AS ADOPTED BY CITY COUNCIL NOVEMBER 14, 2017 AND
CALIFORNIA COASTAL COMMISSION MARCH 8, 2018

City of Santa Cruz

DOWNTOWN PLAN

September 1991

As Amended through January 28, 2020

AS ADOPTED BY CITY COUNCIL NOVEMBER 14, 2017 AND
CALIFORNIA COASTAL COMMISSION MARCH 8, 2018

2000-2017 UPDATES OF DOWNTOWN RECOVERY PLAN

The Downtown Recovery Plan was originally adopted in 1991.

In the year 2000, the City undertook a review of the Downtown Recovery Plan and made adjustments based on a review of the projects constructed since the Plan's 1991 adoption.

On September 14, 2000, the City Council adopted the Santa Cruz Downtown Retail Strategic Plan by Resolution No. NS-25,084. This is attached as Appendix 4.

On October 23, 2001, the City Council adopted revisions to the City's Zoning Ordinance pertaining to Floor Area Ratio for residential uses in the High Density Overlay District. This is attached as Appendix 5.

On March 11, 2003, the City Council adopted revisions to Chapter 4 of the Downtown Recovery Plan, Development Standards and Design Guidelines, as Ordinance No. 2003-08. The Plan adjustments were limited to Chapter 4.

On December 14, 2004, the City Council adopted revisions to Chapter 4 of the Downtown Recovery Plan creating an Additional Height Zone C in the Cedar Street Village Corridor. This was attached as Appendix 6 (see revisions on November 14, 2017).

On November 22, 2005, the City Council adopted revisions to Chapter 4 of the Downtown Recovery Plan pertaining to live entertainment. This was attached as Appendix 7 (see revisions on November 14, 2017).

On October 24, 2009, the City Council adopted revisions to Chapter 4 of the Downtown Recovery Plan to allow ground floor offices as principally permitted uses in the North Pacific Subarea as Ordinance No. 2009-24.

On February 9, 2016, the City Council adopted Resolution NS-29,059 revisions to the Downtown Recovery Plan to relocate Sign Regulations from Appendix 3 to Chapter 24.12 Community Design, Part 4, Advertising Devices, Signs and Billboards of the Santa Cruz Municipal Code.

On November 14, 2017 the City Council adopted Resolution NS-29,328 revisions to the plan with specific emphasis on Chapter 4, Development Standards and Design Guidelines with Ordinance 2017-23, extending Additional Height Zone A to Laurel Street and modifying Additional Height Zone B for Front Street riverfront properties. These revisions deleted Appendix 5, Floor Area Ratio, as these standards had been incorporated in General Plan 2030; Appendix 6, Additional Height Zone C, as Zone C was incorporated into Zone A; and Appendix 7, Live Entertainment, which was relocated into Chapter 24.12 Community Design, Part 2, General Site Design Standards, 24.12.195, Live Entertainment of the Santa Cruz Municipal Code.

On January 28, 2020 the City Council adopted Resolution NS-29,620 revisions to the Downtown Plan to: 1) establish the percentage of shelf space allowed for alcoholic beverages for off-site consumptions that represents a small percentage of the total shelf space that would be considered clearly incidental to a principally permitted use; 2) add operational criteria for the sale of alcohol for off-site consumption; 3) remove tattoo parlors from the list of prohibited uses in the downtown; and 4) amend restrictions on personal services within the Downtown Plan area.

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The purpose of the original Downtown Recovery Plan was to provide a coherent framework for public and private actions related to the rebuilding of downtown Santa Cruz after the devastating Loma Prieta earthquake of 1989. The intent of the plan was to establish policies, standards, and guidelines to direct the recovery process toward the rebuilding of a downtown to meet the multiple objectives of the entire community. While the plan also provided longer-term recommendations, the primary focus was the shorter-term recovery of the downtown; as such, the Downtown Plan has been revised over the years to provide for refinements and elaborations.

The Downtown Planes a synthesis of many ideas expressed and refined over the 15 months since October of 1989. Immediately after the earthquake, the City established a working group of broad representation, known as Vision Santa Cruz, whose aim was to "spearhead" the recovery process and to develop a plan that was expressive of the values of the community. One significant achievement of this group was the "First Principles" document, which established consensus over a broad spectrum of issues. This plan is directly descended from the "First Principles" and from direction provided by two steering committees: the City-appointed Streetscape Task Force and a subcommittee established by Vision Santa Cruz− the Technical Advisory Group (T.A.G.). The Downtown Planes also the result of numerous public workshops involving Vision Santa Cruz, the Streetscape Task Force, the T.A.G., the Planning and Downtown Commissions, City Council and the public-at-large.

The Community's Vision

(A portion of the full statement written by Vision Santa Cruz; full vision statement is provided in Appendix 1.)

Vibrant, vital and active, the central business district constitutes the primary retail, commercial, professional, and employment center for the City of Santa Cruz. This compact high-density area is home to unique businesses, offering residents and visitors a diverse and wholesome environment for commercial, cultural, civic, and social pursuits. Local, regional, and national businesses combine in a potent blend, making the downtown a major destination for the entire region.

The pedestrian-oriented environment is characterized by convenient access, a garden-like setting, and human-scale buildings. The visual and physical relationships to the San Lorenzo River, the surrounding natural landscape, and Monterey Bay make downtown Santa Cruz among the most beautiful urban places in California. The architecture captures the best of the City's past while integrating new buildings into a coherent and visually appealing downtown. As a result, the area strikes a balance between a successful modern business center and an environmentally attractive and active public place.

This effective combination is the focus of Santa Cruz public life and is a central element in the community's identity. Downtown is safe and clean. It is a multicultural place, attracting all sectors of the community, and serving as a meeting place for children, students, elderly, office workers, retailers, shoppers and visitors, as well as those living in the downtown and surrounding neighborhoods. Restaurants, cultural events, and entertainment bring additional life to the area during the evening and nighttime hours.

A range of housing types is integrated into the downtown. This urban-density housing provides both market-rate and affordable units, and expands the immediate market for downtown goods, services, and public transportation.

The economic and social vitality of the downtown has a positive effect on the surrounding areas and the entire community. It has restored the heart and soul to an earthquake-shaken town, and once again provides a significant source of tax revenue for the City's general fund.

The First Principles

The First Principles document establishes recommended directions for a wide range of issues and topics, including:

- ***Form and Character.*** New buildings should be allowed to develop individual character while retaining qualities of the historic townscape. Issues of articulation, materials, signage, setbacks, scale, massing, form, bulk, solar access and height are critical.
- ***Building Height.*** Buildings should maintain the scale and character of the existing downtown, with explicit criteria for additional height up to seven stories and provisions to ensure that buildings do not shade key public open spaces. Since this First Principle was established in 1991, the downtown development pattern has largely respected the existing two to three story development pattern with several taller buildings spaced throughout the Pacific Avenue Retail District, providing architectural variation. The 2017 update recognizes these taller buildings also contribute greatly to the architectural fabric of the City and can provide significant opportunities to plan for environmentally sound infill development without damaging the character of the City. The 2017 modifications to the Additional Height Zones have been carefully written to recognize the City's successful recovery from the 1989 Loma Prieta earthquake; preserving and enhancing the urban form of the City, without sacrificing the special human scale and character of downtown. New development will not be required to strictly adhere to a 2 and 3 story scale.
- ***Housing.*** Significant new housing opportunities should be targeted throughout the downtown, including Pacific Avenue, the San Lorenzo riverfront, and South of Laurel. Housing should be comprised of a mix of apartments and condominiums. SRO housing should be replaced and dispersed throughout the downtown area.
- ***Accessibility.*** A downtown that aesthetically integrates access as a primary design criterion for all improvements to ensure increased opportunities for the public to participate in commercial, governmental, residential, social and cultural activities.
- ***Open Space and Streetscape.*** A strong network of public and private open spaces (streets, sidewalks, public parks, plazas, passageways and courtyards) that creates a socially active and pedestrian-oriented downtown core should be emphasized.
- ***Circulation.*** Downtown should be predominantly pedestrian in nature; movement should be carefully structured to reinforce the character of the place. Pedestrian, bicycle, and transit access to the downtown should be enhanced.
- ***Parking.*** Parking in the downtown core should continue to be provided by the Parking District in a centralized fashion, to maximize shared use and minimize the quantity of stored vehicles.

The Basis for Change

This vision for the downtown is one that must evolve in a gradual way. Rather than a static plan or a fixed picture of an end-state condition, the Downtown Planes intended as a creative framework that will guide the ingenuity and efforts of a wide range of participants − public policymakers, architects, developers, merchants and residents − over an extended period of time. The Plan, therefore, is structured to be definitive where specific approaches are necessary to achieve public objectives and more general where multiple approaches can be considered.

Before embarking upon the description of the Plan, it is important to emphasize that the downtown is not a "blank slate" upon which change will occur. Although the 1989 earthquake was devastating, it did not erase the underlying structure and form of the downtown. In addition to the community's vision and the specific principles outlined in this plan, the following factors provide a strong basis for future change:

- *The Pattern of Downtown Streets and Blocks,* which provide the principal organizing structure for public life and private activities within the downtown.
- *The Pattern of Public and Private Ownership,* which establishes the texture and "grain" of the downtown fabric, and the boundaries within which public and private sector participation will take place.
- *Buildings of Architectural Significance,* which provide for a strong continuity with the past and a context for future development; and
- *The Opportunity Sites,* which include earthquake-damaged or demolished sites, and vacant and built sites which may be redeveloped in the future, and upon which the Plan can exert influence.

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Planning Principles and Strategies

The success of downtown Santa Cruz's recovery has been dependent upon the ability to recreate the unique characteristics of the original downtown while providing a clear framework for the future. As recognized by the "First Principles," the downtown must continue to function as a place of commerce, culture, and recreation: a place that people choose to go to meet friends; a place that naturally and spontaneously accommodates civic events as well as informal gatherings; and a place where people live and work. The creation of a rich environment and a balanced mixture of land uses that are mutually reinforcing will be critical in achieving such a place. The following planning principles expand upon the First Principles and provide the basic strategies and recommendations for the Plan.

Strengthen Downtown Santa Cruz as a Vital Retailing District

The land use component most critical to the success of the downtown is retail. In order for downtown Santa Cruz to continue to thrive as an active and meaningful place, it must offer residents, students, employees, and visitors a purpose to be there and an attractive alternative to other retailing options in the region. Without a strong and diverse retail base, the downtown area cannot function as a viable center for the community. Clearly, a major strength of the downtown is its unique retailing personality, which has evolved as a result of strong local merchants and a loyal customer base. This should be built upon further.

A Centralized Retail Management Program

The quality and mix of retailers within the downtown significantly contributes to the diversity and number of people who will come to downtown Santa Cruz. There is a unique opportunity to retain a coordinated approach to the recruitment of tenants and the ongoing management of retailing within the downtown. Such an approach can encourage: the clustering and con- centration of companion retail uses that will promote multiple visitation; the coordination of business hours; the marketing of the downtown as a single destination; and the programming of special events. A discussion of the recommended centralized retail management program is provided in the Implementation chapter of this plan.

A Physical Environment that Reinforces Retailing

In order to remain competitive with outlying shopping areas, Pacific Avenue needs to be perceived as a unique destination that is convenient and comfortable to pedestrians, motorists, and bicyclists. From the pedestrian's standpoint, it is imperative to create a street environment that is hospitable and non-threatening. A good retail street offers a strong sense of continuity and visibility. Ground-level uses along Pacific Avenue should be controlled to ensure that retail continuity is maintained. People need to be encouraged to continue walking along the street, drawn on by nodes of activity such as cafes, stimulating signage, interesting and eye-catching window displays, and other elements that are visually exciting. Views down the length of Pacific Avenue should be maintained to give the

pedestrian, motorist and bicyclist a strong sense of the street as a place; views to retailing establishments should also be maintained to allow the expression of individual merchants to provide the street with its unique identity and personality. Access routes to the downtown should be clearly understandable, naturally directing vehicles and bicycles to their destinations and to convenient parking facilities. To this end, the original Downtown Recovery Plan recommended a reorientation of traffic on Pacific Avenue to allow autos to enter the downtown from both the north and south ends of the avenue, so that the motorist can become oriented to the activities of the street before reaching the off-site parking facilities on Cedar and Front Streets. In addition, the Downtown Plan strongly recommends that on-street curbside parking be maintained to the maximum extent practicable throughout the downtown, to reinforce the overall feeling of convenience and access. Finally, the Downtown Plan recommends strengthening bicycle safety, access and parking as an important means of improving shopper convenience.

More Than a Place to Shop

The downtown must be more than a place to conduct business; it should also be a place where Santa Cruzans naturally gather to meet, to see live theater and movies, to hear music, to enjoy museums, to be entertained, and to eat. The perception of downtown in general, and Pacific Avenue in particular, should be a place of diverse activity. If carefully orchestrated, this diversity will contribute significantly to the success of the retail activities within the downtown. The land use pattern and street design should accommodate these activities and be made visually prominent. To this end, the Downtown Plan recommends that Pacific Avenue and the east-west streets be designed to maximize opportunities for outdoor eating, to give the area a strong identity as an active and festive place. In addition, entertainment and cultural uses (theaters, galleries, nightclubs) are encouraged to provide a richer and more diverse experience to the visitor, and to allow the downtown to be the principal "stage" for the artistic expression of the community. Pacific Avenue is the "main street" of Santa Cruz, and serves not only as the principal retail spine of the city, but also as its central social gathering space. Therefore, it must be attractive to all sectors of the community and allow for spontaneous gatherings and public seating.

A Performing Arts Center

Much interest has been expressed by the community for a Performing Arts Center in the downtown area. The Downtown Plan strongly supports this concept as one that would reinforce the diversity of experiences in the downtown and contribute to its overall revitalization. If the City chooses to pursue the proposed San Lorenzo Park site for the new facility as recommended by the County Cultural Council, consideration should be given to the enhancement of the existing pedestrian bridge across the river and the linkage to Cooper Street and Pacific Avenue.

Enhance the Open Space and Pedestrian Network of Downtown

Nestled at the foot of the Santa Cruz Mountains, on the coast of Monterey Bay and at the mouth of the San Lorenzo River, the City of Santa Cruz has a powerful relationship with its physical environment. The downtown itself is defined by natural features, including Mission and Beach Hills to the north and south and the river to the east. The Downtown Plan calls for the creation of a strong

and varied network of active and meaningful urban spaces that reinforce the unique pedestrian environment of the area, and that link the downtown with its natural setting.

Creating Meaningful Open Space in Downtown

Open spaces within downtown Santa Cruz should have value and meaning; they should be carefully located where people want to be and in locations that take advantage of the unique resources, heritage, and traditions of the community. They should not be contrived or created from "leftover" space. The most meaningful open spaces within cities have emerged out of natural features (e.g., the hilltop parks of San Francisco) and from places that have a historic cultural and/or civic significance (e.g., the church, the market, the crossroads). Downtown Santa Cruz has a meaningful system of such open spaces that should be built upon; these include the San Lorenzo River, the Post Office and Town Clock intersection at Pacific Avenue and Water Streets; the Civic Center; and the downtown streets themselves.

San Lorenzo River as a Major Downtown Open Space

San Lorenzo River is only two blocks from the heart of downtown, and as such offers great potential as a naturalistic open space, wildlife habitat, and recreational amenity: a "garden promenade" that can provide a more contemplative and reflective experience to the hustle and bustle of Pacific Avenue. However, the river has served primarily as a flood control channel and the downtown has largely turned its back on it. In evaluating open space opportunities and potentials for the downtown, the Downtown Plan recommends that the City give the improvement of the riverfront and the creation of linkages to the downtown top priority. The creation of a riverfront park at the foot of Cathcart Street and the enhancement of that street as a strong pedestrian and visual linkage between Pacific Avenue and the river would significantly enhance the open space network of the downtown and is strongly recommended as an action to be pursued as part of the Riverfront Plan. The pedestrian linkage between the river and downtown can also be strengthened along Cooper Street through the Galleria to the existing pedestrian bridge leading to San Lorenzo Park; in the longer term, the Downtown Plan recommends that a stronger pedestrian linkage be established to the river through the parking lot at the northeast corner of Soquel Avenue and Front Street, leading to a significantly expanded pedestrian/bicycle bridge with retailing uses alongside. A third pedestrian linkage to the river can be established between Cathcart Street and Laurel Street, where a new pedestrian bridge could provide direct linkage to the east side neighborhoods across the river.

Open Space of Historic and Civic Significance

Downtown Santa Cruz also has open spaces with historic and civic meaning. The Post Office plaza, Town Clock Park, Scope Park, Adobe Park and Mission Plaza Park form a series of public places that have a unique significance to the community. The Downtown Plan recommends that each of these spaces be enhanced and that a stronger pedestrian linkage be created between them. To this end, the Downtown Plan recommends, as a future action, the creation of a prominent stair and terraced park at Water Street and North Pacific Avenue, connecting Scope Park with Adobe Park and Mission Park. In this way, the historic origins of the City on Mission Hill can be more strongly integrated with the downtown experience. The Downtown Plan also identifies the opportunity to strengthen the civic significance of the Town Clock Plaza and Post Office Plaza as part of the

immediate-term improvements planned for Pacific Avenue. The Downtown Plan recommends that these improvements create a more visually cohesive and pedestrian-friendly open space at the northern tip of Pacific Avenue, that ties the Post Office and Town Clock together, creates a strong visual gateway to the downtown and, through periodic street closures, provides a major opportunity for large public gatherings and civic events.

Civic Center

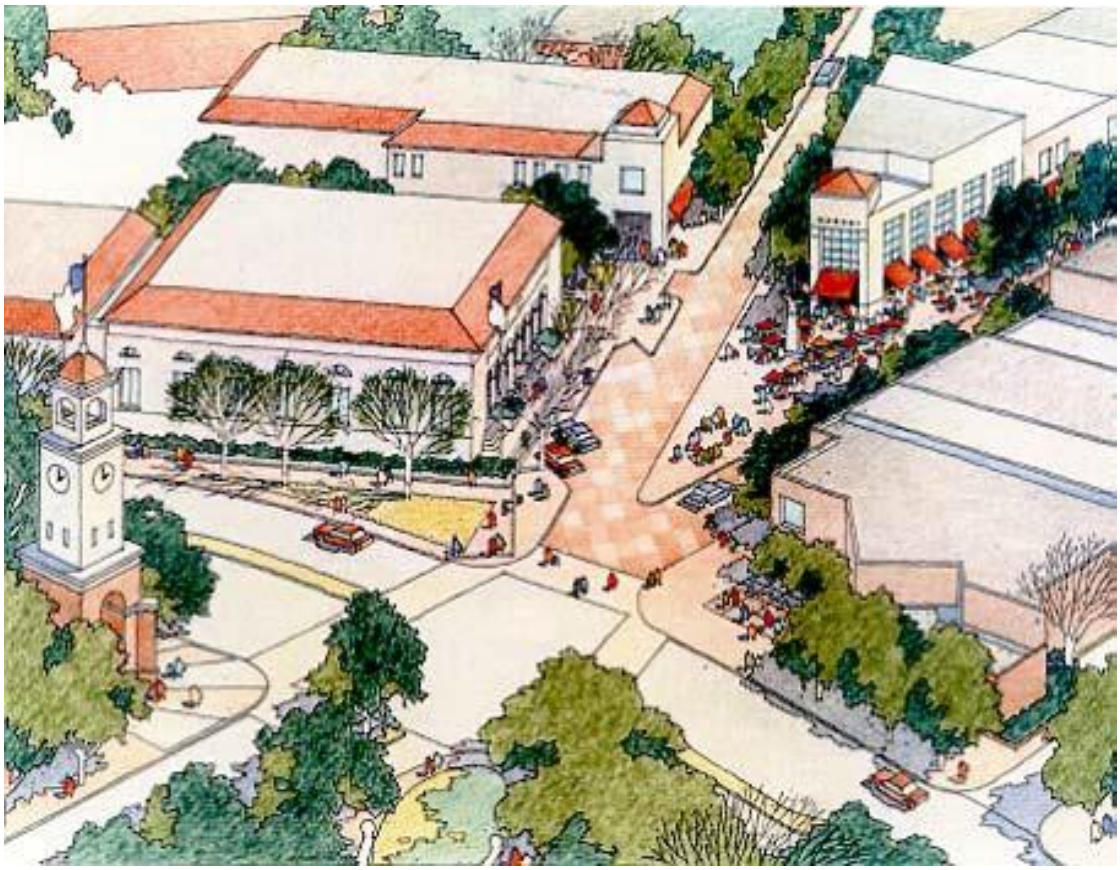
While the Civic Center is a highly appropriate location for spontaneous or formal public gatherings, there is little provision for such activity. Although the majority of the Civic Center is beyond the boundaries of the Downtown Plan, the potential for this area to be reinforced as a civic gathering place should not be ignored. Currently, the City Hall has an attractively landscaped garden and court facing Center Street that is largely passive in nature. Modifications to this landscaped area could be considered to allow for larger formal and informal gatherings, while maintaining the unique scale, character, and garden-like qualities of the City Hall. In addition, or alternatively, the Church Street frontage adjacent to City Hall and the Civic Auditorium could be redesigned to create a stronger visual and civic identity and, with the periodic closure of Church Street, allow for major gatherings.

Cedar Street Park.

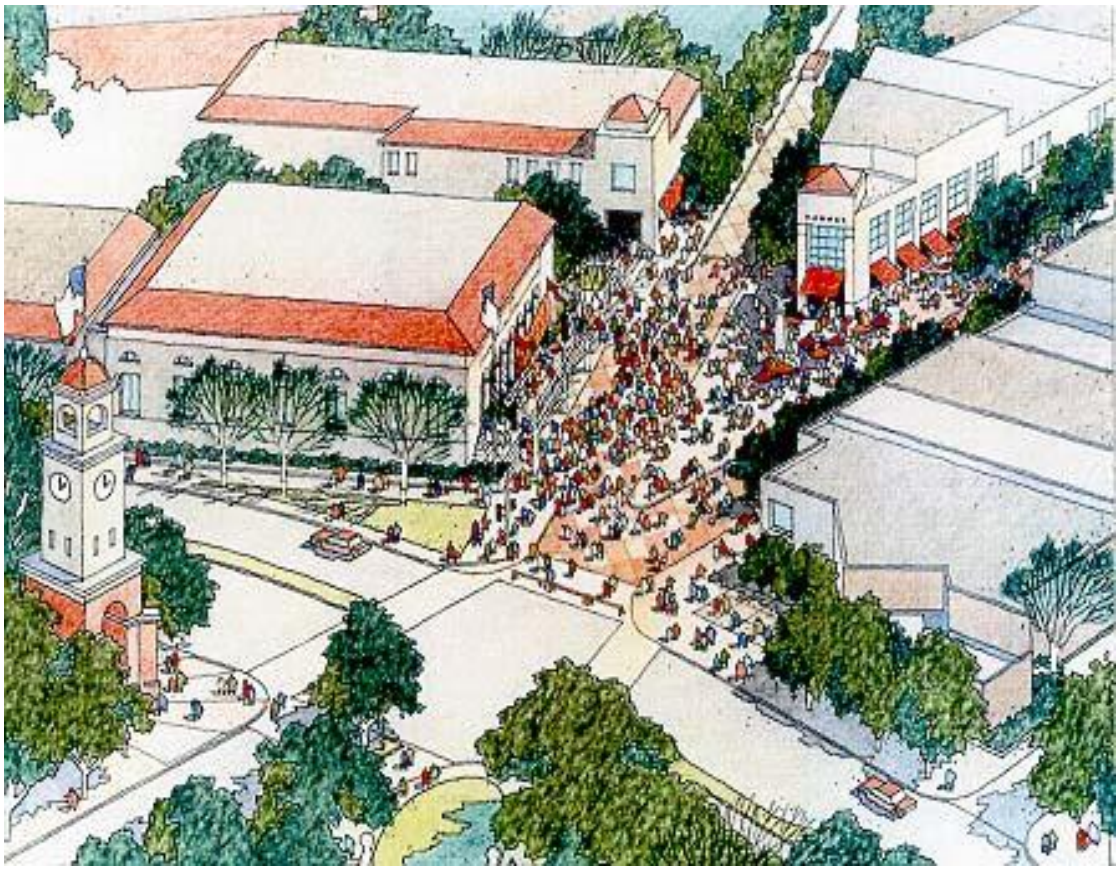
The Downtown Plan also identifies the opportunity to create a park and public space of approximately 15,000 square feet immediately north of the Locust Street parking garage along Cedar Street. This park, which would enjoy sun throughout most of the day, would gain significance because of the heritage walnut tree on the site and its linkage to Pacific Avenue by way of Plaza Lane.

The Streets as Public Open Space

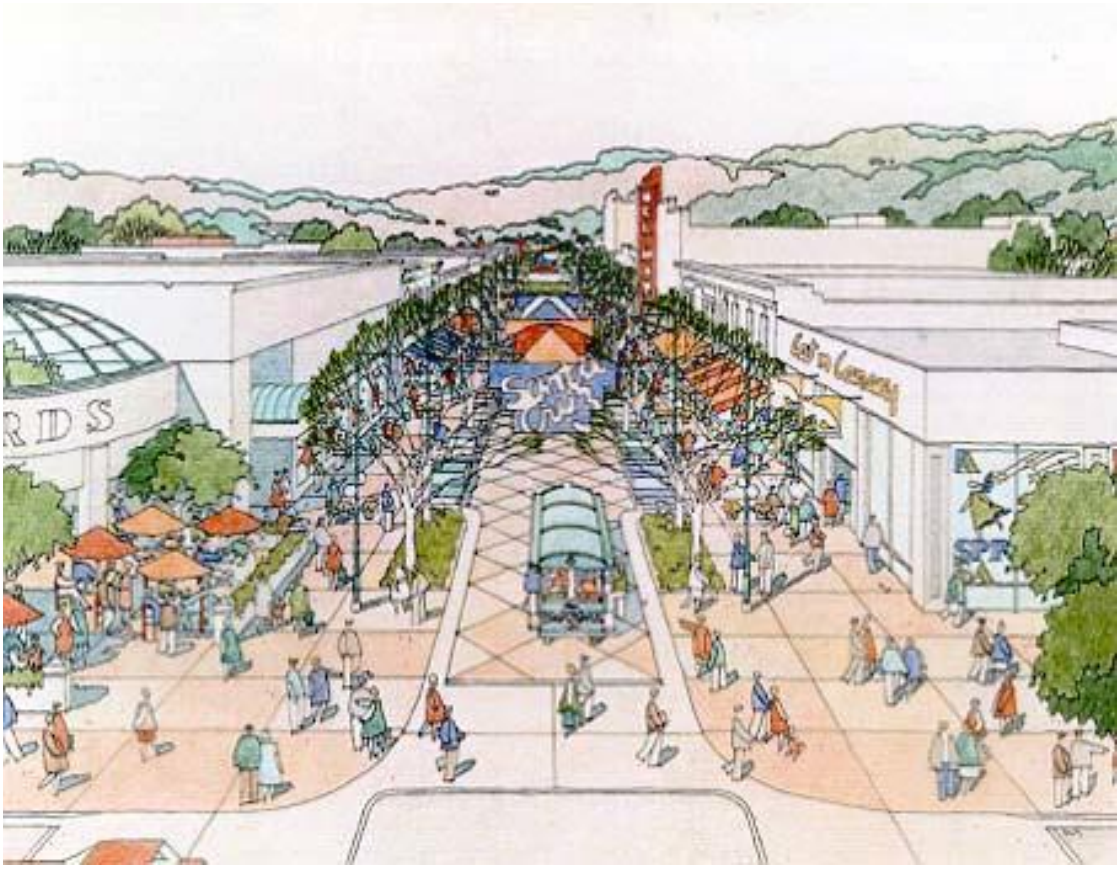
In reinforcing a strong open space network, it must be emphasized that the streets and sidewalks provide the principal public space opportunity within the downtown. The streets function as an extension of the larger open space system, providing key linkages to the river, the beach, and the surrounding neighborhoods; they also reinforce the commercial function of the downtown and accommodate much of the activities that make it a vital and memorable place to be. As such, the design of the streets needs to maximize their contribution to the overall open space system. Pacific Avenue, as the city's "main street," should be designed to allow for periodic closures to accommodate major civic events; on an everyday basis, the street should continue to serve as a comfortable and active public place for a wide range of people, including students, residents, employees, and visitors. Other streets, including Cooper Street, Cathcart Street, and Front Street between River and Water Streets, should also be designed as key open space resources, capable of being closed for special occasions and events and providing direct visual and pedestrian linkages to the downtown. The use of sidewalk extension zones (e.g., outdoor cafes, markets, etc.), setbacks at key points, courtyards, and passages will also reinforce and enrich the overall open space network of the downtown.



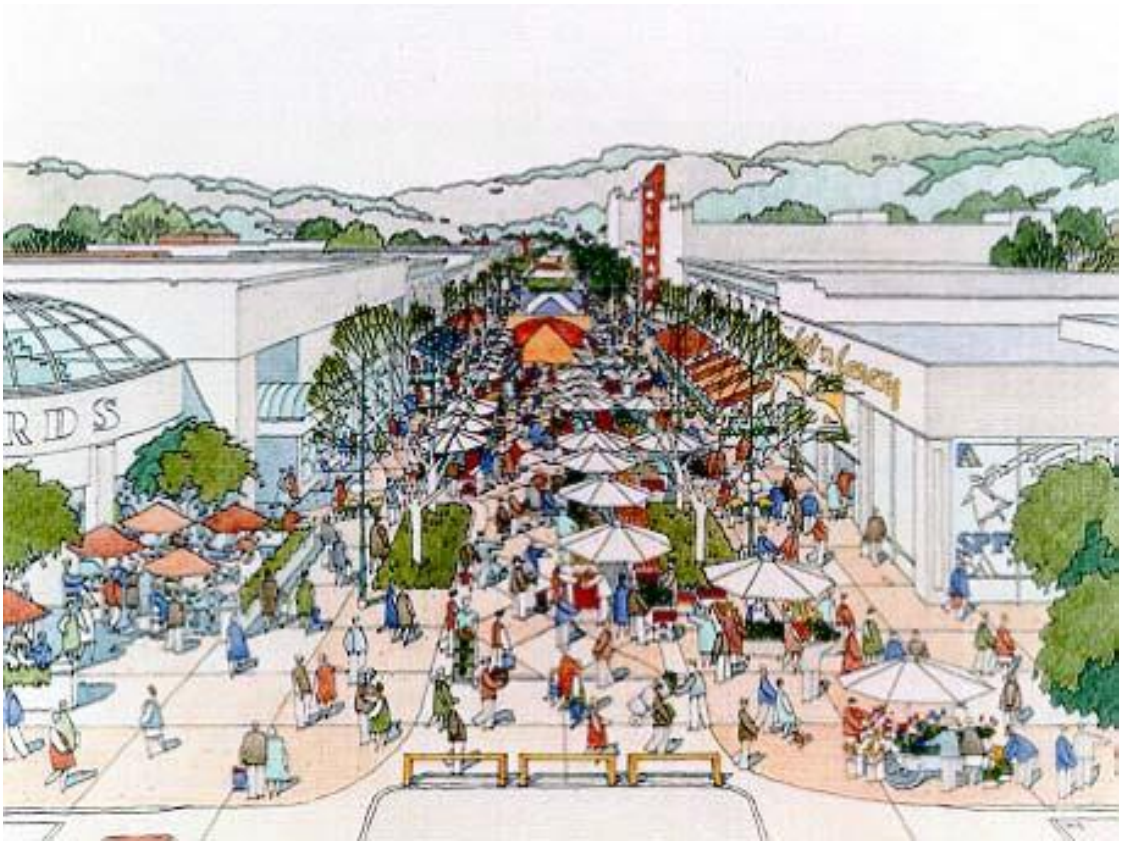
A new plaza at Pacific Avenue and Water Street will create a distinctive entry to the downtown…



…and a major gathering space framed by the Clock Tower and post office.



Pacific Avenue between Cathcart and Lincoln…



… will be transformed once a week into a Farmers Market.

Reinforcing the Pedestrian-Oriented Environment

Downtown Santa Cruz should be a place where pedestrians feel comfortable throughout the day and nighttime hours. Great pedestrian places are those that always feel full and active, with people promenading, window shopping or watching other people, people sitting in cafes with friends, people passing by on bicycles, or people enjoying a spontaneous street performance. The public spaces and streets of downtown Santa Cruz must be appropriately scaled to ensure that a comfortable pedestrian environment is created. As the major open space within the downtown, streets should be designed to respond to the cyclical nature and needs of the community. The ability to have larger pedestrian spaces when they are needed and more intimate and active places at other times will give the streets a life and character of their own. For instance, an annual parade or festival may warrant the temporary closure of all of Pacific Avenue to automobiles, whereas a weekly farmer's market could be accommodated on a particular street segment (e.g., between Cathcart and Lincoln). Similarly, traffic could be closed on other streets within the downtown (e.g., Cooper Street between Pacific and Front or Front Street between Water and River Streets) for special events.

A Balance Between Pedestrians and Automobiles

It is important that streets and sidewalks be correctly sized and programmed to accommodate pedestrian activity and movement. Pedestrian spaces that are too big can evoke a sense of inactivity, emptiness, and insecurity, and as a result discourage pedestrian use. A careful balance needs to be established between the automobile, pedestrians, and bicyclists. The complete elimination of the automobile is not desirable because it can result in pedestrian spaces that are too big and inaccessible. This has been proven in small and medium-sized cities throughout the country, where pedestrian malls have failed to create the desired pedestrian or commercial environment. On the other hand, streets should not be dominated by the automobile to the point where pedestrians and bicyclists feel secondary. The correct balance should include: wide sidewalks for promenading and pedestrian-oriented activities; narrow roadways with slow-moving traffic; continuous, safe bicycle routes; ample accessible, at-grade pedestrian crossings or ramps, and appropriately textured surfaces for access and safe movement of persons using mobility aids and devices; and curbside parking or bike lanes to offer a separation between pedestrians and moving cars and to slow traffic further. Trees should be used to reinforce the pedestrian environment by giving scale and definition to the public walkways and by promoting a visually attractive and comfortable street.

The Relationship of the Public and Private Realm

A downtown pedestrian district like Santa Cruz need not establish a hard edge between public and private uses. Activities should flow back and forth between the public and private realms. The extension of the pedestrian environment into private parcels is encouraged by means of passages and courtyards that have a strong tradition in Santa Cruz. Conversely, retailing activities (e.g., cafes, flower stands, produce markets) are encouraged (within carefully prescribed limits) to "spill out" into the public right-of-way to reinforce the life and vitality of the street.

Preserve and Enhance the Distinctive Scale and Character of Downtown

The image of downtown Santa Cruz is rich and complex, distinctive and memorable. Within the central city, new and rehabilitated buildings have developed individual character while retaining qualities of an historic townscape. The underlying cadence and structure of the built environment continues to express the scale and texture of a pedestrian-oriented downtown.

The Character of Downtown Buildings

Much of the character of downtown Santa Cruz has come from its incremental development and the individual stylistic expressions that have occurred over an extended period of time. As a result of the 1989 Loma Prieta earthquake, much of downtown has been rebuilt in a single generation. This puts a particular burden on the Downtown Plan and its design guidelines to maintain the unique townscape character and to avoid the creation of monolithic "projects" that destroy the human scale and pedestrian quality of the downtown. The design guidelines call for buildings that respect the incremental pattern of development in the downtown and that are reflective of the charm and lifestyle of Santa Cruz: buildings that have a unique rhythm and variation created by elements including balconies, loggias, trellises, and bay windows; buildings that extend and enhance the public realm with courtyards, setbacks, extension areas, and passages; and buildings that are not hermetically sealed, but reflect the environment and are energy efficient. The Downtown Plan does not recommend a single architectural style as a predominant theme, but rather emphasizes a humanistic scale and warmth that provides a common vocabulary.

The Opportunity to Intensify

The Downtown Plan recognizes that it is desirable for downtown Santa Cruz to intensify, in order to bring more people and activities to the area. However, this intensification must be achieved in a way that respects the townscape of the downtown and its relationship with the surrounding area. The Downtown Plan includes an Additional Height Zone A along the Pacific Avenue corridor between Laurel and Water Streets; and the west side of Front Street between Laurel Street and Soquel Avenue, where taller buildings can be created when key criteria are met. An Additional Height Zone B along Front Street is also included in the plan allowing for taller buildings when key criteria are met.

Strengthen Downtown Santa Cruz as a Place to Live

Throughout the country, cities are striving to reestablish old residential neighborhoods or to introduce new ones within their downtowns. Santa Cruz is fortunate to have attractive and viable downtown neighborhoods that serve to reinforce the city center not only as a place to shop or work, but as a place to live...a place that has a life beyond its business hours. In planning for change within the downtown, it is critical that such change be designed to preserve the character and qualities of the adjacent neighborhoods, and encourage new residential development that is compatible in scale. In this regard, land use, urban design, and circulation polices within the Downtown Plan are aimed at ensuring compatibility of scale and use with, and the avoidance of, through-traffic within adjacent neighborhoods.

To further reinforce the city center as a place to live and to extend the residential pattern of the surrounding single-family neighborhoods to the downtown, the Downtown Plan encourages residential development as a second floor and above use throughout the downtown area. Some office space has been constructed for upper floors within the Downtown Plan area on a project specific basis, with emphasis on market balance for housing and jobs. The potential redevelopment of the east side of Front Street also provides opportunities for non-residential uses suitable for the Riverwalk side of these properties; but the overarching policy for promoting additional housing in the downtown area is of primary importance with the 2017 Downtown Plan update.

Open Space and Pedestrian Linkages to the Adjacent Neighborhoods

The Downtown Plan calls for the reinforcement of pedestrian linkages between the downtown and its adjacent residential neighborhoods. The original Downtown Recovery Plan recommended widened sidewalks and improved streetscapes along Church and Cathcart Streets to provide residents of the neighborhood immediately to the west of downtown with enhanced access to the downtown and the San Lorenzo River corridor. Many of these improvements have been completed, but need to continuously be reinforced and enhanced. The Downtown Plan continues to suggest enhanced linkages between the downtown and the Mission Hill neighborhood to the north through the expansion of Scope Park at Water Street and Pacific Avenue, providing direct pedestrian access to Mission Plaza and the historic Mission Hill district. As the South of Laurel district redevelops, it is also suggested that the pedestrian qualities of Pacific Avenue be extended southward to create stronger pedestrian linkages with the Beach Hill neighborhood.

Riverfront Residential

Along Front Street, between Soquel Avenue and Laurel Street, the Downtown Plan promotes upper-level residential uses, while encouraging commercial uses at the ground level facing Front Street and a mix of commercial and residential uses at the Riverwalk level and above. Housing in this location provides a strong support use to the downtown and creates an attractive linkage to the recreational resource and amenity of the riverfront. In addition, the parking lot and adjacent commercial properties on the north east corner of Soquel Avenue and Front Street adjacent to River Street South is identified as a potential site for future mixed-use redevelopment, with residential as the upper-level use oriented to the river.

SRO Housing

SRO housing provides an important resource to a wide range of people who require proximity to the services and transit facilities of the downtown. In this regard, the replacement and maintenance of SRO housing has been encouraged throughout the downtown. Upon the completion of four projects (St. George Hotel, Palomar Hotel, El Centro, Colonial Hotel) along Pacific Avenue, the number of pre-earthquake SRO housing units has been exceeded. The Plan recommends that additional projects be dispersed throughout the downtown and that individual SRO developments not exceed 60 units without City Council approval, to avoid the creation of a single district that will dominate other critical activities within the area.

Infill Residential on City-Controlled Sites

The original Downtown Recovery Plan considered City-controlled sites (such as parking lots) as being very important opportunity sites to provide additional housing. City-controlled properties remain extremely important twenty-five years after the Loma Prieta earthquake. This updated Downtown Plan continues to promote mixed-use opportunities within downtown and rather than highlighting site-specific properties, the Downtown Plan encourages flexibility in targeting potential development projects based on changing market conditions and the City's financial priorities and capacity. There may be opportunities downtown to participate in public/private partnerships and the Downtown Plan encourages exploration of creative development options that will continue to achieve the objectives of this Downtown Plan to positively enhance the residential community of downtown.

New Residential Development in the South of Laurel Area

It has been recognized that the South of Laurel area offers additional potential for the creation of a mixed-use/residential neighborhood that will serve to reinforce the diversity and vitality of downtown Santa Cruz. It will be important for "South of Laurel" to evolve, not as a series of independent projects, but as a well- planned and integrated neighborhood with many of the same qualities that make the city's existing neighborhoods unique and attractive places to live. Planning for this area should strive to create a cohesive and pedestrian-oriented residential "fabric" with well-landscaped streets, parks and community amenities, which may include a permanent event arena, and buildings that are carefully scaled and oriented to reinforce the pedestrian environment.

Housing Feasibility and Affordability

A comprehensive housing implementation strategy should be developed by the City to establish a feasible program for the creation of market-rate and affordable housing, including developer incentives, land write-downs, public participation in financing, parking reductions, etc. The Downtown Plan does not recommend the imposition of exactions on commercial developers for the creation of residential development.

Strengthen Downtown as a Place of Local and Regional Employment

Historically, downtown Santa Cruz has served as the principal government, business, and service center for North County. This role has reinforced the significance of the downtown as an important destination and has provided direct support to retailing uses. The Downtown Plan strongly encourages the concentration of office uses within the downtown, where employees can best take advantage of existing and future transit service, where broader environmental objectives related to the improvement of air quality and transportation can be best served, where additional employees can contribute to the creation of an active and viable urban center, and where they can be best served by downtown retail activities. In terms of supporting the viability of the downtown as a retail district, upper-level office uses are considered primary. While it is recognized that the regional office market is somewhat limited, the Downtown Plan acknowledges the opportunity to attract office users to newly available and assembled sites within the downtown; these uses offer an important opportunity to intensify the downtown district and enhance its role as a regional office center. The policies of this Downtown Plan also allow for the flexibility and opportunities for office and technology-related companies to locate within the downtown, acknowledging the dynamic nature of the current technological industry can greatly contribute to the success and vibrancy of the downtown.

Opportunity Sites for Commercial Development

Several significant sites between Cathcart and Water Streets along Pacific Avenue provide good opportunities for upper-level office uses. The Downtown Plan encourages the most intensive development along Pacific Avenue and the Front Street/Riverfront corridor, where it can most benefit from shared parking and convenient transit, and where higher-density development is most appropriate. There continue to be opportunities for redevelopment of existing structures along lower Pacific Avenue, as well as along Front Street.

Concentrate Commercial Development Within Downtown Core

Land use planning policy for the City served well to support the enormous challenge that property owners, developers, and retailers faced in the rebuilding of the downtown district. Efforts should continue to be made to locate large-scale office and destination-oriented retail uses within the downtown, where they establish an economic vitality that will secure the downtown's role as the principal commercial center of the region. This Downtown Plan continues to promote concentration of mixed use development within the downtown core. As the City's downtown develops with more mid-rise construction (up to 6 or 7 floors), the transit system and alternative transportation methods will become more important for maintaining the quality of life in the downtown area. The corridor connections between the beach and downtown will provide more opportunities for residents and tourism, but the focus of higher-density development and commercial/office uses in the downtown core remains foremost in the Plan.

Create a Stronger Relationship Between Downtown and the Beach

Each summer season, thousands of visitors come to Santa Cruz to enjoy the boardwalk amusements and the sandy beach facing Monterey Bay. Less than one mile to the south, the beach is separated from the downtown by topography (Beach Hill) and a road pattern that is indirect and confusing. As a result, many beach visitors have little knowledge that downtown Santa Cruz exists, and when the sun subsides, look elsewhere for their after-beach entertainment. While downtown Santa Cruz must continue to depend primarily on local residents for its economic health, increased patronage from beach visitors will only help to reinforce the commercial vitality of the area. The strong local character or "personality" of Pacific Avenue can be an attractive draw to visitors who, in a recreational mode, are looking for unfamiliar diversions that provide new experiences. Conversely, the revitalization of the Beach could introduce new activities that would be more attractive to the local resident or patron of the downtown. The creation of complementary activities in both the downtown and the beach area would provide the strongest linkages between the two areas. Specific strategies for strengthening these linkages are outlined in Appendix 2 of the Plan.

	Immediate Action (0-5 Years)	Medium to Long Term (More than 5 Years)
LAND USE AND URBAN DESIGN		
1. Intensify downtown Santa Cruz as the principal retail, restaurant, and commercial district of the city and region.		
a. Require continuity of active ground-level uses (retail, restaurant, cultural, etc.) along Pacific Avenue.	✔	
b. Create a distinctive and active pedestrian environment that supports the downtown retail district as a unique destination.	✔	
c. Maximize opportunities for outdoor eating to reinforce the downtown as a food and entertainment destination.	✔	
d. Maintain and encourage local-serving support retail uses along Cedar and Front streets.	✔	
e. Create a Central Retail Management entity, responsible for retail recruitment, retention, and the management of the downtown district.	✔	
2. Create significant new housing opportunities within the downtown area.		
a. Expand the existing High Density Overlay Zone to include all areas of the downtown east of Cedar Street.	✔	
b. Permit/encourage housing as a principal upper-level use throughout the downtown.	✔	
c. Encourage redevelopment of the riverfront between Soquel Avenue and Laurel Street for mixed-use development, with required upper-level residential uses.		✔
d. Encourage future redevelopment of the Long's-Zanotto's site for mixed-use development, with required upper-level residential uses.		✔
e. Consider reuse of portions of City parking lots for residential redevelopment as replacement parking is provided in new structures.		✔
f. Encourage replacement of SRO units throughout downtown. Limit size of SRO developments to 60 units.	✔	✔

	Immediate Action (0-5 Years)	Medium to Long Term (More than 5 Years)
g. Encourage future redevelopment of south of Laurel area as mixed-use residential neighborhood.	✔	✔
h. Establish a comprehensive housing implementation strategy for the delivery of market-rate and affordable housing in the downtown.	✔	
3. Concentrate and intensify office development within the downtown.		
a. Permit/encourage office use as a principal upper-level use, except in the designated areas where residential is required.	✔	
b. Allow for additional height and intensity at the core of downtown (north of Cathcart along Pacific Avenue) to attract office development.	✔	
c. Discourage major speculative office development in other parts of the city that would most appropriately locate in downtown.	✔	
d. Coordinate with office developers for the provision of office parking that reinforces the overall objective of the Parking District.	✔	
4. Preserve and enhance the distinctive scale and character of downtown Santa Cruz.		
a. Maintain the predominantly two- to three-story form and character of downtown through height limits of 35 feet west of Cedar Street and north of Water Street, and 45 feet in the remainder of the downtown.	✔	
b. Allow additional height to 75 feet in the downtown core, under specific conditions that ensure appropriate transitions to architecturally significant buildings and maintain solar access.	✔	
c. Allow additional height in the North Pacific area to 45 feet, subject to urban design considerations and maintenance of views to Mission Hill.	✔	
d. Adopt urban design guidelines that reinforce: the unique townscape character of Santa Cruz; the incremental pattern of development; the pedestrian environment; and the human scale and quality of buildings.	✔	

	Immediate Action (0-5 Years)	Medium to Long Term (More than 5 Years)
e. Require that new development strive to achieve an "optimum state" of accessibility, beginning with compliance with both the State of California's *Title 24 Accessibility Requirements* and the *Uniform Federal Accessibility Standards (UFAS).*	✔	
f. Preserve historic structures to the maximum extent possible.	✔	

CIRCULATION AND PARKING

1. Improve vehicular circulation patterns in a way that conveys a feeling of convenience and orientation, and that reinforces the pedestrian character of the downtown.

a. Design Pacific Avenue to allow for traffic to enter the downtown from both Water Street at the north and Cathcart Street on the south.	✔	
b. Design Pacific Avenue between Water and Cathcart to allow for maximum operational flexibility, as described in the Circulation Plan.	✔	
c. Reconfigure intersections at River and South River Streets and at River and Front Streets to promote the Front Street/River Street corridor as a principal north-south collector in the downtown.	✔	
d. Consider creation of an east-west local roadway between Front and South River streets in conjunction with future redevelopment of the Long's-Zanotto's property.		✔
e. Consider creation of an east-west local roadway between Cedar and Center Streets in conjunction with future redevelopment of the City parking lot between Lincoln and Cathcart Streets.		✔
f. Maintain and enhance existing service alleys to promote rear service and to create attractive pedestrian ways.	✔	
g. Extend the system of secure alleys as part of redevelopment, to the maximum extent possible.		✔
h. Coordinate with existing property owners to resolve the problems of exposed garbage areas through centralized garbage facilities.	✔	
i. Control service and loading from Pacific Avenue by limiting to non-peak business hours.	✔	

	Immediate Action (0-5 Years)	Medium to Long Term (More than 5 Years)
2. Provide convenient and accessible parking in the downtown.		
a. Maintain the Parking District as the principal method of providing parking in the downtown (south of Water Street).	✔	
b. Maximize curbside parallel parking along Pacific Avenue to reinforce the feeling of a convenient and accessible downtown.	✔	
c. Maintain, to the maximum extent possible, on-street parking on other streets within the downtown.	✔	
d. Consolidate public and private properties to reinforce and expand the existing system of off-street parking along Cedar and Front Streets.	✔	✔
e. Provide ample and secure bike parking along Pacific Avenue and within existing and planned parking structures.	✔	✔
3. Provide for the efficient operation of transit in the downtown to reduce the impacts of the automobile and reinforce the pedestrian environment.		
a. Provide for continued safe and efficient bus access to the Metro Center from Pacific Avenue.	✔	
b. Introduce a rubber-tired "trolley" service to provide a transit linkage between downtown and the beach.	✔	
c. Design Pacific Avenue to be able to accommodate a future fixed-rail trolley or light-rail vehicle within the roadway.	✔	
d. Consider and explore strategies for inter-city rail service to downtown Santa Cruz.	✔	✔
e. Maintain inter-city (e.g., Greyhound) bus service in the downtown, either in the existing facility or as part of a consolidated facility within the Metro Center.	✔	
4. Maintain and enhance the existing system of bike routes within the downtown.		
a. Improve the San Lorenzo River as an exclusive Class 1 bike route.		✔
b. Add Cooper, Church and Locust Streets to the system of posted bike routes in the downtown.	✔	

	Immediate Action (0-5 Years)	Medium to Long Term (More than 5 Years)
c. Design Soquel and Walnut Avenues, and Lincoln and Cathcart Streets, to have dedicated bike lanes installed.	✔	
5. Strengthen pedestrian access to and movement within the downtown.		
a. Improve Pacific Avenue as the primary pedestrian corridor in the downtown, with minimum sidewalk widths of 12 feet.	✔	
b. Improve the San Lorenzo Riverfront as an exclusive pedestrian corridor between the Beach and the downtown.		✔
c. Improve Cathcart Street as an east-west pedestrian linkage between the river, Pacific Avenue, and downtown neighborhoods.	✔	✔
d. Strengthen the pedestrian linkage between downtown and San Lorenzo Park with short-term streetscape improvements at the Galleria and the western landing of the pedestrian bridge; and longer-term improvements, including an east-west roadway through Long's-Zanotto's and an expanded pedestrian bridge.	✔	✔
e. Strengthen the pedestrian linkage to neighborhoods east of the river through a new pedestrian bridge between Soquel and Laurel Street connecting to the Metro Center.		✔
f. Improve pedestrian linkages between downtown and Mission Hill through an expanded Scope Park and stair linkage.		✔
g. Enhance pedestrian linkages to Beach Hill and the Beach through streetscape improvements along Cliff Street and the stairways leading to Pacific Avenue (at Third Street) and the riverfront (at Cliff Street).		✔
STREETSCAPE AND OPEN SPACE		
1. Improve Pacific Avenue as the downtown's major public gathering place, and as a viable retailing street.		
a. Introduce, north of Cathcart, an asymmetrical cross section that provides for a wider (20 to 25 feet) sidewalk on the sunnier, west-facing side of the street to support a diversity of activities, and a comfortable promenading sidewalk (12 to 15 feet) on the east-facing side.	✔	

	Immediate Action (0-5 Years)	Medium to Long Term (More than 5 Years)
b. Introduce, south of Cathcart, a landscaped median to reinforce the continuity and sense of place in this area.	✔	
c. Maintain a strong sense of visual and pedestrian continuity along the entire length of the street.	✔	
d. Provide unobstructed access to all citizens, in compliance with Uniform Federal Accessibility Standards and State Title 24 Accessibility requirements.	✔	
e. Introduce a consistent treatment of boulevard trees along the length of the street that is high-branching, light in appearance, and suitable to urban environments.	✔	
f. Provide decorative pedestrian-scaled lighting that can support banners and holiday decorations.	✔	
g. Introduce public seating in conjunction with other activities (e.g., retail kiosks) at the key "T" intersections along Pacific Avenue.	✔	
h. Introduce ground-level planting at the "T" intersections and on the median south of Cathcart.	✔	
i. Allow for the extension of cafe and retail uses within the public right-of-way, subject to design standards and management guidelines.	✔	
2. Create additional open space opportunities in the downtown that have meaning and significance.		
a. Create a riverfront park at the foot of Cathcart Street to reinforce public access to, and use of, the river.		✔
b. Enhance open space opportunities at the northern tip of Pacific Avenue to accentuate the gateway role of this area and reinforce the significance of the post office and town clock.	✔	
c. Create a new park on the existing parking lot north of the planned Locust Street garage and along Plaza Lane.	✔	
d. Consider the creation of a more active public gathering space within the Civic Center area.		✔

	Immediate Action (0-5 Years)	Medium to Long Term (More than 5 Years)
3. Introduce streetscape improvements on other downtown streets to improve one's sense of arrival and the cohesiveness of the district.		
a. Maintain and expand, to the maximum extent practical, sidewalks along east-west streets in the downtown.	✔	✔
b. Create distinctive landscape/streetscape along major east-west gateway streets/avenues and bridges (e.g., Water, Soquel, Laurel).		✔
c. Enhance the Front Street/River Street corridor with consistent streetscape treatment from the highway to the Beach.		✔

The Downtown Plan calls for a balanced mixture of uses that will reinforce downtown Santa Cruz as a place of commerce, culture, and recreation: a place that people choose to go to meet friends; a place that naturally and spontaneously accommodates civic events; and a place where people live and work. Because of the desire to retain a mixed-use environment that includes a vertical as well as a horizontal mix of uses, there are no distinct land use zones within the downtown. Rather, the Downtown Plan identifies four subareas, each with its own distinct characteristics. These include:

a. ***The Pacific Avenue Retail District,*** including a one-half block depth for all parcels fronting onto Pacific Avenue between Water and Laurel Streets;

b. ***The Front Street/Riverfront Corridor***, including the one-half block depth of property on the west side of Front Street, and all parcels adjacent to the riverfront between Water and Laurel Streets;

c. ***The Cedar Street "Village" District***, generally situated between the Pacific Avenue Retail District on the east and Center Street on the west; and

d. ***The North Pacific Area***, situated between Water Street, River Street, and the Mission Hill escarpment.

This chapter describes the proposed land uses for each of these four subareas and highlights the key development standards pertaining to height, bulk, and design treatment. In addition, specific policies and land use regulations are presented for retail, housing, and office uses in the downtown. The following chapter provides a more comprehensive description of development standards (including permitted uses) and urban design guidelines.

Pacific Avenue Retail District

Pacific Avenue is the historic main street of Santa Cruz, serving as the principal focus of commercial activity in the region and recognized as the main center of public life in the community. It is the place that people naturally congregate for civic events, the place where people can expect to meet others on a more spontaneous basis, and a place that is uniquely suited to the needs of the Santa Cruz consumer.

The most devastating effect of the Loma Prieta earthquake of 1989 was within the Pacific Avenue Retail District; in 15 seconds, the earthquake destroyed the commercial and social heart of the community, a place that had evolved over more than a century. In guiding the redevelopment of private properties along Pacific Avenue, it was important to preserve the unique qualities that occur within the district: its human scale; the incremental and rich pattern of development; the architectural diversity and interest of many of the buildings; and the continuity of active public-oriented uses along the street. While many historic buildings were destroyed or damaged beyond repair, historic structures should be preserved to the maximum extent possible, where appropriate.

It is not the intent of the Downtown Plan and the development standards and guidelines presented in

the following chapter to merely cause the past to be replicated. Rather, the Downtown Plan recognizes the opportunities to improve the Pacific Avenue Retail District: to intensify and diversify the type of activities; to make the street more comfortable to a wider range of people; and to encourage development that is sensitive to the past but that is appropriate to the future, both in terms of retailing and the public life of the community.

The Downtown Plan calls for the intensification of Pacific Avenue as a mixed-use district. Active public- oriented retail, restaurant, entertainment, and cultural uses are considered the primary activity at street level; other uses will be permitted on a conditional basis, if they meet the principal criteria of supporting the active pedestrian environment that is desired. Upper-level office and residential uses are encouraged along Pacific Avenue as a primary support to the ground-level retail uses. As described below, housing is encouraged as a permitted use throughout the downtown. It is recommended that residential projects be dispersed throughout the downtown district. For projects on sites smaller than 20,000 square feet, on-site parking is discouraged within this subarea in favor of centralized and shared parking provided by the Parking District.

The development standards and design guidelines for the Pacific Avenue Retail District call for maintaining the form and character of the existing downtown. Specific criteria are established to allow development to be intensified up to 85 feet, within the area located along Pacific Avenue from Water Street to Laurel Street. The intent of the criteria is to encourage an intensification of activity and population within the core of the downtown but, at the same time, to ensure that a sensitive transition or design integration is made between taller development and existing buildings of historic or architectural value; a principal intent of the criteria is also to maximize solar access to the sidewalks to ensure an active and comfortable pedestrian environment throughout the year.

The standards and guidelines also focus to a great extent upon the effect of private development on the pedestrian's experience. In addition to the types of ground-level land uses, the treatment of ground-level storefronts is also of critical importance to ensure that the pedestrian's experience along the street is reinforced and that new private development extends and enhances the streetscape improvements within the public realm.

The Front Street/Riverfront Corridor

The Front Street/Riverfront Corridor forms an eastern edge to the Pacific Avenue Retail District and creates a transition between the more intensive commercial district and the riverfront. The role of Front Street as an important arterial distributing traffic to, through, and around the downtown has caused it to evolve as a destination retail district, with a major supermarket, drug store, and a specialty retail center backing up to the river. This role is one that is complementary to the more intensive, specialized, and pedestrian-oriented nature of Pacific Avenue, and its maintenance and enhancement is encouraged. Ground-level commercial uses, including destination retail uses, personal service, financial, and office-related uses, are permitted uses along the street. Permitted upper-level uses include office and residential, as well as river-oriented commercial uses connecting to the Riverwalk. This mix of uses serves to reinforce the downtown as a place to live, shop and work; as well as enhances the pedestrian environment and feeling of security along the river.

The pattern of development that has occurred along the Front Street/Riverfront Corridor is one that has largely "turned its back" on the San Lorenzo River. Major recommendations of the City's 1988 San Lorenzo River Design Plan, the 2003 San Lorenzo Urban River Plan, and the 2010 River/Front

and Lower Pacific Design Guidelines and Development Incentives study, all promote enhancing the recreational resource of the river within the downtown and to orient Front Street development in a more positive way to the river. This Downtown Plan includes development standards that promote better access and incentives to redevelop the Front Street/Riverfront Corridor properties.

The Downtown Plan reinforces this objective by encouraging active ground-level uses, including retail shops and restaurants adjacent to Front Street and the Riverwalk. In addition, the Downtown Plan calls for residential, office, or restaurants as upper-level uses east of Front Street between Soquel and Laurel, to take advantage of the riverfront amenity, to reinforce the downtown as a place to live as well as shop and work, and to enhance the pedestrian environment and feeling of security along the river. The Downtown Plan requires at least 60 percent of the square footage of development within these areas (not including parking) to be provided in residential uses. . The guidelines for riverfront development, however, recognize the need to maintain the public nature of the riverfront corridor and include provisions for public access from Front Street, reasonable solar access to the Riverwalk, the articulation of the building mass, and the provision of active ground-level uses.

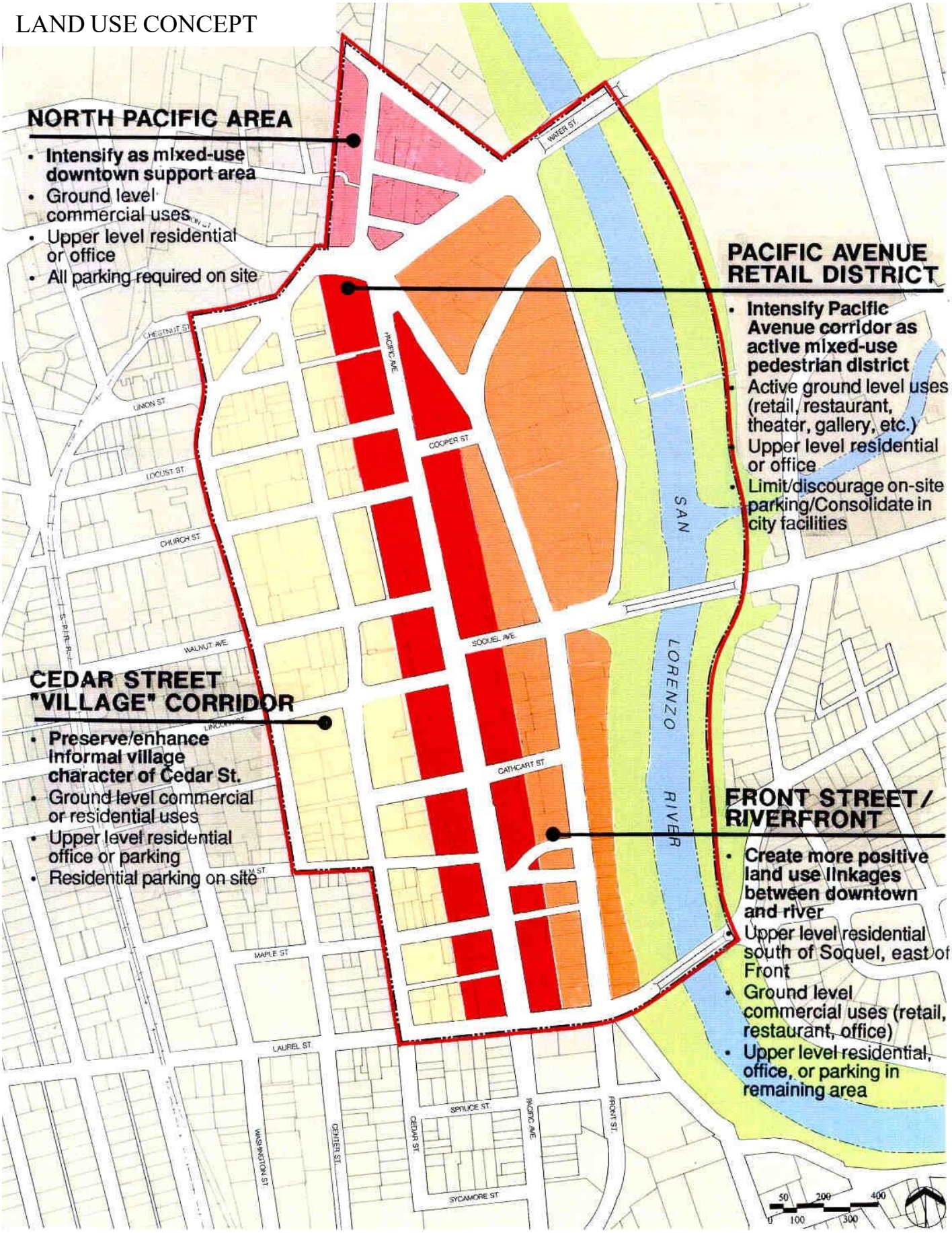
The flood improvements completed per the previously adopted river plans allowed for the removal of the floodplain designation and National Flood Insurance requirements from the properties that abut the east and west sides of Front Street. Prior to the FEMA certification of the completed improvements, new development must comply with FEMA Flood Zone A-99 standards for development within the floodplain, as well as the guidelines provided for below. New projects constructed along this portion of the FEMA floodplain shall be designed to create a positive connection with the San Lorenzo Riverwalk. The FEMA guidelines define construction treatments for various uses within the floodplain.

In addition to the Front Street/Riverfront Corridor between Laurel and Soquel, the Downtown Plan also designates the parking lot and adjacent commercial properties on the north east corner of Soquel Avenue and Front Street for future potential mixed-use residential development. Such a development could maintain ground-level retail and convenience uses, integrated with up to 3 levels of upper-level residential development (to a maximum height of 45 feet), highly articulated to create an attractive edge to the riverfront and an interesting and varied silhouette.

Parking for both the commercial and residential components of the development would be encapsulated on two levels within the podium base of the project and screened from public view by the ground-level retail uses. Development would be required to meet the provision for at least 60 percent of the square footage (not including parking) to be provided in residential uses.

Along the western edge of Front Street, key opportunities need to be preserved for public downtown parking. Specific standards and guidelines for the treatment of surface parking lots and for the development of parking garages are outlined in the following chapter.

LAND USE CONCEPT



The Cedar Street Village Corridor

The Cedar Street Corridor is immediately west of the Pacific Avenue Retail District. The area provides an appropriate transition in scale and use between the downtown and the adjacent residential neighborhoods and the civic center. In contrast to Front Street, which plays a destinational retail role, Cedar Street serves as a more local-serving street with a mixture of professional offices, support and convenience retail, and restaurant uses. Unlike Pacific Avenue, which developed in a relatively consistent manner with a strong "street wall" of buildings, Cedar Street is more diverse in nature, with a mixture of one and two-story structures of varied setbacks. Many of the buildings are wood frame structures with a strong residential character.

The land use plan and the standards and guidelines strive to preserve and enhance the informal "village" qualities of the Cedar Street Corridor. Unlike the Pacific Avenue district, permitted ground-level uses include office in addition to retail, and residential uses are allowed at the ground level along the east-west streets and Center Street. No strict "build-to" lines are established, and the height of development is purposely stepped down to a maximum of 35 feet, or three floors.

Like the Front Street/Riverfront Corridor, the Cedar Street Village Corridor plays an important role in providing parking facilities for Pacific Avenue. It is particularly important to ensure that if future parking structures are constructed in this area, that they -be designed in a way that is supportive of the village character of the district and at a scale compatible with the adjacent neighborhoods. To this end, all parking structures in this subarea are required to step down to 35 feet adjacent to public streets.

Upper-level residential uses are particularly encouraged within the Cedar Street subarea to intensify the resident population of the downtown and to create an appropriate land use transition to the adjacent neighborhoods.

The North Pacific Area

The area of the downtown north of Water Street is unique from the remainder of the district to the south. Situated at the foot of Mission Hill and between River Street and Water Streets, this subarea plays an important gateway role for motorists entering the area from the north and the east. The Town Clock and Scope Park at North Pacific and Water Street intensifies this gateway role and creates a visual and activity linkage with the downtown core to the south.

North Pacific Avenue also plays an important gateway function to the downtown, providing a linkage from River Street to the Town Clock and the Pacific Avenue Retail District to the south. North Pacific itself has evolved as a unique street; its narrow right-of-way and small-scale retail buildings nestled against the escarpment of Mission Hill create an intimate village-like quality.

As the downtown area intensifies, the light industrial uses in the North Pacific area will naturally evolve to more urbanized uses. The Downtown Plan calls for a mixture of office, residential, and retail uses that can support the primary commercial uses of the Pacific Avenue area to the south

A maximum height of 35 feet (2 floors of commercial, or 1 floor of commercial with 2 floors of residential above) is proposed for the North Pacific area. Additional height up to 45 feet (3 floors of commercial, or 1 floor of commercial with 3 floors of residential above) is allowed for properties

east of North Pacific Avenue, if visual analyses indicate that views to Mission Hill from the Water Street Bridge are preserved and if additional height is highly articulated.

Portions of -the North Pacific Area are not located within the City's parking district and, as such, parking must meet overall City standards and be provided on site.

Retail

A critical objective of the Downtown Planes the revitalization and intensification of downtown Santa Cruz as the principal retail and commercial district of the city and region. Retail is the land use component most critical to the success of the downtown. Without a strong and diverse retail base, the downtown cannot function as a viable center for the community. Clearly, a major strength of the downtown is its unique retailing personality, which has evolved as a result of strong local merchants and a loyal customer base. The Downtown Plan proposes that this base be built upon further, by means of the following policies:

Downtown Plan Retail Policies

a. Retail uses that generate pedestrian interest and activity shall be the predominant permitted use for the street level of development throughout the downtown as outlined in the Central Business District Use Allowances tables in Chapter 4 of the Plan.

b. The design of Pacific Avenue, and the development standards and design guidelines, should maximize opportunities for outdoor eating (e.g., cafes) to reinforce the downtown's image and identity as a vital food and entertainment district.

c. The design of Pacific Avenue, and the development standards and design guidelines, should be aimed at creating a distinctive and active pedestrian environment that supports the downtown as a unique retail destination, comfortable to a complete range of users.

The Downtown Management Corporation should be retained to continue to improve public perception of downtown Santa Cruz by enhancing safety and security; provide information and direction to shoppers and visitors in downtown Santa Cruz; and provide a visible presence in downtown Santa Cruz to observe and report street disorder.

Housing

A major objective of the "First Principles" is the creation of significant new housing opportunities within the downtown. It is recognized that while the downtown must function as a viable commercial center, it should also be an attractive place to live. The combination of retail and office uses with a

wide range of residential units will extend and enrich the life of the downtown and serve to make it a more attractive place for residents, employees, and visitors alike. Toward this objective, the following housing policies were established by Vision Santa Cruz in its "First Principles" document and are supported by the Plan:

a. A mix of housing should be developed, including development of new housing areas and a variety of types (apartments, condominiums, SRO's) serving a range of needs and income groups. No one housing type should predominate.

b. The City's current 15 percent affordability requirement should be maintained.

c. Numeric goals for housing should be established for types, market served, and locations which are achievable and take into account costs and feasibility. Specific locations should be evaluated for housing potential including Pacific Avenue, South of Laurel and along the San Lorenzo River, adjacent to the parking lots at the north east corner of Soquel Avenue and Front Street.

d. Housing in the downtown should be well designed, well maintained, and well managed in order to fit well in the new downtown fabric.

e. Reconstructed post-Loma Prieta earthquake SRO housing should be retained.

General Plan 2030

In November of 1990, the City Council adopted a High Density Overlay Zone (HDO) for the Pacific Avenue corridor between Water and Elm Streets, which provided density bonuses for residential development within commercial mixed-use projects. This overlay district became obsolete with the adoption of the General Plan 2030 in 2012. The Regional Visitor Commercial land use designation (applicable to downtown) includes new floor area ratio (FAR) ranges that supersede the HDO district.

Downtown Plan Housing Policies

a. The Downtown Plan reconfirms housing as a permitted upper-level use throughout the downtown and introduces the potential for ground-level residential (e.g., townhouses) on the east-west streets west of Cedar Street and along Center Street.

b. The Plan reconfirms the density provisions of the ordinance, and provides for more detailed height and massing criteria and design guidelines for housing within each subdistrict of the downtown.

c. The Downtown Plan identifies the area along the San Lorenzo River, east of Front Street between Soquel Avenue and Laurel Street, and the properties at the

north east corner of Soquel Avenue and Front Street as areas where upper-level housing is encouraged as the primary use of any redevelopment project that occurs. This provision recommends that at least 60 percent of the square footage within these projects (not including parking) be devoted to housing.

d. The Downtown Plan supports the retention of all SRO housing units reconstructed after the Loma Prieta earthquake. The Downtown Plan further recommends that additional SRO projects dispersed throughout the downtown and that individual development not exceed 60 units without City Council approval, to avoid the creation of a single district that will dominate other critical activities within the area.

e. Although the area south of Laurel Street is beyond the boundaries of the Downtown Plan, the Beach/South of Laurel Plan recognizes the great potential for this area to be redeveloped as an in-town neighborhood that: supports the downtown as a mixed-use district; extends the existing pattern of residential uses from Beach Hill and the downtown neighborhoods; takes advantage of the amenity of the river; and creates a more positive activity linkage between the downtown and the Beach.

f. All residential projects within the downtown must meet off-street parking requirements of the zoning ordinance, unless they are situated within the parking district, in which case they shall adhere to the requirements of the district.

g. Beyond regulatory requirements, a comprehensive housing implementation strategy should be established to develop a feasible program for the delivery of market-rate and affordable housing units in the downtown. Measures could include developer incentives such as land write-downs, public participation in financing, parking reductions and direct subsidies, as appropriate. Exactions on commercial developers for the provision of residential units are not recommended.

Office

Historically, downtown Santa Cruz has served as the principal government, business, and service center for North County. This role has reinforced the significance of the downtown as an important destination and has provided direct support for retailing uses. The Downtown Plan strongly encourages the concentration and intensification of office uses within the downtown, where employees can best take advantage of existing and future transit service, where broader environmental objectives related to the improvement of air quality and transportation can be best served, where additional employees can contribute to the creation of an active and viable urban center, and where they can be best served by downtown retail activities.

Office Policies

The Downtown Plan recommends the following land use policies as a means of reinforcing the downtown as the principal office and employment center in the city and region:

a. Office use should be a permitted upper-level use throughout the downtown, except in the designated areas where residential is a required upper-level use.

b. Major speculative office development projects (e.g., greater than 10,000 square feet) that would be an appropriate downtown use should be discouraged in other parts of the City.

c. The City and Parking District No. 1 should coordinate with office developers for the provision of convenient off-site parking that can meet private requirements as well as public objectives for well-designed centralized parking facilities.

A. ALL CENTRAL BUSINESS DISTRICTS LAND USES

All new construction shall require approval of a Design Permit, regardless of type of use.

1. Prohibited Uses

The uses described in subsection (a) below, are deemed inconsistent with the goals, policies and objectives of the Downtown Plan and are, therefore, prohibited within the Downtown Plan (Plan) portion of the Central Business District as either a stand-alone use or an accessory or temporary use. Such uses that lawfully existed within the Plan area prior to the adoption of this provision are deemed non-conforming and may continue only at the same location at the same intensity or less for a period of no more than 20 years from the effective date of the Zoning Ordinance amendment (October 10, 2000), after which time the use shall be completely removed or converted to a conforming use. The uses described in subsection (b) below shall be deemed a public nuisance and shall be immediately abated according to the provisions of the Zoning Ordinance or other applicable City Codes or Ordinances.

Uses that are prohibited within any of the Downtown Plan subdistricts.

a. Uses not permitted include, but are not limited to, the following: medical and recreational cannabis provider dispensaries; rent, sales or service of automobiles, trucks, recreational vehicles, motorcycles or trailers; sale of firearms; general advertising signs; sale of alcoholic beverages for off-site consumption requiring ABC liquor license Numbers 20 or 21 (liquor stores), with the exception of the sale of alcohol for off-site consumption that is clearly incidental to other principally permitted uses, that represents less than fifteen percent of the total shelf space in the business, and that complies with the operational criteria specified in Table 4-1 of Chapter 4, herein, inclusive of the additional regulations referenced in said table; drive-up facility; or drive-through facility.

b. Nuisance Activities. No use, even though listed as a permitted use or otherwise allowed, shall be permitted which, by reason of its nature or manner of operation, is deemed by the Zoning Administrator to be creating a condition that is hazardous, noxious, or offensive through the emission of odor, fumes, smoke, cinder, dust, gas, vibration, glare, refuse, water-carried waste, or excessive noise. Such use shall be subject to violation abatement procedures, which may result in revocation of the use permit.

2. Accessory Uses

Accessory uses, as defined in Section 24.22.013 of the Zoning Ordinance, shall be limited to the use of no more than one quarter (¼) of the total floor area occupied by the permitted use.

3. Temporary Uses

Temporary uses, as defined in Section 24.22.879 of the Zoning Ordinance, shall be limited to the following activities and standards:

a. The following activities if they are sponsored by a government entity or an organized group of businesses, property owners or residents of the CBD:

   i. Neighborhood, District or Citywide-oriented carnival, circus, street fair, exhibition, celebration or festival;
   ii. Booth for educational, charitable, patriotic or welfare purposes;
   iii. Open air sale of agricultural products, including seasonal decorations.
   iv. Open air sporting event;
   v. Arts or crafts sale or artistic performance event; or
   vi. Surface parking open to the public.

b. The following activities if they secure the proper permits, if applicable, from City agencies: Parades, civic events, and advertised citizen gatherings.

TABLE 4-1: Central Business Districts Use Allowances — Ground Floor (Street Level)

P = Principally Permitted
A = Administrative Use Permit
S = Special Use Permit
"—" = Not Permitted

Use Categories	*Pacific Avenue Retail*	*Front Street Riverfront*	*Cedar Street Village*	*North Pacific*	*Additional Regulations*
Residential					
Community Care Residential Facility	—	—	P/A	—	(1)
Dwellings, Multiple and Townhouse	A	A	A	A	(2)
Dwellings, One-Family & Two-Family	—	—	P	—	(2)
Dwellings, Small Ownership Housing	A	A	A	A	(2)
Dwellings, SRO Single Room Occupancy Housing	A	A	A	A	(2)
Family Day Care Homes, Small	—	P	P	P	(1)
Family Day Care Homes, Large	A	A	A	A	(1)
Supportive and Transitional Housing	A	A	A	A	(1)

TABLE 4-1: Central Business Districts Use Allowances — Ground Floor (Street Level)

P = Principally Permitted
A = Administrative Use Permit
S = Special Use Permit
"—" = Not Permitted

Use Categories	*Pacific Avenue Retail*	*Front Street Riverfront*	*Cedar Street Village*	*North Pacific*	*Additional Regulations*
Commercial					(3)
Banks and Financial Institutions	A	P	A	P	(4)
Business Support Services	A	P	P	P	
Eating and Drinking Establishments					
- Bar, Tavern	A	A	S	A	(5)
- Brewpubs	A	A	A	A	(5)
- Bona Fide Restaurant	P	P	P	P	(5)
- Tasting Rooms	A	A	A	A	
- Breweries, Distilleries and Wineries	A	A	A	A	(6)
General Market	P/A	P/A	P/A	P/A	(7)
Hotels / Motels	A	P	A	P	(8)
Instructional Services - Schools, Business and Technical	A	A	A	A	(9)
Live/Work Quarters	A	A	A	A	(10)
Nightclubs and Live Entertainment	S	S	S	S	(11)
Offices, Professional	A	A	A	P	(12)
Parking Facilities, Surface and Structured	A	A	A	A	(13)
Personal Services					
- General Personal Services	A	A	A	P	(14)
- Health/Fitness Studio	A	A	A	A	(15)
Retail Sales	P	P	P	P	(7), (16)
Theaters/Commercial Entertainment	P	P	S	P	
Thrift Stores/Pawn Shops	S	S	S	S	(17)
Institutional and Community Facilities					(3)
Community/Religious Assembly	A	A	A	A	
Day Care Centers	A	A	A	A	
Government Buildings	P	P	P	P	
Medical Centers and Clinics	A	A	A	A	(12)
Museums/Galleries/Cultural Institutions	A	A	A	A	(18)
Social Service Centers	A	A	A	A	
Other Similar Uses as Determined by the Zoning Administrator to be consistent with the purpose of the subdistrict	P/A/S	P/A/S	P/A/S	P/A/S	

Additional Regulations – Ground Floor Uses.

(1) Community Care Residential Facilities. Facilities with fewer than 7 persons are principally permitted uses in the Cedar Street Village District. Facilities with 7 or more persons require approval of an Administrative Use Permit (AUP). Supportive and Transitional Housing facilities are allowed with only those restrictions that apply to similar residential uses.

(2) Multi-Family Housing. (Including Single-Room Occupancy projects subject to standards set forth in 24.12.) In all districts where multi-family housing requires an AUP, common residential lobbies for upper-level residences are allowed at ground level with active ground level common spaces publicly visible. Within the Cedar Street Village, ground-level residential uses are permitted on the side streets west of Cedar Street and along Center Street. Direct access between individual townhouse units and the street are strongly encouraged through the use of porches and front "stoops". In the Front Street/Riverfront Corridor and North Pacific Area, the first floor of units shall be elevated above the sidewalk level 5 feet. For Front Street/Riverfront Corridor, allow for ground level residential uses provided that such uses are internal to a block and do not face Front Street, Laurel Street, Cathcart Street, Soquel Avenue, River Street, North Pacific, or any public pedestrian paseo or lane. Individual housing unit entrances with direct access to Front Street are prohibited within 60 feet of Front Street from Soquel Avenue and Laurel Streets and along the frontages of public passageways between Front Street and the Riverwalk.

(3) Commercial and Non-Residential Uses. These uses adjacent to public passageways in the Front Street/Riverfront Corridor shall be accessible from Front Street and the Riverwalk.

Large Non-Residential Ground-Level Uses. These uses exceeding sixteen thousand (16,000) gross square feet per single-tenant/establishment require approval of a Special Use Permit (SUP) by the City Council after review and recommendation by the Planning Commission. In addition to the findings for SUP issuance required under Section 24.08.050, a SUP required by this subsection shall not be issued unless the following additional criteria, findings and conditions related to the public benefits provided by the proposed project are made by the City Council.

a. The use adds a desired, “targeted” business to the Downtown, which would serve to diversify the Downtown Plan area ground-level business base;

b. The use provides a public benefit and contributes to an appropriate balance of local or non-local businesses. For the purposes of this finding, it shall be presumed that local businesses serve to sustain the authenticity and unique retail character of the downtown business mix. However, non-local businesses may add to retail draw and contribute to overall downtown vitality in certain circumstances;

c. The use contributes to an appropriate balance of small, medium and large-sized businesses in the downtown area to diversify the ground-level business mix; to insure the maintenance of the “Santa Cruz” identity, unique character and authenticity; to seek to reduce economic “leakage” of sales out of the City and County; and to induce local investment and employment to the downtown area;

d. The design of the façade of the proposed use meets the design standards and guidelines of the Downtown Plan and is not restricted by corporate standardized or trademarked exterior design, signage, materials, color or other visual treatments;

e. The proposed use would be a good neighbor and contribute to the community life of the downtown by participating in such community activities as: (1) Membership in downtown merchant, resident, neighborhood improvement organizations and/or assessment districts; (2) to the greatest extent feasible, hiring local residents; and (3) hosting or participating in downtown festivals, fairs, benefit events and similar neighborhood activities; and

f. If applicable, all food and/or beverage service activities shall be conducted in accordance with the following "good neighbor operating procedures" for such uses.

   i. Sufficient trash and recycling receptacles shall be provided and shall be regularly maintained;
   ii. All debris boxes shall be screened and kept on the premises in a designated or approved location;
   iii. The operator shall be responsible for cleaning the sidewalk within fifty (50) feet horizontal distance from the premises during the hours of operation to maintain the sidewalk free of paper, spillage or other litter; and
   iv. Noise, glare and odors shall be contained within the premises so as not to be a nuisance to neighbors. Under no circumstance shall the ventilation outlets or motors cause emission of objectionable odors or noise directed toward neighbors.

(4) Banks and Financial Institutions. These uses may be allowed when there is no other bank within the contiguous block.

(5) Eating and Drinking Establishments. All uses within this category shall be subject to City and State alcohol regulations. When applicable, all fast food and/or beverage establishments (defined in the Zoning Ordinance) shall be conducted in accordance with the "good neighbor" operating procedures listed in Section 3.f.

(6) Breweries, Distilleries and Wineries. These manufacturing uses are allowed in these districts only when they contain at least 25% of floor area devoted to retail and/or tasting of the product manufactured on the premises. Street-oriented active store frontage is required.

(7) Sale of Alcohol for Offsite Consumption. Retail establishments with the Department of Alcoholic Beverage Control license numbers 20 and 21 including general markets may sell alcohol for offsite consumption with approval of an administrative use permit if the sale of alcohol is clearly incidental to other principally permitted uses and represents less than fifteen percent of the total shelf space in the business; the business conforms with Section 24.12.1106(10) of the Santa Cruz Municipal Code; the hours of alcohol sales are limited to 7:00 a.m. to 12:00 a.m.; security mitigations approved by the Police Department to help prevent theft and sale of alcohol to minors, including but not limited to the potential for requiring alcohol to be located where it can be monitored by store personnel or security cameras, are provided; and single-serving alcohol containers other than beer are not provided for sale. This exception to the prohibition on single-serving alcohol containers does not include malt liquor, which remains prohibited.

Existing businesses that were approved to sell alcohol for offsite consumption prior to the enactment of the operational criteria are not required to obtain new administrative use permits but are required to comply with the operational criteria by October 10, 2020.

If the sale of alcohol for offsite consumption use is determined by the Planning or Police Departments to be a nuisance or to otherwise frustrate the intent of the Downtown Plan, the City may initiate proceedings to revoke to the right to sell alcohol per Section 24.12.1112 and Title 4 of the Santa Cruz Municipal Code.

(8) Hotels/Motels. These uses are allowed as principally permitted uses along the east side of Front Street. No hotel rooms are allowed along the ground level frontages or along the Riverwalk level frontage.

(9) Instructional Services - Schools, Business and Technical. Schools and studios for arts and crafts, photography, music and dance provided that such establishments are not located along Pacific Avenue frontage or east-west street frontage. A Special Use Permit is required (1) when located along Pacific Avenue frontage or (2) if located along east-west street frontage, provided the following conditions are met:

a. Any such establishment will not occupy more than 50 linear feet of frontage space;

b. Such establishment is compatible with nearby residential uses;

c. Such space is in compliance with the storefront and façade design and development standards; and

d. Such space is capable of being converted into retail use in the future.

(10) Live/Work Quarters. The residential component of a Live/Work space shall not be located on the ground level, unless the residence is located in the interior of the lot; i.e., the non-residential component of the space must have frontage on the public right-of-way or publicly accessible passageway. The non-residential component of the space must have a minimum frontage depth of 30 feet.

(11) Nightclubs, Establishments Providing Live Entertainment. These uses with stage/performance areas greater than 80 square feet or permitting dancing, and establishments serving alcoholic beverages not ancillary to food service will be considered for the ground level, subject to the following operating conditions:

a. Acoustical studies indicating that such uses can achieve the City's existing noise abatement standards;

b. The provisions of Part 12 of the Zoning Ordinance (for High Risk or Low Risk Alcohol Outlets) are met;

c. The establishments shall be conduct business in accordance with the following “good neighbor operating procedures” as described in Section 3.f above.

d. The storefront adjacent to the street is designed in compliance with the storefront and building façade standards and guidelines and includes active people-oriented activities of visual interest to the pedestrian (e.g., food service/restaurant seating,

retail frontage, queuing areas or art work) and in no case shall the storefront occupy more than 50 linear feet of street frontage;

e. Such establishments are compatible with adjacent residential uses; and

f. Such space is capable of being transformed into retail use in the future.

(12) Medical Centers/Clinics and Professional Offices. Professional, editorial, real estate, insurance and other general business offices including space for non-profit organizations; medical and dental offices; and medical, optical and dental clinics will be considered for the ground level subject to the following criteria. These uses:

a. Are prohibited along Pacific Avenue frontage (75 feet perpendicular to Pacific frontage property line and within 40 feet perpendicular to the east-west street property line), except when limited to interior ground floor space not fronting the street.

b. Must be compatible with existing and planned ground-level and upper-level permitted uses; and

c. Must be in compliance with the storefront and building façade guidelines and standards, and capable of being transformed into retail use in the future.

(13) Parking, Surface or Structured. Allow for the use of parking lifts within the required envelope of any parking garage. See subdistrict development standards for other specific parking criteria.

(14) Personal Services. Uses such as barber shops, laundry and clothes cleaning establishments; administrative, executive and financial services; and technology-related services are allowed with an AUP for the ground level in the Pacific Avenue Retail district and by right in the other subdistricts if it can be demonstrated that:

a. Such establishments are not located along Pacific Avenue frontage or along east-west street frontage (75 feet perpendicular to Pacific frontage property line and within 40 feet perpendicular to the east-west street property line) from Water Street to Laurel Street and are, therefore, limited to the interior ground floor space. This requirement may be met within the business establishment by providing a retail use in the front 40 feet of the space, with the personal service use provided in the area beyond that 40 feet of retail space. Businesses that can provide a retail use in the front but cannot meet the 40-foot requirement may apply for an administrative use permit for alternate space design provided that: 1) the business can demonstrate that there is a physical difference in the space that dictates the need for the exception, or 2) the business would contribute to the overall character and mix of uses in the downtown and would be expected to create a significant local or regional draw to the downtown.

b. Such establishments are compatible with existing and planned ground-level and upper-level permitted uses; and

c. Such establishments are in compliance with the storefront and building façade guidelines and standards, and capable of being transformed into retail use in the future without extensive remodeling.

(15) Health and Fitness Studios. These uses will be considered for ground-level use, provided that:

a. The storefront adjacent to the street is designed in compliance with the storefront and building façade standards and guidelines and active people-oriented uses are located adjacent to the street (e.g., retailing component);

b. In no case shall the storefront occupy more than 50 linear feet of street frontage;

c. Such establishments are compatible with adjacent residential uses; and

d. Such space is capable of being transformed into retail use in the future.

(16) Retail. The store space along the frontage of North Pacific Avenue, River Street and Water Street shall have the minimum perpendicular depth of forty (40) feet; however, such use may vary in depth along these streets provided that each street maintains an average retail depth of twenty five (25) feet.

(17) Thrift Stores or pawn shops. These uses are prohibited along Pacific Avenue frontage (75 feet perpendicular to Pacific frontage property line and within 40 feet perpendicular to the east-west street property line).

(18) Art Galleries and Museums. These uses shall be open to the public.

TABLE 4-2: Central Business Districts Use Allowances — Upper Floors (Includes Riverwalk Level)					
P = Principally Permitted A = Administrative Use Permit S = Special Use Permit "—" = Not Permitted					
Use Categories	*Pacific Avenue Retail*	*Front Street Riverfront*	*Cedar Street Village*	*North Pacific*	*Additional Regulations*
Residential					
Community Care Residential Facility	—	—	P/A	—	(1)
Dwellings, Multiple and Townhouse	A	A	A	A	(2)
Dwellings, One-Family & Two-Family	—	—	P	—	(2)
Dwellings, Small Ownership Housing	A	A	A	A	(2)
Dwellings, SRO Single Room Occupancy Housing	A	A	A	A	(2)
Family Day Care Homes, Small	—	P	P	P	(1)
Family Day Care Homes, Large	A	A	A	A	(1)
Supportive and Transitional Housing	A	A	A	A	(1)
Commercial					
Banks and Financial Institutions	A	P	A	P	
Business Support Services	A	P	P	P	
Eating and Drinking Establishments					
- Bar, Tavern	A	A	S	A	(3)
- Brewpubs	A	A	A	A	(3)
- Bona Fide Restaurant	P	P	P	P	(3)
- Tasting Rooms	A	A	A	A	(3)
- Breweries, Distilleries and Wineries	A	A	A	A	(6)
General Market	P	P	P	P	
Hotels/Motels	A	P	A	P	(4)
Instructional Services - Schools, Business and Technical	A	A	A	A	(5)
Live/Work Quarters	A	A	A	A	
Nightclubs and Live Entertainment	S	S	S	S	(7)
Offices, Professional	P	P	P	P	(8)
Parking Facilities, Surface and Structured	A	A	A	A	(9)
Personal Services					
- General Personal Services	P	P	P	P	
- Health/Fitness Studio	A	A	A	A	(10)
Retail Sales	P	P	P	P	(11)
Theaters/Commercial Entertainment	P	P	S	P	
Thrift Stores/Pawn Shops	S	S	S	S	

Institutional and Community Facilities					(3)
Community/Religious Assembly	A	A	A	A	
Day Care Centers	A	A	A	A	
Government Buildings	P	P	P	P	
Medical Centers and Clinics	A	A	A	A	(8)
Museums/Galleries/Cultural Institutions	A	A	A	A	(12)
Communication Facilities	P	P	P	P	(13)
Industrial and Other					
Artist Studio	A	A	A	A	
Bakery, microbrewery, handicrafts or similar light manufacturing and assembly use associated with retail sales/services	A	A	A	A	
Other Similar Uses as Determined by the Zoning Administrator to be consistent with the purpose of the subdistrict	P/A/S	P/A/S	P/A/S	P/A/S	

Additional Regulations – Upper Floor Uses.

(1) Community Care Residential Facilities. Facilities with fewer than 7 persons are principally permitted uses in the Cedar Street Village District. Community Care Residential Facilities with 7 or more persons require approval of an AUP. Supportive and Transitional Housing facilities are allowed with only those restrictions that apply to similar residential uses.

(2) Multi-family Housing. Development projects containing up to 60 units in size are principally permitted uses. Residential uses shall incorporate sound attenuation space planning designs and construction materials and methods such that noise from nearby commercial activities do not unduly disturb occupants of new dwelling units. Residential development exceeding 60 units will be considered with a Special Use Permit if it can be demonstrated that such a development includes a mixture of unit types (e.g., variety of unit sizes) that will be attractive to a wide range of potential residents. Single-Room Occupancy projects require approval of an AUP and are subject to 24.12.1000 et seq. Single-Room Occupancy projects exceeding 60 units require approval of City Council. For properties east of Front Street between Soquel Avenue and Laurel Street, housing is a priority use and shall be at least 60% of the total floor area of the project. This requirement does not apply to properties within 75 feet of Laurel Street or Soquel Avenue.

(3) Eating and Drinking Establishments. All uses within this category shall be subject to City and State alcohol regulations. When applicable, all fast food and/or beverage establishments (defined in the Zoning Ordinance) shall be conducted in accordance with the previously described "good neighbor operating procedures" previously described in section 3.f. of the Ground Floor Uses. Eating and drinking establishments are encouraged on the Riverwalk level to publicly activate the Riverwalk and connections to the Riverwalk and east/west publicly accessible spaces in the Pacific Avenue Retail District. Outdoor rooftop dining is allowed when associated with an upper level restaurant/eating and drinking establishment.

(4) Hotels/Motels. These uses are allowed as principally permitted uses along the east side of Front Street. No hotel rooms are allowed along the ground level frontages or along the Riverwalk level frontage.

(5) Instructional Services - Schools, Business and Technical. Schools and studios for arts and crafts, photography, music and dance provided that such establishments are compatible with nearby residential uses.

(6) Breweries, Distilleries and Wineries. These manufacturing uses are allowed in these districts only when they contain at least 25% of floor area devoted to retail and/or tasting of the product manufactured on the premises.

(7) Nightclubs, Establishments Providing Live Entertainment. These uses with stage/performance areas greater than 80 square feet or permitting dancing, and establishments serving alcoholic beverages not ancillary to food service, are subject to the following operating conditions:

a. Acoustical studies indicating that such uses can achieve the City's existing noise abatement standards;

b. The provisions Part 12 of the Zoning Ordinance (for High Risk or Low Risk Alcohol Outlets) are met;

c. All such establishments are conducted in accordance with the previously described "good neighbor operating procedures"; and

d. Such establishments are compatible with nearby residential uses.

(8) Medical Centers/Clinics and Professional Offices. Professional, editorial, real estate, insurance and other general business offices including space for non-profit organizations; medical and dental offices; and medical, optical and dental clinics will be considered for upper levels subject to the following criteria. These uses must be compatible with existing and planned ground-level and upper-level permitted uses.

(9) Parking, Surface or Structured. Allow for the use of parking lifts within the required envelope of any parking garage. See subdistrict development standards for other specific parking criteria.

(10) Health and Fitness Studios. These uses will be considered for upper level use, provided that such establishments are compatible with adjacent residential uses.

(11) Retail Sales. In the Pacific Avenue Retail District, second level retail sales are allowed subject to the approval an Administrative Use Permit when the second level is connected to the same business on the ground floor, subject to being compatible with and minimizing impacts to nearby residents. Riverwalk retail is allowed subject to the approval of an Administrative Use Permit to publicly activate the Riverwalk. Retail space should be evaluated in the context of adjacent projects to ensure uses are compatible, active and enhance the Riverwalk.

(12) Art Galleries and Museums. These uses shall be open to the public.

(13) Communication Facilities. Uses are subject to the regulations in Part 15 of Chapter 24.12.

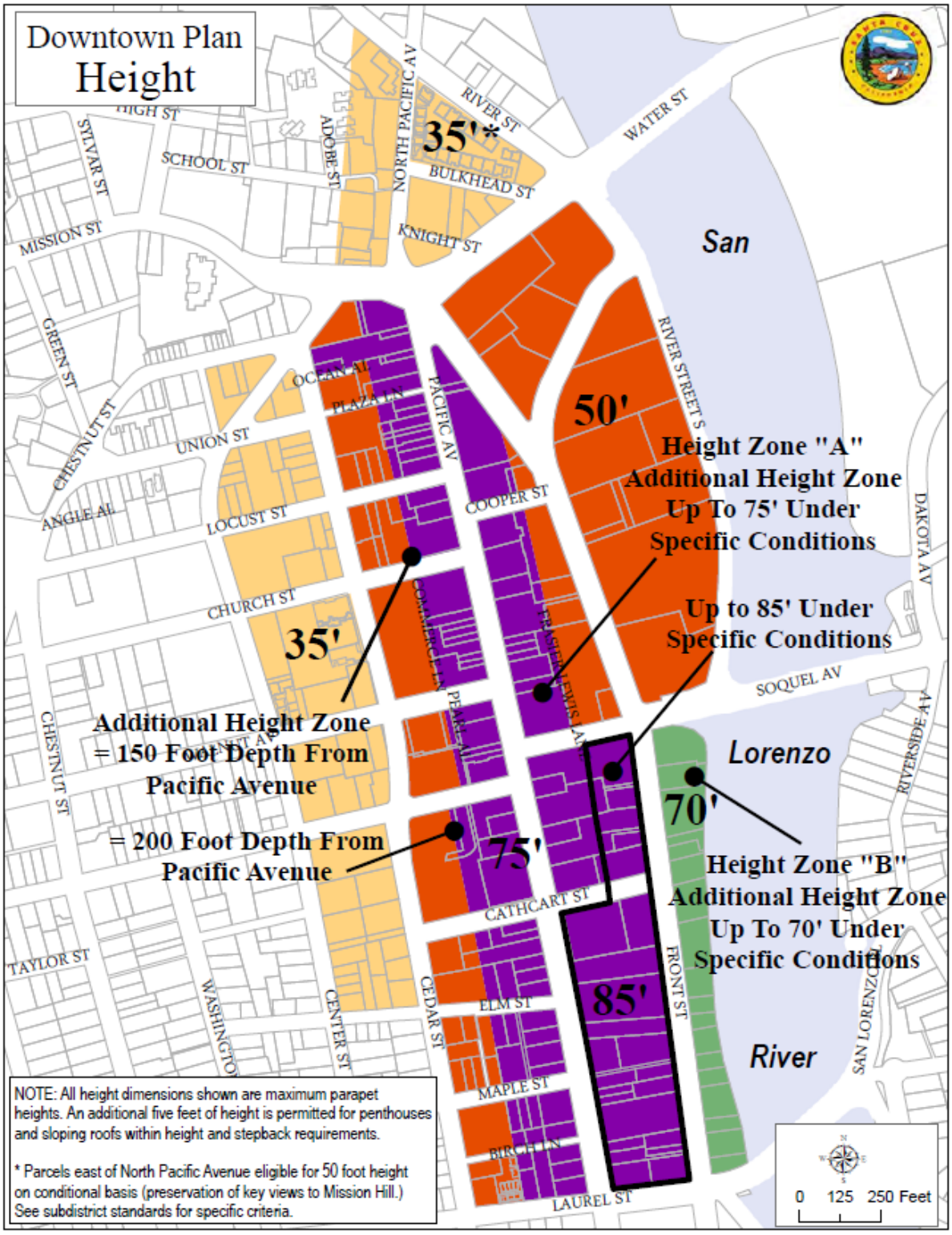


Figure A-1: Downtown Plan Height

B. PACIFIC AVENUE RETAIL DISTRICT DEVELOPMENT STANDARDS

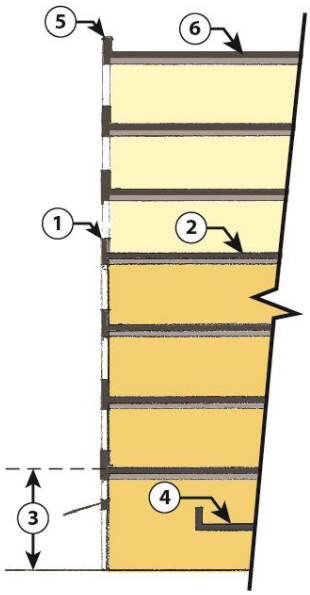
1. Building Height

The following height standards shall apply to all development within the Pacific Avenue Retail District, including frontage along Pacific Avenue and the east-west streets within the subarea. All buildings must conform to the Base Height requirements, except for provisions for additional height within the "Additional Height Zone A". The intent of the standards is not to create a five-story downtown, but rather to preserve the overall character and scale of the historic core while allowing some intensification and increased height on larger parcels.

a. Floors. No new building shall be less than two stories in height. The second story shall be at least 50 percent of the first floor area and shall be located toward the street frontage. An exception may be made for building recessed breaks as described for the Additional Height Zones.

b. Floor-to-Floor Height. The first floor uses must have a minimum floor-to-floor height of 18 feet for properties north of Cathcart Street and 15 feet minimum south of Cathcart Street. Any mezzanine shall be set back at least 30 feet from the building line on the street and shall occupy no more than one-third of the area of the first floor.

c. Base Height and Floors. No new development shall exceed a Base Height of 55 feet (measured to the top of parapet or eaves), except as provided for in the "Additional Height Zone A". Within this Base Height, no more than 3 floors of upper-level uses above the ground-level retail use will be permitted within the maximum 55 feet Base Height. (See Figure B-1.)



COMMERCIAL OR MIXED-USE

BASE HEIGHT

1. Maximum 55' to top of parapet
2. Maximum 3 floors of commercial or residential above 1 level of commercial
3. Minimum 15' ground level floor-to-floor dimension (South of Cathcart)
   Minimum 18' ground level floor-to-floor dimension (North of Cathcart)
4. Maximum mezzanine area = 33% of ground level floor area

ADDITIONAL HEIGHT ZONE A

5. Maximum 75' to top of parapet for 60% of site area on sites 15,000 to 50,000 sf;
   Maximum 85' to top of parapet for 20% of site area for sites >50,000 sf
6. Maximum 6 floors of commercial or residential above 1 level of commercial *

**Within the massing and stepback requirements for additional height.*

Figure B-1: Maximum Building Heights and Floors.

d. Mechanical Penthouses. Uninhabitable mechanical penthouses will be permitted above the Base Height to a maximum height of 65 feet, provided that such penthouses are set back a minimum of 15 feet from any exposed face of the buildings, unless such penthouses are architecturally integrated into the building façade design.

e. Sloping Roofs. (45 degrees/1:1 pitch or flatter) shall be permitted up to a maximum height of 60 feet, measured to the top of the sloping roof. For projects not eligible for the Additional Height, street wall heights shall not exceed the base height limit of 55 feet.

f. Visual Impact Study. Any site that is located where the east-west street does not cross Pacific Avenue (sites with frontage on Locust, Church, Walnut, Lincoln, Soquel, Elm and Maple Streets) must prepare a visual impact study to determine how the proposed building would be viewed from the east-west street from a pedestrian eye-level.

2. Build-to Lines and Setbacks

To ensure that Pacific Avenue and the east-west streets are spatially well defined, all development shall be built to the property line of the street. The following exceptions to this condition are noted:

a. Active Outdoor Uses. Setbacks of up to 12 feet in depth are permitted along the northern property line of Cathcart Street, if such setbacks are intended to provide active outdoor uses (e.g., outdoor dining or public seating) oriented to the street.

b. Laurel Street Sidewalk. Require any development along Laurel Street between Pacific Avenue and Front Street to dedicate sufficient property to result in a sidewalk depth of at least 12 feet. The precise dedication shall be consistent with the final Laurel Street design and shall be established with a build-to line.

c. Front Street Sidewalk. Require any development along the west side of Front Street between Cathcart Street and Laurel Street to dedicate sufficient property to result in a sidewalk depth of at least 12 feet.

d. Recessed Storefronts. Minor ground-level storefront setbacks are permitted within the provisions of the storefront and building façade standards and guidelines. Recessed storefronts up to six feet in depth and twenty-five feet in length may occur where a designated outdoor use, such as an outdoor café, is an integral part of the retail business.

3. Public and Private Parking Facilities

The Pacific Avenue Retail District is within the Downtown Parking District #1 and, as such, shall comply with all parking requirements set forth within that district. On-site parking will not be permitted unless it meets one or more of the following conditions:

a. Below Grade Parking and Access Driveways. Parking is provided completely below grade, and access driveways to the parking facility do not conflict with the

movement of pedestrians or vehicles within the area. No driveways shall be permitted along Pacific Avenue.

b. Visual Screening. Surface or above-grade structured parking can be provided if the parking is visually screened and separated from Pacific Avenue and east-west streets by retail development and if such parking can be accessed from an east-west street or rear service lane.

c. West Side Front Street. Allow parking facilities along the west side of Front Street south of Soquel Avenue where only one driveway curb cut shall be permitted per facility per street frontage; the parking facility shall not extend to street corners; and the parking facility shall be architecturally integrated within the overall building composition.

4. Driveways and Curb Cuts

Limit on-site driveways along Front Street to a maximum of one driveway per property or at a spacing of at least 200 feet; driveways should be no more than 24 feet in width and to the extent practicable should be spaced from an adjacent driveway by at least 200 feet Wider driveways may be considered based on a demonstrated need to accommodate specific vehicle operations of a proposed development..

5. Special Conditions for Maple Street Fronting Parcels 005-152-08, 005-152-17, 005-152-18, and 005-152-22.

Buildings fronting the 10-foot Maple Street alley between Pacific Avenue and Front Street shall be set back 20 feet to provide for a 50-foot wide public paseo, lane or street. If the above aggregated parcels are redeveloped together, the aggregated parcel size prior to the dedication exceeds the 15,000 square feet threshold to qualify for heights above the 55 foot base height, and shall be developed in conformance with the Additional Height Zone A performance standards. As a result of the required dedication, development on these aggregated parcels shall not be required to provide on-site parking. Developers of the aggregated parcels may pay parking fees to the Downtown Parking District in lieu of meeting the on-site parking requirements. A parking credit shall be applied to the project based on the amount of land dedicated to the City to expand the alley.

6. Special Conditions for Elm Street Pedestrian Connection (Parcel 005-152-31, 005-152-30, 005-152-05, 005-152-32, and 005-152-33).

Development of the above parcels shall include a 30-foot wide publicly accessible pedestrian connection between Pacific Avenue and Front Street. The public passageway shall be located in the vicinity of Elm Street (within approximately 50 feet of Elm Street extension). The passageway shall be integrated into the design of the development.

C. PACIFIC AVENUE RETAIL DISTRICT
BUILDING FAÇADE STANDARDS AND GUIDELINES

The intent of the urban design standards and guidelines for the Pacific Avenue Retail District is to reinforce the unique townscape qualities of the downtown, to introduce diversity and variety that will enhance the visual interest and comfort of the pedestrian, and to extend the landscape qualities of the streetscape into the private realm. The building facades of the downtown have a significant effect on the public identity and character of the downtown and, as such, need to be carefully considered.

1. Building Facades.

   Building facades shall respond to the character and composition of existing commercial buildings along Pacific Avenue. More specifically, facades shall be composed with 3 clearly distinct zones: the storefront, up to 18 feet in height or 15 feet south of Cathcart Street; the upper two to three stories of the facade to the established parapet height (e.g., 55 feet); and the roof and cornice treatment, which includes the visible portions of any additional height permitted above the Base Height of 55 feet. This compositional approach is consistent with the existing building facades along Pacific Avenue, as well as the desire to reinforce the pedestrian realm and avoid the creation of monolithic vertical walls along the street edge. A separation of treatment shall be clearly established between the ground-level storefront and the upper building levels, utilizing a strong belt course or architectural line, and through the specific storefront treatment described below. Similarly, a strong cornice line or roof treatment is encouraged to promote variety and a distinctive silhouette along the street.

2. Adjacent Buildings.

The composition of building facades shall also be considered in relation to adjacent buildings of historic or architectural value. While it is not the intent to maintain a consistent treatment along the street edge, the composition of new development shall seek to be harmonious and compatible with elements of adjacent structures, such as window proportions, the design of horizontal belt courses and cornice treatments, building materials and architectural elements.

3. Upper-Level Facades. (i.e., the two to three levels of building wall up to the 55-foot Base Height)

Upper-level facades shall provide a counterpoint to the storefronts below, and provide a visually interesting and varied edge to the public space of the street. In general, the upper-level façade shall be built to the property line and consist of carefully composed "punctured openings" within a richly detailed wall. A variety of treatments shall be introduced to create richness in both the horizontal and vertical planes, including:

- balconies
- bay windows
- flower boxes
- awnings
- cornice and belt courses, etc.

4. Streetwall.

To create a visually interesting "streetwall" with a rhythm and cadence that is reflective of the pattern of development along Pacific Avenue, building facades shall introduce variation at general intervals of 25 to 50 feet with the use of:

- fenestration,
- architectural elements,
- building materials, and/or
- building planes.

Large, uninterrupted expanses of horizontal or vertical wall surface shall be avoided. Regardless of property lines, the appearance shall be of a street with varying architectural treatments at intervals of no more than 50 to 75 feet. The multiple rhythms shall be created through the careful design of building elements and three-dimensional articulation of building elements sufficient to mitigate the presence of long, blank walls along Pacific Avenue, Front Street and Cedar Street the east-west streets, and the alleys. Elements that make up the rhythmic variation may include, but are not limited to:

- recessed windows;
- projecting windows;
- bay windows;
- structural elements;
- surface textures, patterns and colors;
- trim elements;
- balconies;
- belt-cornices;
- cornices;
- awnings and shutters; and
- landscape elements.

5. Cornices and Belt Courses.

Overhead horizontal projections (providing at least 8 feet of clearance above grade) of a purely architectural or decorative character such as cornices, eaves, sills and belt courses shall define the building elements (base, middle and top) and create three-dimensional interest in the façade, provided that they do not project more than:

a. At roof level, 3feet into the public right-of-way or a designated setback area.

b. At every other level, 1 foot into the public right-of-way or designated setback area.

6. Windows.

Building walls shall be punctured by well-proportioned openings that provide three dimensional relief, detail, interest and rhythmic variation on the facade. Variation in rhythm shall be provided both horizontally and vertically. Large expanses of glass on the upper levels shall be considered only where activities of interest to the pedestrian can be highlighted, and in such cases, the design of these openings shall be carefully integrated

within the overall facade composition. Windows shall be recessed a minimum of six inches from the face of the wall to emphasize the thickness of the wall consistent with the historical, traditional and newer buildings on Pacific Avenue; or windows other than bay windows may project from the wall six inches maximum into the public right-of-way. Windows shall be of high quality and shall be operable at the upper level and composed of elements that emulate the size and detail of the windows on Pacific Avenue. Window moldings and/or shutters with projections up to six inches are encouraged to provide detail, shade and articulation to building facades.

7. Upper Level Bay Windows and Balconies.

Bay or projecting windows and balconies are encouraged and may be permitted on upper levels of buildings, provided that a minimum of 10 feet of clearance is provided to grade and that the following provisions are met:

a. The projection into the public right-of-way or designated setback area is no more than 3 feet; where sidewalks are less than 10 feet in depth, this projection shall be limited to 2 feet; along alleys, no projection shall be closer than 8 feet to the centerline of any alley.

b. The glass area of the bay window, and the open portions of each balcony, shall not be less than 50 percent of the total area of the vertical surfaces of the projection.

c. Bay windows and balconies shall "punctuate" rather than dominate the facade; to this end, the maximum length of bay windows shall be 15 feet at the property line or setback line; this width shall be reduced to a maximum width of 9 feet at the full projection of 3 feet, by means of 45 degree angles at the sides of all projecting bay windows. Perpendicular bay windows and balconies (or projections at a different angle) may be permitted, provided that they remain within the outside dimensions described above. Unless balconies are used as a means of distinguishing the storefront area from the upper-level facades, they shall be generally 15 feet in width or less.

d. The minimum horizontal separation between bay windows, between balconies, and between bay windows and balconies shall be three feet as measured from the face of the building wall along the property line or setback line. A bay window or balcony shall not occur within two feet of the building edge. The intent of this guideline is to ensure that bay windows and balconies do not visually dominate the building wall.

8. Skyline Architectural Variations.

Special attention shall be paid to the articulation of the top portion of buildings such as variation in height, massing, materials, horizontal bands, cornices and parapets. Rooflines shall be broken at intervals no greater than 50 to 60 feet by roof elements or step backs to reinforce the predominant building increment along Pacific Avenue. Interesting and varied roof forms are encouraged. Rooftop equipment shall be completely concealed from view and integrated within the architectural vocabulary of the building. The use of landscaped roof terraces and gardens is also recommended.

9. Building Materials.

To extend the character of the existing downtown, building materials shall evoke honesty and solidity. Stone, brick and stucco, richly detailed to provide visual interest and variation, are encouraged as the predominant building materials. While wood and metal are desirable materials for window casings and trim, large expanses of wood or metal siding are discouraged as the predominant building materials. Such materials are considered appropriate for ornamental elements on the facade. Applied brick tiles that attempt to give the appearance of genuine masonry are also discouraged as the predominant building material. Decorative ceramic tiles are encouraged, however, as accent features. Reflective glass is prohibited.

10. Colors.

Materials shall be relatively light in color. To create a lively visual environment, earth tones, terra-cotta, pastels or whites, accented with dark or bright colors, are recommended. Roofing materials and accenting features such as canopies, cornices, tile accents, etc. shall also offer color variation. The color scheme for the building shall be compatible in color and value with the adjacent structures and shall be compatible with and sympathetic to the overall color palette of the buildings in the block and the downtown.

11. Landscape Provisions.

To promote a unique image and identity of downtown in its coastal setting, buildings shall incorporate provisions for planting, including flower boxes, topiary planting, and climbing vines. Plant materials within the planters, planting beds, flower boxes and flower pots shall provide color and variety throughout the year. The use of artificial plants shall not be permitted.

At least two of the following landscape concepts shall be incorporated into each Pacific Avenue or East-West Streets façade design (or 30 feet of retail frontage). In general, the landscape shall aggregately cover a minimum of 25 percent of the length of the storefront:

a. Landscape setbacks up to 18 inches in depth.

b. Landscape planters recessed into Pacific Avenue sidewalk, up to 18 inches into the public right-of-way.

c. Planter boxes no more than 24 inches in height may be permitted to project into the public right-of-way up to 18 inches. Window boxes also may be permitted to project from bay windows and balconies by 18 inches. Planter and window boxes shall provide internal and concealed drains connected to roof drains to avoid overflow to the street; they shall also be designed with high quality durable materials that are compatible and integral with the building façade.

d. Hanging flower pots may project into the public right-of-way up to 18 inches and shall have a minimum 8-foot clearance within the public right-of-way unless hanging directly above planter boxes.

e. Trellis structures supporting climbing vines that may project up to six inches into the public right-of-way or, where more than eight feet above the sidewalk, may project up to 18 inches into the public right-of-way.

12. Rear Service Alleys.

Upper-level facade treatments adjacent to the rear service lanes shall be consistent in quality and design with treatments adjacent to public streets and rights- of-way. The use of planting (e.g., planter and window boxes, trellises, topiary) on building facades adjacent to the service lanes is particularly encouraged to enhance the visual and pedestrian character of the alley.

13. Exterior Lighting.

Buildings shall provide warm (color temperature equal to incandescent), low-level lighting from sundown to 10:00 PM nightly as an integral part of the façade design to add to the nighttime ambient light level in the downtown and to add nighttime visual interest to the buildings. Accent lighting using warm, low-level energy efficient light sources is encouraged as an integral part of the facade design.

14. Property Line Walls.

Where a building shares a property line with an adjacent property or building, mitigate the potential for large blank walls as follows:

a. Where the adjacent building is lower than the proposed building, the property line wall shall be set back from the property line sufficient to allow windows in the new wall; or

b. The applicant shall seek an easement from the adjacent property owner to allow windows (subject to the future redevelopment of the adjacent property). Mitigation measures shall be incorporated to allow windows under the Building Code.

c. This provision may be modified by the Planning Director, subject to the preparation of a visual computer simulation of the building in context of the building viewed from key points at pedestrian eye level down Pacific Avenue and key intersecting streets.

D. PACIFIC AVENUE RETAIL DISTRICT
STOREFRONT STANDARDS AND DESIGN GUIDELINES

All storefront improvements with an improvement cost of more than $10,000 require a Design Permit. All storefronts in a new building or re-developed building shall conform to the following storefront design standards:

1. Primary Entrance. All buildings with frontage along Pacific Avenue shall have a primary entrance on Pacific Avenue.

2. Blank Walls. All buildings with frontage on Pacific Avenue or the East-West streets shall not have blank walls exceeding ten (10) feet in length. Blank walls shall be mitigated with trellises and/or climbing plants or other architectural or landscape elements.

3. Door Entry Frequency. Establishments with frontage along Pacific Avenue shall provide door entries no further distant than 50 feet along the Pacific Avenue or east-west street frontage.

4. Open Entries to Street. Street front entries shall remain unlocked and unblocked and shall remain in use during store hours.

5. Unique Entrances. The ground floor frontage along Pacific Avenue shall be modulated, articulated, textured, colored and given such other architectural treatment to provide a visually differentiated store "front" every 25 feet.

6. Entrance Design. Storefronts shall incorporate at least two of the following design concepts into the storefront designs.

   a. Bay Windows. Provide bay windows up to 12 feet in length that may project up to 12 inches into the public ROW - where the bay window has glazing on all projecting faces.

   b. Porticos. Provide porticos around the entry door that may project up to 12 inches into the public ROW.

   c. Awnings. Provide awnings that may overhang the sidewalk a maximum of 6 feet with a vertical clearance above the sidewalk between 8 feet and 14 feet.

   d. Marquis. Provide permanent marquis structures or canopies that project from the building at entries (maximum 10 feet in length, minimum height 8 feet above the sidewalk and maximum projection of 6 feet into the ROW).

   e. Signs. Provide decorative signs that project into the ROW per Central Business District sign ordinance.

   f. Glazing. The use of reflective or tinted glass in ground level show windows is prohibited.

g. Store Displays. Store displays shall be configured in such a way as to allow pedestrians to see into the store from the sidewalk. Goods, posters, photos or other visual images shall be placed a sufficient distance from the store windows to enable pedestrians to see clearly into the store.

E. FRONT STREET/RIVERFRONT CORRIDOR DEVELOPMENT STANDARDS AND DESIGN GUIDELINES

1. Height and Stepback Requirements

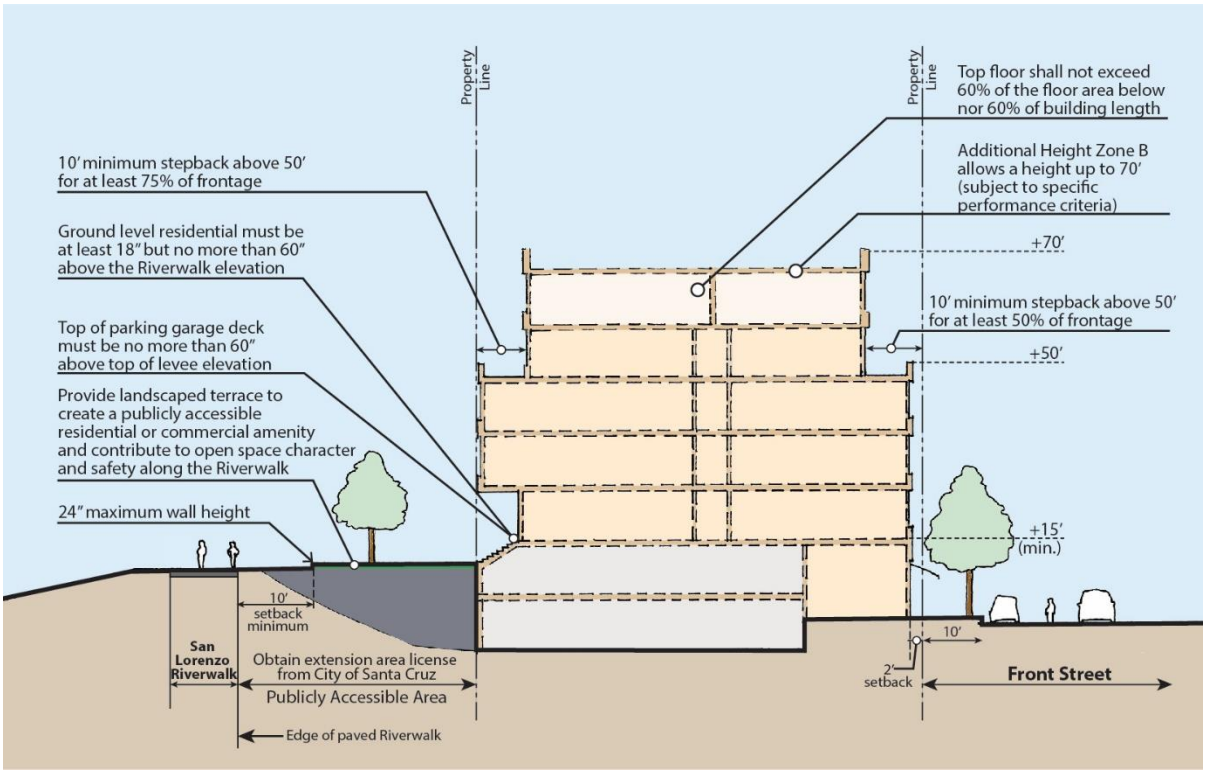


Figure E-1: Proposed base and additional height and stepback requirements along the Front Street/ Riverfront Corridor.

a. Base Height and Floors. No new development shall exceed a base height of 50 feet (measured to the top of parapet or eaves on the highest floor). Within this base height, no more than 3 floors with a mix of uses above the ground-level retail use will be permitted within the maximum base height of 50 feet.

b. Mechanical Penthouses. Uninhabitable mechanical penthouses will be permitted above the base height to a maximum height of 60 feet, provided that such penthouses are set back from the face of buildings by a minimum of 15 feet and that sloping roofs meet the provisions of c. below, unless the penthouse is architecturally integrated into the building facade.

c. Upper Level Stepbacks from Streets and Public Passageways. In order to promote a pedestrian scale, to increase light to the street, and to reduce overall building mass and scale, development above 50 feet in height shall be required to step back from the Front Street façade a minimum of 10 feet. At least 50% of building frontage along Front Street and Soquel Avenue shall step back 10 feet above the height of 50 feet. Buildings adjacent to River Street, east-west streets, and publicly accessible

passageways shall step back at least 10 feet from the street for any height above 35 feet.

d. Upper Level Stepback from River. Along the west side of the Riverwalk, development shall step back 10 feet from the exterior wall face above the 50 foot height level as measured from Front Street sidewalk elevation. Allow up to 25% of the Riverwalk building frontage to encroach into the required 10-foot stepback area to provide for massing variation. (See Figure E-1).

2. Build-to Lines and Setbacks.

In order to promote well-defined streets, development shall generally be required to be built to the property line adjacent to public streets. The following exceptions to this condition are noted:

a. Sidewalk Width. In locations where the sidewalk is less than 12 feet wide, development shall be set back from the property line to create a 12-foot sidewalk. Development along Laurel Street and Front Street shall dedicate sufficient property to result in a sidewalk depth of at least 12 feet. The precise dedication shall be consistent with the final Laurel Street design and shall be established with a build-to line.

b. Gateway Landscaping. New development along Water Street (south side), Laurel Street (north side), and Soquel Avenue shall be set back from the sidewalk by 10 feet to allow for generous gateway landscaping treatment.

c. Building Length. Between Soquel Avenue and Laurel Street, limit the length of individual buildings along Front Street to a maximum of 300 feet of lineal street frontage, subject to the performance criteria for improved public access to the Riverwalk from Front Street at the key connection points of Cathcart Street, near Elm Street and Maple Street. (See Figure E-2)

d. Riverwalk Property Line. No setback from the Riverwalk property line is required.

e. Encroachments. Development along the Riverwalk shall not encroach beyond the property line of the parcel, except in cases where levee-facing "people-oriented" commercial activities incorporate public access points to the Riverwalk. Top floor cantilevered portions of the building are allowed to encroach over the property line a maximum of 5 feet in order to provide architectural interest to the façade. Such cantilevered encroachment over the property line shall not exceed 25 percent of the total building frontage along the riverfront.

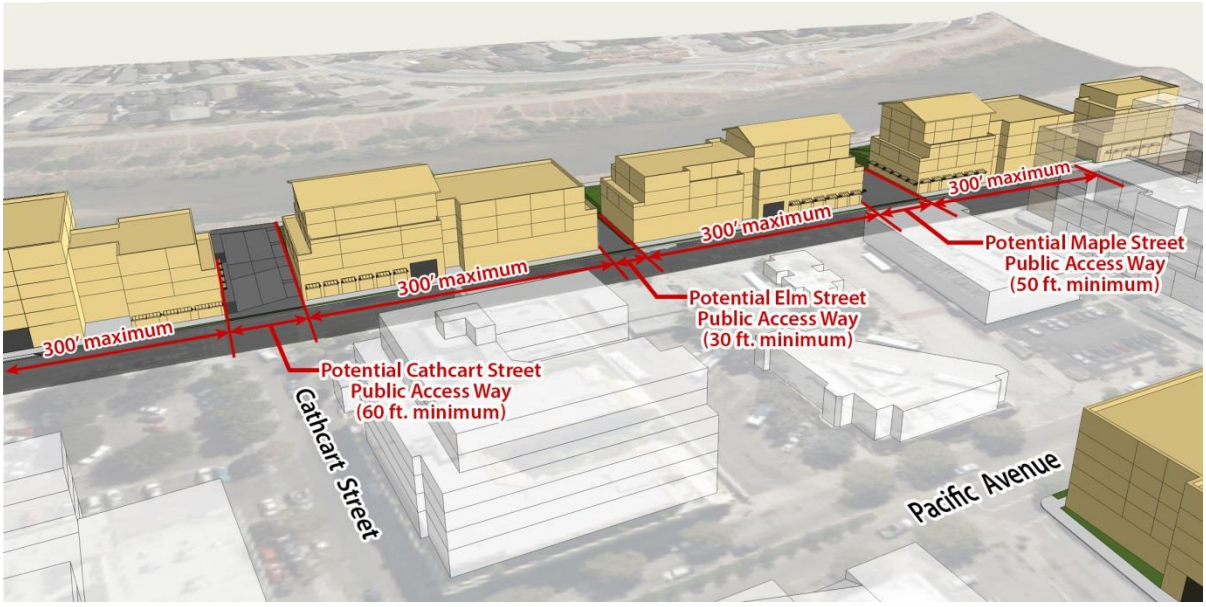


Figure E-2: Proposed building massing and public access requirements along Front Street and the riverfront.

3. Storefront Treatment.

While it is recognized that the Front Street/Riverfront Corridor is less pedestrian intensive than the Pacific Avenue District, the ground-level treatment of commercial buildings and parking structures within the area shall generally comply with those for the Pacific Avenue Retail District in terms of: storefront access, transparency and variation; and the use of awnings and canopies. Special attention shall be given to the treatment of intersections, to reinforce their gateway role to Pacific Avenue and to create a high level of interest and activity along the street.

4. Riverwalk Promenade.

The Riverwalk Promenade is the paved bicycle and pedestrian path on top of the river levee. The interface between the public Riverwalk and the adjacent private development is a vitally important element of the Downtown Plan. As such, all development along the Riverwalk will involve some form of public/private partnership and cooperation. Key performance criteria include:

a. Riverwalk Setback. Residential or outdoor commercial uses adjacent to the Riverwalk shall be no closer than 10 feet from the western edge of the physical walkway, except where "people-oriented" commercial uses incorporate public access points to the Riverwalk.

b. Levee Fill. All development shall fill the western slope of the levee (which may include both public and private property) as directed by the City of Santa Cruz and Army Corps of Engineers to create a level condition between the Riverwalk and the adjacent building. The filled area may terrace up from the maximum 24-inch wall to the finished floor of the development in a way that allows for the outdoor spaces to be publicly accessible. (See Figure E-1.)

c. Retaining Wall at Property Line. Design the wall of the ground level of the building to structurally support fill material, and to provide appropriate under-drainage.

d. Landscaping. Landscaping this private and public space shall incorporate trees and vegetation appropriate to the river environment. Walls along the Riverwalk shall not exceed 24 inches in height and shall be set back from the promenade by at least 10 feet. Other than trees, landscaping shall not exceed 42 inches in height above grade. Trees planted as part of the San Lorenzo Flood Control Improvement Project should be maintained and incorporated into new development where feasible and where not in conflict with the required fill or publicly accessible amenities.

e. Extension Area License Agreement for Public Space. The City shall consider negotiated Extension Area license agreements on the publicly owned land on the west side of the Riverwalk for open space purposes that promote activity and overlook the Riverwalk and river. The publically accessible open space area shall be visually open and accessible from the Riverwalk, but may be delineated with a low fence or hedge no more than 42 inches in height.

f. Commercial Criteria. In the case of commercial development, the area subject to the license agreement may be terraced and shall be designed to accommodate outdoor eating or public seating, and shall be within 24 inches of the Riverwalk elevation.

g. Public/Private Interface. In the case of residential development, the area subject to the license agreement and associated private yard shall be designed as a visually accessible garden space that provides a transition to the public Riverwalk. Residential entrances facing the river shall be elevated at least 18 inches, but no more than 5 feet above the Riverwalk to create privacy and differentiation of public and private spaces.

h. Entrances Along Riverfront. Entries, either to individual residential units or common entrances, or to commercial establishments, shall be provided along the riverfront promenade at intervals no greater than 75 feet.

i. Fencing. Fencing shall be decorative, visually open rail material, creating a visual connection between the private and public spaces.

j. Visually Open Development. Solid vegetation in the form of a visual screen or hedge is prohibited and views to the Riverwalk from private open spaces are required. Line of sight views between the development and the Riverwalk are intended to ensure a safe and interesting environment to joggers, walkers and cyclists.

5. Access to the Riverwalk.

Between Soquel Avenue and Laurel Streets along Front Street, new development shall provide east-west public access between the Riverwalk and the Front Street sidewalk at or near the extension of Cathcart Street, Elm Street and Maple Street Developers of riverfront properties shall be required to physically and/or financially contribute their fair share through conditions of approval, an Improvement District, Development Agreement, or similar

mechanisms to the improvement of these publicly accessible connections. Development shall be consistent with the following performance standards:

a. Publicly Open Passageways. Such access shall be open to the public during daylight hours.

b. Pedestrian Focus. Such publicly accessible connections shall be predominantly pedestrian in nature and located within 50 feet of the Front Street intersections at the terminus of Cathcart Street and the extensions of Maple and Elm Streets. In addition to the pedestrian access, bicycle access shall be provided at the extension of Elm Street, which will serve as the primary bicycle access to the Riverwalk between Soquel Avenue and Laurel Street.

c. Passageway Widths. The width of these publicly accessible pedestrian connections shall be no less than the following: 60 feet at or near the terminus of Cathcart Street; 50 feet at or near the terminus of Maple Street; and 30 feet at or near the extension of Elm Street.

d. Vertically Open Passageways. These passageways shall be open to the sky, provide a high quality accessible path of travel between the Front Street sidewalk and the Riverwalk, and provide clear building breaks that avoid the walling off of the river from downtown.

e. Pedestrian Oriented Uses. The pedestrian passageways shall be lined with active pedestrian-oriented uses that create a safe and interesting environment, including commercial uses, outdoor cafes, resident-serving amenities, building entries and/or lobbies. Such uses, particularly restaurants and outdoor cafes, are strongly encouraged to provide direct frontage and active outdoor areas along both the pedestrian passageway and the Riverwalk.

6. Upper-Level Facade Treatment.

The treatment of upper-level facades shall generally comply with the guidelines for the Pacific Avenue Retail District in terms of building rhythm, corner treatment, windows, roof treatment, building materials, colors and planting, and rear service lanes.

7. Gateway Treatments.

New development that occurs at key gateway intersections to the downtown (e.g., River-Water; Pacific-Front; Cooper-Front; Soquel-Front; Cathcart-Front; Laurel-Front) shall be articulated to accentuate this condition. Treatments could include corner towers or turrets, setbacks, distinctive changes in fenestration and materials, etc.

8. Riverfront Residential.

Residential development occurring along the Front Street/Riverfront Corridor, or future residential development that may occur as part of a mixed-use development on the northeast corner of the Front/Soquel intersection, shall be highly articulated and expressive of the individual units within the complex. The use of sloping roofs, recessed loggias

and balconies, bay windows, dormers and chimneys shall be carefully composed to create an intricate composition that expresses individual unit modules to the maximum extent practicable. A variety of building materials is encouraged, including the building materials recommended for the Pacific Avenue district above (e.g., stucco, brick, and stone). To avoid the creation of a "wall" of development along the riverfront between Soquel and Laurel Streets, development shall be highly articulated with variation in height. The required 10-foot sideyard setbacks shall also serve to break up the mass of development along this important edge.

9. Public and Private Parking Facilities.

The Front Street/Riverfront Corridor is within the Downtown Parking District #1 and development shall comply with all parking requirements set forth within that district.

a. Surface Lot Landscaping. Existing and/or expanded surface parking lots within the Front Street/Riverfront Corridor shall be well landscaped. In addition to the landscaped area requirements for surface parking provided in the zoning ordinance, surface lots shall provide at least one tree for every four parking spaces, distributed throughout the lot. Surface lots shall be screened from the public sidewalk with low walls, planters, or hedges.

b. West Side of Front Street. Allow parking facilities along the west side of Front Street south of Soquel Avenue, where only one driveway curb cut shall be permitted per parking facility per street frontage; the parking facility shall not extend to street corners; and the parking facility shall be architecturally integrated within the overall building composition.

c. Structured Parking Design. Above-grade structured parking should be visually separated at the ground level from all public sidewalks and streets by means of active storefront uses as described above. Such parking should be accessed, to the maximum extent possible, from east-west streets or rear service lanes.

d. Structured Parking Facades. Parking structure facades shall be designed as compatible visual extensions of other multi-story buildings.

e. Structured Parking Rear Façade. Special attention shall also be given to the design of parking structure facades adjacent to rear service lanes, to reinforce their attractiveness for pedestrian use. The use of integrated trellis structures and planters along the service lanes is recommended.

f. Screens and Trellises. Decorative screen and trellis elements of durable, high-quality materials are also encouraged to provide variation and interest on the facade.

g. Garage Ramp Visibility. Sloping floor elevations shall not occur within 10 feet of the adjacent public street.

h. Wrap Garage with Commercial. Where parcel depth permits, the face of the parking structure shall be set back from ground floor commercial uses.

i. Garage Openings. Openings shall be carefully composed within the building wall to appear as well-proportioned windows, rather than continuous strips; variation in the dimension and proportion of openings and in the horizontal and vertical planes of the facade shall be provided to create visual interest and to reduce the massiveness of the parking structure.

j. Entrances and Stairways. Entryways and stairways shall be located along the street edge; they shall be well lit and visible from the street to promote security and a feeling of comfort.

k. Top Deck Elevation. The top deck of all structured and encapsulated parking shall be constructed to an elevation no greater than 5 feet above that of the Riverwalk promenade and shall be screened from public view. Parking garages may exceed the maximum building length of 250 feet if they are lower than 5 feet above the adjacent levee elevation.

10. Driveways and Curb Cuts.

Limit on-site driveways along Front Street to a maximum of one driveway per property or at a spacing of at least 200 feet; driveways should be no more than 24 feet in width and to the extent practicable should be spaced from an adjacent driveway by at least 200 feet. Wider driveways may be considered based on a demonstrated need to accommodate specific vehicle operations of a proposed development.

11. Guidance for Bird Safe Structures Along the San Lorenzo River.

The following measures shall be incorporated into all development projects that are located between Front Street and the San Lorenzo River.

- Minimize the overall amount of glass on building exteriors facing the San Lorenzo River.
- Avoid mirrors and large areas of reflective glass.
- Avoid transparent glass skyways, walkways, or entryways, free-standing glass walls, and transparent building corners.
- Utilize glass/window treatments that create a visual signal or barrier to help alert birds to presence of glass. Avoid funneling open space to a building façade.
- Strategically place landscaping to reduce reflection and views of foliage inside or through glass.
- Avoid up-lighting and spotlights. Turn non-emergency lighting off (such as by automatic shutoff), or shield it, at night to minimize light from buildings that is visible to birds, especially during bird migration season (February-May and August-November).

F. CEDAR STREET VILLAGE CORRIDOR DEVELOPMENT STANDARDS AND DESIGN GUIDELINES

1. Height and Stepback Requirements.

   a. Base Height and Floors. The maximum height of all development within the Cedar Street Village Corridor shall be 35 feet (3 floors maximum). East of Cedar Street, development may be allowed to exceed 35 feet on a discretionary basis to a maximum height of 50 feet (4 floors maximum). The granting of additional height above thirty-five (35) feet is discretionary and requires a Design Permit with the recommendation of the Planning Director to the City Council, which must approve the additional height.

2. Storefront Treatment.

The ground-level treatment of buildings and parking structures within the Cedar Street subarea shall generally comply with guidelines for the Pacific Avenue retail subarea, in terms of storefront access, transparency and variation, and the use of landscaping, awnings and canopies. However, it is recognized that Cedar Street has a more informal character than Pacific Avenue and, as such, more variation of ground-level treatment is envisioned and encouraged. The use of porches and terraced gardens as an intermediate space between the ground floor use and the sidewalk is permitted, as long as the finished floor elevation of the ground floor use is no more than four feet above or below the sidewalk level, and accessibility requirements are met.

3. Upper-Level Facade Treatment.

The treatment of upper-level facades shall generally comply with the guidelines for the Pacific Avenue Retail District in terms of building rhythm, corner treatment, windows, roof treatment, building materials, colors and planting. In recognition, however, of the area's village character, several special conditions are noted:

   a. Architectural Elements. The use of architectural elements that promote the village character of the street is encouraged. Such elements could include sloping roofs, chimneys, bay windows, dormers, recessed loggias, balconies, and porches.

   b. Articulation. Facades shall be highly articulated and varied; the introduction of moldings and trims, and changes in horizontal and vertical planes are strongly encouraged to create visual interest and variation in light and shadow. Residential development shall be highly articulated and expressive of the individual units within the complex.

   c. Building Materials. Building materials can be more diverse and residential in character than those recommended for the Pacific Avenue Retail District. The use of wood as a siding material is encouraged.

d. Flowers and Landscaping. The use of planters, trellises and topiary treatment of buildings is encouraged to further enliven the area and to promote its unique village qualities.

4. Public and Private Parking Facilities.

Parking structure facades shall be designed as compatible visual extensions of other multi-story buildings. Sloping floor elevations shall not occur adjacent to public streets. Where parcel depth permits, the face of the parking structure shall be set back from ground floor commercial uses. Openings shall be carefully composed within the building wall to appear as well-proportioned windows, rather than continuous strips; variation in the dimension and proportion of openings and in the horizontal and vertical planes of the facade shall be provided to create visual interest and to reduce the mass of the parking structure. Decorative screen and trellis elements of durable, high-quality materials are also encouraged to provide variation and interest on the facade. Special attention shall also be given to the design of parking structure facades adjacent to rear service lanes, to reinforce their attractiveness for pedestrian use. The use of integrated trellis structures and planters along the service lanes is recommended. Entries and stairwells within parking structures shall be located adjacent to public streets and designed to be visually open, to promote a feeling of security and comfort.

G. NORTH PACIFIC AREA
DEVELOPMENT STANDARDS AND DESIGN GUIDELINES

1. Height and Stepback Requirements

   a. Base Height and Floors. The maximum height of all development within the North Pacific subarea shall be 35 feet (3 floors maximum). However, within this 35 foot Base Height, east of North Pacific Avenue, development may be allowed on a discretionary basis to a maximum height of 50 feet (4 floors maximum). The granting of additional height above 35 feet is discretionary and requires a Design Permit with the recommendation of the Director of Planning to the City Council, which must approve the additional height.

   b. Minimum Floor Height. The first floor uses must have a minimum floor-to-floor height of 14 feet.

   c. Visual Analysis and Criteria for Exceeding Base Height. Proposed development above 35 feet, up to 50 feet, must prepare a detailed visual analysis of the building to determine the visual impact. The visual impact analysis must consider the views from the mid-point of the Water Street Bridge looking toward the Mission Hill, from Mission Hill and other key locations within the City. The additional building height shall not obstruct views of the profile of the top of the grade of Mission Hill as viewed from the crest of the Water Street Bridge;

      i. Additional height above 45 feet, up to a maximum of 50 feet, must demonstrate that the building creates a superior gateway entrance to Pacific Avenue and the Downtown; and
      ii. The building height above 35 feet shall be stepped back a minimum of ten (10) feet from the 35 foot Base Height. The additional height shall be highly articulated and the upper level shall gently transition to surrounding development.
      iii. Uninhabitable mechanical penthouses will be permitted above the Base Height to a maximum height of 5 feet above the permitted building height, provided that such penthouses are set back a minimum of 15 feet from any exposed face of the buildings and are out of the pedestrian's view, unless such penthouses are architecturally integrated into the building façade design.

2. Build-to Lines and Setbacks.

To promote well-defined streets, development shall generally be required to be built to the property line adjacent to public streets. The following exceptions to this condition are noted:

   a. Sidewalk Width. In locations where the sidewalk is less than 12 feet, development shall be set back from the property line to create a 12-foot sidewalk.

   b. Gateway Landscaping. Within this subarea, new development along Water Street (north side) and River Street (west side) shall be set back from the property line by 10 feet to allow for generous gateway landscaping treatment. Buildings along River Street may project into this setback with approval of a landscape plan provided that the average setback along that street remains 10 feet.

c. Non-Residential Elevation. Along Pacific Avenue and Water Street, ground level uses shall not be located more than one foot above the elevation of the adjacent curb.

d. Residential Elevation. Along River Street, the first occupied residential floor level shall not be higher than five feet above the adjacent curb. For each one foot above the adjacent curb, an additional one foot of landscape setback shall be required.

3. Gateway Intersections.

The intersections of Water and River Streets, and River Street and North Pacific Avenue, are important gateways to the downtown. New development that occurs at these key gateway intersections shall be designed to accentuate this condition. Treatments shall include corner towers or turrets, setbacks, distinctive changes in fenestration and materials. The design of the ground level of the buildings at these intersections shall be articulated to reinforce the gateway significance utilizing corner setbacks, small plazas, large display windows, distinctive entrance features and canopies.

4. Building Facades.

The treatment of upper-level facades shall generally comply with the guidelines and standards for the Pacific Avenue Retail District in terms of building rhythm, articulation, corner treatment, windows, roof treatment, building materials, colors and planting.

5. Ground-Level Storefronts.

The design of the ground-level of buildings facing North Pacific Avenue, River Street and Water Street shall generally follow the guidelines and standards described for the Pacific Avenue Retail District to the south (e.g., access and transparency, storefront variation and treatment, awnings, canopies).

6. River Street.

The setback area described above for River Street shall include a well-designed landscape concept to enhance the gateway role and appearance of River Street and to create a transition between private development and the street. This landscaped area shall be broken at intervals to provide entrances to adjacent ground-level uses.

7. River Street Residential.

If residential development occurs along the River Street Corridor, it shall be highly articulated and expressive of the individual units within the complex. The use of sloping roofs, recessed loggias and balconies, bay windows, dormers, and chimneys shall be carefully composed to create an intricate and pleasing composition. Clapboard wood siding is encouraged, in addition to the building materials recommended for the Pacific Avenue Retail District above (e.g., stucco, brick, and stone).

8. Town Clock Park/Scope Park.

New development occurring adjacent to Town Clock Park (Knight Street right-of-way) or Scope Park shall have a strong ground-level orientation to these public open spaces. Buildings along Knight Street shall be built to the property line to maintain the spatial quality of Town Clock Park and to reinforce the civic importance of the Water-Pacific-Front intersection. Ground-level uses shall be pedestrian-oriented, and the treatment of storefront facades shall correspond with the guidelines described for the Pacific Avenue Retail District.

9. Public and Private Parking Facilities.

For properties in the North Pacific subarea which are not within the downtown Parking District #1, new development must comply with the City's general standards related to parking.

a. Surface Parking Lots. Existing and/or expanded surface parking lots within the North Pacific area shall be well landscaped, with at least one tree for every four parking spaces, and screened from the public sidewalk with low walls, planters or hedges.

b. Structured Parking. Parking structures in the North Pacific Area shall be an integral part of the development that it serves, either in below-grade structures or above-grade structures that are sensitively encapsulated within the overall building form.

c. Location of Structured Parking. Exposed parking structures shall be limited to the interior of the block or to Bulkhead Street.

d. Parking Structure Façade. Where parking is exposed as a facade, such facades shall be designed as an integral extension of the overall building facade.

e. Garage Ramps. Sloping floor elevations shall not occur within 10 feet of the adjacent public street.

f. Garage Openings. Openings shall be carefully composed within the building wall to appear as well-proportioned windows, rather than continuous strips; variation in the dimension and proportion of openings and in the horizontal and vertical planes of the facade shall be provided to create visual interest and to reduce the mass of the parking structure.

g. Screens and Trellises. Decorative screen and trellis elements of durable, high-quality materials are also encouraged to provide variation and interest on the facade.

h. Wrap Garage with Commercial. Above-grade structured parking facing River Street, Water Street or North Pacific Avenue shall be visually separated from all public sidewalks at the ground level by means of active ground-level uses as described above. Such parking shall be accessed, to the maximum extent possible, from east-west streets (e.g., Bulkhead Street). New access driveways along North Pacific Avenue, River and Water Streets shall be avoided.

H. ADDITIONAL HEIGHT ZONES

In 1991 when the original Downtown Recovery Plan was being developed, the community was concerned about the impact of four and five-story buildings on the predominantly one and two-story downtown. Since 1991, there has been significant infill development that has diversified the mix and intensity of downtown uses, with upper level office and residential uses. No longer is Downtown Santa Cruz and Pacific Avenue a one- and two-story downtown; it has evolved into a vibrant three to seven story district.

As such, the Additional Height Zone A is extended to eligible sites south of Cathcart Street and along the west side of Front Street; and Additional Height Zone B is established along the Front Street/Riverfront Corridor south of Soquel Avenue to Laurel Street. (See Downtown Plan Height diagram) The City also wishes to promote uses that foster activity and a sense of stewardship, allowing the area to evolve from a service district to an integral part of the overall downtown. In order to achieve this goal, residential uses are considered highly desirable upper-level uses, with active commercial and people-oriented uses at street level. It is recognized that smaller parcels may need to be assembled and consolidated to create viable areas for redevelopment, but development of assembled properties shall be done in a way that maintains the town scale and character of the downtown, with its diverse mix of small- and medium-sized buildings, its pedestrian orientation and, its block pattern that provides multiple street and walkway connections.

The scale of blocks and parcels is a critical component, contributing to the town scale and pedestrian orientation of downtown Santa Cruz. In the areas south of Cathcart Street and Soquel Avenue, the larger block sizes make it particularly important to create additional pedestrian connections between Pacific Avenue and Front Street, and between Front Street and the Riverwalk. This has been a community vision, dating back to the original Downtown Recovery Plan and reinforced with the 2010 River/Front and Lower Pacific Design Guidelines and Development Standards. However, regulations alone cannot be expected to accomplish such transformational change, which will involve public improvements and strong public/private partnerships. Financing tools for the implementation of enhanced pedestrian linkages to the river, and for improved bicycle and pedestrian amenities along Front Street, shall be considered to leverage increased land values in the area and to provide for equitable contributions from the private sector.

In establishing the development standards for the Additional Height Zones, it is important to make sure that the standards reflect the unique conditions and opportunities of the area. It is necessary to avoid the creation of large, monolithic buildings that are out of scale with the finer-grained development pattern of the downtown.

Buildings of additional height above the Downtown's dominant three to four-stories may depart from the tri-partite facades of the historic downtown, but shall be designed in a manner that creates a positive relationship and an appropriate scale transition to the existing fabric. In addition to the volumetric standards set forth as a basis for additional height in Additional Height Zone A, building stepbacks, belt courses, material, plane and/or fenestration changes are design strategies that should be employed to create compatible architectural and scale relationships with adjacent buildings of lower height. A strong and well detailed storefront and building base is

critical to the continuity of the retail and pedestrian environment of the Downtown; intermediate floors should be composed with window openings, balconies or projections that provide visual interest and a scale relationship with adjacent buildings; and the top most floor(s) should contribute to the overall silhouette and spatial form of the street with reduced floor plates, cornices, projecting canopies or other special architectural elements.

Rather than relying on building stepbacks and terracing to achieve an appropriate scale transition to smaller buildings, the standards call for horizontal and vertical variation to create the appearance of multiple buildings that are more in keeping with the surrounding area. Additional height – even up to 85 feet in the Additional Height Zone A – can be absorbed appropriately if it is confined to a portion of a property, rather than as a massive block, terraced back from the street.

1. Additional Height Zone A.

Properties on Pacific Avenue and within 150 feet of Pacific Avenue between Water and Lincoln Streets, and within 200 feet of Pacific Avenue between Lincoln and Laurel Streets (as measured perpendicular from the property line along Pacific Avenue) , certain properties located on the east side of Cedar Street between Mission Street and Ocean Alley, and the west side of Front Street between Cathcart and Laurel Streets shall be considered within the "Additional Height Zone A", within which additional height above the 55 foot Base Height limit may be requested for buildings meeting certain criteria (See Figure A-1: Downtown Plan Heights). The intent of the Additional Height Zone A is to preserve the overall character of the existing development pattern, while allowing a discretionary intensification of use and increased height to maintain a compact urban core. For eligible development projects that overlap the Base Height and Additional Height Zone boundary, all portions of the project exceeding the 55 foot base height shall be located within to the Additional Height Zone as shown in Figure A-1.

a. Eligible Development Projects. The granting of building height above the 55 foot Base Height limit is discretionary and requires a Design Permit with the recommendation of the Director of Planning to the City Council, which must approve the additional height. To achieve approval, the applicant must demonstrate that the proposed project meets the criteria described below. Applicants for development within the Additional Height Zone A may request additional height as indicated below, if one of the following conditions is met:

    i. The aggregate parcel size is greater than 15,000 square feet, which may include land not located within the Additional Height Zone;
    ii. The frontage along Pacific Avenue is greater than 150 feet, or at least 100 feet with 150 feet of frontage along an east-west street;
    iii. The parcel is located between adjacent structures of four or more floors in height; or
    iv. The project qualifies for a density bonus as allowed under either State law or City adopted density bonus ordinance.

b. Additional Height Criteria for Project Approval. The development project shall be found consistent with the following overarching City objectives:

    i. The additional height will help to achieve the First Principles of the Downtown

Plan (e.g. form, housing, accessibility and open space).

ii. The additional height will contribute to an improved social and economic environment by including new housing.

iii. The form of the development promotes the appearance of a grouping of buildings rather than large, monolithic building masses.

iv. The development receiving additional height will physically and/or financially contribute its fair share (through an Improvement District, Development Agreement or similar mechanisms) to the implementation of internal pedestrian connections between Pacific Avenue and Front Street.

v. The additional height will help to meaningfully achieve one or more of the following key community objectives, including but not limited to: Affordable Housing, Day Care Center, exceed Green Building minimums, Incubator Space for Small Business, Public Access Easements, Public Right-of-way Improvements, Publicly Accessible Open Space, Structured or Shared Parking, and Transportation Demand Management concepts.

c. Zone A Maximum Height and Floors. The buildings shall conform to the adopted building codes in effect at the time of building permit application to achieve the following height limits.

i. For development projects on aggregated parcels between 15,000 square feet and 50,000 square feet, the maximum height shall be 75 feet and the maximum number of floors shall be 5 floors above the required ground floor commercial use.

ii. For development projects on aggregated parcels larger than 50,000 square feet, the maximum height shall be 85 feet and the maximum number of floors shall be 6 floors above the required ground floor commercial use.

iii. Uninhabitable mechanical penthouses will be permitted to project 5 feet above the approved additional height of building, provided that such penthouses are set back a minimum of 15 feet from any exposed face of the building, unless architecturally integrated into the building façade design.

iv. Architectural features at prominent gateway corners may exceed the maximum heights above when required findings are made.

d. Performance Criteria. The following criteria are intended to promote the appearance of multiple buildings of varying heights, and to avoid the development of monolithic buildings:

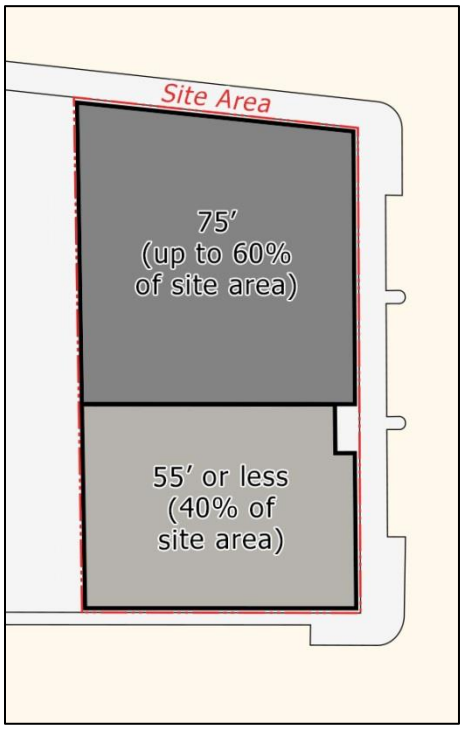
i. Maximum Height and Footprints. For sites which are eligible for additional height, the footprint of portions of the building at or below 55 feet shall be at least 40% of the total site area; portions of the building footprint above 55 feet to a height of 75 feet may comprise up to 60% of the site area. For assembled sites greater than 50,000 square feet in area, buildings may achieve an 85-foot height for up to 20% of the total site area. (See Figure H-1)

ii. Architectural Features. Taller building masses shall be located on portions of the site that are adjacent to street corners or in areas that will result in minimal shading of adjacent streets and sidewalks.

iii. Pacific Avenue Building Length. Along Pacific Avenue, portions of buildings that exceed the maximum base height of 55 feet may occupy up to 55% of the length of the property line along the street or 200 feet, whichever is less. Any

additional height above the base height must be set back from the building wall by at least 15 feet. (See Figures H-2 and H-4)

iv. Front Street Building Length. Along Front Street, portions of buildings that exceed the maximum base height of 55 feet may occupy up to 60% of the length of the property line along the street or 180 feet, whichever is less. Any additional height above the base height must be set back from the building wall by at least 15 feet. (See Figure H-3)



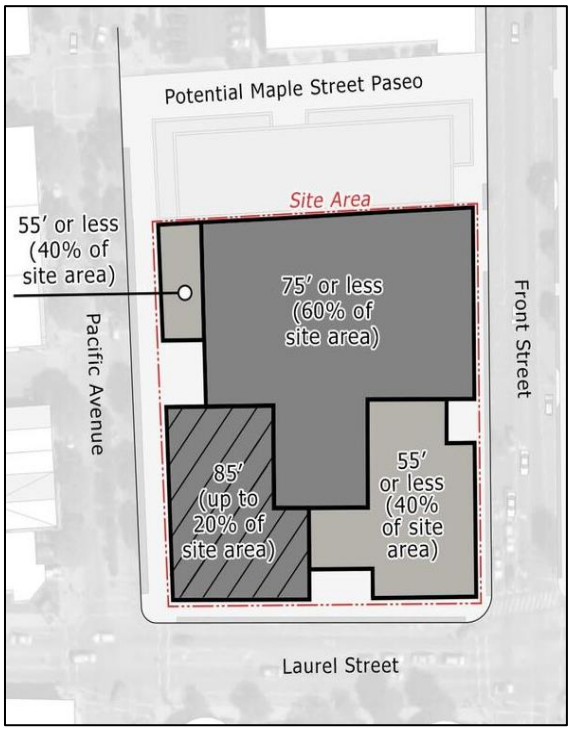


Figure H-1: Distribution percentage of additional height for sites 15,000–50,000 sq. ft.

Distribution percentage of additional height for sites larger than 50,000 sq. ft.

v. Laurel, Cathcart and Soquel Building Lengths. Along Laurel Street, Cathcart Street and Soquel Avenue, portions of buildings that exceed the maximum base height of 55 feet may occupy up to 60% of the length of the property line or 150 feet, whichever is less. Any additional height above the base height must be set back from the building wall by at least 15 feet. (See Figure H-2)

vi. Maple Street Stepbacks. Along the Maple Street extension, the building frontage shall step back by 10 feet above a height of 50 feet; In addition to the 'build to' line The Maple Street building face shall incorporate at least one recessed break, open to the sky, no less than 25 feet wide and no less than 10 feet in depth from Maple Street . (See Figure H-3)

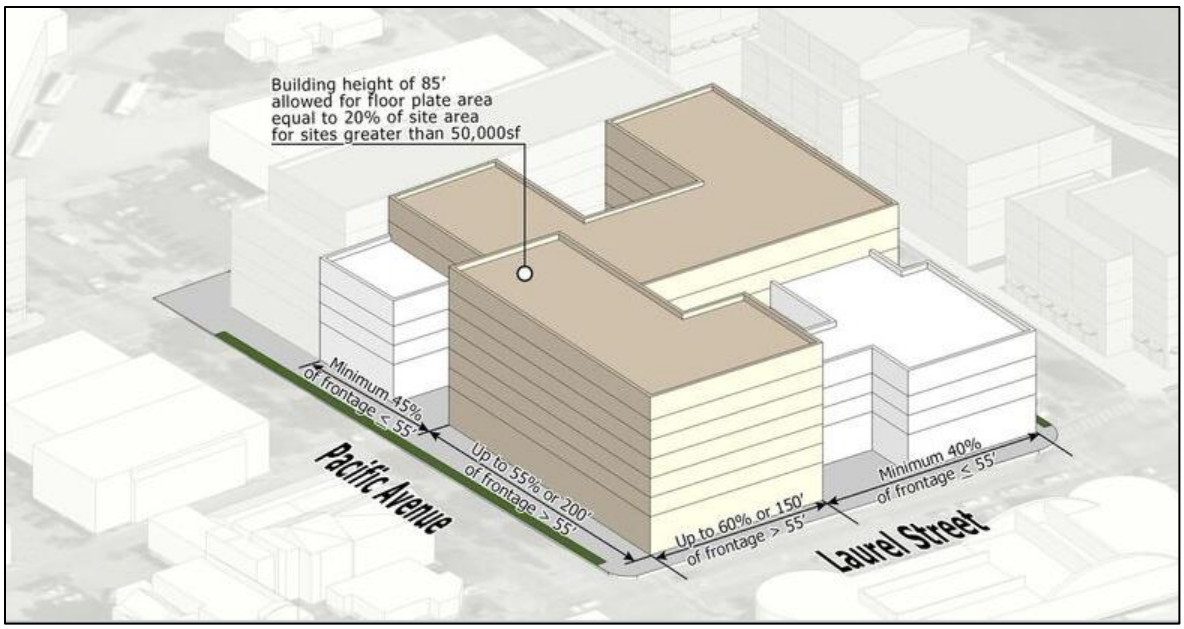


Figure H-2: Example of possible distribution of frontage heights along Pacific Avenue and Laurel Street.

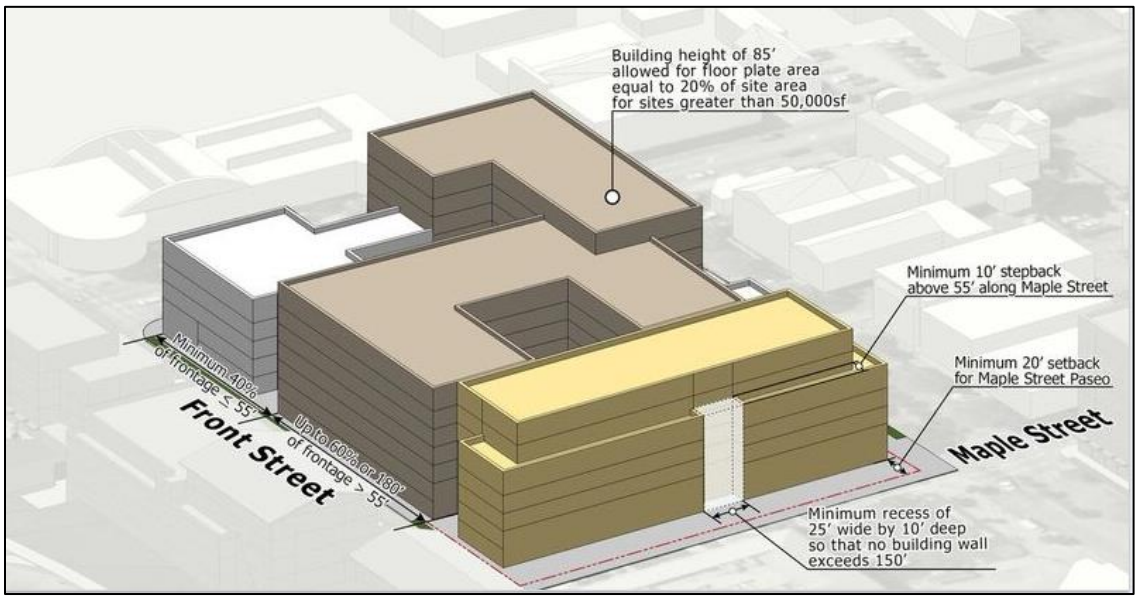


Figure H-3: Example of possible distribution of frontage heights along Front Street and the Maple Street Paseo.

vii. Building Recessed Breaks. Any building mass that exceeds the maximum base height of 55 feet must establish a separation or break that is open to the sky, measuring at least 25 feet along the streetfront property line, with a depth no less than 15 feet as measured perpendicular from the streetfront property line. For

buildings along Maple Street, the recessed break shall be a minimum of 10 feet in depth. (See Figures H-3 and H-4)

(1) The recessed breaks must provide a clear visual break between building volumes, but at the same time contribute to a positive streetscape environment.

(2) The recessed spaces shall be open to the sky above the ground level. A light-weight sheltering structure, distinct from the architecture of the principal building (e.g., steel and glass trellis, awning, canopy, or single-level storefront) may be incorporated within the recessed space to provide activity along the street and protection to the ground level activity. This structure may encroach into the public right-of-way by at least 1 foot and no more than 2 feet and shall extend horizontally on either side of the recessed space by two feet to interlock with the principal building. The structure may include sliding doors or gates that can be secured at night, provided that they are accessible and visible during daytime business hours. (See Figure H-5)

(3) These recessed spaces along the streetfront shall be considered as an opportunity for creative solutions that enhance the streetscape environment. They must be designed and programmed to be purposeful and meaningful places that support positive activity and preclude anti-social behavior. They could include building entries, cafes or retail extension areas. Courtyards and paseos are particularly encouraged as a way of separating building volumes and in creating unique public spaces that connect to Pacific Avenue. The recessed spaces may be gated. (See Figure H-5)

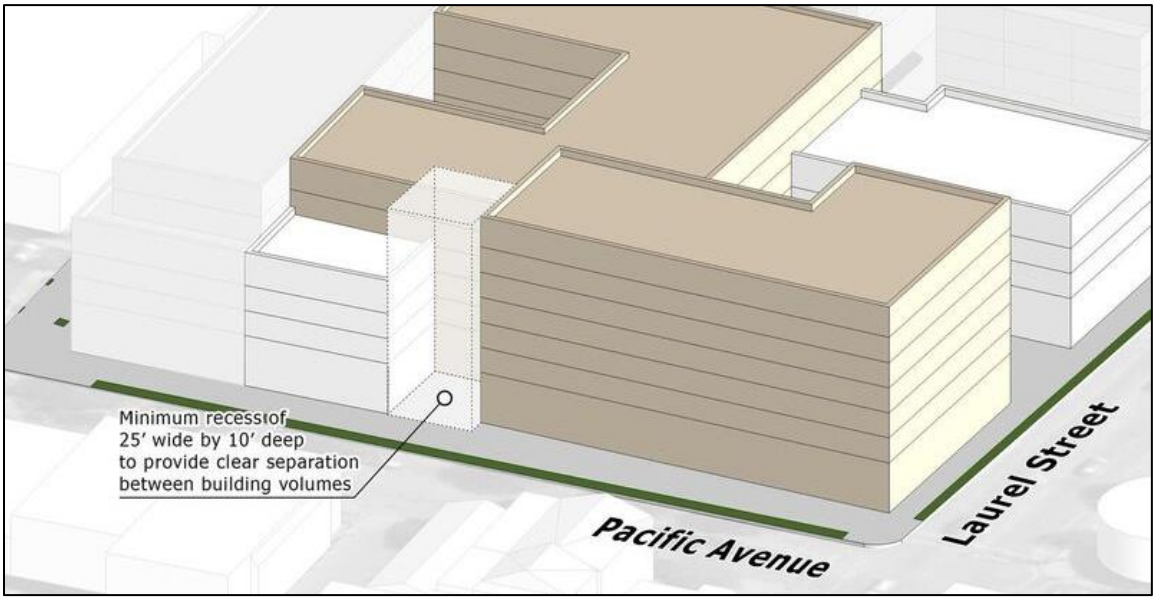


Figure H-4: Example of horizontal massing variation and recessed break in building.

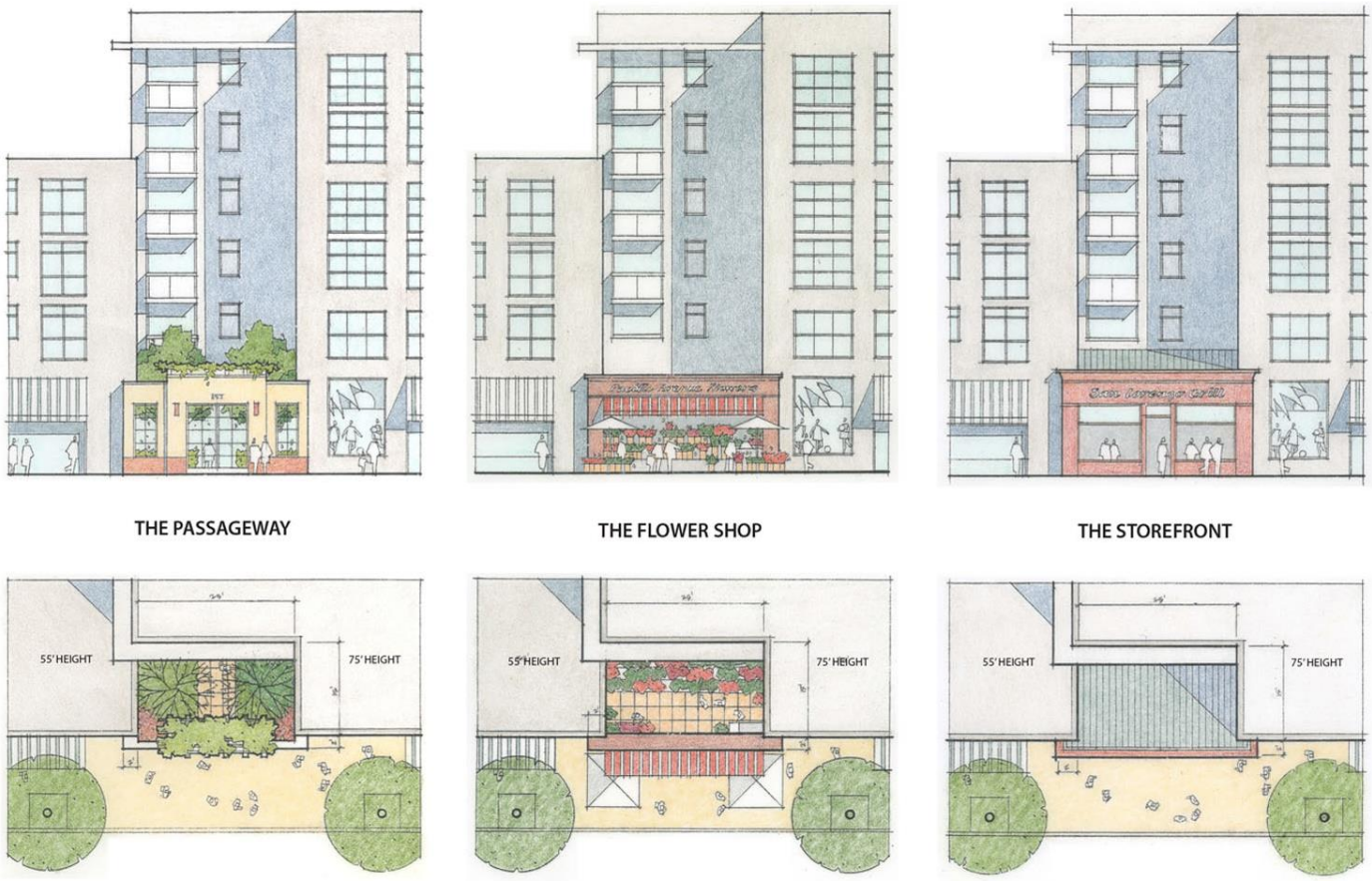


Figure H-5: Recessed spaces along the streetfront must provide a clear visual break between building volumes, while creating a positive streetscape environment. Three examples of potential treatments.

ix. Two-Story Variation. To establish the appearance of a distinct grouping of buildings, a minimum two-story variation shall be provided between building masses along each of the street fronts. (See Figure H-6)

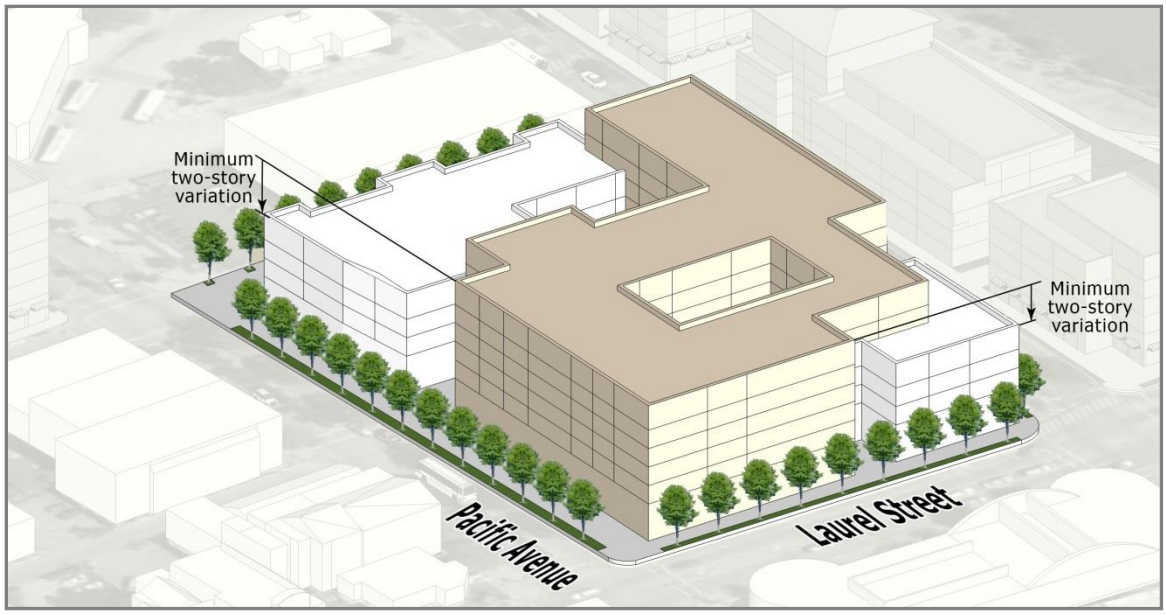


Figure H-6: Example of vertical massing variation.

e . Application Requirements. The following materials shall be submitted with all applications for proposed buildings taller than 55 feet.

i. Visual Analysis. A detailed visual analysis of the proposed buildings to determine the visual impact of the development shall be submitted. The visual impact analysis must consider the views from key locations within the City and the views from Pacific Avenue and from the east-west streets.
ii. Program Statement. A Program Statement shall be submitted indicating details of public amenities to be included in the project. The Program Statement shall specify the participation either through funding and/or land contribution, construction, and/or maintenance of the Maple Street paseo or lane. The Program Statement shall include the private funding mechanism for on-going management and maintenance of the exterior common areas, including public and private spaces along the Maple Street paseo or lane between Pacific Avenue and Front Street. The Program Statement shall specify the method of participation in the City's affordable housing program, if applicable The Program Statement items will be the basis of conditions of project approval.

2. Additional Height Zone B.

The Additional Height Zone B includes properties located on the east side of Front Street between Soquel Avenue and Laurel Street.

a. Eligible Development Projects. The granting of building height above the 50-foot Base Height limit is discretionary and requires a Design Permit with the recommendation of the Director of Planning to the City Council, which must approve the additional height. To achieve approval, the applicant must demonstrate that the proposed project meets the criteria described below. Applicants for development within the Additional Height Zone B may request additional height as indicated below if one of the following conditions is met:

i. The aggregate parcel size is greater than 15,000 square feet;
ii. The frontage along Front Street is greater than 100 feet;
iii. The parcel is located between adjacent structures of three or more floors in height; or
iv. The project qualifies for a density bonus as allowed under either State law or City adopted density bonus ordinance.

b. Additional Height Criteria for Project Approval. The development project shall be found consistent with the following overarching City objectives:

i. The additional height will help to achieve the First Principles of the Downtown Plan (e.g. form, scale, housing, accessibility and open space);
ii. The additional height will contribute to an improved social and economic environment by including a concentration of new housing;
iii. The form of the development promotes the appearance of a grouping of buildings rather than large monolithic building masses;

iv. The development receiving additional height will physically and/or financially contribute its fair share (through an Improvement District, Development Agreement or similar mechanisms) to the implementation of internal pedestrian connections between Front Street and the Riverwalk;
v. The additional height will help to meaningfully achieve one or more of the following key community objectives, including but not limited to: Affordable Housing, Day Care Center, exceed Green Building minimums, Incubator Space for Small Business, Public Access Easements, Public Right-of-way Improvements, Publicly Accessible Open Space, Structured or Shared Parking, and Transportation Demand Management concepts.
vi. Clear demonstration of the public benefit relating to two principal objectives: high quality public access between Front Street and the river, and the appropriate treatment of the riverfront edge along the Riverwalk.

c. Zone B Maximum Height and Floors. The buildings shall conform to the adopted building codes in effect at the time of building permit application to achieve the following height limits.

i. For development projects on aggregated parcels larger than 15,000 square feet, the maximum height shall be 70 feet and the maximum number of floors shall be 5 floors above the required ground floor commercial use.
ii. Uninhabitable mechanical penthouses will be permitted to project 5 feet above the approved additional height of building, provided that such penthouses are set back a minimum of 15 feet from any exposed face of the building, unless architecturally integrated into the building façade.
iii. Uninhabitable architectural features at prominent gateway corners may exceed the maximum heights above for a total of no more than 15 percent of the building footprint.

d. Performance Criteria. In addition to meeting the Front Street/Riverfront Corridor Development Standards and Design Guidelines, the project shall meet the following criteria, which are intended to promote the appearance of multiple buildings of varying heights, and to avoid the development of monolithic buildings:

i. Building Recessed Breaks. In order to break down the mass of buildings along Front Street and to promote the appearance of multiple buildings, require any portion of the building mass that exceeds the maximum base height of 50 feet to establish a separation or break that is open to the sky, measuring at least 15 feet along the streetfront property line, with a depth no less than 10 feet as measured perpendicular from the streetfront property line. (See Figures H-5 and H-7)

The recessed breaks must provide a clear separation between building volumes, but at the same time contribute to a positive streetscape environment. The recessed space should be open to the sky above the ground level. A light-weight sheltering structure, distinct from the architecture of the principal building (e.g., steel and glass trellis, awning, canopy, or single-level storefront) may be incorporated within the recessed space to provide activity along the street and protection to the ground level activity. This structure may encroach into the setback zone by up to two feet and should extend horizontally on either side of the recessed space by at least 1

foot, but not more than 2 feet to interlock with the principal building. The structure may include sliding doors or gates that can be secured at night, provided that they are accessible and visible during daytime business hours.

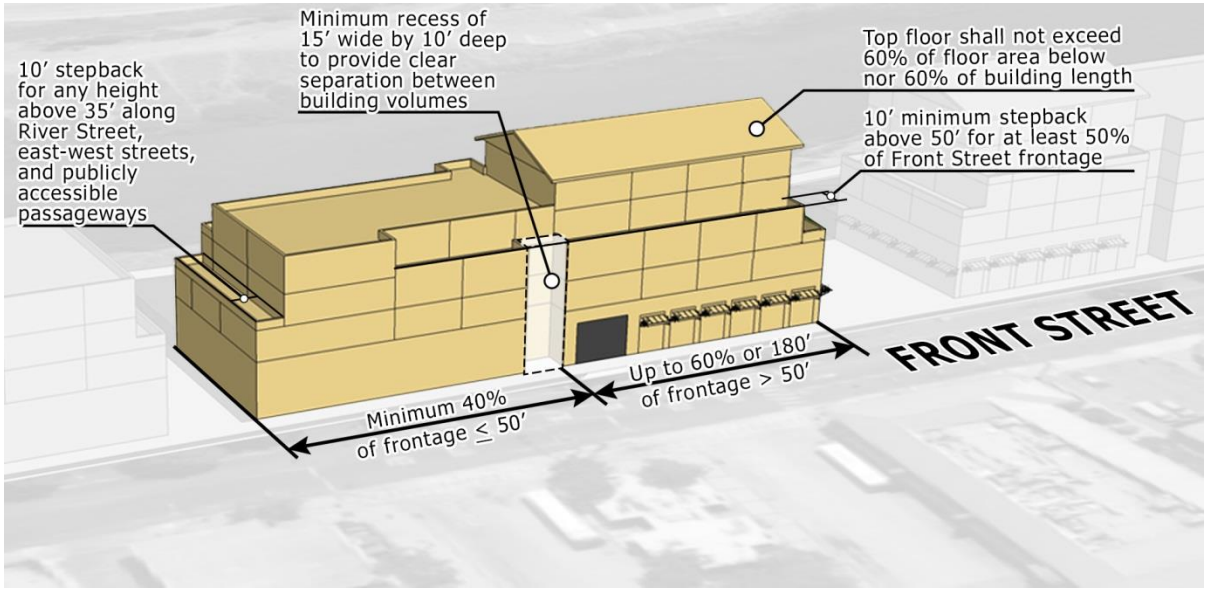


Figure H-7: Example of distribution of frontage heights and horizontal massing variation along Front Street.

ii. Skyline Architectural Variation. To promote skyline variation, the top floor of any building shall not exceed 60% of the floor area below or 60% of the building length as measured along Front Street or the Riverwalk. Variation to the 60% floor area standard can be considered for projects that incorporate publicly accessible pedestrian connections to the Riverwalk.

iii. Integrated Rooftop Design. Rooftops shall be fully designed and creatively integrated into the function of the building. Rooftops provide opportunities including, but not limited to, usable residential or commercial open spaces, community gardens, rainwater retention facilities, green-roof landscaping, solar panel facilities as shade structures, building mechanical equipment and other uses. These spaces shall be thoughtfully and creatively designed as part of the initial project application.

e. Application Requirements. The following materials shall be submitted with all applications for proposed buildings taller than 50 feet.

i. Visual Analysis. A detailed visual analysis of the proposed building including three-dimensional perspectives to determine the visual impact of the development shall be submitted. The visual impact analysis must consider the views from key locations within the City, the views from Front Street and from the Soquel and Laurel bridges and the levee opposite the project site from a pedestrian level view.

ii. Roof Design Plan. A detailed and fully integrated roof design plan that includes details of open space uses, landscaping, solar facilities, drainage, and mechanical equipment.

iii. Grading and Landscape Plan. A comprehensive grading and landscape plan for the filled area of the river levee.

iv. Passageway Plan. For projects adjacent to the proposed publicly accessible passageways between Front Street and the Riverwalk (in the proximity of the extensions of Cathcart Street, Maple Street and Elm Street), a scaled plan shall be provided with adequate details, section drawings and other drawings that describe how the project will achieve high quality public access to the riverfront from Front Street and how the riverfront edge will be designed to reinforce the amenity value and safety of the Riverwalk. Drawings shall describe the relationship of publicly accessible spaces with adjacent proposed development activities, grading, landscape and paving materials and treatments.

iii. Program Statement. A Program Statement shall be submitted indicating details of public amenities to be included in the project. The Program Statement shall specify the private funding mechanism for on-going management and maintenance of the exterior common areas, including public and private spaces between the Riverwalk and the development and any adjacent paseo or passageway from Front Street to the Riverwalk. The Program Statement shall specify the method of participation in the City's affordable housing program, if applicable.

I. ALL CENTRAL BUSINESS DISTRICTS STOREFRONT STANDARDS AND GUIDELINES

The intention of the storefront guidelines is to promote variety and individuality along the street while complementing the scale and design character of the streetscape, reinforce the pedestrian environment, and allow for the landscape character of the downtown to extend into the private realm. The storefront guidelines encourage both setbacks from, and encroachments into, the public right-of-way, where such measures will serve to enrich the visual diversity and life of the street.

1. Storefront Projections and Setbacks. In addition to landscape elements, storefronts are encouraged to introduce architectural variation at the pedestrian level in order to create a diverse building edge between the public and private realms. More specifically:

a. Bay Windows. Storefront bay windows may project up to 12 inches into the public right-of-way, if such windows maintain glazing on all projecting faces, and if the windows do not exceed 15 feet in width. A clearance of at least 12 inches between the bottom of the projecting bay and the sidewalk is recommended.

b. Porticos. Entry porticos may project up to 12 inches into the public right-of-way.

c. Entry Setbacks. Entry setbacks may be permitted up to 48 inches from the property line.

d. Marquis and Canopies. Permanent marquis structures or canopies that project from the buildings are encouraged, but shall be confined to entry lobbies leading to upper-level residential or office uses, or to public-oriented passages that provide for pedestrian access through the block. They shall be designed as an attractive and integral part of the overall facade design, shall project no more than 6 feet from the face of the building, take up no more than 10 feet of frontage, and maintain a clearance of at least 8 feet above the sidewalk surface. No column supports shall be permitted within the public right-of-way.

e. Projecting Signs. Projecting signs are encouraged on storefronts consistent with the sign regulations for the Central Business District in the Zoning Code.

f. Awnings. Awnings overhanging the sidewalk are also encouraged to further enhance the life and variety of the street. The preferred material for awnings is canvas, but other materials will be considered if they are light in character and can be architecturally integrated with the building facade. Awnings shall be maintained at least 8 feet above the sidewalk surface, and shall be carefully designed to complement the overall facade design. Under standard conditions (e.g., not within retail extension zones), storefront awnings shall not project more than 6 feet into the public right-of-way, and generally shall not be higher than 14 feet above the sidewalk. Awnings above 14 feet in height shall not project more than 3 feet into the public right-of-way.

2. Storefront Variation and Craftsmanship. The visual experience of moving along the street shall be enjoyable and varied. Changes in treatment (e.g., the use of porticos, setbacks, architectural elements, landscape treatments, etc.), within the standards and guidelines are

outlined above and below. Particular attention shall be given to the craftsmanship and detailing within the pedestrian's range of touch and view. The use of special materials (e.g., stone, brass, bronze, terra cotta, ceramic, wood) for storefront ornamentation is strongly encouraged, particularly around windows and entries and at the base of building walls.

3. Retractable Storefronts. Where appropriate, the use of retractable storefronts is encouraged to create a direct relationship between sidewalk activity and the commercial establishment; this treatment is particularly encouraged for restaurants where outdoor seating is proposed, or for retail establishments that include an extension area within the public right-of-way.

4. Storefront Landscape Elements. The introduction of plant materials on the building face and storefront is strongly encouraged to reinforce and extend the landscape identity of Pacific Avenue and the downtown. More specifically:

a. Storefront Setbacks. Storefront setbacks of up to 18 inches may be permitted for the introduction of low planters of up to 12 inches in height below storefront windows.

b. Sidewalk Planting. The sidewalk paving along Pacific Avenue may be designed to allow for planting beds at sidewalk level to encroach into the public right-of-way up to 18 inches. Such planting beds shall include durable curbing (up to 3 inches in height) to provide a clear visual separation.

c. Planter and Window Boxes. Planter and window boxes may be allowed to project into the public right-of-way up to 18 inches, with a maximum height of 24 inches above the sidewalk level. It is recommended that window boxes maintain a clearance of 12 inches above the sidewalk, not including decorative support braces. Window boxes shall be designed as a compatible and integral extension of the storefront window casing; materials shall be durable and of high quality. Planter and window boxes shall also provide for internal drainage connecting to roof drain lines.

d. Hanging Flower Pots. Hanging flower pots may project into the public right-of-way up to 12 inches and shall have a minimum 8-foot clearance within the public right-of-way unless hanging directly above planter boxes.

e. Trellises. Trellis structures supporting climbing vines are encouraged against blank building walls, both at the storefront and upper levels. At the storefront level, trellises shall be allowed to project into the public right-of-way up to 6 inches; above 8 feet in height, overhanging arbor or trellis structures shall be allowed to project up to 18 inches into the right-of-way.

f. Plant Types. Plant materials within planters, planting beds, flower boxes and flower pots shall provide color and variety throughout the year. The use of non-flowering shrubs or plant materials is discouraged, unless they are part of a planned pattern of landscape to that creates interest on the street.

J. ALL CENTRAL BUSINESS DISTRICTS
OTHER DEVELOPMENT STANDARDS AND DESIGN GUIDELINES

1. Design Variation. The Downtown Plan contains development standards, which when implemented, are intended to achieve the First Principles of the Plan and public objectives for the downtown. While every effort has been made to thoughtfully produce clear and concise standards for the community, the Plan can never address or respond to all development scenarios and circumstances. Therefore, projects that closely conform to the development standards, but with slight variations may be considered upon demonstration that the resulting project will better achieve stated Plan and community objectives. Such variations shall be minor in nature and must receive a positive recommendation from the Planning Director, with final approval by the City Council.

2. Storefront Setbacks. Minor ground-level storefront setbacks are permitted within the provisions of the storefront and building façade standards and guidelines discussed below. Recessed storefronts up to six feet in depth and twenty-five feet in length may occur where a designated outdoor use, such as an outdoor café, is an integral part of the retail business.

3. Roof Top Mechanical Equipment. The design of roof top mechanical equipment and related structures is an important aesthetic consideration when viewing the downtown skyline. The arrangement of roof top equipment, elevator penthouses, mechanical penthouses and enclosures, safety rails, inside faces of parapets, roofing surfaces, architectural elements, and other mechanical or electrical equipment, including telecommunications equipment, shall be designed, installed and painted to be visually unobtrusive and to create a unified, coherent whole. These roof top features shall be incorporated into the building design at the Planning approval stage of the project. Additional visual simulations may be required to demonstrate that the project provides for architecturally interesting and varied skyline views, with specific attention given to integrating these rooftop features into the overall building design.

4. Permanent Projections into the Public Right-of-Way. It is not the intent of the Plan to create a hard edge between the public and private realms. Rather, building facades and storefronts that are varied and that promote activity and interest are encouraged.

5. Retail Extension Zones. Pacific Avenue and some of the east-west streets (e.g., Church Street, Walnut Avenue, Cathcart Street and pedestrian paseo or lane) will include opportunities for the extension of retail and restaurant activities into the public right-of-way. These extension areas will be managed by the City and its designated agent through revocable licenses [See Extension Area requirements in section 24.10 of the Zoning Ordinance]. The following guidelines shall govern the physical design of these extension areas:

a. Types of Uses. Designated extension areas shall be confined to uses that add activity and color to the street. Permitted uses shall be limited to outdoor cafes, food kiosks or carts, or the selling of flowers, produce, and newspapers/magazines, unless otherwise approved by the City Council or its designated agent.

b. Outdoor Cafes. The extension area for cafes shall project no more than 12 feet from the property line into the public right-of-way, and in no case shall a cafe extension

area result in a public walk way of less than 12 feet. The elevation of the extension area shall be the same as the public sidewalk, and shall meet ADA accessibility standards. No permanent structures will be allowed within the public right-of-way, with the exception of ADA-complaint barriers. If a separation between the cafe and the promenade is desired, this shall be achieved through low planters that could contain colorful flowers or a low hedge not permanently affixed to the sidewalk; the maximum height of such planters (including the planting) shall be no more than four feet. Planters shall consist of high-quality, durable materials of a weight and mass that will discourage theft, vandalism or easy movement. A canvas awning will be permitted to extend over the full depth of the cafe extension area; no columns or supporting poles will be permitted within the public right-of-way. Awnings shall comply with the design and height guidelines prescribed below. The use of removable umbrellas within sidewalk extension areas is also encouraged, provided that seven feet of clearance is provided from the sidewalk. Removable wind screens that are of a transparent material and that are an integral part of the planter will be permitted to extend the seasonal use of the cafe area. Such screens shall not exceed a height of six feet and shall be separated from the awning to provide for air movement.

c. Retailing Uses. Retailing uses within extension zones shall be limited to the sale of newspapers and magazines, flowers and produce, unless otherwise approved by City Council or its designated agent. Such extension areas shall not exceed 6 feet in depth, unless it is determined that such depth is necessary to achieve the desired pedestrian objectives for the street, and in no case shall an extension area result in a public promenade that is less than 12 feet in depth on Pacific Avenue and no less than 8 feet in depth on Front Street and Laurel Street. Merchandise shall be displayed against the shop front and be oriented toward the street on tables or stands that do not exceed four feet in height. No separation (e.g., planters or low walls) between the merchandise and the street shall be permitted.

d. Furniture. All furniture (e.g., tables, chairs, retailing stands) shall be durable, well-maintained, and of a high quality, suitable for outdoor use; such furniture shall be light, not heavy or massive in nature, to ensure that it does not visually dominate the street. All furniture shall be approved by City Council or its designated agent.

e. Design Materials. The design materials and colors used for chairs, tables, display stands, lighting, and other fixtures (including umbrellas and awnings) shall be generally consistent with both the architectural style and colors used on the building facade and the quality of fixtures along Pacific Avenue.

f. Lighting. Lighting shall be incorporated into the facade of the building and shall complement the style of the building. Lights on buildings shall not be glaring to pedestrians and shall illuminate only the extension area and the activities within. General illumination shall be at 5 foot-candles, with a maximum of 10 foot-candles. Table lamps or candles are encouraged in cafe areas. Wired electrical fixtures will be allowed outside the face of the building, if contained within the semi-permanent barrier allowed for cafe extension areas and if installed by a licensed electrician. A lighting plan must be approved by the City Council or its designated agent.

g. Sidewalk Cleaning. The sidewalk area within the Retail Extension Zone shall be cleaned and maintained by the licensee. The area shall be cleaned, at a minimum, daily and shall be steam cleaned as needed and appropriate, to maintain a clean, sanitary and attractive environment.

6. Distinctive Architectural Elements. Towers, cupolas, chimneys, dormers, spires, flag poles and other architectural elements will be allowed on a conditional basis, if they can meet the following criteria:

a. Key Locations. Such elements occur at significant locations within the downtown (e.g. key corners, street termini, downtown gateways), and provide landmarks that will reinforce the overall sense of place;

b. Architectural Integration. Such elements have been architecturally integrated within the building design and contribute positively to the overall harmony, composition and articulation of the facade and building mass;

c. Solar Access. Such elements do not significantly affect solar access objectives for the west- facing sidewalk of Pacific Avenue or the south-facing sidewalks of-east-west streets; and

d. No Habitable Space. Such elements do not add habitable space above the prescribed height limits set forth above.

7. Accessibility. The Plan recognizes that accessibility permeates all elements of urban design, and requires that access be aesthetically integrated within all public and private development in the downtown. The *Americans with Disability Act*, passed by Congress in 1990, confirms that accessibility is a civil right and not a luxury or option. The Plan endorses this position, and requires that new development strive to achieve an "optimum state" of accessibility, beginning with compliance with both the State of California's *Title 24 Accessibility Requirements* and the *Uniform Federal Accessibility Standards (UFAS).* This requirement shall govern all subdistricts within the downtown.

8. Pedestrian Passages. While sideyard spaces are discouraged in favor of contiguous building facades, public-oriented passages that provide pedestrian access through a development parcel to parking facilities, interior courtyards, and/or other developments are encouraged. These passages shall comply with Californian Building Code, et seq., dimensional requirements, and include provision of natural (as well as electrical) light and active uses along their length. To the maximum extent practicable, adjacent development shall establish a relationship to these passages with entries and storefronts, to promote a secure and interesting environment.

9. Interior Courtyards. Santa Cruz has a tradition of interior courtyards and gardens that provide attractive places to sit and relax, and a spatial counterpoint to the street experience. If provided, courtyards or interior gardens shall be designed to include: direct publicly-oriented linkages to Pacific Avenue and/or to other public streets or lanes; activities that do not reduce the principal objective of activating Pacific Avenue; and generous solar access throughout the year.

10. Intersection Treatment. High activity-generating uses are especially encouraged at the Pacific Avenue intersections. Minor corner setbacks in conjunction with storefront entries are also encouraged at these locations.

11. Corner Treatment. Corner parcels are encouraged to incorporate special features such as rounded or cut corners, articulated corner entrances, display windows, corner roof features, etc.

12. "T" Intersections. New development that occurs at the "T" intersections along Pacific Avenue (Cooper-Church-Locust; Soquel-Walnut-Lincoln; Elm-Maple-Pacific) are encouraged to accentuate the unique spatial characteristics of this condition, through corner treatments as described above, and through special facade treatments at the visual terminus of the east-west streets (e.g., towers, distinctive change in fenestration, roof profile, building material, etc.). Buildings located at the "T" intersections are required to prepare a visual impact analysis to determine the visual impact from the east-west street.

13. Ground Level Treatment. Along rear parking lots and service lanes, rear alleys are envisioned as attractive pedestrian places as well as service spaces. Where the back of development is adjacent to a public alley or surface parking lot, the ground level shall be designed to include architectural interest and detail on the rear façade. At a minimum, a usable and operable rear entrance shall be provided and, to the maximum extent practicable, views into the retailing activity shall be provided from the rear of the building.

14. Off-site Parking and Parking Structures. Required residential and commercial parking may be provided off-site, provided that such parking is located within the parking District No. 1. Publicly available parking structures shall conform to height limits of this Plan, but are not required to adhere to a maximum floor-area-ratio limit.

15. Service Access. Parcels adjacent to rear alleys must maintain service access from the rear and provide attractive rear entrances. Trash storage areas shall be internal to the building or completely enclosed and screened from view, as required by City ordinance. Trash or loading areas shall not, to the maximum extent practicable, be located adjacent to Pacific Avenue, North Pacific Avenue, Front Street or Water Street. Required grease trap interceptors shall be maintained within the property. On a conditional basis, the City will consider their location within public alleys or within the street right-of-way, if there is no feasible alternative within the property.

A. ALL CENTRAL BUSINESS DISTRICTS LAND USES

All new construction shall require approval of a Design Permit, regardless of type of use.

1. Prohibited Uses

The uses described in subsection (a) below, are deemed inconsistent with the goals, policies and objectives of the Downtown Plan and are, therefore, prohibited within the Downtown Plan (Plan) portion of the Central Business District as either a stand-alone use or an accessory or temporary use. Such uses that lawfully existed within the Plan area prior to the adoption of this provision are deemed non-conforming and may continue only at the same location at the same intensity or less for a period of no more than 20 years from the effective date of the Zoning Ordinance amendment (October 10, 2000), after which time the use shall be completely removed or converted to a conforming use. The uses described in subsection (b) below shall be deemed a public nuisance and shall be immediately abated according to the provisions of the Zoning Ordinance or other applicable City Codes or Ordinances.

Uses that are prohibited within any of the Downtown Plan subdistricts.

a. Uses not permitted include, but are not limited to, the following: medical and recreational cannabis provider dispensaries; rent, sales or service of automobiles, trucks, recreational vehicles, motorcycles or trailers; sale of firearms; general advertising signs; sale of alcoholic beverages for off-site consumption requiring ABC liquor license Numbers 20 or 21 (liquor stores), with the exception of the sale of alcohol for off-site consumption that is clearly incidental to other principally permitted uses, that represents less than fifteen percent of the total shelf space in the business, and that complies with the operational criteria specified in Table 4-1 of Chapter 4, herein, inclusive of the additional regulations referenced in said table; drive-up facility; or drive-through facility.

b. Nuisance Activities. No use, even though listed as a permitted use or otherwise allowed, shall be permitted which, by reason of its nature or manner of operation, is deemed by the Zoning Administrator to be creating a condition that is hazardous, noxious, or offensive through the emission of odor, fumes, smoke, cinder, dust, gas, vibration, glare, refuse, water-carried waste, or excessive noise. Such use shall be subject to violation abatement procedures, which may result in revocation of the use permit.

2. Accessory Uses

Accessory uses, as defined in Section 24.22.013 of the Zoning Ordinance, shall be limited to the use of no more than one quarter (¼) of the total floor area occupied by the permitted use.

3. Temporary Uses

Temporary uses, as defined in Section 24.22.879 of the Zoning Ordinance, shall be limited to the following activities and standards:

a. The following activities if they are sponsored by a government entity or an organized group of businesses, property owners or residents of the CBD:

   i. Neighborhood, District or Citywide-oriented carnival, circus, street fair, exhibition, celebration or festival;
   ii. Booth for educational, charitable, patriotic or welfare purposes;
   iii. Open air sale of agricultural products, including seasonal decorations.
   iv. Open air sporting event;
   v. Arts or crafts sale or artistic performance event; or
   vi. Surface parking open to the public.

b. The following activities if they secure the proper permits, if applicable, from City agencies: Parades, civic events, and advertised citizen gatherings.

TABLE 4-1: Central Business Districts Use Allowances — Ground Floor (Street Level)

P = Principally Permitted
A = Administrative Use Permit
S = Special Use Permit
"—" = Not Permitted

Use Categories	*Pacific Avenue Retail*	*Front Street Riverfront*	*Cedar Street Village*	*North Pacific*	*Additional Regulations*
Residential					
Community Care Residential Facility	—	—	P/A	—	(1)
Dwellings, Multiple and Townhouse	A	A	A	A	(2)
Dwellings, One-Family & Two-Family	—	—	P	—	(2)
Dwellings, Small Ownership Housing	A	A	A	A	(2)
Dwellings, SRO Single Room Occupancy Housing	A	A	A	A	(2)
Family Day Care Homes, Small	—	P	P	P	(1)
Family Day Care Homes, Large	A	A	A	A	(1)
Supportive and Transitional Housing	A	A	A	A	(1)

TABLE 4-1: Central Business Districts Use Allowances — Ground Floor (Street Level)

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Use Categories	*Pacific Avenue Retail*	*Front Street Riverfront*	*Cedar Street Village*	*North Pacific*	*Additional Regulations*
Commercial					(3)
Banks and Financial Institutions	A	P	A	P	(4)
Business Support Services	A	P	P	P	
Eating and Drinking Establishments					
- Bar, Tavern	A	A	S	A	(5)
- Brewpubs	A	A	A	A	(5)
- Bona Fide Restaurant	P	P	P	P	(5)
- Tasting Rooms	A	A	A	A	
- Breweries, Distilleries and Wineries	A	A	A	A	(6)
General Market	P/A	P/A	P/A	P/A	(7)
Hotels / Motels	A	P	A	P	(8)
Instructional Services - Schools, Business and Technical	A	A	A	A	(9)
Live/Work Quarters	A	A	A	A	(10)
Nightclubs and Live Entertainment	S	S	S	S	(11)
Offices, Professional	A	A	A	P	(12)
Parking Facilities, Surface and Structured	A	A	A	A	(13)
Personal Services					
- General Personal Services	A	A	A	P	(14)
- Health/Fitness Studio	A	A	A	A	(15)
Retail Sales	P	P	P	P	(7), (16)
Theaters/Commercial Entertainment	P	P	S	P	
Thrift Stores/Pawn Shops	S	S	S	S	(17)
Institutional and Community Facilities					(3)
Community/Religious Assembly	A	A	A	A	
Day Care Centers	A	A	A	A	
Government Buildings	P	P	P	P	
Medical Centers and Clinics	A	A	A	A	(12)
Museums/Galleries/Cultural Institutions	A	A	A	A	(18)
Social Service Centers	A	A	A	A	
Other Similar Uses as Determined by the Zoning Administrator to be consistent with the purpose of the subdistrict	P/A/S	P/A/S	P/A/S	P/A/S	

Additional Regulations – Ground Floor Uses.

(1) Community Care Residential Facilities. Facilities with fewer than 7 persons are principally permitted uses in the Cedar Street Village District. Facilities with 7 or more persons require approval of an Administrative Use Permit (AUP). Supportive and Transitional Housing facilities are allowed with only those restrictions that apply to similar residential uses.

(2) Multi-Family Housing. (Including Single-Room Occupancy projects subject to standards set forth in 24.12.) In all districts where multi-family housing requires an AUP, common residential lobbies for upper-level residences are allowed at ground level with active ground level common spaces publicly visible. Within the Cedar Street Village, ground-level residential uses are permitted on the side streets west of Cedar Street and along Center Street. Direct access between individual townhouse units and the street are strongly encouraged through the use of porches and front "stoops". In the Front Street/Riverfront Corridor and North Pacific Area, the first floor of units shall be elevated above the sidewalk level 5 feet. For Front Street/Riverfront Corridor, allow for ground level residential uses provided that such uses are internal to a block and do not face Front Street, Laurel Street, Cathcart Street, Soquel Avenue, River Street, North Pacific, or any public pedestrian paseo or lane. Individual housing unit entrances with direct access to Front Street are prohibited within 60 feet of Front Street from Soquel Avenue and Laurel Streets and along the frontages of public passageways between Front Street and the Riverwalk.

(3) Commercial and Non-Residential Uses. These uses adjacent to public passageways in the Front Street/Riverfront Corridor shall be accessible from Front Street and the Riverwalk.

Large Non-Residential Ground-Level Uses. These uses exceeding sixteen thousand (16,000) gross square feet per single-tenant/establishment require approval of a Special Use Permit (SUP) by the City Council after review and recommendation by the Planning Commission. In addition to the findings for SUP issuance required under Section 24.08.050, a SUP required by this subsection shall not be issued unless the following additional criteria, findings and conditions related to the public benefits provided by the proposed project are made by the City Council.

a. The use adds a desired, “targeted” business to the Downtown, which would serve to diversify the Downtown Plan area ground-level business base;

b. The use provides a public benefit and contributes to an appropriate balance of local or non-local businesses. For the purposes of this finding, it shall be presumed that local businesses serve to sustain the authenticity and unique retail character of the downtown business mix. However, non-local businesses may add to retail draw and contribute to overall downtown vitality in certain circumstances;

c. The use contributes to an appropriate balance of small, medium and large-sized businesses in the downtown area to diversify the ground-level business mix; to insure the maintenance of the “Santa Cruz” identity, unique character and authenticity; to seek to reduce economic “leakage” of sales out of the City and County; and to induce local investment and employment to the downtown area;

d. The design of the façade of the proposed use meets the design standards and guidelines of the Downtown Plan and is not restricted by corporate standardized or trademarked exterior design, signage, materials, color or other visual treatments;

e. The proposed use would be a good neighbor and contribute to the community life of the downtown by participating in such community activities as: (1) Membership in downtown merchant, resident, neighborhood improvement organizations and/or assessment districts; (2) to the greatest extent feasible, hiring local residents; and (3) hosting or participating in downtown festivals, fairs, benefit events and similar neighborhood activities; and

f. If applicable, all food and/or beverage service activities shall be conducted in accordance with the following "good neighbor operating procedures" for such uses.

   i. Sufficient trash and recycling receptacles shall be provided and shall be regularly maintained;
   ii. All debris boxes shall be screened and kept on the premises in a designated or approved location;
   iii. The operator shall be responsible for cleaning the sidewalk within fifty (50) feet horizontal distance from the premises during the hours of operation to maintain the sidewalk free of paper, spillage or other litter; and
   iv. Noise, glare and odors shall be contained within the premises so as not to be a nuisance to neighbors. Under no circumstance shall the ventilation outlets or motors cause emission of objectionable odors or noise directed toward neighbors.

(4) Banks and Financial Institutions. These uses may be allowed when there is no other bank within the contiguous block.

(5) Eating and Drinking Establishments. All uses within this category shall be subject to City and State alcohol regulations. When applicable, all fast food and/or beverage establishments (defined in the Zoning Ordinance) shall be conducted in accordance with the "good neighbor" operating procedures listed in Section 3.f.

(6) Breweries, Distilleries and Wineries. These manufacturing uses are allowed in these districts only when they contain at least 25% of floor area devoted to retail and/or tasting of the product manufactured on the premises. Street-oriented active store frontage is required.

(7) Sale of Alcohol for Offsite Consumption. Retail establishments with the Department of Alcoholic Beverage Control license numbers 20 and 21 including general markets may sell alcohol for offsite consumption with approval of an administrative use permit if the sale of alcohol is clearly incidental to other principally permitted uses and represents less than fifteen percent of the total shelf space in the business; the business conforms with Section 24.12.1106(10) of the Santa Cruz Municipal Code; the hours of alcohol sales are limited to 7:00 a.m. to 12:00 a.m.; security mitigations approved by the Police Department to help prevent theft and sale of alcohol to minors, including but not limited to the potential for requiring alcohol to be located where it can be monitored by store personnel or security cameras, are provided; and single-serving alcohol containers other than beer are not provided for sale. This exception to the prohibition on single-serving alcohol containers does not include malt liquor, which remains prohibited.

Existing businesses that were approved to sell alcohol for offsite consumption prior to the enactment of the operational criteria are not required to obtain new administrative use permits but are required to comply with the operational criteria by October 10, 2020.

If the sale of alcohol for offsite consumption use is determined by the Planning or Police Departments to be a nuisance or to otherwise frustrate the intent of the Downtown Plan, the City may initiate proceedings to revoke to the right to sell alcohol per Section 24.12.1112 and Title 4 of the Santa Cruz Municipal Code.

(8) Hotels/Motels. These uses are allowed as principally permitted uses along the east side of Front Street. No hotel rooms are allowed along the ground level frontages or along the Riverwalk level frontage.

(9) Instructional Services - Schools, Business and Technical. Schools and studios for arts and crafts, photography, music and dance provided that such establishments are not located along Pacific Avenue frontage or east-west street frontage. A Special Use Permit is required (1) when located along Pacific Avenue frontage or (2) if located along east-west street frontage, provided the following conditions are met:

a. Any such establishment will not occupy more than 50 linear feet of frontage space;

b. Such establishment is compatible with nearby residential uses;

c. Such space is in compliance with the storefront and façade design and development standards; and

d. Such space is capable of being converted into retail use in the future.

(10) Live/Work Quarters. The residential component of a Live/Work space shall not be located on the ground level, unless the residence is located in the interior of the lot; i.e., the non-residential component of the space must have frontage on the public right-of-way or publicly accessible passageway. The non-residential component of the space must have a minimum frontage depth of 30 feet.

(11) Nightclubs, Establishments Providing Live Entertainment. These uses with stage/performance areas greater than 80 square feet or permitting dancing, and establishments serving alcoholic beverages not ancillary to food service will be considered for the ground level, subject to the following operating conditions:

a. Acoustical studies indicating that such uses can achieve the City's existing noise abatement standards;

b. The provisions of Part 12 of the Zoning Ordinance (for High Risk or Low Risk Alcohol Outlets) are met;

c. The establishments shall be conduct business in accordance with the following “good neighbor operating procedures” as described in Section 3.f above.

d. The storefront adjacent to the street is designed in compliance with the storefront and building façade standards and guidelines and includes active people-oriented activities of visual interest to the pedestrian (e.g., food service/restaurant seating,

retail frontage, queuing areas or art work) and in no case shall the storefront occupy more than 50 linear feet of street frontage;

e. Such establishments are compatible with adjacent residential uses; and

f. Such space is capable of being transformed into retail use in the future.

(12) Medical Centers/Clinics and Professional Offices. Professional, editorial, real estate, insurance and other general business offices including space for non-profit organizations; medical and dental offices; and medical, optical and dental clinics will be considered for the ground level subject to the following criteria. These uses:

a. Are prohibited along Pacific Avenue frontage (75 feet perpendicular to Pacific frontage property line and within 40 feet perpendicular to the east-west street property line), except when limited to interior ground floor space not fronting the street.

b. Must be compatible with existing and planned ground-level and upper-level permitted uses; and

c. Must be in compliance with the storefront and building façade guidelines and standards, and capable of being transformed into retail use in the future.

(13) Parking, Surface or Structured. Allow for the use of parking lifts within the required envelope of any parking garage. See subdistrict development standards for other specific parking criteria.

(14) Personal Services. Uses such as barber shops, laundry and clothes cleaning establishments; administrative, executive and financial services; and technology-related services are allowed with an AUP for the ground level in the Pacific Avenue Retail district and by right in the other subdistricts if it can be demonstrated that:

a. Such establishments are not located along Pacific Avenue frontage or along east-west street frontage (75 feet perpendicular to Pacific frontage property line and within 40 feet perpendicular to the east-west street property line) from Water Street to Laurel Street and are, therefore, limited to the interior ground floor space. This requirement may be met within the business establishment by providing a retail use in the front 40 feet of the space, with the personal service use provided in the area beyond that 40 feet of retail space. Businesses that can provide a retail use in the front but cannot meet the 40-foot requirement may apply for an administrative use permit for alternate space design provided that: 1) the business can demonstrate that there is a physical difference in the space that dictates the need for the exception, or 2) the business would contribute to the overall character and mix of uses in the downtown and would be expected to create a significant local or regional draw to the downtown.

b. Such establishments are compatible with existing and planned ground-level and upper-level permitted uses; and

c. Such establishments are in compliance with the storefront and building façade guidelines and standards, and capable of being transformed into retail use in the future without extensive remodeling.

(15) Health and Fitness Studios. These uses will be considered for ground-level use, provided that:

a. The storefront adjacent to the street is designed in compliance with the storefront and building façade standards and guidelines and active people-oriented uses are located adjacent to the street (e.g., retailing component);

b. In no case shall the storefront occupy more than 50 linear feet of street frontage;

c. Such establishments are compatible with adjacent residential uses; and

d. Such space is capable of being transformed into retail use in the future.

(16) Retail. The store space along the frontage of North Pacific Avenue, River Street and Water Street shall have the minimum perpendicular depth of forty (40) feet; however, such use may vary in depth along these streets provided that each street maintains an average retail depth of twenty five (25) feet.

(17) Thrift Stores or pawn shops. These uses are prohibited along Pacific Avenue frontage (75 feet perpendicular to Pacific frontage property line and within 40 feet perpendicular to the east-west street property line).

(18) Art Galleries and Museums. These uses shall be open to the public.

TABLE 4-2: Central Business Districts Use Allowances — Upper Floors (Includes Riverwalk Level)					
P = Principally Permitted A = Administrative Use Permit S = Special Use Permit "—" = Not Permitted					
Use Categories	*Pacific Avenue Retail*	*Front Street Riverfront*	*Cedar Street Village*	*North Pacific*	*Additional Regulations*
Residential					
Community Care Residential Facility	—	—	P/A	—	(1)
Dwellings, Multiple and Townhouse	A	A	A	A	(2)
Dwellings, One-Family & Two-Family	—	—	P	—	(2)
Dwellings, Small Ownership Housing	A	A	A	A	(2)
Dwellings, SRO Single Room Occupancy Housing	A	A	A	A	(2)
Family Day Care Homes, Small	—	P	P	P	(1)
Family Day Care Homes, Large	A	A	A	A	(1)
Supportive and Transitional Housing	A	A	A	A	(1)
Commercial					
Banks and Financial Institutions	A	P	A	P	
Business Support Services	A	P	P	P	
Eating and Drinking Establishments					
- Bar, Tavern	A	A	S	A	(3)
- Brewpubs	A	A	A	A	(3)
- Bona Fide Restaurant	P	P	P	P	(3)
- Tasting Rooms	A	A	A	A	(3)
- Breweries, Distilleries and Wineries	A	A	A	A	(6)
General Market	P	P	P	P	
Hotels/Motels	A	P	A	P	(4)
Instructional Services - Schools, Business and Technical	A	A	A	A	(5)
Live/Work Quarters	A	A	A	A	
Nightclubs and Live Entertainment	S	S	S	S	(7)
Offices, Professional	P	P	P	P	(8)
Parking Facilities, Surface and Structured	A	A	A	A	(9)
Personal Services					
- General Personal Services	P	P	P	P	
- Health/Fitness Studio	A	A	A	A	(10)
Retail Sales	P	P	P	P	(11)
Theaters/Commercial Entertainment	P	P	S	P	
Thrift Stores/Pawn Shops	S	S	S	S	

Institutional and Community Facilities					(3)
Community/Religious Assembly	A	A	A	A	
Day Care Centers	A	A	A	A	
Government Buildings	P	P	P	P	
Medical Centers and Clinics	A	A	A	A	(8)
Museums/Galleries/Cultural Institutions	A	A	A	A	(12)
Communication Facilities	P	P	P	P	(13)
Industrial and Other					
Artist Studio	A	A	A	A	
Bakery, microbrewery, handicrafts or similar light manufacturing and assembly use associated with retail sales/services	A	A	A	A	
Other Similar Uses as Determined by the Zoning Administrator to be consistent with the purpose of the subdistrict	P/A/S	P/A/S	P/A/S	P/A/S	

Additional Regulations – Upper Floor Uses.

(1) Community Care Residential Facilities. Facilities with fewer than 7 persons are principally permitted uses in the Cedar Street Village District. Community Care Residential Facilities with 7 or more persons require approval of an AUP. Supportive and Transitional Housing facilities are allowed with only those restrictions that apply to similar residential uses.

(2) Multi-family Housing. Development projects containing up to 60 units in size are principally permitted uses. Residential uses shall incorporate sound attenuation space planning designs and construction materials and methods such that noise from nearby commercial activities do not unduly disturb occupants of new dwelling units. Residential development exceeding 60 units will be considered with a Special Use Permit if it can be demonstrated that such a development includes a mixture of unit types (e.g., variety of unit sizes) that will be attractive to a wide range of potential residents. Single-Room Occupancy projects require approval of an AUP and are subject to 24.12.1000 et seq. Single-Room Occupancy projects exceeding 60 units require approval of City Council. For properties east of Front Street between Soquel Avenue and Laurel Street, housing is a priority use and shall be at least 60% of the total floor area of the project. This requirement does not apply to properties within 75 feet of Laurel Street or Soquel Avenue.

(3) Eating and Drinking Establishments. All uses within this category shall be subject to City and State alcohol regulations. When applicable, all fast food and/or beverage establishments (defined in the Zoning Ordinance) shall be conducted in accordance with the previously described "good neighbor operating procedures" previously described in section 3.f. of the Ground Floor Uses. Eating and drinking establishments are encouraged on the Riverwalk level to publicly activate the Riverwalk and connections to the Riverwalk and east/west publicly accessible spaces in the Pacific Avenue Retail District. Outdoor rooftop dining is allowed when associated with an upper level restaurant/eating and drinking establishment.

(4) Hotels/Motels. These uses are allowed as principally permitted uses along the east side of Front Street. No hotel rooms are allowed along the ground level frontages or along the Riverwalk level frontage.

(5) Instructional Services - Schools, Business and Technical. Schools and studios for arts and crafts, photography, music and dance provided that such establishments are compatible with nearby residential uses.

(6) Breweries, Distilleries and Wineries. These manufacturing uses are allowed in these districts only when they contain at least 25% of floor area devoted to retail and/or tasting of the product manufactured on the premises.

(7) Nightclubs, Establishments Providing Live Entertainment. These uses with stage/performance areas greater than 80 square feet or permitting dancing, and establishments serving alcoholic beverages not ancillary to food service, are subject to the following operating conditions:

a. Acoustical studies indicating that such uses can achieve the City's existing noise abatement standards;

b. The provisions Part 12 of the Zoning Ordinance (for High Risk or Low Risk Alcohol Outlets) are met;

c. All such establishments are conducted in accordance with the previously described "good neighbor operating procedures"; and

d. Such establishments are compatible with nearby residential uses.

(8) Medical Centers/Clinics and Professional Offices. Professional, editorial, real estate, insurance and other general business offices including space for non-profit organizations; medical and dental offices; and medical, optical and dental clinics will be considered for upper levels subject to the following criteria. These uses must be compatible with existing and planned ground-level and upper-level permitted uses.

(9) Parking, Surface or Structured. Allow for the use of parking lifts within the required envelope of any parking garage. See subdistrict development standards for other specific parking criteria.

(10) Health and Fitness Studios. These uses will be considered for upper level use, provided that such establishments are compatible with adjacent residential uses.

(11) Retail Sales. In the Pacific Avenue Retail District, second level retail sales are allowed subject to the approval an Administrative Use Permit when the second level is connected to the same business on the ground floor, subject to being compatible with and minimizing impacts to nearby residents. Riverwalk retail is allowed subject to the approval of an Administrative Use Permit to publicly activate the Riverwalk. Retail space should be evaluated in the context of adjacent projects to ensure uses are compatible, active and enhance the Riverwalk.

(12) Art Galleries and Museums. These uses shall be open to the public.

(13) Communication Facilities. Uses are subject to the regulations in Part 15 of Chapter 24.12.

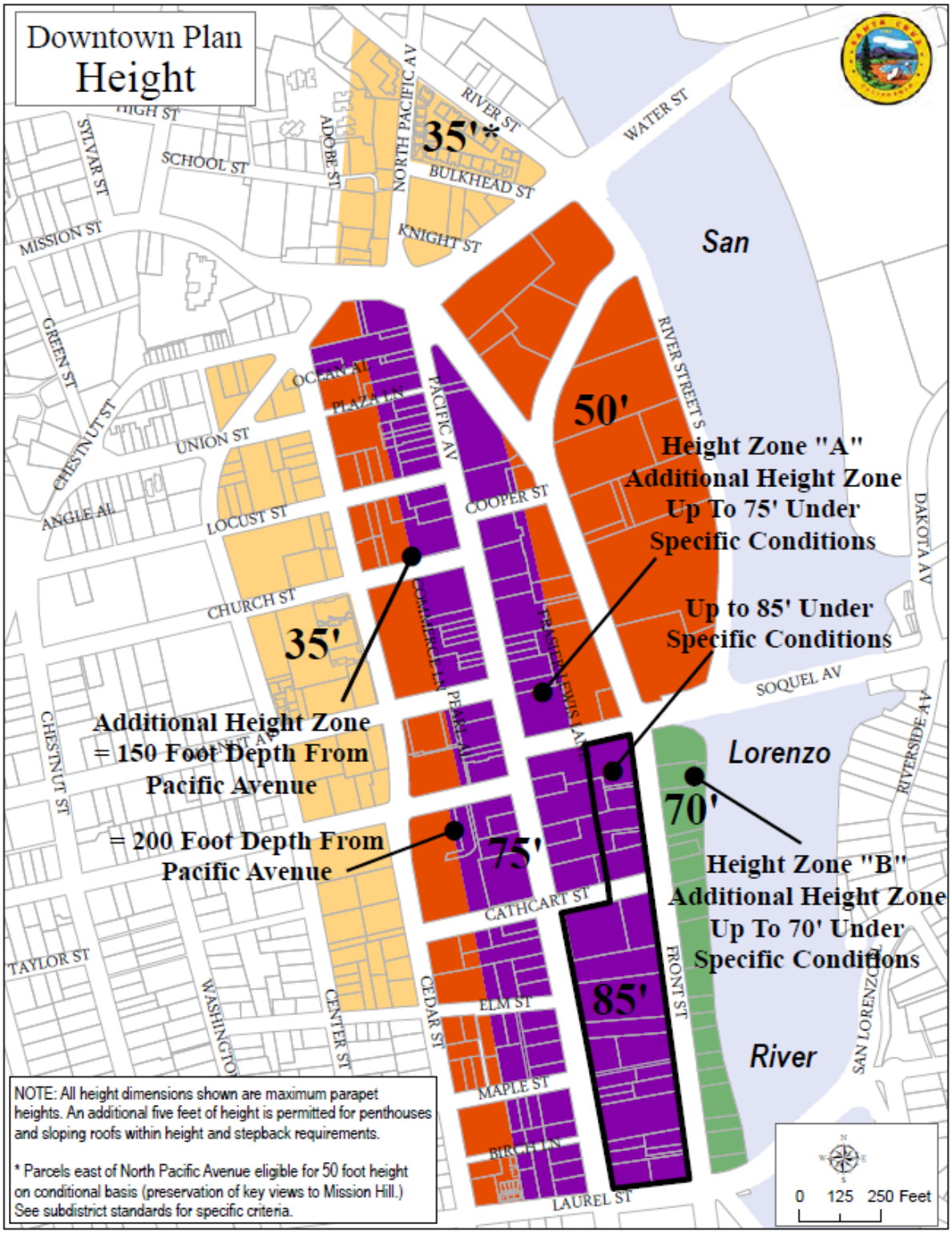


Figure A-1: Downtown Plan Height

B. PACIFIC AVENUE RETAIL DISTRICT DEVELOPMENT STANDARDS

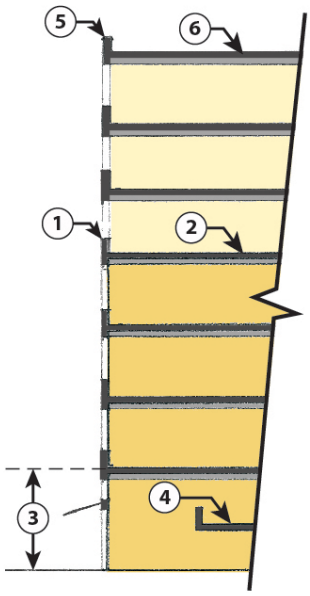
1. Building Height

The following height standards shall apply to all development within the Pacific Avenue Retail District, including frontage along Pacific Avenue and the east-west streets within the subarea. All buildings must conform to the Base Height requirements, except for provisions for additional height within the "Additional Height Zone A". The intent of the standards is not to create a five-story downtown, but rather to preserve the overall character and scale of the historic core while allowing some intensification and increased height on larger parcels.

a. Floors. No new building shall be less than two stories in height. The second story shall be at least 50 percent of the first floor area and shall be located toward the street frontage. An exception may be made for building recessed breaks as described for the Additional Height Zones.

b. Floor-to-Floor Height. The first floor uses must have a minimum floor-to-floor height of 18 feet for properties north of Cathcart Street and 15 feet minimum south of Cathcart Street. Any mezzanine shall be set back at least 30 feet from the building line on the street and shall occupy no more than one-third of the area of the first floor.

c. Base Height and Floors. No new development shall exceed a Base Height of 55 feet (measured to the top of parapet or eaves), except as provided for in the "Additional Height Zone A". Within this Base Height, no more than 3 floors of upper-level uses above the ground-level retail use will be permitted within the maximum 55 feet Base Height. (See Figure B-1.)



COMMERCIAL OR MIXED-USE

BASE HEIGHT

1. Maximum 55' to top of parapet
2. Maximum 3 floors of commercial or residential above 1 level of commercial
3. Minimum 15' ground level floor-to-floor dimension (South of Cathcart)
   Minimum 18' ground level floor-to-floor dimension (North of Cathcart)
4. Maximum mezzanine area = 33% of ground level floor area

ADDITIONAL HEIGHT ZONE A

5. Maximum 75' to top of parapet for 60% of site area on sites 15,000 to 50,000 sf;
   Maximum 85' to top of parapet for 20% of site area for sites >50,000 sf
6. Maximum 6 floors of commercial or residential above 1 level of commercial *

**Within the massing and stepback requirements for additional height.*

Figure B-1: Maximum Building Heights and Floors.

d. Mechanical Penthouses. Uninhabitable mechanical penthouses will be permitted above the Base Height to a maximum height of 65 feet, provided that such penthouses are set back a minimum of 15 feet from any exposed face of the buildings, unless such penthouses are architecturally integrated into the building façade design.

e. Sloping Roofs. (45 degrees/1:1 pitch or flatter) shall be permitted up to a maximum height of 60 feet, measured to the top of the sloping roof. For projects not eligible for the Additional Height, street wall heights shall not exceed the base height limit of 55 feet.

f. Visual Impact Study. Any site that is located where the east-west street does not cross Pacific Avenue (sites with frontage on Locust, Church, Walnut, Lincoln, Soquel, Elm and Maple Streets) must prepare a visual impact study to determine how the proposed building would be viewed from the east-west street from a pedestrian eye-level.

2. Build-to Lines and Setbacks

To ensure that Pacific Avenue and the east-west streets are spatially well defined, all development shall be built to the property line of the street. The following exceptions to this condition are noted:

a. Active Outdoor Uses. Setbacks of up to 12 feet in depth are permitted along the northern property line of Cathcart Street, if such setbacks are intended to provide active outdoor uses (e.g., outdoor dining or public seating) oriented to the street.

b. Laurel Street Sidewalk. Require any development along Laurel Street between Pacific Avenue and Front Street to dedicate sufficient property to result in a sidewalk depth of at least 12 feet. The precise dedication shall be consistent with the final Laurel Street design and shall be established with a build-to line.

c. Front Street Sidewalk. Require any development along the west side of Front Street between Cathcart Street and Laurel Street to dedicate sufficient property to result in a sidewalk depth of at least 12 feet.

d. Recessed Storefronts. Minor ground-level storefront setbacks are permitted within the provisions of the storefront and building façade standards and guidelines. Recessed storefronts up to six feet in depth and twenty-five feet in length may occur where a designated outdoor use, such as an outdoor café, is an integral part of the retail business.

3. Public and Private Parking Facilities

The Pacific Avenue Retail District is within the Downtown Parking District #1 and, as such, shall comply with all parking requirements set forth within that district. On-site parking will not be permitted unless it meets one or more of the following conditions:

a. Below Grade Parking and Access Driveways. Parking is provided completely below grade, and access driveways to the parking facility do not conflict with the

movement of pedestrians or vehicles within the area. No driveways shall be permitted along Pacific Avenue.

b. Visual Screening. Surface or above-grade structured parking can be provided if the parking is visually screened and separated from Pacific Avenue and east-west streets by retail development and if such parking can be accessed from an east-west street or rear service lane.

c. West Side Front Street. Allow parking facilities along the west side of Front Street south of Soquel Avenue where only one driveway curb cut shall be permitted per facility per street frontage; the parking facility shall not extend to street corners; and the parking facility shall be architecturally integrated within the overall building composition.

4. Driveways and Curb Cuts

Limit on-site driveways along Front Street to a maximum of one driveway per property or at a spacing of at least 200 feet; driveways should be no more than 24 feet in width and to the extent practicable should be spaced from an adjacent driveway by at least 200 feet Wider driveways may be considered based on a demonstrated need to accommodate specific vehicle operations of a proposed development..

5. Special Conditions for Maple Street Fronting Parcels 005-152-08, 005-152-17, 005-152-18, and 005-152-22.

Buildings fronting the 10-foot Maple Street alley between Pacific Avenue and Front Street shall be set back 20 feet to provide for a 50-foot wide public paseo, lane or street. If the above aggregated parcels are redeveloped together, the aggregated parcel size prior to the dedication exceeds the 15,000 square feet threshold to qualify for heights above the 55 foot base height, and shall be developed in conformance with the Additional Height Zone A performance standards. As a result of the required dedication, development on these aggregated parcels shall not be required to provide on-site parking. Developers of the aggregated parcels may pay parking fees to the Downtown Parking District in lieu of meeting the on-site parking requirements. A parking credit shall be applied to the project based on the amount of land dedicated to the City to expand the alley.

6. Special Conditions for Elm Street Pedestrian Connection (Parcel 005-152-31, 005-152-30, 005-152-05, 005-152-32, and 005-152-33).

Development of the above parcels shall include a 30-foot wide publicly accessible pedestrian connection between Pacific Avenue and Front Street. The public passageway shall be located in the vicinity of Elm Street (within approximately 50 feet of Elm Street extension). The passageway shall be integrated into the design of the development.

C. PACIFIC AVENUE RETAIL DISTRICT
BUILDING FAÇADE STANDARDS AND GUIDELINES

The intent of the urban design standards and guidelines for the Pacific Avenue Retail District is to reinforce the unique townscape qualities of the downtown, to introduce diversity and variety that will enhance the visual interest and comfort of the pedestrian, and to extend the landscape qualities of the streetscape into the private realm. The building facades of the downtown have a significant effect on the public identity and character of the downtown and, as such, need to be carefully considered.

1. Building Facades.

   Building facades shall respond to the character and composition of existing commercial buildings along Pacific Avenue. More specifically, facades shall be composed with 3 clearly distinct zones: the storefront, up to 18 feet in height or 15 feet south of Cathcart Street; the upper two to three stories of the facade to the established parapet height (e.g., 55 feet); and the roof and cornice treatment, which includes the visible portions of any additional height permitted above the Base Height of 55 feet. This compositional approach is consistent with the existing building facades along Pacific Avenue, as well as the desire to reinforce the pedestrian realm and avoid the creation of monolithic vertical walls along the street edge. A separation of treatment shall be clearly established between the ground-level storefront and the upper building levels, utilizing a strong belt course or architectural line, and through the specific storefront treatment described below. Similarly, a strong cornice line or roof treatment is encouraged to promote variety and a distinctive silhouette along the street.

2. Adjacent Buildings.

The composition of building facades shall also be considered in relation to adjacent buildings of historic or architectural value. While it is not the intent to maintain a consistent treatment along the street edge, the composition of new development shall seek to be harmonious and compatible with elements of adjacent structures, such as window proportions, the design of horizontal belt courses and cornice treatments, building materials and architectural elements.

3. Upper-Level Facades. (i.e., the two to three levels of building wall up to the 55-foot Base Height)

Upper-level facades shall provide a counterpoint to the storefronts below, and provide a visually interesting and varied edge to the public space of the street. In general, the upper-level façade shall be built to the property line and consist of carefully composed "punctured openings" within a richly detailed wall. A variety of treatments shall be introduced to create richness in both the horizontal and vertical planes, including:

- balconies
- bay windows
- flower boxes
- awnings
- cornice and belt courses, etc.

4. Streetwall.

To create a visually interesting "streetwall" with a rhythm and cadence that is reflective of the pattern of development along Pacific Avenue, building facades shall introduce variation at general intervals of 25 to 50 feet with the use of:

- fenestration,
- architectural elements,
- building materials, and/or
- building planes.

Large, uninterrupted expanses of horizontal or vertical wall surface shall be avoided. Regardless of property lines, the appearance shall be of a street with varying architectural treatments at intervals of no more than 50 to 75 feet. The multiple rhythms shall be created through the careful design of building elements and three-dimensional articulation of building elements sufficient to mitigate the presence of long, blank walls along Pacific Avenue, Front Street and Cedar Street the east-west streets, and the alleys. Elements that make up the rhythmic variation may include, but are not limited to:

- recessed windows;
- projecting windows;
- bay windows;
- structural elements;
- surface textures, patterns and colors;
- trim elements;
- balconies;
- belt-cornices;
- cornices;
- awnings and shutters; and
- landscape elements.

5. Cornices and Belt Courses.

Overhead horizontal projections (providing at least 8 feet of clearance above grade) of a purely architectural or decorative character such as cornices, eaves, sills and belt courses shall define the building elements (base, middle and top) and create three-dimensional interest in the façade, provided that they do not project more than:

a. At roof level, 3feet into the public right-of-way or a designated setback area.

b. At every other level, 1 foot into the public right-of-way or designated setback area.

6. Windows.

Building walls shall be punctured by well-proportioned openings that provide three dimensional relief, detail, interest and rhythmic variation on the facade. Variation in rhythm shall be provided both horizontally and vertically. Large expanses of glass on the upper levels shall be considered only where activities of interest to the pedestrian can be highlighted, and in such cases, the design of these openings shall be carefully integrated

within the overall facade composition. Windows shall be recessed a minimum of six inches from the face of the wall to emphasize the thickness of the wall consistent with the historical, traditional and newer buildings on Pacific Avenue; or windows other than bay windows may project from the wall six inches maximum into the public right-of-way. Windows shall be of high quality and shall be operable at the upper level and composed of elements that emulate the size and detail of the windows on Pacific Avenue. Window moldings and/or shutters with projections up to six inches are encouraged to provide detail, shade and articulation to building facades.

7. Upper Level Bay Windows and Balconies.

Bay or projecting windows and balconies are encouraged and may be permitted on upper levels of buildings, provided that a minimum of 10 feet of clearance is provided to grade and that the following provisions are met:

a. The projection into the public right-of-way or designated setback area is no more than 3 feet; where sidewalks are less than 10 feet in depth, this projection shall be limited to 2 feet; along alleys, no projection shall be closer than 8 feet to the centerline of any alley.

b. The glass area of the bay window, and the open portions of each balcony, shall not be less than 50 percent of the total area of the vertical surfaces of the projection.

c. Bay windows and balconies shall "punctuate" rather than dominate the facade; to this end, the maximum length of bay windows shall be 15 feet at the property line or setback line; this width shall be reduced to a maximum width of 9 feet at the full projection of 3 feet, by means of 45 degree angles at the sides of all projecting bay windows. Perpendicular bay windows and balconies (or projections at a different angle) may be permitted, provided that they remain within the outside dimensions described above. Unless balconies are used as a means of distinguishing the storefront area from the upper-level facades, they shall be generally 15 feet in width or less.

d. The minimum horizontal separation between bay windows, between balconies, and between bay windows and balconies shall be three feet as measured from the face of the building wall along the property line or setback line. A bay window or balcony shall not occur within two feet of the building edge. The intent of this guideline is to ensure that bay windows and balconies do not visually dominate the building wall.

8. Skyline Architectural Variations.

Special attention shall be paid to the articulation of the top portion of buildings such as variation in height, massing, materials, horizontal bands, cornices and parapets. Rooflines shall be broken at intervals no greater than 50 to 60 feet by roof elements or step backs to reinforce the predominant building increment along Pacific Avenue. Interesting and varied roof forms are encouraged. Rooftop equipment shall be completely concealed from view and integrated within the architectural vocabulary of the building. The use of landscaped roof terraces and gardens is also recommended.

9. Building Materials.

To extend the character of the existing downtown, building materials shall evoke honesty and solidity. Stone, brick and stucco, richly detailed to provide visual interest and variation, are encouraged as the predominant building materials. While wood and metal are desirable materials for window casings and trim, large expanses of wood or metal siding are discouraged as the predominant building materials. Such materials are considered appropriate for ornamental elements on the facade. Applied brick tiles that attempt to give the appearance of genuine masonry are also discouraged as the predominant building material. Decorative ceramic tiles are encouraged, however, as accent features. Reflective glass is prohibited.

10. Colors.

Materials shall be relatively light in color. To create a lively visual environment, earth tones, terra-cotta, pastels or whites, accented with dark or bright colors, are recommended. Roofing materials and accenting features such as canopies, cornices, tile accents, etc. shall also offer color variation. The color scheme for the building shall be compatible in color and value with the adjacent structures and shall be compatible with and sympathetic to the overall color palette of the buildings in the block and the downtown.

11. Landscape Provisions.

To promote a unique image and identity of downtown in its coastal setting, buildings shall incorporate provisions for planting, including flower boxes, topiary planting, and climbing vines. Plant materials within the planters, planting beds, flower boxes and flower pots shall provide color and variety throughout the year. The use of artificial plants shall not be permitted.

At least two of the following landscape concepts shall be incorporated into each Pacific Avenue or East-West Streets façade design (or 30 feet of retail frontage). In general, the landscape shall aggregately cover a minimum of 25 percent of the length of the storefront:

a. Landscape setbacks up to 18 inches in depth.

b. Landscape planters recessed into Pacific Avenue sidewalk, up to 18 inches into the public right-of-way.

c. Planter boxes no more than 24 inches in height may be permitted to project into the public right-of-way up to 18 inches. Window boxes also may be permitted to project from bay windows and balconies by 18 inches. Planter and window boxes shall provide internal and concealed drains connected to roof drains to avoid overflow to the street; they shall also be designed with high quality durable materials that are compatible and integral with the building façade.

d. Hanging flower pots may project into the public right-of-way up to 18 inches and shall have a minimum 8-foot clearance within the public right-of-way unless hanging directly above planter boxes.

e. Trellis structures supporting climbing vines that may project up to six inches into the public right-of-way or, where more than eight feet above the sidewalk, may project up to 18 inches into the public right-of-way.

12. Rear Service Alleys.

Upper-level facade treatments adjacent to the rear service lanes shall be consistent in quality and design with treatments adjacent to public streets and rights- of-way. The use of planting (e.g., planter and window boxes, trellises, topiary) on building facades adjacent to the service lanes is particularly encouraged to enhance the visual and pedestrian character of the alley.

13. Exterior Lighting.

Buildings shall provide warm (color temperature equal to incandescent), low-level lighting from sundown to 10:00 PM nightly as an integral part of the façade design to add to the nighttime ambient light level in the downtown and to add nighttime visual interest to the buildings. Accent lighting using warm, low-level energy efficient light sources is encouraged as an integral part of the facade design.

14. Property Line Walls.

Where a building shares a property line with an adjacent property or building, mitigate the potential for large blank walls as follows:

a. Where the adjacent building is lower than the proposed building, the property line wall shall be set back from the property line sufficient to allow windows in the new wall; or

b. The applicant shall seek an easement from the adjacent property owner to allow windows (subject to the future redevelopment of the adjacent property). Mitigation measures shall be incorporated to allow windows under the Building Code.

c. This provision may be modified by the Planning Director, subject to the preparation of a visual computer simulation of the building in context of the building viewed from key points at pedestrian eye level down Pacific Avenue and key intersecting streets.

D. PACIFIC AVENUE RETAIL DISTRICT STOREFRONT STANDARDS AND DESIGN GUIDELINES

All storefront improvements with an improvement cost of more than $10,000 require a Design Permit. All storefronts in a new building or re-developed building shall conform to the following storefront design standards:

1. Primary Entrance. All buildings with frontage along Pacific Avenue shall have a primary entrance on Pacific Avenue.

2. Blank Walls. All buildings with frontage on Pacific Avenue or the East-West streets shall not have blank walls exceeding ten (10) feet in length. Blank walls shall be mitigated with trellises and/or climbing plants or other architectural or landscape elements.

3. Door Entry Frequency. Establishments with frontage along Pacific Avenue shall provide door entries no further distant than 50 feet along the Pacific Avenue or east-west street frontage.

4. Open Entries to Street. Street front entries shall remain unlocked and unblocked and shall remain in use during store hours.

5. Unique Entrances. The ground floor frontage along Pacific Avenue shall be modulated, articulated, textured, colored and given such other architectural treatment to provide a visually differentiated store "front" every 25 feet.

6. Entrance Design. Storefronts shall incorporate at least two of the following design concepts into the storefront designs.

   a. Bay Windows. Provide bay windows up to 12 feet in length that may project up to 12 inches into the public ROW - where the bay window has glazing on all projecting faces.

   b. Porticos. Provide porticos around the entry door that may project up to 12 inches into the public ROW.

   c. Awnings. Provide awnings that may overhang the sidewalk a maximum of 6 feet with a vertical clearance above the sidewalk between 8 feet and 14 feet.

   d. Marquis. Provide permanent marquis structures or canopies that project from the building at entries (maximum 10 feet in length, minimum height 8 feet above the sidewalk and maximum projection of 6 feet into the ROW).

   e. Signs. Provide decorative signs that project into the ROW per Central Business District sign ordinance.

   f. Glazing. The use of reflective or tinted glass in ground level show windows is prohibited.

g. Store Displays. Store displays shall be configured in such a way as to allow pedestrians to see into the store from the sidewalk. Goods, posters, photos or other visual images shall be placed a sufficient distance from the store windows to enable pedestrians to see clearly into the store.

E. FRONT STREET/RIVERFRONT CORRIDOR DEVELOPMENT STANDARDS AND DESIGN GUIDELINES

1. Height and Stepback Requirements

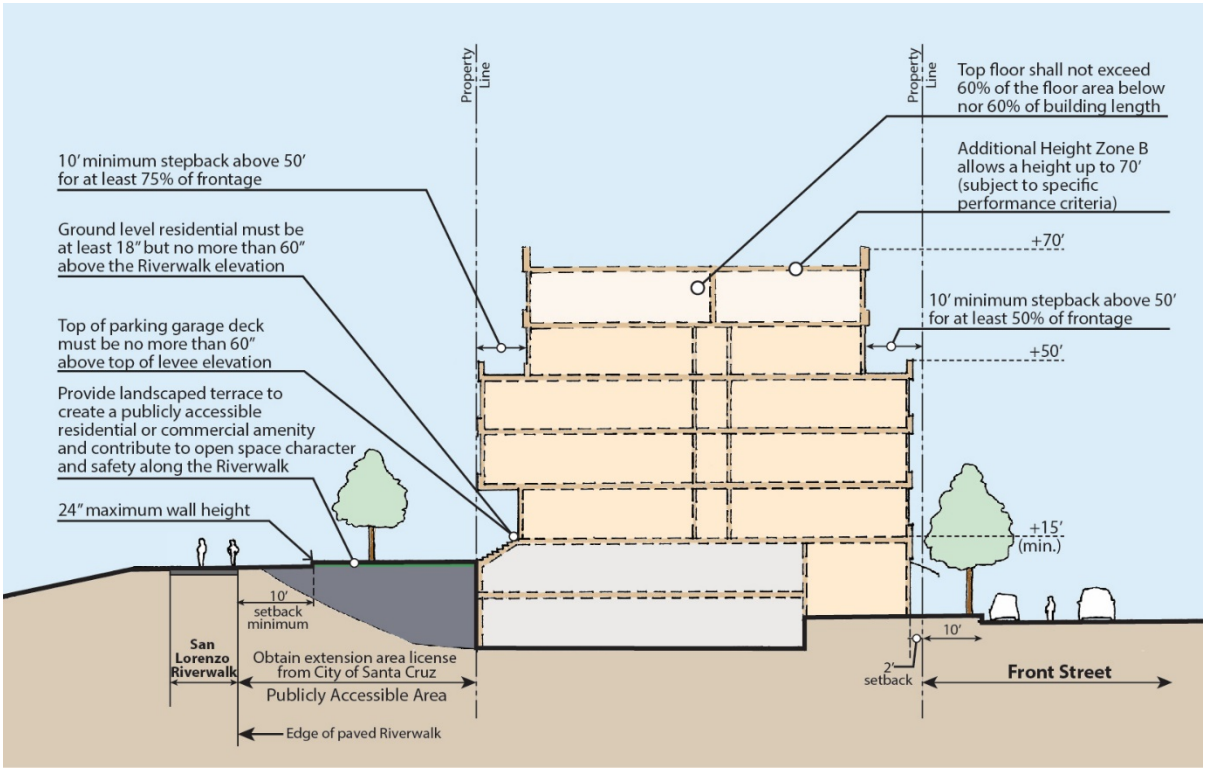


Figure E-1: Proposed base and additional height and stepback requirements along the Front Street/ Riverfront Corridor.

a. Base Height and Floors. No new development shall exceed a base height of 50 feet (measured to the top of parapet or eaves on the highest floor). Within this base height, no more than 3 floors with a mix of uses above the ground-level retail use will be permitted within the maximum base height of 50 feet.

b. Mechanical Penthouses. Uninhabitable mechanical penthouses will be permitted above the base height to a maximum height of 60 feet, provided that such penthouses are set back from the face of buildings by a minimum of 15 feet and that sloping roofs meet the provisions of c. below, unless the penthouse is architecturally integrated into the building facade.

c. Upper Level Stepbacks from Streets and Public Passageways. In order to promote a pedestrian scale, to increase light to the street, and to reduce overall building mass and scale, development above 50 feet in height shall be required to step back from the Front Street façade a minimum of 10 feet. At least 50% of building frontage along Front Street and Soquel Avenue shall step back 10 feet above the height of 50 feet. Buildings adjacent to River Street, east-west streets, and publicly accessible

passageways shall step back at least 10 feet from the street for any height above 35 feet.

d. Upper Level Stepback from River. Along the west side of the Riverwalk, development shall step back 10 feet from the exterior wall face above the 50 foot height level as measured from Front Street sidewalk elevation. Allow up to 25% of the Riverwalk building frontage to encroach into the required 10-foot stepback area to provide for massing variation. (See Figure E-1).

2. Build-to Lines and Setbacks.

In order to promote well-defined streets, development shall generally be required to be built to the property line adjacent to public streets. The following exceptions to this condition are noted:

a. Sidewalk Width. In locations where the sidewalk is less than 12 feet wide, development shall be set back from the property line to create a 12-foot sidewalk. Development along Laurel Street and Front Street shall dedicate sufficient property to result in a sidewalk depth of at least 12 feet. The precise dedication shall be consistent with the final Laurel Street design and shall be established with a build-to line.

b. Gateway Landscaping. New development along Water Street (south side), Laurel Street (north side), and Soquel Avenue shall be set back from the sidewalk by 10 feet to allow for generous gateway landscaping treatment.

c. Building Length. Between Soquel Avenue and Laurel Street, limit the length of individual buildings along Front Street to a maximum of 300 feet of lineal street frontage, subject to the performance criteria for improved public access to the Riverwalk from Front Street at the key connection points of Cathcart Street, near Elm Street and Maple Street. (See Figure E-2)

d. Riverwalk Property Line. No setback from the Riverwalk property line is required.

e. Encroachments. Development along the Riverwalk shall not encroach beyond the property line of the parcel, except in cases where levee-facing "people-oriented" commercial activities incorporate public access points to the Riverwalk. Top floor cantilevered portions of the building are allowed to encroach over the property line a maximum of 5 feet in order to provide architectural interest to the façade. Such cantilevered encroachment over the property line shall not exceed 25 percent of the total building frontage along the riverfront.

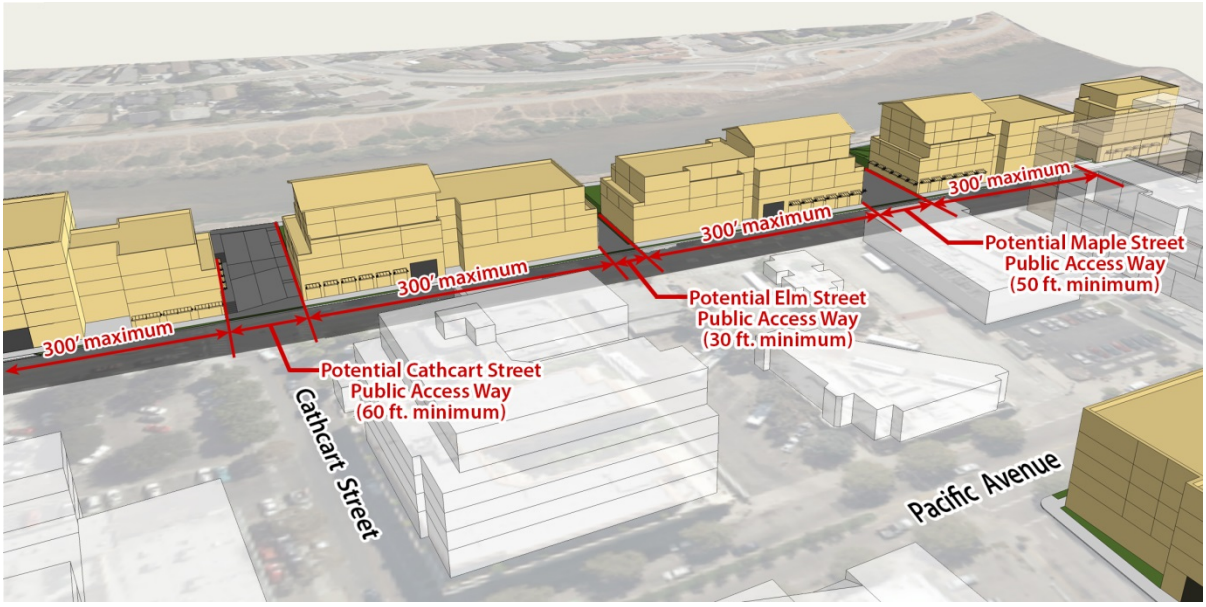


Figure E-2: Proposed building massing and public access requirements along Front Street and the riverfront.

3. Storefront Treatment.

While it is recognized that the Front Street/Riverfront Corridor is less pedestrian intensive than the Pacific Avenue District, the ground-level treatment of commercial buildings and parking structures within the area shall generally comply with those for the Pacific Avenue Retail District in terms of: storefront access, transparency and variation; and the use of awnings and canopies. Special attention shall be given to the treatment of intersections, to reinforce their gateway role to Pacific Avenue and to create a high level of interest and activity along the street.

4. Riverwalk Promenade.

The Riverwalk Promenade is the paved bicycle and pedestrian path on top of the river levee. The interface between the public Riverwalk and the adjacent private development is a vitally important element of the Downtown Plan. As such, all development along the Riverwalk will involve some form of public/private partnership and cooperation. Key performance criteria include:

a. Riverwalk Setback. Residential or outdoor commercial uses adjacent to the Riverwalk shall be no closer than 10 feet from the western edge of the physical walkway, except where "people-oriented" commercial uses incorporate public access points to the Riverwalk.

b. Levee Fill. All development shall fill the western slope of the levee (which may include both public and private property) as directed by the City of Santa Cruz and Army Corps of Engineers to create a level condition between the Riverwalk and the adjacent building. The filled area may terrace up from the maximum 24-inch wall to the finished floor of the development in a way that allows for the outdoor spaces to be publicly accessible. (See Figure E-1.)

c. Retaining Wall at Property Line. Design the wall of the ground level of the building to structurally support fill material, and to provide appropriate under-drainage.

d. Landscaping. Landscaping this private and public space shall incorporate trees and vegetation appropriate to the river environment. Walls along the Riverwalk shall not exceed 24 inches in height and shall be set back from the promenade by at least 10 feet. Other than trees, landscaping shall not exceed 42 inches in height above grade. Trees planted as part of the San Lorenzo Flood Control Improvement Project should be maintained and incorporated into new development where feasible and where not in conflict with the required fill or publicly accessible amenities.

e. Extension Area License Agreement for Public Space. The City shall consider negotiated Extension Area license agreements on the publicly owned land on the west side of the Riverwalk for open space purposes that promote activity and overlook the Riverwalk and river. The publically accessible open space area shall be visually open and accessible from the Riverwalk, but may be delineated with a low fence or hedge no more than 42 inches in height.

f. Commercial Criteria. In the case of commercial development, the area subject to the license agreement may be terraced and shall be designed to accommodate outdoor eating or public seating, and shall be within 24 inches of the Riverwalk elevation.

g. Public/Private Interface. In the case of residential development, the area subject to the license agreement and associated private yard shall be designed as a visually accessible garden space that provides a transition to the public Riverwalk. Residential entrances facing the river shall be elevated at least 18 inches, but no more than 5 feet above the Riverwalk to create privacy and differentiation of public and private spaces.

h. Entrances Along Riverfront. Entries, either to individual residential units or common entrances, or to commercial establishments, shall be provided along the riverfront promenade at intervals no greater than 75 feet.

i. Fencing. Fencing shall be decorative, visually open rail material, creating a visual connection between the private and public spaces.

j. Visually Open Development. Solid vegetation in the form of a visual screen or hedge is prohibited and views to the Riverwalk from private open spaces are required. Line of sight views between the development and the Riverwalk are intended to ensure a safe and interesting environment to joggers, walkers and cyclists.

5. Access to the Riverwalk.

Between Soquel Avenue and Laurel Streets along Front Street, new development shall provide east-west public access between the Riverwalk and the Front Street sidewalk at or near the extension of Cathcart Street, Elm Street and Maple Street Developers of riverfront properties shall be required to physically and/or financially contribute their fair share through conditions of approval, an Improvement District, Development Agreement, or similar

mechanisms to the improvement of these publicly accessible connections. Development shall be consistent with the following performance standards:

a. Publicly Open Passageways. Such access shall be open to the public during daylight hours.

b. Pedestrian Focus. Such publicly accessible connections shall be predominantly pedestrian in nature and located within 50 feet of the Front Street intersections at the terminus of Cathcart Street and the extensions of Maple and Elm Streets. In addition to the pedestrian access, bicycle access shall be provided at the extension of Elm Street, which will serve as the primary bicycle access to the Riverwalk between Soquel Avenue and Laurel Street.

c. Passageway Widths. The width of these publicly accessible pedestrian connections shall be no less than the following: 60 feet at or near the terminus of Cathcart Street; 50 feet at or near the terminus of Maple Street; and 30 feet at or near the extension of Elm Street.

d. Vertically Open Passageways. These passageways shall be open to the sky, provide a high quality accessible path of travel between the Front Street sidewalk and the Riverwalk, and provide clear building breaks that avoid the walling off of the river from downtown.

e. Pedestrian Oriented Uses. The pedestrian passageways shall be lined with active pedestrian-oriented uses that create a safe and interesting environment, including commercial uses, outdoor cafes, resident-serving amenities, building entries and/or lobbies. Such uses, particularly restaurants and outdoor cafes, are strongly encouraged to provide direct frontage and active outdoor areas along both the pedestrian passageway and the Riverwalk.

6. Upper-Level Facade Treatment.

The treatment of upper-level facades shall generally comply with the guidelines for the Pacific Avenue Retail District in terms of building rhythm, corner treatment, windows, roof treatment, building materials, colors and planting, and rear service lanes.

7. Gateway Treatments.

New development that occurs at key gateway intersections to the downtown (e.g., River-Water; Pacific-Front; Cooper-Front; Soquel-Front; Cathcart-Front; Laurel-Front) shall be articulated to accentuate this condition. Treatments could include corner towers or turrets, setbacks, distinctive changes in fenestration and materials, etc.

8. Riverfront Residential.

Residential development occurring along the Front Street/Riverfront Corridor, or future residential development that may occur as part of a mixed-use development on the northeast corner of the Front/Soquel intersection, shall be highly articulated and expressive of the individual units within the complex. The use of sloping roofs, recessed loggias

and balconies, bay windows, dormers and chimneys shall be carefully composed to create an intricate composition that expresses individual unit modules to the maximum extent practicable. A variety of building materials is encouraged, including the building materials recommended for the Pacific Avenue district above (e.g., stucco, brick, and stone). To avoid the creation of a "wall" of development along the riverfront between Soquel and Laurel Streets, development shall be highly articulated with variation in height. The required 10-foot sideyard setbacks shall also serve to break up the mass of development along this important edge.

9. Public and Private Parking Facilities.

The Front Street/Riverfront Corridor is within the Downtown Parking District #1 and development shall comply with all parking requirements set forth within that district.

a. Surface Lot Landscaping. Existing and/or expanded surface parking lots within the Front Street/Riverfront Corridor shall be well landscaped. In addition to the landscaped area requirements for surface parking provided in the zoning ordinance, surface lots shall provide at least one tree for every four parking spaces, distributed throughout the lot. Surface lots shall be screened from the public sidewalk with low walls, planters, or hedges.

b. West Side of Front Street. Allow parking facilities along the west side of Front Street south of Soquel Avenue, where only one driveway curb cut shall be permitted per parking facility per street frontage; the parking facility shall not extend to street corners; and the parking facility shall be architecturally integrated within the overall building composition.

c. Structured Parking Design. Above-grade structured parking should be visually separated at the ground level from all public sidewalks and streets by means of active storefront uses as described above. Such parking should be accessed, to the maximum extent possible, from east-west streets or rear service lanes.

d. Structured Parking Facades. Parking structure facades shall be designed as compatible visual extensions of other multi-story buildings.

e. Structured Parking Rear Façade. Special attention shall also be given to the design of parking structure facades adjacent to rear service lanes, to reinforce their attractiveness for pedestrian use. The use of integrated trellis structures and planters along the service lanes is recommended.

f. Screens and Trellises. Decorative screen and trellis elements of durable, high-quality materials are also encouraged to provide variation and interest on the facade.

g. Garage Ramp Visibility. Sloping floor elevations shall not occur within 10 feet of the adjacent public street.

h. Wrap Garage with Commercial. Where parcel depth permits, the face of the parking structure shall be set back from ground floor commercial uses.

i. Garage Openings. Openings shall be carefully composed within the building wall to appear as well-proportioned windows, rather than continuous strips; variation in the dimension and proportion of openings and in the horizontal and vertical planes of the facade shall be provided to create visual interest and to reduce the massiveness of the parking structure.

j. Entrances and Stairways. Entryways and stairways shall be located along the street edge; they shall be well lit and visible from the street to promote security and a feeling of comfort.

k. Top Deck Elevation. The top deck of all structured and encapsulated parking shall be constructed to an elevation no greater than 5 feet above that of the Riverwalk promenade and shall be screened from public view. Parking garages may exceed the maximum building length of 250 feet if they are lower than 5 feet above the adjacent levee elevation.

10. Driveways and Curb Cuts.

Limit on-site driveways along Front Street to a maximum of one driveway per property or at a spacing of at least 200 feet; driveways should be no more than 24 feet in width and to the extent practicable should be spaced from an adjacent driveway by at least 200 feet. Wider driveways may be considered based on a demonstrated need to accommodate specific vehicle operations of a proposed development.

11. Guidance for Bird Safe Structures Along the San Lorenzo River.

The following measures shall be incorporated into all development projects that are located between Front Street and the San Lorenzo River.

- Minimize the overall amount of glass on building exteriors facing the San Lorenzo River.
- Avoid mirrors and large areas of reflective glass.
- Avoid transparent glass skyways, walkways, or entryways, free-standing glass walls, and transparent building corners.
- Utilize glass/window treatments that create a visual signal or barrier to help alert birds to presence of glass. Avoid funneling open space to a building façade.
- Strategically place landscaping to reduce reflection and views of foliage inside or through glass.
- Avoid up-lighting and spotlights. Turn non-emergency lighting off (such as by automatic shutoff), or shield it, at night to minimize light from buildings that is visible to birds, especially during bird migration season (February-May and August-November).

F. CEDAR STREET VILLAGE CORRIDOR DEVELOPMENT STANDARDS AND DESIGN GUIDELINES

1. Height and Stepback Requirements.

   a. Base Height and Floors. The maximum height of all development within the Cedar Street Village Corridor shall be 35 feet (3 floors maximum). East of Cedar Street, development may be allowed to exceed 35 feet on a discretionary basis to a maximum height of 50 feet (4 floors maximum). The granting of additional height above thirty-five (35) feet is discretionary and requires a Design Permit with the recommendation of the Planning Director to the City Council, which must approve the additional height.

2. Storefront Treatment.

The ground-level treatment of buildings and parking structures within the Cedar Street subarea shall generally comply with guidelines for the Pacific Avenue retail subarea, in terms of storefront access, transparency and variation, and the use of landscaping, awnings and canopies. However, it is recognized that Cedar Street has a more informal character than Pacific Avenue and, as such, more variation of ground-level treatment is envisioned and encouraged. The use of porches and terraced gardens as an intermediate space between the ground floor use and the sidewalk is permitted, as long as the finished floor elevation of the ground floor use is no more than four feet above or below the sidewalk level, and accessibility requirements are met.

3. Upper-Level Facade Treatment.

The treatment of upper-level facades shall generally comply with the guidelines for the Pacific Avenue Retail District in terms of building rhythm, corner treatment, windows, roof treatment, building materials, colors and planting. In recognition, however, of the area's village character, several special conditions are noted:

   a. Architectural Elements. The use of architectural elements that promote the village character of the street is encouraged. Such elements could include sloping roofs, chimneys, bay windows, dormers, recessed loggias, balconies, and porches.

   b. Articulation. Facades shall be highly articulated and varied; the introduction of moldings and trims, and changes in horizontal and vertical planes are strongly encouraged to create visual interest and variation in light and shadow. Residential development shall be highly articulated and expressive of the individual units within the complex.

   c. Building Materials. Building materials can be more diverse and residential in character than those recommended for the Pacific Avenue Retail District. The use of wood as a siding material is encouraged.

d. Flowers and Landscaping. The use of planters, trellises and topiary treatment of buildings is encouraged to further enliven the area and to promote its unique village qualities.

4. Public and Private Parking Facilities.

Parking structure facades shall be designed as compatible visual extensions of other multi-story buildings. Sloping floor elevations shall not occur adjacent to public streets. Where parcel depth permits, the face of the parking structure shall be set back from ground floor commercial uses. Openings shall be carefully composed within the building wall to appear as well-proportioned windows, rather than continuous strips; variation in the dimension and proportion of openings and in the horizontal and vertical planes of the facade shall be provided to create visual interest and to reduce the mass of the parking structure. Decorative screen and trellis elements of durable, high-quality materials are also encouraged to provide variation and interest on the facade. Special attention shall also be given to the design of parking structure facades adjacent to rear service lanes, to reinforce their attractiveness for pedestrian use. The use of integrated trellis structures and planters along the service lanes is recommended. Entries and stairwells within parking structures shall be located adjacent to public streets and designed to be visually open, to promote a feeling of security and comfort.

G. NORTH PACIFIC AREA
DEVELOPMENT STANDARDS AND DESIGN GUIDELINES

1. Height and Stepback Requirements

   a. Base Height and Floors. The maximum height of all development within the North Pacific subarea shall be 35 feet (3 floors maximum). However, within this 35 foot Base Height, east of North Pacific Avenue, development may be allowed on a discretionary basis to a maximum height of 50 feet (4 floors maximum). The granting of additional height above 35 feet is discretionary and requires a Design Permit with the recommendation of the Director of Planning to the City Council, which must approve the additional height.

   b. Minimum Floor Height. The first floor uses must have a minimum floor-to-floor height of 14 feet.

   c. Visual Analysis and Criteria for Exceeding Base Height. Proposed development above 35 feet, up to 50 feet, must prepare a detailed visual analysis of the building to determine the visual impact. The visual impact analysis must consider the views from the mid-point of the Water Street Bridge looking toward the Mission Hill, from Mission Hill and other key locations within the City. The additional building height shall not obstruct views of the profile of the top of the grade of Mission Hill as viewed from the crest of the Water Street Bridge;

      i. Additional height above 45 feet, up to a maximum of 50 feet, must demonstrate that the building creates a superior gateway entrance to Pacific Avenue and the Downtown; and
      ii. The building height above 35 feet shall be stepped back a minimum of ten (10) feet from the 35 foot Base Height. The additional height shall be highly articulated and the upper level shall gently transition to surrounding development.
      iii. Uninhabitable mechanical penthouses will be permitted above the Base Height to a maximum height of 5 feet above the permitted building height, provided that such penthouses are set back a minimum of 15 feet from any exposed face of the buildings and are out of the pedestrian's view, unless such penthouses are architecturally integrated into the building façade design.

2. Build-to Lines and Setbacks.

To promote well-defined streets, development shall generally be required to be built to the property line adjacent to public streets. The following exceptions to this condition are noted:

   a. Sidewalk Width. In locations where the sidewalk is less than 12 feet, development shall be set back from the property line to create a 12-foot sidewalk.

   b. Gateway Landscaping. Within this subarea, new development along Water Street (north side) and River Street (west side) shall be set back from the property line by 10 feet to allow for generous gateway landscaping treatment. Buildings along River Street may project into this setback with approval of a landscape plan provided that the average setback along that street remains 10 feet.

c. Non-Residential Elevation. Along Pacific Avenue and Water Street, ground level uses shall not be located more than one foot above the elevation of the adjacent curb.

d. Residential Elevation. Along River Street, the first occupied residential floor level shall not be higher than five feet above the adjacent curb. For each one foot above the adjacent curb, an additional one foot of landscape setback shall be required.

3. Gateway Intersections.

The intersections of Water and River Streets, and River Street and North Pacific Avenue, are important gateways to the downtown. New development that occurs at these key gateway intersections shall be designed to accentuate this condition. Treatments shall include corner towers or turrets, setbacks, distinctive changes in fenestration and materials. The design of the ground level of the buildings at these intersections shall be articulated to reinforce the gateway significance utilizing corner setbacks, small plazas, large display windows, distinctive entrance features and canopies.

4. Building Facades.

The treatment of upper-level facades shall generally comply with the guidelines and standards for the Pacific Avenue Retail District in terms of building rhythm, articulation, corner treatment, windows, roof treatment, building materials, colors and planting.

5. Ground-Level Storefronts.

The design of the ground-level of buildings facing North Pacific Avenue, River Street and Water Street shall generally follow the guidelines and standards described for the Pacific Avenue Retail District to the south (e.g., access and transparency, storefront variation and treatment, awnings, canopies).

6. River Street.

The setback area described above for River Street shall include a well-designed landscape concept to enhance the gateway role and appearance of River Street and to create a transition between private development and the street. This landscaped area shall be broken at intervals to provide entrances to adjacent ground-level uses.

7. River Street Residential.

If residential development occurs along the River Street Corridor, it shall be highly articulated and expressive of the individual units within the complex. The use of sloping roofs, recessed loggias and balconies, bay windows, dormers, and chimneys shall be carefully composed to create an intricate and pleasing composition. Clapboard wood siding is encouraged, in addition to the building materials recommended for the Pacific Avenue Retail District above (e.g., stucco, brick, and stone).

8. Town Clock Park/Scope Park.

New development occurring adjacent to Town Clock Park (Knight Street right-of-way) or Scope Park shall have a strong ground-level orientation to these public open spaces. Buildings along Knight Street shall be built to the property line to maintain the spatial quality of Town Clock Park and to reinforce the civic importance of the Water-Pacific-Front intersection. Ground-level uses shall be pedestrian-oriented, and the treatment of storefront facades shall correspond with the guidelines described for the Pacific Avenue Retail District.

9. Public and Private Parking Facilities.

For properties in the North Pacific subarea which are not within the downtown Parking District #1, new development must comply with the City's general standards related to parking.

a. Surface Parking Lots. Existing and/or expanded surface parking lots within the North Pacific area shall be well landscaped, with at least one tree for every four parking spaces, and screened from the public sidewalk with low walls, planters or hedges.

b. Structured Parking. Parking structures in the North Pacific Area shall be an integral part of the development that it serves, either in below-grade structures or above-grade structures that are sensitively encapsulated within the overall building form.

c. Location of Structured Parking. Exposed parking structures shall be limited to the interior of the block or to Bulkhead Street.

d. Parking Structure Façade. Where parking is exposed as a facade, such facades shall be designed as an integral extension of the overall building facade.

e. Garage Ramps. Sloping floor elevations shall not occur within 10 feet of the adjacent public street.

f. Garage Openings. Openings shall be carefully composed within the building wall to appear as well-proportioned windows, rather than continuous strips; variation in the dimension and proportion of openings and in the horizontal and vertical planes of the facade shall be provided to create visual interest and to reduce the mass of the parking structure.

g. Screens and Trellises. Decorative screen and trellis elements of durable, high-quality materials are also encouraged to provide variation and interest on the facade.

h. Wrap Garage with Commercial. Above-grade structured parking facing River Street, Water Street or North Pacific Avenue shall be visually separated from all public sidewalks at the ground level by means of active ground-level uses as described above. Such parking shall be accessed, to the maximum extent possible, from east-west streets (e.g., Bulkhead Street). New access driveways along North Pacific Avenue, River and Water Streets shall be avoided.

H. ADDITIONAL HEIGHT ZONES

In 1991 when the original Downtown Recovery Plan was being developed, the community was concerned about the impact of four and five-story buildings on the predominantly one and two-story downtown. Since 1991, there has been significant infill development that has diversified the mix and intensity of downtown uses, with upper level office and residential uses. No longer is Downtown Santa Cruz and Pacific Avenue a one- and two-story downtown; it has evolved into a vibrant three to seven story district.

As such, the Additional Height Zone A is extended to eligible sites south of Cathcart Street and along the west side of Front Street; and Additional Height Zone B is established along the Front Street/Riverfront Corridor south of Soquel Avenue to Laurel Street. (See Downtown Plan Height diagram) The City also wishes to promote uses that foster activity and a sense of stewardship, allowing the area to evolve from a service district to an integral part of the overall downtown. In order to achieve this goal, residential uses are considered highly desirable upper-level uses, with active commercial and people-oriented uses at street level. It is recognized that smaller parcels may need to be assembled and consolidated to create viable areas for redevelopment, but development of assembled properties shall be done in a way that maintains the town scale and character of the downtown, with its diverse mix of small- and medium-sized buildings, its pedestrian orientation and, its block pattern that provides multiple street and walkway connections.

The scale of blocks and parcels is a critical component, contributing to the town scale and pedestrian orientation of downtown Santa Cruz. In the areas south of Cathcart Street and Soquel Avenue, the larger block sizes make it particularly important to create additional pedestrian connections between Pacific Avenue and Front Street, and between Front Street and the Riverwalk. This has been a community vision, dating back to the original Downtown Recovery Plan and reinforced with the 2010 River/Front and Lower Pacific Design Guidelines and Development Standards. However, regulations alone cannot be expected to accomplish such transformational change, which will involve public improvements and strong public/private partnerships. Financing tools for the implementation of enhanced pedestrian linkages to the river, and for improved bicycle and pedestrian amenities along Front Street, shall be considered to leverage increased land values in the area and to provide for equitable contributions from the private sector.

In establishing the development standards for the Additional Height Zones, it is important to make sure that the standards reflect the unique conditions and opportunities of the area. It is necessary to avoid the creation of large, monolithic buildings that are out of scale with the finer-grained development pattern of the downtown.

Buildings of additional height above the Downtown's dominant three to four-stories may depart from the tri-partite facades of the historic downtown, but shall be designed in a manner that creates a positive relationship and an appropriate scale transition to the existing fabric. In addition to the volumetric standards set forth as a basis for additional height in Additional Height Zone A, building stepbacks, belt courses, material, plane and/or fenestration changes are design strategies that should be employed to create compatible architectural and scale relationships with adjacent buildings of lower height. A strong and well detailed storefront and building base is

critical to the continuity of the retail and pedestrian environment of the Downtown; intermediate floors should be composed with window openings, balconies or projections that provide visual interest and a scale relationship with adjacent buildings; and the top most floor(s) should contribute to the overall silhouette and spatial form of the street with reduced floor plates, cornices, projecting canopies or other special architectural elements.

Rather than relying on building stepbacks and terracing to achieve an appropriate scale transition to smaller buildings, the standards call for horizontal and vertical variation to create the appearance of multiple buildings that are more in keeping with the surrounding area. Additional height – even up to 85 feet in the Additional Height Zone A – can be absorbed appropriately if it is confined to a portion of a property, rather than as a massive block, terraced back from the street.

1. Additional Height Zone A.

Properties on Pacific Avenue and within 150 feet of Pacific Avenue between Water and Lincoln Streets, and within 200 feet of Pacific Avenue between Lincoln and Laurel Streets (as measured perpendicular from the property line along Pacific Avenue) , certain properties located on the east side of Cedar Street between Mission Street and Ocean Alley, and the west side of Front Street between Cathcart and Laurel Streets shall be considered within the "Additional Height Zone A", within which additional height above the 55 foot Base Height limit may be requested for buildings meeting certain criteria (See Figure A-1: Downtown Plan Heights). The intent of the Additional Height Zone A is to preserve the overall character of the existing development pattern, while allowing a discretionary intensification of use and increased height to maintain a compact urban core. For eligible development projects that overlap the Base Height and Additional Height Zone boundary, all portions of the project exceeding the 55 foot base height shall be located within to the Additional Height Zone as shown in Figure A-1.

a. Eligible Development Projects. The granting of building height above the 55 foot Base Height limit is discretionary and requires a Design Permit with the recommendation of the Director of Planning to the City Council, which must approve the additional height. To achieve approval, the applicant must demonstrate that the proposed project meets the criteria described below. Applicants for development within the Additional Height Zone A may request additional height as indicated below, if one of the following conditions is met:

    i. The aggregate parcel size is greater than 15,000 square feet, which may include land not located within the Additional Height Zone;
    ii. The frontage along Pacific Avenue is greater than 150 feet, or at least 100 feet with 150 feet of frontage along an east-west street;
    iii. The parcel is located between adjacent structures of four or more floors in height; or
    iv. The project qualifies for a density bonus as allowed under either State law or City adopted density bonus ordinance.

b. Additional Height Criteria for Project Approval. The development project shall be found consistent with the following overarching City objectives:

    i. The additional height will help to achieve the First Principles of the Downtown

Plan (e.g. form, housing, accessibility and open space).

ii. The additional height will contribute to an improved social and economic environment by including new housing.

iii. The form of the development promotes the appearance of a grouping of buildings rather than large, monolithic building masses.

iv. The development receiving additional height will physically and/or financially contribute its fair share (through an Improvement District, Development Agreement or similar mechanisms) to the implementation of internal pedestrian connections between Pacific Avenue and Front Street.

v. The additional height will help to meaningfully achieve one or more of the following key community objectives, including but not limited to: Affordable Housing, Day Care Center, exceed Green Building minimums, Incubator Space for Small Business, Public Access Easements, Public Right-of-way Improvements, Publicly Accessible Open Space, Structured or Shared Parking, and Transportation Demand Management concepts.

c. Zone A Maximum Height and Floors. The buildings shall conform to the adopted building codes in effect at the time of building permit application to achieve the following height limits.

i. For development projects on aggregated parcels between 15,000 square feet and 50,000 square feet, the maximum height shall be 75 feet and the maximum number of floors shall be 5 floors above the required ground floor commercial use.

ii. For development projects on aggregated parcels larger than 50,000 square feet, the maximum height shall be 85 feet and the maximum number of floors shall be 6 floors above the required ground floor commercial use.

iii. Uninhabitable mechanical penthouses will be permitted to project 5 feet above the approved additional height of building, provided that such penthouses are set back a minimum of 15 feet from any exposed face of the building, unless architecturally integrated into the building façade design.

iv. Architectural features at prominent gateway corners may exceed the maximum heights above when required findings are made.

d. Performance Criteria. The following criteria are intended to promote the appearance of multiple buildings of varying heights, and to avoid the development of monolithic buildings:

i. Maximum Height and Footprints. For sites which are eligible for additional height, the footprint of portions of the building at or below 55 feet shall be at least 40% of the total site area; portions of the building footprint above 55 feet to a height of 75 feet may comprise up to 60% of the site area. For assembled sites greater than 50,000 square feet in area, buildings may achieve an 85-foot height for up to 20% of the total site area. (See Figure H-1)

ii. Architectural Features. Taller building masses shall be located on portions of the site that are adjacent to street corners or in areas that will result in minimal shading of adjacent streets and sidewalks.

iii. Pacific Avenue Building Length. Along Pacific Avenue, portions of buildings that exceed the maximum base height of 55 feet may occupy up to 55% of the length of the property line along the street or 200 feet, whichever is less. Any

additional height above the base height must be set back from the building wall by at least 15 feet. (See Figures H-2 and H-4)

iv. Front Street Building Length. Along Front Street, portions of buildings that exceed the maximum base height of 55 feet may occupy up to 60% of the length of the property line along the street or 180 feet, whichever is less. Any additional height above the base height must be set back from the building wall by at least 15 feet. (See Figure H-3)

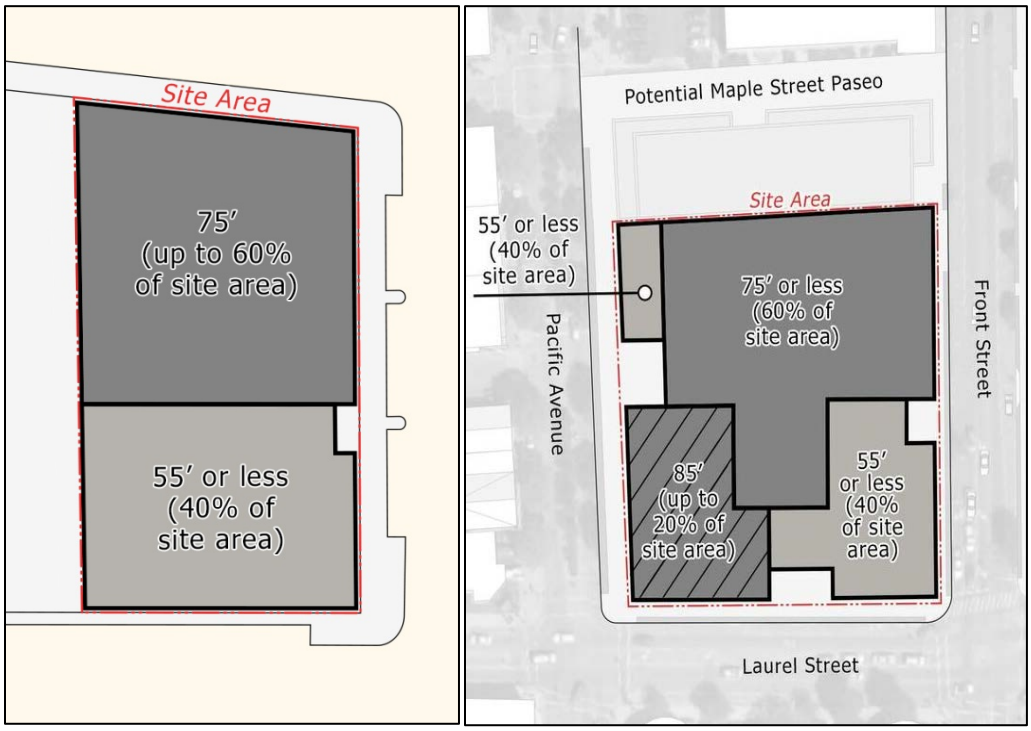


Figure H-1: Distribution percentage of additional height for sites 15,000–50,000 sq. ft.

Distribution percentage of additional height for sites larger than 50,000 sq. ft.

v. Laurel, Cathcart and Soquel Building Lengths. Along Laurel Street, Cathcart Street and Soquel Avenue, portions of buildings that exceed the maximum base height of 55 feet may occupy up to 60% of the length of the property line or 150 feet, whichever is less. Any additional height above the base height must be set back from the building wall by at least 15 feet. (See Figure H-2)

vi. Maple Street Stepbacks. Along the Maple Street extension, the building frontage shall step back by 10 feet above a height of 50 feet; In addition to the 'build to' line The Maple Street building face shall incorporate at least one recessed break, open to the sky, no less than 25 feet wide and no less than 10 feet in depth from Maple Street . (See Figure H-3)

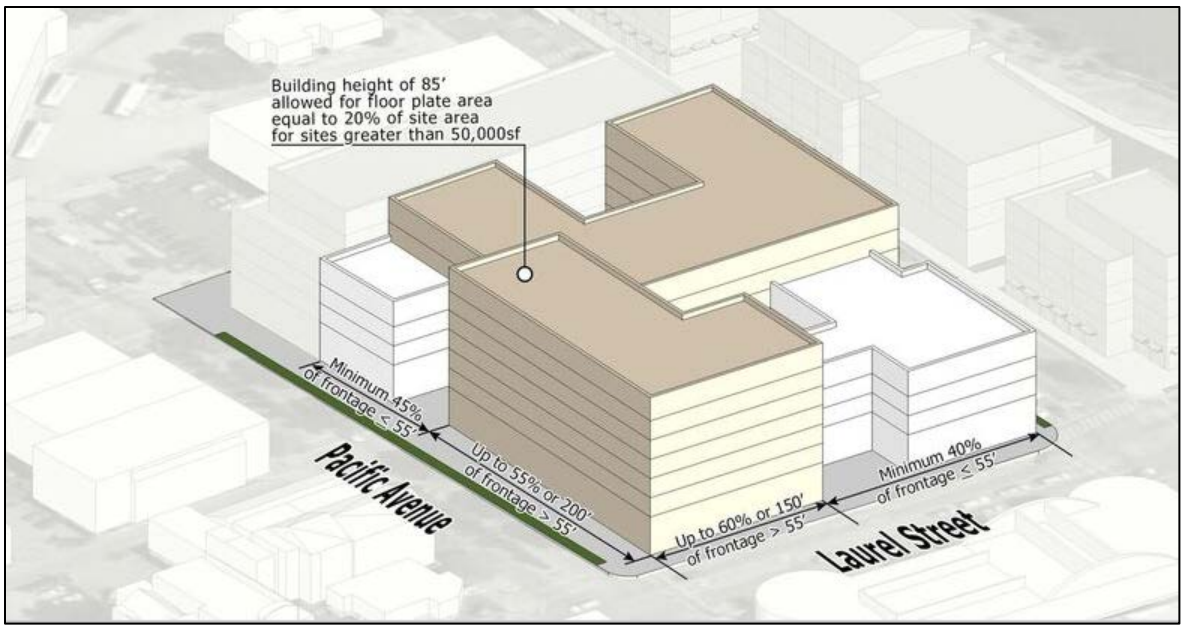


Figure H-2: Example of possible distribution of frontage heights along Pacific Avenue and Laurel Street.

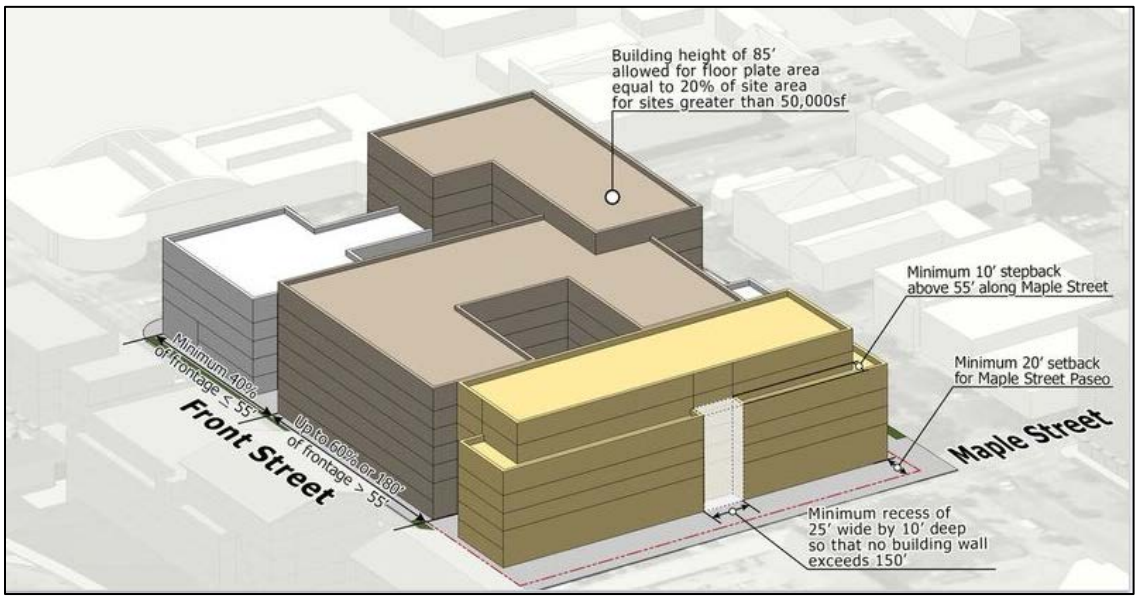


Figure H-3: Example of possible distribution of frontage heights along Front Street and the Maple Street Paseo.

vii. Building Recessed Breaks. Any building mass that exceeds the maximum base height of 55 feet must establish a separation or break that is open to the sky, measuring at least 25 feet along the streetfront property line, with a depth no less than 15 feet as measured perpendicular from the streetfront property line. For

buildings along Maple Street, the recessed break shall be a minimum of 10 feet in depth. (See Figures H-3 and H-4)

(1) The recessed breaks must provide a clear visual break between building volumes, but at the same time contribute to a positive streetscape environment.

(2) The recessed spaces shall be open to the sky above the ground level. A light-weight sheltering structure, distinct from the architecture of the principal building (e.g., steel and glass trellis, awning, canopy, or single-level storefront) may be incorporated within the recessed space to provide activity along the street and protection to the ground level activity. This structure may encroach into the public right-of-way by at least 1 foot and no more than 2 feet and shall extend horizontally on either side of the recessed space by two feet to interlock with the principal building. The structure may include sliding doors or gates that can be secured at night, provided that they are accessible and visible during daytime business hours. (See Figure H-5)

(3) These recessed spaces along the streetfront shall be considered as an opportunity for creative solutions that enhance the streetscape environment. They must be designed and programmed to be purposeful and meaningful places that support positive activity and preclude anti-social behavior. They could include building entries, cafes or retail extension areas. Courtyards and paseos are particularly encouraged as a way of separating building volumes and in creating unique public spaces that connect to Pacific Avenue. The recessed spaces may be gated. (See Figure H-5)

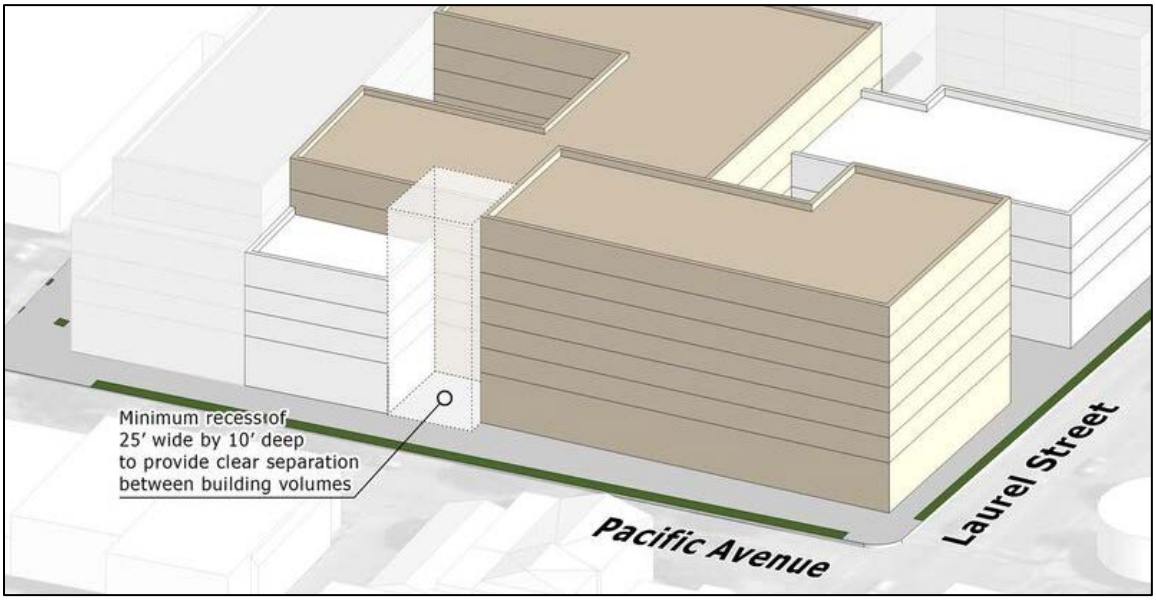


Figure H-4: Example of horizontal massing variation and recessed break in building.

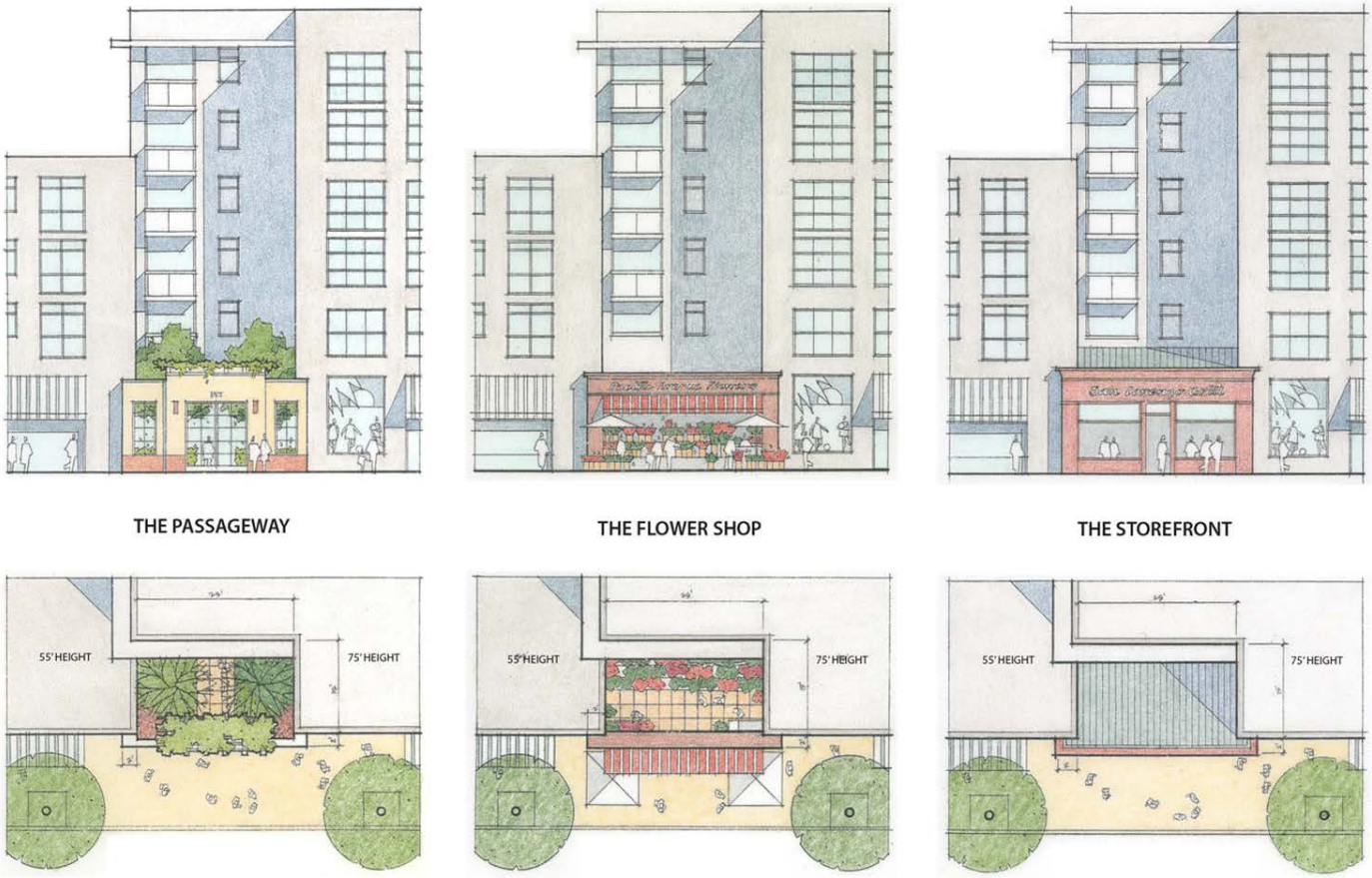


Figure H-5: Recessed spaces along the streetfront must provide a clear visual break between building volumes, while creating a positive streetscape environment. Three examples of potential treatments.

ix. Two-Story Variation. To establish the appearance of a distinct grouping of buildings, a minimum two-story variation shall be provided between building masses along each of the street fronts. (See Figure H-6)

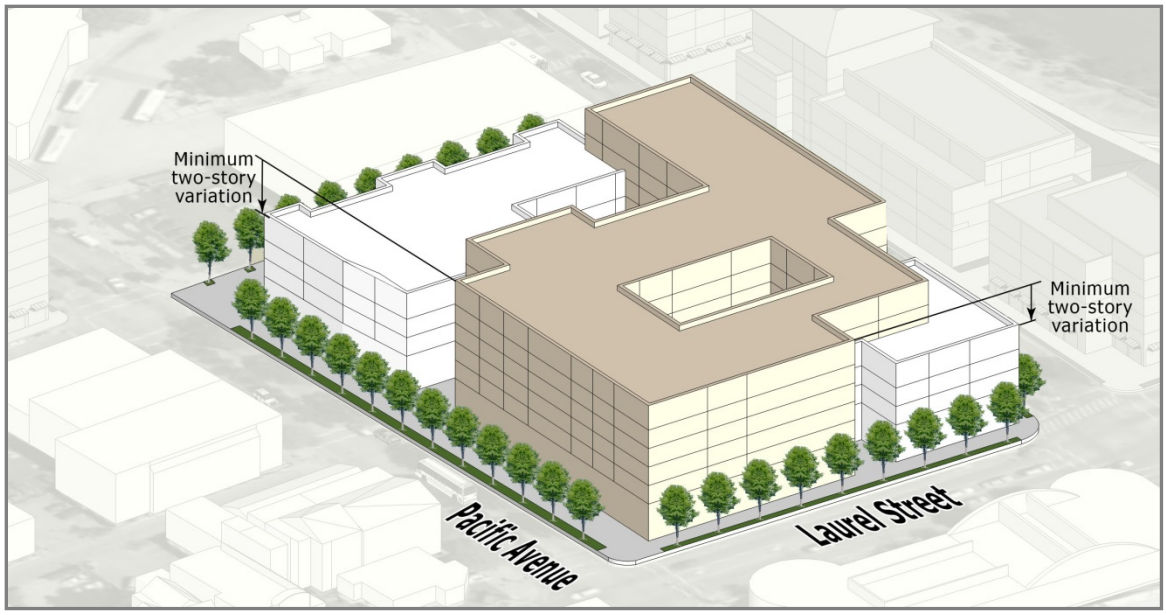


Figure H-6: Example of vertical massing variation.

e . Application Requirements. The following materials shall be submitted with all applications for proposed buildings taller than 55 feet.

i. Visual Analysis. A detailed visual analysis of the proposed buildings to determine the visual impact of the development shall be submitted. The visual impact analysis must consider the views from key locations within the City and the views from Pacific Avenue and from the east-west streets.
ii. Program Statement. A Program Statement shall be submitted indicating details of public amenities to be included in the project. The Program Statement shall specify the participation either through funding and/or land contribution, construction, and/or maintenance of the Maple Street paseo or lane. The Program Statement shall include the private funding mechanism for on-going management and maintenance of the exterior common areas, including public and private spaces along the Maple Street paseo or lane between Pacific Avenue and Front Street. The Program Statement shall specify the method of participation in the City's affordable housing program, if applicable The Program Statement items will be the basis of conditions of project approval.

2. Additional Height Zone B.

The Additional Height Zone B includes properties located on the east side of Front Street between Soquel Avenue and Laurel Street.

a. Eligible Development Projects. The granting of building height above the 50-foot Base Height limit is discretionary and requires a Design Permit with the recommendation of the Director of Planning to the City Council, which must approve the additional height. To achieve approval, the applicant must demonstrate that the proposed project meets the criteria described below. Applicants for development within the Additional Height Zone B may request additional height as indicated below if one of the following conditions is met:

i. The aggregate parcel size is greater than 15,000 square feet;
ii. The frontage along Front Street is greater than 100 feet;
iii. The parcel is located between adjacent structures of three or more floors in height; or
iv. The project qualifies for a density bonus as allowed under either State law or City adopted density bonus ordinance.

b. Additional Height Criteria for Project Approval. The development project shall be found consistent with the following overarching City objectives:

i. The additional height will help to achieve the First Principles of the Downtown Plan (e.g. form, scale, housing, accessibility and open space);
ii. The additional height will contribute to an improved social and economic environment by including a concentration of new housing;
iii. The form of the development promotes the appearance of a grouping of buildings rather than large monolithic building masses;

iv. The development receiving additional height will physically and/or financially contribute its fair share (through an Improvement District, Development Agreement or similar mechanisms) to the implementation of internal pedestrian connections between Front Street and the Riverwalk;
v. The additional height will help to meaningfully achieve one or more of the following key community objectives, including but not limited to: Affordable Housing, Day Care Center, exceed Green Building minimums, Incubator Space for Small Business, Public Access Easements, Public Right-of-way Improvements, Publicly Accessible Open Space, Structured or Shared Parking, and Transportation Demand Management concepts.
vi. Clear demonstration of the public benefit relating to two principal objectives: high quality public access between Front Street and the river, and the appropriate treatment of the riverfront edge along the Riverwalk.

c. Zone B Maximum Height and Floors. The buildings shall conform to the adopted building codes in effect at the time of building permit application to achieve the following height limits.

i. For development projects on aggregated parcels larger than 15,000 square feet, the maximum height shall be 70 feet and the maximum number of floors shall be 5 floors above the required ground floor commercial use.
ii. Uninhabitable mechanical penthouses will be permitted to project 5 feet above the approved additional height of building, provided that such penthouses are set back a minimum of 15 feet from any exposed face of the building, unless architecturally integrated into the building façade.
iii. Uninhabitable architectural features at prominent gateway corners may exceed the maximum heights above for a total of no more than 15 percent of the building footprint.

d. Performance Criteria. In addition to meeting the Front Street/Riverfront Corridor Development Standards and Design Guidelines, the project shall meet the following criteria, which are intended to promote the appearance of multiple buildings of varying heights, and to avoid the development of monolithic buildings:

i. Building Recessed Breaks. In order to break down the mass of buildings along Front Street and to promote the appearance of multiple buildings, require any portion of the building mass that exceeds the maximum base height of 50 feet to establish a separation or break that is open to the sky, measuring at least 15 feet along the streetfront property line, with a depth no less than 10 feet as measured perpendicular from the streetfront property line. (See Figures H-5 and H-7)

The recessed breaks must provide a clear separation between building volumes, but at the same time contribute to a positive streetscape environment. The recessed space should be open to the sky above the ground level. A light-weight sheltering structure, distinct from the architecture of the principal building (e.g., steel and glass trellis, awning, canopy, or single-level storefront) may be incorporated within the recessed space to provide activity along the street and protection to the ground level activity. This structure may encroach into the setback zone by up to two feet and should extend horizontally on either side of the recessed space by at least 1

foot, but not more than 2 feet to interlock with the principal building. The structure may include sliding doors or gates that can be secured at night, provided that they are accessible and visible during daytime business hours.

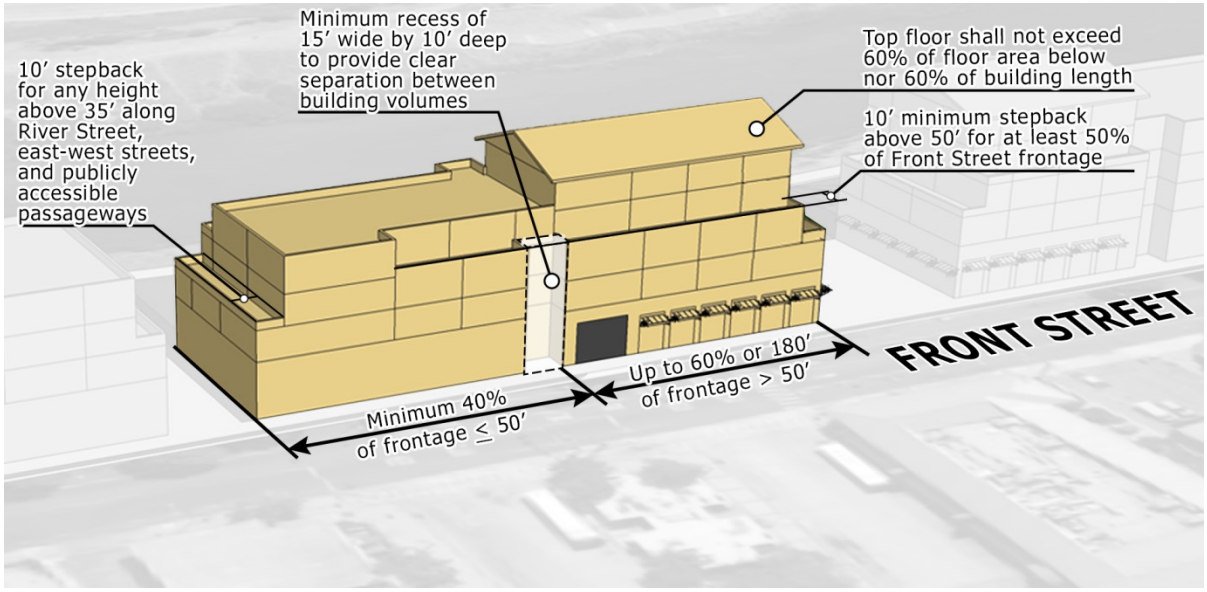


Figure H-7: Example of distribution of frontage heights and horizontal massing variation along Front Street.

ii. Skyline Architectural Variation. To promote skyline variation, the top floor of any building shall not exceed 60% of the floor area below or 60% of the building length as measured along Front Street or the Riverwalk. Variation to the 60% floor area standard can be considered for projects that incorporate publicly accessible pedestrian connections to the Riverwalk.

iii. Integrated Rooftop Design. Rooftops shall be fully designed and creatively integrated into the function of the building. Rooftops provide opportunities including, but not limited to, usable residential or commercial open spaces, community gardens, rainwater retention facilities, green-roof landscaping, solar panel facilities as shade structures, building mechanical equipment and other uses. These spaces shall be thoughtfully and creatively designed as part of the initial project application.

e. Application Requirements. The following materials shall be submitted with all applications for proposed buildings taller than 50 feet.

i. Visual Analysis. A detailed visual analysis of the proposed building including three-dimensional perspectives to determine the visual impact of the development shall be submitted. The visual impact analysis must consider the views from key locations within the City, the views from Front Street and from the Soquel and Laurel bridges and the levee opposite the project site from a pedestrian level view.

ii. Roof Design Plan. A detailed and fully integrated roof design plan that includes details of open space uses, landscaping, solar facilities, drainage, and mechanical equipment.

iii. Grading and Landscape Plan. A comprehensive grading and landscape plan for the filled area of the river levee.

iv. Passageway Plan. For projects adjacent to the proposed publicly accessible passageways between Front Street and the Riverwalk (in the proximity of the extensions of Cathcart Street, Maple Street and Elm Street), a scaled plan shall be provided with adequate details, section drawings and other drawings that describe how the project will achieve high quality public access to the riverfront from Front Street and how the riverfront edge will be designed to reinforce the amenity value and safety of the Riverwalk. Drawings shall describe the relationship of publicly accessible spaces with adjacent proposed development activities, grading, landscape and paving materials and treatments.

iii. Program Statement. A Program Statement shall be submitted indicating details of public amenities to be included in the project. The Program Statement shall specify the private funding mechanism for on-going management and maintenance of the exterior common areas, including public and private spaces between the Riverwalk and the development and any adjacent paseo or passageway from Front Street to the Riverwalk. The Program Statement shall specify the method of participation in the City's affordable housing program, if applicable.

I. ALL CENTRAL BUSINESS DISTRICTS STOREFRONT STANDARDS AND GUIDELINES

The intention of the storefront guidelines is to promote variety and individuality along the street while complementing the scale and design character of the streetscape, reinforce the pedestrian environment, and allow for the landscape character of the downtown to extend into the private realm. The storefront guidelines encourage both setbacks from, and encroachments into, the public right-of-way, where such measures will serve to enrich the visual diversity and life of the street.

1. Storefront Projections and Setbacks. In addition to landscape elements, storefronts are encouraged to introduce architectural variation at the pedestrian level in order to create a diverse building edge between the public and private realms. More specifically:

a. Bay Windows. Storefront bay windows may project up to 12 inches into the public right-of-way, if such windows maintain glazing on all projecting faces, and if the windows do not exceed 15 feet in width. A clearance of at least 12 inches between the bottom of the projecting bay and the sidewalk is recommended.

b. Porticos. Entry porticos may project up to 12 inches into the public right-of-way.

c. Entry Setbacks. Entry setbacks may be permitted up to 48 inches from the property line.

d. Marquis and Canopies. Permanent marquis structures or canopies that project from the buildings are encouraged, but shall be confined to entry lobbies leading to upper-level residential or office uses, or to public-oriented passages that provide for pedestrian access through the block. They shall be designed as an attractive and integral part of the overall facade design, shall project no more than 6 feet from the face of the building, take up no more than 10 feet of frontage, and maintain a clearance of at least 8 feet above the sidewalk surface. No column supports shall be permitted within the public right-of-way.

e. Projecting Signs. Projecting signs are encouraged on storefronts consistent with the sign regulations for the Central Business District in the Zoning Code.

f. Awnings. Awnings overhanging the sidewalk are also encouraged to further enhance the life and variety of the street. The preferred material for awnings is canvas, but other materials will be considered if they are light in character and can be architecturally integrated with the building facade. Awnings shall be maintained at least 8 feet above the sidewalk surface, and shall be carefully designed to complement the overall facade design. Under standard conditions (e.g., not within retail extension zones), storefront awnings shall not project more than 6 feet into the public right-of-way, and generally shall not be higher than 14 feet above the sidewalk. Awnings above 14 feet in height shall not project more than 3 feet into the public right-of-way.

2. Storefront Variation and Craftsmanship. The visual experience of moving along the street shall be enjoyable and varied. Changes in treatment (e.g., the use of porticos, setbacks, architectural elements, landscape treatments, etc.), within the standards and guidelines are

outlined above and below. Particular attention shall be given to the craftsmanship and detailing within the pedestrian's range of touch and view. The use of special materials (e.g., stone, brass, bronze, terra cotta, ceramic, wood) for storefront ornamentation is strongly encouraged, particularly around windows and entries and at the base of building walls.

3. Retractable Storefronts. Where appropriate, the use of retractable storefronts is encouraged to create a direct relationship between sidewalk activity and the commercial establishment; this treatment is particularly encouraged for restaurants where outdoor seating is proposed, or for retail establishments that include an extension area within the public right-of-way.

4. Storefront Landscape Elements. The introduction of plant materials on the building face and storefront is strongly encouraged to reinforce and extend the landscape identity of Pacific Avenue and the downtown. More specifically:

a. Storefront Setbacks. Storefront setbacks of up to 18 inches may be permitted for the introduction of low planters of up to 12 inches in height below storefront windows.

b. Sidewalk Planting. The sidewalk paving along Pacific Avenue may be designed to allow for planting beds at sidewalk level to encroach into the public right-of-way up to 18 inches. Such planting beds shall include durable curbing (up to 3 inches in height) to provide a clear visual separation.

c. Planter and Window Boxes. Planter and window boxes may be allowed to project into the public right-of-way up to 18 inches, with a maximum height of 24 inches above the sidewalk level. It is recommended that window boxes maintain a clearance of 12 inches above the sidewalk, not including decorative support braces. Window boxes shall be designed as a compatible and integral extension of the storefront window casing; materials shall be durable and of high quality. Planter and window boxes shall also provide for internal drainage connecting to roof drain lines.

d. Hanging Flower Pots. Hanging flower pots may project into the public right-of-way up to 12 inches and shall have a minimum 8-foot clearance within the public right-of-way unless hanging directly above planter boxes.

e. Trellises. Trellis structures supporting climbing vines are encouraged against blank building walls, both at the storefront and upper levels. At the storefront level, trellises shall be allowed to project into the public right-of-way up to 6 inches; above 8 feet in height, overhanging arbor or trellis structures shall be allowed to project up to 18 inches into the right-of-way.

f. Plant Types. Plant materials within planters, planting beds, flower boxes and flower pots shall provide color and variety throughout the year. The use of non-flowering shrubs or plant materials is discouraged, unless they are part of a planned pattern of landscape to that creates interest on the street.

J. ALL CENTRAL BUSINESS DISTRICTS
OTHER DEVELOPMENT STANDARDS AND DESIGN GUIDELINES

1. Design Variation. The Downtown Plan contains development standards, which when implemented, are intended to achieve the First Principles of the Plan and public objectives for the downtown. While every effort has been made to thoughtfully produce clear and concise standards for the community, the Plan can never address or respond to all development scenarios and circumstances. Therefore, projects that closely conform to the development standards, but with slight variations may be considered upon demonstration that the resulting project will better achieve stated Plan and community objectives. Such variations shall be minor in nature and must receive a positive recommendation from the Planning Director, with final approval by the City Council.

2. Storefront Setbacks. Minor ground-level storefront setbacks are permitted within the provisions of the storefront and building façade standards and guidelines discussed below. Recessed storefronts up to six feet in depth and twenty-five feet in length may occur where a designated outdoor use, such as an outdoor café, is an integral part of the retail business.

3. Roof Top Mechanical Equipment. The design of roof top mechanical equipment and related structures is an important aesthetic consideration when viewing the downtown skyline. The arrangement of roof top equipment, elevator penthouses, mechanical penthouses and enclosures, safety rails, inside faces of parapets, roofing surfaces, architectural elements, and other mechanical or electrical equipment, including telecommunications equipment, shall be designed, installed and painted to be visually unobtrusive and to create a unified, coherent whole. These roof top features shall be incorporated into the building design at the Planning approval stage of the project. Additional visual simulations may be required to demonstrate that the project provides for architecturally interesting and varied skyline views, with specific attention given to integrating these rooftop features into the overall building design.

4. Permanent Projections into the Public Right-of-Way. It is not the intent of the Plan to create a hard edge between the public and private realms. Rather, building facades and storefronts that are varied and that promote activity and interest are encouraged.

5. Retail Extension Zones. Pacific Avenue and some of the east-west streets (e.g., Church Street, Walnut Avenue, Cathcart Street and pedestrian paseo or lane) will include opportunities for the extension of retail and restaurant activities into the public right-of-way. These extension areas will be managed by the City and its designated agent through revocable licenses [See Extension Area requirements in section 24.10 of the Zoning Ordinance]. The following guidelines shall govern the physical design of these extension areas:

a. Types of Uses. Designated extension areas shall be confined to uses that add activity and color to the street. Permitted uses shall be limited to outdoor cafes, food kiosks or carts, or the selling of flowers, produce, and newspapers/magazines, unless otherwise approved by the City Council or its designated agent.

b. Outdoor Cafes. The extension area for cafes shall project no more than 12 feet from the property line into the public right-of-way, and in no case shall a cafe extension

area result in a public walk way of less than 12 feet. The elevation of the extension area shall be the same as the public sidewalk, and shall meet ADA accessibility standards. No permanent structures will be allowed within the public right-of-way, with the exception of ADA-complaint barriers. If a separation between the cafe and the promenade is desired, this shall be achieved through low planters that could contain colorful flowers or a low hedge not permanently affixed to the sidewalk; the maximum height of such planters (including the planting) shall be no more than four feet. Planters shall consist of high-quality, durable materials of a weight and mass that will discourage theft, vandalism or easy movement. A canvas awning will be permitted to extend over the full depth of the cafe extension area; no columns or supporting poles will be permitted within the public right-of-way. Awnings shall comply with the design and height guidelines prescribed below. The use of removable umbrellas within sidewalk extension areas is also encouraged, provided that seven feet of clearance is provided from the sidewalk. Removable wind screens that are of a transparent material and that are an integral part of the planter will be permitted to extend the seasonal use of the cafe area. Such screens shall not exceed a height of six feet and shall be separated from the awning to provide for air movement.

c. Retailing Uses. Retailing uses within extension zones shall be limited to the sale of newspapers and magazines, flowers and produce, unless otherwise approved by City Council or its designated agent. Such extension areas shall not exceed 6 feet in depth, unless it is determined that such depth is necessary to achieve the desired pedestrian objectives for the street, and in no case shall an extension area result in a public promenade that is less than 12 feet in depth on Pacific Avenue and no less than 8 feet in depth on Front Street and Laurel Street. Merchandise shall be displayed against the shop front and be oriented toward the street on tables or stands that do not exceed four feet in height. No separation (e.g., planters or low walls) between the merchandise and the street shall be permitted.

d. Furniture. All furniture (e.g., tables, chairs, retailing stands) shall be durable, well-maintained, and of a high quality, suitable for outdoor use; such furniture shall be light, not heavy or massive in nature, to ensure that it does not visually dominate the street. All furniture shall be approved by City Council or its designated agent.

e. Design Materials. The design materials and colors used for chairs, tables, display stands, lighting, and other fixtures (including umbrellas and awnings) shall be generally consistent with both the architectural style and colors used on the building facade and the quality of fixtures along Pacific Avenue.

f. Lighting. Lighting shall be incorporated into the facade of the building and shall complement the style of the building. Lights on buildings shall not be glaring to pedestrians and shall illuminate only the extension area and the activities within. General illumination shall be at 5 foot-candles, with a maximum of 10 foot-candles. Table lamps or candles are encouraged in cafe areas. Wired electrical fixtures will be allowed outside the face of the building, if contained within the semi-permanent barrier allowed for cafe extension areas and if installed by a licensed electrician. A lighting plan must be approved by the City Council or its designated agent.

g. Sidewalk Cleaning. The sidewalk area within the Retail Extension Zone shall be cleaned and maintained by the licensee. The area shall be cleaned, at a minimum, daily and shall be steam cleaned as needed and appropriate, to maintain a clean, sanitary and attractive environment.

6. Distinctive Architectural Elements. Towers, cupolas, chimneys, dormers, spires, flag poles and other architectural elements will be allowed on a conditional basis, if they can meet the following criteria:

a. Key Locations. Such elements occur at significant locations within the downtown (e.g. key corners, street termini, downtown gateways), and provide landmarks that will reinforce the overall sense of place;

b. Architectural Integration. Such elements have been architecturally integrated within the building design and contribute positively to the overall harmony, composition and articulation of the facade and building mass;

c. Solar Access. Such elements do not significantly affect solar access objectives for the west- facing sidewalk of Pacific Avenue or the south-facing sidewalks of east-west streets; and

d. No Habitable Space. Such elements do not add habitable space above the prescribed height limits set forth above.

7. Accessibility. The Plan recognizes that accessibility permeates all elements of urban design, and requires that access be aesthetically integrated within all public and private development in the downtown. The *Americans with Disability Act*, passed by Congress in 1990, confirms that accessibility is a civil right and not a luxury or option. The Plan endorses this position, and requires that new development strive to achieve an "optimum state" of accessibility, beginning with compliance with both the State of California's *Title 24 Accessibility Requirements* and the *Uniform Federal Accessibility Standards (UFAS).* This requirement shall govern all subdistricts within the downtown.

8. Pedestrian Passages. While sideyard spaces are discouraged in favor of contiguous building facades, public-oriented passages that provide pedestrian access through a development parcel to parking facilities, interior courtyards, and/or other developments are encouraged. These passages shall comply with Californian Building Code, et seq., dimensional requirements, and include provision of natural (as well as electrical) light and active uses along their length. To the maximum extent practicable, adjacent development shall establish a relationship to these passages with entries and storefronts, to promote a secure and interesting environment.

9. Interior Courtyards. Santa Cruz has a tradition of interior courtyards and gardens that provide attractive places to sit and relax, and a spatial counterpoint to the street experience. If provided, courtyards or interior gardens shall be designed to include: direct publicly-oriented linkages to Pacific Avenue and/or to other public streets or lanes; activities that do not reduce the principal objective of activating Pacific Avenue; and generous solar access throughout the year.

10. Intersection Treatment. High activity-generating uses are especially encouraged at the Pacific Avenue intersections. Minor corner setbacks in conjunction with storefront entries are also encouraged at these locations.

11. Corner Treatment. Corner parcels are encouraged to incorporate special features such as rounded or cut corners, articulated corner entrances, display windows, corner roof features, etc.

12. "T" Intersections. New development that occurs at the "T" intersections along Pacific Avenue (Cooper-Church-Locust; Soquel-Walnut-Lincoln; Elm-Maple-Pacific) are encouraged to accentuate the unique spatial characteristics of this condition, through corner treatments as described above, and through special facade treatments at the visual terminus of the east-west streets (e.g., towers, distinctive change in fenestration, roof profile, building material, etc.). Buildings located at the "T" intersections are required to prepare a visual impact analysis to determine the visual impact from the east-west street.

13. Ground Level Treatment. Along rear parking lots and service lanes, rear alleys are envisioned as attractive pedestrian places as well as service spaces. Where the back of development is adjacent to a public alley or surface parking lot, the ground level shall be designed to include architectural interest and detail on the rear façade. At a minimum, a usable and operable rear entrance shall be provided and, to the maximum extent practicable, views into the retailing activity shall be provided from the rear of the building.

14. Off-site Parking and Parking Structures. Required residential and commercial parking may be provided off-site, provided that such parking is located within the parking District No. 1. Publicly available parking structures shall conform to height limits of this Plan, but are not required to adhere to a maximum floor-area-ratio limit.

15. Service Access. Parcels adjacent to rear alleys must maintain service access from the rear and provide attractive rear entrances. Trash storage areas shall be internal to the building or completely enclosed and screened from view, as required by City ordinance. Trash or loading areas shall not, to the maximum extent practicable, be located adjacent to Pacific Avenue, North Pacific Avenue, Front Street or Water Street. Required grease trap interceptors shall be maintained within the property. On a conditional basis, the City will consider their location within public alleys or within the street right-of-way, if there is no feasible alternative within the property.

This chapter has not been modified from the original 1991 Downtown Recovery Plan.

Circulation and Parking Plan 5

As the center of the community, the downtown should be easily accessible by a complete range of transportation modes, including automobiles, transit, bicycles and pedestrians. Movement to and through the downtown should be understandable and comfortable, recognizing that a principal public objective is to create a predominantly pedestrian district. The pattern and operation of roadways should direct motorists to parking areas in a way that conveys a feeling of convenience and a clear understanding of the range of activities and destinations along the way. Transit service should function efficiently within the downtown, and provision should be made for future systems including light rail and historic trolleys. Bicycle routes should link the downtown core with outlying neighborhoods and districts, and adequate and secure provision for bicycle parking should be made.

Vehicular Circulation and Access

Vehicular access to downtown Santa Cruz is constrained by the natural landforms of the San Lorenzo River on the east and Mission Hill and Beach Hill on the north and south, respectively. The structure of the roadway system is reflective of these natural conditions, and has resulted in a pattern that is somewhat eccentric and unique. This eccentricity helps to give structure and a sense of place to the downtown; one can be oriented by the relationship with the river, the hills, or one of the many visual termini that occur along the curvilinear system of roadways leading to the downtown.

The following provides a generalized description of traffic movement around and within the downtown and the recommendations proposed by the Recovery Plan. These recommendations have been reviewed by a traffic engineer, and will be refined further as part of the streetscape design effort.

North-South Collector Streets

The north-south street system generally traverses the downtown from Highway 1 on the north to the Beach Area on the south. Principal north-south street systems include the North River-Front Street corridor, Cedar Street, and Center Street, which are all operated as two-way streets and which provide an important distribution function to and around the downtown. The Plan proposes no substantive changes to Cedar or Center Streets, which are recommended to remain as local-serving two-way streets. Minor modifications to the River-Front Street corridor are proposed to improve the flow of traffic and to improve access to the downtown. These include:

a. The reconfiguration of the intersection of South River and North River Streets to clearly give North River the predominant through-movement. The confusing system of islands at this intersection should be removed in favor of a more straightforward "Y" signalized intersection with a stop sign for northbound traffic on South River Street. The ultimate role and configuration of South River Street should be that of a pedestrian-oriented local access roadway leading to parking facilities, future mixed-use development, and riverfront amenities.

b. The reconfiguration of the River and Front Street intersection to clearly give the predominant through-movement to traffic along the River-Front corridor, and to avoid conflicts at the Cooper-Front Street intersection and with proposed parking garage driveways to the St. George Hotel and County Bank developments. Front Street between River and Water Streets should be operated as a one-way southbound street, with a "T" signalized intersection at River Street with a stop sign. (Note: This configuration will preclude the potential for a one-way couplet on Front and River Streets; it could also require the removal of on-street parking on River Street between South River and Front Streets, which is not viewed as a problem because of the surplus of adjacent off-street surface and structured parking.) To facilitate northbound bicycle traffic, bike lanes should be striped on both sides of River Street from Water Street to Front Street.

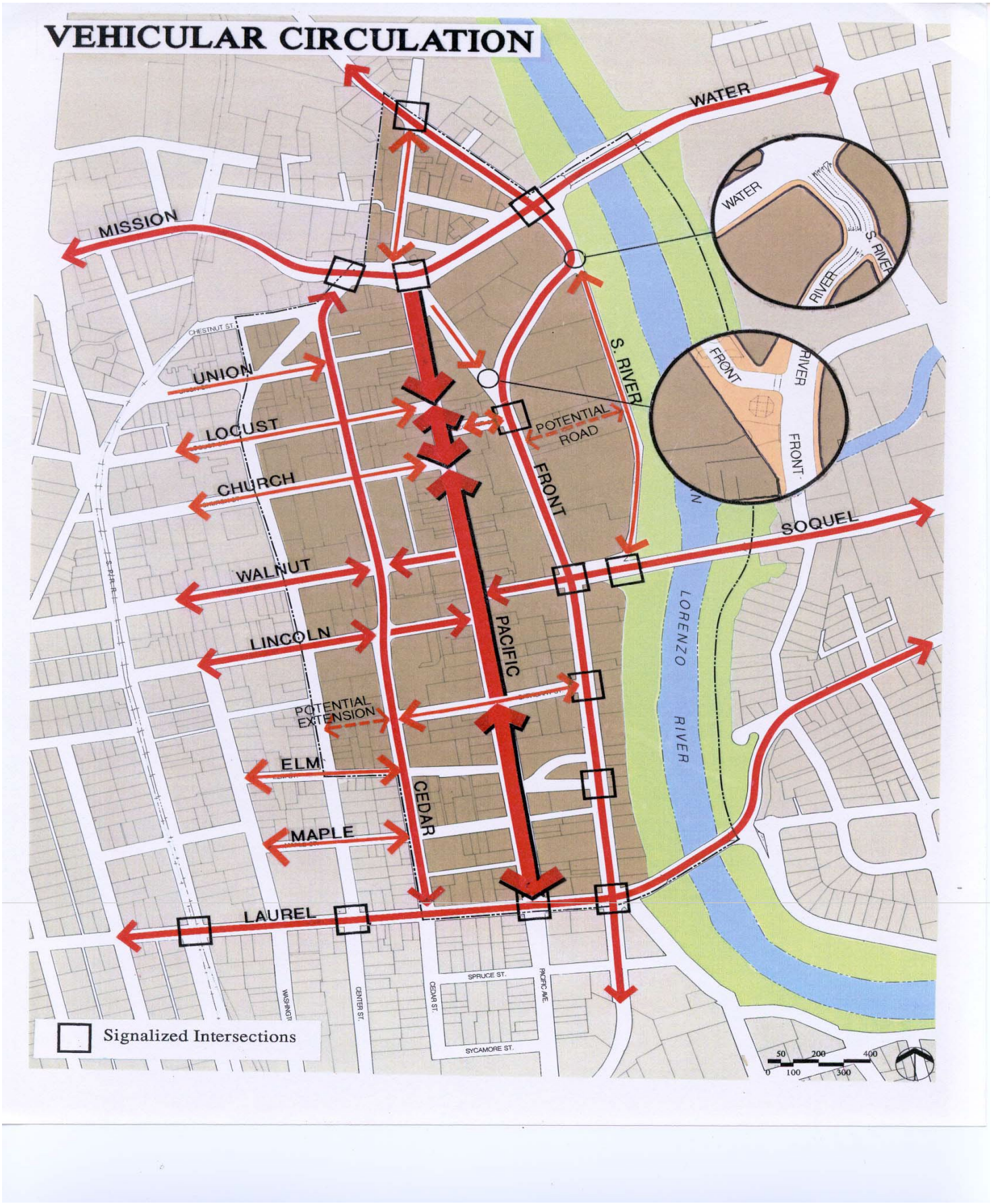
c. The restriping of Front Street to provide for three to four travel lanes north of Soquel and two travel lanes south of Soquel. The need for expanded capacity north of Soquel will reduce opportunities for on-street parking and bike lanes in this area; south of Soquel, the street can accommodate curbside parking and bike lanes. The Plan recommends that Front Street be designed in a way that will allow for operational flexibility in the future.

Beach Access

The majority of traffic coming to and from the beach is directed along the Ocean Street corridor to the Riverside Bridge. Secondarily, beach traffic can circulate through the downtown along the River-Front Street corridor, either from Highway 1 on the north or from any of the east-west river crossings connecting to Ocean Avenue (Water Street, Soquel Avenue, Broadway and Laurel Streets). To a lesser extent, Center and Cedar Streets, which border the West End residential neighborhood, are also used for beach access and egress. No significant changes to overall beach access are proposed. However, the traffic and streetscape improvements suggested for the Front-River Street corridor will enhance the role of Front Street as the main downtown link to the beach.

East-West Crosstown Streets

Principal east-west movement to and through the downtown occurs at the three river crossings including: the Water-Mission Street corridor along the northern edge of the downtown; the Soquel-Walnut-Lincoln corridor through its heart; and the Broadway-Laurel Street corridor at the southern edge of the downtown. These streets are critical to crosstown access as well as access to the downtown itself. No substantive changes are proposed to any of these roadway systems, except for the addition of striped bike lanes on Soquel Avenue from Front to Pacific and on Lincoln Street and Walnut Avenue from Pacific to Cedar.


VEHICULAR CIRCULATION
WATER
MISSION
CHESTNUT ST.
UNION
LOCUST
CHURCH
WALNUT
LINCOLN
ELM
MAPLE
LAUREL
SOQUEL
FRONT
PACIFIC
CEDAR
S. RIVER
POTENTIAL ROAD
POTENTIAL EXTENSION
LORENZO RIVER
RIVER
WATER
S. RIVER
FRONT
RIVER
FRONT
SPRUCE ST.
SYCAMORE ST.
CEDAR ST.
PACIFIC AVE.
CENTER ST.
Signalized Intersections
50 200 400
0 100 300

East-West Local Streets

Cooper, Church and Locust Streets provide local east-west access to, and across, the northern portion of the downtown core; similarly, Cathcart Street provides two-way access between Cedar and Front Street. These local streets provide access to Pacific Avenue from the major north-south collectors; they also provide residents in the West End neighborhoods with convenient access to shops and services along Pacific Avenue as well as the supermarket and drug store along Front Street. To maintain this convenience, the Plan proposes that all of these streets be maintained as two-way streets. The following extensions of the local east-west street system are recommended to improve local access:

a. In conjunction with future redevelopment that may occur on the Long's-Zanotto's property, a two-way roadway along the northern edge of the property through the existing parking lot could be provided to connect Front Street with South River Street. This linkage would also accommodate generous pedestrian circulation and bike access to the river and to a potentially enlarged pedestrian bridge that could be constructed across the river to San Lorenzo Park in the future.

b. In conjunction with future development that may occur on the City-leased parking lot on the west side of Cedar Street between Lincoln and Cathcart Street, consideration should be given to the extension of Cathcart Street as a public way (not necessarily as a street) west to Center Street through existing private parcels.

Pacific Avenue

As the principal spine of downtown commercial and public activity, Pacific Avenue is the major destination of many people coming to the downtown. Unfortunately, access to Pacific Avenue is currently disorienting; this is particularly true for motorists arriving from the north, who are forced to circulate around the downtown on Front or Cedar Streets to reach the one-way northbound Pacific Avenue. In light of the difficult and circuitous turning movements, and the lack of strong visual cues (e.g., landmarks, signage), this movement is confusing, particularly to the infrequent visitor to the downtown. Traffic operations for Pacific Avenue are proposed as follows:

a. Allow automobiles to enter Pacific Avenue from Water Street and Cathcart Street to create attractive and recognizable "gateways" from both the north and the south, and in order to maximize convenient access to the downtown.

b. Design Pacific Avenue to allow for maximum operational flexibility in the future, within constraints related to the creation of an active pedestrian environment and traffic operations. More specifically:

- The segment of Pacific Avenue between Water and Locust Streets will be designed as a one-way southbound street, approximately 20 feet in width.
- In order to accommodate local cross-town traffic as well as Pacific Avenue traffic, the segment of Pacific Avenue between Locust and Church Streets

will be designed with a curb-to-curb dimension of approximately 30 feet, to operate as a one-way southbound or northbound street, or as a two-way street with curbside loading on the west side of the street.

- The segment of the street between Church Street and Walnut Avenue will be designed with a curb-to-curb dimension of 34 feet to allow for one-way south or northbound traffic with parking on both sides, or two-way traffic with parking on one side of the street.
- The segment of the street from Walnut Avenue to Lincoln Street will be designed with a curb-to-curb dimension of approximately 24 feet, to operate as a one-way northbound street or as a two-way street. Because of conflicts with east-west traffic on the Soquel-Walnut-Lincoln corridor, the preferred operation of this segment is one-way northbound.
- The segment of the street from Lincoln to Cathcart Street will be generally designed with a curb-to-curb dimension of approximately 40 feet to allow for one-way northbound or two-way traffic, with curbside parking on both sides of the street.
- The segment of the street from Cathcart to Laurel Street will be designed as a two-way street with curbside parking on both sides to take advantage of the wider right-of-way, to allow for efficient north-south movement of transit vehicles, and to provide convenient access to the local-serving retail establishments.

c. North Pacific Avenue between River and Water Streets will remain as a two-way street.

d. The operation of Pacific Avenue will permit periodic closure of street segments for special events. Segments that can be closed without significantly affecting downtown or crosstown circulation include the segments from: Water to Locust; Church to Walnut; and Lincoln to Cathcart Streets. The remainder of Pacific Avenue, Cooper Street, Cathcart Street, and Front Street between Water and River Streets can also be closed for special events (e.g., downtown festivals and parades), but east-west traffic will need to be rerouted around the downtown.

e. All intersections along Pacific Avenue will be controlled by stop signs; signals are not recommended.

While it is recommended that flexibility of operations be designed into Pacific Avenue, the initial circulation concept calls for: a one-way southbound street between Water and Locust; a two-way segment between Locust and Church; one-way northbound operation between Cathcart and Church; and two-way operations south of Cathcart. North Pacific Avenue will remain as a two-way street. Concern has been expressed that the two-way portion between Locust and Church Streets will cause congestion and impact the pedestrian environment. The Plan recommends that this operation be introduced, and if problems occur for the segment of the street, it can revert to a one-way northbound or southbound movement. Concern has also been expressed that the one-way southbound designation of Pacific Avenue from Water Street to Locust Street, coupled with one-way southbound traffic on Front Street from Water Street to River Street, will create difficulties for

northbound bicyclists. The Plan recommends that this area be monitored and other means of providing for northbound cycling be investigated, if problems emerge. In addition, because the implementation of the Plan for Front Street between the Post Office and River Street will not occur in the first phase of the reconstruction of downtown, the Plan recommends that a northbound contra-flow bicycle facility be investigated for this area.

Service Access

All existing rear service lanes will be maintained to encourage off-street servicing of retail and commercial establishments along Pacific Avenue. The extension of existing service alleys or the creation of new lanes will be encouraged as an integral part of redevelopment (e.g., the construction of new parking garages). The design of the service lanes will also promote pedestrian movement and rear access to Pacific Avenue shops as applicable. The use of a consistent paving (e.g., stamped concrete) and street planting treatment on all service lanes would reinforce this objective. Since continuous rear service will not be possible, and since front door loading is becoming increasingly commonplace for modern retailers, the design of Pacific Avenue will also need to accommodate short-term loading by means of "yellow" curbside loading zones. However, this activity should be limited to nonpeak business periods such as the early morning. No loading docks or curb cuts will be allowed along Pacific Avenue or the east-west streets.

Garbage service should be provided from the rear to the maximum extent possible. While all future development is required by city ordinance to provide screened garbage facilities internal to the development, a system of centralized garbage facilities (including recycling stations and compactors) is recommended to avoid existing problems of unsightly exposed garbage bins and dumpsters. Such centralized facilities could be incorporated within public parking facilities or on private properties, and managed locally by the property owners and merchants. Specific recommendations and solutions to existing problems have been identified by the planning team with the individual property owners; further coordination should be undertaken by the Public Works Department with the property owners to establish the mechanisms for implementing these and other proposals.

Parking

Convenient and accessible parking is a key ingredient to a successful retailing district. An adequate combination of convenient short-term parking on the streets and longer-term off-street facilities is essential to the viability of the commercial uses. The Plan proposes no changes to the City's Downtown Parking District, which allows businesses to pay fees in-lieu of on-site parking. This policy is highly effective in a mixed-use downtown environment, where the potential for shared parking is most pronounced. In the evolution of the downtown area, the City has made a conscious decision to provide for off-street surface parking along Front and Cedar Streets to serve Pacific Avenue. This perimeter parking in conjunction with the provisions of the Parking District have created a strong strategy for parking in the downtown.

On-Street Parking

Although limited in quantity, on-street curbside parking is very important in creating the feeling of a convenient and accessible downtown. Curbside parking can also serve to slow down through-traffic, thereby contributing to the pedestrian nature of the downtown. The Plan recommends that on-street parallel parking be maximized along Pacific Avenue between Laurel and Water Streets, and maintained along the east-west streets, Front, Cedar, and Center Streets. Diagonal parking should be avoided, because of the potential for conflicts with bicyclists and other vehicles. Curbside parking should only be removed if essential due to critical needs related to bicycle or vehicular movement, or the need to enlarge the sidewalk to promote pedestrian safety. In such cases, removal of on-street parking should be considered as additional public off-street parking is established, particularly in the period of implementation of the Plan. On Front Street, pedestrian safety and closing gaps in the existing system of bicycle lanes are the first priorities for use of the roadway space gained from shifting curbside parking to public off-street parking.

Off-Street Parking

The City's system of off-street parking facilities include surface lots and two parking structures along Cedar and Front Streets. A third parking structure in excess of 400 spaces is planned for the public lot at Cedar and Locust Streets. The City is currently preparing a detailed parking supply and demand study to determine parking needs and opportunities; the City is also in the process of restructuring its overall fee system for parking in the downtown. While the Recovery Plan defers to the recommendations of these studies, several opportunities are identified for the improvement of off-street parking, and for the creation of a better distribution of parking throughout the downtown. Opportunities include:

a. The consolidation of properties at the northwestern corner of Soquel and Front Streets to create a contiguous surface parking area, that could ultimately be developed as a multi-level parking garage.

b. The consolidation of properties at the northwestern corner of Cathcart and Front Streets to create a contiguous surface parking area, that could ultimately be developed as a multi-level parking garage.

c. The consolidation of private properties south of the Metro Center along Front Street to create surface parking for the South of Cathcart area, which currently has no major off-street parking facilities. This could occur in several stages: the acquisition of the Putney and Perry property for the creation of a small surface lot to allow for the infill development of the surface lot at Pacific Avenue and the Metro Center; followed by the acquisition of one or more parcels (eastern half of Haber Furniture and the Muffler Shop) as resources become available. Ultimately, these properties could accommodate a parking structure.

d. To further mitigate the shortage of off-street parking facilities in the South of Cathcart area, the Plan identifies the opportunity to consolidate private parking lots

west of Pacific Avenue between Maple and Laurel Streets to create more efficient and contiguous parking that could serve multiple rather than singular uses. (e.g., Planned Parenthood, Cedar Square, parking behind Pacific Avenue and in conjunction with single and multi-family housing projects). This project would require cooperation between the Parking District and individual property owners.

e. The construction of a parking structure on the Cedar Street public parking lot between Cathcart and Lincoln Streets, in conjunction with the redevelopment of the Ford's Department Store/Plaza Books site as a major anchor.

While the Plan identifies these opportunities, it must be acknowledged that parking structures are expensive and that their ultimate realization will depend upon available resources and the Parking District's establishment of a financially feasible approach for their implementation.

Parking structures are, by nature, difficult to fit into a fine-grained urban fabric like downtown Santa Cruz. Care will need to be taken to ensure that their design is appropriately scaled and compatible to the context, and that they are safe and comfortable for pedestrians to use. All structures shall comply with the development standards and guidelines described in the previous chapter of this document. Ample and secure bicycle parking should be an integral part of all parking structures and surface parking.

Transit

With much of California and the country facing deteriorating air quality, increased traffic congestion, and depleting energy resources, enhanced public transit has become a critical objective. The voters of California recognized this in June of 1990 with the passage of two key rail bonds, and the State is now developing an expanded system of inter-city rail. As more public funds become available, municipalities are improving and expanding their transit systems to attract patrons and to reduce vehicle trips.

Inter-City/Light Rail

Although Santa Cruz is not situated within the proposed inter-city rail corridor that will link San Jose and the Bay Area with Sacramento, it is linked by rail to the nearby cities of Capitola and Watsonville, which are connected to San Jose. As commuter traffic congestion increases on Highway 1, the potential for light rail service along this rail corridor will become more attractive. Provision for a link to the downtown from the existing Southern Pacific right-of-way should be pursued; two potential alignments are identified for further study:

a. The extension of the Southern Pacific right-of-way north and east through the Prolo Chevrolet property in the South of Laurel area to Pacific Avenue, to create a loop system north along Pacific Avenue to Church Street and south along Cedar Street to Cathcart, where it would rejoin Pacific.

b. As an alternative to looping a light rail line system south on Cedar Street, consideration could also be given to extending the line west along Church Street to Chestnut Street and the existing railroad right-of-way.

The design of Pacific Avenue should maintain future opportunities to introduce light rail within the roadway right-of-way.

Downtown-Beach Link

A looped light rail line through the downtown could also accommodate historic or recreational trolleys offering a strong link to the Beach. Vehicles of this type would be an attractive alternative to conventional (and hermetically sealed) city buses, and would significantly enhance cross patronage between the Beach and the downtown. In advance of constructing a light rail or recreational rail line, a rubber-tire trolley that could operate on the existing roadways is recommended as a beach-downtown link, connecting key parking resources and destinations in both areas. The recommended route for such a trolley would commence at the Metro Center, proceed north along Pacific Avenue to Church Street, west to Cedar Street, south to Cathcart, east to Pacific, south to the Washington extension to the Wharf, east along Beach to Riverside Avenue, north to Second Street, west to Front Street, and north on Pacific Avenue to the Metro Center. Headways for such a system should be no more than 15 minutes to promote convenience and to maximize ridership.

City Bus System

The downtown is served by approximately 20 bus routes that radiate out from the Metro Center to all parts of the city and to the University. Buses must be able to continue to circulate north and south on Pacific Avenue between Cathcart and Laurel Streets, and along Front Street. No city buses will travel on Pacific Avenue north of Cathcart Street.

Inter-City Bus

Currently, Greyhound Bus Lines operate from a facility immediately north of the Metro Center. This interface is important and should be maintained either in the existing facility, or as part of a consolidated facility within the Metro Center.

Bicycle Movement

As a university town, the use of bicycles in Santa Cruz is a significant mode of travel, and one that needs to be accommodated in the downtown. A system of exclusive bikeways, dedicated bike lanes, and posted bike routes should be maintained and enhanced to allow bicyclists convenient and safe access to the downtown. Much of this system is already in place: the levees along the San Lorenzo River offer an exclusive bikeway linking the adjacent neighborhoods with the downtown; dedicated bike lanes radiate out from the downtown along Laurel Street on the south, Soquel Avenue on the

east, Walnut Avenue on the west, and Water, River, and Mission Streets on the north. This system provides good bike access to the downtown. Within the downtown area, dedicated bike lanes exist along Cedar Street and portions of Front Street.

The nature of the downtown as a pedestrian-intensive district with slow-moving traffic makes it highly hospitable to bicyclists. The Plan calls for the principal downtown streets to be designated minimally as Class 3 bike routes. This would add Cooper, Church, and Locust Streets to the system of posted bike routes in the downtown, which includes Pacific Avenue and the non-dedicated portions of Front Street. Motorists should be reminded that cyclists have the use of the travel lane. This message should be included in any signage at entry points to the downtown core; a bicycle symbol could also be stenciled in the roadway. Traffic signals at intersections surrounding the core should be modified to include bike-sensitive detectors, located and identified as to where cyclists can trigger them. Push buttons are less preferable, and should be installed only where cyclists can use them without hazard.

In general, new dedicated bike lanes are not recommended for the downtown core between Front and Cedar Streets because of the significant demands for pedestrian spaces and for convenient on-street parking, and because Pacific Avenue and the downtown core are envisioned more as a destination for bicyclists than a through-route. However, the Plan calls for Cathcart, Soquel, Lincoln, and Walnut Avenues to have dedicated bike lanes installed to facilitate east-west bike movement. Also, the Plan recommends extending bike lanes along River Street from Water Street to Front Street and eliminating all gaps in the bike lanes along Front Street, except for immediately opposite the Transit Center, through restriping traffic lanes and/or shifting on-street parking to newly established off-street parking. The Plan recognizes that both bike lanes and curbside parking serve to slow auto movement and insulate pedestrians from heavy traffic.

The Plan also calls for Pacific Avenue to be designed as a bike-friendly street. A 15 mph speed limit is recommended for Pacific Avenue from Water to Laurel Streets. The elimination of diagonal parking is recommended to reduce potential conflicts between bicycles and automobiles.

To make the San Lorenzo River levee bikeways fully functional, the Plan recommends addition or improvement of access points to the west bank at Soquel Avenue, Laurel Street and the pedestrian bridge eastbound, Laurel Street westbound, and to the east bank at Water Street eastbound. As called for in the San Lorenzo River Design Concept Plan, closing the gaps in the east bank levee pathway at Soquel Avenue and Branciforte Creek is also recommended. Proper surfacing and maintenance, and adequate width, are also necessary for the levee bike path to serve as a reliable link in the bicycle circulation system.

Bicycle Parking

The Plan also calls for the provision of ample and secure bicycle parking facilities, including short-term bike racks along Pacific Avenue, as well as bike racks and longer-term bike lockers within existing and future parking lots and structures along Cedar and Front Streets. To facilitate shopper convenience, bike racks should be as available as auto parking spaces along Pacific Avenue, dispersed appropriately to serve storefront locations, and highly visible for security. Initially, an average of 20 racks should be placed per block, with room for expansion as demand warrants. The

recommended type of rack is the inverted "U," fabricated in a size to accommodate the variety of child and adult bicycles. A bicycle rental and route information kiosk is also recommended within the downtown (e.g., at Front and River Streets) to promote the recreational and transportation use of bicycles.

The plan calls for additional bicycle parking at significant destinations in the downtown; these include the Post Office, Civic Center and main library. The existing bicycle parking area at the Transit Center should be repaired and the number of racks expanded; some form of cover should be installed to add protection for all-day parking by commuters.

Pedestrian Circulation

Pedestrian access to, and movement within, downtown Santa Cruz must be direct, secure and comfortable. The predominant means for pedestrians to move about the downtown is by way of the street system, which need to be designed to be attractive and interesting. Development adjacent to the public street will be carefully controlled to ensure that the pedestrian environment is reinforced, and that active uses are introduced to create interest and a high level of security. The streetscape design will also reinforce the pedestrian environment by ensuring adequate sidewalk area, continuous and easy access, landscaping that is visually attractive and that offers shade and color, and adequate levels of lighting to promote a feeling of security. The following key pedestrian facilities and linkages are identified:

Pacific Avenue

Pacific Avenue will serve as the primary pedestrian corridor within the downtown. Automobile traffic will be slowed down to the point where pedestrian movement is clearly the dominant mode of travel. Continuous sidewalks of at least 12 feet in width will be provided along Pacific Avenue; the unobstructed portion of these sidewalks (e.g., free of trees, lights, parking meters, etc.) will be at least 8 feet to provide for two couples to pass each other comfortably. Additional activities beyond this walkway and within the public right-of-way (outdoor cafes, seating, planting, art, sculpture, kiosks, etc.) will be incorporated to strengthen the pedestrian environment. Ground-level activities within adjacent development will be carefully regulated to reinforce the pedestrian orientation, a continuity of activity, and storefront design that promotes interest and variation. At intersections, the sidewalk level will be flush with the crosswalk zones of the street to provide for unobstructed and uninterrupted access.

San Lorenzo Riverfront

The San Lorenzo River offers continuous and exclusive pedestrian movement between the Beach, the downtown and adjacent neighborhoods to the south and north. With the completion of riverfront recreational and flood control improvements, this route will be significantly enhanced and linkages between the river and the downtown will become more critical. The improvement of the Riverfront is a high priority that is expected to occur over the next 5 to 10 years.

Cathcart-Riverfront Linkage

Cathcart Street provides an important east-west pedestrian linkage between the West End neighborhoods and the proposed riverfront park. The Plan calls for sidewalks along Cathcart Street to be no less than 12 feet in width; adjacent uses are allowed to set back from the edge of the sidewalk an additional 12 feet to create active and sunny outdoor eating areas. The improvement of Cathcart Street should be a high priority as part of the Pacific Avenue streetscape improvements.

Metro Center-Riverfront Linkage

The San Lorenzo Riverfront Plan identified the opportunity to create a strong pedestrian and visual linkage between the Metro Center and the river, including the creation of a terraced plaza that would allow pedestrians direct access to the river. While the Recovery Plan suggests that the riverfront open space should be provided at the foot of Cathcart Street to create a stronger pedestrian and visual link to Pacific Avenue, a linkage to the river from the Metro Center is still recommended; in addition, a new footbridge across the river, as recommended in the Riverfront Plan, would provide strong pedestrian linkages to the neighborhoods on the east side of the river.

Church-Cooper Linkage

Church Street and Cooper Street provide a convenient and direct pedestrian linkage between the West End neighborhoods, the Civic Center, downtown, and the San Lorenzo River and Park. The Plan proposes that this linkage be strengthened in the following ways:

a. In the immediate term: by means of landscape and lighting improvements within the Galleria complex that will give pedestrians a more direct and visually attractive path to the river; by improvements at the western landing of the pedestrian bridge that will create a more direct and distinctive gateway to the river; and by the creation of wider sidewalks along the north side of Church Street to accommodate outdoor cafes and activities.

b. In the longer term, consideration should also be given to the construction of an expanded pedestrian bridge across the San Lorenzo River that could include shops and bicycle access and provide a more active linkage to San Lorenzo Park. (This is particularly important if the proposed Performing Arts facility is located there.) As part of this concept, consideration should also be given to the creation of a plaza on the east side of Front Street at Cooper Street leading to a new pedestrian connection along the northern edge of the Long's-Zanotto's property.

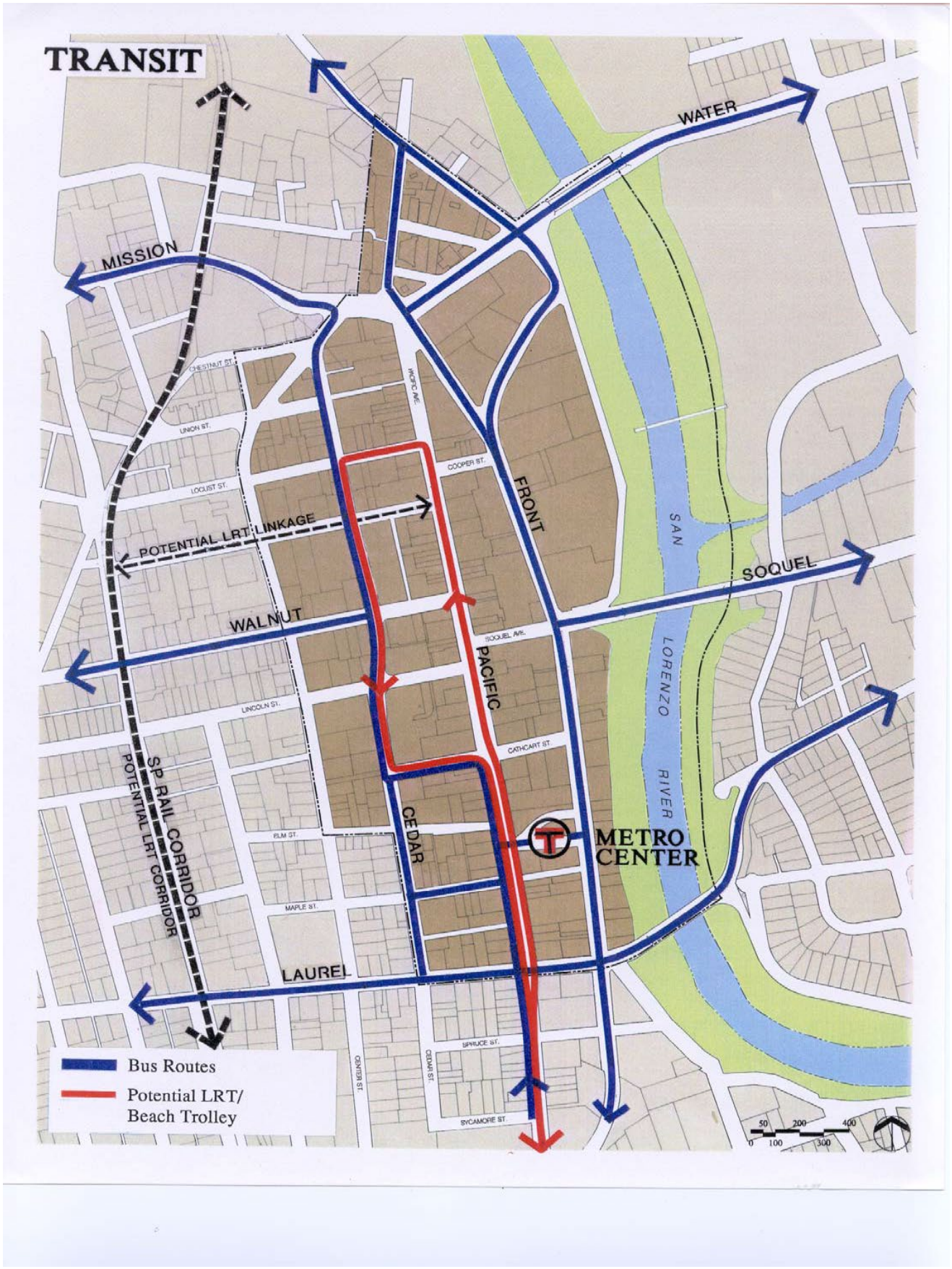
Mission Hill Linkage

As a longer-term action, the Plan recommends the creation of stronger pedestrian linkages to Mission Hill, through the construction of a new stair linking Pacific Avenue and Scope Park to an

upper park that, in turn, would allow pedestrians a direct connection to Adobe Park and Mission Plaza by way of School Street.

Beach Hill Linkage

Similarly, the extension of pedestrian improvements south along Pacific Avenue from Laurel Street to the foot of Beach Hill is recommended as a linkage to that neighborhood. Improvements to the stair at the foot of Pacific Avenue leading to Third Street within Beach Hill should also be considered. Pedestrian and streetscape improvements within Beach Hill along Cliff Street would also create a direct linkage between the beach boardwalk and the San Lorenzo River by means of the historic stairway at South Laurel Street. These improvements should be considered as part of future redevelopment in the South of Laurel area.


TRANSIT
WATER
MISSION
CHESTNUT ST.
UNION ST.
LOCUST ST.
POTENTIAL LRT LINKAGE
WALNUT
LINCOLN ST.
ELM ST.
MAPLE ST.
LAUREL
POTENTIAL LRT CORRIDOR
SP RAIL CORRIDOR
PACIFIC AVE.
COOPER ST.
FRONT
SOQUEL AVE.
CEDAR
CATHCART ST.
METRO CENTER
SAN LORENZO RIVER
SOQUEL
SPRUCE ST.
CEDAR ST.
CENTER ST.
SYCAMORE ST.
Bus Routes
Potential LRT/
Beach Trolley
0 50 100 200 300 400

This chapter has not been modified from the original 1991 Downtown Recovery Plan.

Streetscape and Open Space Plan 6

Nestled at the foot of the Santa Cruz Mountains, on the coast of Monterey Bay, and at the mouth of the San Lorenzo River, the City of Santa Cruz has a powerful relationship with its physical environment. The downtown itself is defined by natural features, including Mission and Beach Hills on the north and south, and the river on the east. The Streetscape and Open Space Plan is aimed at creating a strong and varied network of active and meaningful urban spaces that link the downtown with its natural setting.

Within the downtown, the street system provides the most significant system of open spaces, providing greenery, light, air, and direct connections to the surrounding community. The function of the streets goes well beyond movement and circulation; streets serve as places for social gathering and civic events; they provide orientation and structure to the downtown; and they are the principal public space that forms much of the pedestrian's experience.

Unlike some cities that developed around a town square or plaza, downtown Santa Cruz has grown along its irregular street system, which responds to the natural landforms of the surrounding hills and adjacent river. Rather than resulting in a single center of focus, the differentiated pattern of downtown streets has given Santa Cruz a rich and varied system of open spaces and spatial experiences. Each of the downtown streets is terminated by the curvilinear pattern of the roadway (e.g., Water-Mission Street), "T" intersections (Cooper-Locust-Church Streets), or by views to the adjacent hills (e.g., Cedar Street) or river levee (e.g., Cathcart Street). In this way, the streets have strong spatial definition and are effective orienting devices.

The downtown streets can be seen as an extension of the city's larger open space system, linking the San Lorenzo River, San Lorenzo Park, Mission Plaza, the Beach Boardwalk, and the Civic Center with one another. In effect, they serve as the "bridge" between ground-level activities within individual buildings and the broader open space system of the city. As such, they are the principal organizing and orienting component that gives memory and structure to the downtown.

The streetscape concept for downtown is aimed at reinforcing the unique role and characteristics of each street, and at creating a more understandable and visually cohesive downtown district. The treatment of streets should reinforce the visual and pedestrian linkages between outlying areas and the retail and pedestrian spine along Pacific Avenue. The improvements should also heighten the spatial experience of moving through the downtown and the sense of place within each subdistrict.

In addition to the enhancement of the principal streets, the Plan also calls for the creation of additional open spaces in the downtown that will have meaning and significance to the community. The most meaningful open spaces within cities have emerged out of natural features and from places that have a historic, cultural, and/or civic significance. In Santa Cruz, the San Lorenzo River offers the greatest potential for the creation of a major downtown open space amenity with strong connections to the natural setting of the city and region. The Plan calls for integrating the river more directly with the open space and streetscape system of the downtown, through streetscape improvements along Cathcart Street leading to a new riverfront park at the foot of that street. In addition to a riverfront park, the Plan also calls for the creation of a series of small parks and plazas

that will link the Post Office, Town Clock, and Scope Park with Adobe Park and Mission Park. This linkage will connect the most significant civic landmarks of the downtown with the historic origins of the City on Mission Hill, and by so doing, enrich the open space network of the downtown. The Plan also proposes the creation of a new park along Cedar Street at Plaza Lane, immediately north of the planned Locust Street garage. This park, which will enjoy sun throughout most of the day, would gain significance because of the heritage walnut tree on the site and its linkage to Pacific Avenue by way of Plaza Lane. Finally, the Plan identifies the opportunity of creating a stronger civic gathering space within the Civic Center area.

Pacific Avenue: Overall Recommendations

Pacific Avenue is the "main street" of Santa Cruz, serving as the principal retail spine of the city as well as its central public gathering space. The fact that the street is not a through-road or arterial provides the opportunity to create a place that goes well beyond the traditional main street. The street can be a "stage" upon which a diversity of activities takes place; people and activities, rather than objects, design elements, or even trees, should be the major theme. Pacific Avenue should be designed as a place to be, not just a place to look at. It should be a place that is comfortable and welcoming to students, parents with children, senior citizens, tourists, and to many others. The street must also reinforce the viability of retail activity within the downtown.

The cross section of Pacific Avenue changes significantly from the north end of downtown to the south. Between Water and Walnut Street, it varies from 65 to 70 feet in width; between Walnut and Cathcart, it ranges from 75 to 80 feet; and south of Cathcart, it is approximately 85 feet in width. This variation creates different opportunities and constraints for the design of the street, and suggests application of a range of conditions and treatments along its length.

In general, the Streetscape Concept for Pacific Avenue recommends an asymmetrical sidewalk treatment north of Cathcart Street, to allow for an intensity of sidewalk activities (e.g., public seating, cafe extensions, etc.) along the sunny side of the street. Given the roadway requirements for a 20 to 24-foot wide street and the objective for curbside parking on both sides of Pacific Avenue (approximately 7 feet per curb), approximately 35 to 40 feet of the right-of-way can be reserved for sidewalk areas north of Cathcart. If divided equally, sidewalks would generally be between 15 and 20 feet; in an asymmetrical configuration, a wider sidewalk on the sunny side of the street can be created (e.g., 20 to 25 feet) to support a greater diversity of activities; at the same time, a comfortable promenading sidewalk can be maintained on the east-facing side (e.g., 12 to 15 feet).

South of Cathcart, a landscaped median of approximately eight feet in width is recommended to take advantage of the wider right-of-way and to create a distinctive sense of place for the area. Continuous sidewalks of 10 to 12 feet would be provided along each side of the street. The following provides a generalized framework of common streetscape recommendations for the overall avenue from Water to Laurel Streets:

Continuity. The street should have a strong sense of continuity, that leads pedestrians comfortably from one destination to the next along the avenue and that allows for ceremonial events such as parades. Views down the length of the street should be maintained to reinforce the spatial continuity of Pacific Avenue.

Promenading. A minimum sidewalk depth of 10 feet and a minimum clear promenading width of at least 6 feet shall be provided along the length of the street. Street trees, planting areas, public seating, bike racks, parking meters and other elements should not protrude into the promenading area.

Accessibility. Unobstructed access shall be provided along the length of Pacific Avenue to comply with the provisions of both the Uniform Federal Accessibility Standards and State Title 24 Accessibility Requirements. To this end, if feasible, the full width of all crosswalks shall be flush with the sidewalk curb to provide continuous unobstructed pedestrian access.

Tree Species. The street tree concept establishes a strong sense of diversity within a larger order and brings together a number of different trees, each with its own unique characteristics. The concept builds on the asymmetrical qualities of the street, emphasizing a double staggered row of "boulevard" trees on the east side of the street with a flowering tree on the west. It also establishes a sense of progression along the street, with a focus on a planting of special trees at the "T" intersections and within the median south of Cathcart Street. On the wider west-facing side of the street, the Plan proposes London plane trees, a relatively fast-growing deciduous tree that can grow to an 80-foot height with a 30 to 40-foot spread. On the narrower east-facing side, the Plan calls for a flowering fruit tree (e.g., cherry), which would grow to a mature height of 25 feet. South of Cathcart Street, where the street will be symmetrically configured with a central median, the Plan proposes the extension of the London plane trees along both sidewalks, with a Jacquemontii Birch tree placed in the median. With bark of the most brilliant white, this tree is tall and narrow, growing to a mature height of 60 feet. At the four "T" intersections, the Plan calls for a special landscape treatment, through the use of large and impressive specimen trees that punctuate the street through contrast with the boulevard and flowering trees in form, color and character.

Tree Spacing and Height. In order to maintain a signature landscape along Pacific Avenue, it is critical that the spacing of trees promote strong visual continuity. To this end, the Plan calls for the boulevard tree to be planted on a staggered row at 25 feet on center. The typical configuration would place the outbound tree within a planter in the curbside parking area of the street and the inbound tree on the sidewalk. The Plan calls for the flowering tree on the west side of the street to be planted in a single row at approximately 25 feet on center. South of Cathcart Street, where the sidewalks are considerably narrower, the boulevard tree would be planted in a single row at 50 feet on center, with the median tree at a denser 25-foot spacing. When planted, the boulevard trees should have at least a 10-foot clearance between the lowest branches and the sidewalk; the flowering tree should provide a minimum 7-foot clearance to maintain views to retailing establishments. At full maturity, the branching of all trees should be maintained no less than 14 feet from the sidewalk surface.

Lighting. Decorative pedestrian-scaled lighting should be provided as another consistent vertical element along the street. Single-headed ornamental fixtures are proposed as the predominant fixture along the length of the street, interrupted only by taller double-headed fixtures at key intersections. Light standards shall be approximately 50 feet on center, spaced centrally between the street trees. The same single-headed fixture as proposed for Pacific Avenue is recommended for the east-west streets between Cedar and Front Streets, to reinforce the identity of the downtown as a district as well as a street.

Activity Nodes and Key Intersections. Key intersections and activity nodes along Pacific Avenue (Cooper-Church-Locust; Soquel-Walnut-Lincoln) should be highlighted by a change in landscape treatment to reinforce the spatial and gateway qualities of the intersections and to support the specific activities programmed for the area. Artistically designed kiosk structures (of less than 60 square feet in size) that sell coffee, ice cream, newspapers, flowers, tickets and/or public art are suggested for the sunny west-facing side of Pacific Avenue at the terminus of Locust and Lincoln Streets. These kiosks would be located on the widest depths of sidewalk along the street (e.g., 30 to 40 feet), where no curbside parking is desirable or feasible because of the intersection movements. The structures are seen as key activity generators as well as key visual landmarks along the street. The activity nodes at the "T" intersections should allow for a variety of additional uses including carts, vendors, informal street performances and free speech tables.

Public Seating. Public seating should be situated as an integral part of the activity nodes at the key intersections listed above, to ensure active and comfortable use by a wide diversity of people and oversight by the nearby kiosk vendor. Public seating should also be distributed along the length of the street, but in a configuration that avoids the monopolization of the sidewalk by groups or individuals (e.g., perpendicular to the promenading area).

Ground-Level Planting. Ground-level planting should be maintained in low beds that will not obstruct pedestrian movement and that will maintain views and a general sense of openness along the avenue. Colorful planting beds for annuals, with low curbs and decorative metal fences no higher than 18 inches, are recommended. Potential locations could include: the base of street trees; the activity nodes at the key intersections; and the median proposed for the South of Cathcart area. In addition, private planting adjacent to individual storefronts is encouraged within the design guidelines outlined in the Plan.

Retail/Cafe Extension Areas. In addition to the promenading area and activity nodes, opportunities for outdoor cafes and the extension of limited types of retailing uses (e.g., flowers, produce, newspapers) should be permitted within the public right-of-way. Specific standards for such extension areas are outlined in the design guidelines.

On-Street Parking. As discussed above, curbside parallel parking is included along the length of Pacific Avenue to maximize access and convenience, and to create strong support for adjacent retail uses. Diagonal parking is not recommended because of potential conflicts with other vehicles and bicycles.

Pacific Avenue: Block-by-Block Recommendations

As part of the planning process, the consultant team and City staff undertook a series of block-by-block working sessions with individual property owners and merchants along Pacific Avenue. These sessions were aimed at involving owners and tenants in the programming of street activities and in guiding the overall streetscape design concept. The input from property owners and merchants has been integrated with overall community objectives and design principles for the downtown, and became an important criteria in the final design concept for the street.

Pacific Avenue: South of Cathcart

The South of Cathcart area is characterized by a wider right-of-way (approximately 85 feet) than the segments of the street to the north, and a deficiency of parking because of the lack of any significant off-street parking facilities. The area is also characterized by a discontinuity of ground-level retail uses because of the vacant parcels at the southeast corner of Pacific and Cathcart, and the small City parking lot at the Metro Center. The key objectives for this area are to increase opportunities for parking and to enhance the overall image and identity of the area as an integral part of the overall downtown.

To this end, the Plan calls for a central planting median of approximately 8 feet, with 10-foot sidewalks along each side of the two-way street. The purpose of the median is to reinforce a sense of continuity and identity, and to enhance the pedestrian scale and amenity of the area. The Plan envisions distinctive tree planting on the median and the opportunity for colorful ground planting at the key intersections of Laurel and Cathcart to create attractive gateway statements. The median would also be designed to allow for pedestrian cross-movement at various points along the street, and for convenient disabled access at the key crosswalks within the district (e.g., Cathcart, Elm, Maple, Birch). The Plan proposes continuous on-street parallel parking, which will generally replace the quantity of existing on-street parking spaces (approximately 40 spaces) in the area. A continuous planting of boulevard trees is proposed within the parking zone.

The redevelopment of the vacant parcels along Pacific Avenue with active ground-level retail, restaurant, and entertainment uses will be important in achieving the desired pedestrian and streetscape environment in the South of Cathcart area.

Pacific Avenue: Cathcart to Lincoln

The segment of Pacific Avenue between Cathcart and Lincoln Streets has a right-of-way width of approximately 80 feet. The area is characterized by a significant number of vacant parcels resulting from the earthquake. These sites include the Ford's Department Store property at Cathcart and Pacific, Plaza and Logos Books, and the Good Times and Gularte properties on the east side of Pacific Avenue. In spite of this devastation, the area is also characterized by several strong destinations including the Del Mar Theater, the Plaza Books Annex, the Cat 'n' Canary clothing store, and the weekly farmer's market on the Ford's property. Redevelopment efforts are fairly advanced in the area, with three approved projects: two retail/residential developments on the Gularte and Good Times sites, and a retail/office development that will replace Logos Books.

The principal objective in this area is to create a vital pedestrian and retailing environment. This is achieved through the creation of an asymmetrical cross section, with sidewalks on the sunnier east side of the street ranging from 25 to 35 feet to support retail extension areas, and sidewalks on the west side approximately 20 feet to accommodate comfortable promenading and more limited extension opportunities. The curb-to-curb dimension of the street is proposed at approximately 35 feet to accommodate two curbside lanes of parallel parking and a wide one-way northbound traffic lane with sufficient room for bicycle circulation. With the removal of the curbside parking lane on the west side of the street (i.e., where the single row of flowering trees is confined to the sidewalk), the street could be changed to provide for two-way traffic, an additional vehicular lane or a designated bicycle lane.

As in the South of Cathcart area, the boulevard tree is proposed to be located within the parking zone to visually reduce the roadway width.

The redevelopment of the Ford's and Plaza Books site will be critical to the achievement of a strong pedestrian environment in this area. The Plan recommends the consolidation of these two properties for the creation of a major retail anchor that could reinforce this portion of the downtown as a strong retailing destination. At the corner of Cathcart and Pacific, a setback of approximately 800 square feet is proposed as an entry plaza and cafe for this anchor use, to activate the street and to create a strong gateway to the downtown. Major storefront displays within the retail development would also serve to enliven the street and build off the creative windows across the street at Cat 'n Canary. The Plan also recommends that this segment of the street be closed on a weekly basis to accommodate the farmer's market.

Pacific Avenue: Lincoln to Walnut

The segment of Pacific Avenue between Lincoln Street and Walnut Avenue plays an important east-west traffic function with Soquel Avenue. As a result, the favored traffic movement within this particular segment is for a one-way northbound operation to avoid left-turn conflicts at Lincoln and Walnut. This segment is also characterized by the three distinctive "T" intersections at Lincoln, Soquel and Walnut, which provide strong visual entry points to the downtown.

The Plan for this portion of the street results in a more symmetrical treatment within the 75-foot right-of-way; sidewalks on both sides of the street are approximately 20 feet in depth; however, the elimination of parking along the east side of the street at the "T" intersections of Lincoln and Walnut results in a plaza area of 35 feet in depth at the foot of Lincoln and 25 feet at Walnut Street. On the wider sidewalk at the Lincoln-Pacific intersection, the Plan calls for two landmark retailing kiosks (coffee, ice cream, flowers, newspapers) to activate the street and to define a plaza area adjacent to the Del Mar Theatre. At the foot of Walnut Street, the Plan proposes an open plaza with public seating. In addition to these activity nodes, cafe and retail extension areas are proposed along the east side of Pacific Avenue immediately north of Soquel Avenue, adjacent to the Trust and Ferrari Buildings.

The roadway width of Pacific Avenue within this segment is proposed at approximately 27 feet to allow flexibility of operation. Curbside parallel parking is proposed on both sides of the street north of Soquel Avenue. As discussed above, the boulevard tree would be located on the sidewalk and within the parking zone. Street trees of a different species and spacing from the boulevard tree are proposed for each of the intersection activity nodes to reinforce the spatial quality and significance of the areas and to offer variation along the length of the street.

Pacific Avenue: Walnut to Church

This segment of the street has a predominant right-of-way width of 70 feet; it includes the Palomar Hotel and a range of "in-line" jewelry, apparel, and food-related businesses. Two significant development opportunities occur along this segment of the street: one at the southwestern corner of Church and Pacific Avenue; and a second at the site of the old Cooper House and Odd Fellow's Lodge at Cooper and Pacific Avenue.

The basic asymmetrical cross section is continued in this portion of the street, with the promenading sidewalk on the west side of the street at approximately 12 feet, and the sidewalk on the east side at 20 feet to allow for extension zones adjacent to the Palomar Hotel, the Neary Building, and the new Cooper House. The curb-to-curb dimension of the roadway is proposed at 34 feet to allow for one lane of traffic and two curbside parking lanes, or if it is desired in the future: two lanes of traffic and one curbside parking/loading lane on the east side of the street.

Pacific Avenue: Church to Locust

This segment of Pacific Avenue between Church and Locust Streets includes the distinctive "T" intersection with Cooper Street, creating a unique spatial condition along the avenue. A significant amount of redevelopment will occur within this segment, including a mixed-use theater complex on the former Gottchalk's site, a major office building with ground-level retail on the site of the former Cooper House and Odd Fellow's Lodge, and the reconstruction and expansion of the County Bank Building as a mixed-use commercial project on the northeast corner of Cooper and Pacific. As a result, this portion of Pacific Avenue will be highly active and intensive, appropriate to its role as a major east-west crossing linking the Civic Center with San Lorenzo River and Park.

The basic cross section of this portion of the street is similar to that between Walnut and Church Streets, with a promenading sidewalk of approximately 12 feet on the west side of the avenue adjacent to the theatre complex, and a wider sidewalk of approximately 27 feet on the sunny eastern side adjacent to the Cooper House and the County Bank Building. A roadway of approximately 27 feet is provided to allow for one-way or two-way traffic movement; no on-street parking is proposed in this section of the street because of the east-west cross traffic and turning movements.

The Plan strives to accentuate the significance of this segment of Pacific Avenue through a number of means. Activity nodes on the sunny eastern side of the avenue and at the terminus of Church and Locust Streets are proposed. These would include retailing kiosks as visual landmarks at Pacific and Locust Streets, and sculpture gardens adjacent to the proposed Cooper House at Pacific and Church Streets. Each of these areas will include colorful planting and public seating. A setback plaza of approximately 800 square feet at the corner of Pacific Avenue and Cooper Streets is proposed for the creation of an active outdoor cafe in the spirit of the original Cooper House plaza.

Pacific Avenue: Locust to Water

The segment of Pacific Avenue between Locust and Water Streets has the narrowest right-of-way width, approximately 65 feet. This portion of the street contains two major approved redevelopment projects: the St. George Hotel development, which will include retail uses with residential above; and the Ron Lau development, which is planned to include Bookshop Santa Cruz on the first two levels and a bed and breakfast inn on three upper floors. The “flatiron” building at the northern tip of Pacific Avenue at Front Street is also planned for reconstruction; together with the Bookshop Santa Cruz, these two projects will create a strong northern gateway to the downtown.

The Plan proposes a one-way southbound street of approximately 20 feet in width for this segment, to create a strong gateway to the downtown from the north. Two curbside lanes of parallel parking/loading are proposed on either side of the avenue. A major element of the Plan is the

creation of a small plaza (3,000 square feet) at the northern tip of Pacific Avenue that will serve as an active extension area for the "flatiron" building, a strong visual gateway to Pacific Avenue...and with the closure of Front Street and/or Pacific Avenue, a major civic gathering space in close conjunction with the Post Office and the Town Clock to the north. The paving treatment of this plaza and the dimensions and paving of the adjacent roadways (Pacific Avenue and Front Street) will be carefully planned to signal motorists that they are entering a pedestrian-dominant zone. The placement of the existing Veteran's Memorial within the space will provide a strong visual element, reinforcing its gateway role. The dimension of sidewalks along this segment of the street will vary from 14 feet to 20 feet to allow extension zones adjacent to the St. George Hotel complex and the Bookshop Santa Cruz.

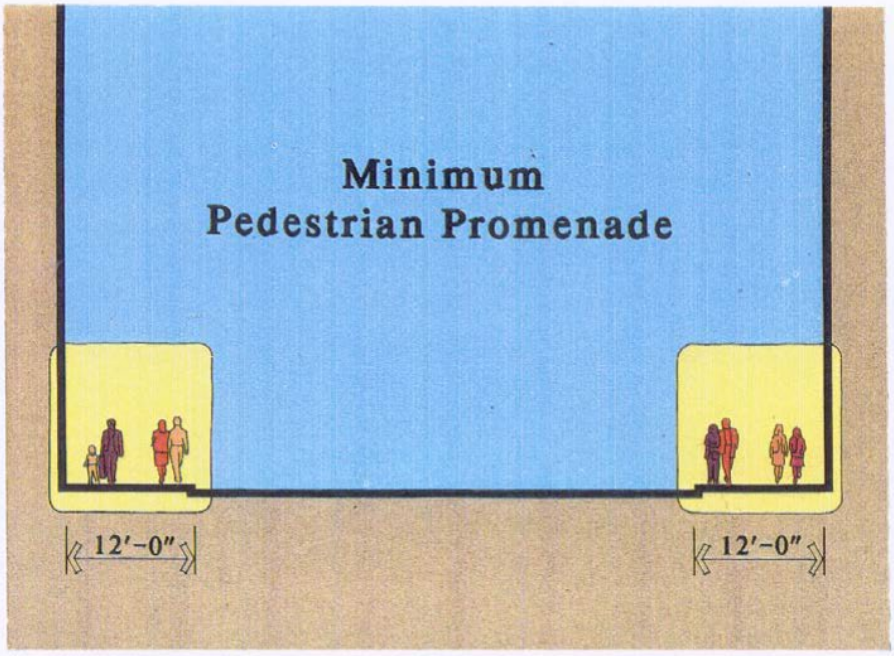
East-West Streets Between Cedar and Front Streets

In order to reinforce the downtown as a district, the Plan emphasizes the importance of improving the east-west streets in a manner that will provide for continuity and clarity. While the first phase of the downtown streetscape improvements are generally confined to Pacific Avenue between Laurel and Water Streets, the streetscape master plan also includes the east-west streets between Cedar and Front Streets. These will be improved in subsequent phases and/or as redevelopment along these streets occurs.

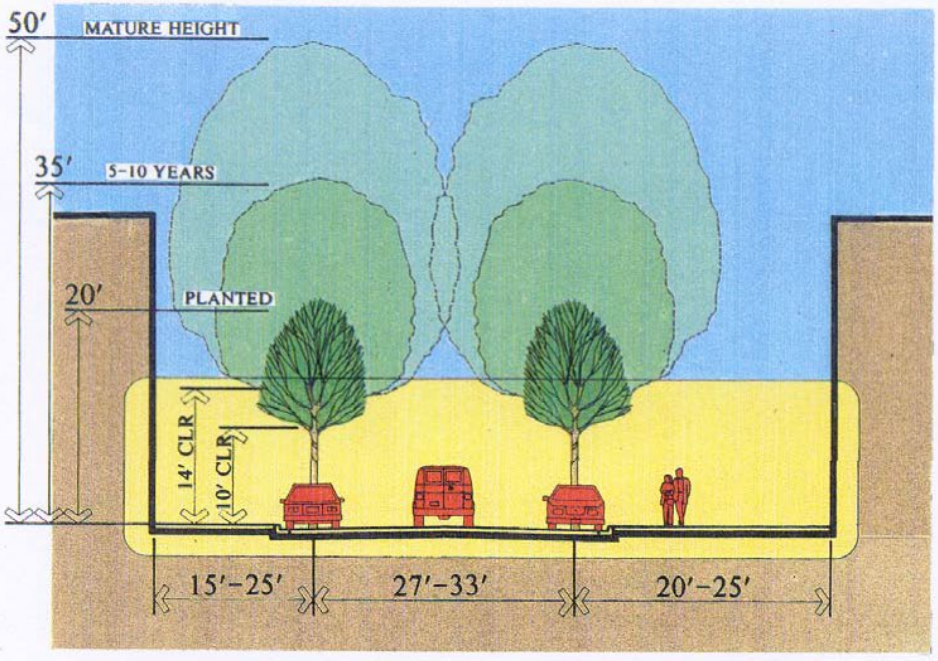
The east-west streets provide important linkages between Pacific Avenue and the adjacent areas; they also provide a continuation of the downtown activities and, as such, must offer a comfortable pedestrian environment. In general, the rights-of-way are considerably narrower than Pacific Avenue, ranging from 55 feet (e.g., Locust) to 70 feet (Cathcart, Walnut). Each of the streets has a unique character and role within the downtown. For instance, Soquel Avenue, Walnut Avenue and Lincoln Street are the principal east-west vehicular routes through the center of the downtown. Cooper, Church and Locust Streets provide for local access and pedestrian movement between the San Lorenzo River, Civic Center and the West End neighborhood. Cathcart Street is the only downtown street that is continuous between Cedar and Front Streets and, as such, provides another pedestrian linkage between the downtown neighborhoods and the river. The Plan calls for these streets to be landscaped in a manner that will promote continuity along their length and result in a diversity of planting in the downtown.

More specifically, along Soquel, Walnut and Lincoln Streets, between Cedar and Front Streets, the Plan recommends a fine-scaled and lacy tree (e.g., ash) to provide a distinctive gateway effect and a contrast to the London planes proposed along Pacific Avenue. Along Cooper, Church and Locust Streets, the Plan recommends the extension of the London plane from Pacific Avenue to emphasize the continuity of the pedestrian environment and to ensure a broad canopy over the street. Similarly, along Cathcart Street, the London plane is recommended to reinforce pedestrian linkages between the river, downtown and the neighborhoods. Along the side streets south of Cathcart Street, including Elm and Maple Streets and Birch Alley, a flowering ornamental fruit tree (e.g., pear) is recommended to introduce color to this part of the downtown, and to respond to the narrower sidewalk widths.

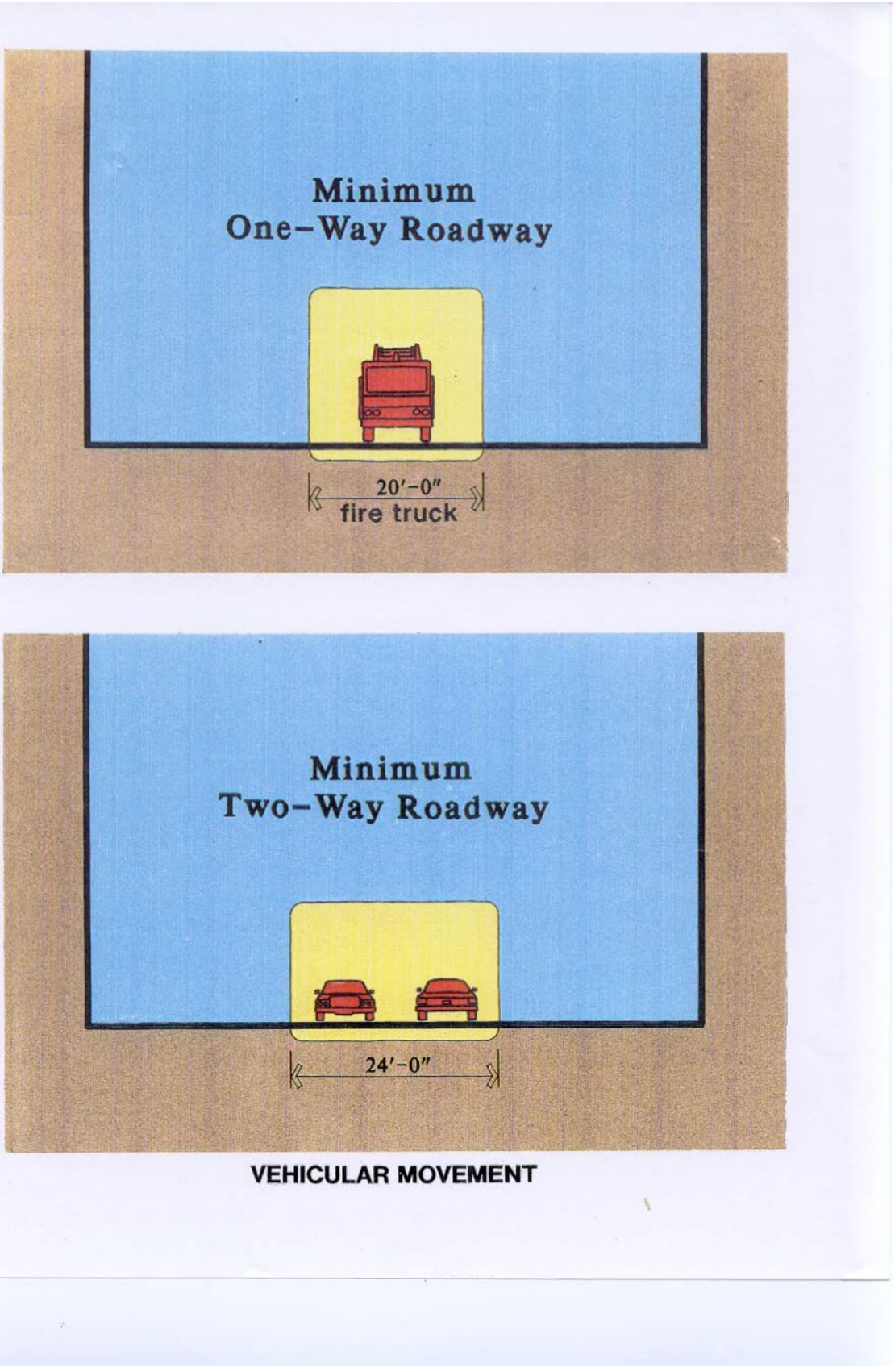
The following provides a more detailed discussion of recommendations for the east-west streets between Cedar, Front, Laurel and Water Streets.



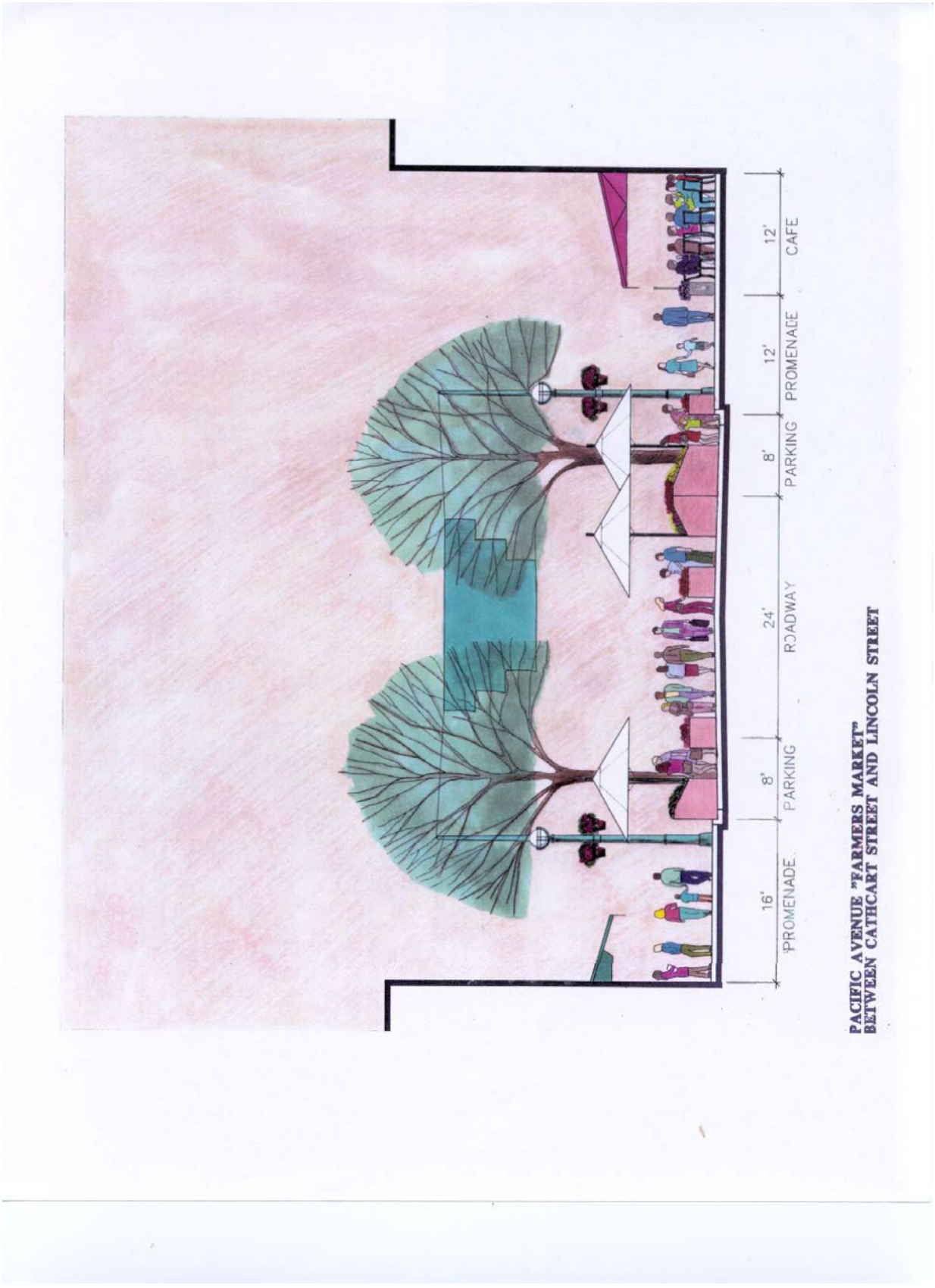
PEDESTRIAN MOVEMENT



BOULEVARD TREES



VEHICULAR MOVEMENT



PACIFIC AVENUE "FARMERS MARKET"
BETWEEN CATHCART STREET AND LINCOLN STREET

'ACIFIC AVENUE
ETWEEN CATHCART STREET AND LAUREL STREET



PACIFIC AVENUE "ACTIVITY AREA" & KIOSK
BETWEEN LINCOLN STREET AND SOQUEL STREET



PACIFIC AVENUE
BETWEEN CHURCH STREET AND SOQUEL STREET



PACIFIC AVENUE
BETWEEN WATER STREET AND LOCUST STREET

Cooper Street

Cooper Street plays a unique role in downtown Santa Cruz. As a vehicular street, it provides, with Church and Locust Streets, local east-west access between the West End neighborhoods and Front Street. In the same way, it provides an important pedestrian linkage between the Civic Center, Pacific Avenue, and the San Lorenzo River and park. As a public space, it is uniquely distinctive because of its architectural heritage, reinforced by the historic Octagon building, the Leonard Building, and the County Bank Building. The loss of the historic Cooper House was significant in this regard. Abbott Square, a 5,000 square foot pocket park between the Octagon building and the Cooper House site, reinforces the open space role of the street.

Historically, Cooper Street has been closed on occasions to accommodate special events and festivals. With the completion of the Art and History Museum at Cooper and Front Streets, this potential will be enhanced further. The Plan calls for the street to be maintained as a slow-moving, two-lane roadway with a curbside loading lane (e.g., yellow and white zone) on the south side of the street, and parallel parking and limited loading on the north side. The parking and loading lane on the south side of the street will begin 50 feet east of Pacific Avenue to respond to the proposed Cooper House plaza. In areas where there is parking, sidewalks will measure approximately 8 to 10 feet in width. Along the north side of the street, trees will be planted within the parking lane to promote a narrower pedestrian-oriented street; along the south side of the street, trees will be planted at the same 50-foot spacing, but on the sidewalk to provide for an uninterrupted loading lane that can accommodate long trucks.

Church Street

Like Cooper Street, Church Street is important for local east-west vehicular access and pedestrian movement between the West End neighborhoods, the downtown, and the riverfront. The Plan proposes that it be maintained as a slow-moving, two-lane street of approximately 24 feet in width. To enhance the pedestrian linkage, and to take advantage of cafe extension opportunities adjacent to the proposed theater complex, the Plan proposes the elimination of on-street parking along both sides of the street, with the exception of the north face of the street on the western half of the block. In this way, sidewalks can be maintained at 10 to 12 feet in width, with a wider sidewalk (approximately 20 feet) provided on the sunny north side of the street adjacent to the cinema. The Plan proposes the planting of London plane trees at 25 feet on center within the sidewalks on both sides of the street, interrupted only by the proposed cinema marquis on the north side of the street.

Locust Street

Like Cooper and Church Streets, Locust Street must be maintained as a slow-moving local access street. The narrow right-of-way of approximately 50 feet limits the potential for wide sidewalks. The two-lane carriageway with a lane of parking of approximately 37 feet is recommended to be maintained, with parking confined on the south side of the street. The resulting dimension of the sidewalks will be approximately eight feet. The Plan calls for London plane trees to be planted within the sidewalk at spacing of 50 feet.

Soquel Avenue

The Plan calls for Soquel Avenue to be reinforced as an important gateway street to the downtown. The street must continue to function as a major east-west vehicular route, with two lanes of two-way traffic and an eastbound right turn lane at Front Street. In addition, the Plan recommends that exclusive bike lanes be provided in both directions to accommodate east-west bicycle movement across the downtown. In order to accommodate the movement requirements and to create an attractive pedestrian environment, the Plan recommends that curbside parking be eliminated from this segment of the street. In addition, the Plan calls for a building setback of seven feet on the eastern half of the block, in order to allow for generous gateway landscaping and promenading sidewalks. A large, distinctive, lacy open tree, such as an ash, is recommended within the sidewalk areas (which will range from 10 to 15 feet in width) at spaces of 25 feet on center.

Walnut Avenue

Walnut Avenue will continue to function as a two-lane one-way westbound street between Pacific and Cedar Streets. The Plan proposes that the convenient diagonal parking on the south side of the street be maintained because of the wider right-of-way and the compatibility with bicycle and pedestrian movement. The Plan also calls for the removal of parking on the north side of the street, in favor of an exclusive bike lane that will be part of the Soquel-Lincoln Street system of east-west bicycle lanes. The same tree utilized on Soquel Avenue (e.g., the ash) is recommended to be planted in the sidewalks at a spacing of 50 feet on center. The width of the sidewalks on this street will be approximately 8 to 10 feet.

Lincoln Street

Lincoln Street, between Cedar and Pacific, is planned as a two-lane one-way eastbound street with parallel parking on the north side and an exclusive bike lane along the southern curb. Ash trees, or an open lacy tree to correspond to those selected for Soquel and Walnut Streets, are proposed on both sides of the street at 50 feet on center. The northern line of trees is proposed in planters within the parking zone, while the southern line of trees would be in the sidewalk to allow for a continuous bike lane.

Cathcart Street

As discussed, Cathcart Street is the only local street within the downtown that connects Front and Cedar Streets across Pacific Avenue. As a result, it is an important visual and pedestrian linkage between the West End neighborhood and the San Lorenzo River. It also plays an important role as a local east-west vehicular linkage within the downtown.

West of Pacific, the Plan proposes a 48-foot wide curb-to-curb dimension for Cathcart Street, allowing two lanes of traffic, bike lanes, and curbside parallel parking/loading on the north and south sides of the street.

East of Pacific Avenue, where the right-of-way is narrower and where a strong pedestrian linkage to the river is desired, the Plan calls for a sidewalk of approximately 11 feet on the north side, with parking eliminated to accommodate bicycle lanes and a promenade-width sidewalk. On the south

side of the street, a sidewalk of approximately 7 feet is established in order to retain parking and bike lines. West of Pacific Avenue, sidewalks will be approximately eight feet within the existing right-of-way. A staggered double row of London plane trees, spaced at 25 feet, is recommended along both sides of the street, with the outbound tree placed within a planter in the parking zone to reduce the visual width of the street.

Maple Street

The Plan calls for Maple Street to be maintained as a two-lane, two-way local street between Cedar and Pacific, with parallel parking on both sides of the street. Flowering street trees planted at 50 feet on center in planters within the parking zone are recommended, because of the narrow dimension of the sidewalks (approximately 6 feet).

Elm Street

Elm Street will be maintained as a one-way service alley, with a curb-to-curb dimension of approximately 28 feet and parallel parking on the north side of the street. Because of the narrow sidewalks that result (approximately six feet), and the frequent driveway curb-cuts, flowering street trees are recommended only along the north side of the street in planters within the parking zone.

Birch Lane

Within the South of Cathcart area, the inactivity of the service alleys has created social and visual problems. Birch Lane, between Laurel and Maple Streets, offers a unique opportunity to establish an attractive and active pedestrian way between Cedar Street and Pacific Avenue. The lane already contains a range of entertainment and food-related uses, including: a jazz club, a bagelry, an Irish pub, and a health food store. The Plan proposes that this alley be converted into a pedestrian way that would allow limited access for service vehicles, and for adjacent restaurant and entertainment uses to extend into the right-of-way. Parking at Cedar Square is proposed to be shifted to the south within the public right-of-way to allow the pedestrian way to remain adjacent with the active uses of the pub, jazz club, and bagelry.

In order to enhance the image of Birch Lane as a "club alley," a special paving, lighting, and street planting approach should be developed. Flowering trees, similar to those selected for Maple and Elm Streets, are recommended. Access to surface parking lots (e.g., Planned Parenthood and the residential apartment building) should be reconfigured from Laurel Street and Maple Avenue by aggregating the separate lots. In addition, a program of centralized garbage storage will be critical to improve the visual image of the lane. A key action that will be necessary to make this concept successful will be the replacement of Pip Print and its surface parking at the corner of Birch and Pacific with a more active and street-oriented use.

Service Alleys

Downtown Santa Cruz has numerous service alleys that provide loading access to individual properties as well as pedestrian access from off-street parking facilities. The Plan proposes that a consistent treatment of lighting and paving (e.g., stamped concrete) be developed for all of these lanes, to improve their visual appearance and the pedestrian environment. For each lane, a strategy

for centralized garbage should be developed to alleviate existing problems of exposed dumpsters and recycling bins.

The East-West Gateway Streets: Water, Soquel, and Laurel

Three east-west street corridors bring traffic directly to Pacific Avenue: Water and Mission Streets at the northern edge of the downtown; Soquel Avenue, Lincoln, and Walnut Streets in the center of downtown; and Laurel Street at the southern edge. These streets serve as distinctive gateways to the downtown district, which should be heightened and enhanced. More specifically:

Water-Mission Streets: This street corridor links Ocean Street on the east with Highway 1 on the west, and is a key entry to the downtown. The existing visual experience is a rich one that should be preserved. From the Water Street Bridge, one can see the varied skyline of Santa Cruz framed by the escarpments of Mission and Beach Hills and the San Lorenzo River. The median treatment of tall redwood trees along Water Street creates a distinctive gateway, and the Town Clock provides a strong suggestion of arrival and center. From Mission Street, the downtown is more slowly revealed as one proceeds down Mission Hill to the Town Clock and Scope Park. Specific streetscape recommendations for the Water-Mission Street corridor include:

a. Treatment of the Water Street Bridge with banners and special lighting that creates a stronger feeling of entry, and that highlights the importance of the San Lorenzo River. A common theme could be established with both the Soquel Avenue and Broadway Bridges.

b. New development that occurs at River and Water Streets should be carefully designed to accentuate this intersection as a northern gateway to the downtown (e.g., use of distinctive architectural elements at corner).

c. The planting of street trees along the north and south curbs of Water and Mission Streets to strengthen the sense of greenery, and to enhance the gateway sequence leading to the Town Clock. The existing stand of redwoods in the median should be maintained.

d. Redesign Town Clock Square and Scope Park to create a stronger visual linkage and civic statement in relation to the post office and the proposed entry plaza at the northern tip of Pacific Avenue. This linkage should be achieved with special paving that will also assist pedestrians in negotiating the wide intersection, and with common tree planting that reinforces the spatial integrity of the intersection. Paving at the entry to Pacific Avenue and Front Street should also be designed to give the motorist a strong sense of arrival and a signal that the downtown is a pedestrian district where traffic must move slowly. The treatment of new buildings adjacent to the space should be carefully considered to reinforce the spatial integrity of the intersection and to be compatible with the Italianate post office (e.g., similar materials and color, visual extension of key horizontal lines including pediment and parapet). Activities (e.g., cafe, outdoor market) on the new Pacific Avenue plaza, Scope Park, and Town Clock Plaza will also reinforce the civic significance of the space and the sense of entry to the downtown.

e. Introduce signage that clearly directs traffic destined for the downtown shopping district to Pacific Avenue, and other traffic to Front, Cedar, and Center Streets.

Soquel-Walnut-Lincoln: As discussed above, these three streets provide a major east-west corridor through the downtown; their gateway significance is enhanced by the way that they visually terminate at Pacific Avenue. Specific recommendations related to their improvement include:

a. Treat the Soquel Avenue Bridge with banners and special lighting to create a stronger feeling of entry, and to highlight the importance of the San Lorenzo River.

b. Introduce a consistent landscape treatment along Soquel, Walnut and Lincoln Streets (e.g., an open lacy street tree such as an ash), on the north and south sides of Soquel Avenue and around the Soquel-Front intersection.

c. Design the corner treatment of new buildings at Soquel and Front Streets to accentuate the role of this intersection as a principal gateway to the downtown (e.g., tower or turret treatments, corner setbacks, major display window, etc.).

d. Reinforce the significance of the Lincoln, Soquel and Walnut intersections with Pacific Avenue. Streetscape treatment of Pacific Avenue between Lincoln and Walnut Streets should reinforce the significance of the three intersections as a major "crossing" and principal activity center in the downtown. Taller specimen trees at the "T" intersections are recommended.

Laurel Street: The southern gateway to the downtown district is by way of Laurel Street and the Broadway Bridge, which form a major east-west arterial through the city. Apart from signage, the motorist is not given many visual "signals" that the downtown is immediately to the north. Specific streetscape recommendations for this corridor include:

a. Treat the Broadway Bridge with banners and special lighting to create a stronger feeling of entry, and to highlight the importance of the San Lorenzo River.

b. Introduce continuous curbside street trees at a spacing of 50 feet along the north and south side of Laurel Street.

c. Mark the intersection at Front and Cedar Streets through the use of distinctive landscaping (taller trees, planting beds) to signify an entrance to motorists.

d. Highlight Pacific Avenue at Laurel as the southern "gateway" to the downtown, by making streetscape improvements on Pacific Avenue (e.g., median treatment, paving, street trees) highly visible. Extending paving and landscaping treatment across the Laurel Street intersection should be considered.

e. Incorporate design guidelines that encourage distinctive architectural treatment of new development at Front and Laurel Streets to accentuate this intersection as a major gateway to the downtown. Because of its visual prominence from the

Broadway Bridge, the Toyota property provides a particular opportunity in this regard.

The Front/River Street Corridor

Although Ocean Street to the Riverside Bridge is (and will continue to be) the predominant way for regional traffic to reach the Beach, the Front/River Street corridor provides the most direct downtown route between Highway 1 and the Beach. This corridor also plays an important visual role as a "seam" between the downtown and the San Lorenzo River. Its role as an automobile route needs to be carefully balanced with both its visual role and the need for pedestrians to move along it and to cross it safely and conveniently to the river.

Front and River Streets are currently under study to determine the appropriate operations for the corridor. Options under consideration include: four through-lanes of traffic; three through-lanes with exclusive northbound and southbound bike lanes along each curb; and two through-lanes with curbside parking and exclusive bike lanes. All options would accommodate left and right turn lanes as necessary at key intersections (e.g., Soquel). While from an urban design standpoint, it would be most desirable to maintain curbside parking with a bicycle lane to create a comfortable buffer between pedestrians and traffic, the City has determined that traffic movement requires more than two lanes of through-movement. Therefore, a tradeoff between the desire for bicycle movement and curbside parking will need to be made.

Regardless of the ultimate operation of the corridor, the Plan recommends a strong and consistent streetscape treatment along River Street from Highway 1 to Front Street, south along Front Street to the Washington Extension, and then south to the Wharf and Boardwalk. This treatment would help to direct through-traffic around the downtown, and to create an attractive riverfront boulevard leading to the Beach. Palm trees would create a visually strong statement and would be evocative of the Beach; they would also be at an appropriate scale with the relatively wide street, and provide an interesting visual counterpoint to the more intimate streetscape of Pacific Avenue and the riparian landscape along the river. A consistent lighting treatment along the length of the corridor should also be considered. As discussed above, each of the major east-west vehicular intersections with Front Street should be marked by an interruption in the landscaping to signify entries to the downtown.

The segment of Front Street between Water and River Streets will continue to function as a one-way southbound street, and is envisioned as a more intimate pedestrian-oriented street with limited through-traffic. The streetscape treatment should reflect this role. The paving treatment of Pacific Avenue should extend along the west side of the street adjacent to the St. George Hotel, where continuous retail commercial uses are planned. The street tree along this portion of Front Street should be similar in scale and type to the boulevard tree selected for Pacific Avenue (i.e., London plane) to extend the pedestrian character of the downtown to Front Street.

Cedar Street

Although Cedar Street plays a similar role as Front Street, in terms of providing local access and parking for Pacific Avenue, it is markedly different in function and image. Unlike Front Street,

Cedar does not lead directly to any major arterials. It functions as a local route and, particularly since the earthquake, has become a more retail-intensive and pedestrian-oriented street. Its image is that of a village street; the buildings are varied in height, form and setback; the streetscape is informal and random. While the pedestrian environment of Cedar Street needs to be improved (in some cases, sidewalks are narrow and in bad repair), the informal and "organic" character of the street should remain in place. A consistent street planting approach is not recommended, as this would obscure the unique and diverse character of the buildings and activities along the street.

Rather, it is recommended that street planting continue to occur on an incremental basis, by individual property owners within setback areas, at the edge of the city parking lots and within the street right-of-way, where there is sufficient space to allow for promenading (e.g., at least 10 feet). Existing street trees should be evaluated for their appropriateness and their condition. There are examples of street trees that are not thriving (e.g., Pittosporum or Victorian Box) and ones that are inappropriate for sidewalk installation (e.g., Ligustrum or Privet). Care should be taken to plant trees that are appropriate to the particular constraints of a location.

Park and Plaza Improvements

While streets provide the major opportunity for public open space within the downtown, the Plan identifies several opportunities for the introduction of parks and plazas that can serve as places for gathering and recreation.

Plaza Lane/Cedar Street Park

Once the Locust Street parking garage is completed, there is an opportunity to create a park/public space of approximately 15,000 square feet on the existing city parking lot to the north. This park could include as a major element the preservation of the landmark walnut tree, and could serve as an attractive counterpoint to the more active and urban spaces along Pacific Avenue. The park, which would enjoy sun throughout most of the day, would be directly connected to Pacific Avenue by Plaza Lane.

A New Civic Center Plaza

Although not strictly within the boundaries of the Downtown Recovery Plan, the Civic Center at Church and Center Streets offers an appropriate opportunity to create a meaningful civic gathering space for the downtown. Immediately following the earthquake, citizens naturally gravitated toward City Hall to gain information. Despite its significance as the seat of local government and a center of cultural exchange (e.g., Civic Auditorium and the main library), the Civic Center does not include an open space specifically designed for public gatherings. The Plan recommends that consideration be given in the future to the creation of such a place at the Civic Center; this could include a redesigned plaza and garden space in front of City Hall and/or an open space flanking Church Street and visually connecting the City Hall, Civic Auditorium and Library.

A Riverfront Park

The City's 1988 San Lorenzo River Design Plan called for the creation of a riverfront plaza/park along the levee promenade between Soquel and Laurel Streets. The Plan located this open space

opposite the Metro Center to create a strong activity linkage with the downtown, and to offer pedestrians the opportunity to get to the water's edge. Based upon further evaluation of open space opportunities in the downtown, the Recovery Plan strongly reconfirms the importance of creating such a riverfront park as a public gathering space and as an open space resource that connects the downtown with its major natural feature. However, the Plan recommends that it be sited at the foot of Cathcart Street to provide a more direct visual and pedestrian linkage with Pacific Avenue, and to take advantage of opportunities to expand Cathcart Street as a stronger pedestrian street.

The precise design of the riverfront park needs to be studied in detail. Its size should be approximately one-half acre in size (no more than 150 feet square) to promote a strong sense of intimacy and enclosure. Its design should be closely coordinated with adjacent commercial and residential development to maximize ground-level activity (e.g., convenience retail uses, residential stoops and entries, etc.) and a sense of security. The design should lead pedestrians comfortably from the Cathcart Street crosswalk at Front Street to the top of the levee in a gradual series of terraces that also provide disabled access. A terraced amphitheater stepping down to the river's edge should provide pedestrians with access to the water's edge and serve as a performing space or as a place for brown-bag lunches and informal seating. In addition to hardscape elements that accommodate public gathering, the park should include generous softscape including turf areas, natural riparian vegetation, and colorful planting.

This chapter has not been modified from the original 1991 Downtown Recovery Plan.

Implementation and Management Strategy 7

Implementation

The Downtown Recovery Plan will be implemented through a range of actions, some to be carried out by the Redevelopment Agency, others through other City departments, including Planning, Public Works, Parks and Recreation, Water and Finance. Implementation of the Plan includes construction projects such as public and private development, the replacement of infrastructure and streetscape, as well as statutory and regulatory actions such as changes in zoning, parcel configuration, and planning documents.

The Plan itself, when adopted, will supersede those sections of the 1984 Downtown Area Plan dealing with the planning area of the Downtown Recovery Plan. The Downtown Recovery Plan thus amends and becomes part of the City's General Plan. (Some sections of the 1984 Downtown Area Plan dealing with other parts of the downtown remain relevant and will combine with the Recovery Plan to comprise the area plan for the greater downtown.)

Aspects of the Plan also amend parts of the San Lorenzo River Design Plan as the Downtown Recovery Plan implementation strategy seeks integration with the River Plan.

Implementation of the land use recommendations and design guidelines may require amendments to the Municipal Code, including the zoning ordinance. Portions or all of the Plan may be adopted as a Specific Plan for the downtown.

Implementation of the streetscape recommendations and replacement/reconstruction of water, sewer, street, storm drainage and other utility infrastructure will involve construction activity on Pacific Avenue or other downtown locations. Construction impact mitigations will be proposed as part of the Environmental Impact Report (EIR) for the Plan.

The long range implementation of the Plan anticipates eventual construction of parking structures and/or the combination, reconfiguration, purchase or lease of areas for public and private parking. Changes in traffic circulation and signalization, bikeways, and arrangements necessary to operate a beach shuttle and/or a fixed rail trolley are also anticipated. Acquisition and/or development of park and open space areas as outlined in the Plan are also anticipated as an implementation activity. Actions necessary to implement accessibility standards identified in the Plan in both private and public development will be undertaken. In short, a variety of operational policies and construction activities are anticipated in order to implement specific recommendations in the Plan.

A number of redevelopment actions are contemplated as part of the implementation strategy. These include: property acquisition (including eminent domain proceedings); entering into disposition and development agreements (e.g., selling of land, stipulating public and private responsibilities associated with new development); subdivision, resubdivision or combining of properties, changing property boundaries; demolition of nonhistoric buildings; issuance of bonds, certificates of participation or other financial instruments; and passage of specific resolutions or ordinances as

necessary and appropriate to implement particular aspects of the Downtown Recovery Plan.
A number of potential actions will be implemented as part of the retail management strategy to be undertaken jointly between the City and the private sector.

Environmental review will address these activities as well as the general levels of development and building identified as part of the "project called out in the Plan.

Specific Implementation Policies for Circulation

In order to promote a bicycle-friendly downtown, the following specific implementation policies for circulation are recommended:

1. Elimination of Diagonal Parking. The elimination of diagonal parking is recommended for the entire downtown core area, except on the left side of one-way streets (e.g., Walnut Avenue between Pacific and Cedar), where there will be no conflict with safe bicycle movement.

2. Avoid Decorative Bricking in Streets. Decorative bricking in the street can cause hazards to cyclists as well as pedestrians and persons utilizing mobility aids and devices, and should not be used.

3. Smoothness Standards. For safety as well as aesthetic reasons, all roadway surfaces in the downtown should be built and maintained to a high standard of smoothness.

4. Construction Hazards. During the coming period of public and private reconstruction of the downtown, all construction sites should be monitored for compliance with safety standards regarding road cuts, debris, temporary signs and scaffolds, and other potential hazards. Steel plates placed over roadway excavations should have edges tapered or buried, and should have nonslip treatments.

5. Standards for Gratings. As the Downtown Recovery Plan is implemented, all gratings and utility service cover plates should conform to CalTrans standards for bicycle safety; existing substandard gratings should be upgraded.

6. Mixed-Use Pathways. Sufficient space on mixed-use paths, such as the river levee, should be ensured as both bicycle and pedestrian use increases.

Downtown Management Strategy

The previous chapters of the Recovery Plan have dealt with the physical design standards, regulations, and proposals for public and private improvements. This chapter outlines recommended management strategies for the ongoing administration and maintenance of the downtown area.

Clearly, physical improvements alone will not create an active and economically viable retail street. The nature of downtown retail has changed due to highly competitive pressures created by

outlying shopping centers, which have the advantage of central management and controlled environments. Downtown merchants and property owners can no longer afford to ignore the advantage of working together to create a competitive destination. In addition, the magnitude of Santa Cruz' specific problems related to rebuilding a major portion of its downtown warrants an active and aggressive centralized management approach.

The following management strategies and systems are proposed as a means of both guiding and supporting the redevelopment of the downtown and the redesign of Pacific Avenue. While many of the activities are within the traditional responsibility of the City, and will remain so, this approach is comprehensive and includes activities of downtown-oriented nonprofit entities. For instance, the City Council, through its various agencies, will continue to administer all health, safety and land use regulations. The Downtown Commission, appointed by the Council, will continue to advise the Council on overall issues affecting the downtown, including parking and public improvements.

Augmenting these activities is the proposed Cooperative Retail Management (CRM) organization, which would be established to manage and administer specific programs related to the revitalization of the downtown's retail and public spaces. The CRM organization would assist retailers, property owners, and the City in coordinating and actively managing programs which directly affect the overall street and economic environment of the downtown, including retail recruitment and retention, property management, leasing and management of special uses in public spaces, and maintenance and security.

A key to all of the recommendations is the concept of a public-private partnership. In order to effectuate that partnership, a commitment to the program must be demonstrated by the private sector as well as the City in terms of financing the organization, having representation in the organization, and adhering to the programs established by the organization. That commitment should be made at the outset.

Cooperative Retail Management

The following section discusses potential responsibility phases and management issues associated with implementation of the Downtown Recovery Plan, including the element of a Cooperative Retail Management (CRM) program. It is included as resource material to inform future discussions on the issue, and should not be construed as adopted policy.

The Plan recommends that a Cooperative Retail Management (CRM) entity, structured as a nonprofit (501-3-c) corporation, be formed as soon as possible. The immediate objective of this entity would be to coordinate the property owner and tenant improvements and activities with the City's reconstruction program, and to administer a retail retention and recruitment program for the downtown.

The entity should be established as a joint effort of the City and the Downtown Association. Its board of directors should include members of both entities and representative retailers, property owners, developers, and property managers. Downtown legal, accounting, and design professionals would also be appropriate as board members. Budget estimates could be as much as $250,000 to $300,000 per year in the initial three to five years, depending on the level of staffing required.

Phase One CRM Responsibilities

The CRM's primary responsibilities prior to completion of the construction phase would be assisting retailers in getting back into old and newly constructed buildings in a timely and coordinated manner and initiating a retail recruitment effort. The primary tasks for the first two years include the following:

Retail Recruitment

- Execute a retail recruitment program designed to identify and recruit Bay Area, regional and national chains into the Downtown and areas contiguous to the Downtown.
- Administer a retail recruitment program designed to identify and recruit additional independent retailers into the Downtown.
- Assist property owners and retailers in finding appropriate locations which match the needs of both parties as well as the overall marketing strategy for the Downtown.

Retail Assistance

- Coordinate developers' and property owners' construction with the City's construction and development schedules to facilitate the process of moving tenants into permanent commercial space.
- Administer a retail retention program designed to help prepare existing local retailers for the demands of relocation and potentially higher rents.
- Oversee displaced retailers relocations, advise retailers and administer any retailer relocation funds that might become available through State grants or low-interest loans from other sources, as may be appropriate.
- Assist small retailers and property owners in negotiating fair and equitable leases for commercial space in the Downtown.
- Initiate the development and enforcement of retail standards and coordination such as common hours of operation, joint marketing, advertising, and promotions; cluster merchandising concepts; innovative pedestrian-oriented signage; and customer service training for store employees.
- Coordinate with the City on issues involving parking, traffic, movements, street lighting, security, maintenance, and special events during reconstruction.
- Formulate a management plan for administration of kiosks and extension areas or other related matters.

Phase Two CRM Responsibilities

Upon completion of the street improvements and the initial stages of the retail recruitment program, the CRM would implement the management plan for the downtown retail district. The emphasis on retail recruitment and retention should shift from active solicitation and marketing for tenants to coordination of, and assistance to, real estate brokers, property owners, and developers; in addition, the emphasis of the CRM should be on the active management of the street on a day-to-day basis.

The primary focus of Phase Two would be to: coordinate overall promotions and marketing; assist with individual retail recruitment; control and coordinate downtown business hours; and coordinate with the Downtown Association on seasonal events and promotions. However, in addition, and in light of the foregoing considerations, it is recommended that the City Council enter into a management contract with the CRM to undertake the following responsibilities (to the extent allowed by the law):

- Coordinating with the City in the permitting of retail and cafe extension areas.
- Permitting and licensing of vendors, carts and street performers.
- Permitting and coordination of weekly farmer's market.
- Tenant recruitment and leasing of kiosks.
- Coordination with the City, property owners and tenants on security and maintenance issues.
- Coordination with the City, property owners and tenants on all temporary street closures.
- Maintenance and updating of all public information kiosks and directories within the downtown.
- Maintenance and administration of a Pacific Avenue banner program; and coordination with the City and arts community in a program of public art within the downtown.

Management Issues

The City Attorney must provide the City with an opinion on the manner in which the CRM could manage activities normally managed by the City. Dependent upon that opinion, the management contract between the City and the CRM would include some or all of the following activities:

Retail and Cafe Extension Areas

- The City would issue licenses to property owners for merchants or restaurant operators wishing to extend into the public right-of-way, consistent with the retailing objectives of the CRM.
- The City would review all design proposals and enforce compliance with established standards for the use of retail and cafe extension areas, consistent with the objectives of the CRM.
- Licenses would be fully revocable for noncompliance with the standards, at any time and without recourse.
- A monthly or semi-annual license fee from all permittees based on the amount of square feet of public right-of-way utilized as an extension area would be established.

Carts and Vendors

- The CRM would issue permits for carts and vendors. These permits would clearly establish the proposed location for the cart on the street, allowable hours of operation, and the type of merchandise or food to be sold under the terms of the contract.
- For the issuance of a permit, approval would be required of the adjacent property owner(s).
- Permits would be on a month-to-month basis and fully revocable for noncompliance with standards established by the City and the CRM.
- The CRM would collect a standard monthly permit fee from all cart and vendor operations.

Street Performers

- The CRM would establish a Downtown Public Space Arts and Performance committee with responsibility for developing guidelines for street performers and public art. The committee would review all permit submittals and retain a right to refuse anyone a permit.
- The CRM would establish zones within the Downtown which have the approval of adjacent property owners and the City. Street performances would be restricted to these areas.
- The CRM would issue permits for street performers. Permits would clearly establish permitted location for street performers and allowable times for performances.
- The CRM would not collect fees for these permits.
- Note: This provision should be reviewed by the City Attorney, as an underlying "time, place, and manner ordinance" may be required to be adopted by City Council.

Free Speech Tables/Demonstrations

- The CRM would also assist groups wishing to set up free speech tables or undertake demonstrations, in coordinating with the Police Department and in gaining appropriate permits.
- The CRM would establish zones within the Downtown where free speech tables could be set up.

Farmer's Market

- The CRM would assist in the coordination and administration of the weekly farmer's market, including issuance of permits, control over individual vendors, and logistics related to setup, trash control, storage of stalls and vehicles, and street cleanup.

- The CRM would also coordinate with adjacent property owners and retailers to ensure that the farmer's market continues to be compatible with their merchandising.

Retail Kiosks

- The CRM would be responsible for recruiting tenants and leasing kiosks to appropriate tenants who will help activate the street.
- Prospective tenants would obtain written approval from adjacent property owners.
- All leases for kiosk space would be of a short-term duration, subject to renewal, and fully revocable for noncompliance with standards established by the City.
- The CRM would be responsible for assisting tenants in improvements to the kiosk and collecting monthly rents.

Street Closures

- The CRM could be responsible for coordination of all street closures with the City, police, property owners and tenants, including the preparation of all necessary applications, requests for such closures, and posting of public notices for street closures in accordance with City ordinances.

Security

- The City Police Department would maintain primary responsibility for downtown security. The CRM would act as a liaison between individual tenants, property owners, and the police.
- The current assignment of police to the downtown is five full-time patrol officers. The CRM would review the assignment with the City on an ongoing basis to maximize security effectiveness.
- A budget should be established for private security guards to augment police surveillance during the Christmas shopping season and special events, and for parking lot/structure patrol and for traffic control as required.
- The CRM could administer the "Neighborhood Watch" program for the downtown; all shops and businesses could be connected to the CRM by phone; the CRM could alert police and other merchants as required. The CRM could also conduct bimonthly meetings with merchants and the police to resolve issues and to refine security strategies.

Maintenance

- The City would retain responsibility for maintenance of the downtown area; CRM will act as an advisory to the City regarding tenant and property owner concerns.
- It is recognized that the overall streetscape maintenance will be at a higher level than other areas of the City, but staffing levels should not exceed the current levels.
- Once the Streetscape Design has been completed, it is critical that the Design Consultant, along with input from the Streetscape Task Force, property owners and tenants, develop a detailed maintenance impact report, which shall include:
    - definition of the work area and area priorities for level of maintenance;
    - frequency for wash down and sweeping of public walkways;
    - specifications for tree pruning;
    - specific locations of planting areas/beds and planting schedule;
    - schedule for repairs and responses to vandalism;
    - frequency of trash pickup;
    - maintenance of kiosks;
    - maintenance of banners and holiday decorations; and
    - consideration of water-saving alternatives.
- An automatic irrigation system should be installed throughout the area, including all tree wells and planting beds. Hose bibs should be located at appropriate intervals throughout the area.

Project Financing

A key element in the implementation of the Downtown Recovery Plan is the development of a funding strategy. This strategy needs to be both flexible and sufficient to cover the anticipated costs of the Recovery Plan and various post-earthquake recovery programs. Issues of importance include capital expenditure and long-term maintenance.

Financial Resources

Funding for capital expenditures is available from federal, state, and local sources. The strategy developed for the Recovery Plan is to use the most efficient mix of these resources to provide the

maximum leveraging of local funds. The funding strategy is also dependent on project phasing and must be flexible to respond as costs and schedules change. The sources for financing downtown recovery are diverse and will be brought together in different combinations at different times to implement the Recovery Plan.

Federal Resources

Federal Emergency Management Agency Assistance – Disaster Assistance

This program provides assistance to local governments to reconstruct public improvements damaged by a natural disaster. The program is based on an assessment by the Federal Emergency Management Agency (FEMA) of local damage and the cost of replacement. Funding from this program will be used to pay for portions of the cost of reconstruction of Pacific Avenue and other City infrastructure in the downtown area.

Economic Development Administration – Sudden and Severe Impact Assistance Program

This program is designed to provide economic development assistance to cities damaged by natural disasters. Assistance provided to the City of Santa Cruz through this program is part of the financing for the Cedar/Locust parking/commercial structure.

FEMA– 403 Housing Assistance

The Federal Emergency Management Agency established a fund for the nine-county Bay Area to assist in construction of damaged single-room occupancy and other low and moderate-income housing. Six million dollars in funds from this were received by the County of Santa Cruz, which in turn dispersed two million dollars to three projects in the City of Santa Cruz.

State Sources

California Department of Commerce

The California Department of Commerce, through its earthquake recovery infrastructure match program, has provided the City with financial assistance to construct the Cedar/Locust parking structure. This program provides a direct grant to the City.

Local Sources

Measure E

This six-year, one-half cent sales tax increase is applied throughout the County of Santa Cruz. Measure E provides that the City of Santa Cruz will receive 39 percent of the revenue of this measure, and it is estimated that this will be $13,000,000 over the term of the tax.

Tax Increment Financing

The City of Santa Cruz, through the merger and expansion of its existing redevelopment project areas, created the Merged Earthquake Recovery and Reconstruction Project. Detailed tax increment projections for the Merged Project will be made to determine the amount of tax

increment revenues to be generated over the term of the project. Initial revenues range in the area of $800,000 per year and increase thereafter.

Parking District

The Downtown Santa Cruz Parking District was created in 1955 and has provided the financial basis for the reconstruction of the City's existing Off-Street Parking District. Revenues for the Off-Street Parking District are derived from parking meter and parking deficiency taxes. Revenues from the parking district have been severely diminished as a result of the earthquake, which created a large drop in revenue from the parking deficiency tax. The parking district has contracted for a study to develop a long-term financial strategy to assist in increased parking management and development in the downtown area. The report will recommend increases in the parking deficiency fee, sufficient to implement the proposed program.

Downtown Promotion District

The City and the business community have joined to create a Downtown Promotion district. This District is presently involved in developing an overall strategy for the improved marketing and promotion of the downtown area. This District, in 1990, increased its Promotion District fees and now has reached a funding level of $110,000. As the downtown area continues to develop, it will continue to study these fees to ensure that they are sufficient to meet downtown promotion needs.

Private Sources

Private Foundation Assistance

The Redevelopment Agency and the City have been very aggressive in seeking private foundation assistance. Today, this assistance has taken the form of several grants to assist the Vision Santa Cruz nonprofit corporation in its work on preparing the Downtown Recovery Plan. Additional grants will be sought from other groups as part of an overall promotion program for the City of Santa Cruz.

Private Financing – Financial Institutions

The credit market nationally has experienced severe contractions as a result of both a downturn in the national economy and the costs of the savings and loan bailout. Banks now required large equity positions and other forms of securities as part of financing packages for private, commercial, and residential construction. The Redevelopment Agency recognizes this financial state and has attempted to serve as a catalyst in identifying financial institutions which have an active interest in loaning in the downtown area of Santa Cruz. To this end, the Redevelopment Agency has sponsored both a forum and individual meetings between lending institutions and potential developers in the downtown area. While this effort has not changed lending terms, it has helped identify the market potential of downtown Santa Cruz and overcome a certain degree of reluctance to loan as part of a rebuilding project.

Red Cross Housing Funds

The American Red Cross has granted the City of Santa Cruz $1.5 million to assist in reconstruction of low and moderate-income housing destroyed as a result of the October 17, 1989 earthquake. In response to a Request for Proposals for use of these funds, the City received 24 proposals. A

selection committee screened the proposals and the City Council awarded grants to assist in the reconstruction of the St. George Hotel, the Colonial Hotel, and the Neary Lagoon project. This assistance is in the form of long-term loans and will be recycled in subsequent years as loan repayments are received.

Mello-Roos Financing

The State Legislature, in its post-earthquake emergency session, passed SB27X, which allows for the use of Mello-Roos bonds for post-earthquake commercial reconstruction and retrofitting projects. These bonds would provide long-term financing at fixed rates to private owners to utilize for rebuilding projects. The bonds would be secured by a tax on land and bond proceeds loaned to private land owners to assist in reconstruction. These loans would be repaid similarly to a bank loan. Conditions for bond issuance are similar to those for bank loans, and therefore projects must meet vigorous financial standards. To assist in making this financing mechanism more attractive, the City has actively pursued passage of HR/3560 in the United States Congress. This House bill, introduced by Congressman Fourtney Stark, would allow for the issuance of Mello-Roos bonds with a tax exempt status. This status would allow for a bond rate at approximately two percent less than those issued on a taxable basis through former Mello-Roos legislation. Passage of HR/3560 could be an important element in speeding reconstruction in the City's downtown area. The City is actively supporting passage.

Appendices

This Appendix has not been modified from the original 1991 Downtown Recovery Plan.

Appendix 1: The Community Vision Statement

Introduction

Vibrant, vital and active, the central business district constitutes the primary retail, commercial, professional and employment center for the City of Santa Cruz. This compact, high-density area is home to unique businesses, offering residents and visitors a diverse and wholesome environment for commercial, cultural, civic and social pursuits. Local, regional and national businesses combine in a potent blend, making the downtown a major destination for the entire region.

The pedestrian-oriented environment is characterized by convenient access, a garden-like setting, and human-scale buildings. The visual and physical relationships to the San Lorenzo River, the surrounding natural landscape, and Monterey Bay make downtown Santa Cruz among the most beautiful urban places in California. The architecture captures the best of the City's past while integrating new buildings into a coherent and visually appealing downtown. As a result, the area strikes a balance between a successful modern business center and an environmentally attractive and active public place.

This effective combination is the focus of Santa Cruz public life and is a central element in the community's identity. Downtown is safe and clean. It is a multicultural place, attracting all sectors of the community and serving as a meeting place for children, students, elderly, office workers, retailers, shoppers and visitors, as well as those living in the downtown and surrounding neighborhoods. Restaurants, cultural events and entertainment bring additional life to the area during the evening and nighttime hours.

A range of housing types is integrated into the downtown. This urban-density housing provides both market-rate and affordable units, and expands the immediate market for downtown goods, services and public transportation.

The economic and social vitality of the downtown has a positive effect on the surrounding areas and the entire community. It has restored the heart and soul to an earthquake-shaken town, and once again provides a significant source of tax revenue for the City's general fund.

Activities

As the "living room" of the entire City, downtown offers something for everyone, attracting people of all ages and diverse backgrounds.

Downtown is a vibrant place where merchants thrive because of their ingenuity and enterprise. Each successful business adds to the commercial vitality of the downtown area as a whole and contributes to a setting where other businesses prosper.

Within this center and in the immediately surrounding neighborhoods, there are offices for

government, finance, education and professional services.

Selected areas of the public space are designed to support temporary retail activities such as outdoor cafes, a farmers' market, sidewalk sales, and arts and crafts fairs, as well as community, cultural and entertainment events such as parades, art shows and concerts.

The community is noted for creative cuisine and fine wines. The design of buildings and public spaces takes advantage of the mild climate to encourage outdoor eating places. Restaurants are varied in character and bustling with activity. Restaurants and retail shops that are open in the evening, as well as the wide variety of entertainment and cultural events offered, encourage people to remain downtown into the evening hours.

People who live downtown and in the surrounding neighborhoods help activate the areas as they meet their daily shopping and entertainment needs. The pedestrian environment fosters a warm social climate and nourishes relationships between people. Friends stop and talk. People watch and interact with each other.

Santa Cruz is known as a center for the arts and entertainment. It has an extensive and impressive array of facilities, both public and private, that support creative expression, including art, music, cabaret, concert, theater, film and literature. The downtown area now serves as a focal point for this cultural milieu: the library, a new performing arts center, new theaters and cinema, galleries, museums, lecture halls, as well as offices, studios, and housing provide a cornerstone for the artistic community and many sources of entertainment, enhancing both the commercial and public life of the city.

The intellectual and cultural resources of Cabrillo College, UC Santa Cruz, Santa Cruz High School and other educational institutions are an important presence in the social and public life of the downtown. Community education programs for people of all ages have an expression in the immediate downtown, adding to the vitality of the area.

The dynamic nature of downtown activities and the quality and mix of the merchandise offered attracts people not only from the surrounding neighborhoods, but from the width and breadth of the county and from regions beyond.

Uses

The central business district mixes commercial, civic and residential uses. Their interplay produces a vital, active environment that makes the area a productive and attractive community asset. Residential uses complement the importance of commercial use.

To create a vital, retail environment, there is an effective mix of anchor tenants, specialty shops and eating places. Street-level frontage in the central business district is primarily designated for retail use.

Offices and professional services, located above retail shops and in areas surrounding the central business district, provide a component critical to the success of the retail environment. Employees and clients comprise a large portion of the weekday pedestrian traffic on the street and contribute

to the market for retail businesses. Office space designed to meet the needs of larger businesses is available.

Residential uses in the downtown area provide housing for a range of occupants, including customers and employees of downtown businesses. This presence in the area improves the security of the streets. A mix of housing types is available, including studio and efficiency units; one, two and three-bedroom apartments or condominiums; and units that combine living and working space. Housing is of high quality, well managed and designed to be compatible with the surrounding commercial uses. Housing is dispersed throughout the downtown area, not concentrated in one place.

Housing prices range from low-income to market rate and include both rental and for sale units. Housing is available for senior citizens, first time buyers, university students, faculty and staff, service, retail and professional workers, and other people who seek a high quality urban living environment.

Housing supports and complements commercial activity. Street-level frontage is designed and reserved for commercial uses. Residential projects provide for their own parking needs – either on site, or by buying into the City's parking district. Potential mixed-use conflicts are avoided through careful site planning and design.

Public and Quasi-Public Uses and facilities are carefully integrated into the fabric of the downtown. City and County government centers are conveniently located for pedestrian access from the central business district.

Public-serving facilities such as the Civic Auditorium, the Public Library, the Center for Art and History, and the Performance Arts Center provide important destinations for residents and visitors and contribute to the vitality of the downtown. These uses also serve to reinforce retail uses such as bookstores, music stores, art suppliers and galleries.

Community-serving social services located in the downtown are clustered in small nodes away from the commercial center, with easy access to public transportation.

Parking, Access & Transportation

Clear and effective circulation patterns, convenient parking and public transportation make downtown readily accessible. Rights-of-way have been preserved to allow for future development of mass transit and now support energy-conserving alternative transportation modes. Parking and transportation facilities accommodate disabled access.

Shuttles play a key role, linking remote parking with the major areas in the greater downtown, Pacific Avenue, visitor accommodations on Ocean Street, the Boardwalk and the beach, County and City government centers, as well as the downtown metro center. Although space is available for long-term employee parking, the community has succeeded in providing alternative transportation for downtown employees to free up more space for commercial, retail and short-term parking.

Urban Design

The image of downtown Santa Cruz is rich and complex, distinctive and memorable. Within the central city, new and rehabilitated buildings have developed individual character while retaining the qualities of the historic townscape. The underlying cadence and structure of the built environment continues to express the scale and texture of a pedestrian-oriented main street.

Viewed from the surrounding hills, the downtown area is interesting and picturesque; the predominance of two- and three-story buildings, punctuated by distinctive taller buildings, is enhanced by a generous, but not overpowering, urban landscape. The urban structure is responsive to, and affords selective views from, downtown to the surrounding natural and urban landscape – Pogonip, Graham Hill, and Mission Hill to the north; the San Lorenzo River and Branciforte Bluffs to the east; Beach Hill to the south; and the California Street Bluffs to the west.

The activity center of the downtown occurs at the intersection of Pacific Avenue, the primary commercial shopping street, and Church Street/Locust Street/Cooper Street. These streets provide a civic axis, linking major downtown public facilities, City Hall, the Civic Auditorium and the Public Library to the west, the Center for Art and History, the Performing Arts Center, and the County Government to the east.

The hierarchical structure of the built environment is reflected in the overall composition of the downtown; principal streets and spaces are clearly evident, and the edges of the central commercial area clearly delineated. Transitions from the commercial and civic areas into the adjoining residential neighborhoods are natural, as changes in building heights and landscape character occur as a gradient rather than as abrupt changes.

Within the downtown, the building scale establishes a measure which feels intimate and personal. Building spacing, rhythm and articulation generally reflect the underlying historic patterns, thus reinforcing this human and pedestrian scale.

Although adjacent and neighboring buildings exhibit considerable diversity and variety in expression and character, their interrelationships form a unifying whole through sensitive combining of form, color and materials. Recent buildings respect the integrity of the complement of historically significant buildings.

Silhouettes of taller buildings are characterized by varied configurations, yet are united through scale. These buildings clarify the structure of downtown and define and emphasize important locations, such as entries into the central city, key streets and intersections, public facilities and spaces, without overwhelming or dominating adjacent buildings and outdoor spaces. The unique offset grid street pattern that meets along Pacific Avenue creates a series of focal points for additional, smaller-scale landmark buildings. Each of these landmark buildings adds distinctiveness and identity to the places they help create.

Streets and parking areas are designed to provide ease in pedestrian, bicycle, and motor vehicle movement and circulation, and to achieve a high visual quality.

Attractive parking areas – structures and surface lots – are appropriately located and easily accessible in the downtown. Surface lots are characterized by a strong tree canopy that provides

summer shade, thus improving human comfort. Parking structures relate to the pedestrian scale and incorporate activity-generating uses at the street level. Similarly, the public transit center and other transit nodes are both functional and aesthetically appealing.

Street-level access, conveniently located handicapped parking spaces, and similar design features underscore the City's resolve to create barrier-free access for the disabled community.

Architecture

Care and sensitivity in the design of individual building forms, proportions, materials, and colors contribute to a larger composition which gives the entire downtown a discernable and aesthetically appealing coherence. Massing, rhythm, articulation and other primary building design elements draw on important preexisting relationships and contexts established by the older, distinctive buildings.

Santa Cruz is an exemplar community with respect to resource-conserving architecture. Energy conservation has increasingly influenced the design and construction of buildings. Building forms and technologies, combined with the overall urban design, have made Santa Cruz notable for energy efficiency. The presence of awnings and other sun control devices suggests a community concerned about climate-responsive architecture. Window locations also reveal attention to the importance of natural light in building design.

No single architectural style predominates, although human scale is the common metric. The roofscape features aesthetically appealing treatments of utilitarian necessities such as vents, elevators, shafts and chimneys. The predominance of flat roofs juxtaposed to carefully located pitched roofs and vertical elements add variety, complexity and interest to the built environment. Large areas of undifferentiated facades (building faces), both solid and transparent, are notably absent. Buildings meet the sky with architectural treatments such as cornices, overhangs and trellises that create interest and definition.

Downtown buildings are characterized by high quality materials, good craftsmanship, and sensitive architectural detailing. This quality is also expressed through textures and finishes that give a sense of timelessness and solidity. The play of sunlight on the buildings adds interest and delight through shade and shadow patterns generated by massing, fenestration and decorative features, in addition to the street trees.

Buildings stepped back at upper stories permit additional sunlight to reach into the street and create roof decks and terraces. These outdoor spaces combine with second and third-story balconies, windows, and other human scale features to contribute to the friendly and inhabited feeling of the built environment.

Streetscape

The landscape of downtown contributes to a strong sense of place for the commercial, cultural, and civic core of the city. The native trees that mark the urban reach of the San Lorenzo River complement the dignified, yet delightful, landscape of the city center. Street trees provide summer shade, yet let the winter sun reach into the public space. Flowers and low shrubs add color and

dynamism to the paved areas. In addition to its aesthetic appeal, the landscape enhances human comfort through micro-climate modification and purification of the air.

Building massing and setbacks provide strong boundaries to the public realm, and serve to establish appropriate character for the streets they adjoin. The strong building line and facade plane creates clear and usable public open space. Judicious use of setbacks creates private outdoor space suitable for various commercial activities.

A strong network of well-maintained and managed public and private open spaces provides a distinguishing character for downtown Santa Cruz as a special place for working, shopping, living, and visiting. This network – street space, generous building entries, strategically located courtyards, and a plaza space – is structured within a framework and sequence that is responsive to commercial, social, and civic needs. Public space and the contiguous street-level uses shape activity patterns that support a socially active downtown.

Consistent with a high quality retail environment, sidewalk cafes, street vending, outdoor sales areas, outdoor performance areas and similar human interaction enrich the pedestrian environment, adding excitement and vitality to the downtown experience. These high levels of pedestrian concentration and activity help create informal meeting and conversational places that truly make downtown public space the city's living room.

Larger community events such as outdoor markets, performances and civic celebrations take place in a plaza designed to accommodate such uses through a combination of building setbacks and temporary street closings.

Public amenities such as benches, planters, lighting, street name and traffic sign posts, trash receptacles, public restrooms, bicycle racks, public telephones and information kiosks are functionally and aesthetically integrated into the streetscape. They are central to pedestrian comfort, convenience, and safety. Public art adds to the sensory delight of the streetscape.

Well-designed directional signs and "you are here" maps, consistent with and contributing to the character and quality of building facades, enliven the streetscape and provide important information about goods and services, historical sites, retail and cultural activities, and public facilities. The image, character, form, legibility, and location of signs (pedestrian information, traffic and advertising signs) contribute to the overall aesthetic quality and scale of downtown.

Relationship to Surrounding Areas

The enhanced San Lorenzo River is bordered by a clean, attractive pedestrian promenade. People stroll along the levees enjoying shops, cafes, and outdoor performances. Recreational open space is convenient to downtown residents, employees, shoppers and visitors, further enhancing the Pacific Avenue downtown experience. The river promenade also serves as a key transportation link; walking and bike paths connect the governmental centers, downtown shops and offices, and the beach and Boardwalk. As an integral part of the downtown, the river itself provides an important amenity for restaurants, attractive new housing and open space uses.

The city's beaches and wharf are a major tourist destination. First-rate conference facilities and nearby hotels and motels provide a range of services and accommodations for overnight and

extended-stay visitors. Foot and bike paths, combined with frequent shuttles, link this vibrant tourist area to downtown retail, office, housing and cultural facilities, strengthening the economic health of both areas. Conference facilities serve to promote off-season visitors, further strengthening the local economy.

Downtown rebuilding has not undermined the integrity of the existing neighborhoods adjacent to the downtown. New construction has added to the housing stock of the area without overwhelming either the surrounding established neighborhoods (with their characteristic greenery) or downtown businesses and offices.

The downtown core is a delightful and convenient place for local residents and visitors to shop, recreate and pursue cultural activities. The surrounding neighborhoods bring life to the area and contribute to the vitality of downtown. An increased number of office and retail workers reside in the downtown, allowing them to contribute to a lively and pleasant urban environment.

UC Santa Cruz has become a fuller partner with the greater community. Downtown businesses recognize the important role University students, faculty and staff have in the marketplace, and many businesses cater specifically to the University population. The University, on the other hand, contributes directly to the downtown through faculty and student housing projects, and satellite classroom facilities. Collaboration between the University and the community has improved the availability of cultural and performance facilities. Downtown is increasingly a destination for students, staff and faculty.

This Appendix has not been modified from the original 1991 Downtown Recovery Plan.

Appendix 2: The Downtown-Beach Link

Each summer season, thousands of visitors come to Santa Cruz to enjoy the boardwalk amusements and the sandy beach facing Monterey Bay. Although less than one mile to the south, the beach is separated from the downtown by topography (Beach Hill) and a road pattern that is indirect and confusing. As a result, many beach visitors have little knowledge that downtown Santa Cruz exists and, when the sun subsides, look elsewhere for their after-beach entertainment.

While downtown Santa Cruz must continue to depend primarily on local residents for its economic health, increased patronage from beach visitors will only help to reinforce the commercial vitality of the area. The strong local character or "personality" of Pacific Avenue can be an attractive draw to visitors who, in a recreational mode, are looking for unfamiliar diversions that provide new experiences. Conversely, the revitalization of the Beach could introduce new activities that would be more attractive to the local resident or patron of the downtown. The creation of complementary activities in both the downtown and the beach area would provide the strongest linkages between the two areas. The following strategies are aimed at strengthening these linkages:

Pacific Avenue as a Food and Entertainment District

One of the most attractive opportunities for such an activity linkage is the enhancement of Pacific Avenue as a food and entertainment district. Most of the "raw ingredients" already exist to achieve this: a strong resident and student population; a benign climate ideal for outdoor dining throughout most of the year; and numerous clubs, restaurants and cafes that have already established a local and regional reputation. These attributes should be capitalized upon in the design of Pacific Avenue and in the recruitment of new businesses. Outdoor dining opportunities should be maximized to fulfill the great demand, and to reinforce the image and identity of downtown Santa Cruz as an active and bustling entertainment center.

A Hotel-Conference Center at the Beach

Just as visitors to the Beach could be given more reason to enjoy downtown Santa Cruz, residents and employees of the downtown could be attracted to the Beach more frequently if there were activities there that had a stronger local orientation. While the restaurants along the wharf provide an attractive destination and local hotels are used for meetings and social events, the beach area is still very much removed from the daily life of the downtown resident or employee. A landmark business-resort hotel and conference center at the beach could reinforce the downtown-beach activity linkage by providing the community with a new meeting place; at the same time, such a facility would be attractive as a regional beach-oriented destination and provide the beach area with a stronger "critical mass" and focus that would serve to enhance its overall image and identity.

Improving Transit Linkages Between the Beach and Downtown

Making the downtown and beach more accessible to one another is a critical factor in achieving a strong linkage. Because of limited parking facilities and streets that are congested during the peak summer season, a transit connection offers the best opportunity to improve the linkage between the two areas.

Ideally, a fixed rail trolley car with historic and recreational appeal is preferable to attract riders and to make the trip part of the enjoyable experience of coming to the beach. The car should be open in nature to maximize the outdoor experience; transit stops should be carefully planned in relation to major destinations (e.g., the wharf, parking facilities, the boardwalk, the future hotel/conference center, the Metro Center, etc.); and headways should be sufficiently frequent to promote a strong feeling of convenience.

Street design and traffic operations should be planned to allow the most direct fixed rail connection between the downtown and the beach; as discussed in the circulation element of this Plan, a route that loops within the Beach Area (along Beach, Riverside, Second and Front Streets) and within the downtown along Pacific Avenue and Cedar Streets is recommended.

In the more immediate term, a rubber-tired trolley vehicle that could circulate on the same route is recommended. While this vehicle would not have the same level of appeal as a fixed rail trolley, it would be a much more friendly and accessible alternative to the conventional (and hermetically sealed) city buses that currently provide shuttle service between the beach and the downtown. The implementation of a recreational transit shuttle could be undertaken by the private sector, the Downtown Association and/or the Transit District.

Consideration should also be given to the enhancement of recreational rail service along the existing Southern Pacific rail line between Felton and the Beach, passing immediately to the west of downtown along Chestnut Street. Pedestrian linkages between the downtown and a transit stop at Chestnut Street could be enhanced along Church Street, through the use of signage or a shuttle service.

Improving Pedestrian and Visual Linkages

Currently, the downtown and Beach are separated by a relatively unfriendly pedestrian environment. With the future redevelopment of the South of Laurel area and the implementation of proposed improvements along the San Lorenzo River, the pedestrian experience can be significantly enhanced through landscaped walkways and streets, and activities that promote a strong sense of interest and security.

Pedestrian linkages should provide the most direct and understandable routes between the beach and the downtown. Four specific linkages are recommended for enhancement. The riverfront promenade, as planned, will provide a strong linkage between the beach boardwalk, the Metro Center, and the proposed east-west pedestrian connections to Pacific Avenue along Cathcart and Cooper Streets.

Cliff Street visually terminates at the Coconut Grove, bisects the Beach Hill neighborhood, and connects by stair to the "River Bend" area at Laurel Street; it offers the pedestrian an interesting and attractive alternative to the riverfront promenade. This linkage could be significantly enhanced with a strong landscape treatment (e.g., palms) that visually emphasizes the axis to the beach and Coconut Grove, and that is more hospitable to the pedestrian; improvements to the historic stair, including a lookout and more provisions for public seating, could also be made. The stair linking Third Street on Beach Hill with the foot of Pacific Avenue also provides a major opportunity for enhanced pedestrian linkages.

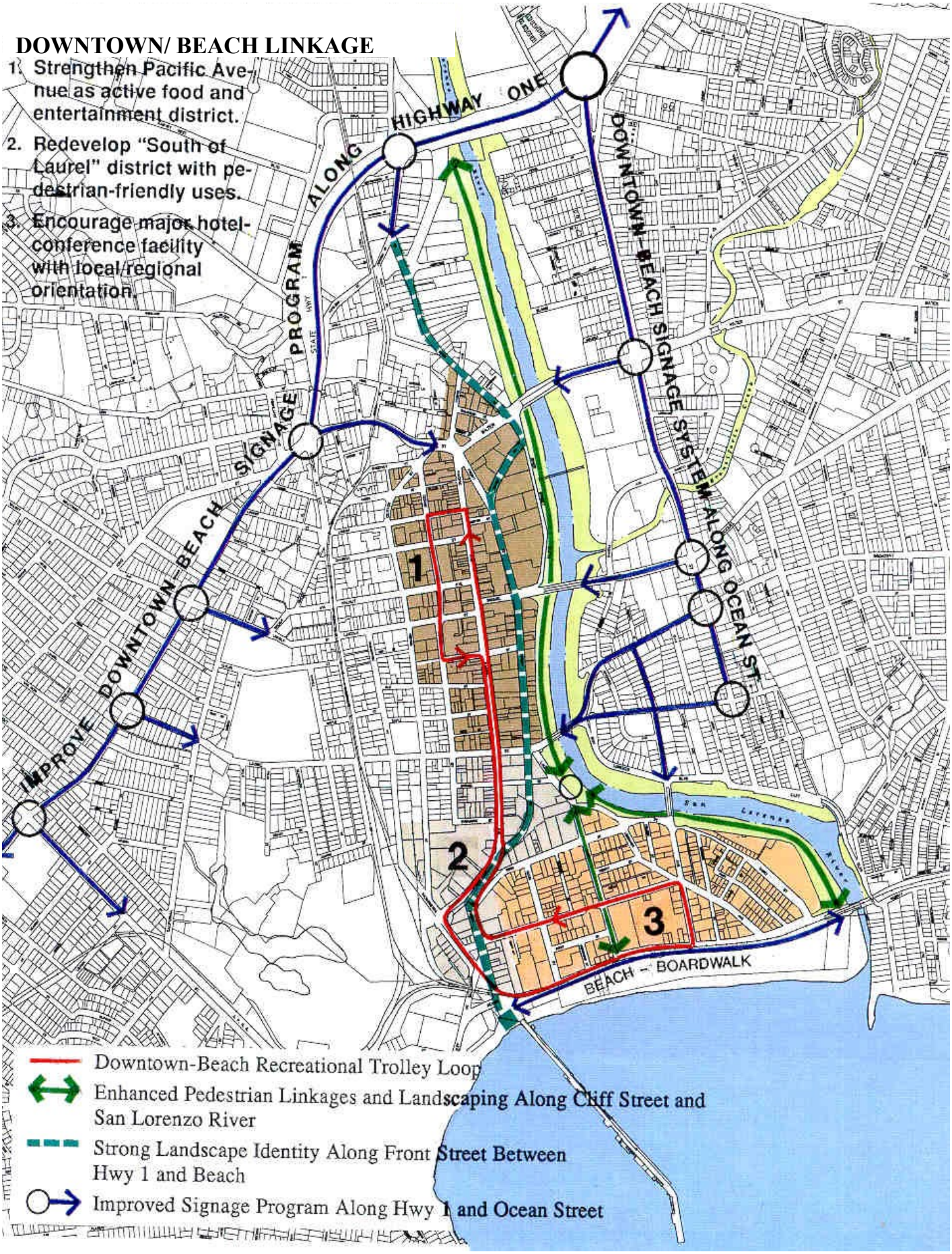
Pacific Avenue, as it extends southward through the South of Laurel area, should also be enhanced as a strong pedestrian connection; the same landscape treatment as proposed for the downtown portions of Pacific Avenue should be extended to the Front Street intersection, to signal the entry to the downtown area and to strengthen Pacific Avenue as the central spine of the area; ground-level activities along Pacific Avenue should be public and pedestrian oriented. The pedestrian environment between the Pacific-Front intersection and the wharf should also be enhanced, with consistent street trees and generous sidewalk area for promenading. This linkage could be part of a larger visual system along Front Street, directing traffic and pedestrians to the beach. The use of palms along Front Street would be evocative of the beach, creating a strong visual route and an attractive edge to the downtown district.

Cedar and Center Streets should also be maintained as pedestrian linkages between the West End neighborhoods of downtown and the Beach.

Giving the Visitor a Stronger Sense of Orientation

Vehicular and pedestrian access to the beach and downtown can be achieved in a multiplicity of ways. A strong system of signage should be established to better orient the motorist and the pedestrian arriving in the city or moving about it. A consistent and visually coordinated system of signs incorporating strong graphic symbols for the beach and the downtown will give the visitor a better geographical orientation and increase the likelihood of joint visitation. While beach traffic need not be routed through the downtown, the motorist can be given a clear idea of where the downtown is and how to get to it when the beach experience is completed.

Even more effective than signage is the preservation and enhancement of views to the downtown from key entry points (e.g., from River and Front Streets to Pacific Avenue or from the Broadway Bridge north to the downtown). The creation of a more intensive downtown core with the potential for some additional height will offer a stronger visual sense of the downtown; glimpses of activities along Pacific Avenue (e.g., from Mission and Water Streets at the Town Clock) will also give the passing motorist a quick and effective visual picture of the downtown and its attractions.


DOWNTOWN/ BEACH LINKAGE
1. Strengthen Pacific Avenue as active food and entertainment district.
2. Redevelop "South of Laurel" district with pedestrian-friendly uses.
3. Encourage major hotel-conference facility with local/regional orientation.
HIGHWAY ONE
IMPROVE DOWNTOWN-BEACH SIGNAGE PROGRAM ALONG
DOWNTOWN-BEACH SIGNAGE SYSTEM ALONG OCEAN ST.
1
2
3
BEACH – BOARDWALK
Downtown-Beach Recreational Trolley Loop
Enhanced Pedestrian Linkages and Landscaping Along Cliff Street and San Lorenzo River
Strong Landscape Identity Along Front Street Between Hwy 1 and Beach
Improved Signage Program Along Hwy 1 and Ocean Street

Appendix 3: Sign Regulations

Sign Regulations have been moved to Chapter 24 of the Zoning Ordinance.

This Appendix has not been modified from its adoption to the Downtown Recovery Plan on September 26, 2000.

Appendix 4: Downtown Retail Strategic Plan

RESOLUTION NO. NS-25,084

RESOLUTION OF THE CITY COUNCIL OF THE CITY OF SANTA CRUZ
ADOPTING THE
DOWNTOWN RETAIL STRATEGIC PLAN
ATTACHED AS EXHIBIT A TO THIS RESOLUTION,
AND DIRECTING CITY STAFF TO PREPARE AN IMPLEMENTATION PROGRAM FOR THE STRATEGIC PLAN
WHICH WOULD BE PRESENTED TO THE CITY COUNCIL
FOR THEIR CONSIDERATION FOR ADOPTION
AS PART OF A COMPREHENSIVE REVITALIZATION EFFORT
FOR THE DOWNTOWN.

WHEREAS, in the wake of the October 1989 Loma Prieta earthquake which virtually decimated the City's Central Business District, the City of Santa Cruz, pursuant to a lengthy and inclusionary public participatory process, developed a Downtown Recovery Plan, the purpose of which was to provide a coherent framework for public and private actions related to the rebuilding of downtown Santa Cruz in the wake of the earthquake and to establish policies, standards and guidelines to direct the recovery process toward the rebuilding of a downtown that would meet multiple community objectives. The Plan was adopted in September 1991 and later amended in April 1993; and

WHEREAS, the "community vision" for the Central Business District (CBD), as articulated in the Downtown Recovery Plan, was a vibrant, vital and active CBD which would constitute the primary retail, commercial, professional and employment center for the City of Santa Cruz and would be developed as a high density area which was the home to "unique" businesses offering residents and visitors a diverse, authentic and welcoming environment for commercial, cultural, civic and social activities. As envisioned, these community-based objectives would be advanced by a blend of smaller, medium and larger-sized businesses and by a blend and balance of local, regional and national businesses in the CBD; and

WHEREAS, over the past ten years the CBD has developed incrementally and is currently a healthy, attractive and pleasant mixed use neighborhood that functions well as: A place of entertainment and culture; a local government center; a ceremonial gathering place; a daytime employment center; and a casual or informal gathering place. The Downtown reflects a scale and density, and features streetscape amenities that are pedestrian-friendly, while accommodating vehicular and bicycle parking, and providing a diverse set of shopping/entertainment and public gathering experiences. The Downtown is remarkable for reflecting a unique "Santa Cruz" style or "authenticity"—featuring many independent retailers and unique goods and services. The Downtown has a very strong base from which to further energize the district and enable it to fulfill the vision and goals of the Recovery Plan; and

WHEREAS, the Downtown does experience "leakage" of income to other commercial areas of the City and County whereby residents of the City and workers of the Downtown cannot find the goods and services they desire in the Downtown District and seek out these goods and services elsewhere in the County or travel to Santa Clara County for their shopping needs; and

WHEREAS, the Downtown could benefit from the introduction of specific types of retailers to provide the critical mass needed for the Downtown to become a successful and stable shopping destination and to "round out" or balance the visitor's, resident's and worker's shopping experience and fulfill some of their unmet shopping needs, thereby reducing the loss of tax dollars and other income to Downtown merchants ("economic leakage") and reducing congestion and concomitant air quality and quality of life degradation associated with this travel outside of the City for shopping needs; and

WHEREAS, additional building and streetscape design standards are needed to insure an attractive physical environment to house those activities and to avoid some unintended consequences of the current regulations; and

WHEREAS, the Downtown could benefit from additional market rate housing, both rental and ownership, to create a "24-hour" downtown, further supporting the retail sector and housing some Downtown workers, thereby reducing commute traffic and parking congestion; and

WHEREAS, the Downtown could benefit from a new, comprehensive revitalization strategy, called the Downtown Retail Strategic Plan, attached as Exhibit A to this Resolution, which would include four symbiotic elements: (1) Regulation, (2) Incentives for targeted business establishments, (3) Proactive Recruitment and (4) On-going Marketing and Maintenance; and

WHEREAS, the Regulation strategy of this Retail Strategic Plan includes a variety of zoning tools including: (1) identifying principal permitted uses, discretionary or conditional uses, limited or controlled uses and prohibited uses; (2) establishing special use review procedures and criteria for large-space ground floor retail establishments; (3) establishing "good neighbor" operating procedures for certain uses; (4) establishing building height and scale limits, setbacks, and architectural design and treatment standards; (5) establishing streetscape design treatments as standards and guidelines, including landscaping, lighting, signage, displays, and sidewalk furniture and which are included within a companion set of Zoning Ordinance amendments identified as Ordinance No. 2000-20; and

WHEREAS, an Incentive strategy of the Downtown Retail Strategic Plan includes a variety of zoning tools and City interdepartmental coordination strategies and financing which would be pursued; and

WHEREAS, The Strategic Plan recommends an aggressive, proactive Recruitment program to identify specific types of retail establishments that would contribute to an effective, efficient, balanced and authentic shopping district for residents, workers and visitors; and actively recruit such establishments to locate within the District; and

WHEREAS, the Strategic Plan recommends an on-going Marketing and Maintenance program for the District; and

WHEREAS, the Planning Commission on August 10, 2000 recommended to the City Council adoption of the Downtown Retail Strategic Plan as well as the proposed amendments to the Zoning Ordinance; and

WHEREAS, in making these recommendations, the Planning Commission found the proposed Zoning text and map amendments and Strategic Plan to be consistent with the findings of the 1991 Final Environmental Impact Report (FEIR) on the Downtown Recovery Plan and with Section 15168 of the California Environmental Quality Act and determined that these actions would more effectively translate the FEIR-stated mitigation measures into more specific implementation measures; and

WHEREAS, in light of the foregoing considerations, the City Council has determined that the public necessity and general welfare and good zoning practice shall be served and furthered and the welfare of the City's residential and business community, as articulated by the principles upon which the Downtown Recovery Plan is premised, will be well-served and advanced by endorsing the Downtown Retail Strategic Plan and by directing staff to prepare an implementation program for the Downtown Retail Strategic Plan for Council's consideration for adoption; and

WHEREAS, the City Council has determined that the actions set forth in the proposed Downtown Retail Strategic Plan and any associated Downtown Recovery Plan or Zoning Ordinance amendments, do not alter the scope of development anticipated in the July 1991 Downtown Recovery Plan, will not foreseeably serve to alter impacts of that development which were fully analyzed in the Downtown Recovery Plan Program Environmental Impact Report certified by the City Council in July 1991, and the initial environmental analysis of the Strategic Plan and its findings of no significant impact is consistent with Section 15168 of the California Environmental Quality Act; and

WHEREAS, the Council has determined that the regulations in the proposed zoning amendments and the implementing actions of the Strategic Plan do not substantially change the Downtown Recovery Plan project and there have been no substantial changes in the environmental circumstances under which the Downtown Recovery Plan was adopted and which the Downtown Recovery Plan Program Environmental Impact Report analyzed that would require further environmental review for the regulations set forth in the proposed ordinance; and

WHEREAS, there is no new information of substantial importance which was not known, or could not have been known, as of the time the Downtown Recovery Plan Program Environmental Impact Report was certified that would require further environmental review for the regulations set forth in the proposed ordinance. Accordingly, no further environmental review over and above the review which was conducted in the certified Downtown Recovery Plan Program Environmental Impact Report is required as a prerequisite to endorsement of the Downtown Retail Strategic Plan.

NOW, THEREFORE, BE IT RESOLVED by the City Council of the City of Santa Cruz that the City Council hereby adopts the Downtown Retail Strategic Plan, attached as Exhibit A to this Resolution, and directs City staff to prepare an implementation program for the Downtown Retail Strategic Plan which would be presented to Council for consideration for adoption as part of a comprehensive revitalization effort for the Downtown.

PASSED AND ADOPTED this 26th day of September, 2000 by the following vote:

AYES: Councilmembers: Fitzmaurice, Beiers, Rotkin, Hernandez, Mathews, Krohn; Mayor Sugar.

NOES: Councilmembers:

ABSENT: Councilmembers:

DISQUALIFIED: Councilmembers:

APPROVED_____
Mayor

ATTEST:_____
City Clerk

Attachment A to City Council Resolution No. NS-25,084

Resolution of the City Council of the City of Santa Cruz adopting this Downtown Retail Strategic Plan and directing City staff to prepare an implementation management and monitoring program for the Strategic Plan which would be presented to the City Council for their consideration for adoption and funding as part of a comprehensive revitalization effort of the Downtown.

Santa Cruz Downtown Retail Strategic Plan

September 2000

INTRODUCTION

The City of Santa Cruz's downtown area was severely damage by the 1989 Loma Prieta earthquake. Following the earthquake, the City undertook a comprehensive "visioning" planning process involving numerous meetings of various stakeholders of the downtown. The results of this visioning planning process culminated in the development of a comprehensive program to rebuild and revitalize the downtown. It has been 9 years since the adoption of the Downtown Recovery Plan and the beginning of this redevelopment process and the City Council feels it is time to reassess the strategies presented in the Downtown Recovery Plan (DRP) to see how well they have done and what amendments, if any, may be needed to respond to current market trends and community values. One of the current concerns is the type and size of retail activity that has located, is locating, or should locate at the ground floor level of the downtown. This study focuses on the downtown retail activity and creates an updated retail strategy intended to strengthen the pedestrian-friendly environment therein.

The reassessment of the DRP is designed to reaffirm the community vision of the downtown as a vibrant, vital and active Central Business District (CBD), constituting the primary retail, professional and employment center for the City of Santa Cruz as well as its central gathering place and entertainment/cultural center. In addition, this process is intended to confirm existing strategies or create new ones to ensure the downtown's vitality.



Initial evaluation of downtown Santa Cruz indicates that the downtown is a healthy, attractive and pleasant mixed-use neighborhood that functions well as a place of entertainment and culture, a local government center, a gathering place, a daytime employment center, and a retail destination for residents, workers and visitors. The downtown reflects an appropriate scale and density, and features streetscape amenities that are pedestrian-friendly, accommodates adequate vehicular and bicycle parking, and provides diverse shopping, entertainment and public spaces. One of the challenges of the district is to create a "24 hour" neighborhood with more housing and more destination retail uses to create the kind of weekday and evening and weekend foot traffic needed to sustain local retailers.

Most importantly, the downtown is remarkable for reflecting a unique authenticity, a "Santa Cruz style", featuring many independent retailers and unique goods and services. The downtown has a very strong base from which to further energize the district and enable it to fulfill the community's goals and visions for the downtown.

If downtown Santa Cruz is to capitalize on its assets and address its challenges, the community must take strategic actions. Santa Cruz residents, downtown business leaders, elected officials, city representatives and community workers have worked together to produce a preliminary strategy for achieving the goal of a vital, diverse and unique downtown. This strategy for downtown includes design standards, regulations for retail uses, incentives to attract targeted businesses to the downtown and district-wide marketing and management strategies.

PLANNING PROCESS

In January 2000, the City Council asked the Planning Department and Redevelopment Agency to undertake a Downtown Assessment to evaluate the status of retail activity in the downtown and review the effectiveness of the 1991 Downtown Recovery Plan's development standards and guidelines that have shaped the downtown for nearly ten years. The result of the Downtown Assessment is a recommended strategic plan for downtown retail activity.

This strategic plan was developed through a process of public forums and City Council work sessions, community and market surveys, and extensive research by City staff of strategies other similar-size cities have adopted. Steps in the planning process include:

- Urban design/physical assessment of the downtown Central Business District
- Retail development assessment
- Community surveys
- Two Council work sessions
- Downtown Symposium with retail and downtown revitalization experts
- Land use focus group
- Survey of comparable cities strategies for revitalization

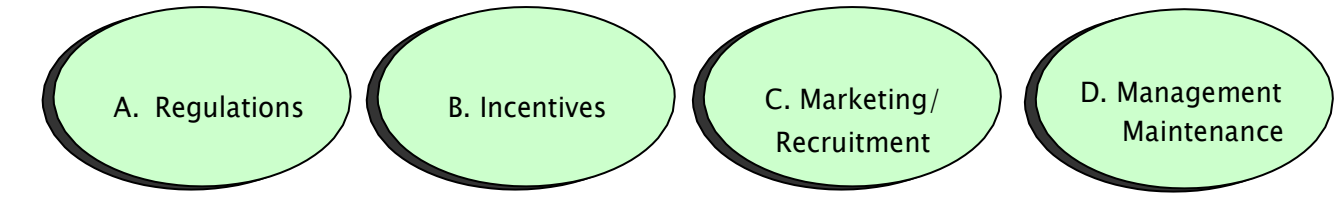
As a result of this planning process, several dominant themes for downtown Santa Cruz have emerged. Citizens of Santa Cruz have identified a vibrant, vital and active downtown with a strong and diverse retail presence and a unique "identity" as a priority for the City. Downtown Santa Cruz should include a mix of uses, including local, independent retail businesses that serve residents, workers and visitors to the district.

Additionally, a primary goal for the downtown is to create and maintain a unique sense of place, and to ensure that the downtown is a destination point for people to enjoy retail, entertainment and public uses. A vision for a successful downtown includes the following goals:

- Maintain Authenticity/ Uniqueness/ Vitality
- Create a Welcoming Sense of Place
- Strengthen Economic Health and Vitality
- Retail Local Control
- Create an Inclusive Environment
- Maintain Legal Defensibility and Equity with the Ability to Implement the Strategies

STRATEGY FRAMEWORK

Each strategy for creating a strong retail environment has been organized and included in a Strategy Framework. The Strategy Framework identifies the strategic tasks, which will be most instrumental in achieving the goals and vision for the downtown. These categories provide a structure for addressing issues and catalyzing implementation of the strategies for downtown Santa Cruz. (These overarching strategies are described as specific actions in the Strategic Action Table)



Land use regulations that focus on guiding the market toward providing the appropriate mix of retail uses to create and maintain a dynamic, authentic and multi-use neighborhood.

An array of business incentives to attract and retain the type of tenants and activities necessary to achieve a diverse, healthy retail balance for downtown Santa Cruz.

Guidance and funding for an aggressive and proactive recruitment of the specifically identified tenant types needed to sustain

A management and maintenance program to establish downtown Santa Cruz as a regional retail destination and to create a sense of place.

These strategies implemented in conjunction with each other can be used to create a proactive, four-pronged approach to downtown revitalization that will help achieve the goals and visions for the downtown and ensure continued vitality while maintaining its authenticity.

SANTA CRUZ DOWTOWN RETAIL STRATEGIC ACTION TASKS

Regulation

Goal: Establish land use regulations for uses in downtown Santa Cruz (Central Business District—CBD) to ensure that the uses allowed contribute to a vital, diverse and unique downtown that reflects the retail preferences of the CBD residents, workers, and visitors and the citizens of Santa Cruz.

	Strategy/Action	Time Frame Short = < 1 yr. Med = 1 – 3 yrs. Long = > 3 yrs.	Potential Funding Sources
A1.	Require a Special Use Permit (SUP) for all ground floor uses over 16,000 SF.	S	Development fees
A2.	Prohibit specific uses not desired in the downtown.	S	City
A3.	Create a guideline for the balance between local, independent and national, regional stores in the downtown; this guideline to be used to measure the appropriateness of allowing ground floor uses of over 16,000 square feet during the SUP review process.	S	City
A4.	Control the behavior of nightclubs and fast food establishments by requiring "good neighbor" operating procedures.	S	City
A4-1.	Require all national and regional stores, which utilize "trademarked" architecture to meet the downtown design standards.	S	Development fees
A4-2.	Ensure that the design for the exterior of the store and the signage are in conformance with established design criteria.	S	City, Development fees
A4-3.	Encourage new store management to actively participate in programs and policies established for the downtown.	S	City, Development fees
A5.	Require Design Permits for major façade improvements.	S	Development fees
A5-1.	Revise the current ordinance requiring a Design Permit for façade improvements over $50,000 to require a Design Permit for improvements over $10,000.	S	City
A5-2.	Convert certain storefront and building façade Design Guidelines to Design Standards, and create new ones, to assist in achieving higher quality design.	S	City
A5-3.	Ensure that there is code enforcement for non-	S, Ongoing	City

Strategy/Action	Time Frame Short = < 1 yr. Med = 1 – 3 yrs. Long = > 3 yrs.	Potential Funding Sources
conforming storefronts and façades.		
A6. Evaluate fees to reflect relative contributions to maintenance of infrastructure and amenities for new housing, retail and office uses.	M	City
A6-1. Prepare a "nexus" study to determine the demand for housing and impact on existing housing generated by new office development in the CBD.	M	City
A7. Provide permitting assistance upon submittal of a ground floor retail tenancy plan for new buildings.	M	City, private funds

B. Incentives

Goal: Utilize a range of incentives to entice desired uses to locate and remain in downtown Santa Cruz.

Strategy/Action	Time Frame Short = < 1 yr. Med = 1 – 3 yrs. Long = > 3 yrs.	Potential Funding Sources
B1. Develop a list of targeted uses and specific business types for recruitment into the downtown, based on economic and market data.	S	City
B2. Provide assistance in parking district fees for targeted establishments for a period of up to three years.	M	RDA
B3. Provide storefront and façade grants to targeted new existing establishments.	M	RDA
B4. Provide low interest loans for façade improvements to targeted new establishments.	M	RDA, private financial institutions
B5. Provide marketing, retailing and businesses assistance to existing retail establishments and desired new retail uses.	M	RDA, private funds
B6. Provide permitting assistance for targeted businesses locating within CBD.	S	City

C. Targeted Marketing and Recruitment

Goal: Create a welcoming, attractive and diverse downtown environment which attracts quality local retail, dining and entertainment uses and establishes the downtown as a unique destination point for Santa Cruz residents, workers and visitors.

Strategy/Action		**Time Frame** Short = < 1 yr. Med = 1 – 3 yrs. Long = > 3 yrs.	**Potential Funding Sources**
C1.	Adopt a mission statement for the downtown retail, dining and entertainment recruitment/ retention programs.	S	N/A
C2-1.	Confirm a palette of desired retail uses for the downtown to create the appropriate "critical mass" that will establish the downtown as a retail and entertainment destination.	S	N/A
C2-2.	Conduct a search within the City and the County to identify potential types of retailers that would provide quality merchandising while maintaining the unique character of downtown.	Ongoing	RDA, Private funds
C2-3.	Work with local property/building owners to match potential retail uses with available spaces in the CBD.	Ongoing	RDA
C2-4.	Establish an outreach team of local officials, merchants and community members working with the brokerage community to entice prospective retailers to consider locating in downtown Santa Cruz.	S	N/A
C3.	Create a "brand" or identifying logo/visual image and character statement for the downtown, and use it to advertise and promote the downtown as a destination point.	S/M	Private funds

D. Promotion and Management

Goal: Establish downtown as a well-identified and well-known district and a unique destination point and maintain the district's amenities through coordinated management practices and regular maintenance of infrastructure.

Strategy/Action		Time Frame Short = < 1 yr. Med = 1 – 3 yrs. Long = > 3 yrs.	**Potential Funding Sources**
D1.	Create an enhanced signage program to identify where the downtown is located, and how to get there, from various key entry points to the City and from other destinations within the City (such as the Beach).	M	City, RDA
D2.	Establish a visual identity for the downtown with gateway designators and banners.	S/M	RDA, City, private funds
D3.	Create additional signage at the entries to the city that give direction of downtown and downtown parking resources.	S/M	RDA, City, private funds
D4.	Enhance the public and private landscape quality within the downtown.	S/M	RDA, City, private funds
D5.	Enhance maintenance in the downtown; invest in infrastructure.	S/M	RDA, City, private funds
D6.	Coordinate common advertising and promotional fliers.	S	RDA, City, private funds
D7.	Coordinate promotional events with the opening of the new garage.	S	City, private funds
D8.	Promote additional events within the downtown.	Ongoing	City, private funds

Appendix 5: Floor Area Ratio

This Appendix has been deleted due to the Floor Area Ratio being incorporated into the Regional Visitor Commercial land use designation of the General Plan 2030.

Appendix 6: Additional Height Zone C

This Appendix has been deleted because the Additional Height Zone C is now part of the Additional Height Zone A.

Appendix 7: Live Entertainment

This Appendix has been deleted because the Live Entertainment regulations are located in the Zoning Code and other references to allowed downtown uses are located in the beginning of Chapter 4 of this Downtown Plan

Received
CLERK OF THE BOARD
MAR 1 3 2023
BOARD OF SUPERVISORS
COUNTY OF SANTA CRUZ

CITY OF SANTA CRUZ

Notice of Exemption

To: ☑ Clerk of the Board
County of Santa Cruz
Governmental Center
701 Ocean Street
Santa Cruz, CA 95060

☐ Office of Planning and Research
1400 Tenth Street, Room 121
Sacramento, CA 95814

From: City of Santa Cruz, Planning and Community Development Department
809 Center Street, Room 101, Santa Cruz, CA 95060

Project Title: Downtown Library and Affordable Housing Project

Project Address: 113 and 119 Lincoln Street

Assessor's Parcel No.: 005-141-11 and 005-141-21

Project Location: City of: Santa Cruz – see Figure 1. **County of:** Santa Cruz

Project Description: The project consists of a Nonresidential Demolition Authorization Permit, Special Use Permit, Design Permit, Lot-Line Adjustment, Sign Permit, and Heritage Tree Removal Permit to demolish one existing commercial building and surface parking lot and construct the Downtown Library and Affordable Housing Project (DLAHP). The project uses include a new, approximately 38,000-square-foot public library, 124 affordable housing units, a parking garage with up to 336 parking spaces, approximately 10,000 square feet of ground-floor commercial tenant space, an approximately 1,500-square-foot commercial childcare facility, and associated site improvements. The project uses would be integrated within a new 273,194-square-foot building, which would range in height from three to eight stories at 50 to 84 feet tall, respectively. The lot-line adjustment would merge the two existing site parcels into one lot. The project also includes a density bonus request as permitted pursuant to state and local regulations with one requested waiver and one incentive/concession to development standards.

Name of Person or Agency Carrying Out Project: City of Santa Cruz in partnership with For The Future Housing, Inc. and Eden Housing

Name of Public Agency Approving Project: City of Santa Cruz

Exempt Status: (check one)

_____ Ministerial Project (Section 21080(b)(1); 15268).

__✓__ Statutory Exemption (Code/Section 21083.3).

__✓__ Categorically Exempt (Section 15305 and Section 15332).

_____ Declared Emergency (Section 21080(b)(3); 15269(a)).

_____ Emergency Project (Section 21080(b)(4); 15269(b)(c)).

_____ The project clearly will not have a significant effect on the environment (15061(b)(3)).

Reasons why project is exempt: The project has been determined to be exempt from the California Environmental Quality Act (CEQA) under a Statutory Exemption pursuant to Public Resources Code Section 21083.3 and State CEQA Guidelines Section 15183 (Projects Consistent with General Plan, Community Plan or Zoning) and pursuant to CEQA Guidelines Sections 15305 (Categorical Exemption, Class 5, Minor Alterations in Land Use Limitations) and 15332 (Categorical Exemption, Class 32, In-fill Development Projects) as explained below.

Statutory Exemption – Public Resources Code Section 21083.3. CEQA allows a lead agency to avoid repeating analyses that were already provided in a certified General Plan EIR for a development project that is consistent with the General Plan. Public Resources Code section 21083.3 and its parallel CEQA Guidelines provision, section 15183, provide for streamlined environmental review or exemption for projects consistent with the General Plan for which an EIR was certified. Pursuant to section 21083.3, subdivision (b), if a development project is consistent with the general plan for which an environmental impact report was certified, the application of CEQA shall be limited to effects on the environment which are "peculiar to the parcel or to the project" and which were not addressed as significant effects in the prior environmental impact report, or which substantial new information shows will be more significant than described in the prior environmental impact report. Subdivision (d) further indicates that an effect of a project upon the environment shall not be considered "peculiar to the parcel or to the project," "if uniformly applied development policies or standards" have been previously adopted by the city or county, with a finding based upon substantial evidence, that the development policies or standards will substantially mitigate that environmental effect when applied to future projects, unless substantial new information shows that the policies or standards would not substantially mitigate the environmental effect. CEQA Guidelines section 15183, subdivision (f), adds that "[w]here a city or county, in previously adopting uniformly applied development policies or standards for imposition on future projects, failed to make a finding as to whether such policies or standards would substantially mitigate the effects of future projects, the decision-making body of the city or county, prior to approving such a future project pursuant to this section, may hold a public hearing for the purpose of considering whether, as applied to the project, such standards or policies would substantially mitigate the effects of the project."

Under these provisions of CEQA, a project that is consistent with a General Plan that was adopted pursuant to a certified EIR, could be potentially partially or wholly exempt from CEQA.

Section 15183 of the State CEQA Guidelines provides further guidance related to Public Resources Code section 21083. Specifically, if a project is consistent with an agency's General Plan for which an EIR has been certified, the agency shall limit its examination of environmental effects to those which the agency determines, in an initial study or other analysis:

(1) Are peculiar to the project or the parcel on which the project would be located,

(2) Were not analyzed as significant effects in a prior EIR on the zoning action, general plan, or community plan, with which the project is consistent,

(3) Are potentially significant off-site impacts and cumulative impacts which were not discussed in the prior EIR prepared for the general plan, community plan or zoning action, or

(4) Are previously identified significant effects which, as a result of substantial new information which was not known at the time the EIR was certified, are determined to

have a more severe adverse impact than discussed in the prior EIR. (State CEQA Guidelines section 15183(b).)

CEQA Guidelines section 15183, subdivision (c) further provides that "if an impact is not peculiar to the parcel or to the project, has been addressed as a significant effect in the prior EIR, or can be substantially mitigated by the imposition of uniformly applied development policies or standards,..., then an additional EIR need not be prepared for the project solely on the basis of that impact."

On June 26, 2012, the Santa Cruz City Council adopted the *General Plan 2030* after certifying an EIR for the plan. The General Plan 2030 EIR (April 2012) includes the Draft EIR volume (September 2011) and the Final EIR volume (April 2012). The General Plan EIR reviewed all of the topics included on the Appendix G Environmental Checklist in the State CEQA Guidelines. In addition the project is located within the *Downtown Plan* area, which was adopted as a specific plan (pursuant to California Government Code requirements) to implement General Plan policies in the downtown area. The Santa Cruz City Council approved amendments to the *Downtown Plan* in November 2017 after certifying an EIR for the Plan amendments. The certified Downtown Plan Amendments EIR (November 2017) includes the Draft EIR volume (July 2017) and the Final EIR volume (October 2017). Impacts arising from future development with the downtown area, potentially occurring as a result of amendments to the *Downtown Plan*, were addressed in this EIR, including aesthetics, air quality and greenhouse gas emissions, biological resources, cultural and tribal cultural resources, hydrology and water quality, public services, transportation and traffic, water and wastewater utilities, land use, and cumulative impacts.

As indicated above, pursuant to Public Resources Code section 21083.3, certain (or potentially all) aspects of a development project that are consistent with a General Plan for which an EIR was certified may be exempt from additional CEQA analyses (i.e., negative declaration, mitigated negative declaration, or EIR) of issues that were adequately covered in the General Plan EIR. The project site is designated Regional Visitor Commercial (RVC) in the City's *General Plan 2030* and is zoned Central Business District (CBD). Mixed-use development is strongly encouraged in areas designated RVC, and the General Plan further indicates that the *Downtown Plan* provides detailed requirements in the downtown area. The project uses are consistent with the General Plan land use designation and uses identified in the *Downtown Plan*. The General Plan allows a floor area ratio (FAR) for the Regional Visitor Commercial (RVC) land use designation in the downtown area of up to 5.0, and the project's FAR is 4.08, which is within the allowed FAR established in the General Plan as amended in 2017. Thus, the project uses are consistent with the General Plan 2030 for which an EIR was prepared and certified in June 2012, and meets the provisions of CEQA section 21083.3(b) with regards to project consistency with the City's adopted General Plan.

While the General Plan 2030 EIR and Downtown Plan Amendments EIR considered the impacts of repurposing, intensifying, and redeveloping existing developed parcels in the City as a whole, specific future development of the project site was not noted or specifically evaluated in the General Plan 2030 EIR, and there were no site-specific impacts identified for the project site. However, as part of the overall estimated buildout, the EIR considered construction of new housing units and non-residential uses in the City with an estimated buildout of 3,350 new residential units and approximately 1,090,000 and 1,274,000 square feet of commercial and office uses, respectively, uses throughout the City by the year 2030. Since adoption of the General Plan, approximately 2,390 residential units and 436,950 and 41,315 square feet of commercial and office space, respectively, have been constructed or approved throughout the City. Thus, the project's 124 affordable residential units and 46,050 square feet of non-residential uses would be within the

remaining residential and non-residential development estimates considered in the city-wide General Plan EIR impact analyses.

Potential future development in the downtown area considered in the General Plan 2030 EIR and Downtown Plan Amendments EIR analyses was estimated at approximately 1,350 housing units and approximately 205,050 square feet of non-residential commercial and office space. Since adoption of the *General Plan 2030*, approximately 1,200 residential units have been constructed or approved in the downtown area and would total 1,324 units with the project, which is slightly below the total number of residential units considered for development (1,347 units) in the General Plan 2030 and Downtown Plan Amendments EIRs. Additionally, with the project, constructed and approved non-residential development would result in a net increase of approximately 46,050 square feet, which is within development estimates analyzed in the General Plan and Downtown Plan Amendments EIRs.

Specific future development of the project site was not noted in the General Plan 2030 EIR or Downtown Plan Amendments EIR, and there were no site-specific impacts identified for the project site, although a new library at the project site was considered in the cumulative impact analyses in the Downtown Plan Amendments EIR. However, as indicated above, the project's residential and non-residential uses would be within the remaining residential and non-residential development estimates considered in the city-wide General Plan 2030 EIR impact analyses.

An "Environmental Checklist Review" was prepared and is on file with the City of Santa Cruz Planning and Community Development Department. The purpose of the checklist was to evaluate the impact categories covered in the City's certified General Plan 2030 EIR and Downtown Plan Amendments EIR to determine whether the project's impacts have been adequately analyzed in that EIR or whether any new significant impacts peculiar to the project or project site would result. Where an impact resulting from the project was adequately analyzed previously, the review provides a cross-reference to the pages in the General Plan and Downtown Plan Amendments EIRs where information and analysis may be found relative to the environmental issue listed under each topic. The Environmental Checklist also identifies whether the project involves new significant impacts or substantially more severe impacts than analyzed in the General Plan 2030 EIR and Downtown Plan Amendments EIR or new significant impacts not peculiar to the site or project. As indicated above, an impact would not be considered "peculiar" to the project or project site if uniformly applied development policies or standards will substantially mitigate an environmental effect. Therefore, the review includes mitigation measures identified in the General Plan EIR that would be applicable to the site or project and/or relevant uniformly applicable development policies or standards that will be applied to the project.

Based on this following review, it has been determined that the City's General Plan 2030 EIR has adequately addressed the following issues, and no further environmental review is required pursuant to Public Resources Code section 21083.3: aesthetics (scenic views, scenic resources, visual character); agricultural and forest resources; air quality (conflicts with Air Quality Management Plan, project emissions, sensitive receptors, odors); biological resources (special status species, riparian, wetland or other sensitive habitat, conflicts with plans); cultural resources (historical resources); energy; greenhouse gas emissions (conflict with plans); hazards/hazardous materials (use/disposal of hazardous materials, create hazard, airport safety, emergency response, wildfire hazards); hydrology-water quality (groundwater, flood risk, conflicts with plans); land use; mineral resources; noise and vibration; population and housing; public services; recreation;

transportation (conflicts with program, policy, design, emergency access); utilities (infrastructure, wastewater treatment, solid waste disposal); and wildfire.

The following site-specific impacts have been analyzed and determined to be less than significant due to substantial mitigation resulting from General Plan policies, zoning regulations and/or development standards that are uniformly applied to development projects throughout the City: aesthetics (light and glare); biological resources (nesting birds, conflicts with local tree ordinance); cultural resources (archaeological resources, human burials); geology and soils (seismic, geologic hazards, erosion, soils, paleontological resources); greenhouse gas emissions; hazards/hazardous materials (exposure to hazardous materials); hydrology/water quality (drainage and water quality); transportation (conflict with CEQA Guidelines); tribal cultural resources; utilities (water supply); and cumulative impacts. Thus, pursuant to Public Resources Code section 21083.3 and State CEQA Guidelines section 15183, no further environmental analysis is required.

For reasons explained in the Environmental Checklist Review prepared for the project, the Planning Commission and City Council agreed with City staff's conclusion that the Project is wholly exempt from CEQA under section 21083.3 and CEQA Guidelines section 15183. The Environmental Checklist Review explained why the project does not create any impacts that are peculiar to the project or parcel. The document identifies numerous impacts that were sufficiently addressed in the General Plan 2030 EIR and Downtown Plan Amendments EIR. The remaining impacts can be substantially mitigated by the uniformly applied development policies and standards identified in the Checklist. The Planning Commission found that these policies and standards, as applied to the project, were effective in substantially mitigating these impacts.

Thus, pursuant to Public Resources Code section 21083.3 and State CEQA Guidelines section 15183, no further environmental analysis is required.

Categorial Exemption - CEQA Guidelines Sections 15305 and 15332. CEQA provides several "categorical exemptions" which are applicable to categories of projects and activities that the Natural Resource Agency has determined generally do not pose a risk of significant impacts on the environment.

The Class 5 categorical exemption is for "minor alterations in land use limitations." Examples provided include minor lot line adjustments, side yard and setback variances, not resulting in the creation of any new parcel. The project includes a lot line adjustment to merge two existing site parcels into one lot. The lot line adjustment would not create a new parcel, but would result in one parcel instead of the two parcels that already exist. Furthermore, the project site is relatively flat with average slopes substantially less than 20% and would not result in any changes in land use or density, consistent with the requirements for this categorical exemption class.

The Class 32 categorical exemption is for "in-fill development" projects that meet the following criteria:

(a) The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations;

(b) The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses;

(c) The project site has no value as habitat for endangered, rare or threatened species;

(d) Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality; and

(e) The site can be adequately served by all required utilities and public services.

The project meets all of the foregoing criteria to claim the application of the in-fill exemption because, as explained in a Categorical Exemption Review memo and in the Environmental Checklist documenting the project's compliance with the Statutory Exemption under Public Resources Code section 21083.3, the project is consistent with the *General Plan 2030* land use designation and policies. With the exception of building height, City staff review has found the project consistent with zoning designations and regulations. However, one waiver and one incentive/concession regarding building height is requested as part of the density bonus request pursuant to provisions in state law. Therefore, the project is consistent with zoning regulations pursuant to provisions under the State Density Bonus law, which allow for waivers to the City's zoning regulations. Therefore, the project is consistent with the General Plan and zoning pursuant to subdivision (a) of section 15332.

The project site is located within City limits, is currently developed, and is surrounded by existing developed uses that are considered urban uses in the downtown area. The City meets definition of an urbanized area in the CEQA Guidelines as explained in the Categorical Exemption Review memo. The project site is 1.55 acres, which is less than the maximum five acres as required for this exemption under subdivision (b) of section 15332.

The project site is currently developed and surrounded by development. A review of potential special status species on the project site found that none are known and that the project site has no value as habitat for endangered, rare or threatened species under subdivision (c) of section 15332.

The project would not result in significant impacts related to traffic, noise, air quality or water quality, as explained in the Categorial Exemption Review memo, the Environmental Checklist supporting the determination of Statutory Exemption, and supporting technical studies. The project therefore meets the criteria set forth in subdivision (d) of section 15332 as summarized below. The project would not result in significant impacts related to traffic-transportation based on review with the City's adopted Vehicle Miles Traveled (VMT) threshold and Implementation Guidelines because the project location (within one-half mile of a major transit stop) and uses, including 100 percent affordable housing and community facilities, are screened from further review pursuant to City VMT guidelines. No significant impacts related to noise would result from project operations or construction as determined in a noise impact study. Air emissions modeling found that neither project construction nor operation would exceed adopted criteria air pollutant emissions thresholds, and the project would not result in conflicts with the Monterey Bay Air Resources District's adopted *Air Quality Management Plan*. The project is consistent with City regulations and requirements regarding stormwater management for construction and operation, and the project would not result in significant impacts to water quality.

The site can be adequately served by all required utilities and public services, as existing utility infrastructure already serves the project area and is sized sufficiently to serve the project uses, meeting the criteria in subdivision (e) of section 15332.

The City has further considered whether the project is subject to any of the exceptions to the use of a categorical exemption found at CEQA Guidelines Section 15300.2. This section prohibits the use of categorical exemptions under the following circumstances:

(a) for certain classes of categorical exemptions (including Class 5 but not Class 32), due to locations with particularly sensitive environmental conditions;

(b) when the cumulative impact of successive projects of the same type in the same place, over time, is significant;

(c) where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances;

(d) where the project may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway;

(e) where the project is located on a state designated hazardous waste site; and

(f) where the project may cause a substantial adverse change in the significance of a historical resource.

Under CEQA Guidelines Section 15300.2(a), a categorical exemption for Classes 3, 4, 5, 6 and 11 is qualified by consideration of where the project is location – a project that is ordinarily insignificant in its impact on the environment may in a particularly sensitive environment be significant. The consideration includes where the project may impact an environmental resource of "hazardous or critical concern where designated, precisely mapped, and officially adopted pursuant to law by federal, state, or local agencies." Section 15300.2(a) does not apply to the Class 32 category of projects. For purposes of the Class 5 exemption, the project site does not qualify as an environmental resource of hazardous or critical concern. Neither the City's *General Plan 2030* nor the *Downtown Plan*, or any state or federal regulatory document has precisely mapped and officially designated the site as such an environmental resource. Absent such a formal designation, the location exception cannot apply. (See, e.g., *Aptos Residents Assn. v. County of Santa Cruz* (2018) [20] Cal.App.5th 1039, 1052-1053; *Don't Cell Our Parks v. City of San Diego* (2018) [21] Cal.App.5th 338, 362-363.) Moreover, the site is already developed and has already been previously disturbed. Therefore, the Class 5 category of projects as applied to the project is not excluded on the basis of location on a site with particularly sensitive environmental conditions.

As explained in the Categorical Exemption Review memo, there is no evidence of a potential significant cumulative impact (section 15300.2(b)) because successive projects of the same type in the same place have not been approved and are not proposed. Additionally, there is no evidence to conclude that significant impacts would occur based on past project approvals in the surrounding area or that the project's impacts are cumulatively considerable when evaluating any cumulative impacts associated with air quality, noise, transportation or water quality or cumulative impacts evaluated in the General Plan 2030 EIR and Downtown Plan Amendments EIR as a result of other approved projects in the surrounding area. Therefore, this exception does not apply.

The project would not result in any significant effects on the environment due to unusual circumstances (section 15300.2(c)). The project site's immediate area has similar General Plan and zoning designations as the project property. As explained in the Categorical Exemption Review memo, there are no "unusual circumstances" that differentiates the project and project site from the general class of similarly situated projects and project sites. For example, other properties in the surrounding area have developed or could develop a similar mixed-used project, utilizing waivers permitted under the provisions of the state and local density bonus laws.

The project site possesses no unusual features or environmental characteristics that distinguish it from other properties of the same size in the downtown area. There are numerous in-fill development sites in the downtown area that could similarly be redeveloped with a mixed-use project. There are at least six similar mixed-use projects that are currently under construction or approved in the downtown area on in-fill sites, some of which include surface parking lots similar to the project site; four of these projects have applied the in-fill development categorical exemption under CEQA. The size and density of the project do not represent unusual features or circumstances, as numerous other approved projects have similar or greater densities and size.

Additionally, there is no substantial evidence that the project would result in a significant impact based on project reviews and technical studies conducted for the project as reviewed and summarized in the Categorical Exemption Review memo and the Environmental Checklist supporting the determination of Statutory Exemption. The project would result in a building height of 84 feet due to the waiver and incentive/concession required for qualifying projects that include density bonus units. While the project height is greater than other buildings in the immediate vicinity, there are other approved downtown mixed-use projects with similar heights. The additional height allowed by an approved waiver pursuant to the density bonus law would not be considered to conflict with zoning standards, and therefore would not be considered an unusual circumstance.

Furthermore, CEQA (Public Resources Code section 21099) states that aesthetic impacts of a residential, mixed-use residential, or employment center project on an in-fill site within a transit priority area shall not be considered significant impacts on the environment, although design review would still be required pursuant to local City requirements and regulations. The project site is considered an in-fill site and also is located within a transit priority area.

Additionally, there is no substantial evidence that the project would result in a significant impact due to unusual circumstances based on project reviews and technical studies conducted for the project as explained in the Categorical Exemption Review. For these reasons, the project would not result in any significant effects on the environment due to unusual circumstances, and exception (c) does not apply to the project.

The project will not result in damage to scenic resources within a scenic highway (section 15300.2(d)), as the site is not adjacent to or visible from a designated scenic highway. There are no designated state scenic highways within the City, and the project is not adjacent to the highways located in the City. Therefore, the project site is not located within or near a highway officially designated as a state scenic highway and would not result in damage to scenic resources within a state scenic highway. Thus, this exception does not apply to the project.

The site is not a state-designated hazardous waste site, and thus is not subject to the exception set forth in subdivision (e) of section 15300.2.

A historic evaluation performed for the project concluded that the existing building that is proposed for demolition is not listed or eligible for listing in the California Register of Historic Resources (CRHR), the National Register of Historic Places, or the City of Santa Cruz Historic Building Survey. Evaluation of artifacts found during archaeological testing concluded that they do not meet the criteria to be found eligible for listing in the CRHR or requirements under local criteria. Thus, the existing structure on the project site and discovered artifacts are not historical resources under the definition found in CEQA Guidelines section 15064.5, subdivision (a). Therefore, the project,

including demolition of an existing building, would not result in a substantial adverse change to the significance of a historic resource. The project is not subject to the exception set forth in subdivision (f) of section 15300.2.

For all of these reasons, the City is able to document that the project qualifies for the Categorical Exemption found at CEQA Guidelines sections 15305 and 15332 for in-fill development projects and minor alterations in land use limitations, respectively, and that none of the potential exceptions to the use of a categorical exemption, as set forth in CEQA Guidelines section 15300.2, apply to this project or the project site.

Lead Agency
Contact Person: Timothy Maier **Phone:** (831) 420-5129

Department: Planning & Community Development **Address:** 809 Center Street, Room 101
Santa Cruz, CA 95060

Signature: _____ **Date:** 3/14/23

Title: Senior Planner

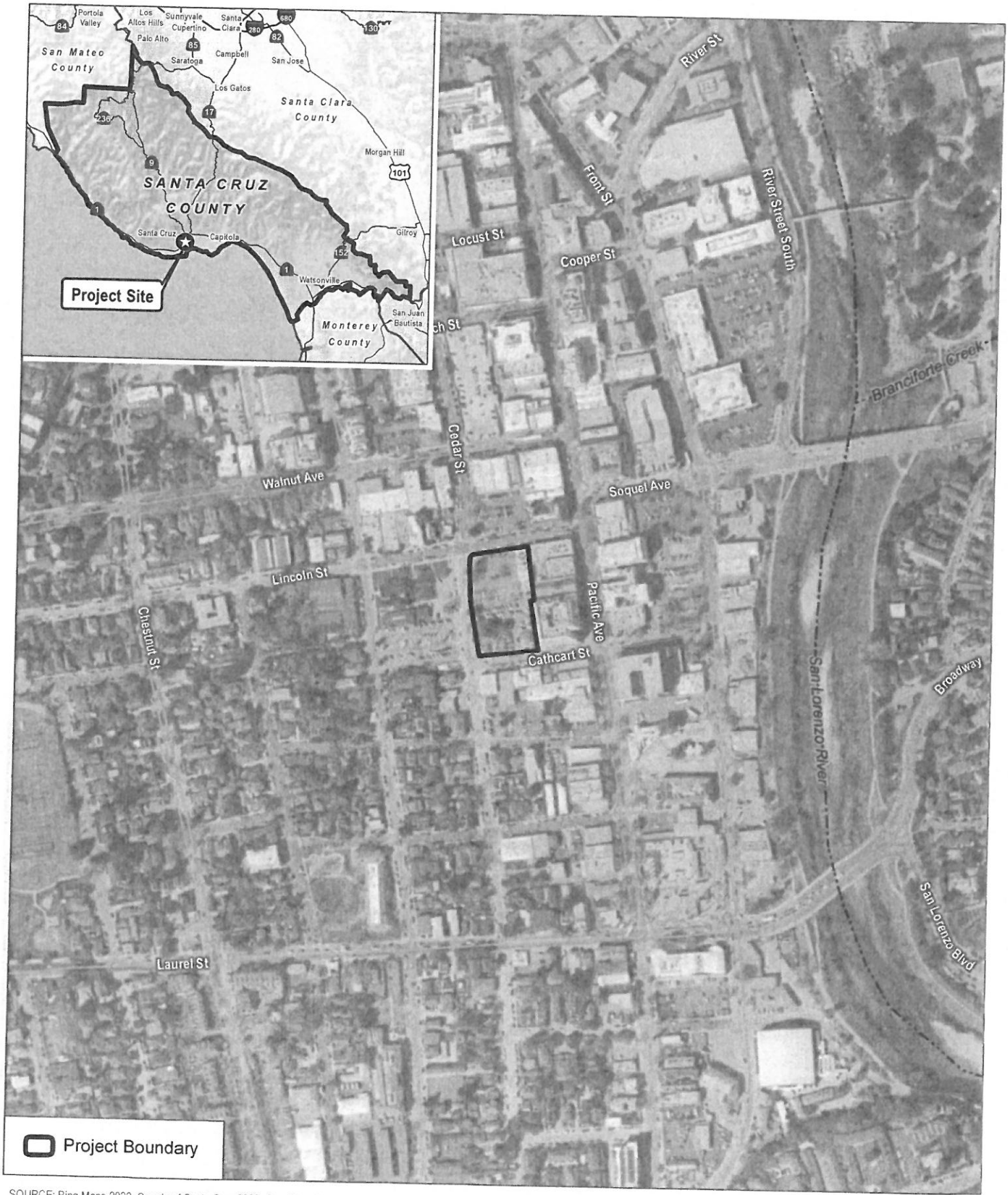
☑ Signed by Lead Agency
☐ Signed by Applicant

If filed by applicant:

1. Attach certified document of exemption finding.
2. Has a notice of exemption been filed by the public agency approving the project? ☐ Yes ☐ No

Date Received for filing at County Clerk: _____

Date Received for filing at OPR:



SOURCE: Bing Maps 2022, County of Santa Cruz 2020, OpenStreetMap

DUDEK

0 200 400 Feet

FIGURE 1

Project Location

Downtown Library and Affordable Housing Project

THIS NOTICE HAS BEEN POSTED AT THE CLERK OF THE BOARD OF SUPERVISORS OFFICE FOR A

PERIOD COMMENCING 3/16/2023

AND ENDING 4/16/2023

City of Santa Cruz
ENVIRONMENTAL CHECKLIST
FOR DETERMINATION OF CEQA EXEMPTION

I. BACKGROUND

1. **Application No:** CP22-00128

2. **Project Title:** Downtown Library and Affordable Housing Project (DLAHP)

3. **Lead Agency Name and Address:**
   City of Santa Cruz Planning and Community Development Department
   809 Center Street, Room 101
   Santa Cruz, CA 95060

4. **Contact Person and Contact Information:**
   Timothy Maier, Senior Planner
   (831) 420-5129; tmaier@cityofsantacruz.com

5. **Project Location:** 113 and 119 Lincoln Street (005-141-11, -21); see Figure 1.

6. **Project Applicant / Sponsor Name and Address:**
   Jim Rendler, For The Future Housing Inc., 945 W Julian Street, San Jose, CA 95126;
   Dixie Baus, Eden Housing, 22645 Grand Street, Hayward, CA 94541
   Owner: City of Santa Cruz

7. **General Plan Designation:** Regional Visitor Commercial (RVC)

8. **Zoning:** Central Business District (CBD), Cedar Street Village Corridor subdistrict

9. **Other Public Agencies Whose Approval is Required:** None known

10. **Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.31?** Yes

II. PROJECT DESCRIPTION

Proposed Project Uses. The project consists of a Nonresidential Demolition Authorization Permit, Special Use Permit, Design Permit, Lot-Line Adjustment, Sign Permit, and Heritage Tree Removal Permit to demolish one existing commercial building and surface parking lot and construct the DLAHP, consisting of a new public library, affordable housing units, a parking garage, ground-floor commercial tenant space, and a commercial childcare facility, with associated site improvements.

An application for a Heritage Tree Removal Permit to remove nine heritage trees in conjunction with the proposed project, was submitted to the Director of Parks and Recreation and was approved by the City's Urban Forester on October 18, 2022. The Parks and Recreation Commission considered and denied an appeal to the approval on December 10, 2022. Subsequently, the City Council on January 10, 2023, per applicable provisions of the Municipal Code, "called up" the heritage tree permits so as to assure that all heritage tree issues would be considered by the City Council at the same time the Council considers the other applications for the permits required by the DLAHP.

The proposed project uses would be integrated within a new 273,194-square-foot building, which would range in height from three to eight stories at 50 to 84 feet tall, respectively. The proposed lot-line adjustment would merge the two existing site parcels into one lot. The project also includes a density bonus request as permitted pursuant to state and local regulations with requested waivers and concessions to some development standards as explained in Section II.C. The proposed site plan is shown on Figure 2, and the proposed uses are further described below. Figures 3A and 3B show the proposed project building elevations. Figure 4 provides a conceptual depiction of the proposed building heights.

- *Public Library.* The proposed facility is an approximately 38,000-square-foot public library that would replace the existing downtown library located on Church Street across the street from City Hall. The library would be three stories, featuring two floors with elevated ceilings. The main library entrance is proposed at the mid-block point on Cedar Street, and includes a roof deck at the southwest corner of Cedar and Cathcart Streets.
- *Affordable Housing.* The proposed 100-percent-affordable-housing component includes 124 units located on five stories above the proposed parking garage. The proposed units include 13 studio units of about 450 square feet each, 48 one-bedroom units of approximately 500 square feet each, 31 two-bedroom units of approximately 730 to 840 square feet each, 31 three-bedroom units of approximately 900 to 950 square feet each, and 1 two-bedroom manager's unit. The units are proposed as affordable to extremely low, very-low, and low income households.
- *Parking Garage.* The eastern side of the project site would contain a 243-stall, three-story, above-grade public parking garage with minimal frontage on the street façades on Cathcart and Lincoln Streets. The parking garage would be a Public City Parking Facility with 24-hour access. The City has also considered one level of subterranean parking that would increase the on-site parking by approximately 90 spaces to 336 spaces, and the proposed site plan may be revised to include this option at a later date if directed by the City Council. It is noted that all project technical studies have considered inclusion of one subterranean level of parking, as does this review. The public parking component of the proposed project is intended to replace the existing public parking on the project site and to offset deficits in available downtown parking capacity resulting from approved and anticipated future development projects.
- *Childcare Facility.* A one-story, approximately 1,500-square-foot daycare facility is proposed immediately adjacent to the proposed library. The daycare facility would have

a capacity for a minimum of 16 children. An outdoor play area would be located adjacent to the facility and would be used by children at the facility as well as on-site residents.

- *Commercial Space.* Approximately 11,950 square feet of commercial use is programmed for three stories at the southwest corner below the library roof deck. With demolition of the existing on-site commercial building, the project would result in a net increase of approximately 6,550 square feet of commercial space.

The project includes a density bonus request pursuant to California Government Code sections 65915 – 65918, which was enacted in 1979 to encourage the provision of affordable housing units in the state by offering a combination of benefits to developers. The amount of the density bonus is based on the number of affordable units at each income level that are included in a project. To determine whether a project qualifies for a density bonus, the percentage of affordable units is based on the maximum number of units that would be permitted under the City's zoning code (i.e., the "base density"). The City determined that the base density for the project site is 46 units per acre, which would allow for 72 residential units on the 1.55-acre project site.

Because all of the proposed housing units would be affordable to lower income households, with a base density of 72 units, an 80-percent density bonus over the base density, or up to 130 units, are permitted. (Gov. Code, § 65915(f)(3)(D)(i).) With a base density of 72 units, 14 units (20 percent) of the residential units would be required to be provided as affordable housing units at the low or very-low income level to meet the City's inclusionary housing requirements. However, the project proposes 124 affordable units, of which 19 units (or 26 percent of the base density) would be for extremely low-income households, 59 units (or 82 percent of the base density) would be for very-low-income households, 45 (or 62 percent of the base density) would be for low-income households, and 1 unit would be the manager's unit. Additionally, according to Government Code section 65915(f)(3)(D)(ii), there are no maximum controls on density for projects where all units are affordable to lower income households and that are located within one-half mile of a major transit stop.

One waiver and one incentive/concession have been requested related to building height and the above-ground parking garage that would be required with the requested density bonus. A waiver and incentive/concession are being requested for building height to exceed the 50- and 75-foot maximum per the *Downtown Plan* resulting from placement of the proposed housing component atop the 3-story above-ground parking garage. The project is requesting an exception from the *Downtown Plan*'s maximum height of 50 feet as specified in the Cedar Street Village Corridor subarea of the *Downtown Plan*. The exceedance of the 50-foot height limit is requested as both a waiver and an incentive/concession as explained below.

The *Downtown Plan* establishes a maximum building height of 50 feet above the allowed 35-foot limit in the Cedar Street Village Corridor on the east side of Cedar Street, and allows for an increase of up to 75 feet in the eastern portion of the site that is designated as "Additional Height Zone A," subject to approval of a Design Permit by the City Council. As proposed, the residential component of the project has been sited partially within Additional Height Zone A. An incentive/concession is being requested for exceedance of the 50-foot height limit that

would result from placement of the parking facility at surface level, which is proposed due to the high costs of construction of underground parking. Placement of the parking structure at surface level would cause the height of the building to exceed 50 feet.

The waiver is requested as an additional increase in height beyond 50 feet due to inclusion of the density bonus units; the height would further increase above that resulting from the additional height induced by placement of the parking garage at grade. The residential component is partially placed within the *Downtown Plan*'s Additional Height Zone A, which allows for a request for height of up to 75 feet with approval by the City Council; however, about half of the residential component would encroach into the area outside of Additional Height Zone A, in which the maximum allowable height per the *Downtown Plan* is 50 feet. The waiver is being requested to allow building height to exceed the 50- and 75-foot maximum per the *Downtown Plan* as a result of placement of the proposed housing component above the 3-story above-ground parking garage. The residential component of the site, which covers approximately the eastern half of the project site, would reach 84 feet in height and 91 feet at the building edges including parapets. Compliance with the maximum height of 50 feet as specified in the *Downtown Plan* would require a reduction in the number of stories of the building, and consequently, would: 1) diminish parking capacity necessary to support existing and future downtown development, and 2) eliminate a significant number of housing units, which would physically preclude construction of the number of residential units allowed under state density bonus law. Due to the elevated costs associated with subterranean construction, an incentive/concession has been requested for placement of the parking structure above grade. Reasonable financial documentation has been prepared to justify the request. As proposed, the parking structure's height of approximately 33 feet is less than the 35-foot height as identified in the *Downtown Plan*, demonstrates consistency with the *Downtown Plan*.

Access and Parking. Primary vehicular access to the proposed project would be provided along the southeastern portion of the site, from Cathcart Street, via a new one-way alley and parking garage entrance. The new alley would allow one-way access only in the northerly direction on the eastern edge of the project site, from Cathcart Street to Lincoln Street. The parking garage access is off of Cathcart Street, immediately west of the alley, and would allow both ingress and egress. Both access points would be improved with a new driveway approach.

As indicated above, a total of 243 parking spaces are proposed within the public parking garage. The project would also include 258 bicycle parking spaces located throughout the project site, of 140 are proposed Class I spaces that consist of individually enclosed, locked spaces. Class II bike spaces (i.e., bike racks) would be located along the sidewalk building entries and within the public parking garage along the pedestrian entry corridor. In addition, there would be separate, secured bike parking locations inside the parking garage for residential tenants and staff as well as library, daycare, and commercial employees.

The project includes frontage improvements along Cathcart Street, Cedar Street, and Lincoln Street per City standards, including curbs, gutters, and expanded sidewalks. The proposed

sidewalks would be built 10 to 12 feet wide. The project also includes four loading/unloading parking spaces along Cedar Street and five on-street parking spaces along Lincoln Street. A bus stop would be provided on Cedar Street just north of the Cathcart Street.

Utilities and Stormwater Management. The project would connect to existing City water, sanitary sewer, and storm drain infrastructure and would be served by other City public services and private utilities for electricity and natural gas. The project would connect to existing sanitary sewer main within Cathcart Street and Cedar Street and to an existing water main in Cathcart Street. Stormwater would be treated on site through a biofiltration area and planters prior to conveyance into existing storm drains on Lincoln, Cedar, and Cathcart Streets.

Landscaping. The project would involve the removal of nine heritage trees, as defined by the City's Heritage Tree Ordinance. The project proposes to plant an 14 new 24-inch-box-sized, canopy street trees along the perimeter of the site. On the ground-level, the landscape plan includes new street plantings and raised steel planters which would support various landscape plants and ground cover. The project would be landscaped on the podium level (4th floor), with a garden area, gathering space, raise steel planters, and green roof above the library; these areas would be landscaped with various plants and groundcover. The project would be subject to provisions of the City's Water Efficient Landscape Ordinance pursuant to Chapter 16.16 of the City's Municipal Code.

Construction Schedule. The project involves demolition of a single-story commercial building (totaling approximately 5,400 square feet), asphalt pavement throughout the site, and frontage improvements along Cathcart Street, Cedar Street, and Lincoln Street. Construction is expected to occur over approximately 2.5 years, commencing in the year 2024.

Reuse of the Existing Library. The proposed project would replace the existing library on Church Street, which is located on an approximate 59,000-square-foot site that includes public parking lots in addition to the existing downtown library. In 2020, the city initiated a reuse visioning process for the existing library that included an extensive public and stakeholder engagement process. Several potential public uses and components were considered and discussed for the existing library site, including parks, plazas, the farmers market, parking, and mixed-use and affordable housing. With input from approximately 550 participants, a "Mixed-Use Housing with Civic Plaza" option received the highest score, followed by a "Plaza + Park" with housing as the second choice. A "Library Structure Re-purposed with Parking" option, which proposed to adaptively re-use the library structure for community or commercial uses, received the lowest score, and ranked lowest amongst the options (SOURCE V.3g[1]).

At this time, there is no City Council-approved direction for the existing library if the proposed project is approved and constructed. While mixed-use housing with a public plaza received the highest ranking in the public visioning process, no option was selected as a preferred option, and other uses, such as community, institutional, or commercial uses, could be also

1 All cited sources/references are identified in Section V at the end of this document.

be proposed as a part of a future project. Therefore, future uses at the existing library are speculative and cannot be reviewed at this time. When specific plans are developed and proposed for the existing library, separate environmental review and permit approvals would be required.

Relocation of the Farmers Market. The existing parking lot at the project site is the location of a weekly farmers Market sponsored by the Santa Cruz Community Farmers Markets (SCCFM). The City has been in ongoing discussions with SCCFM since late summer of 2017, working to establish a new permanent location for the Downtown Farmers Market with an improved site, enhanced community space, and opportunity for year-round operations and expansion with special events. One site has been identified that is located one block away from the existing site at City Parking Lot 7 at the corner of Cathcart and Front Streets (City of Santa Cruz 2023).

In October 2022, the City and SCCFM jointly agreed to enter into a Memorandum of Understanding to further define the next steps involved in establishing ongoing temporary and permanent operations of the SCCFM Downtown Farmers Market in downtown Santa Cruz. In a joint statement, both parties acknowledged temporary market locations, developing plans for a market on Lot 7, continuing to identify other locations and funding for a permanent market in downtown, and continued operation of the market at the existing downtown location for the foreseeable future until SCCFM determines that surrounding construction impacts necessitate a relocation to a suitable alternative downtown site identified by SCCFM and the City. Appropriate environmental review and permitting would be conducted at the time a preferred permanent location for the weekly Downtown Farmers Market is selected.

III. ENVIRONMENTAL SETTING

The project site is located at 113 and 119 Lincoln Street in the City of Santa Cruz (City) on an 1.55-acre (67,921-square-foot) site. The project site is located on the eastern side of Cedar Street, immediately south of Lincoln Street and north of Cathcart Street. The site is bounded by Lincoln Street on the north, commercial development along Pacific Avenue on the east, Cathcart Street on the south, and Cedar Street on the west. The project site spans the full block between Lincoln and Cathcart Streets; see Figure 1.

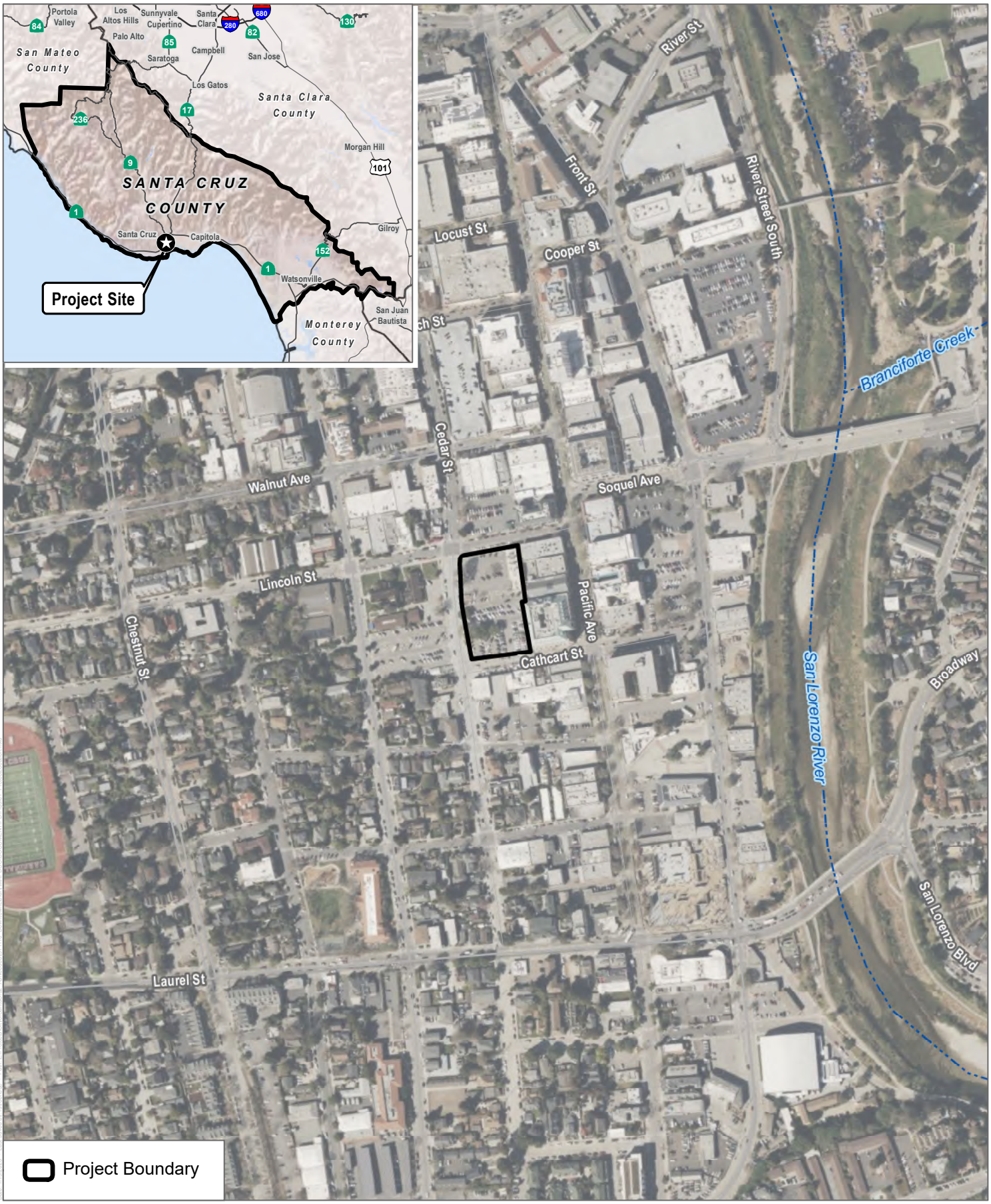
The project site is located in the Cedar Street Village Corridor of *Downtown Plan*. The site is surrounded by primarily developed commercial uses and mixed-use developments within the City's downtown area. An existing church is located to the west of the project site and Cedar Street. Residential uses are located in mixed-used buildings to the east of the project site along Cathcart Street/Pacific Avenue, and several projects are currently under construction in the project vicinity, including a project to the west of the project site and Cedar Street, a project along Pacific Avenue south of Cathcart Street, and a project on Front Street to the east of the project site.

The flat project site is paved and developed with a surface public parking lot that contains 134 parking spaces and one 5,400-square foot commercial building that is currently in use as a fitness gym. The

parking lot is known as “Public Parking Lot 4.” The existing parking lot is the location of a weekly Farmers Market that is held year-round.

The project site contains 12 existing, non-native landscape trees throughout the subject property of varying condition. Of this total, nine trees are considered heritage trees pursuant to City regulations (SOURCE V.15c):

- 4 Southern Magnolia *(Magnolia grandiflora)*
- 2 Chinese Pistache *(Pistachia chinensis)*
- 2 Sweetgum *(Liquidambar styraciflua)*
- 1 Maidenhair *(Ginkgo biloba)*



SOURCE: Bing Maps 2022, County of Santa Cruz 2020, OpenStreetMap

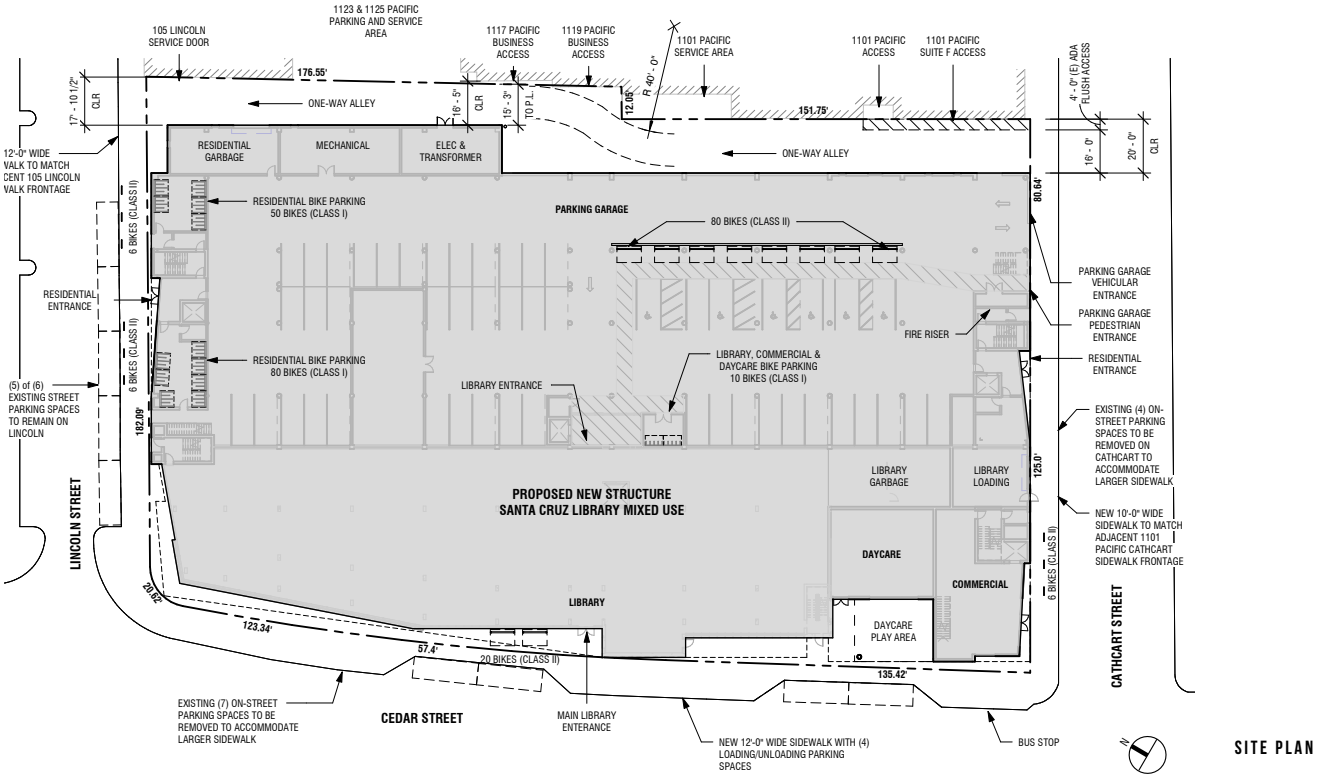
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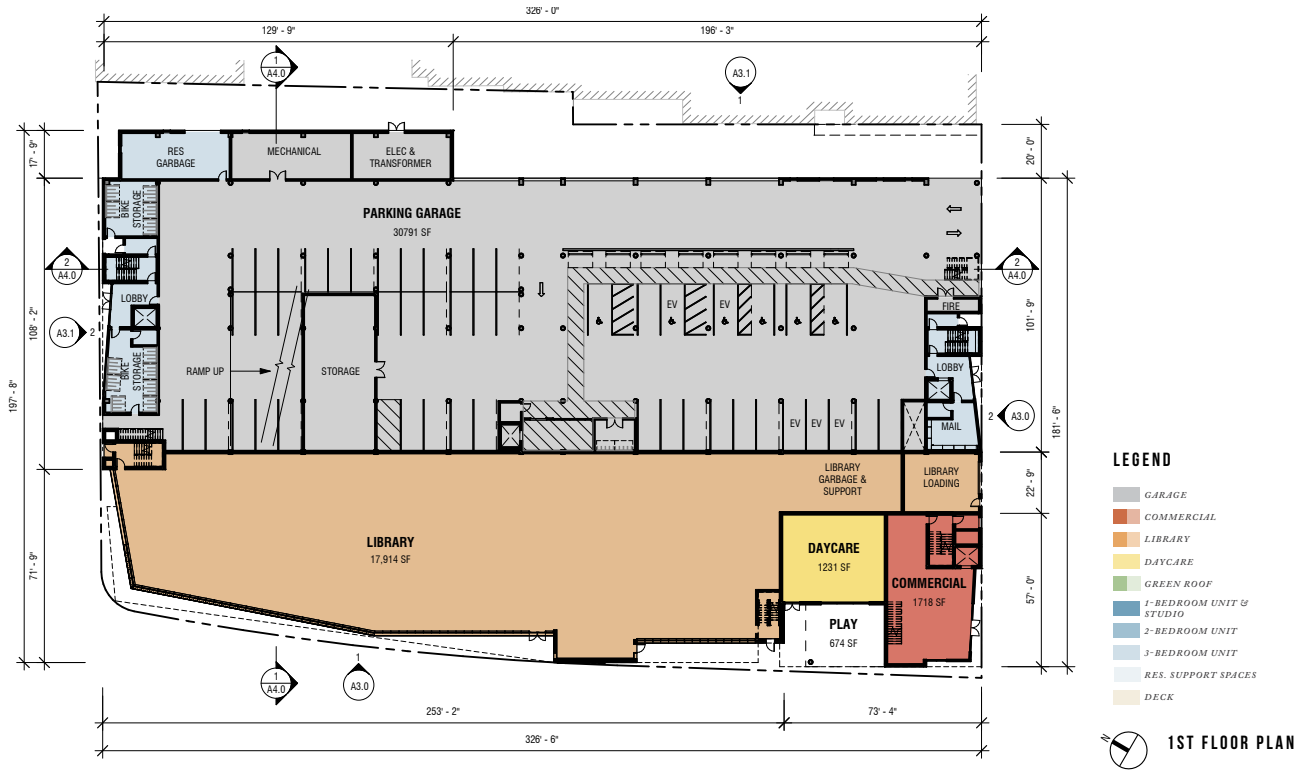
0 200 400 Feet

FIGURE 1

Project Location

Downtown Library and Affordable Housing Project





SOURCE: TenOver 2022

FIGURE 2

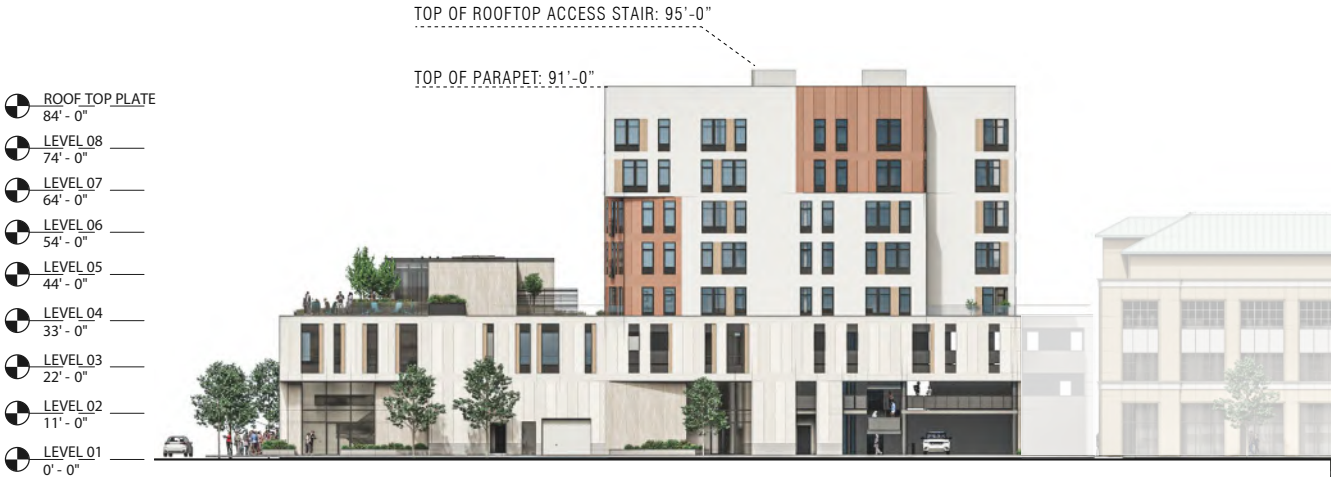
Project Site Plan

Downtown Library and Affordable Housing Project

DUDEK



1 WEST ELEVATION



2 SOUTH ELEVATION

SOURCE: TenOver 2022

FIGURE 3A

Project Elevations

Downtown Library and Affordable Housing Project

DUDEK



1 EAST ELEVATION



2 NORTH ELEVATION

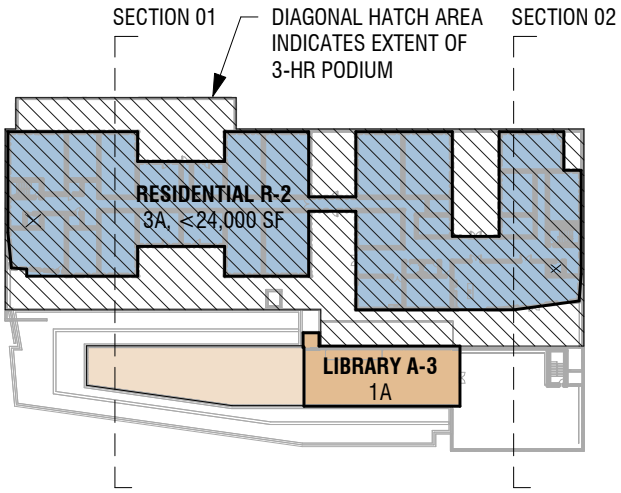
SOURCE: TenOver 2022

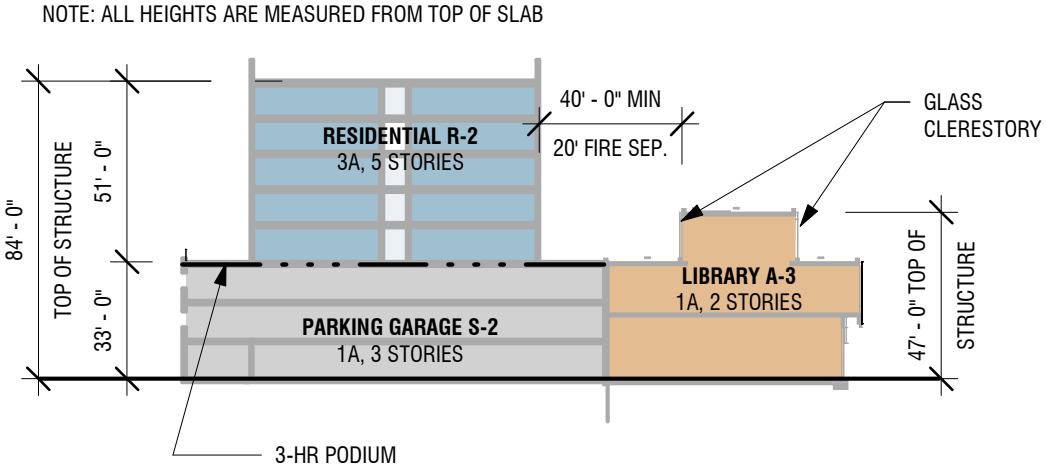
FIGURE 3B

Project Elevations

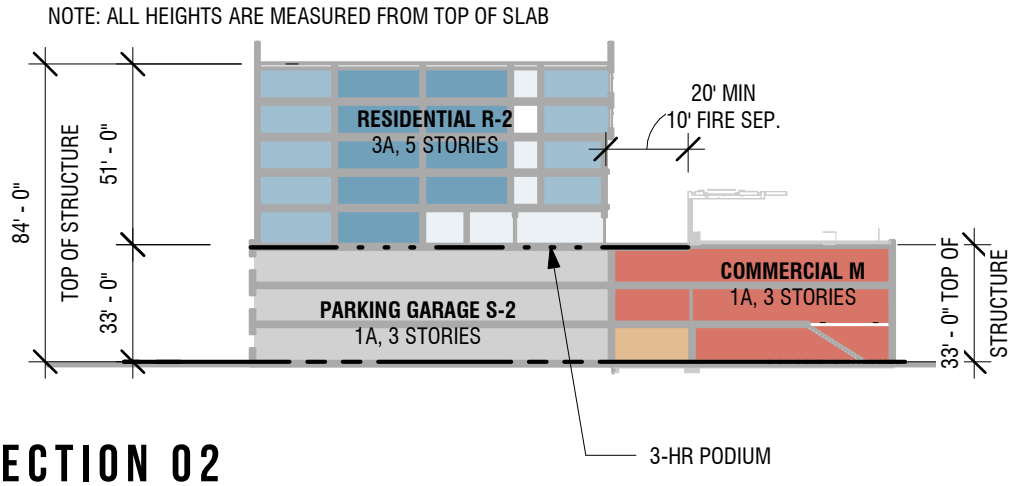
530 Downtown Library and Affordable Housing ProjectStreet

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SECTION 01



SECTION 02

SOURCE: TenOver 2022

FIGURE 4

Project Building Heights

Downtown Library and Affordable Housing Project

DUDEK

IV. ENVIRONMENTAL CHECKLIST

A. Introduction and Background

In analyzing a proposed project, the City may consider whether existing environmental documents already provide an adequate analysis of potential environmental impacts. An earlier analysis may be used where, pursuant to tiering, a program environmental impact report (EIR), or other California Environmental Quality Act (CEQA) provisions, it can be determined that one or more effects have been adequately analyzed in an earlier EIR or negative declaration (State CEQA Guidelines section 15063(b)(1)(C)). If an earlier analysis is used, the Initial Study checklist discussion should identify: a) the earlier analyses and state where they are available for review; b) identify which effects were adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis; and c) describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

CEQA also allows a lead agency to avoid repeating analyses that were already provided in a certified General Plan EIR for a development project that is consistent with the General Plan. Public Resources Code section 21083.3 and its parallel CEQA Guidelines provision, section 15183, provide for streamlined environmental review or exemption for projects consistent with the General Plan for which an EIR was certified. Pursuant to section 21083.3, subdivision (b), if a development project is consistent with the general plan for which an environmental impact report was certified, the application of CEQA shall be limited to effects on the environment which are "peculiar to the parcel or to the project" and which were not addressed as significant effects in the prior environmental impact report, or which substantial new information shows will be more significant than described in the prior environmental impact report. Subdivision (d) further indicates that an effect of a project upon the environment shall not be considered "peculiar to the parcel or to the project," "if uniformly applied development policies or standards" have been previously adopted by the city or county, with a finding based upon substantial evidence, that the development policies or standards will substantially mitigate that environmental effect when applied to future projects, unless substantial new information shows that the policies or standards would not substantially mitigate the environmental effect. CEQA Guidelines section 15183, subdivision (f), adds that "[w]here a city or county, in previously adopting uniformly applied development policies or standards for imposition on future projects, failed to make a finding as to whether such policies or standards would substantially mitigate the effects of future projects, the decision-making body of the city or county, prior to approving such a future project pursuant to this section, may hold a public hearing for the purpose of considering whether, as applied to the project, such standards or policies would substantially mitigate the effects of the project." Under these provisions of CEQA, a project that is consistent with a General Plan that was adopted pursuant to a certified EIR, could be potentially partially or wholly exempt from further CEQA analyses.

Section 15183 provides more detailed guidance than can be found in Public Resources Code section 21083.3 itself. Section 15183, subdivision (b), states that if a project is consistent with an agency's General Plan for which an EIR has been certified, the agency shall limit its examination of environmental effects to those which the agency determines, in an initial study or other analysis:

(1) Are peculiar to the project or the parcel on which the project would be located;

(2) Were not analyzed as significant effects in a prior EIR on the zoning action, general plan, or community plan, with which the project is consistent;

(3) Are potentially significant off-site impacts and cumulative impacts which were not discussed in the prior EIR prepared for the general plan, community plan, or zoning action; or

(4) Are previously identified significant effects which, as a result of substantial new information which was not known at the time the EIR was certified, are determined to have a more severe adverse impact than discussed in the prior EIR. (State CEQA Guidelines section 15183(b).)

Guidelines section 15183, subdivision (c), further provides that "if an impact is not peculiar to the parcel or to the project, has been addressed as a significant effect in the prior EIR, or can be substantially mitigated by the imposition of uniformly applied development policies or standards…then an additional EIR need not be prepared for the project solely on the basis of that impact." "[D]evelopment policies or standards need not apply throughout the entire city or county, but can apply only within the zoning district in which the project is located…. Moreover, such policies or standards need not be part of the general plan or any community plan, but can be found within another pertinent planning document such as a zoning ordinance." (Guidelines, section 15183, subd. (f).)

B. Use of Earlier Analyses

***General Plan 2030*.** On June 26, 2012, the Santa Cruz City Council adopted the *General Plan 2030* after certifying an EIR for the plan. The *General Plan 2030* EIR includes the Draft EIR volume (September 2011) and the Final EIR volume (April 2012). The General Plan EIR reviewed all of the topics included on the Appendix G environmental checklist in the State CEQA Guidelines as well as all sections required to be included in an EIR.

The General Plan EIR is a "program" EIR prepared pursuant to State CEQA Guidelines section 15168, which reviewed environmental impacts associated with future development and buildout within the City's planning area that would be accommodated by the General Plan. A program EIR can be used for subsequent projects implemented within the scope of the program/plan. Typically, site-specific or new significant impacts that weren't addressed in the program EIR would be evaluated in an Initial Study, leading to preparation of a Negative Declaration, Mitigated Negative Declaration, or EIR. Mitigation measures adopted for the General Plan also would be a part of future development projects, as relevant, and supplemented, as may be necessary, with any site-specific mitigation measures identified in the project-specific environmental review process.

As indicated above, pursuant to Public Resources Code section 21083.3, certain (or potentially all) aspects of a development project that are consistent with a General Plan for which an EIR was certified may be exempt from additional CEQA analyses (i.e., negative declaration, mitigated negative declaration, or EIR) of issues that were adequately covered in the General Plan EIR. The project site is designated Regional Visitor Commercial (RVC) in the City's *General Plan 2030* and is zoned Central Business District (CBD). The proposed mixed-use project is consistent with the General Plan land use designation. According to the General Plan, this designation "applies to areas that emphasize a variety of commercial uses that serve Santa Cruz residents as well as visitors. Mixed-use development is strongly encouraged in RVC districts." For the Downtown Santa Cruz Area, the General Plan indicates that the Regional Visitor Commercial designation "emphasizes a mix of regional office and retail uses, residential and mixed-use developments, restaurants, and visitor attractions such as entertainment venues," and that "the Downtown Recovery Plan provides detailed requirements for this area." The General Plan allows a floor area ratio (FAR) for the Regional Visitor Commercial (RVC) land use designation in the downtown area of up to 5.0. The project's proposed FAR is 4.08, which is within the allowed FAR established in the General Plan.

While the General Plan 2030 EIR considered the impacts of repurposing, intensifying, and redeveloping existing developed parcels in the City as a whole, specific future development of the project site was not noted or specifically evaluated in the General Plan 2030 EIR, and there were no site-specific impacts identified for the project site. However, as part of the overall estimated buildout, the EIR considered construction of new housing units and non-residential uses in the City with an estimated buildout of 3,350 new residential units and approximately 1,088,000 and 1,273,910 square feet of commercial and office uses, respectively, throughout the City by the year 2030 (SOURCE V.1b, DEIR volume-page 3-13). Since adoption of the General Plan, approximately 2,392 residential units and approximately 436,950 and 41,315 square feet of commercial and office space, respectively, have been constructed or approved throughout the City. Thus, the DLAHP's proposed 124 residential units and 46,050 square feet of non-residential uses would be within the remaining residential and non-residential buildout estimates considered in the city-wide General Plan EIR impact analyses.

It is noted that there are some pending development projects in the City, including in the downtown area that have not been approved, but are expected to be presented to City decision-makers in the near future, and thus, are considered reasonably foreseeable. If approved, these pending projects would include 570 residential units and a net increase of approximately 134,500 square feet of non-residential uses. Even with these pending projects that could be approved in the near future, total residential units (3,086 units) and non-residential development (approximately 687,915 square feet) with the proposed project and other approved and under construction projects would not exceed development estimates considered in the analyses in the General Plan EIR.

The proposed project is located within the "Downtown" neighborhood area that was identified in the General Plan 2030 EIR for the purposes of evaluating potential growth. The

General Plan 2030 EIR identified additional development in the downtown neighborhood to include 299 residential units, approximately 38,900 square feet of commercial space, approximately 4,500 square feet of office space, and 82 hotel rooms. However, it is noted that the "Downtown" neighborhood in the General Plan 2030 EIR encompasses a larger area than is included within the boundaries of the *Downtown Plan* as further described below. In addition, the downtown area located along the San Lorenzo River east of Front Street is located in the "River/Front" neighborhood in the General Plan 2030 EIR, for which potential future development was estimated at 337 residential units and approximately 70,000 and 91,600 square feet of commercial and office space, respectively. Additional potential future development within the area covered in the *Downtown Plan* also was considered with amendments to the *Downtown Plan* that were approved in 2017 as discussed below.

***Downtown Plan*.** The Santa Cruz City Council approved amendments to the *Downtown Plan* (formerly Downtown Recovery Plan [DRP]) in November 2017. The DRP was originally adopted in 1991 to guide reconstruction of the downtown after the 1989 Loma Prieta earthquake that destroyed significant portions of the downtown area. The intent of the DRP was to establish policies, development standards and guidelines to direct the recovery process toward the rebuilding after the earthquake. The DRP was adopted as a specific plan (pursuant to California Government Code requirements) to implement policies in the downtown area. Chapter 4 of the *Downtown Plan*, Development Standards and Design Guidelines, is incorporated by reference in Part 24 of the Zoning Code in the CBD zone.

A series of amendments to the DRP were proposed in 2017, including a change in the plan's name to "Downtown Plan." A program EIR was prepared pursuant to section 15168 of the State CEQA Guidelines, which evaluated effects of the 2017 Plan amendments. The amendments included additional height allowances under specified circumstances and other revised development standards that could lead to potential increased development in the downtown area. The Downtown Plan Amendments EIR evaluated impacts of this level of potential future development and addressed aesthetics, air quality and greenhouse gas emissions, biological resources, cultural and tribal cultural resources, hydrology and water quality, public services, transportation and traffic, water and wastewater utilities, land use, and cumulative impacts.

While the proposed project site is located within the boundaries of the *Downtown Plan*, it is not located in one of the development areas evaluated in the Downtown Plan Amendments EIR, although a new library at the project site was considered in the cumulative impact analysis in the Downtown Plan Amendments EIR.

Potential future development in the downtown area considered in the General Plan and Downtown Plan Amendments EIRs was estimated at approximately 636 residential units and 42,750 square feet of non-residential uses. Additional potential future development within the area covered in the *Downtown Plan* also was considered with amendments to the Downtown Plan that were approved in 2017 to include a net increase of 711 residential units, approximately 2,200 square feet of office space, and a decrease in commercial space of approximately 14,700 square feet as evaluated in the Downtown Plan Amendments EIR;

further discussion of the *Downtown Plan* is provided below. Taken together, approximately 1,347 housing units and approximately 205,053 square feet of non-residential commercial and office space were considered in the analyses in the General Plan 2030 EIR and Downtown Plan Amendments EIR. As indicated above, potential development estimates in the Downtown Plan Amendments EIRs were only estimates developed for the purpose of completing environmental analyses, but were not caps or development limits.

Since adoption of the *General Plan 2030*, approximately 1,200 residential units have been constructed or approved in the "Downtown" and "River/Front" neighborhoods, which include the General Plan neighborhoods included within the boundaries of the *Downtown Plan*, and there has been a net reduction of approximately 3,300 square feet of non-residential space. With the proposed project, cumulative residential units in the downtown area would total 1,324 units, which is slightly below the total number of residential units considered for development (1,347 units) in the General Plan 2030 and Downtown Plan Amendments EIRs. Additionally, with the proposed project, non-residential development would have result in a net increase of approximately 46,050 square feet, which is approximately one-quarter of the amount of non-residential space (205,000 square feet) considered in the General Plan and Downtown Plan Amendments EIRs. Thus, the proposed 124 residential units and 46,050 square feet of non-residential uses are within the amount of development considered in the *Downtown Plan* areas.

It is noted that there is one pending mixed-use development project in the downtown area that has not been approved, but is expected to be presented to City decision-makers in the near future, and if approved, would include 276 residential units and a net decrease in commercial square footage. With this pending project, total residential units would exceed estimates considered in the analyses in the *General Plan 2030* and Downtown Plan EIRs by 250 units, but would still be within the overall development and growth projections considered in the General Plan EIR. In addition, there is one pending non-residential development project that may be considered by City decision makers within the next six months. Although not a mixed-use project like the proposed DLAHP, it would result in addition of approximately 133,600 square feet of commercial space as a new hotel. However, when added to other approved and constructed non-residential space, including the DLAHP, non-residential square footage would be less than the amount considered in the Downtown Plan Amendments EIR and General Plan EIR.

C. Environmental Checklist Review

The purpose of the checklist presented on the following pages is to evaluate the impact categories covered in the City's certified General Plan2030 EIR and Downtown Plan Amendments EIR to determine whether the project's impacts have been adequately analyzed in the EIRs or whether any new significant impacts peculiar to the project or project site would result. Where an impact resulting from the project was adequately analyzed previously, the review provides a cross-reference to the pages in the General Plan EIR and/or Downtown Plan Amendments EIR where information and analysis may be found relative to the environmental issue listed under each topic. The checklist also identifies whether the project involves new

significant impacts or substantially more severe impacts than analyzed in the General Plan EIR and/or Downtown Plan Amendments EIR or new significant impacts peculiar to the site or project. As indicated above, an impact would not be considered "peculiar" to the site or project if uniformly applied development policies or standards would substantially mitigate an environmental effect. Therefore, the following review includes mitigation measures identified in the Downtown Plan Amendments EIR and/or General Plan EIR that would be applicable to the site or project and/or relevant applicable development policies or standards that would be applied to the project.

The Downtown Plan Amendments EIR and General Plan 2030 EIR are on file at the City's Planning and Community Development Department, 809 Center Street, Room 101, Santa Cruz, California from 7:30 to 11:30 AM, Monday through Thursday. The documents are also available for review on the City of Santa Cruz Planning Department's website at:

- *General Plan 2030* and EIR at: https://www.cityofsantacruz.com/government/city-departments/planning-and-community-development/long-range-policy-planning/general-plan
- Downtown Plan Amendments EIR at: https://www.cityofsantacruz.com/Home/Components/BusinessDirectory/BusinessDirectory/101/2849

D. Conclusion

Based on the following review, it has been determined that the City's General Plan 2030 EIR has adequately addressed the following issues, and no further environmental review is required pursuant to Public Resources Code section 21083.3: aesthetics (scenic views, scenic resources, visual character); agricultural and forest resources; air quality (conflicts with Air Quality Management Plan, project emissions, sensitive receptors, odors); biological resources (special status species, riparian, wetland or other sensitive habitat, conflicts with plans); cultural resources (historical resources); energy; greenhouse gas emissions (conflict with plans); hazards/hazardous materials (use/disposal of hazardous materials, create hazard, airport safety, emergency response, wildfire hazards); hydrology-water quality (groundwater, flood risk, conflicts with plans); land use; mineral resources; noise and vibration; population and housing; public services; recreation; transportation (conflicts with program, policy, design, emergency access); utilities (infrastructure, wastewater treatment, solid waste disposal); and wildfire.

The following site-specific impacts have been analyzed and determined to be less than significant due to substantial mitigation resulting from General Plan policies, zoning regulations and/or development standards that are uniformly applied to development projects throughout the City: aesthetics (light and glare); biological resources (nesting birds, conflicts with local tree ordinance); cultural resources (archaeological resources, human burials); geology and soils (seismic, geologic hazards, erosion, soils, paleontological resources); greenhouse gas emissions; hazards/hazardous materials (exposure to hazardous materials); hydrology/water quality (drainage and water quality); transportation (conflict

with CEQA Guidelines); tribal cultural resources; utilities (water supply); and cumulative impacts. Thus, pursuant to Public Resources Code section 21083.3 and State CEQA Guidelines section 15183, no further environmental analysis is required.

E. Checklist and Discussion

1. AESTHETICS **Would the project:**	**Where Impact is Addressed in Downtown Plan Amendments EIR**	**Where Impact is Addressed in General Plan 2030 EIR**	**Does Project Involve New Significant Impacts or Substantially More Severe Impacts?**	**Any New Impacts Peculiar to Project or Site?**	**Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards**
a) Have a substantial adverse effect on a scenic vista?	DEIR pp. 4.1-9 to 4.1-10 FEIR pp. 4-41, 43	DEIR pp. 4.3-2 to 4.3-7, 4.3-13 to 4.3-15 FEIR pp. 3-2	No	No	None
b) Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?	DEIR p. 4.1-11 FEIR pp. 4-41	DEIR pp. 4.3-14 to 4.3-17	No	No	None
c) In non-urbanized areas, Substantially degrade the existing visual character or quality public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage point.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?	DEIR pp. 4.1-11 to 4.1-16 FEIR pp. 4-41-43, 4-74, 4-89	DEIR pp. 4.3-7 to 4.3-8, 4.3-15 to 4.3-19 FEIR pp. 3-2	No	No	Design Review & Permit Requirements Municipal Code section 24.08.400-430, *Downtown Plan* development standards
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	DEIR pp. 4.1-16 to 4.1-17	DEIR pp. 4.3-19 to 4.3-20	No	No	Municipal Code section 24.14.266 Standard Condition of Approval to prevent offsite lighting

(a) Scenic Views. The project site is located in the developed downtown area of the City of Santa Cruz. The visual character of downtown is defined by existing development along tree-lined streets. The General Plan indicates that prominent scenic views mostly are those that are oriented toward Monterey Bay and the Pacific Ocean or toward the Santa Cruz Mountains that frame the northern boundary of Santa Cruz (SOURCE V.1b, DEIR volume). According to maps developed for the City's *General Plan 2030* and included in the General Plan EIR (SOURCE V.1b-DEIR Figure 4.3-1), the project site is not located within any mapped panoramic view areas and is not located within proximity to identified

visual landmarks. The project is located in a developed, urban area, and no scenic views are available from the project site. Urban views, including those of the downtown project area, are identified along the San Lorenzo levee, (SOURCE V.1b, DEIR volume), further east of the project site.

The General Plan EIR, which comprehensively addressed visual impacts associated with new population growth and development, concluded that most of the future development accommodated by the General Plan would not be in areas that are part of a public scenic view. The EIR discussed several limited areas in which potential disruption to scenic views could occur with future development, but the project site is not located within these areas. None of the General Plan policies and actions directed toward protection of scenic views are applicable to the project as no scenic views would be affected by the proposed project. The Downtown Plan Amendments EIR concluded that construction of buildings with increased height and FAR allowed under the *Downtown Plan* amendments would not obstruct or remove scenic views downtown.

The proposed project would not have an adverse effect on a scenic view as none have been identified, mapped or observed that include the project site. Thus, the proposed project would not result in impacts peculiar to the project or the site or substantially more severe impacts than evaluated in the General Plan 2030 EIR and Downtown Plan Amendments EIR, and no further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

(b) Scenic Resources. There are no designated state scenic highways or roads within the City. The project site is not located near a state scenic highway. The project site is developed with one commercial building and a paved, public parking lot. There are no structures or features on the project site that would be considered scenic resources. As described above in Section IV.E.1(a), the project site is not in proximity to and would not impact any "visual landmarks" identified in the General Plan EIR.

The General Plan EIR concluded that, with implementation of General Plan policies and actions, future infill development accommodated by the Plan would not result in significant impacts to scenic resources. The General Plan seeks to preserve natural features that visually define areas and provide scenic benefits (CD1.1), as well as to protect significant vegetation that provides scenic value (CD 4.3.3). The Downtown Plan Amendments EIR determined that development allowed under the *Downtown Plan* amendments would not have an adverse effect on scenic resources as none are present in the downtown area.

The project would result in the removal of 12 existing trees that are on the project site; nine of the trees to be removed are considered heritage trees under City regulations. Although nine to be removed are of heritage size as defined by City regulations, and several trees are larger trees that are visible along Cedar Street and in the immediate vicinity of the project site, the trees are not visible from a wide-ranging area, are not visually prominent or distinctive, and are not considered scenic resources. Thus, the project would not have an impact on scenic resources. For these reasons, the proposed project would not result in impacts to scenic resources that would be peculiar to the project or the site or substantially more severe than evaluated in the General Plan 2030 EIR and in the Downtown Plan Amendments EIR, and no further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

(c) Effects on Visual Character. The project site is developed and surrounded primarily by developed commercial uses and mixed-use developments within the City's downtown area. An existing church is located to the west of the project site and Cedar Street. Residential uses are located in mixed-used buildings to the east of the project site along Cathcart Street/Pacific Avenue, and several projects are currently under construction in the project vicinity, including a project to the west of the project site and Cedar Street, a project along Pacific Avenue south of Cathcart Street, and a project on Front Street to the east of the project site.

The General Plan 2030 EIR concluded that most of the future development accommodated by the General Plan would not substantially degrade the visual character of surrounding areas with implementation of General Plan policies and actions to develop design guidelines and review development to protect "distinctive design characteristics" and landmarks of neighborhoods (CD2.1, CD2.3) in combination with continued application of design review as part of Design Permit approvals.

As set forth in the General Plan, the *Downtown Plan* provides the detailed development requirements for the Downtown area. The Downtown Plan Amendments EIR analyzed potential aesthetics impacts related to allowing increased heights in the downtown area, although no site-specific development plans for any particular parcel were available or reviewed, and the project site was not included in one of the "additional height" areas evaluated in the EIR. However, the *Downtown Plan* does allow development with taller buildings and standards such as building recesses, required upper floor stepbacks, and recessed breaks to promote the appearance of multiple buildings of varying heights, and to avoid the development of monolithic building. As a result, the *Downtown Plan* concluded that building mass of taller buildings would be broken up and there would not be full site area coverage where additional heights may be allowed. The *Downtown Plan* also includes design guidelines and standards that address architectural features, including building facades and windows, as well as building materials, colors, and lighting. Furthermore, the Downtown Plan Amendments EIR indicated that the continued landscaping with street trees, specifically along Pacific Avenue and Front Street, would further screen upper floors, soften views of building mass from distant views, and maintain pedestrian-level building scale, which would be applicable to other downtown areas as well.

The Downtown Plan Amendments EIR concluded that with implementation of requirements to limit the footprint of taller building area, provision of recesses, implementation of design treatments to minimize building mass, and compliance with the *Downtown Plan* development standards and design guidelines, potential intensified development resulting from potential additional allowed heights would not significantly alter the visual character of the downtown area.

This conclusion also is consistent with CEQA (Public Resources Code section 21099), which provides that aesthetic impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment, although design review would still be required pursuant to local City requirements and regulations. "Infill site" means a lot located within an urban area that has been previously developed, or on a vacant site where at least 75 percent of the perimeter of the site adjoins, or is separated only by an improved public right-of-way from, parcels that are developed with qualified urban uses. "Transit priority area" means an area within one-half mile of a major transit stop that is existing or planned.

The project qualifies as mixed-use project on an infill site in a transit priority area (approximately 350 feet northwest of the Santa Cruz Metro Center on Pacific Avenue).

The proposed project is located in the Cedar Street Village Corridor of the *Downtown Plan*. East of Cedar Street, where development may be allowed to exceed 35 feet on a discretionary basis to a maximum height of 50 feet (4 floors maximum). The granting of additional height above 35 feet is discretionary and requires a Design Permit with the recommendation of the Planning Director to the City Council, which must approve the additional height. In addition, approximately 50 feet on the eastern edge of the project site is located within "Additional Height Zone A," which allows building heights to 75 feet with specified development standards. The granting of building height above the 55-foot base height limit in Additional Height Zone A is discretionary and requires a Design Permit with the recommendation of the Director of Planning to the City Council, which must approve the additional height. Projects that qualify for a density bonus as allowed under either State law or City-adopted density bonus ordinance are eligible for the additional height increase. It also is noted that the *Downtown Plan* indicates that projects that closely conform to the development standards, but with slight variations may be considered upon demonstration that the resulting project will better achieve stated Plan and community objectives. Such variations shall be minor in nature and must receive a positive recommendation from the Planning Director, with final approval by the City Council (section J.1).

The three-story elements of the proposed project (parking garage and commercial space) have a height of 33 feet, which is below the 35-foot height limit established in the *Downtown Plan*. The proposed library also is generally under 35 feet in height except for one element that extends to 47 feet in height, but does not exceed 50 feet in height which is allowed with discretionary approval. The 5-story residential component of the proposed project reaches a height of 84 feet (and 91 feet with parapets), which exceeds both the 75-foot maximum height allowed in "Additional Height Zone A" in the eastern portion of the site and also the 50-foot height limit on the portion of the site not located in the "Additional Height Zone A". Figure 4 provides a conceptual depiction of the proposed building heights.

The proposed project is eligible for requesting additional height to 75 feet for the eastern portion of the site located within "Additional Height Zone A" if the City makes findings that the project is consistent with the following overarching City objectives (*Downtown Plan*, pages 72-73):

i. The additional height will help to achieve the First Principles of the *Downtown Plan* (e.g. form, housing, accessibility and open space).

ii. The additional height will contribute to an improved social and economic environment by including new housing.

iii. The form of the development promotes the appearance of a grouping of buildings rather than large, monolithic building masses.

iv. The development receiving additional height will physically and/or financially contribute its fair share (through an Improvement District, Development Agreement or similar mechanisms) to the implementation of internal pedestrian connections between Pacific Avenue and Front Street.

v. The additional height will help to meaningfully achieve one or more of the following key community objectives, including but not limited to: Affordable Housing, Day Care Center, exceed Green Building minimums, Incubator Space for Small Business, Public Access Easements, Public Right-of-way Improvements, Publicly Accessible Open Space, Structured or Shared Parking, and Transportation Demand Management concepts.

The proposed project would result in a building height of 84 feet, which is higher than other buildings in the immediate vicinity due to the requested waiver required for qualifying projects that include density bonus units. The height also exceeds the additional 75-foot heights that could be allowed on the eastern portion of the project site. However, the proposed project is similar in height and scale as three approved mixed-use projects in the downtown area that are also designated RVC in the *General Plan 2030*, and which have approved heights of 81 to 85 feet. Furthermore, the *Downtown Plan* permits additional height to 85 feet in the area to the east of the project site between Pacific Avenue and Front Street on the west and east, and Cathcart Street and Laurel Street on the north and south, respectively. The additional 85-foot height can also be allowed on the west side of Front Street between Cathcart Street and Soquel Avenue. In addition, there are two other buildings in the downtown area that exceed 80 feet in height, the Palomar Hotel and 110 Cooper Street (City of Santa Cruz 2017). Therefore, there are other existing, approved, and under construction projects with similar or slightly greater heights than the proposed project, and existing City plans allow for height up to 85 feet under specified conditions in the immediate vicinity of the proposed project. Therefore, the proposed building height for the residential portion of the building, which exceeds the allowable additional building height, would not in and of itself be considered an unusual feature of the project because other buildings of similar size exist, are under construction, or could be constructed under existing city plans and regulations on similarly sized, infill sites as the proposed project.

The proposed project's building height for the residential portion of the project would visually appear as a taller building with one or two stories visible behind existing buildings on Pacific Avenue. Given other buildings approved and being constructed in the downtown area and elsewhere in the city, the additional height would not, when viewed in proximity of other larger buildings, be considered an unusual circumstance. Additionally, the taller portion of the building is primarily confined to the eastern edge of the site, with lower building heights that are consistent with City standards being located along the Cedar Street frontage. This is consistent with the *Downtown Plan*'s standards call for horizontal and vertical variation to create the appearance of multiple buildings that are more in keeping with the surrounding area. The Plan states that "Additional height – even up to 85 feet in the Additional Height Zone A – can be absorbed appropriately if it is confined to a portion of a property, rather than as a massive block, terraced back from the street."

As indicated in the Downtown Plan Amendments EIR, there is no required presumption under CEQA that taller buildings are necessarily a substantial adverse change in the existing visual environment. Such determinations are made on a case-by-case basis at a lead agency's discretion and in consideration of the relevant environmental setting or context, which here, is a nearly fully developed urban area. Future proposed buildings with additional height would not be considered to be substantially out of scale with other existing buildings in the downtown area (City of Santa Cruz 2017).

The City has found that the proposed project is consistent with the overarching objectives of the *Downtown Plan*, although the 5-story residential component exceeds both the 75-foot maximum height allowed in "Additional Height Zone A" in the eastern portion of the site and also the 50-foot height limit on the portion of the site not located in the "Additional Height Zone A".

As described in Section II, Project Description, the proposed project will be reviewed through the Design Permit process. Per section 24.08.400 of the Municipal Code, the purpose of the City's Design Permit review is to "promote the public health, safety and general welfare through the review of architectural and site development proposals and through application of recognized principles of design, planning and aesthetics and qualities typifying the Santa Cruz community." To receive Design Permit approval, the project would require findings from the City's approving body. Design Permit review and approval would be considered an application of uniformly applied development standards, which would reduce potential visual character impacts to a less-than-significant level.

The City of Santa Cruz is an "urbanized area" under the definition of the term in CEQA Guidelines section 15387. Per the CEQA Guidelines Environmental Checklist (Appendix G) question that was amended subsequent to the certification of the General Plan EIR, the City need not specifically consider existing visual character or the quality of the existing views and the project's potential effect on them. Nonetheless, this analysis has considered these issues and concludes that the project would not substantially degrade the existing visual character of the site or its surroundings, nor the quality of the views to or from the site as described above. In an urbanized area, a project that conflicts with applicable zoning and other regulations governing scenic quality could be considered to result in a significant impact. However, there are no regulations governing scenic quality applicable to the project site. There are some regulations regarding scenic views in the coastal zone, but the project is not located in the coastal zone.

The additional height allowed by an approved waiver pursuant to the density bonus law would not be considered to conflict with zoning standards. The court decision in *Wollmer v. City of Berkeley* expressly held that the waivers a city was required to grant for a density-bonus-eligible project did not result in planning and zoning inconsistencies that disqualified the project from the categorical exemption for in-fill development, because the mandatory nature of the waivers meant that those waived standards were inapplicable to the project. The Court found that "taking these laws together as they operate in the context of a density bonus project, it is clear that the waived zoning standards are not "applicable" and that the requirements of Guidelines section 15332, subdivision (a) were met." Therefore, based on the City's analyses and the *Wollmer* decision, the project with density bonus units and the requested height waiver is consistent with the zone district designation and all applicable zoning regulations.

Furthermore, as previously indicated, CEQA (Public Resources Code section 21099) states that aesthetic impacts of a residential, mixed-use residential, or employment center project on an in-fill site within a transit priority area shall not be considered significant impacts on the environment, although design review would still be required pursuant to local City requirements and regulations. The project site is considered an in-fill site and also is located within a transit priority area. City staff has reviewed the project and made the required findings for issuance of a Design Permit.

There are no other applicable zoning and other regulations governing scenic quality. Therefore, the proposed project would not result in aesthetic impacts peculiar to the project or the site or substantially more severe impacts than evaluated in the General Plan 2030 EIR and would not substantially degrade the visual character of the site or area, and no further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

(d) Light and Glare. The project would not result in introduction of a major new source of light or glare, although there would be introduction of windows and typical exterior building lighting. This type of lighting would be oriented so as to not create off-site light. Exterior building lighting would be further reviewed by City staff as part of the Design Permit review.

The General Plan EIR concluded that new infill development accommodated by the plan could result in potential sources of light and glare, but would not result in creation of "substantial" new sources of light and glare or result in a significant impact. The EIR indicated that infill buildings would have standard window and exterior lighting treatments, but would not be expected to result in new sources of substantial light or glare as future development projects would largely replace or redevelop existing urban uses. Exterior lighting would be included as part of the development, but would be typical of exterior building lighting in the downtown area, and would not result in nighttime illumination levels beyond the property line. Additionally, section 24.14.266 of the City's Municipal Code prohibits direct or sky-reflected glare. Furthermore, the Design Permit review that is required for most larger development projects would ensure project compliance with City standards and regulations.

The Downtown Plan Amendments EIR indicated that exterior building lighting would be further reviewed as part of the Design Permit review for future site-specific developments, which would be conditioned to install lighting such that it is directed downward and would not create light onto adjacent properties. The Downtown Recovery Plan requires buildings to provide low-level lighting in the building façade. Therefore, the EIR concluded that the Plan amendments and future development would not result in a significant impact related to creation of a new source of substantial light or glare.

Therefore, the proposed project would not result in new or substantially more severe light and glare impacts than evaluated in the Downtown Plan Amendments EIR and the General Plan 2030 EIR. Details of lighting would be reviewed by City staff as part of the Design Permit. A standard condition of approval requires all exterior lighting required to be shielded to contain the light source in a downward direction and avoid glare and illumination of adjacent properties. An approved Design Permit, including findings pursuant to Municipal Code section 24.08.430 and inclusion of a standard condition of approval regarding shielding of exterior lighting would be considered application of uniformly applied development standards that would substantially reduce light and glare impacts. There would be no light and glare impacts peculiar to the project or the site with uniformly applied development standards imposed as part of the design review process. Thus, no further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

2. AGRICULTURE AND FOREST RESOURCES[2] **Would the project:**	Where Impact is Addressed in Downtown Plan Amendments EIR	Where Impact is Addressed in General Plan 2030 EIR	Does Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Impacts Peculiar to Project or Site?	Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	DEIR Appendix A p.23	DEIR pp. 4.15-3, 4.15-6 to 4.15-8	No	No	None
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	DEIR Appendix A p.23	DEIR pp. 4.15-3, 4.15-6 to 4.15-8	No	No	None
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?	DEIR Appendix A p.23	DEIR pp. 4.15-3, 4.15-5 to 4.15-6	No	No	None
d) Result in the loss of forest land or conversion of forest land to non-forest use?	DEIR Appendix A p.23	DEIR pp. 4.15-3, 4.15-5 to 4.15-6	No	No	None
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?	DEIR Appendix A p.23	DEIR pp. 4.15-3, 4.15-5 to 4.15-8	No	No	None

The project site is located within the developed urban area of the City of Santa Cruz. The project site does not contain prime farmland or other agricultural lands as mapped on the State Farmland Mapping and Monitoring Program (SOURCE V.1b, DEIR Figure 4.15-1). The site is not designated for

[2] In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement Methodology provided in Forest Protocols adopted by the California Air Resources Board.

agricultural uses in the City's General Plan and is not located adjacent to agricultural lands. The project site is not zoned Timberland Preserve.

The General Plan EIR concluded that future development accommodated by the *General Plan 2030* would not result in conversion of agricultural or forest or timber resource lands or conflict with agricultural or timberland zoning within the City or its Sphere of Influence. The General Plan EIR further concluded that potential future development accommodated by the General Plan could be sited adjacent to agricultural lands in two limited areas outside City limits, and that with implementation of the *General Plan 2030* goals, policies and actions aimed at preventing conversion of agricultural lands and the maintenance and establishment of adequate buffers between adjacent land uses, there would be no conflicts between future development and agricultural uses. The Downtown Plan Amendments EIR noted that no agricultural lands or timber resources are located in the downtown area. The General Plan EIR concluded that impacts to agriculture and forest resources would not occur or would be less than significant as a result of future development accommodated by the General Plan.

The project site is not located in the areas adjacent to agricultural lands or timber resources. The proposed project would not result in conversion of agricultural or forest lands, as these resources are not present on or adjacent to the project site. Therefore, the proposed project would not result in impacts on agriculture and forest resources that would be peculiar to the project or the site or substantially more severe than evaluated in the Downtown Plan Amendments EIR and the General Plan 2030 EIR, and no further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

3. AIR QUALITY[3] **Would the project:**	**Where Impact is Addressed in Downtown Plan Amendments EIR**	**Where Impact is Addressed in General Plan 2030 EIR**	**Does Project Involve New Significant Impacts or Substantially More Severe Impacts?**	**Any New Impacts Peculiar to Project or Site?**	**Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards**
a) Conflict with or obstruct implementation of the applicable air quality plan?	DEIR pp. 4.2-17 to 4.2-18	DEIR pp. 4.11-11 to 4.11-12, 4.11-15 to 4.11-18 FEIR p. 3-24	No	No	GP EIR Mitigation 4.11-1
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?	DEIR pp. 4.2-19 to 4.2-21DEIR p. 5-8	DEIR pp. 4.11-6 to 4.11-7, 4.11-9 to 4.11-10, 4.11-18 to 4.11-34 FEIR pp. 3-24 to 3-26	No	No	GP Policies & Actions HZ 2.2, HZ2.2.1, HZ2.2.2, LU1.2, LU1.2.1 that require project level reviews

[3] Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied upon to make the following determinations.

3. AIR QUALITY[3] Would the project:	Where Impact is Addressed in Downtown Plan Amendments EIR	Where Impact is Addressed in General Plan 2030 EIR	Does Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Impacts Peculiar to Project or Site?	Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards
c) Expose sensitive receptors to substantial pollutant concentrations?	DEIR Appendix A pp. 25 to 26	DEIR pp. 4.11-7 to 4.11-8, 4.11-10 to 4.11-11, 4.11-18, 4.11-24 to 4.11-26	No	No	None
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?	DEIR Appendix A p. 26	DEIR pp. 4.11-26 to 4.11-27	No	No	Municipal Code section 24.14.264

(a) Conflict with Air Quality Management Plan. In 1991, the Monterey Bay Air Resources District (MBARD), formerly the Monterey Bay Unified Air Pollution Control District (MBUAPCD), adopted the Air Quality Management Plan (AQMP) for the Monterey Bay Region in response to the California Clean Air Act of 1988, which established specific planning requirements to meet the ozone standards. The California Clean Air Act requires that AQMPs be updated every three years. The MBARD has updated the AQMP seven times. The most recent update, the *2012-2015 Air Quality Management Plan* (2016 AQMP), was adopted in 2017. The 2016 AQMP relies on a multilevel partnership of federal, state, regional, and local governmental agencies. The 2016 AQMP documents the MBARD's progress toward attaining the state 8-hour ozone standard, which is more stringent than the state 1-hour ozone standard. The 2016 AQMP builds on information developed in past AQMPs and updates the 2012 AQMP. The primary elements from the 2012 AQMP that were updated in the 2016 revision include the air quality trends analysis, emission inventory, and mobile source programs (SOURCE V.10a).

For population-related projects, the MBARD developed a procedure that compares existing, under-construction, and approved residential dwelling units with AMBAG's housing unit forecast for a jurisdiction, as dwelling units are closely related to population and can be tracked within local jurisdictions; therefore, the number of dwelling units is used as the method for determining consistency with the AQMP. Consistency of indirect emissions associated with commercial, industrial, or institutional projects intended to meet the needs of the population as forecast in the AQMP is determined by comparing the estimated current population of the county in which the project is to be located with the applicable population forecast in the AQMP. If the estimated current population does not exceed the forecasts, indirect emissions associated with the project are deemed to be consistent with the AQMP. Projects which are consistent with AMBAG's regional forecasts have been accommodated in the AQMP and are therefore consistent with the AQMP (SOURCE 8a and 8b).

The MBARD's most recent 2015 AQMP utilized AMBAG's 2014 Regional Growth Forecast. The City had 24,250 existing dwelling units as of January 1, 2022 (California Department of Finance 2022), and

approximately 1,711 residential units are under construction or have been approved throughout the City, including residential development at the University of California Santa Cruz (UCSC)4. With the addition of these units, the City's housing units would total 25,961dwelling units. That number would increase to 26,085 dwelling units with the addition of the proposed project, which is below the AMBAG Regional Growth Forecast of 28,297 dwelling units for the year 2030 that were factored into the AQMP. Similarly, City population with the proposed project and other approved and under-construction housing units would total 70,607, which is below the AQMP forecast of 73,375 in the year 2030, and thus, the non-residential components of the proposed project, which are intended to serve the local population, would be consistent with the AQMP. Therefore, the proposed project would be consistent with the AQMP, and would not conflict with or obstruct implementation of the AQMP.

The General Plan 2030 EIR concluded that future development accommodated by the Plan could result in development of dwelling units that exceed regional projections, which could result in conflicts with the AQMP according to the MBARD's methodology for determining consistency. The General Plan EIR includes a mitigation measure (Mitigation 4.11-1) that directs City staff to work with AMBAG staff in future updates of population and housing forecasts and indicates that the potential population growth and housing unit increase exceedance would not occur for at least 10+ years, if it occurs at all. Subsequent to adoption of the General Plan, AMBAG updated and adopted regional population and housing forecasts in June 2014, June 2018 and June 2022. At this time, the City's residential population and existing and approved housing units, including those under construction, do not exceed adopted regional housing forecasts upon which the existing AQMP as explained above. Thus, there would be no impact related to conflicts with the current adopted AQMP. The Downtown Plan Amendments EIR also determined that growth that could be accommodated by the *Downtown Plan* amendments would be within the AMBAG forecast at the time and, thus, would not conflict with or obstruct implementation of the AQMP (based on the 2014 Regional Growth Forecast).

Given the foregoing, the proposed project would not result in impacts related to conflicts with the AQMP that would be peculiar to the project or the site or substantially more severe than evaluated in the General Plan 2030 EIR and in the Downtown Plan Amendments EIR, and no further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

(b) Project Criteria Pollutant Emissions. The U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established ambient air quality standards that are the maximum levels of ambient (background) air pollutants considered safe, with an adequate margin of safety to protect public health and welfare. Criteria pollutants include ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), inhalable particulates (PM_{10}), fine particulates ($PM_{2.5}$), and lead. High O_3 levels are caused by the cumulative emissions of reactive organic gases (ROG) and nitrogen oxides (NO_x), which react under certain meteorological conditions to form O_3. In

[4] Residential projects at UCSC are primarily student housing projects, and there is one approved employee housing project. In general, part-year student housing is considered group quarters and year-round faculty / student family housing is counted as housing units (SOURCE V.4a). For the 2014 forecast used in the AQMP, University population and housing projections were completed separately from jurisdiction population projections (SOURCE V.4c). For the purpose of this review and in accordance with current AMBAG guidance, approved employee housing is considered as housing units, and student housing is considered group quarters and is not included as housing units, but the population accommodated by new student housing is included in the population estimates.

California, sulfates, vinyl chloride, hydrogen sulfide, and visibility-reducing particles are also regulated as criteria air pollutants. An area is designated as "in attainment" when it is in compliance with the federal and/or state standards, as further discussed below.

The project site is located within the North Central Coast Air Basin (NCCAB), which is under the jurisdiction of the MBARD and includes Santa Cruz, Monterey, and San Benito Counties. The NCCAB is designated attainment for the federal PM_{10} and SO_2 standards, and is designated attainment/unclassified for the other federal standards. The NCCAB is designated attainment for the state $PM_{2.5}$, NO_2, SO_2, and lead standards, and is designated unclassified for CO in Santa Cruz County. The NCCAB has nonattainment designations for state O_3 and PM_{10} standards.

The MBARD 2012-2015 AQMP, adopted March 15, 2017, identifies a continued trend of declining O_3 emissions in the NCCAB primarily related to lower vehicle miles traveled (VMT), showing that the region is continuing to make progress toward meeting the state O_3 standard during the three-year period reviewed (SOURCE V.10a).

The General Plan 2030 EIR concluded that future development accommodated by the Plan could result in air pollutant emissions, but overall future emissions of ozone precursor pollutants are projected to decrease or remain nearly unchanged over the next 20 years, and thus, project-level emissions would not contribute to existing or potential future violations of air quality standards related to O_3. The General Plan EIR further concluded that, while PM_{10} emissions would increase, compliance with MBUAPCD significance criteria at a project level would ensure that emissions would not exceed daily standards. It was also found that vehicular emission rates are anticipated to lessen in future years due to continuing improvements in automobile and fuel efficiency and new regulations and programs adopted by the state of California that are scheduled to be phased in over the life of the proposed General Plan, and such reductions are factored into the air quality models used to estimate emissions.

Furthermore, the *General Plan 2030* includes goals, policies and actions that set forth measures to avoid and minimize adverse impacts on air quality, including environmental review to address project-level emissions, requiring project-level mitigation measures, and reduction of vehicle trips and emissions. General Plan policies and actions LU1.2, LU1.2.1 and HZ2.2.1 (as modified by the General Plan EIR) are intended to ensure that new development does not result in creation of air pollution and implements measures set forth by the MBARD as part of future project-level review. Specifically, Action HZ2.2.1 requires future development projects to implement applicable MBARD control measures and/ or air quality mitigations in the design of new projects as set forth in the District's "CEQA Guidelines." General Plan Action HZ2.2.2 permits major indirect sources of air pollution only if transportation measures are provided to reduce impacts to a less-than-significant level, consistent with applicable MBARD-recommended mitigation and control measures as set forth in the District's CEQA Guidelines. The policies and actions require future project-level review and implementation of mitigation measures, if warranted, consistent with the adopted standards in the MBARD's CEQA Guidelines. The General Plan EIR concluded that with implementation of the General Plan policies and actions, compliance with MBARD requirements and air quality control measures, and adherence to MBARD permit requirements, contributions to air pollutant emissions and air quality impacts would be less than significant.

The Downtown Plan Amendments EIR concluded that future development accommodated by the *Downtown Plan* amendments would result in construction-related emissions of air pollutants, but that the impact would be less than significant with implementation of General Plan policies and MBARD-recommended measures to control construction emissions, as applicable. The Downtown Plan Amendments EIR determined that operational emissions would not exceed emissions thresholds.

The proposed project would result in construction of a mixed-use development, consisting of a new public library, 124 affordable housing units, a net increase of approximately 6,550 square feet of commercial space, a childcare facility, and public parking. The project would indirectly generate air pollutant emissions through new regional vehicle trips. Project construction could result in generation of dust and PM_{10} emissions as a result of site excavation and grading. According to MBARD's *CEQA Air Quality Guidelines* (SOURCE V.10b), construction activity on 8.1 acres per day with minimal earthmoving or 2.2 acres per day with grading and excavation are assumed to be below the MBARD's PM_{10} significance threshold of 82 pounds per day. The area of proposed development is approximately 1.55 acres in size, which is below the screening-level threshold.

However, project air emissions were modeled for operational and construction emissions to comply with MBARD CEQA Guidelines and also included modeling for operational emissions, using the California Emissions Estimator Model (CalEEMod). The results are summarized in Tables 1 and 2, and as shown, neither project construction nor operational emissions would exceed MBARD thresholds for criteria pollutant air emissions.

Table 1. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions

Year	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	pounds per day					
2024	1.38	19.96	14.46	0.05	3.38	1.84
2025	4.52	7.68	10.26	0.03	1.96	0.67
2026	4.52	9.23	10.96	0.02	0.68	0.52
Maximum Daily Emissions	4.52	19.96	14.46	0.05	3.38	1.84
MBARD Threshold	*N/A*	*N/A*	*N/A*	*N/A*	*82*	*N/A*
Threshold Exceeded?	**N/A**	**N/A**	**N/A**	**N/A**	**No**	**N/A**

Notes: CO = carbon monoxide; MBARD = Monterey Bay Air Resources District; N/A = not applicable; NO_x = oxides of nitrogen; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; ROG = reactive organic gases; SO_x = sulfur oxides.
The values shown are the maximum summer or winter daily emissions results from CalEEMod.
Emissions thresholds are included in MBARD's CEQA Air Quality Guidelines (2008).
CalEEMod model results are on file with the City of Santa Cruz Planning and Community Development Department.

Table 2. Estimated Maximum Daily Operational Criteria Air Pollutant Emissions

Emission Source	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	pounds per day					
Project						
Area	3.92	0.12	10.24	<0.01	0.06	0.06
Energy	0.06	0.3	0.34	<0.01	0.04	0.04
Mobile	7.22	6.90	59.08	0.09	10.32	2.80
Total	**11.20**	**7.56**	**69.66**	**0.10**	**10.42**	**2.90**
Existing						
Area	0.15	<0.01	0.01	0.00	<0.01	<0.01
Energy	<0.01	0.04	0.03	<0.01	<0.01	<0.01
Mobile	1.22	1.34	9.88	0.01	1.25	0.35
Total	**1.37**	**1.37**	**9.91**	**0.01**	**1.29**	**0.36**
Net Change in Emissions						
Net Change (Project – Existing)	**9.83**	**6.19**	**59.74**	**0.09**	**9.13**	**2.54**
MBARD Threshold	*137*	*137*	*550*	*150*	*82*	*N/A*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**N/A**

Notes: CO = carbon monoxide; MBARD = Monterey Bay Air Resources District; N/A = not applicable; NO_x = oxides of nitrogen; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; ROG = reactive organic gases; SO_x = sulfur oxides.
The values shown are the maximum summer or winter daily emissions results from CalEEMod.
Emissions thresholds are included in MBARD's CEQA Air Quality Guidelines (2008).
CalEEMod model results are on file with the City of Santa Cruz Planning and Community Development Department.

Therefore, the project-level review required by the *General Plan 2030*, and as considered in the General Plan 2030 EIR and Downtown Plan Amendments EIR, finds that potential emissions would not exceed MBARD's adopted CEQA significance thresholds, and the project would not violate current air quality standards or expose sensitive receptors to substantial pollutant concentrations. General Plan Action HZ2.2.1 establishes a procedure for project-level reviews and requires site-specific mitigation measures if significant impacts are identified. These measures include applicable MBARD control measure and/ or air quality mitigation. The proposed project has complied with this requirement; no significant impacts were identified, and project emissions would be within the less-than-significant impact evaluated in the General Plan EIR. Thus, the proposed project would not result in impacts peculiar to the project or the site, or substantially more severe impacts than evaluated in the General Plan 2030 EIR and Downtown Plan Amendments EIR, and no further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

In addition, according to the MBARD CEQA Air Quality Guidelines, projects that are consistent with the AQMP would not result in cumulative impacts as regional emissions have been factored into the AQMP. The MBARD prepares air quality plans which address attainment of the state and federal emission standards, and incorporate growth forecasts developed by AMBAG. As indicated in subsection 3(a) above, the proposed project would not conflict with or obstruct the implementation

of the AQMP, which takes into account cumulative development within the City. Therefore, the proposed project would not result in a cumulatively considerable criteria pollutant increase.

(c) Sensitive Receptors. For CEQA purposes, a sensitive receptor is defined as any residence, including private homes, condominiums, apartments, and living quarters; education resources such as preschools and kindergarten through grade 12 schools; daycare centers; and healthcare facilities such as hospitals or retirement and nursing homes. A sensitive receptor includes long term care hospitals, hospices, prisons, and dormitories or similar live-in housing (SOURCE V.10b). There are no sensitive receptors adjacent to the project site, however, a residential project is under construction across the street from the site, west of Cedar Street. The proposed residential project would not introduce a new source of stationary emissions, and thus, would not expose sensitive receptors to substantial pollutant concentrations.

Diesel Particulate Emissions. Diesel particulate matter was identified as a toxic air contaminant (TAC) by the State of California in 1998. The General Plan 2030 EIR discusses construction-related impacts in which diesel particulate matter could be emitted from construction equipment. The impact was found to be less than significant due to the California Air Resources Board's ongoing adoption of regulations for in-use, off-road diesel vehicles that will significantly reduce particulate matter emissions by requiring fleet owners to accelerate turnover to cleaner engines and install exhaust retrofits. The EIR also noted that the California Code of Regulations, Title 13, section 2486(c)(1) prohibits idling of a diesel engine for more than five minutes in any location, thereby further limiting particulate matter emissions. Additionally, emissions during construction are of a short-term duration in comparison to life-long exposure and health risks. Construction-related diesel emissions at the project site would be of limited duration (i.e., primarily during grading) and temporary. Thus, project construction would not expose sensitive receptors to diesel emissions and associated risks are considered a less-than-significant impact as evaluated and concluded in the General Plan EIR. Since the proposed project is within the overall buildout analyzed in the General Plan EIR, and no new significant impacts or impacts peculiar to the project or the site have been identified, no further environmental analysis regarding diesel particulate emissions is required pursuant to Public Resources Code section 21083.3 and the State CEQA Guidelines section 15183.

(d) Odors. According to the Air District's CEQA Air Quality Guidelines (SOURCE V.10b), land uses associated with odor complaints typically include landfills, agricultural uses, wastewater treatment plants, food processing plants, chemical plants, and refineries. The General Plan EIR indicates that the *General Plan 2030* does not specifically identify, designate or support any new stationary sources that would be considered likely significant odor-generating facilities and that the City of Santa Cruz Municipal Code section 24.14.264 prohibits emission of odorous gases or matter in quantities readily detectable. Additionally, future proposed development will be subject to project-level environmental review (LU1.2, LU1.2.1) and mitigation (HZ2.2.1), if required, which would result in avoidance of potentially significant impacts related to odor. The General Plan EIR concluded that new development accommodated by the General Plan would not be expected to result in generation of significant odors with implementation of proposed General Plan policies and with compliance with City regulations that prohibit odor emissions.

The proposed residential project does not include any uses associated with odors and would not result in impacts related to odors. Since the proposed project is within the overall buildout analyzed in the General Plan EIR, and no new significant impacts or impacts peculiar to the project or the site have been identified, no further environmental analysis regarding diesel particulate emissions is required pursuant to Public Resources Code section 21083.3 and the State CEQA Guidelines section 15183.

4. BIOLOGICAL RESOURCES **Would the project:**	**Where Impact is Addressed in Downtown Plan Amendments EIR**	**Where Impact is Addressed in General Plan 2030 EIR**	**Does Project Involve New Significant Impacts or Substantially More Severe Impacts?**	**Any New Impacts Peculiar to Project or Site?**	**Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards**
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	DEIR pp. 4.3-17 to 4.3-18	DEIR pp. 4.8-13 to 4.8-14, 4.8-16 to 4.8-21, 4.8-41, 4.8-43 to 4.8-44, 4.8-48 to 4.8-51 FEIR pp. 3-22, 3-25 to 3-40	No	No	GP Policy NRC2.1, NCR2.4, Actions NCR2.1.3, NCR2.1.4 LCP EQ 4.5.3.2 GP Action NR2.4.1 & GP Table 1-Assessment and Management Protocols for Sensitive Species and Habitat Municipal Code section 24.14.080
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?	DEIR pp. 4.3-18 to 4.3-22 FEIR p. 2-4 to 2-5, 3-2	DEIR pp. 4.8-14 to 4.8-15, 4.8-24, 4.8-26 to 4.8-30, 4.8-22, 4.8-38 to 4.8-41, 4.8-48 to 4.8-51 FEIR p. 3-22	No	No	GP Action NR2.4.1 & GP Table 1-Assessment and Management Protocols for Sensitive Species and Habitat
c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	DEIR p. 4.3-17	DEIR pp. 4.8-15, 4.8-41, 4.8-38 to 4.8-39, 4.8-48 to 4.8-51	No	No	GP Action NR2.4.1 & GP Table 1-Assessment and Management Protocols for Sensitive Species and Habitat

4. BIOLOGICAL RESOURCES Would the project:	Where Impact is Addressed in Downtown Plan Amendments EIR	Where Impact is Addressed in General Plan 2030 EIR	Does Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Impacts Peculiar to Project or Site?	Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	DEIR pp. 4.3-17, 4.3-22	DEIR pp. 4.8-22 to 4.8-25, 4.8-41, 4.8-44 to 4.8-45	No	No	GP Action NRC2.2.1 GP Action NR2.4.1 & GP Table 1-Assessment and Management Protocols for pre-construction nesting bird surveys Condition of Approval for Pre-construction bird nesting surveys
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	DEIR p. 4.3-17	DEIR pp. 4.8-41, 4.8-45 to 4.8-47	No	No	LCP Policy CD 6.1.2 Municipal Code Chapter 9-6 Heritage Tree Removal Permit, required replacement trees, and payment of in-lieu fees
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	DEIR pp. 4.3-17	DEIR pp. 4.5-11 to 4.5-12, 4.8-25 to 4.8-26, 4.8-37 FEIR p. 3-23	Not Applicable	Not Applicable	None

(a-c) Special-Status Species, Sensitive Habitat. The project site is developed with a public parking lot and one commercial building with 12 existing non-native, landscape trees. According to maps developed for the City's *General Plan 2030* and included in the General Plan EIR, the project site is not located within or adjacent to a sensitive habitat area (SOURCE V.1b, DEIR Figure 4.8-3), and there are no known endangered or threatened species on or adjacent to the site due to the site's location within a developed urban area (SOURCE V.1b, DEIR volume). A data base search was conducted to further determine whether any rare, threatened, or endangered species are known to occur on or adjacent to the site or have the potential to occur on the site. The review included the California Natural Diversity Data Base (CNDDB) maintained by the California Department of Fish and Wildlife, the

federal Information for Planning and Consultation (IPaC) data base, and the California Native Plant Society's Rare Plant Inventory. The review did not identify any special-status species occurring on or near the site, and concluded that there is no potential habitat to support special-status species on the project site (SOURCE V.16b). Therefore, the project site does not contain sensitive habitat or habitat for special-status species, and the project would result in no impact to sensitive habitat or special status species.

The General Plan EIR concluded that new development accommodated by the plan would result in construction that could result in impacts to special status species and sensitive habitats. However, with implementation of the proposed General Plan policies and actions, as well as future environmental review of specific development projects and compliance with local regulations and plans, indirect impacts on sensitive habitats resulting from development accommodated by the General Plan would be considered less than significant. The *General Plan 2030* requires environmental impact analyses for development in the vicinity of sensitive habitats (General Plan NCR2.1.3, NCR2.4 and NCR2.4.1), but the project site is not located in the vicinity of sensitive habitats as explained above. The Downtown Plan Amendments EIR also concluded that future development would not result in indirect impacts to adjacent San Lorenzo River riparian or aquatic sensitive habitat with compliance with setbacks established in existing City plans, including the City-wide Creeks and Wetlands Management Plan, which references the San Lorenzo Urban River Plan as the guiding management plan for the area. The project site is not located adjacent to or near the San Lorenzo River.

Therefore, the proposed project would not result in impacts to special-status species or sensitive habitat or impacts peculiar to the project or the site. Therefore, no further review is necessary pursuant to CEQA section 21083.3 and CEQA Guidelines section 15183.

(d) Wildlife Movement/Breeding. The General Plan EIR concluded that with implementation of the proposed *General Plan 2030* goals, policies and actions, as well as compliance with local regulations and plans, potential impacts related to wildlife movement would be considered less than significant. The primary wildlife movement corridors are located along major watercourses and within City-owned open space lands, which would be protected from future development impacts. Table 1, Assessment and Management Protocols for Sensitive Species and Habitat, that is included the *General Plan 2030*, prescribes protocols and recommended management measures in wildlife dispersal corridors, including buffers and compliance with the Citywide Creeks and Wetland Management Plan. Projects adjacent to watercourses would be subject to setback requirements set forth in the Creeks and Wetlands Management Plan. The project site is developed and located within a developed urban area. The site does not contain habitat, nor does it connect to other habitat areas and is not within or adjacent to a creek, riparian area, or wildlife dispersal area. The proposed project is not located adjacent to or within proximity to a watercourse. Thus, the project would have no effect on wildlife movement and would not interfere with native fish or wildlife movement. Therefore, there would be no significant impacts or impacts peculiar to the project or the site, and no further review regarding wildlife movement is necessary pursuant to CEQA section 21083.3 and CEQA Guidelines section 15183.

The project involves the removal of 12 trees. The trees on the project site could provide potential nesting habitat for migratory birds which are protected by the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code (CFGC). Tree removal during the breeding season (generally February 15 to August 31) has the potential to destroy bird nests, eggs or chicks if any are present during the removal. Compliance with the MBTA would require that either a pre-construction nesting survey be conducted to confirm that no nesting birds protected under the MBTA are present if trees or removed during the nesting season or to remove trees outside of the nesting season. Compliance with required regulations would not result in a significant impact. Furthermore, General Plan Action NCR2.4.1 and Table 1 establish biological survey protocols, including pre-construction nesting bird surveys with establishment of appropriate construction buffers if needed, if tree removal and/or construction were to commence during the nesting season. A project condition of approval requires implementation of a pre-construction nesting survey.

The General Plan EIR concluded that potential impacts of future development that could directly or indirectly interfere with wildlife breeding/nesting would be less than significant with implementation of the General Plan policies and actions for resource protection, which include a requirement to conduct pre-construction nesting bird surveys. The Downtown Plan Amendments EIR includes Mitigation Measure 4.3.3 that requires a pre-construction nesting survey be conducted by a qualified wildlife biologist if construction, including tree removal, adjacent to the San Lorenzo River is scheduled to begin during the nesting season. As indicated above, the project site is not located adjacent to or near the San Lorenzo River. Therefore, potential project impacts would be considered less than significant with application of the Downtown Plan Amendments EIR Mitigation Measure 4.3.3 requiring a pre-construction nesting survey, as well as General Plan policies that establish protocols for pre-construction nesting surveys and compliance with state and federal laws. There would be no significant impacts or impacts peculiar to the project or the site with the application of uniformly applied development standards. Therefore, no further review is necessary pursuant to CEQA section 21083.3 and CEQA Guidelines section 15183.

(e) Conflicts with Local Policies and Ordinances. The project would result in the removal of 12 non-native trees due to the proposed construction footprint, nine of which qualify as heritage trees as defined by the City's Heritage Tree Ordinance. Therefore, the project would require a heritage tree removal permit. The project plans show 14 new canopy 24-inch-box-sized street trees would be planted along the perimeter of the site. The heritage trees to be removed include four magnolia, two Chinese pistache, two liquid amber, and one ginkgo trees. The arborist report indicated that the physiological condition of the trees is typical of mature trees in restricted growing spaces surrounded by hardscape and overall decline and other conditions were observed (SOURCE V.15a,c).

Approval of a heritage tree removal permit automatically requires replacement trees or payment of an in-lieu fee. Removal of a heritage tree that is consistent with the criteria, provisions, and requirements set forth in City regulations would not result in a conflict with a local ordinance. City regulations require tree replacement for removal of a heritage tree to consist of replanting three 15-gallon or one 24-inch size specimen for each heritage tree approved for removal.

The General Plan 2030 EIR concluded that development accommodated by the General Plan could result in the removal of heritage trees; however, with implementation of General Plan goals, policies,

and actions, as well as compliance with local regulations and plans, impacts would be less than significant. Removal of heritage trees that is consistent with City regulations and requirements would not be considered a significant impact of the project or an impact peculiar to the project. Approval of a heritage tree removal permit automatically requires replacement trees or payment of in-lieu fees as set forth above.

The proposed project includes replanting of 14 24-inch-box-sized street trees in accordance to city requirements. For these reasons, the proposed project would not result in new significant impacts related to conflicts with local ordinances or impacts peculiar to the project or the site with the application of uniformly applied development standards set forth in the heritage tree regulations, and no further review is necessary pursuant to CEQA section 21083.3 and CEQA Guidelines section 15183.

It is noted that on October 12, 2022, an application for a Heritage Tree Removal Permit was submitted to the Director of Parks and Recreation in conjunction with the proposed project, in accordance with the City's Santa Cruz Municipal Code Chapter 9.56, Preservation of Heritage Trees and Heritage Shrubs. The application requested removal of nine non-native, heritage trees as defined in Municipal Code Chapter 9.56. The Heritage Tree Removal Permit was approved by the City's Urban Forester on October 18, 2022, making the required findings in accordance with Municipal Code section 9.56.060(e). On October 27, 2022, an appeal of the Heritage Tree Removal Permit was submitted; an appeal requires consideration by the City Parks and Recreation Commission. The Parks and Recreation Commission considered and denied the appeal on December 10, 2022. Subsequently, the City Council on January 10, 2023, per applicable provisions of the Municipal Code, "called up" the heritage tree permits so as to assure that all heritage tree issues would be considered by the City Council at the same time the Council considers the other applications for the permits required by the DLAHP.

A Heritage Tree Removal Permit constitutes a discretionary permit reviewed through a process in parallel with the application for other entitlements for any project. The Municipal Code, including Chapter 9.56, contains no requirement for approval of use permits prior to, or concurrent with, granting of entitlement for a Heritage Tree Removal Permit. However, as the Heritage Tree Removal Permit application has been submitted in conjunction with the proposed DLAHP, the application for Heritage Tree Removal Permit may also be considered as part of the overall DLAHP.

(f) Habitat Conservation Plans. There are no adopted Habitat Conservation or Natural Community Conservation Plans in the project vicinity. The City's recently approved Operations and Maintenance Habitat Conservation Plan (O&M HCP) is not applicable to the proposed project or project site as it was developed for improvements or projects related to City facilities with the potential to take federally listed species and other non-listed special-status species.

5. CULTURAL RESOURCES Would the project:	Where Impact is Addressed in Downtown Plan Amendments EIR	Where Impact is Addressed in General Plan 2030 EIR	Does Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Impacts Peculiar to Project or Site?	Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	DEIR pp. 4.4-13 to 4.4-14	DEIR pp. 4.9-12 to 4.9-14, 4.9-15, 4.9-21, 4.9-23 to 4.9-24	Yes	Yes	None
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?	DEIR pp. 4.4-12 to 4.4-13	DEIR pp. 4.9-10 to 4.9-12, 4.9-19 to 4.9-23	No	No	GP EIR Mitigation 4.9-1 and Municipal Code section 24.12.430 Objective Standard to require compliance with archaeological report recommend-dations
c) Disturb any human remains, including those interred outside of formal cemeteries?	DEIR pp. 4.4-12 to 4.4-13	DEIR pp. 4.9-10 to 4.9-12, 4.9-19 to 4.9-23	No	No	GP EIR Mitigation 4.9-1 and Municipal Code section 24.12.430

(a) Historical Resources. According to maps developed for the City's *General Plan 2030* and included in the General Plan EIR, the project site is not located within a designated historic district (SOURCE V.1b, DEIR Figure 4.9-4). The project site includes a commercial building that was constructed in 1941 that is considered a simplified Streamline Modern style (SOURCE V.18).

A historical resources evaluation was conducted for the existing commercial building at 113 Lincoln Street that was constructed in 1941 to determine whether either structure is a historical resource under the definitions in CEQA. The building has been altered considerably with a 1980 storefront remodeling campaign, removal of the original entrance, and a 1986 rear addition. Given the changes made to what was a modest original design, the evaluation found that the building no longer possesses sufficient historic integrity of setting, design, materials, workmanship feeling and association for it to qualify for listing on the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR). The evaluation also concluded that the existing building on the project site is not eligible for the Santa Cruz Historic Resources Inventory because the building does not meet City preservation criteria and has been altered substantially (SOURCE V.18). Therefore, the existing structure on the project site is not a historical resource under the definition of CEQA.

The General Plan 2030 EIR concluded that new development accommodated by the General Plan would result in construction that may result in impacts to historic resources. However, the EIR found that compliance with local regulations regarding protection of historic resources, and implementation of the proposed General Plan policies and actions would reduce impacts to a less-than-significant level. The proposed project would not directly affect historical resources as a result of demolition of the existing building at the project site. Thus, the proposed project would not result in significant impacts to historical resources not otherwise addressed in the General Plan EIR or impacts peculiar to the project or the site. No further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

(b-c) Archaeological Resources. According to a map developed for the City's *General Plan 2030* and included in the General Plan EIR and updated in 2018, the project site is located in an area identified as sensitive for archaeological resources (SOURCE V.1c). A Cultural Resources Report was prepared for the project, which included a files records search of the Northwest Information Center (NWIC) at Sonoma State University and field survey (SOURCE V.12). The NWIC records search indicated that no archaeological studies have been conducted on the project site and no resources have been previously identified on the project site. Ten resources have been recorded within a one-quarter mile radius of the project site, and five archaeological studies have been conducted within a 500-foot radius of the project site. Visual inspection of the project site did not reveal evidence of precolonial or historic-era artifacts or intact archaeological deposits. However, an archaeological investigation for the project concluded that potentially significant cultural materials may be located in the project area and recommended an extended site evaluation to locate subsurface resources, consisting of trenches to the depths of impacts in locations where historic maps indicate potential resources (SOURCE V.12).

An extended testing program was undertaken that consisted of trenches throughout the project site. The testing found five historical-period features in the west central portion of the project site, and the results indicate that much of the site contains intermittent, shallow, and thin sheet deposit of scattered historical period artifacts associated with the mid- to late nineteenth and early to mid-twentieth century. The location and characteristics suggest these are examples of parcel-level dumping events indicative of residential refuse disposal behavior prior to centralized refuse collection that began in the mid-twentieth century. The testing did not reveal evidence of the existence of any archaeological resources or deposits. No prehistoric archaeological materials of any kind were found during the testing (SOURCE V.16a).

Evaluation of the five features concluded that they do not rise to a level where they could be found eligible for listing under the California Register of Historical Resources (CRHR) criteria and integrity requirements or under local criteria. Specifically, the features cannot be associated with a significant contribution to the broad patterns of California's history and cultural heritage or with the lives of persons important in our past. As relatively casual dumping events, there are no distinctive characteristics present, and the features clearly do not represent the work of an important creative individual, nor do they possess high artistic values. As numerous other examples of such deposits exist with greater integrity and historic associations, the features are not likely to yield information important to history. Therefore, these resources are not considered historic resources under CEQA (SOURCE V.16a). The project site was tested, except for the area covered by the existing building. There

is a moderate potential for encountering additional similar artifacts during construction. While it is not expected that additional deposits would meet the definition of a historical resource, archaeological monitoring during grading is recommended. However, any artifacts found would be expected to be similar to those already recovered, which would not be considered historical resources.

Section 24.12.430 of the City's Municipal Code sets forth the procedure to follow in the event that previously unknown prehistoric or cultural features are discovered during construction. Under provisions of this Code section, work shall be halted within 100 feet of the find and the Planning Director shall be immediately notified to determine the appropriate course of action, including implementation of potential mitigation measures. Additionally, the County Coroner shall be notified in accordance with provisions of Public Resources Code 5097.98-99 in the event human remains are found and the Native American Heritage Commission shall be notified in accordance with the provisions of Public Resources Code section 5097 if the remains are determined to be Native American.

The General Plan EIR concluded that new development accommodated by the plan would result in construction that could result in impacts to buried archaeological resources. Mitigation 4.9-1 added an Action to the General Plan (HA1.2.2), which establishes a procedure for preparing archaeological investigations for development within areas designated as "sensitive" or "highly sensitive" and implementing site-specific mitigation measures if significant impacts are identified, with which the proposed project has complied. However, implementation of the proposed General Plan policies and actions, compliance with local regulations, and General Plan EIR Mitigation 4.9-1 would reduce potential impacts to a less-than-significant level. The Downtown Plan Amendments EIR also concluded that compliance with City regulations and General Plan policies and actions (would result in less-than-significant impacts on archaeological resources.

A cultural resources report and field survey were conducted consistent with the requirements of the *General Plan 2030* policies and actions (HA1.2.2) as set forth in the General Plan EIR. The project archaeological investigation did not identify sensitive resources, although monitoring during demolition and grading were recommended. The project would not result in archaeological impacts peculiar to the site or project. In addition, implementation of standards set forth in the City's Municipal Code (section 24.12.430) related to potential discovery of unidentified archaeological resources during construction would be considered application of uniformly applied development standards. Discovery of unidentified (e.g., buried) cultural resources during any construction, including human burials, would be subject to this requirement as a standard condition of approval. Thus, the proposed project would not result in significant impacts to archaeological resources not otherwise addressed in the General Plan EIR or impacts peculiar to the project or the site with the application of uniformly applied development standards. No further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

6. ENERGY Would the project:	Where Impact is Addressed in Downtown Plan Amendments EIR	Where Impact is Addressed in General Plan 2030 EIR	Does Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Impacts Peculiar to Project or Site?	Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards
a Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?	DEIR pp. 5-1 to 5-3	DEIR pp. 4.6-27 to 4.6-29, 4.6-45 to 4.6-46, 5-4 to 5-6	No	No	None
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?	DEIR pp. 5-2 to 5-3	DEIR pp. 4.6-46; 5-5	No	No	None

(a) Energy Use. Construction of the project would require consumption of nonrenewable energy resources, primarily in the form of fossil fuels (including fuel oil, natural gas, and gasoline) for automobiles and construction equipment, and other resources including, but not limited to, lumber, sand, gravel, asphalt, metals, and water. Construction would include energy used by construction equipment and other activities at the project site (e.g., building demolition, excavation, paving), in addition to the energy used to manufacture the equipment, materials, and supplies and transport them to the project site. It is expected that nonrenewable energy resources would be used efficiently during future construction of residential units accommodated by the project. Therefore, the amount and rate of consumption of such resources during construction and maintenance activities would not result in the unnecessary, inefficient, or wasteful use of energy resources.

The proposed project avoids or reduces inefficient, wasteful, and unnecessary consumption of energy in part through siting. The project site is in proximity to bicycle and pedestrian facilities in the area, which would provide incentives for non-automobile transportation modes. The project provides 258 bicycle parking stalls, which exceeds City standards by about 61 spaces and also provides 15 electric vehicle parking spaces that would be available to residents and visitors. The project would be subject to approval of building permits that meet the California Building Code (CBC) and City Green Building Code requirements, as well as compliance with City requirements for water conservation fixtures and features, including drought-resistant landscaping. Additionally, Santa Cruz residents are enrolled in the Central Coast Community Energy (3CE), formerly Monterey Bay Community Power electricity service, which supplies electricity generated from hydropower, solar and wind, which are renewable resources.

The General Plan EIR reviewed energy use associated with development accommodated by the General Plan. The estimated energy demand was found to be within state per capita projections for the planning area, and the EIR concluded that overall, the future consumption of electrical and natural gas resources would not represent unnecessary, inefficient, or wasteful use of resources given the implementation of policies that address lighting and energy conservation measures. The proposed project would result in an increase of 124 dwelling units, a 38,000-square-foot public

library, a childcare facility, and approximately a net increase of 6,550 square feet of commercial space. This level of development would be within the overall amount of development evaluated in the General Plan EIR and within remaining potential development as described in Section IV.B. Therefore, the proposed project would not result in impacts related to inefficient or wasteful use of energy that would be peculiar to the project or the site or substantially more severe than evaluated in the General Plan 2030 EIR. No further.

b) Conflicts with Plans. The proposed project would not result in conflicts with or obstruct a state or local plan for renewable energy or energy efficiency. The proposed project transportation features, design elements, and compliance with building code requirements described above are consistent with the City's Climate Action Plan provisions related to energy efficiency. Therefore, no further review is necessary.

7. GEOLOGY AND SOILS **Would the project:**	**Where Impact is Addressed in Downtown Plan Amendments EIR**	**Where Impact is Addressed in General Plan 2030 EIR**	**Does Project Involve New Significant Impacts or Substantially More Severe Impacts?**	**Any New Impacts Peculiar to Project or Site?**	**Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards**
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:					
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault?	DEIR Appendix A pp. 32 to 33	DEIR pp. 4.10-7 to 4.10-9, 4.10-20	No	No	None
ii) Strong seismic ground shaking?	DEIR Appendix A pp. 32 to 33	DEIR pp. 4.10-6 to 4.10-14, 4.10-21 to 4.10-23	No	No	General Plan Action HZ6.3.1 Municipal Code section 18.04.030 (California Building Code adoption, including Seismic Design Criteria)
iii) Seismic-related ground failure, including liquefaction?	DEIR Appendix A pp. 32 to 33	DEIR pp. 4.10-12 to 4.10-13, 4.10-21 to 4.10-23	No	No	General Plan Action HZ6.3.6 Municipal Code section 24.14.070 regarding geotechnical

7. GEOLOGY AND SOILS Would the project:	Where Impact is Addressed in Downtown Plan Amendments EIR	Where Impact is Addressed in General Plan 2030 EIR	Does Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Impacts Peculiar to Project or Site?	Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards
					investigation requirements regarding geotechnical investigations
iv) Landslides?	DEIR Appendix A pp. 32 to 33	DEIR pp. 4.10-13 to 4.10-14, 4.10-22 to 4.10-24	No	No	None
b) Result in substantial soil erosion or the loss of topsoil?	DEIR Appendix A p. 33	DEIR pp. 4.10-17 to 4.10-18, 4.10-25 to 4.10-26	No	No	City Municipal Code section 24.14.060 and Chapter 18.45 regarding grading and erosion control plans
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	DEIR Appendix A pp. 32 to 33	DEIR pp. 4.10-5 to 4.10-6, 4.10-15 to 4.10-16, 4.10-24 to 4.10-25	No	No	None
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	DEIR Appendix A p. 33	DEIR pp. 4.10-16 to 4.10-17, 4.10-19	No	No	Municipal Code section 18.04.030 (California Building Code adoption, including requirements for Geotechnical Reports
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	DEIR Appendix A p. 33	Not Applicable	Not Applicable	Not Applicable	Not Applicable
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	DEIR pp. 4.4-14	DEIR pp. 4.9-14 to 4.9-16, 4.9-21, 4.9-24 to 4.9-25	No	No	GP EIR Mitigation 4.9-2; standard Condition of Approval for Accidental

7. GEOLOGY AND SOILS Would the project:	Where Impact is Addressed in Downtown Plan Amendments EIR	Where Impact is Addressed in General Plan 2030 EIR	Does Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Impacts Peculiar to Project or Site?	Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards
					Discovery of Paleontological Resources

(a-i) Fault Rupture. The project site is located in a seismically active region of California, which has the potential to be subject to very intense shaking during a seismic event. The City of Santa Cruz is situated between two major active faults: the San Andreas, approximately 11 miles to the northeast, and the San Gregorio, approximately 10 miles to the west. Other known active faults in the vicinity of the site include the Zayante – Vergeles (approximately 8 miles northeast of the site), the Monterey Bay-Tularcitos (approximately 6 southwest of the site), and the Sargent (approximately 12 miles northeast of the site) (SOURCE V.14). However, there are no active fault zones or risk of fault rupture within the City (SOURCE V.1b, DEIR volume). The General Plan EIR found that there are no active faults within the City of Santa Cruz, and thus, fault rupture is not a hazard that required further evaluation. Thus, the proposed project would not result in significant impacts related to fault rupture not otherwise addressed in the General Plan EIR or impacts peculiar to the project or the site with the application of uniformly applied development standards. No further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

(a-ii – iv, c) Seismic and Geologic Hazards. The project could be subject to strong seismic shaking during an earthquake on regional faults. According to maps developed as part of the City's *General Plan 2030* and included in the General Plan EIR, the project site is located in an area susceptible to liquefaction (SOURCE V.1b, DEIR Figure 4.10-4).

A Geotechnical Investigation Report (geotechnical report) was performed for the project that included subsurface borings and representative soil samples at the project site (SOURCE V.14). The soils consisted generally of 1 to 5.5 feet of undocumented fill, which consist of loose silty sand and loose poorly graded sand with silt. Below the undocumented fill, native alluvial soils consisted of loose to medium dense silty sand and poorly graded sand with silt to a depth of approximately 16 feet; additional alluvial soils with dense to very dense poorly graded sand were found to a depth of 60 feet. The geotechnical report noted that groundwater was encountered between 9 to 11 feet below grade during the exploratory borings.

The geotechnical report concludes that there is a potential for liquefaction of soils, which could cause liquefaction-induced settlement to the order of 5 ⅔ to 6 ½ inches, resulting in differential settlement up to 4 ¼ inches. To address this concern, the report recommends specific design parameters for the proposed building's foundation and ground improvement. The report also states that there is the potential for ground deformation and surficial cracking and lateral spreading. To address these concerns, the report recommends that the mixed-use building be supported on shallow foundation overlying ground improvement. Furthermore, the report recommends that the ground floor slab be

either underlain by ground improvement as well, or be designed as structural slab capable of spanning between footings. Implementation of these recommendations would be verified through design documents that would be submitted to the City for review and approval prior to issuance of construction (grading or building) permits. The geotechnical report includes recommended design measures to ensure the project would not cause substantial adverse effects, including the risk of loss, injury, or death due to potential existing geologic hazards. These measures address the safety of project residents and users, and thus involve reducing the effects of existing environmental hazards on the project itself, which does not exacerbate those hazards. For this reason, the measures to not address an environmental impact cognizable under CEQA. (See *California Building Industry Association v. Bay Area Air Quality Management District* (2015) 62 Cal.4th 369, 377-378.)

The project site is relatively level and is not in an area susceptible to landslides (SOURCE V.1b, DEIR Figure 4.10-3). The project site is not located in an area of steep slopes (SOURCE V.1b, DEIR Figure 4.10-5).

The General Plan EIR concluded that adherence to existing regulations and standards, including the California Building Code (CBC) and various policies and actions established in the proposed *General Plan 2030* would minimize harm to people and structures from adverse seismic and geologic events and conditions. General Plan Action HZ6.3.1 requires that all new construction conform with the latest edition of the CBC, and Municipal Code section 18.040.030 adopts State of California building codes as part of the City's Building Code. General Plan Action HZ6.3.6 requires site-specific geologic investigation(s) by qualified professionals for proposed development in potential liquefaction areas and requires developments to incorporate the design and other mitigation measures recommended by the investigation. In addition, Municipal Code section 24.14.070 requires preparation of a geotechnical report and implementation of recommendations for residential projects with more than four units that are within potential liquefaction areas. Thus, buildings must be designed in accordance with the latest edition of the CBC, which sets forth structural design parameters for buildings to withstand seismic shaking without substantial structural damage. Conformance to the CBC as required by state law and the City would ensure the maximum practicable protection available for structures and their associated trenches, excavations and foundations.

The General Plan EIR concluded that with adherence to existing regulations and standards, including preparation of a project-specific geotechnical report and adherence to the CBC, as incorporated into the City's Municipal Code, and various policies and actions established in the General Plan, harm to people and structures from adverse seismic events would be minimized (SOURCE V.1b, DEIR volume). As noted above, a project-specific geotechnical investigation was performed and design recommendations would be implemented and be considered application of a uniformly applied development standard. Demonstration of project design adherence to geotechnical report recommendations will be required at the time of building permit application that demonstrates that the proposed buildings are designed to current seismic design standards. Thus, the proposed project would not result in new significant impacts related to seismic and geologic hazards not otherwise addressed in the General Plan EIR or impacts peculiar to the project or the site with the application of uniformly applied development standards for required geological and geotechnical investigations and implementation of recommendations contained in these reports. No further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

(b) Erosion. According to maps developed as part of the City's *General Plan 2030* and included in the General Plan EIR, the project site consists of Baywood loamy sand, with 0 to 2 percent slopes (SOURCE V.1b, DEIR Figure 4.10-6). As described in the General Plan EIR, erosion potential for this soil profile is not high (SOURCE V.1b, DEIR volume).

The project would result in grading and excavation of approximately 1,100 cubic yards (cy) of soil that would be removed with approximately 150 cy of fill provided. See subsection 10(a) below regarding potential water quality impacts due to grading and earthwork. The project site itself is generally flat, with less than one percent slopes from north to south. Project earthwork would include grading, trenching, and removing trees and other vegetation. These activities would include ground disturbance, which would potentially result in short-term soil erosion. Because the proposed project footprint is greater than 1 acre, it would be subject to the National Pollutant Discharge Elimination System (NPDES) permit requirements for construction site stormwater discharges and would comply with those requirements. A Storm Water Pollution Prevention Plan (SWPPP) is required to be prepared and implemented under these requirements, which includes appropriate erosion-control and water-quality-control measures during site preparation, grading, construction, and post-construction. Implementation of the SWPPP for the proposed project would minimize short-term erosion impacts. Long-term impacts of the proposed project would not result in substantial erosion, as the soils would be covered by buildings, pavement, vegetation, and landscaping.

The General Plan EIR concluded that future development accommodated by the Plan could result in erosion during construction, but could be mitigated with adherence to local regulations that require implementation of erosion control plans, and thus, potential erosion during construction would be minimized, resulting in a less-than-significant impact. Implementation of required erosion control plans and erosion control standards and requirements set forth in the City's Municipal Code Chapter 18.45 would be considered application of a uniformly applied development standard. Thus, the project would not result in new significant erosion impacts not otherwise addressed in the General Plan EIR or impacts peculiar to the project or site with the application of uniformly applied development standards. No further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

(d) Expansive Soils. Expansive soils contain large amounts of clays that expand when wetted and contract when dried. Soils at the project site consist of Baywood loamy sand, which has a low expansive soil potential. As discussed above, a project geotechnical investigation assesses soil conditions and provides design recommendations based on soil characteristics at the project site. The geotechnical investigation did not identify soils that would be considered expansive during the field exploration and concluded that the site is suitable for development with implementation of recommendations in the geotechnical report. Implementation of recommendations set forth in the project geotechnical report is required by the CBC and City regulations and policies, which would ensure that potential exposure to geotechnical hazards associated with potentially expansive soils would be mitigated.

The General Plan EIR concluded that future development accommodated by the Plan could be exposed to expansive soils, which would be addressed through compliance with state and local regulations, including the CBC requirements and section 24.14.070 of the City's Municipal Code

(requirement for geotechnical investigations), which would ensure that buildings are designed to prevent structural damages based on the project-specific geotechnical report. The requirement to implement the recommendations would be considered application of a uniformly applied development standard. Thus, with implementation of the foregoing uniformly applied development standards and regulations that require preparation of geotechnical report and implementation of recommendations set forth in the geotechnical investigation, the proposed project would not result in significant impacts not otherwise addressed in the General Plan EIR or peculiar to the project or site related to expansive soils. No further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

(e) Use of Septic Systems. The project would be connected to City sanitary sewers and would not use septic systems.

(f) Paleontological Resources. According to maps developed for the City's *General Plan 2030* and included in the General Plan EIR, the project site is within an area mapped as Late Pleistocene alluvium formations (SOURCE V.1b, DEIR Figure 4.9-5). Late Pleistocene alluvium is one of the four geologic units in the General Plan area known to contain paleontological resources (SOURCE V.1b, DEIR volume).

The General Plan EIR Mitigation 4.9-2 added General Plan Action HA1.2.3, which requires the City to notify applicants within paleontologically sensitive areas of the potential for encountering such resources during construction and condition approvals that work will be halted and resources examined in the event of encountering paleontological resources during construction. If the find is significant, the City would require treatment in accordance with the recommendations of the evaluating paleontologist. Treatment may include, but is not limited to, specimen recovery and curation or thorough documentation. This provision was added to the City's Municipal Code (section 24.12.431), and all projects are subject to this requirement, which is included as a project condition of approval. Inclusion of a standard condition of approval that specifies actions to take in the event of discovery of paleontological resources would be considered application of uniformly applied development standards. Therefore, with implementation of the General Plan EIR mitigation measure, the proposed project would not result in significant paleontological resource impacts not otherwise addressed in the General Plan EIR with application of uniformly applied development standards. No further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

8. GREENHOUSE GAS EMISSIONS **Would the project:**	**Where Impact is Addressed in Downtown Plan Amendments EIR**	**Where Impact is Addressed in General Plan 2030 EIR**	**Does Project Involve New Significant Impacts or Substantially More Severe Impacts?**	**Any New Impacts Peculiar to Project or Site?**	**Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards**
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?	DEIR pp. 4.2-21 to 4.2-22	DEIR pp. 4.12-13 to 4.12-17, 4.12-21 to 4.12-28 FEIR pp. 3-26 to 3-27	No	No	Climate Action Plan GHG Reduction Measures Municipal Code Chapter 6.100
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	DEIR pp. 4.2-17 to 4.2-18	DEIR pp. 4.12-18 to 4.12-20, 4.12-29 to 4.12-31	No	No	Climate Action Plan GHG Reduction Measures

(a) Greenhouse Gas Emissions. Climate change refers to any significant change in measures of climate, such as average temperature, precipitation, or wind patterns over a period of time. Climate change may result from natural factors, natural processes, and human activities that change the composition of the atmosphere and alter the surface and features of the land. Significant changes in global climate patterns have recently been associated with global warming, an average increase in the temperature of the atmosphere near the Earth's surface, attributed to accumulation of greenhouse gas (GHG) emissions in the atmosphere. Greenhouse gases trap heat in the atmosphere, which in turn heats the surface of the Earth. Some GHGs occur naturally and are emitted to the atmosphere through natural processes, while others are created and emitted solely through human activities. Climate change models predict changes in temperature, precipitation patterns, water availability, and rising sea levels, and these altered conditions can have impacts on natural and human systems in California that can affect California's public health, habitats, ocean and coastal resources, water supplies, agriculture, forestry, and energy use (SOURCE V.1b, DEIR volume).

The most common GHG that results from human activity is carbon dioxide, followed by methane and nitrous oxide. The primary contributors to GHG emissions in California are transportation (about 37 percent), electric power production (24 percent), industry (20 percent), agriculture and forestry (6 percent), and other sources, including commercial and residential uses (13 percent). Approximately 81 percent of California's emissions are carbon dioxide produced from fossil fuel combustion (SOURCE V.1b, DEIR volume).

In 2006, the California Legislature passed the Global Warming Solutions Act of 2006 (AB 32), which sought to reduce GHG emissions generated by California to 1990 emissions levels by the year 2020. AB 32 defines GHGs to include carbon dioxide, methane, nitrous oxide, hydrocarbons, perfluorocarbons and sulfur hexafluoride. In 2016, the Legislature followed up with SB 32, which requires California, by 2030, to reduce its statewide GHG emissions so that they are 40 percent below those that occurred in 1990.

In enacting both AB 32 (2006) and SB 32 (2016), the Legislature codified some of the ambitious GHG reduction targets included within certain Executive Orders issued by Governors Schwarzenegger and Brown. The 2020 statewide GHG reduction target in AB 32 was consistent with the second of three statewide emissions reduction targets set forth in former Governor Schwarzenegger's 2005 Executive Order known as S-3-05, which is expressly mentioned in AB 32. (See Health & Safety Code section 38501, subd. (i).) That Executive Branch document included the following GHG emission reduction targets: by 2010, reduce GHG emissions to 2000 levels; by 2020, reduce GHG emissions to 1990 levels; by 2050, reduce GHG emissions to 80 percent below 1990 levels. To meet the targets, the Governor directed several State agencies to cooperate in the development of a climate action plan. The Secretary of Cal-EPA leads the Climate Action Team, whose goal is to implement global warming emission reduction programs identified in the Climate Action Plan and to report on the progress made toward meeting the emission reduction targets established in the executive order.

In 2015, Governor Brown issued Executive Order, B-30-15, which created a "new interim statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 is established in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050." SB 32 codified this target.

In 2018, Governor Brown issued Executive Order B-55-18, which established a statewide goal to "achieve carbon neutrality as soon as possible, and no later than 2045, and maintain and achieve negative emissions thereafter." The order directs the CARB to work with other State agencies to identify and recommend measures to achieve those goals.

The California Air Resources Board (CARB) is the lead agency for implementing AB 32 and SB 32. In accordance with these statutes, CARB conducts an annual statewide GHG Emission Inventory that provides estimates of the amount of GHGs emitted to the atmosphere by human activities within California. In accordance with requirements of AB 32, CARB adopted an Initial Scoping Plan in 2008 and is required to update the scoping plan at least every five years. The First Update to the Scoping Plan, approved in 2014, established a 2030 emissions target of 40 percent below 1990 levels. The 2017 Scoping Plan identified a balanced mix of strategies to meet the State's 2030 GHG limit.

The current 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan) was approved by CARB on December 15, 2022. The 2022 Scoping Plan lays out a path not just to carbon neutrality by 2045, but also to the 2030 GHG emissions reduction target. The 2022 Scoping Plan analyzed four scenarios, with the objective of informing the most viable path to remain on track to achieve the 2030 GHG reduction target. The scenario modeling indicates that, if the plan described in the Proposed Scenario is fully implemented, and done so on schedule, the State would cut GHG emissions by 85 percent below 1990 levels, result in a 71 percent reduction in smog-forming air pollution, reduce fossil fuel consumption by 94 percent, and create 4 million new jobs, among other benefits (SOURCE V.5a).

The 2022 Scoping Plan details "Local Actions" in Appendix D, which includes recommendations intended to build momentum for local government actions that align with the State's climate goals, with a focus on local GHG reduction strategies (commonly referred to as climate action planning) and approval of new land use development projects, including through environmental review under

CEQA. The recommendations provided in Appendix D are non-binding and should not be interpreted as a directive to local governments, but rather as evidence-based analytical tools to assist local governments with their role as essential partners in achieving California's climate goals. Appendix D recognizes consistency with a CEQA-qualified GHG reduction plan such as a Climate Action Plan as a preferred option for evaluating potential GHG emission impacts under CEQA (SOURCE V.5b).

The City's *General Plan 2030* includes goals, policies, and actions on climate change, including reducing communitywide GHG emissions 30 percent by 2020, reducing 80 percent by 2050 (compared to 1990 levels), and for all new buildings to be emissions neutral by 2030.

In September 2022, the City adopted the 2030 Climate Action Plan (CAP) that updates the previous 2020 CAP that was adopted in 2012 and outlines measures and actions that are intended to reduce GHG emissions, per capita, by approximately 40 percent below 1990 levels by 2030, meeting the California Senate Bill 32 target for 2030 to reduce total GHG emissions 40 percent below 1990 levels. The CAP also seeks to achieve a carbon neutrality goal by the year 2035 prior to the State's target carbon neutrality goal by 2045.

The CAP includes 31 measures with 152 associated individual actions, intended to reduce GHG emissions throughout the City. The measures include those related building energy use and reduction, transportation, public infrastructure, and other climate restoration and sustainable government measures. Through implementation of its measures and actions, the CAP aims to reduce building energy consumption, vehicle miles traveled, solid waste generation, and increase carbon sequestration.

The General Plan EIR estimated greenhouse emissions that could result from potential development and buildout accommodated by the plan that included 3,350 residential dwelling units with an associated population increase of 8,040 residents and approximately 3,140,000 additional square feet of new commercial, office, and industrial uses by the year 2030 with an estimated 8,665 new employees. The General Plan EIR analysis determined that the GHG emission levels associated with potential buildout that would be accommodated by the General Plan would not be considered substantial compared to long-term forecasts and state and regional targets, and would be less than forecast statewide per-capita emission rates. Implementation of the proposed *General Plan 2030* policies and actions, including the CAP, as well as planned implementation of statewide actions, would further reduce emissions. Therefore, the impact was considered less than significant.

The proposed project would result in an increase of 124 dwelling units and other non-residential uses within the City. This level of development would be within the overall amount of residential development and of the type of infill development desired and evaluated in the General Plan EIR and within remaining potential development as described in Section IV.B. Because the project size is within the total amount of potential residential development and level of GHG emissions analyzed in the General Plan EIR, it is of the type of denser infill development desired under the City's plans, and it includes several of the emissions reducing features recommended in the City's CAP (as explained further below), no impacts peculiar to the site or substantially more severe impacts would occur.

As indicated above, the City updated its CAP in 2030, providing new emissions inventories, GHG emissions reductions targets and specific measures to reduce emissions. While, the proposed project

is within the remaining buildout evaluated in the General Plan EIR, the updated CAP identifies a per capita GHG emissions level of 4.22 MT CO_2e (Metric tons of carbon dioxide equivalent, which is the standard units to measure GHG emissions) for the year of 2019, which is slightly higher than the amount forecast in the 2008 baseline year in the General Plan 2030 EIR (3.82 MT CO_2e per capita per year). The CAP also identifies a target of 2.74 MT CO_2e per capita per year in the year 2030, which is slightly lower than the per capita amount forecast in the General Plan EIR (3.82 MT CO_2e per capita per year). The 2030 CAP specifies reduction measures that can achieve this goal and indicates that the per capita emissions target can be met with implementation of the measures included in the CAP (SOURCE V.3d).

Emissions modeling conducted for the project shows that the proposed project could result in GHG emissions of approximately 4.5 MT CO_2e per capita per year, which is higher than the level forecast in the General Plan EIR and the recently adopted 2030 CAP. However, the CAP targets are not thresholds under CEQA, and the MBARD does not have adopted thresholds for GHG emissions, except for stationary sources. The project includes or can include a number of GHG emission reduction measures presented in the CAP, including the following, which are all considered "high impact actions" in the CAP:

- Prohibition of natural gas in new construction with provision all electric power and appliances (BE-1.1), which is part of the enforcement of the City's natural gas prohibition ordinance (Municipal Code Chapter 6.100)
- Install charging stations for 20 percent of the parking spaces in new multi-family housing and commercial projects (T4.2)
- Reduce off-street parking requirements for new housing developments close to frequent transit service (T3.4)
- Provide secure bike parking in new developments (T1.3)

The proposed project includes features that would reduce GHG emissions, consistent with these measures including in the 2030 CAP, including provision of 15 parking spaces for electric vehicles, provision of 258 bicycle parking spaces, which is approximately 60 more spaces than required by City regulations with nearly half of these spaces being locked, Class I facilities, prohibition of natural gas with an all-electric facility, and overall reduced parking in the downtown area. Inclusion of these measures in the project would reduce the project's incremental and per capita GHG emissions and would comply with an adopted CAP, and thus, the project's incremental contribution to GHG emissions and climate change would not be cumulatively considerable or significant.

The State CEQA Guidelines do not prescribe specific methodologies for performing a GHG emissions assessment, establish specific thresholds of significance, or mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance that are consistent with the manner in which other impact areas are handled in CEQA. Global climate change is a cumulative impact; a project's potential impact results through its incremental contribution combined with the cumulative increase of all other sources of GHGs (CEQA Guidelines sections 15064.4 and 15183.5). There are currently no established thresholds for assessing whether the GHG emissions of the proposed project would be

considered a cumulatively considerable contribution to global climate change. The MBARD does not have an adopted GHG emissions threshold, except it does have an adopted guideline for stationary source projects in which a project would not have not a significant GHG emissions impact if the project emits less than 10,000 metric tons of CO_2e per year or complies with regulations or requirements adopted to implement a statewide, regional or local plan for the reduction or mitigation of GHG emissions (SOURCE V.10c). As indicated above, while the City's CAP has a per capita emissions target, it is not a threshold for the purpose of CEQA analyses.

However, the City's adopted CAP provides a quantification of emissions reductions that would result over time throughout the City through implementation of the measures and actions included in the CAP. For the purposes of CEQA, the City's 2030 CAP serves as a "Qualified Climate Action Plan" that the City can streamline the environmental review process of future projects. Pursuant to CEQA Guidelines section 15064.4(b)(2), a lead agency may consider a project's consistency with an adopted emissions reduction plan in determining significance of a project's GHG emissions. The proposed project does implement some of these measures as explained above, which would reduce the project's incremental contribution to GHG emissions and climate change, and are consistent with the GHG emissions reduction measures included in the City's CAP. The GHG emissions reduction measures included in the City's adopted CAP are considered uniformly applied development standards. Therefore, the project would not result in impacts peculiar to the project or site with implementation of uniformly applied development policies and standards, and no further environmental analysis is required regarding these public services pursuant to Public Resources Code section 21083.3.

(b) Conflicts with Applicable Plans. The project would not conflict with state plans adopted for the purpose of reducing GHG emissions. The General Plan EIR found no impacts related to conflicts with applicable plans related to GHG emissions and reduction strategies.

As described above, the Santa Cruz City Council adopted the 2030 CAP which addresses citywide greenhouse emissions and reduction strategies. The CAP incorporates a variety of measures and actions that focus on continued effort to reduce GHG emissions.

The CAP provides City emissions inventories, identifies emissions reduction target for the year 2030 and beyond, and includes measures and actions that are categorized into the following sections with corresponding measures and actions: building energy; transportation; water, waste, and wastewater; climate restoration; climate economy; and sustainable municipal government. These measures address and cover topics related to building energy consumption, solar programs, building electrification, active/public transportation programs, including: ridesharing, electric vehicles, remote work policy and infrastructure, water consumption, solid waste reduction, wastewater treatment, urban forestry, green jobs, and municipal facilities. Each measure has supporting actions, states the GHG reduction potential, lists which City department is responsible for implementation, and explains the advantages and benefits of the specific action. The CAP also includes an Implementation chapter that outlines funding, implementation accountability, and monitoring / reporting procedures for the measures and actions.

The proposed project includes features that further reduce GHG emissions, consistent with measures included in the 2030 CAP as described above. Furthermore, the project represents a unique mixed-use development consisting of a public library, affordable housing, commercial retail, and daycare that would be located in an accessible location to the community. By establishing these uses in close proximity to each other, and downtown Santa Cruz, the project encourages active transportation and could reduce the number of vehicle miles traveled within the City. For these reasons, the project would not conflict with provisions of the CAP.

In addition, AMBAG, as a metropolitan planning organization (MPO), is required by state law (2008 Senate Bill (SB) 375) to develop a Sustainable Communities Strategy (SCS)—an integrated transportation, land use, and housing plan that addresses ways to accommodate future population growth and reduce greenhouse gas emissions from cars and light trucks. *Moving Forward Monterey Bay 2045* is the MTP/SCS for the three-county Monterey Bay Area (SOURCE V.4b). The MTP/SCS identifies Opportunity Areas with the highest chance for successful sustainable growth in the future. Opportunity Areas are generally located where Transit Priority Areas (TPAs) and Economic Development Areas (EDAs) within the AMBAG region overlap. An Opportunity Area is an area within 0.5 miles of an existing or planned "high-quality transit corridor" (as defined in California Public Resources Code section 21064.3) that has the potential for transit-oriented development, including mixed use. The proposed project is not located within an identified Opportunity Area, but given its proximity to transportation corridors and activity centers, the proposed project would be consistent with goals and policies of the SCS Strategy.

Given the foregoing, the project would not result in impacts related to conflicts with plans related to GHG emissions and reduction strategies that would be peculiar to the site or substantially more severe than described in the General Plan 2030 EIR. No further environmental analysis is required pursuant to Public Resources Code section 21083.3 and the State CEQA Guidelines section 15183.

9. HAZARDS AND HAZARDOUS MATERIALS **Would the project:**	**Where Impact is Addressed in Downtown Plan Amendments EIR**	**Where Impact is Addressed in General Plan 2030 EIR**	**Does Project Involve New Significant Impacts or Substantially More Severe Impacts?**	**Any New Impacts Peculiar to Project or Site?**	**Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards**
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	DEIR Appendix A p. 35	DEIR pp. 4.14-9 to 4.14-10	No	No	None
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	DEIR Appendix A p. 35	DEIR pp. 4.14-5 to 4.14-7, 4.14-9 to 4.14-11	No	No	None

9. HAZARDS AND HAZARDOUS MATERIALS **Would the project:**	Where Impact is Addressed in Downtown Plan Amendments EIR	Where Impact is Addressed in General Plan 2030 EIR	Does Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Impacts Peculiar to Project or Site?	Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ miles of an existing or proposed school?	DEIR Appendix A p. 35	DEIR pp. 4.14-12	No	No	None
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	DEIR Appendix A p. 35	DEIR pp. 4.14-5 to 4.14-7	No	No	None
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?	DEIR Appendix A p. 35	Not Applicable	Not Applicable	Not Applicable	Not Applicable
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	DEIR Appendix A pp. 35 to 36	DEIR pp. 4.6-2 to 4.6-5, 4.6-33 to 4.6-37	No	No	None
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury or death involving wildland fires?	DEIR Appendix A p. 36	DEIR pp. 4.6-3 to 4.6-4, 4.6-34 to 4.6-35	No	No	General Plan Actions HZ1.5.3, HZ1.5.4 Standard Fire Department Conditions of Approval

(a-b, c) Use or Release of Hazardous Materials or Creation of Hazard. The proposed project consists of a mixed-use project, consisting of residential, library, childcare facility, and commercial land uses, which would not involve the routine transport, use, or disposal of hazardous materials or wastes, and would not result in the creation of a public health hazard. The project site is not within ¼ mile of an existing or proposed school, and would not result in stationary emission sources or hazardous emissions.

The General Plan EIR concluded that new development accommodated by the General Plan that utilizes hazardous materials or generates hazardous waste would be regulated pursuant to federal,

state, and local laws to ensure proper transportation, handling, and disposal, and with adherence to local and state regulations, as well as implementation of policies and actions, impacts related to creation of hazards due to hazardous material transport, use, or disposal were considered less than significant. Policy HZ4.4 and its supporting actions call for reduction of the risk of exposure to hazardous materials, including regulating the siting and permitting of businesses that handle hazardous materials. Policies HZ4.1 and HZ4.2 call for regulation of hazardous wastes, and HZ4.3 calls for quick and proper response to emergencies. Furthermore, Policy NRC3.2 discourages the use of environmentally harmful pesticides and herbicides.

The proposed project would result in development and land uses that would be within the overall scope of development evaluated in the General Plan EIR, and would not result in industrial or other types of uses that would use and/or dispose of hazardous materials other than routine household and business cleaning supplies. Thus, the proposed project would not result in significant impacts not otherwise addressed in the General Plan EIR or peculiar to the project or site. No further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

(d) Exposure to Hazardous Materials. The project site is not included on the list of hazardous material sites compiled pursuant to Government Code section 65962.5. The project site is not included on a list of hazardous waste sites compiled pursuant to Government Code section 65962.5. The following Cortese List online data resources (SOURCE V.9b) were reviewed during the preparation of this document: (1) the list of hazardous waste and substances sites from the Department of Toxic Substances Control's (DTSC's) EnviroStor database (SOURCE V.9a); (2) the list of leaking underground storage tank sites from the State Water Resources Control Board's (SWRCB's) GeoTracker database (SOURCE V.9e); (3) the list of solid waste disposal sites identified with Waste Constituent Above Hazardous Waste Levels Outside the Waste Management Unit (SOURCE V.9c); (4) the list of active Cease and Desist Orders and Cleanup and Abatement Orders from the SWRCB (SOURCE V.9f); and (5) the list of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC (SOURCE V.9d). In addition, an Environmental Site Assessment prepared for the project found that the project site is not located on any of the DTSC lists of hazardous materials sites and was not listed in any of the regulatory databases (Weber, Hayes & Associates 2022).

A combined Phase I & Phase II Environmental Site Assessment (ESA) was performed for the project that evaluates the potential presence of environmental hazards and risks associated with the subject property. The ESA documents the investigation steps, regulatory records, site inspection, and interview with persons with knowledge of the site. The Phase I records search and historic document review did not reveal any environmental condition of concern for the project site (SOURCE V.20).

The Phase I/II ESA did indicate that there are a number of commercial properties with chemical releases in the vicinity of the project site; the majority of these chemical release sites have undergone case closure and obtain regulatory No Further Action status. However, the Phase I ESA indicates there is well-documented, widespread low-concentration solvent plume (TCE, cis-1,2-DCE, & Vinyl Chloride) present in downtown area groundwater that is upgradient of the project site. This dilute plume has some limited potential to encroach/flow beneath the project site, based on the southwesterly groundwater flow direction in the area. This relatively low-concentration contaminant

groundwater plume, which remains an open agency case, and is considered a Controlled Recognized Condition (CREC). In addition to documenting the location of known groundwater plumes, the Phase I ESA also evaluated the potential for pollutant plume off-gassing. The upgradient, relatively low-concentration solvent plume described above appears to be the only documented release having the potential for vapor encroachment (SOURCE V.20).

Historical land use records also document the presence of a long term of a dry cleaner to the north (upgradient) and one to the southwest (side/downgradient) of the project site. Dry cleaners are known to use relatively large quantities of chemicals, discharge dry cleaning solvent wastewater to drainage lines, and generate chemical wastes. Neither of the two cleaner businesses have any agency-documented chemical releases. However, the Phase I ESA notes that dry cleaning businesses in general have a record of solvent-laden wash water releases to drainage sumps and drainage piping so there exists some elevated potential risk of undocumented chemical releases that could encroach beneath the project site (SOURCE V.20).

A Phase II ESA was performed, which included a soil vapor and groundwater sampling program. The Phase II ESA was implemented to evaluate subsurface project site conditions. Sampling for the Phase II ESA involved collecting five groundwater samples, nine soil vapor samples, and eighteen soil core samples. The testing found trace-to-low detection of two common urban contaminants – gasoline range total petroleum hydrocarbons and solvents in groundwater beneath the site that concentration levels were detected well below established water quality and environmental screening thresholds (SOURCE V.20).

The soil vapor sample results contained relatively low-concentration volatile concentrations that included fuel-based and solvent-based volatile contaminants; two sample locations were shown to have concentrations that slightly exceeded the land use threshold for Benzene (fuel-based contamination), which is considered a common urban contaminant. Two other sample locations were shown to have low concentrations of two common degreaser compounds historically used for dry cleaning and automotive repair operations, however; the results show low concentrations levels were reported as relatively low, however, exceeding residential land use thresholds. Neither of these contamination levels exceed the commercial land use screening thresholds (SOURCE V.20).

The Phase II sampling and testing program results showed that the bulk of the shallow soils (approximately one to three feet deep) across the project site were impacted with elevated concentrations of lead and arsenic that are from typical urban sources (lead-based paint and weed and rodent control). Most of the elevated metal concentrations are characterized as “non-hazardous” and can be disposed of at a local, municipal landfill. However, much of the shallow soils across the project site exceeded residential (unrestricted) or commercial land use screening threshold limits, but can be graded/removed and disposed of during development activities (SOURCE V.20).

The removal and disposal of these soils would be conducted in accordance and in compliance with applicable local and state regulations governing these activities. The Phase I/II ESA recommends that of the report be submitted the Santa Cruz County Environmental Health Services (SCC-EHS), as the overseeing agency, for their review and comment. The Phase I/II ESA also recommends that future earthworks and soil handling will need to be managed under an agency-approved Soil Management

Plan and SCC-EHS for which the agency will likely require additional soil vapor evaluation to confirm vapor intrusion is not a concern. The Soil Management Plan would also likely include supplemental soil delineation testing to further define the limits of shallow soil contamination and to provide accepting landfills with required acceptance data.

The proposed project includes demolition of one existing commercial building, which may contain asbestos and lead-based paint that could expose workers to a hazardous material release. The General Plan EIR found that all demolition activities would be required to be undertaken according to OSHA standards to protect workers from asbestos and lead based paint. Any demolition of buildings containing asbestos also would be required to comply with the MBARD's Rule 306 that requires reporting and investigation of certain buildings with asbestos as established under federal law. Under federal law, a building must be inspected for asbestos prior to demolition or renovation, and federal and state agencies must be notified prior to demolition. According to the State Air Resources Control board, removal and disposal of asbestos procedures and controls must be specified in the notification form. The federal government banned consumer use of lead-based paint (LBP) in 1978 and many, but not all, asbestos-containing materials (ACMs) were banned in construction products in 1989.

The commercial building to be demolished was constructed originally in 1941 (SOURCE V.18). Therefore, it has the potential to include LBP and ACMs. Project construction, including demolition, would be required to comply with applicable state regulations regarding LBP work practices, including testing and abatement. The removal of ACMs would be subject to the Asbestos Demolition and Renovation Program administered by the MBARD, which protects the public from uncontrolled emissions of asbestos through enforcement of the Federal Asbestos Standard. The Program includes survey and notification requirements prior to beginning a project, as well as work practice standards and disposal requirements. Additionally, under California law, fluorescent lamps cannot be disposed as municipal waste. Fluorescent tubes and bulbs may be managed as universal wastes under Title 22, Chapter 23 of the California Code of Regulations and are typically recycled.

The General Plan EIR concluded that new development accommodated by the General Plan could result in exposure to hazardous materials due to proximity to contaminated sites and/or with removal of hazardous building materials during demolition, but with adherence to federal, state, and local regulations, impacts would be less than significant. The preparation and implementation of Soil Management Plan for removal of contaminated soils during construction would be conducted with oversight from the County Environmental Health Department, and the City has designated as the County as the entity responsible for enforcing hazardous materials regulations. Thus, removal and disposal would be conducted in accordance with adopted regulations that would be considered uniformly applied development standards. In addition, a standard condition of approval is included in the project to require testing for asbestos and lead-based paint prior to demolition with approval from MBARD if hazardous materials are found and require removal. For these reasons, the proposed project would not result in exposure to hazardous materials and would not result in significant impacts not otherwise addressed in the General Plan EIR or peculiar to the project or site with compliance with applicable regulations and the application of uniformly applied development standards that will ensure the avoidance of any significant effects. No further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

(e) Airport Safety. The project site is not located within two miles of a public airport or air strip and would not be subjected to potential aircraft hazards.

(f) Emergency Response. Existing access to the project site is provided via Cathcart Street. The vehicular entrance from Cathcart Street would allow for two-way access to the project's parking garage. A 20-foot-wide alley along the eastern edge of the project site would provide one-way access from Cathcart Street to Lincoln Street for emergency vehicles to access the area in the event of an emergency. The project would not include any changes to exiting public roadways that provide emergency access to the site, except for access improvements into the site. Therefore, the project would not impair implementation of or physically interfere with an emergency response or evaluation plan, and would not result in an impact. Thus, the proposed project would not result in significant impacts not otherwise addressed in the General Plan EIR or peculiar to the project or site. No further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

(g) Wildland Fire Hazards. The General Plan EIR indicated that future growth could result in an indirect increased risk of wildfires in the urban-rural interface and adjacent to the City's greenbelt areas, but none of the major vacant sites within the City are within identified fire hazard zones. The EIR indicates that areas targeted as "likely" to have a wildland fire include the Arroyo Seco/Meder Canyon, DeLaveaga, Pogonip, Moore Creek area and Arana Gulch, and future growth in these areas could result in an indirect increased risk of wildfires in the urban-rural interface and adjacent to the City's greenbelt areas. The General Plan EIR found that the City's adopted "Local Hazard Mitigation Plan" includes mitigation strategies to avoid or reduce potential wildfires and that General Plan actions also seek to ensure that new development is sited and designed to accommodate facility emergency access and response (HZ1.2.5, HZ1.2.6, HZ1.5.5) and that street widths are adequate to safely accommodate emergency vehicles (M3.2.3). With implementation of the General Plan policies and actions as well as implementation of the City's "Local Hazard Mitigation Plan", the General Plan EIR concluded that indirect impact on fire protection services would be less than significant. Specifically, General Plan policies and actions related to future development include measures aimed are reducing wildfire hazards (HA1.5, HZ1.5.1) and regulating development siting/design to reduce wildland fires (HZ1.5.3 [setbacks], HZ1.5.4 [fire-resistant/retardant building materials]).

According to maps developed for the City's *General Plan 2030* and included in the General Plan EIR, the project site is not located within a fire hazard area (SOURCE V.1b, DEIR Figure 4.6-1). The project site is not located within or adjacent to fire hazard areas identified in the General Plan EIR. Thus, the proposed project would not result in significant impacts not otherwise addressed in the General Plan EIR or peculiar to the project or site. No further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

10. HYDROLOGY AND WATER QUALITY **Would the project:**	Where Impact is Addressed in Downtown Plan Amendments EIR	Where Impact is Addressed in General Plan 2030 EIR	Does Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Impacts Peculiar to Project or Site?	Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?	DEIR pp. 4.5-12 to 4.5-13	DEIR pp. 4.6-22, 4.7-8 to 4.7-12, 4.7-24 to 4.7-25	No	No	City Municipal Code Section 24.14.060, Chapters 16.19 and 18.45 regarding water quality and erosion control
b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?	DEIR Appendix A p. 36	DEIR pp. 4.5-6 to 4.5-7, 4.5-39 to 4.5-42, 4.7-24 to 4.7-25	No	No	City Municipal Code section 24.14.090
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:	DEIR pp. 4.5-11 to 4.5-12	DEIR pp. 4.7-5 to 4.7-8, 4.7-22 to 4.7-24	No	No	City Municipal Code section 24.14.050, Chapter 16.19 and 18.45 regarding runoff control, grading and erosion control
(i) Result in substantial erosion or siltation on- or off-site;	DEIR pp. 4.5-11 to 4.5-12	DEIR pp. 4.7-5 to 4.7-8, 4.7-22 to 4.7-24	No	No	See above
(ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;	DEIR pp. 4.5-11 to 4.5-12	DEIR pp. 4.7-5 to 4.7-8, 4.7-22 to 4.7-24	No	No	See above
(iii) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff; or	DEIR pp. 4.5-11 to 4.5-12	DEIR pp. 4.7-7 to 4.7-8, 4.7-22 to 4.7-24	No	No	*General Plan 2030* Action CC5.1.8 and Municipal Code Chapters 16.19 and 24.14 regarding drainage and BMPs
(iv) Impede or redirect flood flows?	DEIR pp. 4.5-13	DEIR pp. 4.7-12 to 4.7-14, 4.7-25 to 4.7-27	No	No	*General Plan 2030* Actions CC5.1.7,

10. HYDROLOGY AND WATER QUALITY Would the project:	Where Impact is Addressed in Downtown Plan Amendments EIR	Where Impact is Addressed in General Plan 2030 EIR	Does Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Impacts Peculiar to Project or Site?	Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards
					HZ6.4.6, HZ6.4.10
d) In flood hazard, tsunami or seiche zones, risk release of pollutants due to project inundation?	DEIR pp. 4.5-13	DEIR pp. 4.7-15, 4.7-25 to 4.7-26, 4.10-14	No	No	General Plan Policy HZ6.6 and actions
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?	DEIR Appendix A p. 36	DEIR pp. 4.7-17	No	No	None

(a) Water Quality/Discharges. The proposed project does not involve any discharges that would violate any water quality standards or waste discharge requirements.

Within urbanized areas such as the City, pollutants frequently associated with stormwater include sediment, nutrients, oil and grease, heavy metals, and litter. The primary sources of stormwater pollution in urban areas include automobiles, parking lots, landscape maintenance, construction, illegal connections to the stormwater system, accidental spills, and illegal dumping.

Urban runoff and other "non-point source" discharges are regulated by the 1972 Federal Clean Water Act (CWA), through the National Pollutant Discharge Elimination System (NPDES) permit program that has been implemented in two phases through the California Regional Water Quality Control Boards (RWQCB). Phase I regulations, effective since 1990, require NPDES permits for storm water discharges for certain specific industrial facilities and construction activities, and for municipalities with a population size greater than 100,000. Phase II regulations expand the NPDES program to include all municipalities with urbanized areas and municipalities with a population size greater than 10,000 and a population density greater than 1,000 persons per square mile (SOURCE V.1b. DEIR volume).

The City has developed a Storm Water Management Program (SWMP) in order to fulfill the requirements of the Phase II NPDES General Permit for Discharges of Storm Water from Small Municipal Separate Storm Sewer Systems (MS4) (General Permit) and to reduce the amount of pollutants discharged in urban runoff. In compliance with the Phase II regulations, the City's comprehensive SWMP is designed to reduce the discharge of pollutants to the Maximum Extent Practicable (MEP) and to protect water quality (SOURCE V.1b, DEIR volume). The City also adopted an ordinance for "Storm Water and Urban Runoff Pollution Control" (Chapter 16.19 of the City's Municipal Code), as part of its Storm Water Management Plan in accordance with the RWQCB's requirements. The ordinance identifies prohibited discharges and required Best Management Practices (BMPs) for construction and new development. City regulations (Municipal Code section

16.19.140) requires that any construction project, including those undertaken under any permit or approval granted pursuant to Titles 15 (Streets and Sidewalks), 18 (Buildings and Construction), and 24 (Zoning) of the Municipal Code, shall implement best management practices including the City's mandatory BMPs as detailed in the latest BMP manual published by the City's Public Works Department. BMPs shall be maintained in full force and effect during the duration of the project. The City's BMP manual requires a development project to include a structural or treatment control BMPs, or a combination of BMPs, to reduce potential pollutant loadings in storm water runoff to the maximum extent practicable.

The City's mandatory BMPs, as detailed in the latest BMP manual published by the City's Public Works Department, must be implemented to protect water quality into the municipal storm drain system. The project would also be subject to the Central Coast Post-Construction Requirements (PCRs) that were enacted by the Central Coast RWQCB in July 2013. The PCRs are for projects that create and/or replace ≥2,500 square feet of impervious surfaces. Based on the amount of new/replaced impervious surface area created by the project (44,440 square feet), the project would be required to comply with Tiers 1 through 4 (Site Design, Water Quality Treatment, Runoff Retention, and Peak Management). However, the project is exempt from Tier 4 requirements because stormwater runoff from the project site discharges to a continuous underground storm drain system that discharges to the marine nearshore waters.

The project would include drainage features to collect and treat stormwater runoff. The project site is currently developed, and its impervious surface area would decrease from 65,560 square feet to 44,440 square feet with the proposed project. A stormwater control plan (SWCP) has been prepared for the project that details drainage features to collect and treat stormwater runoff. The project proposes to install a biofiltration area and mechanical filtration system. Stormwater would be collected and filtered by eight new bioretention basins surrounding the perimeter of the site; stormwater would also be collected at the project's green roof (SOURCE V.13). Other measures also include provision of porous pavement on the perimeter of the site. Stormwater would be filtered through this system before it is discharged into existing City storm drains. Furthermore, the proposed project's parking garage would eliminate the existing surface parking lot, which would reduce conveyance of urban pollutants typically found in parking lots into the City's storm drain system.

Construction activity on projects that disturb one or more acres of soil must obtain coverage under the State's General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 99-08-DWQ). Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation. The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP must list best management practices (BMPs) that the discharger will use to protect stormwater runoff and the placement of those BMPs. A Notice of Intent (NOI) and SWPPP must be prepared prior to commencement of construction. Proposed grading and development on the project site would disturb more than one acre and, thus, the project would be subject to the Construction General Permit and preparation of a SWPPP. In addition, the project would be required to implement the City's regulatory requirements and BMPs, as detailed in the "Stormwater Best Management Practices Manual" published by the City's Public Works Department.

The General Plan EIR concluded that with implementation of General Plan policies and adherence to City regulations to protect water quality, impacts from future development on water quality, including potential erosion, would be less than significant. Compliance with regulations contained in the City's Municipal Code regarding implementation of stormwater BMPs, grading requirements and implementation of erosion control plans (Chapters 16.19 and 18.45 and section 24.14.060), as well as, preparation and implementation of a SWPPP during construction, would mitigate potential storm runoff water quality and erosion impacts during earthwork and construction as discussed above and would be considered application of uniformly applied development standards. The Downtown Plan Amendments EIR and General Plan EIR concluded that potential impacts related to water quality would be less than significant with compliance with City stormwater regulations and BMPs and implementation of SWPPP and erosion control plans as may be required. Thus, the proposed project would not result in significant water quality impacts not otherwise addressed in the General Plan and Downtown Plan Amendments EIRs, and the project would not result in water quality impacts peculiar to the site or project with application of uniformly applied development standards. No further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

(b) Groundwater. The City is primarily developed, and no groundwater recharge areas are identified or mapped in the City's *General Plan 2030* or General Plan EIR; groundwater resources utilized as part of the City's water supply are obtained from aquifers outside of the City (SOURCE V.1b. DEIR volume). The *General Plan 2030* includes goals, policies and actions that set forth measures to protect groundwater resources and supporting actions seek to safeguard existing surface and groundwater sources. The General Plan EIR concluded that development accommodated by the General Plan would not be located within groundwater recharge areas and would have no effect on recharge capabilities, and therefore, would not deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table. Development within groundwater mapped recharge areas also is regulated in Municipal Code section 24.14.090 in order to minimize adverse environmental impacts.

The project site is located within a developed area. The project would be connected to the City's public water system and does not include the use of a groundwater well. Therefore, the project would not affect groundwater supplies or recharge or impede sustainable groundwater management of the basin. Thus, the proposed project would not result in significant water quality impacts not otherwise addressed in the General Plan EIR, and the project would not result in water quality impacts peculiar to the site or project. No further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

(c[i-iii]) Drainage. The project site is located within a developed urban area. The project site is currently developed with 65,096 square feet of impervious surface area; the project proposes a net decrease of 20,656 square feet impervious surface area through the construction of the new building, resulting in a total of 44,440 square feet of impervious surface on-site. The project site would connect to the City's existing storm drain located in Cathcart Street and Lincoln Street. As described above in subsection (a), stormwater would be collected and treated onsite with a new storm drain system, including bioretention areas and green roof, before being discharged into the City's storm drains. The proposed project would not alter existing drainage patterns. The project's stormwater system is

designed so that the project stormwater flows would exceed the capacity of storm water facilities or result in substantial erosion.

The General Plan EIR and Downtown Amendments Plan EIR concluded that potential impacts related to increased stormwater runoff would be a less-than-significant impact with implementation of General Plan policies and actions that require new development to maintain pre-development runoff levels (CC5.1.8). The project would not alter existing drainage patterns as it would lead to a net decrease in onsite impervious surface by approximately 20,650 square feet. Furthermore, section 24.14.050 of the City's Municipal Code requires preparation of a drainage plan. Drainage improvements, per this plan, would be required to be designed in accordance with City standards and Public Works requirements in order to meet water quality standards and maintain pre-project runoff levels. Implementation of measures identified in the Stormwater Control Plan in accordance with requirements of the City's Municipal Code would be considered application of uniformly applied development standards. The proposed project would not result in significant drainage impacts not otherwise addressed in the General Plan EIR or peculiar to the site or project with implementation of uniformly applied development standards related to stormwater management. No further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

(c [iv], d) Flood Hazard Areas and Risk of Release of Pollutants. According to maps prepared for the *General Plan 2030* and included in the General Plan EIR, the project site is located within an A99 Flood Zone as designated by the Federal Emergency Management Agency (FEMA) (SOURCE V.1b, DEIR Figure 4.7-1). This designation indicates that the project area is subject to inundation by a 1-percent-annual-chance flood event that will be protected by a Federal flood control system where construction has reached specified legal requirements. A99 Zones are areas where enough progress has been made on the construction of a protection system, such as dikes, dams, and levees, to consider it complete for insurance rating purposes, which in this case are improvements to the levee adjacent to San Lorenzo River (SOURCE V.1b). The project site also is within a mapped tsunami inundation zone (SOURCE V.1b, DEIR Figure 4.7-2). However, the National Oceanic and Atmospheric Administration operates a tsunami warning system that gives several hours' notice to allow evacuation of threatened areas (SOURCE V.1b, DEIR volume).

With implementation of the proposed policies and actions related to flood control and adherence to other City plans and regulations, the General Plan EIR concluded that future development would not result in substantial risk of exposure of structures or people to flood hazards and impacts would be less than significant. The Downtown Plan Amendments EIR also concluded that compliance with federal flood requirements and implementation of City plans and programs, impacts resulting from future development would be less than significant. The proposed project would not result in significant flood hazards not otherwise addressed in the General Plan and Downtown Plan EIRs or peculiar to the site or project. No further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

Sea Level Rise. The General Plan EIR reported that sea level rise, storms of increasing intensity, and an alternating series of floods and droughts threaten the City of Santa Cruz in the coming decades. The EIR indicated that the City was in the process of drafting a "Climate Change Adaptation Plan" to identify and evaluate the potential impacts of climate change on the City of Santa Cruz, analyze the

severity of the hazards that the City faces, and develop potential adaptation responses to reduce the risk and exposure of the City to these hazards. The City prepared a "Climate Adaptation Plan" with funding from FEMA (SOURCE V.2b). The objectives of this Plan are to identify and evaluate the potential impacts of climate change on the City of Santa Cruz, analyze the severity of the hazards that the City faces, and develop potential adaptation responses to reduce the risk and exposure of the City to these hazards. The potential risks were identified in a "Vulnerability Study" that identified potential facilities vulnerable to risks of sea level rise, including beaches, the City's wastewater treatment facility, and the Santa Cruz Harbor (SOURCE V.1b, DEIR volume).

The Climate Adaptation Plan Update 2018-2023, adopted by the City Council in October 2018, further addresses sea level rise. The project site is not located within an area identified as being subject to potential effects of sea level rise; it is located in the downtown area, away from zones along the coastal areas of the City, that are subject to sea level rise hazards. The project site also doesn't contain any critical facilities, listed in the Climate Adaptation Plan, that provide essential services and protect life and property within the City. Thus, the proposed project would not result in significant impacts related to sea level rise not otherwise addressed in the General Plan EIR related to sea level rise, and the project would not result in impacts peculiar to the site or project. No further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

(e) Conflict with Plans. The project site is not located adjacent to a water course or water body. The proposed project would not result in new discharges or conflict with provisions in the Central Coast Basin Plan as all stormwater would be directed into the City's storm drain system with pre-treatment in a bioretention basin to prevent water quality degradation in accordance with the City's stormwater requirements. A sustainable groundwater management plan for the area in which the project is located has not yet been prepared. Therefore, the project would not conflict with or obstruct implementation of an adopted water quality or groundwater plans.

11. LAND USE **Would the project:**	**Where Impact is Addressed in Downtown Plan Amendments EIR**	**Where Impact is Addressed in General Plan 2030 EIR**	**Does Project Involve New Significant Impacts or Substantially More Severe Impacts?**	**Any New Impacts Peculiar to Project or Site?**	**Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards**
a) Physically divide an established community?	DEIR p. 4.9-4	DEIR pp. 4.1-21 to 4.1-22	No	No	None
b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?	DEIR pp. 4.9-5 to 4.9-8 FEIR pp. 3-5-37, 4.9-9 to 4.9-11	DEIR pp. 4.1-9 to 4.1-14, 4.1-25 to 4.1-27	No	No	None

(a) Physically Divide an Established Community. The project site is located within the developed, downtown, urban area of the City, and the project would not physically divide an established

community. The General Plan EIR concluded that future development accommodated by the General Plan would result in no impact because the City of Santa Cruz is primarily built out and as an established community, new development accommodated by the proposed *General Plan 2030* would be considered infill development. Thus, new development would be within an established community and would not result in a physical division of an established community. Furthermore, proposed goals, policies and actions in the draft *General Plan 2030* limit potential expansion of the City's boundaries and seek to maintain the City's urban development limits. Thus, the proposed project would not result in significant impacts not otherwise addressed in the General Plan EIR or peculiar to the project or site. No further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

(b) Conflict with Policies and Regulations. As indicated in Section IV.B., the proposed project is consistent with *General Plan 2030* land use designations. The proposed use is consistent with General Plan and zone district land use designations as discussed in section IV.B and C. Based on the analyses contained in this Environmental Checklist and City staff review of the *General Plan 2030*, the proposed project would not result in a conflict with any policies or regulations adopted for the purpose of avoiding or mitigating an environmental impact. The proposed project is consistent with the General Plan, and the project would not result in land use impacts peculiar to the site or project. No further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

12. MINERAL RESOURCES **Would the project:**	**Where Impact is Addressed in Downtown Plan Amendments EIR**	**Where Impact is Addressed in General Plan 2030 EIR**	**Does Project Involve New Significant Impacts or Substantially More Severe Impacts?**	**Any New Impacts Peculiar to Project or Site?**	**Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards**
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	DEIR Appendix A p. 16	DEIR pp. 4.15-3 to 4.15-4, 4.15-6	No	No	None
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	DEIR Appendix A p. 16	DEIR pp. 4.15-3 to 4.15-4, 4.15-6	No	No	None

(a-b) Loss of Mineral Resources. There are no mineral resources within the City (SOURCE V.1b, DEIR volume). The project therefore would not result in any impact peculiar to the parcel or project with respect to this impact, and no further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

13. NOISE Would the project result in:	Where Impact is Addressed in Downtown Plan Amendments EIR	Where Impact is Addressed in General Plan 2030 EIR	Does Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Impacts Peculiar to Project or Site?	Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies?	DEIR Appendix A pp. 38 to 40	DEIR pp. 4.13-4 to 4.13-8, 4.13-10 to 4.13-22	No	No	GP Action HZ3.1.1, HZ3.1.2, HZ3.1.3, HZ3.1.5, HZ3.2.3 Municipal Code section 24.14.260, Municipal Code section 18.04.030 (California Building Code adoption, including Sound Transmission Control)
b) Generation of excessive ground borne vibration or ground borne noise levels?	DEIR Appendix A pp. 39 to 40	DEIR pp. 4.13-10, 4.13-20 to 4.13-22	No	No	GP Action HZ3.1.3, HZ3.1.5 Municipal Code section 24.14.220
c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	DEIR Appendix A p. 38	Not Applicable	No	No	None

(a) Noise Increases. The primary existing noise source within the project area is traffic noise along area streets. The project site is not within a noise contour mapped per the General Plan; Front Street to the east of the project site is within a 60-dBA noise contour according to the *General Plan 2030* (SOURCE V.1b, DEIR Figures 4.13-1 and 4.13-2).

The *General Plan 2030* includes goals, policies and actions that set forth measures to avoid and minimize adverse impacts regarding exposure to noise. In particular, noise-land use compatibility standards will be applied to all new residential projects (HZ3.2.1), and the General Plan seeks to ensure that noise standards are met in the siting of noise-sensitive uses (HZ3.2). The policies also establish an interior noise level of 45 dBA for all residential uses (HZ3.2.3), consistent with state law. Municipal Code section 18.040.030 adopts State of California building codes as part of the City's

Building Code, and section 18.36.010 refer to CBC sound transmission control. The General Plan indicates that exterior noise levels to 65 dBA are normally acceptable for new multi-family development; noise levels to 70 dBA are considered conditionally acceptable and typically require an acoustical study to determine whether additional insulation or window treatments are required. Normal noise attenuation within residential structures with closed windows is about 20 dBA. As noted above, the project site is not mapped within a noise contour per the General Plan. Therefore, the project conditions would be below the 65-dBA exterior noise threshold as designated by the General Plan EIR.

At the end of 2018, amendments to the State CEQA Guidelines were adopted by the State of California that included changes to the Appendix G environmental checklist, including elimination of questions related to exposure to noise. The questions focus on the potential permanent and temporary noise generated by a project. The proposed project would include residential development, as well as a new library, a childcare facility, commercial space and a parking garage that would be enclosed. None of the project uses residential, library, commercial, or childcare facility)not typically associated with activities that would generate substantial permanent increases in ambient noise levels. The proposed parking garage would be enclosed, which would generally create a shield to vehicular noise, and would replace the existing surface public parking lot on the project site.

A project Noise Impact Analysis (SOURCE V.19) evaluated potential operational and construction noise associated with the project and found that the proposed project would not result in a substantial increase in permanent noise levels. The analysis evaluated operational noise generated by mechanical equipment and indirect noise associated with project traffic. The project mechanical equipment would be limited to the roof and to the area between the library mezzanine and future residential community patio. The library will be fully air-conditioned, and heating, ventilating, and air-conditioning units could be located in areas exposed to adjacent property lines. Based on previous noise measurements near the project site , the lowest hourly Leq noise level is 43 dBA, which represents the ambient noise level (SOURCE V.19). Based on Municipal Code Section 24.14.260, the property line noise criterion for the project mechanical equipment is 48 dBA (i.e., ambient noise level plus five) (SOURCE V.19). The analysis found that the potential noise increases related to mechanical equipment is below the threshold considered in the General Plan 2030 EIR for potentially significant impacts, which is a permanent increase in noise level of five decibels in areas where ambient levels are below 60 dBA Ldn (SOURCE V.19).

An analysis of noise generated by mechanical equipment found that the increase in ambient noise levels would be below the threshold considered in the General Plan 2030 EIR for potentially significant impacts (Salter 2023). In addition, the analysis of noise levels with project traffic found that the increase in traffic resulting from the project would result in an increase in noise levels below City thresholds. Therefore, the project would not result in a significant impact related to permanent increases in noise (Salter 2023). In addition, Municipal Code section 9.36.010 prohibits offensive noise between the hours of 10 PM and 8 AM and section 9.36.020 prohibits unreasonably disturbing noises. Furthermore, section 24.14.260 prohibits increases of sound levels above five decibels (dBA) above the local ambient noise level on a residential property. These regulations are intended to prevent increases in ambient noise levels.

The analysis found that the project traffic when added to existing traffic volumes as identified in the project traffic analysis (SOURCE V.17) would result in an increase in ambient noise levels of less than three decibels at the intersections studied, which would be a less-than-significant increase in noise as the increase would be less than the five-decibel threshold in the General Plan EIR.

There would be a temporary increase in existing noise levels during demolition, earthwork, and construction of the project. The nearest sensitive noise receptors are residential uses located on Cedar Street, approximately 155 feet to the south of the project site. A residential project is currently under construction on the west side of Cedar Street across the street from the proposed project.

Noise impacts resulting from construction would depend on the noise generated by various pieces of construction equipment, the timing and duration of noise-generating activities, and the distance between construction noise sources and noise-sensitive receptors, as well as existing ambient noise levels. Noise generated during construction would vary throughout the construction period and on any given day, depending on the construction phase and the type and amount of equipment used at the construction site. The highest noise levels would be generated during demolition and grading of the site, with lower noise levels occurring during building construction and finishing. As explained in the General Plan EIR, construction sound levels would be intermittent and varied through a single day as well as the duration of project construction.

There would be a temporary increase in existing noise levels during project grading and construction. Noise levels resulting from construction would depend on the noise generated by various pieces of construction equipment, the timing and duration of noise-generating activities, and the distance between construction noise sources and noise-sensitive receptors, as well as existing ambient noise levels. Noise generated during construction would vary throughout the construction period and on any given day, depending on the construction phase and the type and amount of equipment used at the construction site. The highest noise levels would be generated during grading of the site, with lower noise levels occurring during building construction and finishing. Sensitive noise receptors, which are residential uses located approximately 155 feet west of the project site, would experience a temporary increase in noise levels. However, construction sound levels would be intermittent and varied through a single day as well as throughout the duration of project construction, and construction noise levels would decrease with distance from the construction site. Overall, construction noise levels would be temporary and short-term, and would fluctuate throughout the construction period with the construction activities producing higher noise levels occurring earlier in the construction phase. Therefore, construction noise would not result in substantial increases in temporary noise levels or result in a significant impact to sensitive receptors (SOURCE V.19).

The *General Plan 2030* includes goals, policies and actions that set forth measures to avoid and minimize adverse impacts of increased noise resulting from construction or operation of development projects (HZ3.1.1,HZ3.1.2, HZ3.1.3, and HZ3.1.5). The General Plan EIR concluded that with implementation of General Plan policies and adherence to City regulations, noise impacts from future development would be less than significant. The General Plan EIR concluded that development accommodated by the plan would result in construction of varying sound level and duration, but with implementation of General Plan policies and actions that set forth measures to minimize exposure construction noise levels, the increase in temporary noise levels from construction-related activities

would be considered less than significant. General Plan policies seek to minimize and monitor construction noise (HZ3.1.3, HZ3.1.5). In particular, the General Plan seeks to ensure that construction activities are managed to minimize overall noise impacts on surrounding land uses (HZ3.1.3). Development projects are reviewed on a case-by-case basis, and typical conditions of approval include limiting the day and times of day during which construction and/or heavy construction can be conducted, provision of notification to neighbors regarding construction schedules, and implementation of a process to receive and respond to noise complaints. These are some of the types of measures that would be required by the City to manage and minimize construction noise impacts of development projects per proposed General Plan Actions HZ3.1.3 and HZ3.1.5 (SOURCE V.1b, DEIR volume), which would be considered uniformly applied development policies and standards. The project noise study recommends construction best management practices that would minimize construction noise, which will be a condition of project approval, and consistent with the General Plan, would be considered an uniformly applied development standard.

Municipal Code section 24.14.220 indicates that no land or building in any district shall be used or occupied in any manner so as to create noise or vibration in such a manner or in an amount as to adversely affect the surrounding area or adjoining premises. Municipal Code section 9.36.010 prohibits offensive noise between the hours of 10 PM and 8 AM and section 9.36.020 prohibits unreasonably disturbing noises. Furthermore, section 24.14.260 prohibits increases of sound levels above five dBA above the local ambient on a residential property. These regulations are intended to prevent increases in ambient noise levels and would be considered uniformly applied regulations to which the proposed project would be subject to compliance.

Therefore, the proposed project would not result in significant impacts not otherwise addressed in the General Plan EIR or peculiar to the project or site regarding permanent or temporary increases in noise with the application of uniformly applied development standards. No further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

(b) Vibration. The General Plan EIR indicates that there were no planned land uses that would be expected to result in generation of groundborne vibration, and that the potential for vibration is mostly associated with construction-related impacts. Construction noise and potential vibration would be performed during daytime hours and be temporary in nature. As indicated above, the General Plan EIR concluded that with implementation of General Plan policies and adherence to City regulations, noise impacts from construction of future development projects would be less than significant. Municipal Code section 24.14.220 indicates that no land or building in any district shall be used or occupied in any manner so as to create noise or vibration in such a manner or in an amount as to adversely affect the surrounding area or adjoining premises.

The proposed residential use would not result in generation of or exposure to vibration as the proposed uses are not known to be sources of vibration. Construction activities can cause vibration that varies in intensity. The use of pile driving and vibratory compaction equipment typically generates the highest construction-related groundborne vibration levels. Because of the impulsive nature of such activities, the use of the Peak Particle Velocity (PPV) descriptor has been routinely used to measure and assess groundborne vibration and almost exclusively to assess the potential of vibration to induce structural damage and the degree of annoyance for humans. To assess the

potential for vibration to result in structural damage, Caltrans recommends a vibration limit of 0.5 in/sec PPV for historic buildings, 0.2 in/sec PPV for fragile buildings, and a conservative limit of 0.12 in/sec PPV for ancient buildings, ruins or extremely fragile buildings that are documented to be structurally weakened (Caltrans 2013[5]).

The noise impact analysis considered vibration resulting from construction activities. Vibration-producing construction activities are likely to occur during demolition and site preparation with the use of dozers and drilling to clear the site and prepare the foundation of the buildings. The analysis found that vibration levels are not expected to exceed the 0.1 in/sec PPV threshold for human annoyance or the 0.2 in/sec PPV threshold for damage to "normal dwelling houses" at the nearest residential properties; the highest construction-related vibration level would be 0.012 (SOURCE V.19). Thus, the proposed project would not result in significant impacts not otherwise addressed in the General Plan EIR or peculiar to the project or site regarding generation of excessive vibration. No further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

(e-f) Airport Noise. The project site is not located near an airport or private airstrip.

14. POPULATION AND HOUSING **Would the project:**	**Where Impact is Addressed in Downtown Plan Amendments EIR**	**Where Impact is Addressed in General Plan 2030 EIR**	**Does Project Involve New Significant Impacts or Substantially More Severe Impacts?**	**Any New Impacts Peculiar to Project or Site?**	**Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards**
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	DEIR pp. 5-3 to 5-4	DEIR pp. 4.2-2 to 4.2-6, 4.2-12 to 4.2-14	Not Applicable	Not Applicable	None
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?	DEIR Appendix A p. 41	DEIR pp. 4.2-14 to 4.2-15	Not Applicable	Not Applicable	None

(a) Inducement of Substantial Population Growth. The General Plan 2030 EIR estimated population and housing increases that could result from potential development and buildout accommodated by the plan that included 3,350 residential dwelling units with an associated population increase of 8,040 residents by the year 2030. The project would include construction of 124 new dwelling units. The

[5] California Department of Transportation. April 2020. "Transportation and Construction Vibration Guidance Manual."

project would not induce substantial population growth in the City as it would be consistent with population growth projections developed for the City and the amount of development described in the General Plan EIR as described below (SOURCE V.1b, DEIR volume). It is also noted that the proposed project would not be inducing new population growth, but would serve existing households in the city or county that are on waiting lists for affordable housing. The Housing Authority of Santa Cruz County has indicated to City staff that there are a total of 10,851 applicants on the waiting list for affordable housing.

The City had a population of 64,075 people as of January 1, 2022 (SOURCE V.6). The proposed project's 124 residential units would house approximately 290 residents based on the City's existing average household size of 2.33. This is a conservatively high estimate as household sizes in the downtown area at about 1.9 persons per household are slightly lower than the Citywide average, based on Census information. With the additional conservative assumption that all of the project's residents would be adding to the City's population, rather than simply moving from other places in the City (as is most likely, given the waiting list for affordable housing), the City's population would total 64,365. This is within the adopted regional population forecast of 68,845 for the city of Santa Cruz for the year 2025 (SOURCE V.4a), and also within the population forecast of 64,649 residents in the City in 2025 that was considered in the General Plan 2030 EIR. Therefore, the proposed project would not substantially induce unplanned population growth. Since the potential population growth resulting from the proposed project would fall within the total level of development analyzed in the General Plan EIR and is consistent with current regional forecasts, no further environmental analysis is required pursuant to Public Resources Code section 21083.3 and State CEQA Guidelines section 15183.

(b) Displacement of Existing Housing or People. No housing units exist on the project site. Existing uses on the project site include a small commercial building and paved public parking lot. Therefore, the project would not result in displacement of housing or residents and thus would not result in any impact peculiar to the parcel of the project with respect to this category of impact.

15. PUBLIC SERVICES	**Where Impact is Addressed in Downtown Plan Amendments EIR**	**Where Impact is Addressed in General Plan 2030 EIR**	**Does Project Involve New Significant Impacts or Substantially More Severe Impacts?**	**Any New Impacts Peculiar to Project or Site?**	**Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards**
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or need for new or physical altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:					
Fire protection?	DEIR pp. 4.6-10 to 4.6-11	DEIR pp. 4.6-2 to 4.6-4, 4.6-33 to 4.6-36 FEIR pp. 3-19	No	No	None

15. PUBLIC SERVICES	Where Impact is Addressed in Downtown Plan Amendments EIR	Where Impact is Addressed in General Plan 2030 EIR	Does Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Impacts Peculiar to Project or Site?	Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards
Police protection?	DEIR p. 4.6-11	DEIR pp. 4.6-4 to 4.6-5, 4.6-36 to 4.6-37	No	No	None
Schools?	DEIR pp. 4.6-11 to 4.6-13	DEIR pp. 4.6-20 to 4.6-21, 4.6-40 to 4.6-41	No	No	Payment of School Impact Fees
Parks?	DEIR pp. 4.6-13 to 4.6-15 FEIR pp. 3-4 to 3-5	DEIR pp. 4.6-5 to 4.6-20, 4.6-37 to 4.6-40 FEIR pp. 3-20 to 3-22	No	No	None
Other public facilities?	Not Applicable	Not Applicable	No	No	None

Police and Fire Protection Services. As indicated in Section IV.B above, the City's General Plan EIR considered construction of approximately 3,350 residential units within the City to the year 2030 (SOURCE V.1b); the proposed project is within the total and remaining unbuilt residential units and commercial square footage. Thus, the project's proposed 124 residential units and non-residential space would be within the overall amount of development evaluated in the General Plan EIR. The EIR analyses concluded that impacts of potential development and buildout accommodated by the General Plan would be less than significant for fire and police protection services, which was further supported by subsequent analyses in the Downtown Plan Amendment EIR. Thus, construction of any new public facilities to serve the project would not be warranted with General Plan buildout. Since the proposed project size would fall within the total amount of potential development analyzed in the General Plan EIR and Downtown Plan Amendments EIR and would not result in more severe impacts than analyzed in these EIRs, no further environmental analysis is required regarding these public services pursuant to Public Resources Code section 21083.3 and State CEQA Guidelines section 15183.

School Enrollments. The Downtown Plan Amendments EIR and General Plan EIR concluded that buildout of the *Downtown Plan* and General Plan could result in potentially significant impacts to schools but, with required payment of school impact fees to fund necessary facility expansion and/or additions in conjunction with potential reuse of the former Natural Bridges Elementary School if needed, the impact would be mitigated to a less-than-significant level. The *Downtown Plan* Amendments EIR and General Plan EIR concluded that potential addition or expansion of school classroom facilities is not expected to result in significant physical impacts due to the location of existing facilities within developed footprints.

As the proposed project would be within the amount of development analyzed in the and General Plan EIR and Downtown Plan Amendments EIR and would be within the amount of development

analyzed in the General Plan EIR, no new or substantially worsened impacts to schools or impacts peculiar to the project or site would occur. No further environmental analysis is required regarding this public service pursuant to Public Resources Code section 21083.3. It is also noted that payment of school impact fees would be required.

Parks and Recreation. See Section IV.E.16 below regarding impacts to parks and recreational facilities.

16. RECREATION **Would the project:**	**Where Impact is Addressed in Downtown Plan Amendments EIR**	**Where Impact is Addressed in General Plan 2030 EIR**	**Does Project Involve New Significant Impacts or Substantially More Severe Impacts?**	**Any New Impacts Peculiar to Project or Site?**	**Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards**
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	DEIR pp. 4.6-13 to 4.6-15 FEIR pp. 3-4 to 3-5	DEIR pp. 4.6-5 to 4.6-20, 4.6-37 to 4.6-40	No	No	Parks and Recreation Facilities Tax
b) Include recreational facilities or require the construction or expansion of recreational facilities?	DEIR p. 4.6-10	DEIR pp. 4.6-10 to 4.6-11	No	No	None

(a) Use of Existing Parks and Recreational Facilities. The City has responsibility for management, maintenance and operation of over 1,700 acres of parks and open space lands, and various community/recreational facilities, and oversees development of new parks and improvements within City-owned parks, open space, and community facilities. In the project area, the Santa Cruz Riverwalk provides pedestrian and bicycle access to the multi-use path on the river levee. Other nearby facilities include outdoor courtyards at City Hall and the Town Clock and adjacent mini-park. The project site also is less than one mile to Depot Park and the City's Main Beach.

As indicated in Section IV.B above, the City's General Plan EIR considered construction of approximately 3,350 residential units within the City to the year 2030 (SOURCE V.1b, DEIR volume), and the proposed project is within the total and remaining unbuilt residential units. Thus, the proposed project would be within the overall amount of development evaluated in the General Plan EIR. The EIR analyses concluded that, while the City does not meet its goal for neighborhood parks of 2.0 acres per 1,000 residents and for community parks of 2.5 acres per 1,000 residents, implementation of General Plan goals, policies, and actions that set forth measures to avoid and minimize adverse impacts on park and recreational facilities, as well as compliance with local regulations, would ensure that impacts to parks and recreational facilities resulting from buildout of the General Plan would be less than significant. The Downtown Plan Amendment EIR concluded that with implementation of the proposed *General Plan 2030* goals, policies and actions that set forth measures to avoid and minimize adverse impacts on parks and recreational facilities and required project payment of park fees, impacts of new development in the downtown area would be less than significant.

Furthermore, the City imposes a "Parks and Recreation Facilities Tax" (pursuant to Chapter 5.72 of the Municipal Code) on new residential development within the City, payable at the time of issuance of a building permit. The collected taxes are placed into a special fund, and "shall be used and expended solely for the acquisition, improvement and expansion of public park, playground and recreational facilities in the city" (Municipal Code section 5.72.100). The required fees for park expansion and improvements would be considered an application of uniformly applied development standards. (It is noted that projects that have dedicated land or fees in accordance with Municipal Code Chapter 23.28 requirements for subdivisions are exempt from this tax). Thus, with implementation of uniformly applied development standards, the proposed project would not result in significant impacts to parks and recreational facilities not otherwise addressed in the General Plan and Downtown Plan Amendments EIRs or peculiar to the project or site. No further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

(b) New Recreational Facilities. The project does not include public recreational facilities. As indicated above, the General Plan concluded that potential impacts to parks and recreational facilities with growth accommodated by the General Plan would be less than significant. The proposed project would not result in significant impacts to parks and recreational facilities not otherwise addressed in the General Plan EIR or peculiar to the project or site. No further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

17. TRANSPORTATION AND TRAFFIC **Would the project:**	**Where Impact is Addressed in Downtown Plan Amendments EIR**	**Where Impact is Addressed in General Plan 2030 EIR**	**Does Project Involve New Significant Impacts or Substantially More Severe Impacts?**	**Any New Impacts Peculiar to Project or Site?**	**Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards**
a) Conflict with a program, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?	DEIR pp. 4.7-17 to 4.7-21	DEIR pp. 4.4-2 to 4.4-26, 4.4-31 to 4.4-45	No	No	GP Actions M3.1.3, M3.1.4, M2.3.2 regarding traffic improvements and Traffic Impact Fee Program
b) Would the project conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)?	4.7-16, 4.7-19 to 4.17-20	Not Applicable	No	No	GP Policy LU4.2 GP Actions M3.1.1, M3.1.1 regarding trip reduction, high occupant vehicle travel, and alternative travel modes City VMT Implementation Guidelines

17. TRANSPORTATION AND TRAFFIC Would the project:	Where Impact is Addressed in Downtown Plan Amendments EIR	Where Impact is Addressed in General Plan 2030 EIR	Does Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Impacts Peculiar to Project or Site?	Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards
					Traffic Impact Fee Program
c) Substantially increase hazards due to a geometric design feature (for example, sharp curves or dangerous intersections) or incompatible uses (for example, farm equipment)?	DEIR p. 4.7-21	DEIR pp. 4.4-45 to 4.4-46	No	No	None
d) Result in inadequate emergency access?	DEIR p. 4.7-22	DEIR pp. 4.6-33 to 4.6-37	No	No	None

(a) Conflict with Circulation Plan, Policy or Ordinance. The project site is bordered by commercial businesses and Pacific Avenue to the east, Cathcart Street to the south, Cedar Street to the west, and Lincoln Street to the north. Project access will be provided along the southeastern portion of the site, from Cathcart Street, via a new one-way alley and parking garage entrance. The new alley would allow one-way access only in the northerly direction, across the project site, exiting onto Lincoln Street. The parking garage access point would allow both ingress and egress to/from the three-story parking garage. Both access points would be improved with a new driveway approach.

The local roadway network serving the project site includes Pacific Avenue, Cedar Street, Front Street, and Soquel Avenue. The Santa Cruz Metro Transit District (METRO) has bus route service along Cedar Street. Local METRO bus stops are located along Cedar Street/Cathcart Street intersection (Routes 10, 40, 41, and 42) and along Cedar Street/Lincoln Street intersection (Routes 40, 41, and 42). The project site is also approximately 350 feet northwest of the Santa Cruz Metro Center, which provides routes to other locations in the county. Pedestrian and bicycle facilities are located in the area, including sidewalks and bicycle lanes along Pacific Avenue, Cathcart Street, Cedar Street, and Lincoln Street.

The project includes 243 parking spaces within the proposed parking garage to support the residential, library, and commercial uses and 258 bicycle parking spaces. The project includes 140 Class 1 (individually locked enclosure, weather and vandalism protected, supervised) bicycle parking spaces and 118 Class 2 (stand to lock to bike wheel or frame) bicycle spaces. The project includes frontage improvements along Cathcart Street, Cedar Street, and Lincoln Street per City standards, including sidewalks.

The *General Plan 2030* includes goals, policies and actions that set forth comprehensive measures to reduce vehicle trips, increase vehicle occupancy, encourage use of alternative transportation modes, and promote alternative-sustainable land use patterns, all of which would help reduce vehicle trips, avoid and minimize adverse impacts related to traffic. The City's General Plan strives to maintain the

established “level of service” D or better at signalized intersections (M3.1.3). “Level of service” (LOS) is typically used to evaluate traffic operations, in which operating conditions range from LOS “A” (free-flowing) to LOS “F” (forced-flow). Caltrans endeavors to maintain a target LOS at the transition between LOS C and D on State highway facilities. Delays for signalized intersections are evaluated for the overall peak hour as an “average.” The methodologies for unsignalized intersections also evaluates the delays for the each “critical” movement (e.g. stop sign controlled approaches on the minor street and main line left turn). The City’s General Plan also accepts a lower level of service and higher congestion at major regional intersections if necessary improvements would be prohibitively costly or result in significant, unacceptable environmental impacts (M3.1.4).

According to a traffic study performed for the project, the proposed project would result in a net increase of 2,144 daily trips, including trips from the new library, with 82 new trips occurring the AM peak-hour and 269 trips occurring during the PM peak hour (SOURCE V.17). The study found that all intersections in the project vicinity currently operate under Level of Service (LOS) C or better. With addition of project traffic, all intersections would remain at LOS C or better, except Front Street and Soquel Avenue intersections would operate at LOS D during PM peak hour traffic (SOURCE V.17). Therefore, because all intersections would operate at LOS D or better, the proposed project would continue to operate at acceptable City LOS levels and would not conflict with City policies regarding traffic congestion. The proposed project is also located in proximity to pedestrian and bicycle facilities that could be used for some of the project’s daily trips.

The City’s General Plan 2030 EIR concluded that adoption and implementation of the *General Plan 2030* would accommodate future development that would result in increased vehicle trips and traffic, which would cause changes in some intersection levels of service to unacceptable levels or further deterioration of intersections currently operating at unacceptable levels of service at some locations. The General Plan EIR did not identify intersections in the project vicinity that would operate at deficient LOS nor did the General Plan EIR did not identify any impacted intersections in the downtown area with development accommodated by the *General Plan 2030*. Subsequent to adoption of the General Plan, the City adopted a series of amendments to the *Downtown Plan* that could result in additional development in the downtown area beyond what was considered in the General Plan EIR. However, a traffic analysis conducted for the Downtown Plan Amendments EIR found that traffic associated with development resulting from the *Downtown Plan* amendments, would not result in degradation of LOS to below acceptable levels at the intersections studied in the Downtown Plan Amendments EIR under the jurisdiction of the City.

Two regional Caltrans intersections (Highway 1 / Highway 9 and Chestnut Street / Mission Street) would continue operate at LOS E as a result of the *Downtown Plan* amendments. There are improvements identified for the Highway 1/Highway 9-River Street intersection, which are currently under construction, and the Chestnut Street / Mission Street intersection is included in the Regional Transportation Improvement Program (RTIP). These improvements were already required under existing conditions without development resulting from the General Plan or *Downtown Plan*. Traffic associated with future development in the downtown would not further degrade the LOS at the two Caltrans intersections and would not substantially increase delay (SOURCE V.2b, DEIR volume). Therefore, the Downtown Plan Amendments EIR concluded that traffic associated with the growth resulting from *Downtown Plan* amendments would not cause existing or planned intersections to

operate at an unacceptable Level of Service (LOS) or further degrade intersections that already operate at an unacceptable LOS, resulting in a less-than-significant impact.

The General Plan EIR found that with implementation of the identified intersection improvements and *General Plan 2030* policies and actions to reduce vehicular traffic, increase vehicle occupancy and support/encourage use of alternative transportation measures, the identified impact could be reduced to a less-than-significant level at the remaining impacted intersections. However, funding availability likely would remain constrained for major facility improvements and expansion of transit service into the foreseeable future. The General Plan concluded that implementation of recommended improvements and alternative transportation facilities cannot be assured, and that the impact to the intersections identified as operating at unacceptable levels of service under the proposed *General Plan 2030* was conservatively assumed to be significant.

The project would be subject to payment of traffic impact fees that are applied uniformly throughout the City to all new development as part of the city-wide TIF program. The proposed project would not result in significant impacts related to conflicts with policies or regulations regarding the City's circulation system or peculiar to the project or site. The project does not conflict with General Plan mobility policies regarding level of service goals, transportation improvements, reduction of vehicle trips, and encouraging multi-modal and alternative transportation systems. The project would not conflict with adopted policies, plans or programs that support alternative transportation. Thus, no further environmental analysis is required pursuant to Public Resources Code section 21083.3 and the State CEQA Guidelines section 15183.

In addition, subsequent to the City Council's certification of the Final EIR for the General Plan, provisions of CEQA essentially outlawing the use of level of service as a basis for finding significant transportation impacts took effect. Senate Bill (SB) 743, enacted in 2013, created Public Resources Code section 21099, which directed the Governor's Office of Planning and Research (OPR) and the Secretary of the Natural Resources Agency to establish criteria for determining the significance of transportation impacts of projects within transit priority areas, with the option of creating new statewide criteria. The significance criteria for transit priority areas were to promote the reduction of greenhouse gas emissions, the development of multimodal transportation networks, and a diversity of land uses. In developing the new criteria, OPR and the Secretary were to recommend potential metrics that included, but were not limited to, vehicle miles traveled [VMT], vehicle miles traveled per capita, automobile trip generation rates, or automobile trips generated. Section 21099 further provided that, once the CEQA Guidelines had been updated as required by the statute, "automobile delay, as described solely by level of service [LOS] or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to [CEQA], except in locations specifically identified in the guidelines, if any."

Consistent with these directives, the Natural Resources Agency promulgated CEQA Guidelines section 15064.3, which became effective in late 2018. It provides that "[g]enerally, vehicle miles traveled is the most appropriate measure of transportation impacts," with VMT referring to "the amount and distance of automobile travel attributable to a project. Other relevant considerations may include the effects of the project on transit and non-motorized travel." Rather than limit its scope only to transit priority areas, the section changed the approach to assessing transportation impacts under

CEQA all over the State. By its own terms, however, the section did not require agencies to begin using VMT as a new metric until July 1, 2020. LOS had ceased to be a valid significance criterion as of late 2018, however. (See *Citizens for Positive Growth & Preservation v. City of Sacramento* (2019) 43 Cal.App.5th 609, 625-626.)

For these reasons, the City could not find a significant transportation-related effect from the proposed project even if the project resulted in LOS worse than what was anticipated in the General Plan EIR.

(b) Conflicts with State CEQA Guidelines. Subsequent to certification of the General Plan 2030 EIR, amendments to the State CEQA Guidelines at the end of 2018 added a new question of whether or not a project would conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b). As explained above, this is a new section that codifies the switch from LOS to VMT as the metric for transportation analysis pursuant to state legislation adopted in 2013, SB 743.

CEQA Guidelines section 15064.3(b) indicates that development projects that exceed an applicable VMT threshold of significance may indicate a significant impact. Generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high-quality transit corridor should be presumed to cause a less than significant transportation impact. Projects that decrease vehicle miles traveled in the project area compared to existing conditions should be presumed to have a less than significant transportation impact.

In accordance with the amended CEQA Guidelines, the City has transitioned from intersection LOS formerly used for traffic impact analyses to VMT as the metric for determining potentially significant impacts. The City adopted a VMT transportation threshold on June 9, 2020 in accordance with CEQA and state requirements, as well as VMT Implementation Guidelines that are consistent with the State's SB 743 Guidelines. The threshold generally establishes that a project exceeding a level of 15 percent below the County-wide average VMT may result in a significant transportation impact. The City's adopted SB 743 (VMT) Implementation Guidelines include potential Transportation Demand Management (TDM) measures to help achieve VMT reduction. Updates to the City's Guidelines were adopted on June 14, 2022.

The City's guidelines to determine whether a land use project is within the VMT threshold includes a screening process in which situations are identified under which projects are determined to not have a significant impact and further VMT analysis is not required. The guidelines require that each distinct land use for a mixed-use project be analyzed separately unless they are determined to be insignificant to the total VMT. The guidelines also state that housing projects are expected to cause a less-than-significant impact on VMT if a high percentage of the project is affordable, as determined by the City. Furthermore, projects, or portions of a project, that meet the screening criteria do not require a CEQA transportation analysis, and such projects, or portions of a project, will have a non-significant CEQA transportation impact based on their project location and characteristics. According to the City's guidelines, projects that would not be expected to result in a significant VMT impact and that are screened out from further transportation impact review include:

- Small projects that generate fewer than 110 trips per day;

- Projects near high quality transit: within a ½ mile of a major transit stop or a high quality transit corridor with a combined service interval frequency of 15 minutes or less during the AM and PM peak hours;
- Local-serving retail if a single store is less than 50,000 square feet or project is a local-serving project as determined by the City;
- Affordable housing projects that provide a high percentage of affordable housing as determined by the City;
- Local essential service, including day care center, public K-12 schools, police or fire facility, medical/dental office building, government offices, and supportive housing types (assisted living, permanent supportive housing, memory care, etc.);
- Map based screening; and
- Redevelopment projects that do not result in a net increase in VMT (SOURCE V.3e).

City staff has reviewed the project in accordance with the City's adopted guidelines. The traffic study concluded that the proposed project meets the screening criteria because it is located in a VMT Efficient Area based on the Santa Cruz County Residential Screening Map, and, therefore, the project is located in an area that produces VMT per capita that is at least 15-percent below the Countywide average (SOURCE V.17). As described above in section (a), the project is also within ½ mile of a major transit stop that provides service at an interval of 15 minutes or less during AM and PM peak hours. Thirdly, the project includes 124 new residential units that would be 100 percent affordable. Additionally, each of the project elements can use the screening criteria in the City's SB 743 Implementation Guidelines as follows.

- Projects near High-Quality Transit: This screening criterion is met as the proposed project is within one-half mile of a high-quality transit stop as defined by California Public Resources Code section 21064 (Santa Cruz Metro Center).
- Local-Serving Retail: This screening criterion covers the net increase of approximate 6,500 square feet space for commercial uses that would be considered local-serving retail uses, which is substantially less than the screening level of 50,000 square feet.
- Affordable Housing: This screening criterion is met as the proposed project provides 100-percent-affordable housing with the proposed 124 units of affordable housing, which would be considered a high proportion of affordable housing.
- Local Essential Service: this screening criterion covers the proposed daycare and government offices uses (library) (SOURCE V.3c).

For these reasons, according to the City's guidelines, the project would not result in a significant impact related to VMT based on the City's adopted threshold and guidelines would not conflict or be inconsistent with CEQA Guidelines section 15064.3.

The *General Plan 2030* includes goals, policies and actions that set forth comprehensive measures to reduce vehicle trips, increase vehicle occupancy, encourage use of alternative transportation modes, and promote alternative-sustainable land use patterns, all of which would help reduce vehicle trips and VMT, and avoid and minimize adverse impacts related to traffic. General Plan EIR indicates that

Policies M3.1.1 and M3.1.2 direct the City to seek ways to reduce vehicle trip demand, reduce the number of peak hour vehicle trips, and encourage high occupant vehicle travel. Implementation of General Plan policies that serve to reduce VMT would be considered uniformly applied development policies or standards. General Plan policies also encourage employment-related strategies (i.e., flex-time, telecommuting, parking management, ridesharing) (M3.1.7, M3.1.8, M2.4.4) as ways to reduce vehicle trips, which would also reduce VMT.

Although no VMT standards have been developed within the City at the time the Downtown Plan Amendments EIR was prepared, a preliminary per capita VMT estimate included in the EIR showed that VMT resulting from downtown development would be below existing and projected county-wide estimates, which in large part is a reflection of the project's location downtown and in proximity to transit, bicycle and pedestrian facilities (SOURCE V.2b, DEIR volume).

While the General Plan EIR and Downtown Plan Amendments EIR did not analyze VMT as the requirement to do so was not in place, the proposed project does not exceed the City's VMT threshold, which was adopted after certification of the General Plan 2030 and Downtown Plan Amendments EIRs. Furthermore, the proposed services to support residents that are included in the project, such as commercial space, child-care, community gathering places, and the library, would serve to reduce VMT, consistent with General Plan policies and actions to reduce vehicle trips. General Plan Policy LU4.2 encourages land use changes that reduce the need for automobiles. The project locates new residents to a downtown area that supports businesses, employment opportunities, and public transportation; therefore, the project would promote types of transportation other than automobiles.

As indicted above in subsection (a), the project would be subject to payment of traffic impact fees that are applied uniformly throughout the City to all new development as part of the city-wide TIF program. TIF fees are used to address needed traffic improvements at key intersections for circulation and also for alternative transportation improvements; 15 percent of the collected TIF fees are allocated to alternative transportation improvements. In addition, the City's adopted SB 743 (VMT) Implementation Guidelines include potential Transportation Demand Management (TDM) measures to help achieve VMT reduction, which serve to reduce project VMT impacts and are considered uniformly applied development standards. The proposed project was designed pursuant to these guidelines and provides: a bus stop on Cedar Street in front of the proposed library, an onsite childcare facility, bicycle parking in excess of City requirements, secure bicycle parking, widened sidewalks, and reduced project parking, all of which are consistent with TDM measures included in the City's Guidelines, and would serve to further reduce project-generated VMT. Therefore, with this design planned pursuant to the City's VMT guidelines and payment of required traffic impact fees, the project would not result in impacts peculiar to the project or site with implementation of uniformly applied development policies and standards, and no further environmental analysis is required regarding these public services pursuant to Public Resources Code section 21083.3.

(c, d) Design-Safety and Emergency Access. The project has been designed in accordance with standard City requirements, and there are no access designs that would substantially increase hazards; project access and design was reviewed as part of the project transportation study (SOURCE V.17). In particular, the entrance for the parking garage will be set back and an open-air design with

support pillars will provide exiting vehicles with sight lines in both directions, including of the sidewalk for approaching directions. The project design will provide adequate sight distance for exiting vehicles of both oncoming vehicles and pedestrians. Fire truck access would be provided from the Cathcart Street and along the southern boundary of the property. The proposed alley connecting Cathcart Street to Lincoln Street is proposed to have a width of 20 feet with no overhead clearance restrictions. Furthermore, the project would be designed in accordance with City police and fire department requirements and would provide for adequate emergency access. Therefore, the project would not result in increased hazards related to project design, would not provide inadequate emergency access, and would not result in new significant impacts or impacts peculiar to the project or site; no further environmental analysis is required regarding these public services pursuant to Public Resources Code section 21083.3.

18. TRIBAL CULTURAL RESOURCES **Would the project:**	**Where Impact is Addressed in Downtown Plan Amendments EIR**	**Where Impact is Addressed in General Plan 2030 EIR**	**Does Project Involve New Significant Impacts or Substantially More Severe Impacts?**	**Any New Impacts Peculiar to Project or Site?**	**Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards**
Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:					
a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or	DEIR pp. 4.4-12 to 4.4-13	Not Evaluated	Not Applicable	Not Applicable	GP EIR Mitigation 4.9-1 and Municipal Code section 24.12.430
c) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe?	DEIR pp. 4.4-12 to 4.4-13	Not Evaluated	Not Applicable	Not Applicable	GP EIR Mitigation 4.9-1 and Municipal Code section 24.12.430

State Assembly Bill (AB) 52, effective July 1, 2015 after the City's adoption of the *General Plan 2030*, recognizes that California Native American prehistoric, historic, archaeological, cultural, and sacred places are essential elements in tribal cultural traditions, heritages, and identities. The law establishes a new category of resources in the California Environmental Quality Act called "tribal cultural

resources" that considers the tribal cultural values in addition to the scientific and archaeological values when determining impacts and mitigation. Public Resources Code section 21074 defines a "tribal cultural resource" as either:

(1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
    (a) Included or determined to be eligible for inclusion in the California Register of Historical Resources.
    (b) Included in a local register of historical resources as defined in subdivision (k) of section 5020.1.

(2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of section 5024.1.

(a-b) Tribal Cultural Resources and Consultation. The California Public Resources Code section 21084.2 establishes that "[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment." The requirements for review of impacts to tribal cultural resources were added after the certification of the General Plan EIR. In addition, the City provided notice of the proposed DLAHP to local Native American tribes in accordance with AB 52 and to determine whether tribal cultural resource(s) are present within the project area, and if so, whether or not those resources would be significantly impacted by the project. Two responses were received recommending Native American monitoring during construction, but no information was provided regarding tribal cultural resources at the project site.

While there are no known tribal cultural resources meeting the above definition on the project site per the project archaeological report (SOURCE V.12 and V.16a), the project site is located within an area identified as being sensitive for archaeological resources (SOURCE V.1c). As described above in Section IV.E.5, Cultural Resources, the archaeology review and field survey conducted of the project site concluded that the site appears to have a very low potential for archaeological materials and that no prehistoric materials are anticipated to be encountered on the site from project construction or operation (SOURCE V.16a). Section 24.12.430 of the City's Municipal Code sets forth the procedure to follow in the event that unknown archaeological materials are unearthed during construction, as described in Section IV.E.5 above, and implementation of these standards would be a standard condition of approval. Thus, the project would not result in significant impacts to tribal cultural resources or impacts peculiar to the project or the site with application of uniformly applied development standards. No further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

19. UTILITIES AND SERVICE SYSTEMS **Would the project:**	Where Impact is Addressed in Downtown Plan Amendments EIR	Where Impact is Addressed in General Plan 2030 EIR	Does Project Involve New Significant Impacts or Substantially More Severe Impacts?	Any New Impacts Peculiar to Project or Site?	Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment facilities, or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or which could cause significant environmental effects?	DEIR p. 4.5-11 to 4.5-12; 4.8-15	DEIR pp. 4.6-21 to 4.6-25, 4.6-41 to 4.6-43, 4.5-29 to 4.5-38 FEIR pp. 3-2 to 3-19	No	No	None
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?	DEIR pp. 4.8-15 to 4.8-16	DEIR pp. 4.5-3 to 4.5-42 FEIR pp. 3-2 to 3-19	No	No	Municipal Code sections 16.02-04 regarding Water Conservation, Plumbing Fixtures, & Water Service Charges
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	DEIR p. 4.8-16	DEIR pp. 4.6-21 to 4.6-25, 4.6-41 to 4.6-43	No	No	None
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?	DEIR p. 4.6-15	DEIR pp. 4.6-25 to 4.6-27, 4.6-43 to 4.6-44 FEIR p. 3-22	No	No	None
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?	DEIR p. 4.6-15	DEIR pp. 4.6-25 to 4.6-27	No	No	None

(a) Relocation or Construction of Utilities. Subsequent to certification of the General Plan 2030 EIR, the CEQA Guidelines Appendix G questions were modified to include a new question regarding need for new, relocated, or expanded infrastructure systems. The project would be served by existing utilities, and the General Plan EIR concluded that the City's wastewater treatment facility would be adequate to handle growth and development accommodated by the General Plan and would not require expansion or construction of facilities to serve future growth; see subsection (c) below.

Because the size of the proposed project would fall within the total amount of potential development analyzed in the General Plan EIR, the proposed project would not result in more severe impacts than evaluated in the General Plan EIR. The project does not require or result in the relocation or construction of new or expanded water, wastewater treatment, storm water drainage, electric power, natural gas, or telecommunications facilities. No further environmental analysis is required pursuant to Public Resources Code section 21083.3 and the State CEQA Guidelines section 15183.

(b) Water Supply. The project site is located within the service area of the City of Santa Cruz Water Department, which serves an approximate 20-square-mile area. The service area includes the entire City of Santa Cruz, adjoining unincorporated areas of Santa Cruz County, a small part of the City of Capitola, and coastal agricultural lands north of the City. Water is treated at the City's Graham Hill Water Treatment Plant (GHWTP), except for groundwater, which is treated as part of the Beltz well system.

The City's General Plan EIR provides a comprehensive analysis of impacts of water demand within the City's service area, including potential buildout accommodated by the General Plan. The General Plan EIR predicted that water supplies would be adequate in normal years to serve estimated growth within the City of Santa Cruz water service area, although the document acknowledges that the outcome of the pending Habitat Conservation Plan (HCP) for anadromous fisheries may affect supplies. The General Plan EIR concluded that impacts to the City's water supply would be significant and unavoidable during times of prolonged drought and potentially significant during normal years by the year 2030. Measures are identified in General Plan policies and actions to further conserve water, reduce demand and implement a desalination facility to provide a supplemental water supply during droughts. Subsequent to the adoption of the City's *General Plan 2030*, the City adopted the 2015 Urban Water Management Plan (UWMP), and in November 2021, the City adopted the 2020 UWMP. The 2015 UWMP reported that water demand in the City's water service area has ranged between nearly 3,800 million gallons per year (MGY) in 2006 to approximately 2,500 MGY in 2015 (SOURCE V.3i).

The Downtown Plan Amendments EIR concluded that intensified development in the downtown area as a result of the plan amendments represents less than one percent of the total estimated future water demand within the City's service area, and the demand was within the amount of new multi-family dwellings considered in demand forecasts for the 2015 UWMP that was in effect at the time the Downtown Plan Amendments EIR was prepared. The Downtown Plan Amendments EIR concluded that water supplies would be adequate during average and normal years to serve the estimated development in the downtown area. During periods of dry years and drought, water customers would be subject to water curtailment as enacted by the City. A multiple dry year scenario would require more substantial curtailment of all water customers. However, the EIR concluded that the water demand from additional development in the downtown area (less than one percent of the total water service area demand) would not have significant effects on the levels of water supply or curtailment that would be required throughout the service area. Therefore, Downtown Plan Amendments EIR concluded that the impact of increased water demand on water supplies due to the future development in the downtown area would be less than significant (SOURCE V.2b, DEIR volume).

The 2020 UWMP reported that annual water use has decreased since the early 2000s, but annual water use fell to a level of about 2.5 billion gallons, similar to the level experienced during the 1970s drought. However, in 2020, demand was still at a similar level as 2015, about 2.6 billion gallons, despite several years above long-term average rainfall from 2016 and 2020. Current projections forecast that water use over the next 25 years, including projected population growth, will increase at a very slow rate to reach approximately 2.8 billion gallons per year by 2045 (SOURCE V.3f).

With implementation of the City's proposed water rights modifications and water supply augmentation strategies as summarized below, the City projects having sufficient water available in normal years and single dry years to serve anticipated demand throughout the 2020-2045 UWMP planning period. However, the City's 2020 UWMP predicts that under multi-year drought conditions in the near term (2025) with proposed water rights modifications but before implementation of the planned aquifer storage and recovery (ASR) facilities and planned infrastructure projects, available supplies would meet projected demand in years one through four of the multi-year drought scenario, but would fall short of demand by 27 percent in year five, although such a shortage could occur sooner and persist longer through a multiple dry year period. Under multi-year drought conditions after 2030, with implementation of the ASR and planned infrastructure projects, available supplies would meet projected demand in years one through four of the multi-year drought scenario, and the year-five shortage is anticipated to be substantially reduced with projected shortages no larger than a negligible two percent or five percent with consideration of climate change parameters in dry years (SOURCE V.3f).

The General Plan EIR predicted that water supplies would be adequate in normal years to serve estimated growth within the City of Santa Cruz water service area, although the documents acknowledge that the outcome of the pending HCP may affect supplies. The General Plan 2030 EIR concluded that impacts to the City's water supply would be significant and unavoidable during times of drought and potentially during normal years by the year 2030 with growth and development within the City's water service area if recent water use trends change. Measures are identified in General Plan policies and actions to further conserve water, reduce demand and implement a supplemental water supply during droughts. These include: implementation of the City's Long-Term Water Conservation Plan to reduce average daily water demand and maximize the use of existing water resources (CC3.1.1); promotion of water conservation (C3.11.2); updating guidelines and standards for new landscaping that emphasizes xeriscaping and other water-conserving practices (CC3.11.1); Implementation of water conservation best management practices (CC3.5.1); and offering water audits and technical assistance to residents and businesses reduce their average daily water use (CC3.5.3).

However, the 2020 UWMP indicates that while the City is vulnerable to water shortages during later years of a multiple dry year period primarily due to the limitation in when and how much water is available to meet system demand, exacerbated by a lack of storage within the system, the City is actively planning and implementing a number of projects and major investments in the water system designed to secure future water supply reliability. Since 2015, the City of Santa Cruz has been pursuing a Water Supply Augmentation Strategy (WSAS) developed by the Water Supply Advisory Committee, a citizen committee, which was formed in 2014 by Santa Cruz City Council with the charge to analyze potential solutions to deliver a safe, adequate, reliable, affordable and environmentally

sustainable water supply for the City of Santa Cruz. The WSAS portfolio elements, which are being pursued on a concurrent timeline, include:

- *Element 0: Demand Management.* Demand Management, or conservation, is not considered a water supply for the purposes of the UWMP, but is addressed in the UWMP 2020.
- *Element 1: Transfers and Exchanges.* The City has been piloting water transfers to the Soquel Creek Water District since 2018, as water supplies are available, under a cooperative piloting agreement that extends through 2025. Potential water transfers and exchanges with local water districts in addition to the Soquel Creek Water District, include Central Water District, Scotts Valley Water District, and San Lorenzo Valley Water District, which would be facilitated by the City's proposed water rights modifications to place of use as briefly summarized below.
- *Element 2: Aquifer Storage and Recovery (ASR).* The City has been evaluating the feasibility of ASR in both the Santa Cruz Mid-County and in the Santa Margarita Groundwater Basins, with current work primarily focused on the portion of Santa Cruz Mid-County Basin within the City of Santa Cruz service area. Pilot testing has been conducted at the existing Beltz 8 and Beltz 12 well facilities to better understand potential water quality and operational constraints. Implementation of ASR also may occur in the future in the Santa Margarita Groundwater Basin.
- *Element 3: Recycled Water or Desalination.* Following completion of the 2017 Desalination Feasibility Update Review Report, further study of recycled water has been prioritized over study of seawater desalination. The City is continuing to examine the use of recycled water through commissioned engineering studies. The 2018 Recycled Water Facilities Planning Study recommendation includes two projects that would provide non-potable reuse in the City. The City is also committed to exploring other reuse opportunities, including: coordination with Soquel Creek Water District's Pure Water Soquel project, exploring groundwater replenishment and reuse at Beltz Well system, and exploring groundwater replenishment and reuse in Santa Margarita Groundwater Basin (SOURCE V.3f).

The City is also pursuing the Santa Cruz Water Rights Project to support the implementation of the WSAS. The project involves the modification of the City's existing water rights to increase the flexibility of the water system by improving the City's ability to utilize surface water within existing allocations. This project also incorporates into the City's water rights bypass flow requirements for all of the City's surface water sources which are protective of local anadromous fisheries. The primary components of the Santa Cruz Water Rights Project include:

- Water rights modifications related to place of use, method of diversion, points of diversion and re-diversion, underground storage and purpose of use, extension of time, and stream bypass requirements for fish habitats;
- Water supply augmentation components, including new aquifer storage and recovery (ASR) facilities at unidentified locations, ASR facilities at the existing Beltz Well facilities, water transfers and exchanges and intertie improvements; and
- Surface water diversion improvements, including the Felton Diversion fish passage improvements and the Tait Diversion and Coast Pump Station improvements (SOURCE V.3f).

In addition, as required by California Water Code and to manage risks due to water supply shortages that can be expected in the future, the 2020 UWMP includes a Water Shortage Contingency Plan that addresses how the City's water system would be managed during a water shortage emergency that arises as a result of drought, which could result in required customer water use reductions (SOURCE V.3f). Furthermore, the City continues to administer its water conservation program, has completed a Conservation Master Plan.

As indicated in section IV.B, the City's General Plan EIR considered development of approximately 3,350 new residential units throughout the City to the year 2030 (SOURCE V.1b, DEIR volume), and the proposed project would be within the total and remaining unbuilt residential development evaluated in the General Plan EIR. Because the number of new residential units falls within the projected number of units within the EIR, the water demand generated by the proposed project would fall within the total level of water demand estimated and analyzed in the General Plan EIR. As indicated above, annual water demand projections are less than what was analyzed in the General Plan EIR, and the City currently predicts potential negligible shortages during multi-year droughts with implementation of proposed water augmentation projects. However, the proposed project would be subject to uniformly applied development standards that include requirements for installation of water conservation fixtures and landscaping for new construction. In addition, the project would pay the required "System Development Charge" for the required new service connection. This charge as set forth in Chapter 16.14 of the City's Municipal Code is intended to mitigate the water supply impacts caused by new development in the City of Santa Cruz water service area, and the funds are used for construction of public water system improvements and conservation programs. Thus, the proposed project would not result in significant impacts related to availability of water supplies not otherwise addressed in the General Plan EIR or peculiar to the project or site with implementation of uniformly applied development standards. No further review is necessary pursuant to CEQA section 21083.3 and the State CEQA Guidelines section 15183.

(b) Wastewater Treatment Capacity. The project would be served by existing utilities, and the General Plan EIR concluded that the City's wastewater treatment facility would be adequate to handle growth and development accommodated by the General Plan and would not require expansion or construction of facilities to serve future growth. As indicated in section IV.B above, the City's General Plan EIR considered development of approximately 3,350 residential units within the City to the year 2030 (SOURCE V.1b), and the proposed project is within the total and remaining unbuilt residential units. The EIR analyses concluded that impacts of potential development and buildout accommodated by the General Plan would be less than significant for wastewater treatment. Since the size of the proposed project would fall within the total amount of potential development analyzed in the General Plan EIR, the proposed project would not result in new significant impacts or more severe impacts than evaluated in the General Plan EIR or impacts peculiar to the project or site. No further environmental analysis is required pursuant to Public Resources Code section 21083.3.

(d-e) Solid Waste Disposal. The project would be served by existing utilities, and the General Plan EIR concluded that the City's landfill would be adequate to handle growth and development accommodated by the General Plan and would not require expansion or construction of facilities to serve future growth. As indicated in section IV.B above, the City's General Plan EIR considered development of approximately 3,350 residential units within the City to the year 2030 (SOURCE V.1b);

and the proposed project is within the total and remaining unbuilt residential units. The EIR analyses concluded that impacts of potential development and buildout accommodated by the General Plan would be less than significant for solid waste disposal. Since the size of the proposed project would fall within the total amount of potential development analyzed in the General Plan EIR, the proposed project would not result in new significant impacts or more severe impacts than evaluated in the General Plan EIR or impacts peculiar to the project or site. No further environmental analysis is required regarding solid waste pursuant to Public Resources Code section 21083.3.

20. WILDFIRE **If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project:**	**Where Impact is Addressed in Downtown Plan Amendments EIR**	**Where Impact is Addressed in General Plan 2030 EIR**	**Does Project Involve New Significant Impacts or Substantially More Severe Impacts?**	**Any New Impacts Peculiar to Project or Site?**	**Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards**
a) Substantially impair an adopted emergency response plan or emergency evacuation?	DEIR Appendix A pp. 35-36	DEIR pp. 4.6-2 to 4.6-5, 4.6-33 to 4.6-37	No	No	None
b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to, pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?	DEIR Appendix A pp. 36	Not Evaluated	Not Applicable	Not Applicable	None
c) Require the installation or maintenance of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?	DEIR Appendix A pp. 36	Not Evaluated	Not Applicable	Not Applicable	None
d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?	DEIR Appendix A pp. 36	Not Evaluated	Not Applicable	Not Applicable	None

(a) Emergency Plans. The project site is not located in or near a state responsibility area or lands classified as very high fire hazard severity zones (SOURCE V.7). See also Section IV.E.9(f) regarding emergency access.

(b-d) Exacerbation of Wildfire Impacts. Subsequent to the certification of the General Plan 2030 EIR, in 2019 OPR amended the CEQA Guidelines to add wildfire-related impacts and exposure to the Appendix G checklist questions. The project site is not located in or near a state responsibility area or

lands classified as very high fire hazard severity zones; see also 9(g). The project site is located in a local responsibility area. Local responsibility areas are located within incorporated city limits, and therefore, fire protection would be provided by the City's fire department. The proposed project therefore would not cause any impacts peculiar to the parcel or the project with respect to this category of impact.

The project site is flat and surrounded by development in an urban setting. The project would result in construction of habitable structures, but the project would not exacerbate wildfire risks or expose people or structures to significant risks including downslope or downstream flooding or landslides as a result of post-fire conditions. Therefore, no impacts of these kinds would occur. See also section IV.9(g) above.

21. MANDATORY FINDINGS OF SIGNIFICANCE **Would the project:**	**Where Impact is Addressed in Downtown Plan Amendments EIR**	**Where Impact is Addressed in General Plan 2030 EIR**	**Does Project Involve New Significant Impacts or Substantially More Severe Impacts?**	**Any New Impacts Peculiar to Project or Site?**	**Relevant General Plan Mitigation Measures or Other Uniformly Applicable Development Standards**
a) Have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	DEIR pp. 4.3-17 to 4.3-22, 4.4-12 to 4.4-13	DEIR pp. 4.8-13 to 4.8-21, 4.8-24, 4.8-26 to 4.8-30, 4.8-41, 4.8-38 to 4.8-44, 4.8-48 to 4.8-51, 4.9-10 to 4.9-12, 4.9-19 to 4.9-23 FEIR pp. 3-22, 3-25 to 3-40	No	No	GP Action NRC2.2.1 & Project Assessment Protocols for Special Status Species; GP EIR Mitigation 4.9-1 and Municipal Code section 24.12.430
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of the past projects, the effects of other current projects, and the effects of probable future projects.)	DEIR pp. 5-4 to 5-14	DEIR pp. 5-8 to 5-36 FEIR pp. 3-27 to 3-33	No	No	Downtown Plan Amendments EIR Mitigation 5.1
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	DEIR Appendix A pp. 43, 38 to 39	DEIR pp. 4.13-4 to 4.13-8, 4.13-10 to 4.13-20	No	No	None

(a) Quality of the Environment. The project would not degrade the quality of the environment or otherwise affect fish and wildlife habitat as discussed in Section IV.E.4 (Biological Resources) of this Environmental Checklist review. As explained in Section IV.E.4, biological resource impacts are not peculiar to the parcel or the project because they were either adequately addressed in the General Plan EIR or can be substantially mitigated by the application of uniformly applied development policies or standards. As discussed in Section IV.E.5 (Cultural Resources) and Section IV.E.18 (Tribal Cultural Resources), cultural resources are not peculiar to the parcel or the project because they were either adequately addressed in the General Plan EIR or can be substantially mitigated by the application of uniformly applied development policies or standards. The project would not result in elimination of important examples of a major period of California history or prehistory.

(b) Cumulative Impacts. The General Plan EIR identified potential significant cumulative impacts related noise, population, transportation/traffic, and water supply. Vehicle trips resulting from the proposed project would contribute to cumulative noise impacts. The Downtown Plan Amendments EIR identified significant cumulative impacts related to transportation/traffic, water supply, schools, and cumulative traffic.

Noise. The proposed project would not contribute to cumulative noise impacts since the project is not located in proximity to the road segments subject to the cumulative noise impact (Westside industrial area) as identified in the General Plan 2030 EIR.

Population. The General Plan 2030 EIR identified cumulative population growth as a potentially significant impact due to growth at the University of California Santa Cruz (UCSC) in conjunction with growth accommodated by the General Plan. The EIR concluded that cumulative growth (City and UCSC) could result in an average annual growth rate that would exceed historical growth rates and AMBAG population forecast growth rates if the North Campus area is annexed to the City in the next 20 years. UCSC updated its Long-Range Development Plan (LRDP) in 2021 and no longer proposes expansion into the North Campus area, although enrollments were projected to increase. The General Plan EIR considered UCSC enrollment to 19,500 students with provision of additional on-campus housing. According to UCSC's website, enrollment for the 2021-2022 academic year totaled approximately 19,000 students (SOURCE V.11a).

Regional population forecasts are updated every four years by AMBAG and have been updated since certification of the General Plan 2030 EIR and the Downtown Plan Amendments EIR. Current forecasts project a Citywide population of 72,218 in the year 2030 (AMBAG 2022). The City had a population of 64,075 people as of January 1, 2022 (California Department of Finance 2022). Based on the City's existing average household size of 2.33, cumulative residential projects[6] could result in a population increase of approximately 7,684 persons as a result of development of 2,405 new housing units and student housing at UCSC based on average citywide household sizes (2.33) and the slightly lower household size in the downtown area (1.9based on Census information. City population as a result of cumulative residential projects could increase to approximately 71,759, which would not exceed the

[6] Cumulative projects include the proposed project, projects under construction, approved projects, and reasonably foreseeable pending projects, including residential projects at UCSC.

regional population forecast for the City of 72,218 in the year 2030 (SOURCE V.4a). Therefore, no new significant cumulative population growth impacts related to cumulative development is expected.

The General Plan 2030 EIR also indicates that regional population forecasts, which are updated every four years, would account for changing trends in cumulative development and growth. Furthermore, it is also noted that the proposed project would not be inducing new population growth, but would serve existing households in the city or county that are on waiting lists for affordable housing. As indicated in Section IV.E.14, Population and Housing, the Housing Authority of Santa Cruz County has indicated to City staff that there are a total of 10,851 applicants on the waiting list for affordable housing. Given this existing waiting list for affordable housing in the county, it is likely that some or all of the future occupants of the proposed project and other affordable housing projects in the City would already be city residents and thus would not result in additional population growth in the City.

Transportation/Traffic. The proposed project would contribute to cumulative traffic impacts analyzed in the General Plan 2030 EIR. However, the General Plan EIR did not identify significant cumulative impacts in the project vicinity. The Downtown Plan Amendments EIR Mitigation Measure 5-1 requires cumulative downtown development projects to pay fair-share contributions for improvements at the following intersections: Front/Soquel, Front/Laurel and Front/Pacific. With implementation of this mitigation, the Downtown Plan EIR concluded that significant cumulative traffic impacts at these three intersections would be mitigated, and a project's contribution would not be cumulatively considerable. The proposed project would be required to pay traffic impact fees and contribute to downtown improvements as specified in Mitigation Measure 5-1 in the Downtown Plan Amendments EIR.

The project transportation impact study identified one intersection deficiency at the Front Street/Soquel Avenue intersection, but noted that the improvements proposed in the Downtown Intersections Improvement Plan, the LOS and delay could be reduced from F to E and 206.0 to 73.7, respectively (SOURCE V.17). The improvements include modifying the eastbound and southbound approaches While no feasible improvements were identified that would reduce the LOS and delay to LOS D, under the City's existing General Plan, the City accepts a lower LOS at some major regional intersections such as this one per Circulation Policy 5.1.2.

The previous General Plan and Downtown Plan EIRs' evaluations of cumulative traffic impacts were based on the traffic congestion metric of LOS, which is no longer applicable due to changes in CEQA described above in Section IV.E.19, which now require traffic impacts to be evaluated based on VMT. In establishing guidelines, the State Office of Planning and Research issued guidelines that indicate if a project falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans, there would be no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant project impact would imply a less than significant cumulative impact (SOURCE V.8). As indicated in IV.E.19(b), the proposed project would not result in a significant impact related to VMT, and accordingly, cumulative traffic impacts also would be less-than significant. Future development projects would be individually evaluated for potential VMT impacts, and none have been identified. There are no new significant cumulative transportation impacts to which the proposed project would contribute that have not been addressed in the General Plan EIR.

Water Supply. The proposed project would contribute to significant cumulative impacts related to water supply identified in the General Plan 2030 EIR and Downtown Plan Amendments EIR. As indicated in these EIRs, development projects would be subject to City requirements for installation of water-conserving fixtures and landscaping in accordance with current Municipal Code and building requirements. Under multi-year drought conditions, the project, like other City customers, would be subject to water use restrictions. The increase in water demand due to the proposed project would not substantially exacerbate water supply reliability in the future or during a drought because the amount of additional demand when spread across all service area customers would not result in any noticeable increase in the timing or extent of curtailment in customer use that would otherwise be implemented during drought conditions.

In addition, the project would pay the required "System Development Charge" that is required for a new or upgraded service connection or where a project adds new residential uses. This charge, as set forth in Chapter 16.14 of the Municipal Code, funds public water system improvements, and is assessed so projects pay the proportional share of the costs of new and existing water facilities necessary to meet the demand resulting from new or enlarged water services. This charge is intended to mitigate the water supply impacts caused by new development in the City's water service area, and the funds are used for construction of public water system improvements and conservation programs. Payment of the System Development Charge and implementation of other water conservation measures would mitigate the project's contribution to cumulative water supply impacts.

As indicated in Section IV.B above, the City's General Plan EIR considered development of approximately 3,350 residential units within the City to the year 2030 (SOURCE V.1b), and cumulative development, including the proposed project, projects under construction and approved projects, is within the total and remaining estimated unbuilt residential units and non-residential square footage. Furthermore, as explained in Section IV.E.19(b), projected water demands have decreased since certification of the General Plan 2030 EIR, and the City has an updated UWMP (2020). Cumulative development is within the population projections used in the 2020 UWMP to estimate future water demand. Therefore, the proposed project's contribution to cumulative water demand would not result in new or more severe significant impacts relating to water supply than analyzed in the General Plan EIR or Downtown Plan Amendments EIR, nor would the project result in any new significant impacts that are peculiar to the site or project that were not considered in these EIRs. The project would be subject to City requirements for installation of water-conserving fixtures and landscaping in accordance with current City Municipal Code and building requirements.

Under multi-year drought conditions, the proposed project, like other City customers, would be subject to water use restrictions. The increase in water demand due to the proposed project would not substantially exacerbate water supply reliability in the future or during a drought because the amount of additional demand when spread across all service area customers would not result in any noticeable increase in the timing or extent of curtailment in customer use that would otherwise be implemented during drought conditions. In addition, the project would pay the required "System Development Charge" for the required new service connection. This charge, as set forth in Chapter 16.14 of the City's Municipal Code, is intended to mitigate the water supply impacts caused by new development in the City of Santa Cruz water service area, and the funds are used for construction of

public water system improvements and conservation programs. Payment of the System Development Charge and implementation of other water conservation measures would mitigate the project's contribution to cumulative water supply impacts. Therefore, the project's incremental contribution to a significant cumulative water supply impact would not be cumulatively considerable. Because the potential project contribution to cumulative impacts falls within the total level of those analyzed in the General Plan EIR, no further environmental analysis is required pursuant to Public Resource Code section 21083.3 and CEQA Guidelines section 15183.

Schools. The General Plan and Downtown Plan Amendments EIRs concluded that cumulative development could potentially affect school enrollments. The General Plan EIR concluded that this is a potentially significant cumulative impact, but would be mitigated to a less-than-significant level with required payment of school impact fees to fund necessary facility expansion and/or additions (City of Santa Cruz, April 2012, DEIR volume). Both EIRs also found that potential addition or expansion of school classroom facilities is not expected to result in significant physical impacts due to the location of existing facilities within developed footprints, and future enrollment could be accommodated without construction of new schools, although some expansion of existing facilities may be necessary (City of Santa Cruz, April 2012, DEIR volume). Therefore, a project's incremental contribution to this impact as a result of generation of students, including the proposed project, is not cumulatively considerable as the required payment of school impact fees would mitigate the project's cumulative contribution such that it would no longer be considered cumulatively considerable.

Conclusion. Therefore, the proposed project would not result in new significant impacts or substantially more severe impacts than analyzed in the General Plan 2030 and Downtown Plan Amendments EIRs. Nor would the project result in cumulative water supply or traffic impacts peculiar to the project or site with implementation of uniformly applied development standards. No further review is necessary pursuant to CEQA section 21083.3 and State CEQA Guidelines section 15183.

(c) Substantial Adverse Effects on Human Beings. Neither the General Plan EIR nor the Downtown Plan Amendments EIR identified impacts relating to air or water pollution or noise levels that would result in adverse effects on human beings; see Sections IV.E.3, 10 and 13. Project construction would require demolition of existing buildings that may contain hazardous materials (asbestos and lead-based paint). However, as discussed in Section IV.E.9, an uniformly applied development standard to require testing and removal of these materials if found in compliance with applicable regulations is included as a project condition of approval. Thus, no environmental effects have been identified that would have direct or indirect adverse effects on human beings, and the project would not result in new significant impacts peculiar to the project or site that would result in substantial adverse effects on humans.

V. REFERENCES AND DATA SOURCE LIST

Agency Plans and Studies

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    c. July 2018. "Cultural Resources Background Report Update with Policies, Programs, and Maps, City of Santa Cruz, Santa Cruz County, California." Prepared by Dudek.

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    b. 2022. Parks & Recreation Commission Agenda Report for December 12, 2022, Subject:: 113, 119 Lincoln St: [CP22-0128; TR22-0201] (APNs 005-141-11, -21) – Appeal of the decision of the Director of Parks and Recreation to approve a Heritage Tree Removal Permit for removal of nine (9) Heritage Trees in conjunction with the Downtown Library and Affordable Housing Project. December 5, 2022.
    c. 2022. Vehicle Miles Traveled (VMT) Analysis for 119 Lincoln Street-Downtown Library and Affordable Housing Project. November 1, 2022.
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    f. Adopted November 2021. 2020 Urban Water Management Plan. Prepared by the City of Santa Cruz, Water Department. Available online at: https://www.cityofsantacruz.com/government/city-departments/water/urban-water-management-plan-2020.
    g. 2021. Library Site Re-Use Visioning Process Final Draft. Prepared by Group 4. June 14, 2021.

h. June 2020. Resolution of the City Council of the City of Santa Cruz Adopting the Use of Vehicle Miles Traveled as the New Transportation Measure of Environmental Impacts. June 9, 2020 with Draft SB 743 Implementation Guidelines (May 27, 2020).
i. Adopted August 2016. *2015 Urban Water Management Plan.* Prepared by City of Santa Cruz Water Department.

4. AMBAG.
   a. Adopted June 15, 2022. "2022 Regional Growth Forecast."
   b. Adopted June 2022. *Monterey Bay 2045 Moving Forward, 2045 Metropolitan Transportation Plan / Sustainable Communities Strategy.*
   c. Adopted June 11, 2014. "2014 Regional Growth Forecast".

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To:	Samantha Haschert, Principal Planner and Timothy Maier, Senior Planner City of Santa Cruz Planning and Community Development Department
From:	Stephanie Strelow
Subject:	Downtown Library and Affordable Housing Project California Environmental Quality Act Categorical Exemption Review
Date:	February 14, 2023
cc:	Brian Borguno, Development Manager, City of Santa Cruz Economic Development Department

This memorandum provides a review of the applicability of California Environmental Quality Act (CEQA) Guidelines section 15332, Class 32 categorical exemption (In-Fill Development Projects), to the proposed Downtown Library and Affordable Housing Project (DLAHP or project).

I. Background

1. **Application No:** CP22-00128
2. **Project Title:** Downtown Library and Affordable Housing Project
3. **Project Location:** 113 and 119 Lincoln Street (APN 005-141-11, -21); see Figure 1.[1]
4. **General Plan Designation:** Regional Visitor Commercial (RVC)
5. **Zoning:** Central Business District (CBD), Cedar Street Village Corridor subdistrict

A. Project Location

The project site is located at 113 and 119 Lincoln Street in the City of Santa Cruz (City) on an 1.55-acre (67,921-square-foot) site. The project site is located on the eastern side of Cedar Street, immediately south of Lincoln Street and north of Cathcart Street. The site is bounded by Lincoln Street on the north, commercial development along Pacific Avenue on the east, Cathcart Street on the south, and Cedar Street on the west. The project site spans the full block between Lincoln and Cathcart Streets; see Figure 1.

B. Existing and Surrounding Land Uses

The flat project site is paved and developed with a surface public parking lot that contains 134 parking spaces and one 5,400-square-foot commercial building that is currently in use as a fitness gym. The parking lot is known as

[1] All figures are included at the end of this document.

"Public Parking Lot 4." The site contains 12 non-native trees, nine of which are considered "heritage trees" under City regulations. The nine heritage trees include four magnolia, two liquid amber, two Chinese pistache, and one ginkgo. The existing parking lot is the location of a weekly Farmers Market that is held year-round.

The project site is located in the Cedar Street Village Corridor of the *Downtown Plan*. The site is surrounded by primarily developed commercial uses and mixed-use developments within the City's downtown area. An existing church is located to the west of the project site and Cedar Street. Residential uses are located in mixed-used buildings to the east of the project site along Cathcart Street/Pacific Avenue, and several projects are currently under construction in the project vicinity, including a project to the west of the project site and Cedar Street, a project along Pacific Avenue south of Cathcart Street, and a project on Front Street to the east of the project site.

II. Project Description

A. Project Components

The project consists of a Nonresidential Demolition Authorization Permit, Special Use Permit, Design Permit, Lot-Line Adjustment, Sign Permit, and Heritage Tree Removal Permit to demolish one existing commercial building and surface parking lot and construct the DLAHP, consisting of a new public library, affordable housing units, a parking garage, ground-floor commercial tenant space, and a commercial childcare facility, with associated site improvements. The proposed project uses would be integrated within a new 273,194-square-foot building, which would range in height from three to eight stories at 50 to 84 feet tall, respectively. The proposed lot-line adjustment would merge the two existing site parcels into one lot. The project also includes a density bonus request as permitted pursuant to state and local regulations with requested waivers and concessions to some development standards as explained in Section II.C. The proposed site plan is shown on Figure 2, and the proposed uses are further described below. Figures 3A and 3B show the proposed project building elevations.

- **Public Library.** The proposed facility is an approximately 38,000-square-foot public library that would replace the existing downtown library located on Church Street across the street from City Hall. The library would be three stories, featuring two floors with elevated ceilings. The main library entrance is proposed at the mid-block point on Cedar Street, and includes a roof deck at the southwest corner of Cedar and Cathcart Streets.
- **Affordable Housing.** The proposed 100-percent-affordable-housing component includes 124 units located on five stories above the proposed parking garage. The proposed units include 13 studio units of about 450 square feet each, 48 one-bedroom units of approximately 500 square feet each, 31 two-bedroom units of approximately 730 to 840 square feet each, 31 three-bedroom units of approximately 900 to 950 square feet each, and 1 two-bedroom manager's unit. The units are proposed as affordable to extremely low, very-low, and low income households.
- **Parking. Garage.** The eastern side of the project site would contain a 243-stall, three-story, above-grade public parking garage with minimal frontage on the street façades on Cathcart and Lincoln Streets. The parking garage would be a Public City Parking Facility with 24-hour access. The City and its affordable housing development partner have also considered one level of subterranean parking that would increase the on-site parking by approximately 90 spaces to 336 spaces, and the proposed site plan may be revised to include this option at a later date if directed by the City Council. It is noted that all project technical studies have considered inclusion of one subterranean level of parking, as does this review. The public

parking component of the proposed project is intended to replace the existing public parking on the project site and to offset deficits in available downtown parking capacity resulting from approved and anticipated future development projects.

- **Childcare Facility.** A one-story, approximately 1,500-square-foot daycare facility is proposed immediately adjacent to the proposed library. The daycare facility would have a capacity for a minimum of 16 children. An outdoor play area would be located adjacent to the facility and would be used by children at the facility as well as on-site residents.
- **Commercial Space.** Approximately 11,950 square feet of commercial use is programmed for three stories at the southwest corner below the library roof deck. With demolition of the existing on-site commercial building, the project would result in a net increase of approximately 6,550 square feet of commercial space.

Access and Parking. Primary vehicular access to the proposed project would be provided along the southeastern portion of the site, from Cathcart Street, via a new one-way alley and parking garage entrance. The new alley would allow one-way access only in the northerly direction on the eastern edge of the project site, from Cathcart Street to Lincoln Street. The parking garage access is off of Cathcart Street, immediately west of the alley, and would allow both ingress and egress. Both access points would be improved with a new driveway approach.

As indicated above, a total of 243 parking spaces are proposed within the public parking garage. The project would also include 258 bicycle parking spaces located throughout the project site, of 140 are proposed Class I spaces that consist of individually enclosed, locked spaces. Class II bike spaces (i.e., bike racks) would be located along the sidewalk building entries and within the public parking garage along the pedestrian entry corridor. In addition, there would be separate, secured bike parking locations inside the parking garage for residential tenants and staff as well as library, daycare, and commercial employees.

The project includes frontage improvements along Cathcart Street, Cedar Street, and Lincoln Street per City standards, including curbs, gutters, and sidewalks. The proposed sidewalks would be built 10 to 12 feet wide. The project also includes four loading/unloading parking spaces along Cedar Street and five on-street parking spaces along Lincoln Street. A bus stop would be provided on Cedar Street just north of the Cathcart Street.

Utilities and Other Improvements. The project would connect to existing City water, sanitary sewer, and storm drain infrastructure. Stormwater would be treated on site through a biofiltration area and planters prior to conveyance into existing storm drains on Lincoln, Cedar, and Cathcart Streets. The proposed project would provide 14 new canopy trees, other landscaping, open space, and recreational amenities for residents.

B. Heritage Tree Removal Permit

On October 12, 2022, an application for a Heritage Tree Removal Permit was submitted to the Director of Parks and Recreation in conjunction with the proposed project, in accordance with the City's Santa Cruz Municipal Code Chapter 9.56, Preservation of Heritage Trees and Heritage Shrubs. The application requested removal of nine non-native, heritage trees as defined in Municipal Code Chapter 9.56 (any tree whose trunk measures 44 inches or larger in diameter at a height of 54 inches or greater above underlying ground). A Heritage Tree Removal Permit is required for removal of any trees of heritage size per Municipal Code section 9.56.060(a). The application included submittal of an arborist report and payment of a tree replanting mitigation bond, which would accommodate

installation of a minimum of nine, 24-inch-box-sized replacement canopy trees as street trees along the perimeter of the project site.

The Heritage Tree Removal Permit was approved by the City's Urban Forester on October 18, 2022, making the required findings in accordance with Municipal Code section 9.56.060(e). On October 27, 2022, an appeal of the Heritage Tree Removal Permit was submitted; an appeal requires consideration by the City Parks and Recreation Commission. The Parks and Recreation Commission considered and denied the appeal on December 10, 2022. Subsequently, the City Council on January 10, 2023, per applicable provisions of the Municipal Code, "called up" the heritage tree permits so as to assure that all heritage tree issues would be considered by the City Council at the same time the Council considers the other applications for the permits required by the DLAHP.

A Heritage Tree Removal Permit constitutes a discretionary permit reviewed through a process in parallel with the application for other entitlements for any project. The Municipal Code, including Chapter 9.56, contains no requirement for approval of use permits prior to, or concurrent with, granting of entitlement for a Heritage Tree Removal Permit. However, as the Heritage Tree Removal Permit application has been submitted in conjunction with the proposed DLAHP, the application for Heritage Tree Removal Permit may also be considered as part of the overall DLAHP.

C. Density Bonus Request

The project includes a density bonus request pursuant to California Government Code sections 65915 – 65918, which was enacted in 1979 to encourage the provision of affordable housing units in the state by offering a combination of benefits to developers. For projects that include the requisite number of affordable housing units, and upon the request of an applicant, cities are required to (i) allow more market rate units to be built than otherwise allowed by the applicable zoning designation); (ii) provide "incentives or concessions," such as reduced development standards that result in actual and identifiable cost savings for the project; (iii) provide "waivers or modifications" of development standards that would physically preclude the project from being constructed; and (iv) allow reduced parking requirements. Cities are generally obligated to grant a density bonus and incentives, concessions, waivers, or reductions in development standards to the applicant so long as the proposed development complies with the applicable affordability requirements and the waivers or incentives/concessions meet certain standards. Projects that include a specified amount of affordable housing are entitled to a density bonus, even if the density bonus would allow a project to exceed the maximum density under the City's General Plan and Zoning Code.

The amount of the density bonus is based on the number of affordable units at each income level that are included in a project. To determine whether a project qualifies for a density bonus, the percentage of affordable units is based on the maximum number of units that would be permitted under the City's zoning code (i.e., the "base density"). Market-rate projects providing certain percentages of affordable units or units at deeper levels of affordability are entitled to an increase in density up to 50 percent of the total number of units that are allowed under the City's Zoning Ordinance, depending on specified percentages and levels of affordability. The density bonus units themselves are not required to be affordable, and pursuant to section 24.16.250(2) of the Santa Cruz Municipal Code (as well as the State Density Bonus and California case law), "density bonus units shall not be included in the "total units" when determining the number of affordable units required to qualify a housing development for a density bonus." Thus, by law, the percentages of affordable units that qualify a project for the density bonus are based on the base project only and not the base project plus the density bonus units.

City staff concluded that the base density that could be developed on the project site under current *General Plan 2030* and zoning requirements is 46 units per acre. Neither the General Plan Regional Visitor Commercial (RVC) land use designation nor the Central Business District (CBD) zone district provide density requirements for uses located in these designations. The CBD zone district regulations indicate that the *Downtown Plan* development standards apply to projects in this zone district, but the *Downtown Plan* also does not provide permitted densities, though it supports higher-density development in the downtown area. The base density for the project was determined based on a development of a project concept conforming to all requirements of the CBD district and the *Downtown Plan* development regulations, including maximum allowed building heights and floor area ratio (FAR), which would affect the building size and the number of units that could be constructed on the site (TenOver 2023). Based on this review, it was determined that the base density for the project site is 46 units per acre, which would allow for 72 residential units on the 1.55-acre project site.

Because all of the units would be affordable to lower income households, with a base density of 72 units, an 80-percent density bonus over the base density, or up to 130 units, are permitted. (Gov. Code, § 65915(f)(3)(D)(i).) With a base density of 72 units, 14 units (20 percent) of the residential units would be required to be provided as affordable housing units at the low or very-low income level to meet the City's inclusionary housing requirements. However, the project proposes 124 affordable units, of which 19 units (or 26 percent of the base density) would be for extremely low-income households, 59 units (or 82 percent of the base density) would be for very-low-income households, 45 (or 62 percent of the base density) would be for low-income households, and 1 unit would be the manager's unit. Additionally, according to Government Code section 65915(f)(3)(D)(ii), there are no maximum controls on density for projects where all units are affordable to lower income households and that are located within one-half mile of a major transit stop.

The law also provides a variety of tools that applicants can utilize to make projects physically or more economically feasible, including incentives/concessions and waivers that allow for modification of development standards if those standards would result in "actual and identifiable cost reductions" to the project or that "physically preclude" construction of the density bonus project. A project applicant is allowed to request as many waivers from development standards as needed if the development standard would preclude the density bonus project from being built at the allowed density. Per the City's regulations, the proposed affordable housing component is eligible for four incentives or concessions, and the childcare component is eligible for an additional incentive/concession, but has not been requested.

One waiver and one incentive/concession have been requested, related to building height and the above-ground parking garage required with the requested density bonus. A waiver and incentive/concession are being requested for building height to exceed the 50- and 75-foot maximum per the *Downtown Plan* resulting from placement of the proposed housing component atop the 3-story above-ground parking garage. The project is requesting an exception from the *Downtown Plan*'s maximum height of 50 feet as specified in the Cedar Street Village Corridor subarea of the *Downtown Plan*. The exceedance of the 50-foot height limit is requested as both a waiver and an incentive/concession as explained below.

The *Downtown Plan* establishes a maximum building height of 50 feet above the allowed 35-foot limit in the Cedar Street Village Corridor on the east side of Cedar Street, and allows for an increase of up to 75 feet in the eastern portion of the site that is designated as "Additional Height Zone A," subject to approval of a Design Permit by the City Council. As proposed, the residential component of the project has been sited partially within Additional Height Zone A.

The base density plans show three levels of underground parking and three levels of residences (with 72 units) above the parking garage, which would result in a fully-conforming building with a height of 48 feet. An incentive/concession is being requested for exceedance of the 50-foot height limit that would result from placement of the parking facility at surface level, which is proposed due to the high costs of construction of underground parking. Placement of the parking structure at surface level would cause the height of the building to exceed 50 feet.

A waiver is being requested to further allow building height to increase in height above 50 feet. The waiver is requested as an additional increase in height beyond 50 feet due to inclusion of the density bonus units; the height would further increase above that resulting from the additional height induced by placement of the parking garage at grade (requested as an incentive/concession). The residential component is partially placed within the *Downtown Plan*'s Additional Height Zone A, which allows for a request for height of up to 75 feet with approval by the City Council; however, about half of the residential component would encroach into the area outside of Additional Height Zone A, in which the maximum allowable height per the *Downtown Plan* is 50 feet. The waiver is being requested to allow building height to exceed the 50- and 75-foot maximum per the *Downtown Plan* as a result of placement of the proposed housing component above the 3-story above-ground parking garage. The residential component of the site, which covers approximately the eastern half of the project site, would reach 84 feet in height and 91 feet at the building edges including parapets. Compliance with the maximum height of 50 feet as specified in the *Downtown Plan* would require a reduction in the number of stories of the building, and consequently, would: 1) diminish parking capacity necessary to support existing and future downtown development, and 2) eliminate a significant number of housing units, which would physically preclude construction of the number of residential units allowed under state density bonus law. Due to the elevated costs associated with subterranean construction, an incentive/concession has been requested for placement of the parking structure above grade. Reasonable financial documentation has been prepared to justify the request. As proposed, the parking structure's height of approximately 33 feet is less than the 35-foot height as identified in the *Downtown Plan*, demonstrates consistency with the *Downtown Plan*.

Pursuant to density bonus state law and the City's zoning ordinance, an applicant is required to provide justification for any requested waivers. The City must grant these waivers unless they violate state or federal law, create a specific adverse impact on health and safety or the physical environment that cannot be mitigated, or adversely impact real property listed on the California Register of Historical Resources. The City has no evidence that the requested waiver and incentive/concession should not be granted as required by state law.

D. Existing Library Reuse and Relocation of the Farmers Market

Reuse of the Existing Library

The proposed project would replace the existing library on Church Street, located across from City Hall and in close proximity to the Civic Auditorium. The approximately 59,000-square-foot site is bounded by Locust Street on north, Cedar Street on the east, Church Street on the north, and Center Street on the west. The site includes the existing downtown library and two associated public parking lots—Lot 14 and Lot 16, which have a total of 59 parking spaces.

On June 23, 2020, the City Council voted to advance the proposed project and initiated a reuse visioning process for the existing library that included an extensive public and stakeholder engagement process. Several potential

public uses and components were considered and discussed for the existing library site, including parks, plazas, the farmers market, parking, and mixed-use and affordable housing. With input from approximately 550 participants, a "Mixed-Use Housing with Civic Plaza" option received the highest score, followed by a "Plaza + Park" with housing as the second choice. A "Library Structure Re-purposed with Parking" option, which proposed to adaptively re-use the library structure for community or commercial uses, received the lowest score, and ranked lowest amongst the options (City of Santa Cruz 2021).

At this time, there is no City Council-approved direction for re-use for the existing library site if the proposed project is approved and constructed. While mixed-use housing with a public plaza received the highest ranking in the public visioning process, no option was selected as a preferred option, and other uses, such as community, institutional, or commercial uses, could be also be proposed as a part of a future project. Therefore, future uses at the existing library are speculative and cannot be reviewed at this time. When specific plans are developed and proposed for the existing library, separate environmental review and permit approvals would be required.

Relocation of the Farmers Market

The City has been in ongoing discussions with Santa Cruz Community Farmers Markets (SCCFM) since late summer of 2017, working to establish a new permanent location for the Downtown Farmers Market with an improved site, enhanced community space, and opportunity for year-round operations and expansion with special events. One site has been identified that is located one block away from the existing site at City Parking Lot 7 at the corner of Cathcart and Front Streets (City of Santa Cruz 2023).

On October 14, 2022, the City and SCCFM jointly agreed to enter into a Memorandum of Understanding to further define the next steps involved in establishing ongoing temporary and permanent operations of the SCCFM Downtown Farmers Market in downtown Santa Cruz. In a joint statement, both parties acknowledged:

- Temporary SCCFM market locations include, but are not limited to, the following: Lot 7, Lot 4, City Hall complex, including the courtyard and surrounding public rights of way;
- SCCFM and the City have worked together over the last few years to develop conceptual site plans for operation of the market on Lot 7;
- SCCFM has approved Lot 7 and the conceptual site plans as one option for both a temporary and future permanent location for the market;
- SCCFM and the City will continue to identify more locations and funding for a permanent market in downtown over the year ahead which in addition to Lot 7, including but not be limited to, Lot 4 and the existing library site as identified in the study completed by the Project for Public Space and Group 4 Architecture approved by City Council in June 2021; and
- SCCFM will continue to operate the market at the existing downtown location for the foreseeable future until SCCFM determines that surrounding construction impacts necessitate a relocation to a suitable alternative downtown site identified by SCCFM and the City.

Appropriate environmental review and permitting would be conducted at the time a preferred permanent location for the weekly Downtown Farmers Market is selected.

III. Reasons Why the Project is Exempt

CEQA provides "categorical exemptions" that are applicable to categories of projects and activities that the California Natural Resources Agency has determined generally do not pose a risk of significant impacts on the environment. The Class 32 categorical exemption is for "in-fill development" projects that meet the following criteria:

(a) The project is consistent with the applicable general plan designation and all applicable general plan policies as well as with applicable zoning designation and regulations;

(b) The proposed development occurs within city limits on a project site of no more than five acres substantially surrounded by urban uses;

(c) The project site has no value as habitat for endangered, rare or threatened species;

(d) Approval of the project would not result in any significant effects relating to traffic, noise, air quality, or water quality; and

(e) The site can be adequately served by all required utilities and public services.

The proposed project meets all of the foregoing criteria to claim the application of the in-fill exemption, as explained below.

A. Consistency with General Plan and Zoning Designations, Policies, and Regulations

The project is consistent with the City's *General Plan 2030* land use designations, the CBD zone district permitted land uses, and all applicable *General Plan 2030* policies and zoning regulations as explained below.

General Plan Designations and Policies

As previously indicated, the project site is designated RVC in the *General Plan 2030*. The RVC designation is applied to areas that "emphasize a variety of commercial uses that serve Santa Cruz residents as well as visitors. Mixed-use development is strongly encouraged in RVC districts." In the downtown area, the RVC designation specifically "emphasizes a mix of regional office and retail uses, residential and mixed-use developments, restaurants, and visitor attractions such as entertainment venues." The designation also indicates that the *Downtown Recovery Plan*[2] provides detailed requirements for this area." Furthermore, the *General Plan 2030* allows a FAR range of 0.25 to 5.0 for parcels that are designated RVC and located in the downtown area.

[2] The Downtown Recovery Plan (DRP) is now called the *Downtown Plan* and is referred to as such in this document. The DRP was adopted in 1991 to guide reconstruction after the 1989 Loma Prieta earthquake and provides development standards and guidelines to direct the rebuilding and recovery process. The DRP was adopted as a specific plan (pursuant to California Government Code requirements) to implement policies in the downtown area. Chapter 4 of the *Downtown Plan*, Development Standards and Design Guidelines, is incorporated by reference in Part 24 of the Zoning Code, the CBD zone district, and the CBD district is part of the LCP implementation regulations. The DRP has been modified several times over the past 25 years with significant amendments adopted in 2017. The amendments approved in 2017 included changing the name of the Plan to "*Downtown Plan*" since post-earthquake recovery had been achieved and also included revisions to development standards, including provisions for additional height allowances under specified circumstances in the downtown area.

The proposed project includes a mix of uses, including community services (i.e., the relocated library and childcare facility), commercial uses, and residential uses, as well as continued public parking. Thus, the project is consistent with mixed-use developments emphasized in the *General Plan 2030* for the downtown area. The project's FAR is 4.08, which is within the allowed FAR established in the *General Plan 2030* for the downtown area. Thus, the proposed mixed-use project land uses and FAR are consistent with the *General Plan 2030* RVC land use designation.

The proposed project also is consistent with the policies of the *General Plan 2030*, including the Housing Element, based on City review explained in the February 23, 2023 Planning Commission staff report, dated February 15, 2023. The consistency review is included in Attachment A.

Zone District Uses and Development Regulations

As previously indicated, the project site is zoned CBD. Pursuant to Municipal Code section 24.10.2300, the purpose of the CBD zone district is to implement the Land Use Plan, Development Standards, and Design Guidelines of the *Downtown Plan*, a specific plan. It is intended to refine the *Downtown Plan* in the area of land use and regulations. It supports the purpose of the *Downtown Plan*, in the context of the *General Plan 2030*, which aims to maintain downtown as the urban center of the city with the many functions a city center serves. Pursuant to section 24.10.2301, Chapter 4 of the *Downtown Plan*, as amended, is adopted by reference in the CBD zone. The policies and regulations set forth in Chapter 4 of the *Downtown Plan* shall control all uses in the CBD and its four subdistricts: Pacific Avenue Retail District; Front Street Riverfront Corridor; Cedar Street Village Corridor; and North Pacific Area.

The project site is located within the Cedar Street Village Corridor in the *Downtown Plan*. The land use plan and the standards and guidelines for this area strive to preserve and enhance the informal "village" qualities of the Cedar Street Corridor. Unlike the Pacific Avenue district, permitted ground-level uses include office in addition to retail, and residential uses are allowed at the ground level along the east-west streets and Center Street (City of Santa Cruz 2020b). A range of land uses are allowed within the Cedar Street Village Corridor.

East of Cedar Street, development may be allowed to exceed 35 feet on a discretionary basis to a maximum height of 50 feet (4 floors maximum). The granting of additional height above 35 feet is discretionary and requires a Design Permit with the recommendation of the Planning Director to the City Council, which must approve the additional height. In addition, approximately 50 feet on the eastern edge of the project site is located within "Additional Height Zone A," which allows building heights to 75 feet with specified development standards. The granting of building height above the 55-foot base height limit is discretionary and requires a Design Permit with the recommendation of the Director of Planning to the City Council, which must approve the additional height. Projects that qualify for a density bonus as allowed under either State law or City-adopted density bonus ordinance are eligible for the additional height increase. It also is noted that the *Downtown Plan* indicates that projects that closely conform to the development standards, but with slight variations may be considered upon demonstration that the resulting project will better achieve stated Plan and community objectives. Such variations shall be minor in nature and must receive a positive recommendation from the Planning Director, with final approval by the City Council (section J.1).

The proposed project uses are consistent with allowed residential, commercial, and institutional and community facilities allowed in the Cedar Street Village Corridor. With the exception of the one requested waiver and one

requested incentive/concession, the proposed project is consistent with all CBD zone district requirements and *Downtown Plan* development standards as summarized below, based on City review explained in the February 23, 2023 Planning Commission staff report dated February 15, 2023. The consistency review is included in Attachment A.

The three-story elements of the proposed project (parking garage and commercial space) have a height of 33 feet, which is below the 35-foot height limit established in the *Downtown Plan*. The proposed library also is generally under 35 feet in height except for one element that extends to 47 feet in height, but does not exceed 50 feet in height which is allowed with discretionary approval. The 5-story residential component of the proposed project reaches a height of 84 feet (and 91 feet with parapets), which exceeds both the 75-foot maximum height allowed in "Additional Height Zone A" in the eastern portion of the site and also the 50-foot height limit on the portion of the site not located in the "Additional Height Zone A". Figure 4 provides a conceptual depiction of the proposed building heights.

The proposed project is eligible for requesting additional height to 75 feet for the eastern portion of the site located within "Additional Height Zone A" if the City makes findings that the project is consistent with the following overarching City objectives (*Downtown Plan*, pages 72-73):

i. The additional height will help to achieve the First Principles of the *Downtown Plan* (e.g. form, housing, accessibility and open space).

ii. The additional height will contribute to an improved social and economic environment by including new housing.

iii. The form of the development promotes the appearance of a grouping of buildings rather than large, monolithic building masses.

iv. The development receiving additional height will physically and/or financially contribute its fair share (through an Improvement District, Development Agreement or similar mechanisms) to the implementation of internal pedestrian connections between Pacific Avenue and Front Street.

v. The additional height will help to meaningfully achieve one or more of the following key community objectives, including but not limited to: Affordable Housing, Day Care Center, exceed Green Building minimums, Incubator Space for Small Business, Public Access Easements, Public Right-of-way Improvements, Publicly Accessible Open Space, Structured or Shared Parking, and Transportation Demand Management concepts.

The City has found that the proposed project is consistent with the overarching objectives of the *Downtown Plan*, although the 5-story residential component exceeds both the 75-foot maximum height allowed in "Additional Height Zone A" in the eastern portion of the site and also the 50-foot height limit on the portion of the site not located in the "Additional Height Zone A". However, California State Density Bonus Law and the City's corresponding Density Bonus Ordinance provide tools to incentivize affordable housing and/or deeper levels of affordability. One incentive is that applicants can utilize a waiver or modification to development standards if those standards would "physically preclude" construction of the density bonus project, which would include building height.

As described above in Section II.C and further explained in the City Planning Commission staff report dated February 15, 2023, one waiver and one incentive/concession have been requested to allow for the increased building height as a result of the proposed above-ground parking garage, which are required because it has

been shown that applicable zoning development standards would physically preclude the construction of the number of residential units allowed under the State Density Bonus Law. Chapter 24, Part 3 of the Municipal Code governs the City's density bonus provisions. Pursuant to section 24.16.200, the purposes of Part 3 of this chapter are: (1) to provide incentives for the production of housing for very-low-income, low-income, moderate-income, and senior households; (2) to provide incentives for the creation of rental housing serving lower-income households; (3) to provide incentives for the construction of childcare centers serving very-low-, low-, and moderate-income households; and (4) to implement California Government Code sections 65915, 65915.5, 65915.7, and 65917 as required by Government Code section 65915(a). In enacting this part, it is also the intent of the City to implement the goals, objectives, and policies of the *General Plan 2030* Housing Element to encourage the construction of affordable housing in the City. Further, it is the intent of the City to encourage the development of rental housing in order to serve an economically diverse community and to mitigate the trend, as documented in the *General Plan 2030* Housing Element, that only limited rental unit development occurs without public assistance.

The court decision in *Wollmer v. City of Berkeley* expressly held that the waivers a city was required to grant for a density-bonus-eligible project did not result in planning and zoning inconsistencies that disqualified the project from the categorical exemption for in-fill development, because the mandatory nature of the waivers meant that those waived standards were inapplicable to the project. The Court found that "taking these laws together as they operate in the context of a density bonus project, it is clear that the waived zoning standards are not "applicable" and that the requirements of Guidelines section 15332, subdivision (a) were met." Therefore, based on the City's analyses and the *Wollmer* decision, the project is consistent with the zone district designation and all *applicable* zoning regulations, as well as the *General Plan 2030* land use designation and policies.

B. Project Site Size and Surroundings

The 1.55-acre site is entirely located within City limits and is less than 5 acres in size. The proposed project would encompass the entire site. The project site is surrounded by urban uses including commercial uses along Pacific Avenue that border the project site on the east, as well as commercial uses along Lincoln and Cathcart Streets to the north and south, respectively. An existing church and commercial uses exist along Cedar Street to the west of the project site, as well as a mixed-use commercial/residential project that is under construction. CEQA does not provide a definition of "urban uses" that must be found to substantially surround a project in order to qualify for the exemption in CEQA Guidelines section 15332. However, the project site is within the downtown area of the City, and both the downtown and the City are characteristic of a densely populated area. In addition, the CEQA Guidelines section 15194, which addresses an exemption for affordable housing, includes a requirement that the project be located within an "urbanized area or within a census-defined place with a population density of at least 5,000 persons per square mile." Although the proposed project does not meet other requirements for use of the affordable housing exemption in section 15194, and therefore the City has not claimed that exemption is applicable to the proposed project, it is noted that the City's 12.7 square miles supports a population of 5,045 persons per square mile, which is consistent with the definition of urban area presented in this section of the CEQA Guidelines. CEQA Guidelines section 15387 also defines "urbanized area" as a city or group of contiguous cities with a population of 50,000 or more and having a population density of at least 1,000 persons per square mile, and the City also meets this definition, Therefore, the proposed development occurs within City limits on a project site of no more than 5 acres and is substantially surrounded by urban uses.

C. Project Site Habitat Value for Rare, Threatened, and/or Endangered Species

The project site and surrounding properties are developed. The site is developed with one existing commercial building and a paved, surface public parking lot. The site includes 12 non-native, planted trees within the existing parking lot.

The project site is not within an area mapped as potential sensitive habitat as depicted in the City's *General Plan 2030*, and there are no known endangered or threatened species on or adjacent to the site due to the site's location within a developed urban area (City of Santa Cruz 2012a). However, a database search was conducted to further determine whether any rare, threatened, or endangered species are known to occur on or adjacent to the site or have the potential to occur on the site. The review included the California Natural Diversity Data Base (CNDDB) maintained by the California Department of Fish and Wildlife, the U.S. Fish and Wildlife Service Information for Planning and Consultation (IPaC) database, and the California Native Plant Society Rare Plant Inventory. The review did not identify any special-status species occurring on or near the site, and concluded that there is no potential habitat to support special-status species on the project site (Dudek 2023b). Therefore, the project site has no value as habitat for rare, threatened, or endangered species.

It is noted that 12 non-native trees would be removed, but given the review of potential threatened or endangered species, tree removal would not affect habitat for special-status species. The potential for disturbance to nesting birds protected under state and federal regulations is discussed below in Section IV.C.

D. Significant Effects Relating to Traffic, Noise, Air Quality, or Water Quality

Traffic

Vehicle Miles Traveled. In December 2018, the California Natural Resources Agency certified and adopted an update to the CEQA Guidelines, including the new CEQA Guidelines section implementing Senate Bill (SB) 743. SB 743 and the CEQA Guidelines state that level of service (LOS) (i.e., congestion) will no longer be considered to be an environmental impact under CEQA and that vehicle miles traveled (VMT) is the most appropriate measure of transportation impact. Cities were required to adopt new thresholds and/or procedures related to VMT by July 2020.

In accordance with the amended CEQA Guidelines, the City has transitioned from intersection LOS formerly used for traffic impact analyses to VMT as the metric for determining potentially significant impacts. The City adopted a VMT transportation threshold on June 9, 2020 in accordance with CEQA and state requirements. The threshold generally establishes that a project exceeding a level of 15 percent below the Countywide average VMT may result in a significant transportation impact.

The City's SB 743 Implementation Guidelines (City of Santa Cruz 2022a) to determine whether a land use project is within the VMT threshold includes a screening process in which situations are identified under which projects are determined to not have a significant impact and further VMT analysis is not required. The guidelines require that each distinct land use for a mixed-use project be analyzed separately unless they are determined to be insignificant to the total VMT. The guidelines also state that housing projects are expected to cause a less-than-significant impact on VMT if a high percentage of the project is affordable, as determined by the City.

Furthermore, projects, or portions of a project that meet the screening criteria do not require a CEQA transportation analysis, and such projects, or portions of a project, will have a non-significant CEQA transportation impact based on their project location and characteristics. According to the City's guidelines, projects that would not be expected to result in a significant VMT impact and that are screened out from further transportation impact review include:

- Small projects that generate fewer than 110 trips per day;
- Projects near high-quality transit: within one-half mile of a major transit stop or a high-quality transit corridor with a combined service interval frequency of 15 minutes or less during the AM and PM peak hours[3];
- Local-serving retail (less than 50,000 square feet) projects;
- Projects with a high percentage of affordable housing is provided as determined by the City of Santa Cruz;
- Local essential services, which includes daycare centers and libraries;
- Map-based screening; and
- Redevelopment projects that do not result in a net increase in VMT.

The proposed project is located in a "VMT Efficient Area" based on the "Santa Cruz County Residential Screening Map." This means that based on the VMT per capita threshold set by the City and County, the proposed project is located in an area that produces VMT per capita that is at least 15 percent below the countywide average, and therefore is below the City's adopted VMT impact threshold. Additionally, each of the project elements can use the screening criteria in the City's SB 743 Implementation Guidelines as follows.

- Projects near High-Quality Transit: This screening criterion is met as the proposed project is within one-half mile of a high-quality transit stop as defined by California Public Resources Code section 21064 (Santa Cruz Metro Center).
- Local-Serving Retail: This screening criterion covers the net increase of approximate 6,500 square feet space for commercial uses that would be considered local-serving retail uses, which is substantially less than the screening level of 50,000 square feet.
- Affordable Housing: This screening criterion is met as the proposed project provides 100-percent-affordable housing with the proposed 124 units of affordable housing, which would be considered a high proportion of affordable housing.
- Local Essential Service: This screening criterion covers the proposed daycare and government offices uses (library).

The proposed parking on the site represents a net increase of 109-202 public parking spaces with the proposed 243-space parking garage that could potentially be expanded to 336 spaces, which would replace the 134 existing spaces. Because the proposed parking is part of the public supply of parking in the downtown area and is not dedicated to the other proposed project uses, the parking component of the proposed project is analyzed as part of the overall shared public supply in the downtown area. In this case, the Parking District is projected to lose 448 spaces by 2030, but only projected to gain up to 336 spaces with the proposed project. This

[3] The CEQA Guidelines indicate that, generally, projects within one-half mile of either an existing major transit stop or a stop along an existing high quality transit corridor should be presumed to cause a less-than-significant transportation impact.

represents a net loss in the shared public supply of 112-205 spaces. The project does not add more parking than required by the City.

For all of the foregoing reasons, the VMT for the proposed project is assumed to be less than significant in accordance with the adopted City guidelines. Thus, the project would not result in a significant impact related to VMT based on the City's adopted threshold and would not conflict or be inconsistent with CEQA Guidelines section 15064.3 (City of Santa Cruz 2022c). Furthermore, the proposed project includes provision of bicycle parking in excess of City requirements (61 spaces in excess of City requirements), which could further reduce VMT by one percent (City of Santa Cruz 2022d).

It is also noted that the City's guidelines follow the guidance of and are consistent with the State's guidelines for evaluation of transportation and VMT impacts (California Office of Planning and Research 2018), which found that adding affordable housing to in-fill locations generally improves jobs-housing match, in turn shortening commutes and reducing VMT, and in areas where the existing jobs-housing match is closer to optimal, low-income housing nevertheless generates less VMT than market-rate housing. In addition, a project consisting of a high percentage of affordable housing may be a basis for the lead agency to find a less-than-significant impact on VMT, and evidence supports a presumption of less than significant impact for a 100-percent-affordable residential development (or the residential component of a mixed-use development) in in-fill locations (California Office of Planning and Research 2018).

Other Transportation Impacts. The City did not identify any other significant transportation-related effect resulting from the proposed project, including conflicts with transportation policies. The project site is located in proximity (less than one-half mile) to bus stops and the Santa Cruz Metro Center, thus facilitating transit use. The project includes frontage and sidewalk improvements as well as 248 bicycle parking spaces which, as indicated above, exceeds City requirements by 61 spaces, and includes locked facilities which serve to facilitate and enhance pedestrian and bicycle travel. The *General Plan 2030* includes goals, policies, and actions that set forth comprehensive measures to reduce vehicle trips, increase vehicle occupancy, encourage use of alternative transportation modes, and promote alternative-sustainable land use patterns, all of which would help reduce vehicle trips, and avoid and minimize adverse impacts related to traffic. Thus, the project is consistent with *General Plan 2030* policies that promote non-automobile transportation. The provision of public parking on the project site would be part of the Downtown Parking District and not dedicated solely to project uses. As indicated above, even with the proposed on-site net increase of public parking spaces on the project site, the Downtown Parking District overall would experience a net loss in public parking spaces before 2030. However, this would not result in a significant transportation impact under criteria included in the CEQA Guidelines.

The *General Plan 2030* strives to maintain the established LOS D or better at signalized intersections (M3.1.3). Level of service is typically used to evaluate traffic operations, in which operating conditions range from LOS "A" (free-flowing) to LOS "F" (forced-flow). The *General Plan 2030* also accepts a lower LOS and higher congestion at major regional intersections if necessary improvements would be prohibitively costly or result in significant, unacceptable environmental impacts (M3.1.4). Although LOS is no longer used as metric for determining significance of transportation impacts under CEQA, a traffic impact study was prepared for the project in accordance with City requirements. The study found that the intersection LOS analysis results show that all study intersections would operate at an acceptable LOS established in *General Plan 2030* policies during both AM and PM peak hours under "existing plus project" conditions (Kimley-Horn 2023), and thus, the

project would not result in traffic levels which would conflict with City LOS policies. The proposed project is also located in proximity to pedestrian and bicycle facilities that could be used for some of the project's daily trips.

Noise

The proposed project would not result in a substantial increase in permanent noise levels. The project consists of a mixed-use residential, public library, and commercial development with predominantly residential uses. None of the project uses (residential, library, commercial, or childcare facility) would be associated with activities that would generate substantial permanent increases in ambient noise levels. The proposed parking garage would be enclosed, which would generally create a shield to vehicular noise, and would replace the existing surface public parking lot on the project site.

An analysis of noise generated by mechanical equipment found that the increase in ambient noise levels would be below the threshold considered in the General Plan 2030 EIR for potentially significant impacts (Salter 2023). In addition, the analysis of noise levels with project traffic found that the increase in traffic resulting from the project would result in an increase in noise levels but they would remain below City thresholds. Therefore, the project would not result in a significant impact related to permanent increases in noise (Salter 2023). In addition, Municipal Code section 9.36.010 prohibits offensive noise between the hours of 10 PM and 8 AM and section 9.36.020 prohibits unreasonably disturbing noises. Furthermore, section 24.14.260 prohibits increases of sound levels above five decibels (dBA) above the local ambient noise level on a residential property. These regulations are intended to prevent increases in ambient noise levels.

There also would be a temporary increase in existing noise levels during project grading and construction. Noise levels resulting from construction would depend on the noise generated by various pieces of construction equipment, the timing and duration of noise-generating activities, and the distance between construction noise sources and noise-sensitive receptors, as well as existing ambient noise levels. Noise generated during construction would vary throughout the construction period and on any given day, depending on the construction phase and the type and amount of equipment used at the construction site. The highest noise levels would be generated during grading of the site, with lower noise levels occurring during building construction and finishing. Sensitive noise receptors, which are residential uses located approximately 155 feet west of the project site, would experience a temporary increase in noise levels. However, construction sound levels would be intermittent and varied through a single day as well as throughout the duration of project construction, and construction noise levels would decrease with distance from the construction site. Overall, construction noise levels would be temporary and short-term, and would fluctuate throughout the construction period with the construction activities producing higher noise levels occurring earlier in the construction phase. Therefore, construction noise would not result in substantial increases in temporary noise levels or result in a significant impact to sensitive receptors.

The proposed project does not include any uses that would result in generation of groundborne vibration. Potential vibration levels associated with construction are not expected to exceed thresholds for human annoyance or for damage to "normal dwelling houses" at the nearest residential properties. Thus, groundborne noise would not result in a significant impact (Salter 2023).

Air Quality

Criteria Air Pollutant Emissions. The California Emissions Estimator Model (CalEEMod) Version 2020.4.0 was used to estimate criteria air pollutant emissions generated during construction and operation of the proposed project. CalEEMod is a statewide computer model developed in cooperation with air districts throughout the state to quantify criteria air pollutant emissions associated with construction activities from a variety of land use projects, such as residential, commercial, and industrial facilities. A construction assumptions scenario was developed based on the best available information known and provided by the City and its affordable housing development partner. Key construction assumptions include phase types, phase timing and duration, off-road equipment use (e.g., type, quantity, and hours of operation per day), number of vehicle trips (e.g., haul trucks, vendor trucks, and worker vehicles) and trip distance, ground disturbance acreage, amount of demolition debris, and paving area.

Emissions of criteria air pollutants associated with construction and operation of the proposed project based on the CalEEMod results are shown on Tables 1 and 2. As shown, maximum daily emissions would not exceed the applicable Monterey Bay Air Resources District (MBARD) significance thresholds (MBARD 2008) related to air quality. Therefore, project air pollutant emissions would during both construction and operations would result in a less-than-significant impact as all emissions levels would be substantially below MBARD thresholds.

Table 1. Estimated Maximum Daily Construction Criteria Air Pollutant Emissions

Year	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	pounds per day					
2024	1.38	19.96	14.46	0.05	3.38	1.84
2025	4.52	7.68	10.26	0.03	1.96	0.67
2026	4.52	9.23	10.96	0.02	0.68	0.52
Maximum Daily Emissions	**4.52**	**19.96**	**14.46**	**0.05**	**3.38**	**1.84**
MBARD Threshold	*N/A*	*N/A*	*N/A*	*N/A*	*82*	*N/A*
Threshold Exceeded?	**N/A**	**N/A**	**N/A**	**N/A**	**No**	**N/A**

Notes: CO = carbon monoxide; MBARD = Monterey Bay Air Resources District; N/A = not applicable; NO_x = oxides of nitrogen; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; ROG = reactive organic gases; SO_x = sulfur oxides.
The values shown are the maximum summer or winter daily emissions results from CalEEMod.
Emissions thresholds are included in MBARD's CEQA Air Quality Guidelines (2008).
CalEEMod model results are on file with the City of Santa Cruz Planning and Community Development Department.

Table 2. Estimated Maximum Daily Operational Criteria Air Pollutant Emissions

Emission Source	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	pounds per day					
Project						
Area	3.92	0.12	10.24	<0.01	0.06	0.06
Energy	0.06	0.3	0.34	<0.01	0.04	0.04
Mobile	7.22	6.90	59.08	0.09	10.32	2.80
Total	**11.20**	**7.56**	**69.66**	**0.10**	**10.42**	**2.90**
Existing						
Area	0.15	<0.01	0.01	0.00	<0.01	<0.01
Energy	<0.01	0.04	0.03	<0.01	<0.01	<0.01
Mobile	1.22	1.34	9.88	0.01	1.25	0.35
Total	**1.37**	**1.37**	**9.91**	**0.01**	**1.29**	**0.36**
Net Change in Emissions						
Net Change (Project – Existing)	**9.83**	**6.19**	**59.74**	**0.09**	**9.13**	**2.54**
MBARD Threshold	*137*	*137*	*550*	*150*	*82*	*N/A*
Threshold Exceeded?	**No**	**No**	**No**	**No**	**No**	**N/A**

Notes: CO = carbon monoxide; MBARD = Monterey Bay Air Resources District; N/A = not applicable; NO_x = oxides of nitrogen; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; ROG = reactive organic gases; SO_x = sulfur oxides.
The values shown are the maximum summer or winter daily emissions results from CalEEMod.
Emissions thresholds are included in MBARD's CEQA Air Quality Guidelines (2008).
CalEEMod model results are on file with the City of Santa Cruz Planning and Community Development Department.

Air Quality Management Plan. Potential conflicts with the MBARD's Air Quality Management Plan (AQMP) also were considered using guidance set forth by the MBARD's CEQA Guidelines (MBARD 2008). A consistency determination is a process by which the lead agency demonstrates that the population associated with a proposed project is accommodated by the Association of Monterey Bay Area Governments' (AMBAG's) regional forecasts. AMBAG's regional forecasts for population and dwelling units are embedded in the emission inventory projections used in the regional AQMP.

For population-related projects, the MBARD developed a procedure that compares existing, under-construction, and approved residential dwelling units with AMBAG's housing unit forecast for a jurisdiction, as dwelling units are closely related to population and can be tracked within local jurisdictions; therefore, the number of dwelling units is used as the method for determining consistency with the AQMP. Consistency of indirect emissions associated with commercial, industrial, or institutional projects intended to meet the needs of the population as forecast in the AQMP is determined by comparing the estimated current population of the county in which the project is to be located with the applicable population forecast in the AQMP. If the estimated current population does not exceed the forecasts, indirect emissions associated with the project are deemed to be consistent with the AQMP. Projects which are consistent with AMBAG's regional forecasts have been accommodated in the AQMP and are therefore consistent with the AQMP (MBARD 2008).

The MBARD's most recent 2015 AQMP utilized AMBAG's 2014 Regional Growth Forecast. The City had 24,250 existing dwelling units as of January 1, 2022 (California Department of Finance 2022), and approximately 1,711 residential units are under construction or have been approved throughout the City, including residential development at the University of California Santa Cruz (UCSC)[4]. With the addition of these units, the City's housing units would total 25,961 dwelling units. That number would increase to 26,085 dwelling units with the addition of the proposed project, which is below the AMBAG Regional Growth Forecast of 28,297 dwelling units for the year 2030 that were factored into the AQMP. Similarly, City population with the proposed project and other approved and under-construction housing units would total 70,607, which is below the AQMP forecast of 73,375 in the year 2030, and thus, the non-residential components of the proposed project, which are intended to serve the local population, would be consistent with the AQMP. Therefore, the proposed project would be consistent with the AQMP, and would not conflict with or obstruct implementation of the AQMP.

Water Quality

The proposed project does not involve any discharges that would violate any water quality standards or waste discharge requirements. The City has developed a Storm Water Management Program (SWMP) in order to fulfill the requirements of the National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges of Storm Water from Small Municipal Separate Storm Sewer Systems (MS4) (General Permit) and to reduce the amount of pollutants discharged in urban runoff. In compliance with the regulations, the City's comprehensive SWMP is designed to reduce the discharge of pollutants and to protect water quality. The City also adopted an ordinance for "Storm Water and Urban Runoff Pollution Control" (Chapter 16.19 of the Municipal Code), as part of its SWMP. The ordinance identifies prohibited discharges and required Best Management Practices (BMPs) for construction and new development. City regulations (Municipal Code section 16.19.140) require that any construction project, including those undertaken under any permit or approval granted pursuant to Titles 15 (Streets and Sidewalks), 18 (Buildings and Construction), and 24 (Zoning) of the Municipal Code, shall implement BMPs including the City's mandatory BMPs as detailed in the latest BMP manual published by the City's Public Works Department. The City's BMP manual requires the project to include a structural or treatment control BMPs, or a combination of BMPs, to reduce potential pollutant loadings in storm water runoff to the maximum extent practicable.

The project site is currently developed, and its impervious surface area would decrease from 65,560 square feet to 44,440 square feet with the proposed project. A stormwater control plan (SWCP) has been prepared for the project that details drainage features to collect and treat stormwater runoff. The project proposes to install a biofiltration area and mechanical filtration system and would be designed so that stormwater would collect into this system. Other measures also include provision of porous pavement on the perimeter of the site. Stormwater would be filtered through this system before it is discharged into existing City storm drains. Furthermore, the proposed project's parking garage would eliminate the existing surface parking lot, which would reduce conveyance of urban pollutants typically found in parking lots into the City's storm drain system.

[4] Residential projects at UCSC are primarily student housing projects, and there is one approved employee housing project. In general, part-year student housing is considered group quarters and year-round faculty / student family housing is counted as housing units (AMBAG 2022). For the 2014 regional growth forecast used in the AQMP, University population and housing projections were completed separately from jurisdiction population projections (AMBAG 2014). For the purpose of this review and in accordance with current AMBAG guidance, approved employee housing is considered as housing units, and student housing is considered group quarters and is not included as housing units, but the population accommodated by new student housing is included in the population estimates.

The SWCP is subject to review and approval by the City's Public Works Department, which has found that the project is in compliance with stormwater management and treatment provisions included in City regulations. Thus, the proposed project would not alter existing drainage patterns, and operations would not result in a significant impact.

Construction activity on projects that disturb one or more acres of soil must obtain coverage under the State's General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 99-08-DWQ). Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation. The Construction General Permit requires the development and implementation of a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP is required to list BMPs that the discharger will use to protect stormwater runoff. Proposed grading and development on the project site would disturb more than 1 acre and, thus, the project would be subject to the Construction General Permit and preparation of a SWPPP, which would set forth measures to prevent erosion and protect water quality during construction.

Compliance with regulations contained in the Municipal Code regarding implementation of stormwater BMPs, grading requirements and implementation of erosion control plans (Chapters 16.19 and 18.45 and section 24.14.060), as well as preparation and implementation of a SWPPP during construction, would avoid/minimize potential water quality impacts from stormwater runoff.

E. Utilities and Public Services

The project site is in an urban area and is currently served by public utilities and services for water, wastewater, gas, electricity, and solid waste. The proposed project would continue to be served by existing utilities and service providers. Except for gas and electricity, all services and utilities are provided by the City. All existing public services and utilities are adequate to serve the proposed project.

IV. Exceptions to Categorical Exemptions

The City has further considered whether the project is subject to any of the potential exceptions to the use of a categorical exemption found in CEQA Guidelines section 15300.2. This section prohibits the use of categorical exemptions under the following circumstances:

(a) For certain classes of projects (not the Class 32 in-fill exemption) due to location;

(b) When the cumulative impact of successive projects of the same type in the same place, over time, is significant;

(c) Where there is a reasonable possibility that the activity will have a significant effect on the environment due to unusual circumstances;

(d) Where the project may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway;

(e) Where the project is located on a state-designated hazardous waste site; and

(f) Where the project may cause a substantial adverse change in the significance of a historical resource.

A. Location

The exemption exception in section 15300.2(a) does not apply because projects in the Class 32 category are not excluded on the basis of location.

B. Cumulative Impacts

Under CEQA Guidelines section 15300.2(b), a categorical exemption shall not be used when the cumulative impact of successive projects of the same type in the same place, over time is significant. There is no specific time requirement for the consideration of cumulative impacts "over time." However, CEQA requires a lead agency to consider cumulative impacts from "reasonably foreseeable" projects (CEQA Guidelines section 15355(b)).

Successive projects of the same type in the same place on the proposed project site have not been approved or proposed. Furthermore, once the construction of the proposed project is complete, there would be no available space on the site for future development. The City may consider inclusion of one subterranean level of parking as part of the proposed parking garage, but this would be included with the proposed project and not developed at a later date after the project had been constructed.

There are a number of other mixed-use and residential projects in the downtown area that have been approved or are under construction in proximity to the proposed project and within the downtown area as defined by the boundaries in the *Downtown Plan*. The geographic scope of the cumulative impact exception is clearly narrower than for projects for which an EIR is prepared, due to the more restrictive language of the potential exception ("projects of the same type in the same place"). However, notwithstanding the narrower scope of the exception, cumulative impacts from other projects similar to the proposed project located in vicinity of the proposed project or within downtown were fully considered.

There are three mixed-use projects under construction and three other approved mixed-use projects within the vicinity of the proposed project. All projects include ground-floor commercial uses with residential uses on the upper floors, and one project also includes a public transit facility and offices. Thus, these projects are similar to the proposed project and would result in construction of 641 residential units with ground-floor commercial uses. However, there would be a net reduction of approximately 52,500 square feet of non-residential commercial and office space due to demolition of existing commercial buildings to accommodate the new mixed-use projects. These other downtown area projects also are expected to be constructed within the same general 2- to 5-year timeframe as the proposed project with construction completion by the year 2030.

The General Plan 2030 EIR considered potential new housing units and non-residential uses in the City that could be accommodated by the *General Plan 2030* with an estimated buildout of 3,350 new residential units and approximately 1,090,000 square feet of commercial uses throughout the City by the year 2030 (City of Santa Cruz 2012b, DEIR volume-page 3-13). The proposed project is located within the "Downtown" neighborhood area that was identified in the General Plan 2030 EIR for the purposes of evaluating potential growth. The General Plan 2030 EIR identified additional development in the downtown neighborhood to include 299 residential units, approximately 38,900 square feet of commercial space, approximately 4,500 square feet of office space, and 82 hotel rooms. However, it is noted that the "Downtown" neighborhood in the General Plan 2030 EIR encompasses a larger area than is included within the boundaries of the *Downtown Plan*. In

addition, the downtown area located along the San Lorenzo River east of Front Street is located in the "River/Front" neighborhood in the General Plan 2030 EIR, for which potential future development was estimated at 337 residential units and approximately 70,000 and 91,600 square feet of commercial and office space, respectively. Additional potential future development within the area covered in the *Downtown Plan* also was considered with amendments to the *Downtown Plan* that were approved in 2017 to include a net increase of 711 residential units, approximately 2,200 square feet of office space, and a decrease in commercial space of approximately 14,700 square feet as evaluated in the Downtown Plan Amendments EIR.

Taken together, potential future development in the downtown area considered in the General Plan and Downtown Plan Amendments EIRs was estimated at 1,347 housing units and approximately 205,053 square feet of non-residential commercial and office space. It is noted that these potential development numbers in the *General Plan 2030* and Downtown Plan Amendments EIRs were estimates developed for the purpose of completing environmental analyses, but were not adopted as caps or development limits.

Since adoption of the *General Plan 2030*, approximately 1,200 residential units have been constructed or approved in the "Downtown" and "River/Front" neighborhoods, which include the area within the *Downtown Plan*, and there has been a net reduction of approximately 3,300 square feet of non-residential space. With the proposed project, cumulative residential units in the downtown area would total 1,324 units, which is slightly below the total number of residential units considered for development (1,347 units) in the *General Plan 2030* and Downtown Plan Amendments EIRs. Additionally, with the proposed project, approved and constructed cumulative non-residential development, including the DLAHP, would have a net increase of approximately 54,750 square feet, which is approximately one-quarter of the amount of non-residential space (205,000 square feet) considered in the EIRs.

It is noted that there is one pending mixed-use development project in the downtown area that has not been approved, but is expected to be presented to City decision-makers in the near future, and thus is considered reasonably foreseeable. If approved, this project would include 276 residential units and a net decrease in commercial square footage. With this pending project, total residential units would exceed estimates considered in the analyses in the *General Plan 2030* and *Downtown Plan* EIRs for the downtown area by 250 units, but would still be within the overall development and growth estimates considered in the General Plan EIR. In addition, there is one pending non-residential development project that also may be considered by City decision makers within the next six months. Although not a mixed-use project like the proposed DLAHP, it would result in addition of approximately 133,600 square feet of commercial space as a new hotel. However, when added to other approved and constructed non-residential space, including the DLAHP, non-residential square footage would be less than the amount considered in the Downtown Plan Amendments EIR and General Plan EIR.

There is no substantial evidence to support a conclusion that significant impacts would occur as a result of reasonably foreseeable cumulative projects in the downtown area based on cumulative impact analyses conducted for the City's General Plan 2030 EIR and Downtown Plan Amendments EIR. Because approved cumulative development is within residential development estimates and far below non-residential development estimates considered and analyzed in the *General Plan 2030* and Downtown Plan Amendments EIRs, potential cumulative impacts in the downtown area from buildout under the plans have been adequately addressed. The General Plan 2030 EIR identified potential significant cumulative impacts related to noise, population, transportation/traffic, and water supply. The Downtown Plan Amendments EIR identified significant

cumulative impacts related to transportation/traffic, water supply, and schools. Cumulative impacts due to other development projects in the vicinity of the proposed project would not be significant or the proposed project's contribution would not be cumulatively considerable as explained below.

Noise. Neither the proposed project nor other downtown cumulative projects would contribute to cumulative noise impacts since the these projects are not located in proximity to the road segments subject to the cumulative noise impact (Westside industrial area) as identified in the General Plan 2030 EIR.

Transportation/Traffic. Previous evaluations of cumulative traffic impacts were based on the traffic congestion metric of LOS, which is no longer applicable due to changes in CEQA described above, which now require traffic impacts to be evaluated based on VMT. In establishing guidelines, the State Office of Planning and Research issued guidelines that indicate if a project falls below an efficiency-based threshold that is aligned with long-term environmental goals and relevant plans, there would be no cumulative impact distinct from the project impact. Accordingly, a finding of a less-than-significant project impact would imply a less than significant cumulative impact (California Office of Planning and Research 2018). As indicated in Section III.D, the proposed project would not result in a significant impact related to VMT, and accordingly, cumulative traffic impacts also would be less-than significant.

Population. The General Plan 2030 EIR identified cumulative population growth as a potentially significant impact due to cumulative growth at the University of California, Santa Cruz (UCSC) in conjunction with growth accommodated by the General Plan 2030. The EIR concluded that cumulative growth (City and UCSC) could result in an average annual growth rate that would exceed historical growth rates and AMBAG population forecast growth rates if the North Campus area is annexed to the City in the next 20 years. UCSC updated its Long-Range Development Plan (LRDP) in 2021 and no longer proposes expansion into the North Campus area, although enrollments were projected to increase. The General Plan EIR considered UCSC enrollment to 19,500 students with provision of additional on-campus housing. According to UCSC's website, enrollment for the 2021-2022 academic year totaled approximately 19,000 students (University of California Santa Cruz 2023).

Regional population forecasts are updated every four years by AMBAG and have been updated since certification of the General Plan 2030 EIR and the Downtown Plan Amendments EIR. Current forecasts project a Citywide population of 72,218 in the year 2030 (AMBAG 2022). The City had a population of 64,075 people as of January 1, 2022 (California Department of Finance 2022). Based on the City's existing average household size of 2.33, cumulative downtown projects, including the proposed project, could result in a population increase of approximately 3,085 persons as a result of development of 1,324 new housing units. This is a conservatively high estimate as household sizes in the downtown area at about 1.9 persons per household are slightly lower than the Citywide average, based on Census information. City population as a result of cumulative downtown projects could increase to approximately 67,160 and would not exceed regional population forecasts for the City of 72,218 in the year 2030 (AMBAG 2022). Even with addition of the pending downtown project that could be approved in the near future (approximately 276 units), resulting population would be less than the regional forecast for the year 2030. Therefore, no new significant cumulative population growth impacts related to downtown development is expected.

The General Plan 2030 EIR also indicates that regional population forecasts, which are updated every four years, would account for changing trends in cumulative development and growth. Furthermore, it is also noted that the proposed project would not be inducing new population growth, but would serve existing households

in the city or county that are on waiting lists for affordable housing. The Housing Authority of Santa Cruz County has indicated to City staff that there are a total of 10,851 applicants throughout the county on its waiting list for affordable housing. It would be reasonable to assume that some of these people already live in the City, and thus, the project and other affordable housing projects in the downtown area would serve in part if not completely, existing City residents and would not result in any substantial population increases.

Water Supply. The proposed project would contribute to significant cumulative impacts related to water supply identified in the General Plan 2030 and Downtown Plan Amendments EIRs. As indicated above, the proposed project and cumulative approved downtown development are within the amount of development analyzed in both EIRs. With two pending downtown projects, development estimates analyzed for the downtown area would be exceeded, but would still be within development estimates considered in the city-wide General Plan EIR. As indicated in both EIRs, approved development projects would be subject to City requirements for installation of water-conserving fixtures and landscaping in accordance with current Municipal Code and building requirements. Under multi-year drought conditions, the project, like other City customers, would be subject to water use restrictions. The increase in water demand due to the proposed project would not substantially exacerbate water supply reliability in the future or during a drought because the amount of additional demand when spread across all service area customers would not result in any noticeable increase in the timing or extent of curtailment in customer use that would otherwise be implemented during drought conditions.

In addition, the project would pay the required "System Development Charge" that is required for a new or upgraded service connection or where a project adds new residential uses. This charge, as set forth in Chapter 16.14 of the Municipal Code, funds public water system improvements, and is assessed so projects pay the proportional share of the costs of new and existing water facilities necessary to meet the demand resulting from new or enlarged water services. This charge is intended to address the water supply impacts caused by new development in the City's water service area, and the funds are used for construction of public water system improvements and conservation programs. Therefore, the project's incremental contribution to a significant cumulative water supply impact would not be cumulatively considerable.

Schools. The General Plan and Downtown Plan Amendments EIRs concluded that cumulative development could potentially affect school enrollments. The General Plan EIR concluded that this is a potentially significant cumulative impact, but would be mitigated to a less-than-significant level with required payment of school impact fees to fund necessary facility expansion and/or additions (City of Santa Cruz, April 2012, DEIR volume). Both EIRs also found that potential addition or expansion of school classroom facilities is not expected to result in significant physical impacts due to the location of existing facilities within developed footprints, and future enrollment could be accommodated without construction of new schools, although some expansion of existing facilities may be necessary (City of Santa Cruz, April 2012, DEIR volume). Therefore, a project's incremental contribution to this impact as a result of generation of students, including the proposed project, is not cumulatively considerable as the required payment of school impact fees would mitigate the project's cumulative contribution such that it would no longer be considered cumulatively considerable.

Conclusion. Based on cumulative impacts potentially resulting from reasonably foreseeable projects in the downtown area, no other potentially significant cumulative impacts have been identified. As explained above, the proposed project's contribution to cumulative water supply impacts would not be cumulatively considerable. No significant cumulative impacts have been identified for air quality or water quality. All development projects must comply with City stormwater regulations that would prevent or minimize water quality impacts as

addressed in Section III.D, and thus, other cumulative projects in the downtown area would not result in a significant cumulative impact. Similarly, according to the MBARD, projects which are consistent with the AQMP would not result in a significant cumulative impact (MBARD 2008). Therefore, this exception of significant cumulative impacts of successive projects of the same type and in the same place does not apply to the project.

C. Significant Impacts Due to Unusual Circumstances

Under CEQA Guidelines section 5300.2(c), a categorical exemption shall not be used where there is a reasonable possibility that the activity will have a significant effect on the environment due to "unusual circumstances." Unusual circumstances may be established by showing that the project has some feature that distinguishes it from others in the exempt class, such as its size or location, and that there is a reasonable possibility of a significant effect due to that unusual feature or circumstance, or by showing that the project would have a significant environmental effect. For the unusual circumstances exception to apply, it is not enough alone that there is a reasonable possibility the project would have a significant environmental effect; instead there must be a reasonable possibility that the activity would have a significant effect on the environment *due to unusual circumstances*.

The nature of a project may be "unusual," particularly if its scope and size differ from conditions in the surrounding vicinity. This includes whether the project is or is not consistent with the surrounding zoning and land uses, including consistency with the underlying general plan and zoning designations and development standards. Conversely, the scope and size may be "unusual" if the use, height, or density vastly differ from surrounding uses. Therefore, "the presence of comparable facilities in the immediate area adequately supports [a]n implied finding that there [are] no 'unusual circumstances' precluding a categorical exemption." (*Walters v. City of Redondo Beach* (2016) 1 Cal. App.5th 809, 821, quoting *Bloom v. McGurk* (1994) 26 Cal.App.4th 1307, 1316.)

The project site possesses no unusual features or environmental characteristics that distinguish it from other properties of the same size in the downtown area. The project site's immediate area, and the downtown area in general, have similar *General Plan 2030* and zoning designations as the subject property. There are no "unusual circumstances" that differentiate the project from the general class of similarly situated projects.

The project site is approximately 1.55 acres in size and is developed. There are numerous in-fill development sites in the downtown area that could similarly redevelop with a mixed-use project. There are at least six similar mixed-use projects that are currently under construction or approved in the downtown area on in-fill sites, some of which include surface parking lots similar to the project site; four of these projects have applied the in-fill development categorical exemption under CEQA. In addition, there is an approved mixed-use project in the downtown neighborhood as defined in the General Plan EIR and four other approved mixed-use projects within the City. A summary and comparison of these projects are included in Attachment B. These projects have similar or greater densities and building heights as the proposed project, and most have utilized waivers and concessions permitted under state and local density bonus laws. The proposed project represents a density of 80 dwelling units (du) per acre. This density is within and substantially lower than densities of most of the above-referenced approved projects and projects that are under construction in the downtown area, where densities range from 84 to 196 du/acre, most of which are greater than 130 du/acre. The proposed project's total number of housing units also is less than three of the approved downtown projects. Therefore, the size

and density of the project do not represent unusual features or circumstances, as numerous other approved projects have similar or greater densities and size.

The project site is located within an urban area, surrounded by development, and sensitive resources are not present as explained above and below. As explained below, there are no "unusual circumstances" that differentiate the project from the general class of similarly situated properties or projects. For example, other properties in the surrounding area have developed or could develop a similar mixed-used project, utilizing waivers permitted under the provisions of the state and local density bonus laws.

Lastly, the proposed project does not include uses that would be considered unusual in the downtown area. As indicated above in Section III.A, all proposed project uses are allowed in the CBD district as set forth in the *Downtown Plan*. The proposed parking garage is consistent with the City's *Downtown Plan*, which indicates that parking in the downtown core should continue to be provided by the Parking District in a centralized fashion, to maximize shared use and minimize the quantity of stored vehicles. The *Downtown Plan* continues to call for parking structures and specifically calls for consideration of reuse of portions of City parking lots for residential redevelopment as replacement parking is provided in new structures. In this case, the project includes a parking garage, as well as housing and community uses. In addition, the Plan calls for consolidation of public and private properties to reinforce and expand the existing system of off-street parking along Cedar and Front Streets

The proposed parking garage would remove the existing 134-space surface public parking lot and would provide a new three-level parking garage with 243-336 spaces available to the public, as well as the project users. While the project would result in an net increase in public parking on the project site, reviews by City staff indicate the Downtown Parking District would continue to operate with a deficit of approximately 112-205 parking spaces. Thus, although the new parking garage could result indirectly in traffic and air emissions as vehicles search for available parking and may exacerbate the existing parking deficit downtown, these situations are common and not be considered an unusual circumstance that would lead to a significant impact. The traffic generated by the proposed project would not lead to traffic congestion that exceeds City policy directives for acceptable levels of service (Kimley-Horn 2023) as explained in Section III.D. Similarly, the air emission modeling conducted for the project that accounts for project trips and the parking garage found that all criteria air pollutant emissions would be below regulatory thresholds as explained in Section III.D. Therefore, the proposed parking garage would not be an unusual feature or circumstance that could lead to a significant impact.

Aesthetics. The proposed project would result in a building height of 84 feet, which is higher than other buildings in the immediate vicinity due to the requested waiver required for qualifying projects that include density bonus units. The height also exceeds the additional 75-foot heights that could be allowed on the eastern portion of the project site. However, the proposed project is similar in height and scale as three approved mixed-use projects in the downtown area that are also designated RVC in the *General Plan 2030*, and which have approved heights of 81-85 feet. Furthermore, the *Downtown Plan* permits additional height to 85 feet in the area to the east of the project site between Pacific Avenue and Front Street on the west and east, and Cathcart Street and Laurel Street on the north and south, respectively. The additional 85-foot height can also be allowed on the west side of Front Street between Cathcart Street and Soquel Avenue. In addition, there are two other buildings in the downtown area that exceed 80 feet in height, the Palomar Hotel and 110 Cooper Street (City of Santa Cruz 2017). Therefore, there are other existing, approved, and under construction projects with similar or slightly greater heights than the proposed project, and existing City plans allow for height up to 85 feet under

specified conditions in the immediate vicinity of the proposed project. Thus, the proposed building height for the residential portion of the building, which exceeds the allowable additional building height, would not in and of itself be considered an unusual feature of the project because other buildings of similar size exist, are under construction, or could be constructed under existing city plans and regulations on similarly sized, infill sites as the proposed project.

The proposed project's building height for the residential portion of the project would visually appear as a taller building with one or two stories visible behind existing buildings on Pacific Avenue. Given other buildings approved and being constructed in the downtown area and elsewhere in the city, the additional height would not, when viewed in proximity of other larger buildings, be considered an unusual circumstance. Additionally, the taller portion of the building is primarily confined to the eastern edge of the site, with lower building heights that are consistent with City standards being located along the Cedar Street frontage. This is consistent with the *Downtown Plan*'s standards call for horizontal and vertical variation to create the appearance of multiple buildings that are more in keeping with the surrounding area. The Plan states that "Additional height – even up to 85 feet in the Additional Height Zone A – can be absorbed appropriately if it is confined to a portion of a property, rather than as a massive block, terraced back from the street."

As indicated in the Downtown Plan Amendments EIR, there is no required presumption under CEQA that taller buildings are necessarily a substantial adverse change in the existing visual environment. Such determinations are made on a case-by-case basis at a lead agency's discretion and in consideration of the relevant environmental setting or context, which here, is a nearly fully developed urban area. Future proposed buildings with additional height would not be considered to be substantially out of scale with other existing buildings in the downtown area (City of Santa Cruz 2017).

The proposed project would not block scenic views, such as ocean views or distant mountain views as described in the General Plan and Downtown Plan Amendments EIR, nor affect scenic resources adjacent to a designated scenic highway, the primary consideration for identifying potentially significant impacts related to aesthetics. In an urbanized area, which the City is under the definition of the term in CEQA Guidelines section 15387, a project that results in conflicts with applicable zoning and other regulations governing scenic quality also could be considered a significant impact. However, there are no regulations governing scenic quality applicable to the project site. There are some regulations regarding scenic views in the coastal zone, but the project is not located in the coastal zone.

As indicated above, the additional height allowed by an approved waiver pursuant to the density bonus law would not be considered to conflict with zoning standards, and therefore, the heights allowed under the waiver would not be considered an unusual circumstance as similar density bonus and waiver requests have been approved in the City in which new building heights have extended to 85 feet. Furthermore, CEQA (Public Resources Code section 21099) states that aesthetic impacts of a residential, mixed-use residential, or employment center project on an in-fill site within a transit priority area shall not be considered significant impacts on the environment, although design review would still be required pursuant to local City requirements and regulations. The project site is considered an in-fill site and also is located within a transit priority area. City staff has reviewed the project and made the required findings for issuance of a Design Permit.

Heritage Tree Removal. The project involves the removal of 12 non-native trees, nine of which are heritage trees subject to approval of a Heritage Tree Removal Permit as discussed above in Section II.B. The project

landscape plan includes planting of 14 canopy, 24-inch-box-sized street trees, which exceeds replanting requirements for removal of nine heritage trees. As indicated in Section II.B, the proposed removal of heritage trees was found to meet the City's criteria for removal, and the project will replant trees in excess of the amount removed.

Removal of heritage trees is permitted by City regulations under specified circumstances and with required tree replanting at ratios specified by the City. Approval of a heritage tree removal permit automatically requires replacement trees or payment of an in-lieu fee. Removal of a heritage tree that is consistent with the criteria, provisions, and requirements set forth in City regulations would not result in a conflict with a local ordinance, and thus, removal of heritage trees consistent with City regulations and requirements would not be considered a significant impact of the project or an unusual circumstance.

The proposed heritage tree removal is similar to other approved projects in the downtown area and throughout the City that have also included removal of heritage trees and replanting replacement trees. Most infill sites have been previously developed and include some trees and landscaping, and thus, the presence of heritage trees on the project site does not represent an unusual feature or circumstance. Other project sites with recently approved Heritage Tree Removal Permits include but are not limited to: Pacific Front Mixed-Use Project site that is under construction (two heritage trees); the approved Riverfront Project (eight heritage trees) approved 190 West Cliff Drive mixed-use project (11 heritage trees); and 415 Natural Bridges Affordable Housing Project (four heritage trees.

Removal of heritage trees would not result in a significant impact due to unusual circumstances as properties and projects throughout the City are able to remove heritage trees through compliance with the criteria for removal, approval of permit, and replanting replacement trees as required by City regulations. Thus, the project and its location do not differ from other projects of any type and location throughout the City that are bound by the same regulations. In addition, the trees themselves do not represent an unusual feature. All trees are non-native and planted as part of the parking lot landscaping or street trees. While several trees are larger trees and visible along Cedar Street and in the immediate vicinity of the project site, the trees are not visible from a wide-ranging area, are not visually prominent or distinctive, and are not considered scenic resources. The trees do not represent a significant or prominent visual element of the surrounding area, and removal would not substantially alter the visual character of the area. While any tree may possess aesthetic qualities, the trees that would be removed are not unusual for the species nor are they visually distinctive or prominent from a wide area. Therefore, the trees would not be considered an unusual feature, and 13 replacement trees are proposed.

The trees on the project site could provide potential nesting habitat for migratory birds which are protected by the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code (CFGC). Compliance with the MBTA would require that either a pre-construction nesting survey be conducted to confirm that no nesting birds protected under the MBTA are present if trees or removed during the nesting season or to remove trees outside of the nesting season. Compliance with required regulations would not result in a significant impact. Furthermore, the City's *General Plan 2030* (Action NCR2.4.1 and Table 1) establishes biological survey protocols, including pre-construction nesting bird surveys if tree removal construction were to commence during the nesting season with establishment of appropriate construction buffers if needed if nesting birds are found. A standard project condition of approval requires Implementation of a pre-construction nesting survey, which

would be applicable to the proposed project. Compliance with this standard condition would avoid any harm to nesting birds on-site, if any are found during the survey.

Thus, removal of heritage trees at the project site would not be considered an unusual circumstance as heritage trees have been removed at other sites in the downtown area and throughout the City to accommodate mixed-use and other residential projects.

Other Potential Impacts. There is no substantial evidence that the proposed project would result in a significant impact as explained below. Therefore, there are no unusual circumstances related to the project or its surroundings that may lead to a significant effect on the environment.

The project site is located with an A99 Flood Zone as designated by the Federal Emergency Management Agency (FEMA), which also covers the entire downtown area and other parts of the City. This designation indicates that the project area is subject to inundation by a 1-percent-annual-chance flood event, but which will ultimately be protected upon completion of an under-construction federal flood protection system. A99 Zones are areas where enough progress has been made on the construction of a protection system, such as dikes, dams, and levees, to consider it complete for insurance rating purposes (FEMA 2023), which in this case are improvements to the levee adjacent to the San Lorenzo River (City of Santa Cruz 2012b). For these reasons, the project site does not contain unusual hydrologic conditions or circumstances, and the project would not result in significant impacts related to drainage or water quality degradation.

Most mixed-use and other development projects throughout the downtown area are required to prepare a geotechnical investigation report (Cornerstone Earth Group 2022). The geotechnical investigation conducted for the project addressed identified issues related to liquefaction, ground deformation, and lateral spreading, and provided recommendations to address these concerns. Implementation of these recommendations would be verified through design documents that would be submitted to the City for review and approval prior to issuance of construction (grading or building) permits. The investigation concluded that the project is geotechnically feasible given the existing soil conditions and implementation of construction and design recommendations included in the geotechnical investigation. The investigation did not reveal any conditions that differ from other sites in the downtown area and throughout the city, and thus, there are no soils or geological features that would be considered unusual that aren't encountered at other sites throughout the City.

As explained in Section III.C, the project site is not located in a sensitive biological area, and the project would not result in impacts to biological resources as none exist on the project site or surrounding area.

The property is located within a sensitive archaeological area. A cultural resource evaluation was conducted, which included archival research and a surface reconnaissance. The archival research revealed that no previously recorded archaeological resources are located within the proposed project area. The project site does not contain historical resources as explained below in Section IV.F.

The project site is not located in a mapped fire hazard area per the City's *General Plan 2030* (City of Santa Cruz 2012a). Also, the project site not located in or near a state responsibility area or lands classified as very high fire hazard severity zones by the California Department of Forestry and Fire Protection (CAL FIRE 2007).

Conclusion. For these reasons explained above, there are no unusual circumstances surrounding the project or project site that would suggest a reasonable possibility of a significant effect on the environment due to such circumstances, and this exception does not apply to the project.

D. Scenic Resources

Under CEQA Guidelines section 15300.2(d), a categorical exemption shall not be used for a project which may result in damage to scenic resources, including but not limited to, trees, historic buildings, rock outcroppings, or similar resources, within a highway officially designated as a state scenic highway. The project site is not located adjacent to or near a highway; the nearest highway, Highway 1, is located approximately 0.4 miles northwest of the project site. Furthermore, there are no officially designated state scenic highways within the City (Caltrans 2023). Therefore, the project would not result in damage to scenic resources within an officially designated, state scenic highway, and this exception does not apply to the project.

E. Hazardous Waste Sites

Under CEQA Guidelines section 15300.2(e), a categorical exemption shall not be used for a project located on a site which is included on any list compiled pursuant to section 65962.5 of the Government Code (i.e., the Cortese List). The project site is not included on a list of hazardous waste sites compiled pursuant to Government Code section 65962.5. The following Cortese List online data resources (CalEPA 2023) were reviewed during the preparation of this document: (1) the list of hazardous waste and substances sites from the Department of Toxic Substances Control's (DTSC's) EnviroStor database (DTSC 2023a); (2) the list of leaking underground storage tank sites from the State Water Resources Control Board's (SWRCB's) GeoTracker database (SWRCB 2023a); (3) the list of solid waste disposal sites identified with Waste Constituent Above Hazardous Waste Levels Outside the Waste Management Unit (CalEPA 2023b); (4) the list of active Cease and Desist Orders and Cleanup and Abatement Orders from the SWRCB (SWRCB 2023b); and (5) the list of hazardous waste facilities subject to corrective action pursuant to Section 25187.5 of the Health and Safety Code, identified by DTSC (CalEPA 2023c). In addition, an Environmental Site Assessment prepared for the project found that the project site is not located on any of the DTSC lists of hazardous materials sites and was not listed in any of the regulatory databases (Weber, Hayes & Associates 2022). Therefore, based on the above review, the project site is not included on any list compiled pursuant to Government Code section 65962.5 and this exception does not apply to the project.

It is noted that review of regulatory databases and local/state agency record repositories revealed there are a few chemical release sites in the general vicinity of the project site, but no documented sites with the potential to impact the project site were identified (Weber, Hayes & Associates 2022). However, a Phase I Environmental Site Assessment identified two dry cleaners with undocumented releases and a documented, low-level solvent plume present in shallow groundwater upgradient of the project site that has some potential to encroach (flow) beneath the site (Weber, Hayes & Associates 2022). A Phase II sampling and testing program was implemented to evaluate subsurface site conditions for potential contamination. No contaminated groundwater or vapor releases were found. The results showed that the bulk of the shallow soils (approximately one to three feet deep) across the project site were impacted with elevated concentrations of lead and arsenic that are from typical urban sources (lead-based paint and weed and rodent control). Most of the elevated metal concentrations are characterized as "non-hazardous" and can be disposed of at a local, municipal landfill. However, much of the shallow soils across the project site exceeded residential (unrestricted) or commercial

land use screening threshold limits, but can be graded/removed and disposed of during development activities (Weber, Hayes & Associates 2022). The removal and disposal of these soils would be conducted in accordance and in compliance with applicable local and state regulations governing these activities; specifically future grading and soils removal would be required to be managed under an agency-approved Soil Management Plan (SMP) under the direction of the County of Santa Cruz Environmental Health Department.

F. Historical Resources

Under CEQA Guidelines section 15300.2(f), a categorical exemption shall not be used for a project which may cause a substantial adverse change in the significance of a historical resource. CEQA Guidelines Section 15064.5 defines a historical resource as:

- A resource listed in, or determined to be eligible for listing in, the California Register of Historical Resources (CRHR);
- A resource listed in a local register of historical resources.
- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California…Generally, a resource shall be considered by the lead agency to be :historically significant." Generally, a resource is considered historically significant if it meets criteria for listing in the California Register of Historical Resources, including:
    - Is associated with events that made a significant contribution to the broad patterns of California's history and cultural heritage.
    - Is associated with the lives of people important in our past.
    - Embodies the distinctive characteristics of a type, period, region, or method of construction, represents the work of an important creative individual, or possesses high artistic values.
    - Has yielded or may be likely to yield information important in prehistory or history; OR
    - A resource determined to be a historical resource by a project's lead agency.

According to maps developed for the City's *General Plan 2030*, the project site is not located within a designated historic district (City of Santa Cruz 2012a). However, the project site is located in an area mapped as archaeologically sensitive per the City's *General Plan 2030* and contains one structure that is older than 50 years old.

A historical resources evaluation was conducted for the existing commercial building at 113 Lincoln Street that was constructed in 1941. The building has been altered considerably with a 1980 storefront remodeling campaign, removal of the original entrance, and a 1986 rear addition. Given the changes made to what was a modest original design, the evaluation found that the building no longer possess sufficient historic integrity of setting, design, materials, workmanship feeling and association for it to qualify for listing on the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR). The evaluation also concluded that the existing building on the project site is not eligible for the Santa Cruz Historic Resources Inventory because the building does not meet City preservation criteria and has been altered substantially (PAST Consultants 2022). Therefore, the existing structure on the project site is not a historical resource under the definition of CEQA.

An archaeological investigation for the project concluded that potentially significant cultural materials may be located in the project area and recommended an extended site evaluation to locate subsurface resources, consisting of trenches to the depths of impacts in locations where historic maps indicate potential resources (Albion 2022). An extended testing program was undertaken that consisted of trenches throughout the project site. The testing found five historical-period features in the west central portion of the project site, and the results indicate that much of the site contains intermittent, shallow, and thin sheet deposit of scattered historical period artifacts associated with the mid- to late nineteenth and early to mid-twentieth century. The location and characteristics suggest these are examples of parcel-level dumping events indicative of residential refuse disposal behavior prior to centralized refuse collection that began in the mid-twentieth century. No prehistoric archaeological materials of any kind were found during the testing (Dudek 2023).

Evaluation of the five features concluded that they do not rise to a level where they could be found eligible for listing under the California Register of Historical Resources (CRHR) criteria and integrity requirements or under local criteria. Specifically, the features cannot be associated with a significant contribution to the broad patterns of California's history and cultural heritage or with the lives of persons important in our past. As relative casual dumping events, there are no distinctive characteristics present, and the features clearly do not represent the work of an important creative individual, nor do they possess high artistic values. As numerous other examples of such deposits exist with greater integrity and historic associations, the features are not likely to yield information important to history. Therefore, these resources are not considered historical resources under CEQA (Dudek 2023). The project site was tested, except for the area covered by the existing building. There is a moderate potential for encountering additional similar artifacts during construction. While it is not expected that additional deposits would meet the definition of a historical resource, archaeological monitoring during grading is recommended.

Based on this information, the project would not result in a substantial adverse change to the significance of a historic resource, and this exception does not apply to the project.

For these reasons, the City is able to document that the project qualifies for the Categorical Exemption found at CEQA Guidelines section 15332, the in-fill exemption, and that none of the potential exceptions to the use of a categorical exemption apply to this project or the project site.

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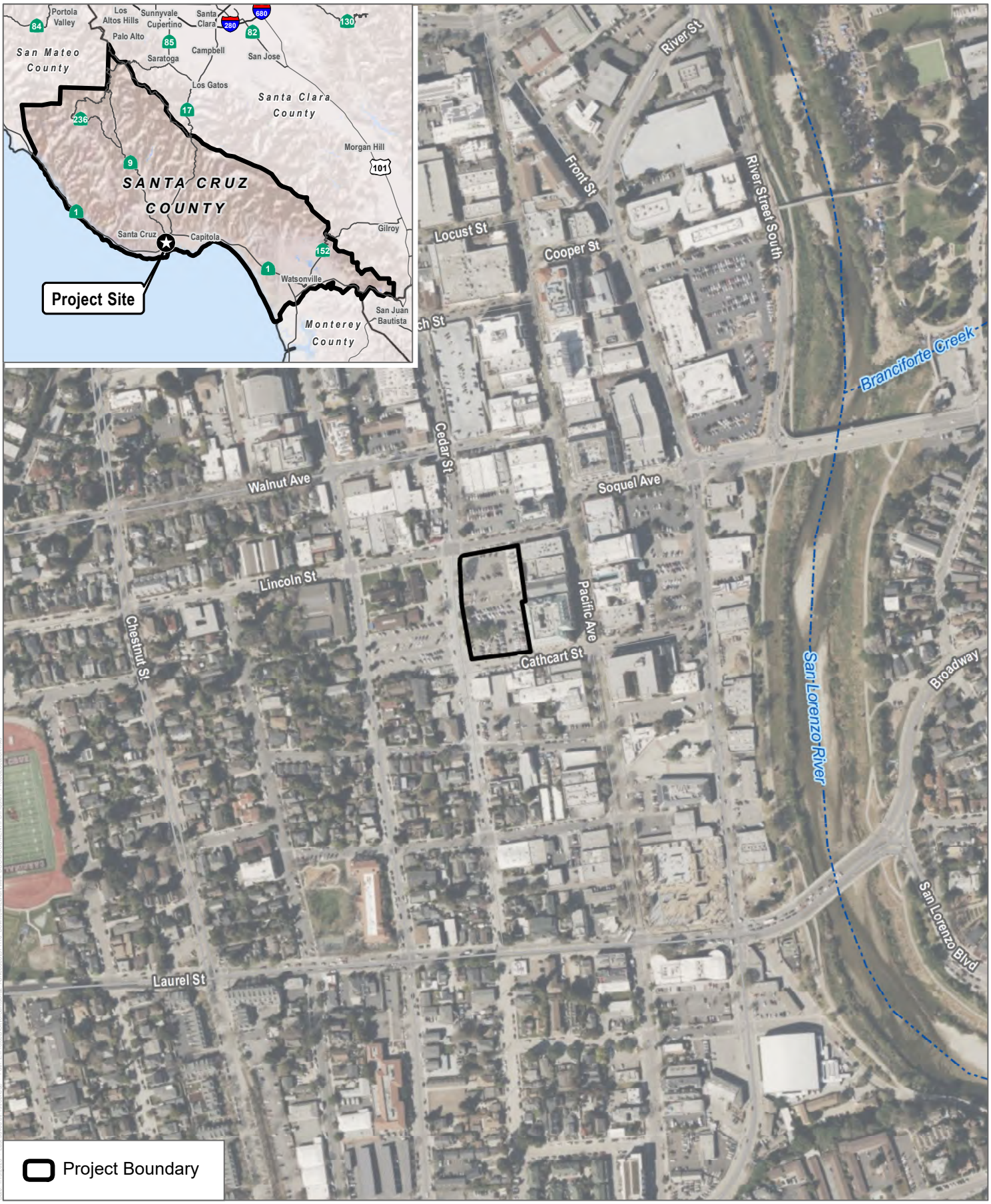
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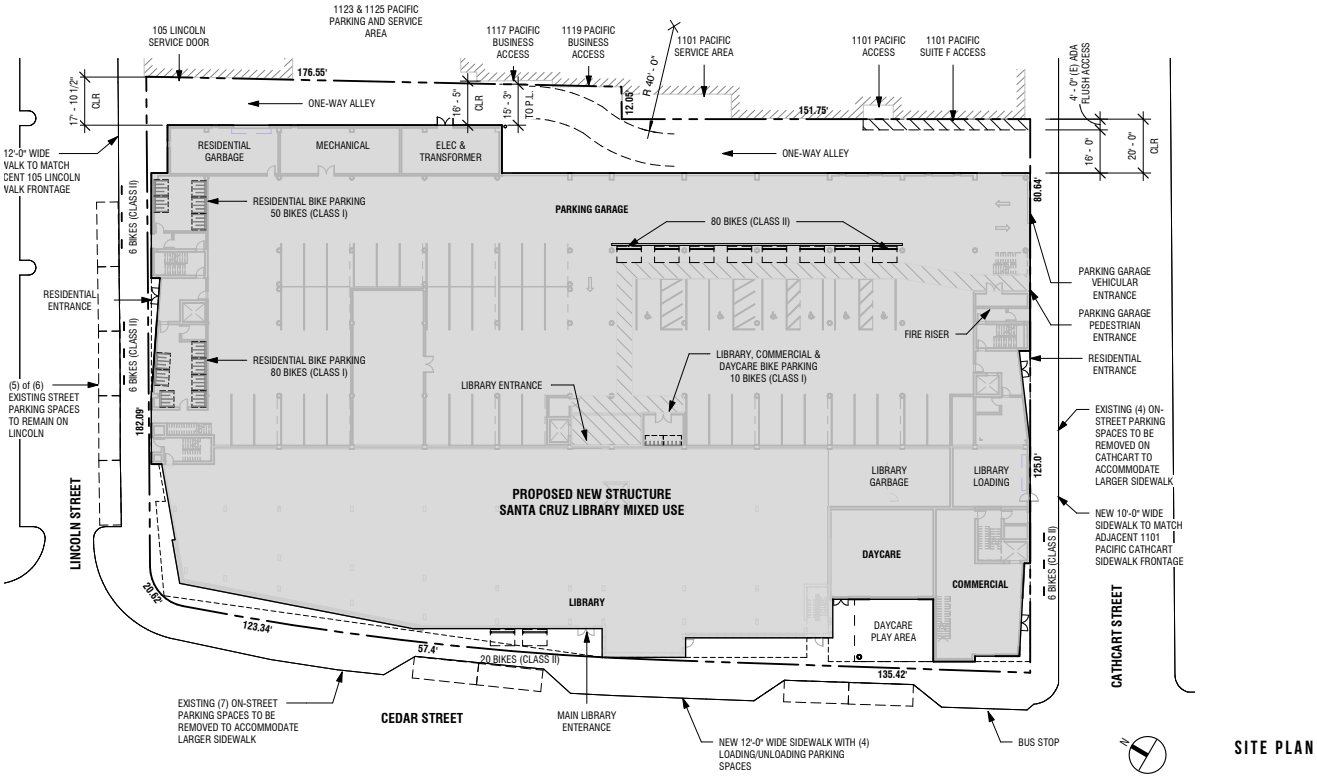
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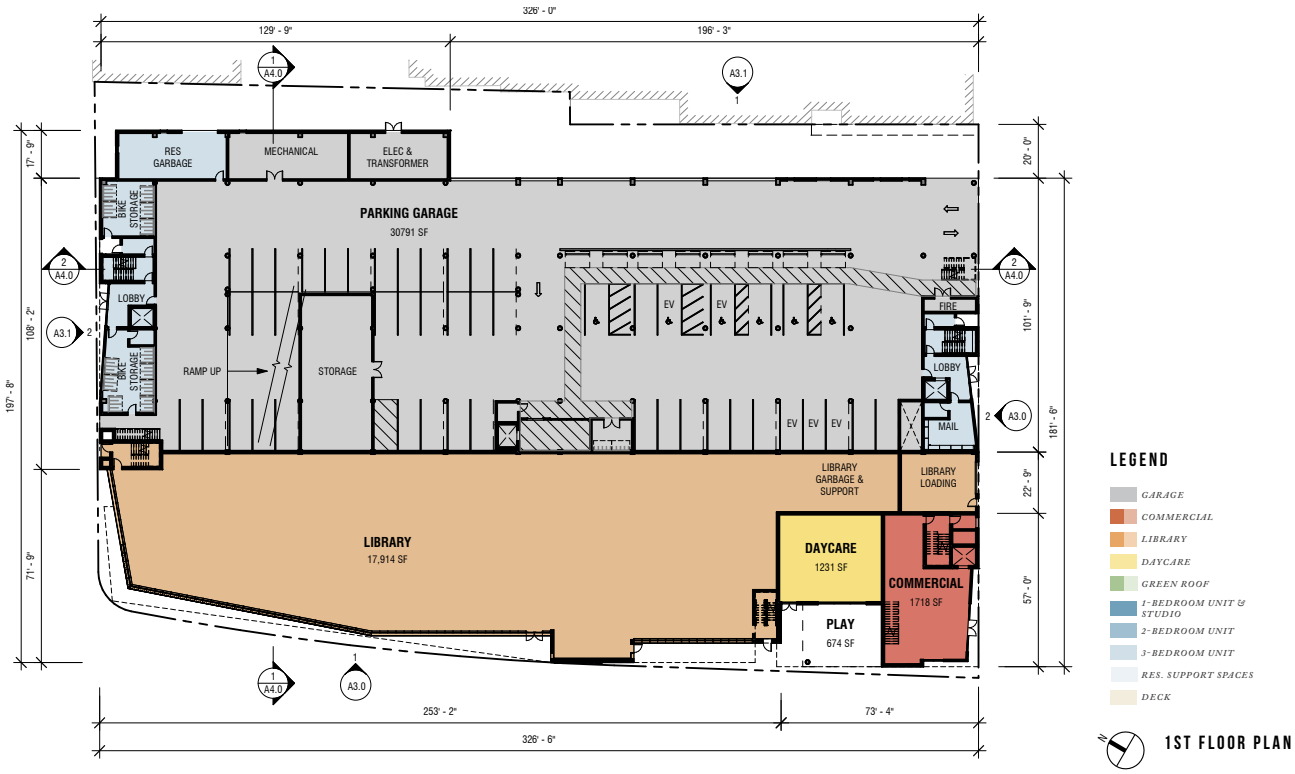
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FIGURE 1

Project Location

Downtown Library and Affordable Housing Project





SOURCE: TenOver 2022

FIGURE 2

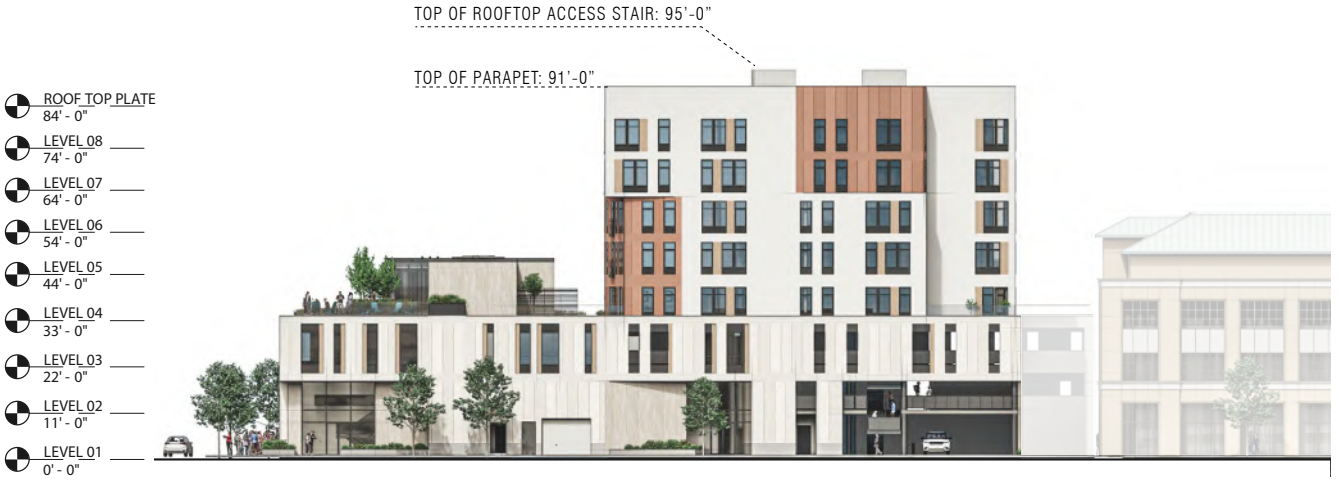
Project Site Plan

Downtown Library and Affordable Housing Project

DUDEK



1 WEST ELEVATION



2 SOUTH ELEVATION

SOURCE: TenOver 2022

FIGURE 3A

Project Elevations

Downtown Library and Affordable Housing Project

DUDEK



1 EAST ELEVATION



2 NORTH ELEVATION

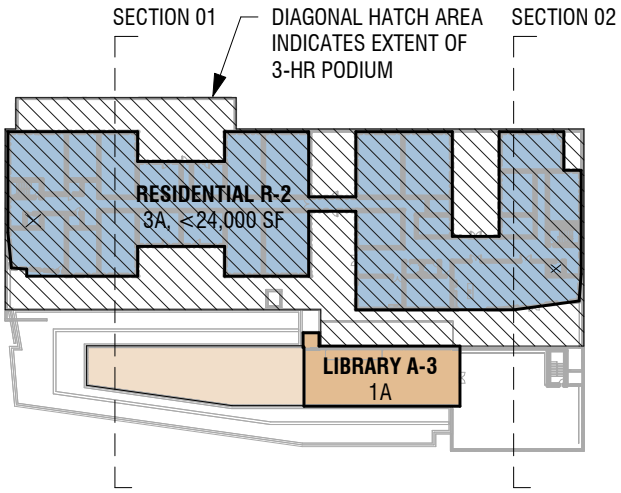
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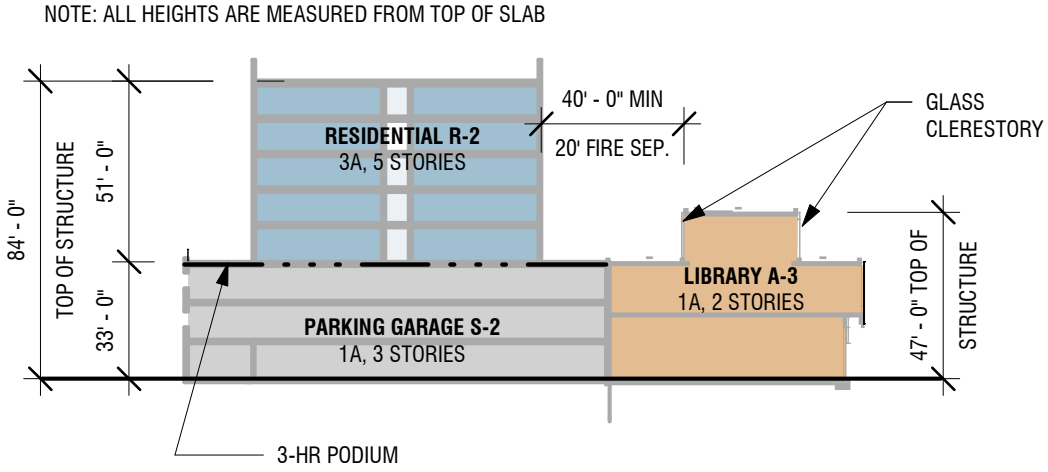
FIGURE 3B

Project Elevations

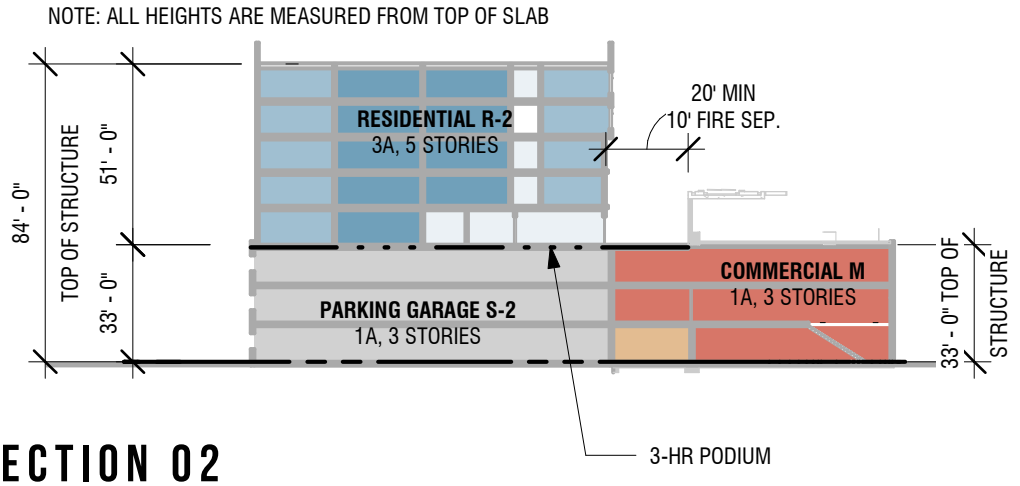
530 Downtown Library and Affordable Housing ProjectStreet

DUDEK





SECTION 01



SECTION 02

SOURCE: TenOver 2022

FIGURE 4

Project Building Heights

Downtown Library and Affordable Housing Project

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ATTACHMENT A

City Review of Project Consistency with General Plan and Zone District Regulations

General Plan Consistency

The project site has a General Plan Land Use designation of RVC (Regional Visitor Commercial), characterized in the General Plan as below:

> "Regional Visitor Commercial (RVC), 0.25 to 3.5 FAR. Applies to areas that emphasize a variety of commercial uses that serve Santa Cruz residents as well as visitors. Mixed-use development is strongly encouraged in RVC districts. Areas designated RVC include:
>
> - Downtown Santa Cruz, 0.25 to 5.0 FAR. Emphasizes a mix of regional office and retail uses, residential and mixed-use developments, restaurants, and visitor attractions such as entertainment venues. The Downtown Recovery Plan provides detailed requirements for this area.

The proposed mixed-use project conforms to, and fosters the attainment of, many goals and policies of the General Plan, including the following:

Goal LU3 A complementary balance of diverse land uses

- Land Use Development Policy LU3.1: Foster land use patterns that balance economic, housing, community, and environmental needs, and promote social diversity.
- Land Use Development Policy LU3.3: Develop, maintain, and encourage economically viable neighborhood-serving commercial districts. Cf. LU4.2.4 and ED5.2.
- Land Use Development Policy LU3.4 - In neighborhoods near visitor areas, give priority to uses that serve both visitors and residents.
- Land Use Development Policy LU3.7 - Encourage higher-intensity residential uses and maximum densities in accordance with the General Plan Land Use designations.
- Land Use Development Policy LU3.8 - Allow the following residential uses to exceed the maximum densities in this chapter
- Land Use Development Policy LU4.2 Encourage land use changes that reduce the need for autos.

Goal M1 Land use patterns, street design, parking, and access solutions that facilitate multiple transportation alternatives

- Mobility Development Policy M1.1 - Reduce automobile dependence by encouraging appropriate neighborhood and activity center development.
- Mobility Development Policy M1.3 - Create pedestrian-friendly frontage and streetscapes and attractive pedestrian-oriented areas.
- M4.2 Provide and maintain a complete, interconnected, safe, inviting, and efficient citywide bicycle network

- M4.4 Assure a high level of bicycle user amenities. Cf. PR1.6.4. M4.4.1 Maintain Zoning Ordinance and parking district requirements that require secure, covered bicycle parking and/or storage lockers at private and public facilities.
- M4.4.3 Increase the supply of bicycle parking throughout the city.

Goal ED1 A vibrant regional economic center

- Economic Development Policy ED1.1 Promote Santa Cruz as the principal retail, cultural, recreational, restaurant, entertainment, and commercial destination in the region.
- Economic Development Policy 5.2 - Provide for residents' daily shopping needs in local-serving neighborhood commercial centers.

Goal CC 8 Excellent educational opportunities and resources

- CC8.5 Provide free and equal access to City libraries.
- CC8.6 Strive for library collections that meet community needs.
- CC8.7 Expand the communication and information network in the
- City's libraries and optimize its quality.
- CC10.1 Encourage an adequate and diverse supply of childcare facilities
- and services citywide.
- CC10.2 Encourage development of accessible, affordable, and quality
- childcare facilities near public transportation, employment centers, and in the Downtown.

Goal NRC5 An enhanced and sustainable urban forest

- NRC5.1 Protect and manage tree resources in the urban environment, with emphasis on significant and heritage trees.

Goal H1: Encourage an adequate diversity in housing types and affordability levels to accommodate present and future housing needs of Santa Cruz residents.

- Policy 1.1 Provide adequate sites and supporting infrastructure to accommodate housing through land use, zoning, and specific plan designations that encourage a broad range of housing opportunities.
- Policy 1.2 Concentrate new housing in the Central Core, along major commercial corridors, and on major opportunity sites consistent with the Land Use Element.
- Policy 1.3 Facilitate the production of mixed residential-commercial uses through the use of appropriate development standards, design and compatibility review, and regulatory and financial incentives.
- Policy 1.4 Establish and maintain residential development standards that support housing production yet promote the vitality of established neighborhoods.

Goal H2: Increase and protect the supply of housing affordable to extremely low, very low, low, and moderate income households.

- Policy 2.2 Facilitate the development of affordable housing through the provision of regulatory concessions, financial incentives and assistance, density bonuses, and other means.
- Policy 2.5 Promote meaningful and informed participation of residents, community groups, and governmental agencies in local housing and community development activities.

Goal H4: Provide increased opportunities for low and moderate income residents to rent or purchase homes.

Goal H5: Improve housing and neighborhoods throughout Santa Cruz and in designated target areas.

- Policy 5.3 Ensure that the character and design of both infill development and remodel/rehabilitation projects promote the vitality of existing neighborhoods.
- Policy 5.4 Promote the overall vitality and livability of neighborhoods by providing adequate public services, community facilities, infrastructure, landscaping and open space, adequate parking, traffic management, pedestrian and bicycle routes, and public safety to meet the needs of each individual neighborhood, as well as by preventing and eliminating blighting conditions

Goal H6: Strive to fulfill the city's housing needs while promoting an environmentally sustainable, compact community with clearly defined urban boundaries.

- Policy 6.1 Ensure a compatible relationship between new housing and circulation patterns and encourage pedestrian and bicycle friendly communities in order to minimize traffic impacts on quality of life.
- Policy 6.7 Promote transit-oriented, mixed-use residential developments that are close to services, reduce dependence on automobile use, and are of high quality

As a mixed-used development encompassing a new public library; commercial tenant space; childcare facility; approximately 243-space structured parking; and residential complex incorporating 124 residences, including studio-, one-, two- and three-bedroom residential units, situated in the City's urban core, the project demonstrates consistency with the stated purpose of the CBD zone district, Cedar Street Village Corridor subarea and General Plan land use designations. The project would exceed the specified unit density of both the Zoning Ordinance as well as the General Plan but would conform to provisions of AB1763 and State Density Bonus Law, as specified above.

Zoning Consistency

The project site occurs on land contained in the CBD (Central Business District) zone district, Cedar Street Village Corridor subarea and has a General Plan land use designation of RVC (Regional Visitor Commercial). Section 24.10.2300 of the City's Zoning Code states the following in reference to the purpose of the *Downtown Plan* in implementing the City's aspirations for the Central Business District:

> "This part implements the Land Use Plan, Development Standards and Design Guidelines of the *Downtown Plan* (Plan), a specific plan. It is intended to refine the Plan in the area of land use and regulations. It supports the purpose of the Plan, in the context of the General Plan, which aims to maintain downtown the urban center of the city, with the many functions a city center serves. This chapter of the Zoning Ordinance is also part of the Local Coastal Implementation Plan.
>
> The Central Business District Zone of the *Downtown Plan* is divided into four subareas, in order to enhance the character of each by special consideration of the character of each. A fifth area, CBD Subdistrict E, Lower Pacific Avenue, implements the policies of the Beach and South of Laurel Plan and is separate from the *Downtown Plan*."

The *Downtown Plan* additionally establishes a vision for the City's downtown core as embodied in the First Principles originally introduced in the *Downtown Plan* in 1991 and refined in the years thereafter. An excerpt of the Vision appears below:

> "Vibrant, vital and active, the central business district constitutes the primary retail, commercial, professional and employment center for the City of Santa Cruz. This compact, high-density area is home to unique businesses, offering residents and visitors a diverse and wholesome environment for commercial, cultural, civic and social pursuits. Local, regional and national businesses combine in a potent blend, making the downtown a major destination for the entire region.
>
> "A range of housing types is integrated into the downtown. This urban-density housing provides both market-rate and affordable units, and expands the immediate market for downtown goods, services and public transportation. The economic and social vitality of the downtown has a positive effect on the surrounding areas and the entire community."

The project site occurs on land with the Cedar Street Village Corridor subarea of the *Downtown Plan*, which the *Downtown Plan* characterizes as follows:

> "The Cedar Street Corridor is immediately west of the Pacific Avenue Retail District. The area provides an appropriate transition in scale and use between the downtown and the adjacent residential neighborhoods and the civic center. In contrast to Front Street, which plays a destinational retail role, Cedar Street serves as a more local-serving street with a mixture of professional offices, support and convenience retail, and restaurant uses. Unlike Pacific Avenue, which developed in a relatively consistent manner with a strong "street wall" of buildings, Cedar Street is more diverse in nature, with a mixture of one and two-story structures of varied setbacks. Many of the buildings are wood frame structures with a strong residential character."
>
> "[A]ll parking structures in this subarea are required to step down to 35 feet adjacent to public streets. Upper-level residential uses are particularly encouraged within the Cedar Street subarea to intensify the resident population of the downtown and to create an appropriate land use transition to the adjacent neighborhoods.

Except for the increase in height proposed though request for an incentive/concession and waiver, the proposed project complies with all standards of the Zoning Ordinance.

ATTACHMENT B

Comparison of City Mixed-Use Projects

City of Santa Cruz Approved and Under Construction
Mixed-Use/Residential and Affordable Housing Projects

Project	Site Size	DUs / Density	Height (in feet)	Number of Total Trees / Heritage Trees Removed	Density Bonus Request
Downtown					
• Front-Laurel	1.4 acres	205 / 146 du/ac	55-85	15 / 2	Yes
• Pacific Station South	0.5 acres	85 / 170 du/ac	80	0	Yes
• 523 Center St	0.77 acres	65 / 84 du/ac	48.5	0	No
• Riverfront Project	0.98 acres	175 / 179 du/ac	81	25 / 8	Yes
• Pacific Station North	0.7 acre	94 / 134 du/ac	7 stories	0	Yes
• 1013 Pacific	0.122 acres	17 / 139 du/ac	4 stories	0	Yes
• 130 Center (not in *Downtown Plan* area)	1.19 acres	233 / 196 du/ac	75	0	Yes
• 555 Pacific [1]	0.8 acres	94 / 118 du/ac	4 stories	1 / 1	No
• Park Pacific-1547 Pacific [1]	0.53 acres	66 / 125 du/ac	56	1 / 1	No
Other Parts of City					
• 831 Water	0.9 acres	145 / 159 du/ac	60	0	Yes
• 915 Water	0.58 acres	105 / 181 du/ac	48	2 / 2	Yes
• 150 Felker	0.4 acres	32 / 80 du/ac	50	6 / 6	Yes
• 314 Jessie Street	0.4 acres	50 / 116 du/ac	4 stores	0	Yes
• 190 W Cliff Drive	2.2 acres	89 / 40 du/ac	4 stores	55/11	Yes

[1] Constructed and in operation.

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DRAFT ENVIRONMENTAL IMPACT REPORT

Downtown Plan Amendments



City of Santa Cruz

SCH NO: 2017022050

July 2017

DRAFT

ENVIRONMENTAL IMPACT REPORT

DOWNTOWN PLAN AMENDMENTS

SCH NO. 2017022050

PREPARED FOR

CITY OF SANTA CRUZ

Planning and Community Development Department

PREPARED BY

DUDEK

Santa Cruz, California

July 2017

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CHAPTER 1
INTRODUCTION

1.1 PURPOSE OF THE EIR

This EIR has been prepared for the City of Santa Cruz (City), which is the lead agency for the project. This EIR has been prepared in accordance with the California Environmental Quality Act (CEQA), which is found in the California Public Resources Code, Division 13, and with the State CEQA Guidelines, which are found in Title 14 of the California Code of Regulations, commencing with section 15000.

As stated in the CEQA Guidelines section 15002, the basic purposes of CEQA are to:

- ❒ Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.
- ❒ Identify the ways that environmental damage can be avoided or significantly reduced.
- ❒ Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- ❒ Disclose to the public the reasons a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

Pursuant to State CEQA Guidelines section 15121, an EIR is an informational document which will inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information which may be presented to the agency. While the information in the EIR does not control the ultimate decision about the project, the agency must consider the information in the EIR and respond to each significant effect identified in the EIR by making findings pursuant to Public Resources Code section 21081.

This EIR is being prepared as a "Program EIR" pursuant to section 15168 of the State CEQA Guidelines. A program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related geographically, by similar environmental effects, as logical parts in the chain of contemplated actions, or in connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program. A program EIR can provide a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action and can ensure consideration of cumulative impacts. A program EIR can be used as part of the environmental review for later individual projects to be carried out pursuant to the project previously analyzed in the program EIR, where impacts have been adequately addressed in the program EIR. For later individual projects proposed in the areas covered by the plans and amendments covered in this EIR, the City will

determine whether the individual project or subsequent activity is within the scope of this Program EIR, meaning it is an activity within the same project as analyzed in the program EIR or within the same geographic area encompassed by the program EIR. Depending on the City's determination, including whether new effects could occur or new mitigation measures would be required, the analysis for later projects could range from no new CEQA document to a new EIR. The City potentially could apply one or more CEQA "streamlining" tools when it considers later projects, such as the focused analytical routes offered under Public Resources Code sections 21155.2 and 21083.3 and CEQA Guidelines sections 15152, 15182, 15183, and 15183.3. If appropriate and applicable to a proposed project, the City may also consider one or more statutory or categorical exemptions. The State CEQA Guidelines encourage agencies to tier the environmental analyses which they prepare for separate but related projects, including general plans, zoning changes, and development projects.

Pursuant to CEQA (Public Resources Code section 21002), public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures which would substantially lessen the significant environmental effects of such projects. Pursuant to section 15021 of the State CEQA Guidelines, CEQA establishes a duty for public agencies to avoid or minimize environmental damage where feasible. In deciding whether changes in a project are feasible, an agency may consider specific economic, environmental, legal, social, and technological factors. According to the State CEQA Guidelines, "feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors. This section further indicates that CEQA recognizes that in determining whether and how a project should be approved, a public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social factors, and an agency shall prepare a "statement of overriding considerations" as to reflect the ultimate balancing of competing public objectives when the agency decides to approve a project that will cause one or more significant effects on the environment. The environmental review process is further explained below in subsection 1.4.

1.2 PROJECT OVERVIEW

This Environmental Impact Report (EIR) addresses the potential environmental effects of a series of proposed amendments to the following adopted plans and regulations; a full description of all project components is provided in the Chapter 3.0, Project Description, of this EIR.

- ❒ Downtown Recovery Plan: Amendment to extend Additional Height Zone A, modify Additional Height Zone B, and modify development standards
- ❒ General Plan 2030: Amendment to modify Floor Area Ratio for the Regional Visitor Commercial land use designation in the downtown area
- ❒ Local Coastal Plan (LCP): Amendment to Land Use Plan text to modify San Lorenzo Urban River Plan land use development policies

- ❒ Zoning Code sections: Amendment to Municipal Code Section 24.10, Part 24, Central Business District (CBD), of the Zoning Code to modify extension area regulations and add Parklet standards.

1.3 SCOPE OF THE EIR

An Initial Study and Notice of Preparation were prepared for the project and are included in Appendix A. The Initial Study identifies potentially significant impacts and discusses issues that were found to result in no impacts or less-than-significant impacts. The discussions in the Initial Study of impacts that are not being addressed in detail in the text of the Draft EIR are intended to satisfy the requirement of CEQA Guidelines section 15128 that an EIR "shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and therefore were not discussed in detail in the EIR."

Based on the analyses in the Initial Study and responses to the Notice of Preparation (as discussed below), this EIR evaluates potentially significant impacts for the topics listed below. The EIR also evaluates topics required by CEQA and CEQA Guidelines, including growth inducement, project alternatives, and cumulative impacts. The environmental analysis for this EIR includes:

- ❒ Aesthetics
- ❒ Air Quality and Greenhouse Gas Emissions
- ❒ Biological Resources
- ❒ Cultural Resources and Tribal Cultural Resources
- ❒ Hydrology and Water Quality
- ❒ Public Services (Fire and Police Protection Services, Parks and Recreation, Schools, Solid Waste)
- ❒ Transportation and Traffic
- ❒ Water and Wastewater Utilities
- ❒ Land Use – Plan and Policy Review

The focus of the environmental review process is upon significant environmental effects. As defined in section 15382 of the CEQA Guidelines, a "significant effect on the environment" is:

> ... a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether a physical change is significant.

In evaluating the significance of the environmental effect of a project, the State CEQA Guidelines require the lead agency to consider direct physical changes in the environment and reasonably foreseeable indirect physical changes in the environment which may be caused by the project (CEQA Guidelines section 15064[d]). A direct physical change in the environment is a physical change in the environment which is caused by and immediately related to the project. An indirect physical change in the environment is a physical change in the environment which is not immediately related to the project, but which is caused indirectly by the project. An indirect physical change is to be considered only if that change is a reasonably foreseeable impact which may be caused by the project.

CEQA Guidelines section 15064(e) further indicates that economic and social changes resulting from a project shall not be treated as significant effects on the environment, although they may be used to determine that a physical change shall be regarded as a significant effect on the environment. In addition, where a reasonably foreseeable physical change is caused by economic or social effects of a project, the physical change may be regarded as a significant effect in the same manner as any other physical change resulting from the project.

1.4 ENVIRONMENTAL REVIEW AND APPROVAL PROCESS

1.4.1 Scoping

Under CEQA, the lead agency for a project is the public agency with primary responsibility for carrying out or approving the project, and for implementing the requirements of CEQA. CEQA Guidelines section 15083 authorizes and encourages an early consultation or scoping process to help identify the range of actions, alternatives, mitigation measures, and significant effects to be analyzed and considered in an EIR, and to help resolve the concerns of affected regulatory agencies, organizations, and the public. Scoping is designed to explore issues for environmental evaluation, ensuring that important considerations are not overlooked and uncovering concerns that might otherwise go unrecognized.

A Notice of Preparation (NOP) for this EIR was circulated for a 30-day comment period on February 14, 2017. The NOP, with an Initial Study as an attachment, was circulated to the State Clearinghouse and to local, regional, and federal agencies in accordance with State CEQA Guidelines. The NOP also was sent to organizations and interested citizens that have requested notification in the past for the proposal project or any project. Additionally, the NOP was circulated to owners of property contiguous to the project site in accordance with the City's CEQA Guidelines. The Initial Study and NOP are included in Appendix A. A public scoping meeting also was held at a Planning Commission meeting on June 15, 2017.

Written comments were received from three public agencies (California Coastal Commission, Caltrans and FEMA), two organizations (Friends of San Lorenzo River Wildlife and Sierra Club), and five individuals (Candace Brown, Gillian Greensite, Debbie Hencke, Jane Mio, and Jack

Nelson). These letters are included, in Appendix B. Both the written comments and oral comments received at the scoping meeting have been taken into consideration in the preparation of this EIR for comments that address environmental issues. Comments received during the scoping period regarding environmental issues generally include the following concerns, which are further discussed in the EIR chapters that discuss the relevant topic:

- ❒ Aesthetics and impacts to the visual character of the surrounding area;
- ❒ Biological impacts to San Lorenzo River habitat, including potential impacts to birds;
- ❒ Flood hazards and effects of climate change and sea level rise;
- ❒ Drainage and water quality impacts;
- ❒ Traffic and parking impacts; and
- ❒ Provision of public access and recreation along the river.

1.4.2 Public Review of Draft EIR

The Draft EIR will be published and circulated for review and comment by the public and other interested parties, agencies, and organizations for a public review period from July 26, 2017 through September 8, 2017. Written comments on the Draft EIR may be submitted to the City of Santa Cruz at the address below or may be submitted by email to Ron Powers at rpowers@cityofsantacruz.com, by 5:00 pm on September 8, 2017.

Ron Powers, Principal Planner
City of Santa Cruz Planning and Community Development Department
809 Center Street, Room 107
Santa Cruz, CA 95060

The Draft EIR will be available for public review during the comment period at the following locations:

- ❒ City of Santa Cruz Planning and Community Development Department, located at 809 Center Street, Room 107.
- ❒ Reference Desk of the Downtown Public Library, located at 224 Church Street.
- ❒ Online at: http://www.cityofsantacruz.com/departments/planning-and-community-development/environmental-documents.

The City of Santa Cruz encourages public agencies, organizations, community groups, and all other interested persons to provide written comments on the Draft EIR prior to the end of the 45-day public review period. Section 15204(a) provides guidance on the focus of review of EIRs, indicating that in reviewing draft EIRs, persons and public agencies "should focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated," and that comments are most helpful when they suggest additional specific

alternatives or mitigation measures that would provide better ways to avoid or mitigate the significant environmental effects. This section further states that: "CEQA does not require a lead agency to conduct every test or perform all research, study, and experimentation recommended or demanded by commenters. When responding to comments, lead agencies need only respond to significant environmental issues and do not need to provide all information requested by reviewers, as long as a good faith effort at full disclosure is made in the EIR."

1.4.3 Final EIR / Project Approval

Following the close of the public and agency comment period on this Draft EIR, responses will be prepared for all comments received during the public review period that raise CEQA-related environmental issues regarding the project. The responses will be published in the Final EIR. The Final EIR will include written responses to any significant environmental issues raised in comments received during the public review period in accordance with State CEQA Guidelines section 15088. The Final EIR also will include Draft EIR text changes and additions that become necessary after consideration of public comments.

The Final EIR document, which includes the Draft EIR document, will be presented to the City Planning Commission for consideration of the proposed actions and recommendation to the City Council. The City Council will make the final decision on the proposed General Plan amendment, rezoning and permit applications. The Planning Commission and the City Council must ultimately certify that it has reviewed and considered the information in the EIR, that the EIR has been completed in conformity with the requirements of CEQA, and that the document reflects the City's independent judgment.

Pursuant to sections 21002, 21002.1 and 21081 of CEQA and sections 15091 and 15093 of the State CEQA Guidelines, no public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant effects unless both of the following occur:

(a) The public agency makes one or more of the following findings with respect to each significant effect:
    1. Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effects on the environment.
    2. Those changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by such other agency.
    3. Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the environmental impact report.

(b) With respect to significant effects which were subject to a finding under paragraph (3) of subdivision (a), the public agency finds that specific overriding economic, legal,

social, technological, or other benefits of the project outweigh the significant effects on the environment.

Although these determinations (especially regarding feasibility) are made by the public agency's final decision-making body based on the entirety of the agency's administrative record as it exists after completion of a final EIR, the draft EIR must provide information regarding the significant effects of the proposed project and must identify the potentially feasible mitigation measures and alternatives to be considered by that decision-making body.

1.4.4 Adoption of Mitigation Monitoring & Reporting Program

CEQA requires that a program to monitor and report on mitigation measures be adopted by a lead agency as part of the project approval process. CEQA requires that such a program be adopted at the time the agency approves a project or determines to carry out a project for which an EIR has been prepared to ensure that mitigation measures identified in the EIR are implemented. The Mitigation Monitoring and Reporting Program will be included in the Final EIR, although it is not required to be included in the EIR.

1.5 ORGANIZATION OF EIR

The content and format of this Draft EIR are designed to meet the requirements of CEQA and the CEQA Guidelines (sections 15122 through 15132). This Draft EIR is organized into the following chapters:

- **Chapter 1, Introduction**, explains the CEQA process; describes the scope and purpose of this Draft EIR; provides information on the review and approval process; and outlines the organization of this Draft EIR.
- **Chapter 2, Summary**, presents an overview of the project; provides a summary of the impacts of the project and mitigation measures; provides a summary of the alternatives being considered; includes a discussion of known areas of controversy; and lists the topics not carried forward for further analysis.
- **Chapter 3, Project Description**, provides information about the location, setting, and background for the project; identifies project-specific objectives; provides a detailed description of the project elements and components; and lists the likely approvals for the project.
- **Chapter 4, Environmental Setting, Impacts, and Mitigation Measures**, explains the approach to the environmental analysis for this EIR, and provides environmental setting, impacts, and mitigation measures for the topics identified for inclusion in the EIR. Each topical section in this EIR presents information in three parts. The "Environmental Setting" section provides an overview of the existing conditions on and adjacent to the

project site. Local, State and federal regulations also are identified and discussed, when relevant.

The "Impacts and Mitigation Measures" section provides an outline of the criteria used to evaluate whether an impact is considered significant based on standards identified in the California Environmental Quality Act (CEQA) and State CEQA Guidelines. Agency policies or regulations and/or professional judgment also are used to further define what actions may cause significant effects. Any project feature or element that may cause impacts, as well as project features that may serve to eliminate or reduce impacts, will be identified and addressed for both direct and reasonably foreseeable indirect impacts. Mitigation measures that would reduce significant impacts are identified. The significance of the impact after mitigation also is identified. For impacts found to be less-than-significant, mitigation measures are not required, but where relevant, the EIR recommends project modifications or appropriate conditions of approval.

- **Chapter 5, Other CEQA Considerations**, This section evaluates the topics required to be included in an EIR, including significant unavoidable impacts, irreversible impacts growth inducement, cumulative impacts, and project alternatives.
- **Chapter 6, References and EIR Preparation**, identifies all agencies contacted during the preparation of the EIR, all references that were cited or utilized in preparation of the EIR and individuals who were involved in preparing this Draft EIR and the individuals who provided information.
- **Appendices** contain additional information used in preparing this Draft EIR. Appendix A contains the Notice of Preparation and Initial Study, and Appendix B includes comment letters that were submitted in response to the NOP. Appendix C includes the revised plan text amendments. Appendix D includes the development buildout assumptions developed by City Planning and Community Development Department staff. Appendix E includes calculations of air emissions prepared for this EIR, and Appendix F includes the traffic calculations prepared for the City.

CHAPTER 2
SUMMARY

2.1 INTRODUCTION

This chapter provides a brief description of the proposed project, known areas of controversy or concern, project alternatives, all potentially significant impacts identified during the course of this environmental analysis, and issues to be resolved. This summary is intended as an overview and should be used in conjunction with a thorough reading of the EIR. The text of this report, including figures, tables and appendices, serves as the basis for this summary.

2.2 PROJECT OVERVIEW

This Environmental Impact Report (EIR) addresses the potential environmental effects of construction of This Environmental Impact Report (EIR) addresses the potential environmental effects of a series of proposed amendments to the following adopted plans and regulations; a full description of all project components is provided in the Chapter 3.0, Project Description, of this EIR.

- ❒ Downtown Recovery Plan: Amendment to extend Additional Height Zone A, modify Additional Height Zone B, and modify development standards
- ❒ General Plan 2030: Amendment to modify Floor Area Ratio for the Regional Visitor Commercial land use designation in the downtown area
- ❒ Local Coastal Plan (LCP): Amendment to Land Use Plan text to modify San Lorenzo Urban River Plan land use development policies
- ❒ Zoning Code sections: Amendment to Municipal Code Section 24.10, Part 24, Central Business District (CBD), of the Zoning Code to modify extension area regulations and add Parklet standards.

2.3 AREAS OF CONTROVERSY OR CONCERN

The City of Santa Cruz, as the Lead Agency, has identified areas of concern based on the Initial Study and Notice of Preparation (NOP), which are included in Appendix A. In response to the NOP, letters of comment were received from three agencies (California Coastal Commission, Caltrans and FEMA), two organizations (Friends of San Lorenzo River Wildlife and Sierra Club), and five individuals (Candace Brown, Gillian Greensite, Debbie Hencke, Jane Mio, and Jack Nelson). An agency and public scoping also was held at the Planning Commission meeting on June 15, 2017 to receive public comments on the scope of the EIR's analyses and project alternatives. Both the written comments and oral comments received at the scoping meeting

have been taken into consideration in the preparation of this EIR for comments that address environmental issues.

Written comments on the NOP and oral comments received at the scoping meeting raised the following environmental concerns, some of which may be areas of controversy:

- ❒ Aesthetics and impacts to the visual character of the surrounding area;
- ❒ Biological impacts to San Lorenzo River habitat, including potential impacts to birds;
- ❒ Flood hazards and effects of climate change and sea level rise;
- ❒ Drainage and water quality impacts;
- ❒ Traffic and parking impacts; and
- ❒ Provision of public access and recreation along the river.

2.4 SUMMARY OF ALTERNATIVES

CEQA Guidelines require that an EIR describe and evaluate alternatives to the project that could eliminate significant adverse project impacts or reduce them to a less-than-significant level. The following alternatives are evaluated in Section 5.5.

- ❒ No Project – Required by CEQA
- ❒ Alternative 1 – Reduced Height for Expanded Additional Height Zone A to 75 feet and Elimination of Additional Height Zone B
- ❒ Alternative 2 – Reduced Height for Additional Height Zone A to 75 feet along Pacific/Front and Reduced Height for Additional Height Zone B to 60 feet along the San Lorenzo River with Development Standard Modifications: eliminate encroachment over property line and require 10-foot setback above 50 feet

Table 5-5 in Section 5 of this EIR presents a comparison of project impacts between the proposed project and each alternative. None of the alternatives, including the No Project Alternative would eliminate significant project impacts and cumulative impacts related to traffic, although all alternatives would result reduce the level of impact. Table 5-5 (on the next page) presents a comparison of project impacts between the proposed project and the alternatives. Excluding the No Project Alternative, Alternative 1 – Reduced Height for Additional Height Zone A and Elimination of Additional Height Zone B – is considered the environmentally superior alternative of the alternatives considered. Although it would not reduce significant impacts to less-than-significant levels, it could result in the greatest reduction of traffic and water demand impacts and reduce some of the other identified significant impacts. However, it would not fully meet project objectives.

2.5 SUMMARY OF IMPACTS AND MITIGATION MEASURES

All impacts identified in the subsequent environmental analyses are summarized in this section. This summary groups impacts of similar ranking together, beginning with significant unavoidable impacts, followed by significant impacts that can be mitigated to a less-than-significant level, followed by impacts not found to be significant. The discussions in the Initial Study of impacts that are not being addressed in detail in the text of the Draft EIR are intended to satisfy the requirement of CEQA Guidelines section 15128 that an EIR "shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and therefore were not discussed in detail in the EIR." The Initial Study is included in Appendix A of this EIR. A summary of less-than-significant and no impacts identified in the Initial study is presented at the end of this section.

2.5.1 Significant Unavoidable Impacts

The following impacts were found to be potentially significant, and while mitigation measures have been identified in some cases, the impact cannot be reduced to a less-than-significant level. Section 5.5, Project Alternatives, examines alternatives to eliminate or reduce the level of significance of these impacts.

Cumulative Impacts

The proposed project will contribute to significant cumulative traffic impacts at six locations in the project vicinity and along state highways. Future development projects within the area of the proposed plan amendments will be required to pay the City's traffic impact fee. However, payment of the traffic impact fee and the associated improvements would not mitigate impacts to a less-than-significant level at three intersections: Ocean Street/Water Street, Highway 1/ Highway 9, and Chestnut Street/Mission Street. Improvements could be made to the other intersections to achieve an acceptable LOS of D.

MITIGATION 5-1: Require future development projects within the downtown area to contribute fair-share payments for improvements at the following intersections: Front/Soquel (signal timing and lane modifications); Front/Laurel (westbound lane addition and north and south right-turn overlap); and Pacific/Laurel (southbound left-turn lane addition).

With implementation of Mitigation 5-1, significant cumulative impacts at three intersections would be mitigated, and the project's contribution would not be cumulatively considerable. Future development projects in the downtown area would be required to pay the City's traffic impact fees for improvements at the other three intersections, but planned improvements would not result in acceptable levels of service, and no other feasible improvements have been identified. Therefore, cumulative traffic

impacts remain significant at three City intersections and along state highways this is a significant cumulative impact, and the project's contribution to cumulative traffic impacts would be cumulatively considerable at these locations.

2.5.2 Significant Impacts

The following impacts were found to be potentially significant, but could be reduced to a less-than-significant level with implementation of identified mitigation measures should the City's decision-makers impose the measures on the project at the time of final action on the project.

Impacts Evaluated in EIR

Biological Resources

Impact 4.3-2: **Indirect Impacts to Sensitive Riparian Habitat.** Future development of taller buildings as a result of the proposed Downtown Plan amendments could result in indirect impacts to birds in the area that could lead to bird mortalities.

MITIGATION 4.3-2: Revise Downtown Plan to include standard for design guidance for bird-safe structures along the San Lorenzo River, including:

- Minimize the overall amount of glass on building exteriors facing the San Lorenzo River.
- Avoid mirrors and large areas of reflective glass.
- Avoid transparent glass skyways, walkways, or entryways, free-standing glass walls, and transparent building corners.
- Utilize glass/window treatments that create a visual signal or barrier to help alert birds to presence of glass. Avoid funneling open space to a building façade.
- Strategically place landscaping to reduce reflection and views of foliage inside or through glass.
- Avoid or minimize up-lighting and spotlights.
- Turn non-emergency lighting off (such as by automatic shutoff), or shield it, at night to minimize light from buildings that is visible to birds, especially during bird migration season (February - May and August - November).

Impact 4.3-3: **Indirect Impacts to Nesting Birds.** Future development as a result of the proposed Downtown Plan amendments could result in disturbance to nesting birds if any are present in the vicinity of construction sites along the San Lorenzo River.

MITIGATION 4.3-3: Require that a pre-construction nesting survey be conducted by a qualified wildlife biologist if construction, including tree removal, adjacent to the San Lorenzo River is scheduled to begin between March and late July to determine if nesting birds are in the vicinity of the construction sites. If nesting raptors or other nesting species protected under the MBTA are found, construction may need to be delayed until late-August or after the wildlife biologist has determined the nest is no longer in use or unless a suitable construction buffer zone can be identified by the biologist. (Citywide Creeks and Wetlands Management Plan Standard 12).

Public Services

Impact 4.6-1c: **Schools.** Adoption of the proposed plan amendments could indirectly result in increased population associated with potential development that would generate elementary school student enrollments that could exceed capacity of existing schools.

MITIGATION: No mitigation measures are required beyond payment of school impact fees that will be collected at the time of issuance of a building permit.

Impact 4.6-2: **Parks and Recreation.** Adoption of the proposed plan amendments could indirectly result in increased population associated with potential development that could be accommodated by the Plan that would result in increased demand for parks and recreational facilities that could result in some deterioration of existing parks and recreational facilities.

MITIGATION: With implementation of the proposed General Plan 2030 goals, policies and actions that set forth measures to avoid and minimize adverse impacts on parks and recreational facilities as summarized on Table 4.6-2 and required payment of park fees, the proposed project's indirect impact on parks and recreational facilities would be considered less-than-significant.

Impacts Evaluated in Initial Study (Appendix A)

Noise

Noise-1: **Exposure to Noise.** Future development in the project area would be exposed to exterior and / or interior noise levels that exceed local and state requirements. However, the project area is not within locations that would expose people to noise in excess of established standards.

MITIGATION NOISE-1: Require preparation and implementation of acoustical studies for future residential development along Front Street to specify building design features that meet state interior sound levels.

2.5.3 Less-Than-Significant Impacts

The following impacts were found to be less-than-significant. Mitigation measures are not required.

Impact 4.1-1: **Scenic Views.** Future development accommodated by the proposed plan amendments would not eliminate or substantially adversely affect, modify, or obstruct a visually prominent or significant public scenic vista.

Impact 4.1-3: **Visual Character of the Surrounding Area.** The proposed project would result in amendments to the DRP and General Plan that would allow increased heights of 20 to 35 feet over existing allowable standards, and future development could result in taller and more massive buildings. With implementation of required development standards for massing, required percentage variation of heights, and upper-level skyline variation, future buildings would be of similar height and scale as the other taller buildings in the downtown area, which already contains several multi-story buildings of varied height, and would not substantially degrade the visual character of the surrounding area.

Impact 4.1-4: **Introduction of Light and Glare.** The proposed project would result in amendments to the DRP and General Plan that would allow increased heights and building coverage, and future development would include exterior and interior lighting typical of residential developments, but would not result in introduction of a major new source of light or glare.

Impact 4.2-1: **Criteria Pollutant Emissions.** Future development and growth accommodated by the proposed project would result in emissions of criteria pollutants, but would not exceed adopted thresholds of significance, violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Impact 4.2-2: **Greenhouse Gas (GHG) Emissions.** Future development and growth accommodated by the proposed project would result in in GHG emissions, which are not considered significant.

Impact 4.3-1: **Indirect Impacts to Special Status Species and Aquatic Habitat.** Future development of taller buildings as a result of the proposed Downtown Plan amendments could result in indirect to impacts to riparian and aquatic special status species due to increased shading due to increased building heights, but would not substantially affect habitats.

Impact 4.4-1: **Archaeological and Tribal Cultural Resources.** Future development accommodated by the proposed plan amendments could result to impacts to archaeological, historical archaeological, human remains, and/or tribal cultural resources. However, City requirements for cultural resource investigations would ensure that future development projects assess and mitigate potential impacts (4a, 4b, 4e).

Impact 4.4-2: **Historic Resources.** Future development accommodated by the proposed plan amendments could result in impacts to historical resources (4c), however, site-specific redevelopment could occur under existing conditions without the proposed plan amendments.

Impact 4.4-3: **Paleontological Resources.** Future development accommodated by the proposed plan amendments could result to impacts to unknown paleontological resources discovered during construction. However, adherence to City procedures would not result in significant impacts.

Impact 4.5-1: **Stormwater Drainage.** Future development accommodated by the proposed plan amendments could result in stormwater runoff, but would not substantially alter the existing drainage pattern of the area, substantially increase the rate or amount of surface runoff, exceed the capacity of existing or planned storm drain facilities, cause downstream or off-site drainage problems, or increase the risk or severity of flooding in downstream areas.

Impact 4.5-2: **Water Quality.** Future development accommodated by the proposed plan amendments could result in water quality degradation to San Lorenzo River from automobile oils and greases carried in stormwater runoff. Project grading could also result in erosion and potential downstream sedimentation if not properly managed.

Impact 4.5-3: **Flood Hazards.** Future development accommodated by the proposed plan amendments could result in exposure to flood hazards, including watercourse flooding, sea level rise or tsunami. (5d-g). However, with compliance with federal flood requirements and implementation of City plans and programs, the proposed project would not lead to indirect impacts related to exposure to flood hazards.

Impact 4.6-1a: **Fire Protection.** Adoption of the proposed plan amendments could indirectly result in increased population density associated with potential new development accommodated by the Plan that would result in increased fire protection and emergency service demands. Existing and future development and growth within the City would result in the need to construct new or expanded fire stations, however, the impacts of fire station construction or expansion are not expected to be significant.

Impact 4.6-1b: **Police Protection.** Adoption of the proposed plan amendments could indirectly result in increased population associated with potential development that could be accommodated by the Plan that would result in increased police protection service demands. However, future development and growth would not result in the need to construct new or expanded police facilities.

Impact 4.6-3: **Solid Waste.** Adoption of the proposed plan amendments could indirectly result in increased population associated with potential development that could be accommodated by the Plan, which could result in indirect generation of solid waste that could be accommodated within the remaining landfill capacity.

Impact 4.6-4: **Energy Use.** Adoption of the proposed plan amendments could indirectly result in increased population associated with potential development that could be accommodated by the Plan, which could result in indirect increased energy demands, which would not be wasteful or an inefficient use of resources.

Impact 4.7-1: **Circulation System Impacts.** The project will result in an increase in daily and peak hour trips, but would not cause existing or planned intersections to operate at an unacceptable Level of Service (LOS) or further degrade intersections that already operate at an unacceptable LOS.

Impact 4.7-2: **Highway Segment Impacts.** The project will result in an increase in daily and peak hour trips, but would not result in a change to an unacceptable LOS along state highway segments.

Impact 4.8-1: **Water Supply.** Adoption of the proposed plan amendments could indirectly result in intensified development with a demand for potable water in a system that, under existing conditions, has adequate supplies during average and normal years, but is subject to potential supply shortfalls during dry and critically dry years. The additional project demand would not result in a substantial increase during dry years and would not be of a magnitude to affect the level of curtailment that might be in effect.

Impact 4.8-2: **Wastewater Treatment.** Adoption and implementation of the proposed plan amendments could indirectly result in increased development and population growth that would result in indirect generation of wastewater that could be accommodated by the existing wastewater treatment plant.

2.5.4 No Impacts

The State CEQA Guidelines section 15128 require that an EIR contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR. Through the Initial Study, NOP scoping process, and EIR, the City of Santa Cruz determined that the proposed project would have no impact on the environmental issues outlined below, and thus, are not further analyzed in the EIR. See the Initial Study in Appendix A for further discussion.

Impacts Evaluated in EIR

Impact 4.1-2: **Scenic Resources.** Future development accommodated by the proposed plan amendments would not result in elimination or a substantial adverse effect to scenic resources.

Impact 4.7-3: **Project Access.** The project will not result in creation of hazards due to design of the project circulation system or introduction of incompatible uses.

Impact 4,7-4: **Emergency Access.** The project will not result in inadequate emergency access.

Impact 4.7-5: **Transit, Pedestrian and Bicycle Travel.** The project will not conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Impact 4.9-1: **Conflicts with Policies and Regulations.** The proposed project will not conflict with policies or regulations adopted for the purpose of avoiding or mitigating an environmental effect, and therefore, will result in *no impact* related to consistency with local plans and policies.

Impacts Evaluated in Initial Study (Appendix A)

- Agricultural and Forest Resources
- Hazards and Hazardous Materials, except Wildland Fire Risk
- Mineral Resources
- Noise: Generation of Vibration, Location Within Airport Land Use Plan

2.6 ISSUES TO BE RESOLVED

CEQA Guidelines section 15123 requires the Summary to identify "issues to be resolved including the choice among alternatives and whether or how to mitigate the significant effects." This EIR has presented mitigation measures and project alternatives, and the City Planning Commission and City Council will consider the Final EIR when considering the proposed project. In considering whether to approve the project, the Planning Commission and City Council will take into consideration the environmental consequences of the project with mitigation measures and project alternatives, as well as other factors related to feasibility. "Feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors (State CEQA Guidelines, section 15364). Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (or already owns the alternative site). No one of these factors establishes a fixed limit on the scope of reasonable alternatives. The concept of feasibility also encompasses the question of whether a particular alternative or mitigation measure promotes the underlying goals and objectives of a project. Moreover, feasibility under CEQA encompasses "desirability" to the extent that desirability is based on a reasonable balancing of the relevant economic, environmental, social, legal, and technological factors.

CHAPTER 3
PROJECT DESCRIPTION

3.1 PROJECT LOCATION AND SETTING

The City of Santa Cruz is located along the northern shore of Monterey Bay, approximately 75 miles south of San Francisco, 25 miles south of San Jose and 40 miles north of Monterey (see Figure 1-1). The City occupies a picturesque location between the Pacific Ocean and the Santa Cruz Mountains and is bordered by parks, open space, and residential uses on the north, open space lands on the west, the Monterey Bay on the south, and a portion of the unincorporated urban community of Live Oak on the east. The City's western and northern borders are mostly defined by publicly- and privately-owned open space and agricultural lands, with the Monterey Bay on the south. Within the City, city-owned open space lands help establish a greenbelt around the City.

The project area is located within the Downtown Recovery Plan (DRP) planning area that covers approximately 69 acres. Boundaries of the DRP plan area generally are: Laurel Street on the south, Cedar and Center Streets on the west, River and Water Streets on the north, and the top of the west levee of the San Lorenzo River on the east. The DRP identifies the following four subareas, which are also referenced as sub-districts in the Central Business District (CBD). The area covered by the DRP and subareas are shown on Figure 1-2.

a. *Pacific Avenue Retail District*, including a one-half block depth for all parcels fronting onto Pacific Avenue between Water and Laurel Streets;

b. *Front Street/Riverfront Corridor*, including the one-half block depth of property on the west side of Front Street, and all parcels adjacent to the riverfront between Water and Laurel Streets;

c. *Cedar Street "Village" District*, generally situated between the Pacific Avenue Retail District on the east and Center Street on the west; and

d. *North Pacific Area*, situated between Water Street, River Street, and the Mission Hill escarpment.

The proposed project, as described in the following sections, would affect future development intensity within an approximate 12-acre portion of the lower DRP planning area that generally includes the lower parts of the Pacific Avenue Retail District and Front Street/Riverfront Corridor. The project area is shown on Figure 2-1 and is generally bounded by Laurel Street on the south; the San Lorenzo River on the east; Cathcart Street and Soquel Avenue on the north; and Cedar Street on the west. This area is developed primarily with a mix of commercial uses with some upper floor office and residential uses. The area also includes the Metro Station (approximately 1.5 acres), owned and operated by the Santa Cruz Metropolitan Transit District that serves as the bus plaza for the downtown area.

3.2 PROJECT BACKGROUND

The Downtown Recovery Plan (DRP) was adopted in 1991 to guide reconstruction of the 1989 Loma Prieta earthquake as the earthquake destroyed significant portions of downtown Santa Cruz. The intent was to establish policies, development standards and guidelines to direct the recovery process toward the rebuilding after the earthquake. In addition to an Introduction, Summary, and Implementation Strategy, the DRP includes the following components:

- ❒ Land Use Plan for four subareas (Chapter 3)
- ❒ Development Standards and Design Guidelines (Chapter 4)
- ❒ Circulation and Parking Plan (Chapter 5)
- ❒ Streetscape and Open Space Plan (Chapter 6).

An EIR on the DRP was prepared in 1991 and adopted by the City Council in 1991 with certification of an Environmental Impact Report prepared on the Plan. The DRP was adopted as a specific plan (pursuant to California Government Code requirements) to implement policies in the downtown area. The 1991 EIR prepared for the DRP estimated that the development program established by the DRP would result in a total of 656 residential units, 990,000 gross square feet of office space and 1,329,257 gross feet of commercial retail space. Prior to the earthquake, the downtown area supported 311 housing units, mostly residential hotels containing single-room occupancy (SRO) units and approximately 1,130,00 square feet of retail space and 431,300 square feet of office space (EIP Associates, 1991, DEIR volume).

The DRP has been modified several times over the past 25 years with the most recent change in 2016 to relocate the downtown sign regulations from the DRP to Chapter 24 of the Zoning Code. Implementation of the DRP also included amendments to the Zoning Code. Specifically, DRP Chapter 4—Development Standards and Design Guidelines—is incorporated by reference in Part 24 of the Zoning Code, the Central Business District (CBD).

The City Planning and Community Development Department and the Planning Commission began review of the development standards for the Pacific Avenue Retail District and the Front Street/Riverfront Corridor at the request of the City Council in October 2014. The Planning Commission established two subcommittees to review and develop recommendations. The recommended amendments were forwarded to the City Council, and in October 2016, the City Council directed staff to initiate environmental review on the proposed amendments.

3.3 PROJECT OBJECTIVES

Section 15124 of the State CEQA Guidelines indicates that the EIR Project Description shall include a statement of the objectives sought by the proposed project. A clearly written statement of objectives will help the lead agency develop a reasonable range of alternatives to

evaluate in the EIR and will aid the decision makers in preparing findings or a statement of overriding considerations, if necessary. The statement of objectives should include the underlying purpose of the project.

The existing DRP includes a set of "first principles" intended to guide redevelopment of the downtown area. These principles address the appearance and height of buildings, new housing opportunities, accessibility and circulation, open space and streetscape, and parking.

The following are the project objectives provided by City staff.

1. Support the following First Principles of the Downtown Plan:
    - *Form and Character.* New buildings should be allowed to develop individual character while retaining qualities of the historic townscape. Issues of articulation, materials, signage, setbacks, scale, massing, form, bulk, solar access and height are critical.
    - *Housing.* Significant new housing opportunities should be targeted throughout the downtown, including Pacific Avenue, the San Lorenzo riverfront, and South of Laurel. Housing should be comprised of a mix of apartments and condominiums. SRO housing should be replaced and dispersed throughout the downtown area.
    - *Accessibility.* A downtown that aesthetically integrates access as a primary design criterion for all improvements to ensure increased opportunities for the public to participate in commercial, governmental, residential, social and cultural activities.
    - *Open Space and Streetscape.* A strong network of public and private open spaces (streets, sidewalks, public parks, plazas, passageways and courtyards) that creates a socially active and pedestrian-oriented downtown core should be emphasized.
    - *Circulation.* Downtown should be predominantly pedestrian in nature; movement should be carefully structured to reinforce the character of the place. Pedestrian, bicycle, and transit access to the downtown should be enhanced.
    - *Parking.* Parking in the downtown core should continue to be provided by the Parking District in a centralized fashion, to maximize shared use and minimize the quantity of stored vehicles.
2. Increase opportunities for all types of housing in downtown.
3. Encourage and incentivize maximum public access to the San Lorenzo River.
4. Achieve superior connections to the San Lorenzo River above the existing DRP and existing SLURP policies consistent with Section 30211 of the Coastal Act.
5. Ensure that development adjacent to the Riverwalk will be designed to prevent impacts to the adjacent sensitive San Lorenzo River and will incentivize clean-up of degraded areas along the levee.

6. Enhance opportunities to view and interact with the San Lorenzo River as a coastal resource.
7. Create development standards that will incentivize development of key east-west public passageways between Pacific Avenue and the Riverwalk.

3.4 PROJECT COMPONENTS

The proposed project consists of a series of amendments to the following adopted City plans and regulations:

- ❒ Downtown Recovery Plan: Amendment to extend Additional Height Zone A, modify Additional Height Zone B, and modify development standards
- ❒ General Plan 2030: Amendment to modify Floor Area Ratio for the Regional Visitor Commercial land use designation
- ❒ Local Coastal Plan (LCP): Amendment to Land Use Plan text to modify San Lorenzo Urban River Plan land use development policies
- ❒ Zoning Code sections: Amendment to Municipal Code Section 24.10, Part 24, Central Business District (CBD), of the Zoning Code to modify extension area regulations and add Parklet standards.

Each of these project components is further explained in the next section.

3.4.1 Proposed Plan and Zoning Code Amendments

Downtown Recovery Plan Amendments

The proposed DRP amendments include minor revisions to text, reorganization of text, elimination of outdated text, addition of new text and exhibits, and modifications to development guidelines and standards. The focus of the amendment is to expand the location of "Additional Height Zones" and revise the Chapter 4 Development Standards. The primary proposed modification would increase allowable building heights in the lower Pacific Avenue and lower Front Street areas between Cathcart and Laurel Streets and along the San Lorenzo River between Laurel and Soquel Avenue. According to the City, these changes were initiated to provide more opportunities for housing in the core of the downtown. Increasing densities in the downtown is consistent with the overarching objectives of the City to maintain a compact downtown with a dense urban core in exchange for retaining a greenbelt around the City. The DRP amendment also includes: modifications to the format of the original DRP with the creation of a Use Chart for ground level and upper level uses; consolidating language relating to design guidelines and development standards; and the renaming of the plan to eliminate the word "Recovery" from the title that was formerly associated with the post-earthquake reconstruction

that is now mostly complete. Key proposed changes are summarized in Table 3-1 and further described in the following sections. All DRP text revisions can be viewed on the City's website at: http://www.cityofsantacruz.com/government/city-departments/planning-and-community-development/downtown-recovery-plan-amendments.

Development Standards and Design Guidelines

Land Uses. The proposed amendments continue to support and promote mixed-use development opportunities within the DRP area, but references to specific sites have been eliminated, including references to potential residential development on city-owned parking lots along Cedar Street. The proposed Plan revisions do indicate that "the Plan encourages the most intensive development along Pacific Avenue and the Front Street/Riverfront corridor, where it can most benefit from shared parking and convenient transit, and where higher density development is most appropriate" with acknowledgement that there are opportunities for redevelopment of existing structures along lower Pacific Avenue and Front Street.

The proposed amendments consolidate former text on permitted uses into a new table that identifies permitted uses for both ground level and upper level uses for each of the four CBD subdistricts, as well as the required level of permit approvals for each use. This modification allows for easier reference to allowed uses and provides notes about particular uses. Neither the existing DRP nor the proposed amendments provide an exhaustive list of all potential and foreseen uses for the CBD subdistricts. The proposed DP does include more uses not mentioned in the original DRP, including required Community Care, Family Day Care and Supportive and Transitional Housing uses that are required by State Law. Ground level parking has been added as a conditional (or administrative use) along Front Street if certain criteria are met (provision of some public parking, garage doesn't extend to street corners, one curb cut per garage). The proposed revisions include prohibition of marijuana dispensary facilities as a result of the passage of state Proposition 64, the ballot measure to allow personal recreational use of marijuana. The proposed DP also includes a provision that allows the Zoning Administrator to determine whether a proposed unlisted use would be considered similar in nature to other listed uses that support the objectives of the DP and the CBD.

Building Heights and Stepbacks. The primary change associated with the proposed amendment is to expand the area of "Additional Height" zones along lower Pacific Avenue and the River Street/Riverfront corridor. The proposed amendments would allow increases in allowable maximum building heights in three locations as shown on Figure 3-1 as described in the following sections. Additionally, the amendments propose an increase the base height along Pacific Street between Water and Laurel Streets from 50 to 55 feet and along the west side of Front Street.

TABLE 3-1: Summary of Key Proposed DRP Amendments

Chapter	Existing	Proposed
Introduction, Executive Summary, Chapters 1, 2 and 3	Downtown Recovery Plan	Revisions refer to the plan as Downtown Plan (DP), except where specifically referring to the original document.
	The 1989 Loma Prieta earthquake is the baseline for describing character of the CBD zone. Language indicating historic character or historic fabric of the CBD meant pre-1989 earthquake character.	Text has been modified to note that the City has had 25 years of post-earthquake development and recognizes that the CBD character has changed.
	Summary of the Plan Recommendations	Revised text clarifies that language reflects recommendations in 1991.
	References to flood improvements.	Updated to reflect improvements to the San Lorenzo River levee made since the Loma Prieta earthquake.
	Descriptions and boundaries of the four CBD subdistricts - Pacific Avenue Retail, Front Street / Riverfront Corridor, Cedar Street Village Corridor, and North Pacific.	The general descriptions of the purposes and character of these four areas remain the same. The height map is moved to Chapter 4 with the other Development Standards.
	Reference and description of the High Density Overlay (HDO) District.	Text eliminated as the HDO District was repealed in 2016.
Chapter 4	The DRP was formatted to describe allowable uses for each of the four CBD subdistricts, including by ground floor and upper floor uses, written in paragraph form.	Reorganizes the allowable uses for all the CBD districts into a table format, similar to the Citywide Zoning Ordinance update format that will be more consistent with all zoning districts in the future. Adds two tables: one for ground level uses and one for upper floor uses.
	Prohibited uses are listed within Chapter 4 of the Plan. The Plan also includes a list of amortized uses that are to be phased out by October 2020.	Adds Medical and Recreational marijuana service providers to the list of prohibited uses within the Central Business District. No change is proposed for the types of uses that are listed to be phased out of the CBD by October 2020.
	Existing "Additional Height Zones" are located generally north of Cathcart and west of Front Street.	Expands zones of additional height to areas along lower Pacific Avenue and lower Front Street.
Chapters 5, 6 and 7	Circulation-Parking, Open Space-Streetscape and Implementation	No revisions to Chapters 5, 6 and 7 are proposed with this update.
Appendices	Appendix 3 – Sign Regulations 5 – Floor Area Ratio (ordinance) 6 – Additional Height Zone C (specific to upper Pacific Avenue) 7 – Live Entertainment (ordinance)	Appendix 3 – Downtown Sign regulations previously were moved to the Zoning Code, Chapter 24.12. Appendix 5 – Floor Area Ratio ordinance appendix deleted as it is now identified in the General Plan 2030. Appendix 6 – The Additional Height Zone C is integrated with Additional Height Zone A in Chapter 4. Appendix 7 – Live Entertainment ordinance is in the Zoning Code Chapter 24.
List of Maps and Diagrams	Land Use Concept Height Housing Zone A – Additional Height Standards Zone B – Additional Height Standards	Land Use Concept remains unchanged. Height Map relocated to Chapter 4. Housing Map deleted as it represented the High Density Overlay Zone that is obsolete with the General Plan 2030. Additional Height Zones A and B are in Chapter 4.

- *Additional Height Zone A – to 75 Feet*: The proposed amendment would extend the existing "Additional Height Zone A" to the area along Pacific Avenue between Cathcart Street and Laurel Street and to the area along the west side of Front Street between Cathcart Street and Soquel Avenue. Additional Height Zone A, which currently is applied to Pacific Avenue north of Cathcart, would allow building heights to 75 feet on sites 15,000 to 50,000 square feet in size Current allowable heights for these areas are 50 to 60 feet. The proposed change also reduces the minimum property size to which the additional height may be applied from 20,000 to 15,000 square feet.
- *Additional Height Zone A - to 85 Feet*: The proposed amendment would establish a maximum height of 85 feet in Additional Height Zone A for the area between the east side of Pacific Avenue and the west side of Front Street (between Cathcart and Laurel) and on the west side of Front Street between Cathcart and Soquel Avenue for projects on aggregated parcels larger than 50,000 square feet.
- *Additional Height B - to 70 Feet*: The proposed amendment changes the "Additional Height Zone B[1]" to cover properties located on the east side of Front Street between Soquel Avenue and Laurel Street. The amendment would allow additional heights to 70 feet over the base height limit of 50 for properties larger than 15,000 square feet in size. The DRP amendments performance criteria is provided that requires recessed building breaks, skyline architectural variation and integrated rooftop design.

Uninhabitable mechanical penthouses continue to be permitted to exceed the maximum building height (to a maximum height of 65 feet, except 60 feet for the Front Street/Riverfront corridor) with a 15-foot setback, which is reduced from the 25-foot setback in the current plan.

The proposed amendments also modify upper floor stepback requirements. A stepback is generally an upper floor setback from the edge of the building to help break up building mass. The proposed amendments would change the existing upper level 42 or 52 degree stepback standard to standard that would allow a certain percentage of a site to have heights over a specified limit. According to City staff, this "volumetric approach" is intended to ensure both vertical and horizontal building variation to avoid monolithic structures.

- For sites that are eligible for additional height in Additional Height Zone A, the footprint of portions of the building at or below 55 feet shall be at least 40% of the total site area; portions of the building footprint above 55 feet to a height of 75 feet may comprise up to 60% of the site area. For assembled sites greater than 50,000 square feet, buildings may achieve an 85-foot height for up to 20% of the total area in the area proposed for this additional height allowance. Figure 3-2 provides a schematic that shows proposed distribution of building height on different size sites.

[1] The existing Additional Height Zone B consists of two areas along Pacific Avenue that are now included in the proposed expansion of Additional Height Zone A. The existing Additional Height Zone C at the northern end of the DRP area is now included into Additional Height Zone A.

Along Pacific Avenue, portions of buildings that exceed the maximum base height of 55 feet may occupy up to 55% of the length of the property line along the street or 200 feet, whichever is less. Any additional height above the base height must be set back from the building wall by at least 15 feet. An example of the potential distribution of height that is included in the proposed revised Downtown Plan is shown on Figure 3-3.

Along Front Street, portions of buildings that exceed the maximum base height of 55 feet may occupy up to 60% of the length of the property line along the street or 180 feet, whichever is less with the proposed amendment. Any additional height above the base height must be set back from the building wall by at least 15 feet.

- ❒ For the Front Street/Riverfront Corridor, the proposed amendments require a minimum 10-foot stepback from Front Street for development above 50 feet in height and at least 50% of the building frontage along Front Street and Soquel Avenue shall have a 10-foot setpback for development above 50 feet (See Figure 3-4). Along the west side of the Riverwalk, a 10-foot setback from the exterior building face would be required for development above 50 feet. The proposed amendments allow up to 25% of the Riverwalk building frontage to encroach into the required 10-foot setpback area to provided massing variation. See Figure 3-4, which depicts heights and stepbacks along Front Street and adjacent to the San Lorenzo River. The proposed amendments also permit top floor cantilevered portions of the building to encroach over the property line a maximum of 5 feet in order to provide architectural interest to the façade, which shall not exceed 25 percent of the total building frontage along the riverfront.
- ❒ Along Laurel Street, Cathcart Street and Soquel Avenue, portions of buildings that exceed the maximum base height of 55 feet may occupy up to 60% of the length of the property line or 150 feet, whichever is less. Any additional height above the base height must be set back from the building wall by at least 15 feet.
- ❒ Along the Maple Street extension to Front Street, the proposed amendment requires the building frontage to be stepped back by 10 feet above a height of 50 feet. In addition to the 'build to' line, the Maple Street building face shall incorporate at least one recessed break, open to the sky, no less than 25 feet wide and no less than 10 feet in depth from Maple Street (see Figure 3-4).

Development Standards and Design Guidelines. The proposed amendments reorganize and combine Guideline language with Development Standard language in Chapter 4 with generally minor text revisions. A new section has been added that consolidates requirements and performance criteria for Additional Height areas, and another new section provides consolidates Storefront Standards and Guidelines that are applicable to the entire CBD zone. A new standard has been added that requires new development to provide for public passageways between the Riverwalk and Front Street at or near the extension of along Cathcart Street, Elm Street and Maple Street.

Tables 3-2 and 3-3 summarize changes in development standards and design guidelines for the Pacific Avenue Retail District and Front Street/Riverfront Corridor, respectively.

Other DRP Text Revisions

The proposed DRP amendments includes other revisions, including removing references to the High Density Overlay (HDO) District, which was repealed in 2016 due to redundancy with the adopted *General Plan 2030* and Housing Element. The HDO had been adopted for the Pacific Avenue corridor between Water and Elm Streets, which provided density bonuses amounting to an additional 2.0 FAR for residential development within commercial mixed-use projects. The zone became obsolete with the adoption of the *General Plan 2030* in 2012 as the Regional Visitor Commercial land use designation (applicable to the downtown area) includes new floor area ratio (FAR) ranges that supersede the HDO district.

The Draft Plan includes language to require the sloped side of the river levee between the levee and the private property to be filled with earth to achieve a similar elevation between the Riverwalk and the adjacent private development for the purposes of encouraging more connections to the Riverwalk. The original DRP did encourage filling along the levee, but the proposed language makes this public objective a mandatory design feature for new development.

The proposed amendment would require any development along the west side of Front Street between Cathcart Street and Laurel Street to dedicate sufficient property to result in a sidewalk depth of at least 12 feet. Development along Laurel Street between Pacific Avenue and Front Street would also require a setback to result in at least a 12 foot sidewalk. Additionally, specific parcels are identified and standards provided for future pedestrian extensions from Elm Street and Maple Street to Front Street and the San Lorenzo River. Buildings fronting the 10-foot Maple Street alley between Pacific Avenue and Front Street shall be set back 20 feet to provide for a 50-foot wide public paseo, lane or street. In recognition of this required dedication, the proposed amendment indicates that aggregated parcels meeting the size for additional height would not be required to provide on-site parking, but pay parking fees to the Downtown Parking District in lieu of meeting the on-site parking requirements. Specified properties are required to dedicate a 30-foot wide publicly accessible pedestrian connection as an extension of Elm Street between Pacific Avenue and Front Street, and the passageway shall be integrated into the design of the development.

TABLE 3-2: Summary of Pacific Avenue Retail District Development Standards

Standard	Existing	Proposed
Base Height	50 feet (maximum)	Increase to 55 feet (maximum)
Additional Height	Additional height not permitted south of Metro Center. 75' maximum height for properties eligible for additional height north of Metro Center. Project sites eligible for additional height must be at least 20,000 square feet in size.	Extend Additional Height zone south of Soquel Avenue to Laurel Street. Allow up to 60% of site area to be 75 feet in height and up to 20% of site up to 85' for eligible properties, subject to massing standards. Project sites eligible for additional height must be at least 15,000 square feet in size.
Uses within Additional Height Zone.	Maximum of 5 levels of commercial and 5 levels of residential above 1 level of required pedestrian-oriented ground level commercial.	Allow 6 levels of residential development above 1 level of required pedestrian-oriented ground level commercial.
Additional Height Stepbacks on Pacific Avenue	On west side, setback above 50' to create 42° solar access plane to opposite sidewalk. On east side setback so that no more than 30% of additional height is visible.	Replace terraced stepbacks with volumetric massing standards that avoid large monolithic buildings. Limit additional height to: a footprint no greater than 60% of the total site area with two-story variation between building masses. Limit additional height to • a maximum of 55% of Pacific Avenue frontage or 200' whichever is less, • 60% of east-west street frontages or 130', • 60% of Front Street frontages or 180', • and 50% of the Maple Avenue Paseo frontage. Provide recessed space with 15' minimum depth and 25' width to distinguish between volumes. Treat this recessed space in a manner that creates a positive pedestrian/streetscape environment.
Additional Height Stepbacks on East-West Streets	Setback above 50' to create 52° solar access plane to opposite sidewalk.	
Additional Height Stepbacks on Front Street	Not applicable. Maximum height along Front Street is 50'.	
Public Connections between Pacific Ave and Front St.	No specific requirements. All buildings are built to the property line of the street with some exceptions. No interior side yard setbacks stipulated.	Require all new development to physically dedicate and/or to make a fair share financial contribution to the creation of publicly accessible connections along or near the extension of Maple (50 feet) and Elm (40 feet) Streets. Require upper level stepbacks of 10 feet above 50 feet. A recessed break, open to the sky, is required along Maple Street of no less than 25 feet in width with a depth of at least 10 feet.

TABLE 3-3: Summary of Front Street/Riverfront District Development Standards

Standard	Existing	Proposed
Base Height	50' (max)	No change to maximum base height.
Uses within Base Height:	3 floors of commercial or 3 floors of residential above 1 level of commercial.	No change for buildings within the base height.
Additional Height	Additional height not permitted south of Metro Center.	Establish Additional Height Zone B, between Soquel Avenue and Laurel Street. Allow buildings up to 70 feet for properties that meet specific Performance Criteria that promote high quality public access to the river, appropriate treatment of the riverfront edge and commitment to manage and maintain riverfront open space.
Ground Level Uses	Commercial uses required along Front Street.	Add live-work as a permitted ground level use along Front Street.
Building Stepbacks	Any development above 35' is required to step back at least 10' from the street.	Require at least 50% of Front and Laurel Street frontages to step back by 10 feet above a height of 50 feet. Require a stepback of 10 feet above 50 feet on frontages facing the Riverwalk. Buildings Adjacent to River Street, east-west streets, and publicly accessible passageways shall step back at least 10 feet from the street for any height above 35 feet.
Upper Level Standards	Not specified in current plan.	Require top floor area to not exceed 60% of the site area if the project includes a publicly accessible passageway to the river. If no passageway is included within the project, require the top floor to not exceed 60% of the floor are below.
Public Connections to River	No specific standard. Guidelines ask for pedestrian access between Front Street and the Riverwalk.	Require all new development to physically dedicate and/or to make a fair share financial contribution to the creation of publicly accessible connections along or near the extensions of Cathcart, Maple and Elm Streets, at widths of 60, 50 and 40 feet respectively.
Building Length	No standard.	Limit building to 250' of lineal street frontage. A minimum 30' break between buildings must be provided.

General Plan 2030 Amendment

The existing General Plan 2030 was updated and adopted by the City Council in June 2012. The proposed General Plan amendment would revise General Plan text to increase the upper level of permissible floor area ratio (FAR) for the Regional Visitor Commercial (RVC) land use designation in the downtown area from 3.5 to 5.0[2]. (See Appendix C for text revision.) The RVC designation currently is applied to all of the area within the boundaries of the DRP.

The purpose of this modification is to reflect the changes to the Additional Height Zone A in the Downtown Plan, which would allow for a potential height of up to 85 feet for a portion of a development site that meets the criteria for additional height under the proposed DRP amendment. While the FAR is proposed to be modified, no changes to underlying zone districts are proposed.

Local Coastal Plan Amendments

A portion of the downtown and project study area lies within the coastal zone. Pursuant to the California Coastal Act, the City has a Local Coastal Plan (LCP) that was certified by the California Coastal Commission (CCC). The LCP consists of a land use plan, implementing ordinances and maps applicable to the coastal zone portions of the City, and applies to all private and public projects located within the coastal zone. The Land Use Plan consists of: text; policies, programs and maps; Area Plan coastal policies and maps; and a Coastal Access Plan. The Implementation Plan consists of ordinances and regulations used to implement the Land Use Plan, including sections in the Zoning Code. The City is in the process of updating and revising the LCP Land Use Plan as a separate document from the General Plan. The LCP applies to private and public projects located within the coastal zone.

Chapter 4 of the Downtown Recovery Plan is incorporated by reference in the CBD zone district, and the district is part of the implementation section of the LCP. Thus, revisions to the DRP Chapter 4 require review and approval by the California Coastal Commission as part of an LCP amendment.

In addition to the development standards of Chapter 4, there are several LCP policies that are proposed to be modified. Since the original certification of the City's LCP in 1985, additional plans have been prepared and policies incorporated into the LCP as amendments. The City adopted the San Lorenzo Urban River Plan (SLURP) in 2003 as a resource management protection plan for the river. Subsequent to the City Council approval, several resource-related and land use policies were included in the LCP and approved by the CCC as an amendment to the City's LCP. There are nine coastal policies based on the SLURP that pertain to development along

[2] FAR is the gross floor area permitted on a site divided by the total net area of the site. For example, on a site with 10,000 net sq. ft. of land area, a FAR of 1.0 will allow a maximum of 10,000 gross square feet of building floor area to be built. On the same site, a FAR of 3.5 would allow 35,000 sq. ft. of floor area,

Front Street within the coastal zone. The proposed amendment would modify one policy, eliminate the other existing eight policies, and add two new LCP policies. The LCP policies proposed for deletion address maintenance of 50-foot building heights along Front Street, provision of public amenities, and building architecture. Appendix C lists the policies proposed for deletion with an explanation provided by City Planning Department staff.

The proposed new LCP SLURP policies are:

- ❒ Require new development projects to incorporate design features that encourage active engagement with the Riverwalk such as: filling adjacent to the Riverwalk and landscaping, providing direct physical access to the Riverwalk, including appropriate active commercial and/or residential uses adjacent to the Riverwalk, or providing a combination of these and/or other design features that support the resource enhancement and river engagement policies of the San Lorenzo Urban River Plan.
- ❒ Require new development projects to incorporate pedestrian and/or bicycle connections between Front Street and the Riverwalk at appropriate locations such as the extensions from Maple Street and near Elm Street.

Zoning Code Amendments

The project includes amendments to Part 24 of the Municipal Code, Commercial Business District that is part of the Zoning Code. Minor text revisions are proposed in several sections as shown in Appendix C, and the two primary changes relate to outdoor extension areas and parklets:

- ❒ Municipal Code section 24.10.2340, Extension Areas. The proposed amendment specifies that this section is applicable to the Central Business District and to properties to the San Lorenzo Riverwalk as areas for outdoor restaurant and business extension in order to enhance the pedestrian ambiance of the downtown and the San Lorenzo Riverwalk, by introducing uses attractive to pedestrians into the pedestrian environment, configured and arranged in ways which activate and enliven the public streets and the San Lorenzo Riverwalk.
- ❒ Municipal Code section 24.10.2341, Parklets. The proposed amendments add an new section that regulates construction of “parklets”. The purpose of parklets is to enhance the pedestrian ambiance of the CBD zone district by creating useable outdoor spaces that encourage a sense of community and that provide a tool for economic development. The new sections include requirements for design, construction and operation.

3.4.2 Potential Buildout with Proposed Amendments

Adoption of the proposed plan and code amendments would not directly result in development, and the proposed amendments do not include site-specific development. However, the proposed amendments would expand and specify the geographical areas in which increased

building heights may be allowed, which could result in additional building floors as part of future redevelopment in the area. Therefore, the amendments could lead to reasonably foreseeable indirect physical changes in the environment.

City Planning Department staff developed an estimate of potential buildout without and with the proposed amendments for the purpose of identifying and evaluating potential indirect environmental impacts resulting from new development that could be accommodated by the project. The affected area was divided into three segments as shown on Figure 3-6 to include the Riverfront area, the area between the east side of Pacific and Front Street, and the area to the west of Pacific Avenue. City staff identified broad development assumptions for these areas, which are included in Appendix D.

Table 3-4 at the end of this section summarizes potential development based on City staff estimates. The proposed amendment to expand the existing "Additional Height Zones" could result in a net increase of approximately 711 residential units and approximately 2,200 square feet of office space with a net decrease of approximately 14,700 square feet of commercial building space over existing conditions within the study area. In comparison, City staff estimates that potential redevelopment under the adopted *General Plan 2030* without the proposed DRP amendments could result in a net increase of approximately 437 residential units with a decrease of approximately 24,000 square feet of commercial and 5,000 square feet of office uses.

At this time there are no development applications currently pending before the City. However, there have been development inquiries and discussions between private developers and City staff. The Santa Cruz Metropolitan Transit District also had been pursuing a mixed-use transit, parking, and residential project on the downtown Metro Station site, but there are no current project plans for this development.

3.5 PROJECT APPROVALS & USE OF EIR

As indicated in the Section 1.0, Introduction, the EIR is an informational document for decision makers. The EIR includes a "program-level" analysis. As defined by the State CEQA Guidelines section 15168, a Program EIR is prepared for a series of actions that can be characterized as one large project and are related geographically, by similar environmental effects, as logical parts in the chain of contemplated actions, or in connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program.

The City of Santa Cruz is the lead agency and responsible for approving the proposed amendments to the DRP, General Plan and LCP. After certification, this EIR may be used by the City as a "first tier" document for later projects as authorized by section 15183 of State CEQA Guidelines. Reviews of later projects under this provision would be required to consider any project-specific impacts that were not adequately addressed in this EIR. The specific later

projects are not known at this time, but could include, for example, site-specific development projects.

For later individual projects proposed in the areas covered by the plans and amendments covered in this EIR, the City will determine whether the individual project or subsequent activity is within the scope of this Program EIR, meaning it is an activity within the same project as analyzed in the program EIR or within the same geographic area encompassed by the program EIR. Depending on the City's determination, including whether new effects could occur or new mitigation measures would be required, the analysis for later projects could range from no new CEQA document to a new EIR. The City potentially could apply one or more CEQA "streamlining" tools when it considers later projects, such as the focused analytical routes offered under Public Resources Code sections 21155.2 and 21083.3 and CEQA Guidelines sections 15152, 15182, 15183, and 15183.3. If appropriate and applicable to a proposed project, the City may also consider one or more statutory or categorical exemptions.

Other public agencies that have review or approval authority of the project include:

- ❒ California Coastal Commissions: Approval of LCP amendment

TABLE 3-4: Potential Development/Buildout Assumptions with Downtown Plan Amendments

	Area X Riverfront	Area Y E. Pacific/W. Front Pacific Station	Area Z W. Pacific	Totals	Change from Existing Conditions (Includes demolition and reconstruction)
Baseline/Existing Conditions					
Property Area	146,000 sf (3.35 acres)	222,200 sf (5.10 acres)	148,800 sf (3.42 acres)	517,000 sf (11.87 acres)	N/A
Commercial	62,000 sf	74,864 sf	182,836 sf	**319,700 sf**	N/A
Office	N/A	56,105 sf	65,761 sf	**121,866 sf**	N/A
Residential	N/A	113 units	56 units	**169 units**	N /A
Parking	164 spaces	186 spaces	97 spaces	**447 spaces**	N /A
Buildout Assumptions with Proposed Downtown Plan Amendments (Units are totals, reflecting both demolition and reconstruction)					
Commercial	73,171 sf	47,000 sf	184,836 sf	**305,007 sf**	**-14,693 sf**
Office	18,296 sf	40,000 sf	65,761 sf	**124,057 sf**	**+2,191 sf**
Residential	321 units	483 units	76 units	**880 units**	**+711 units**
Parking	397 spaces	1,924 spaces	117 spaces	**2,438 spaces**	**+1,991 spaces**

SOURCE: City of Santa Cruz Planning and Community Development Department



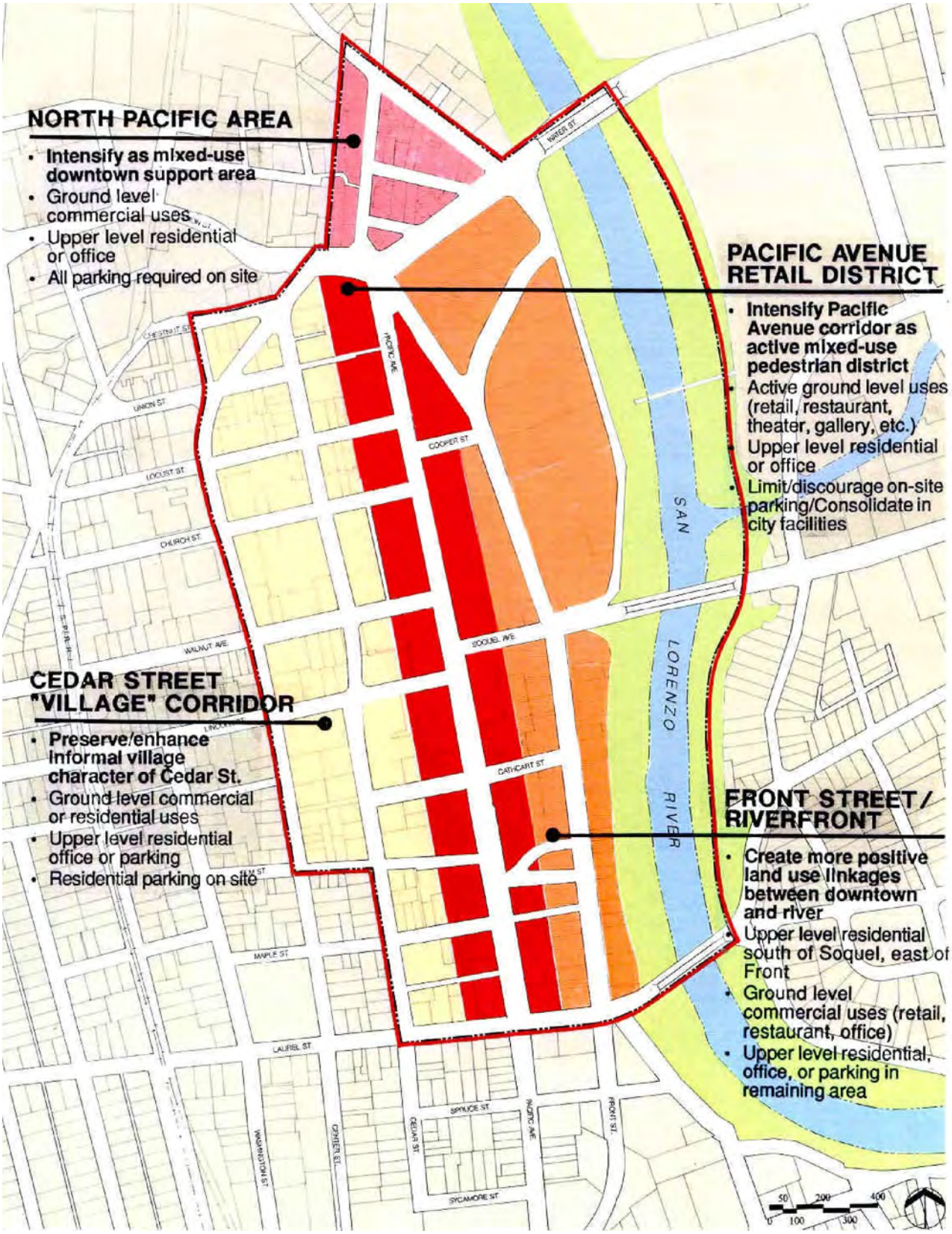
SOURCE: Bing Maps (accessed 2017)

FIGURE 1-1
Project Location

City of Santa Cruz Downtown Plan Amendments EIR

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SOURCE: City of Santa Cruz

FIGURE 1-2

Downtown Recovery Plan Boundaries and Subareas

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City of Santa Cruz Downtown Plan Amendments EIR

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SOURCE: Bing (accessed 2017), County of Santa Cruz

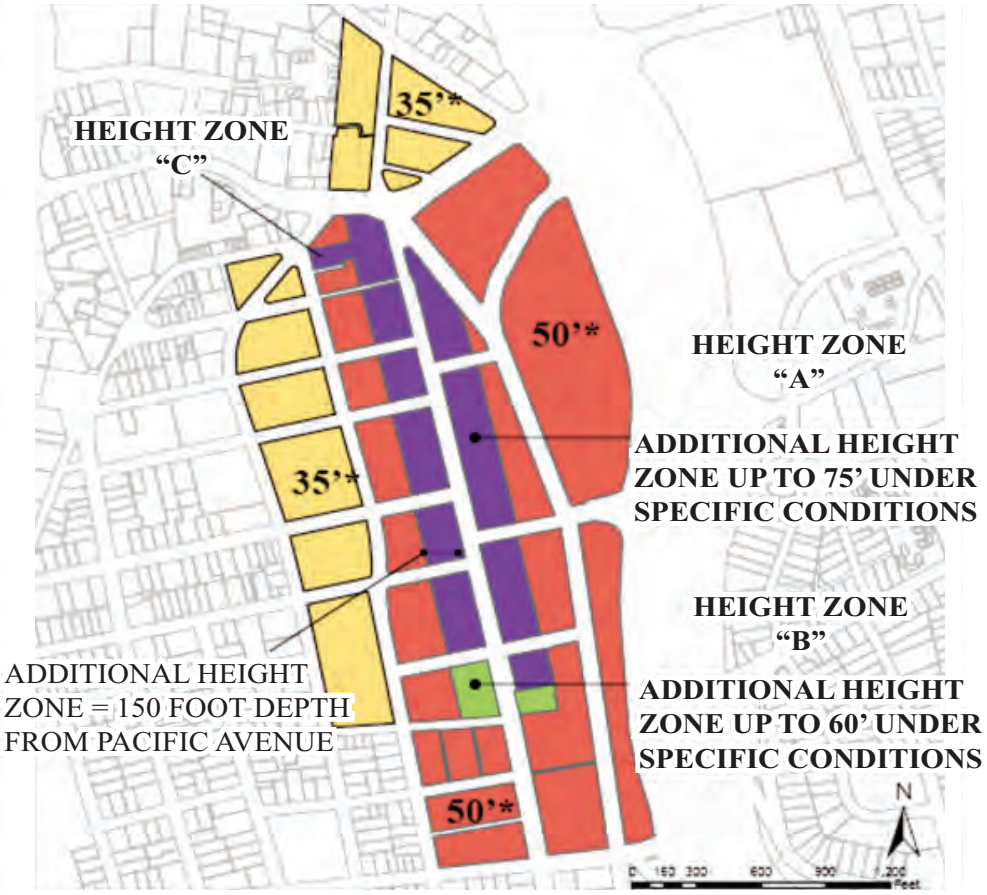
FIGURE 2-1
Lower Downtown Project Study Area

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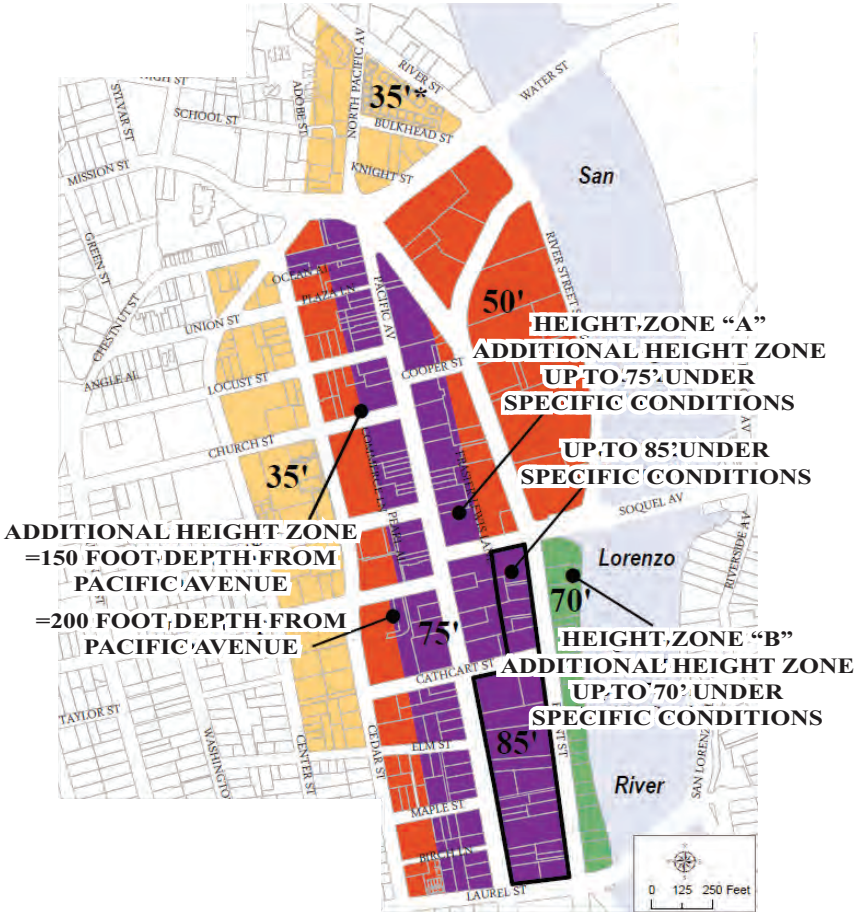
City of Santa Cruz Downtown Plan Amendments EIR

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Existing Additional Height Zones



Proposed Additional Height Zones



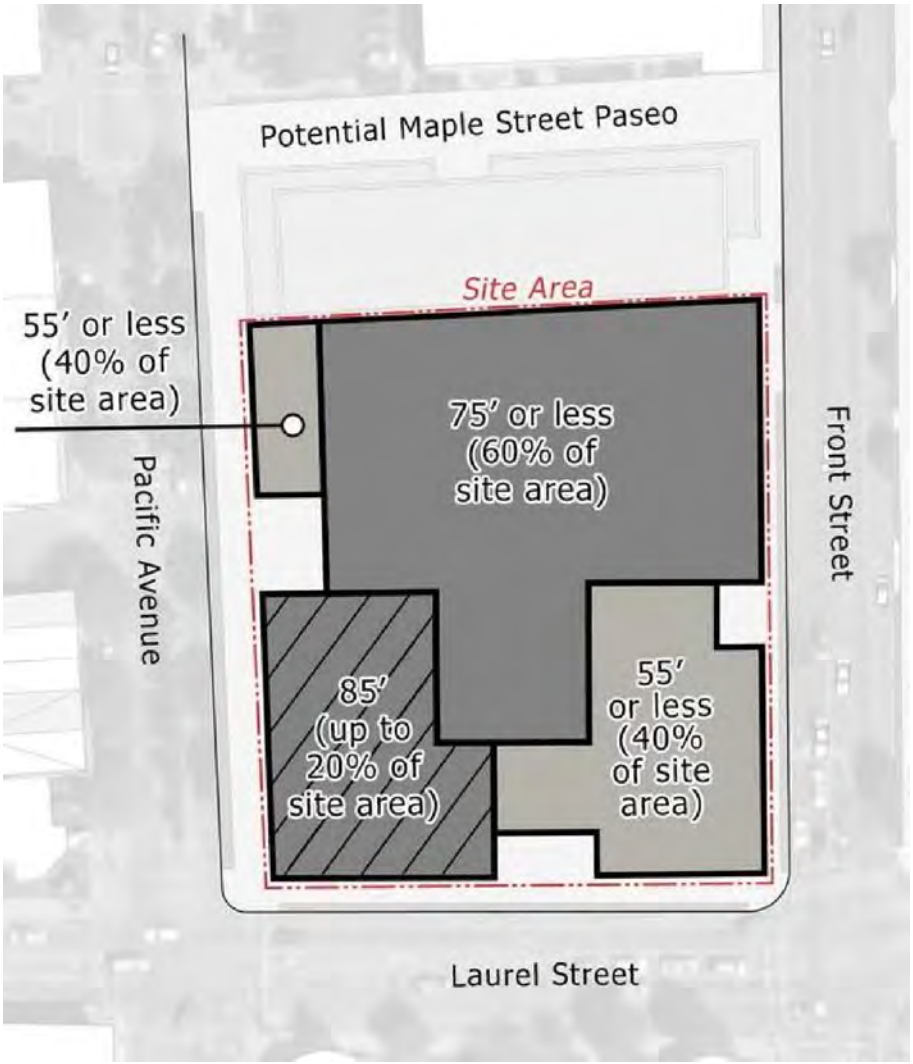
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FIGURE 3-1
Existing and Proposed Additional Height Zones

Proposed distribution of additional height for sites 15,000˜ 50,000 sq. ft.



Proposed distribution of additional height for sites larger than 50,000 sq. ft.



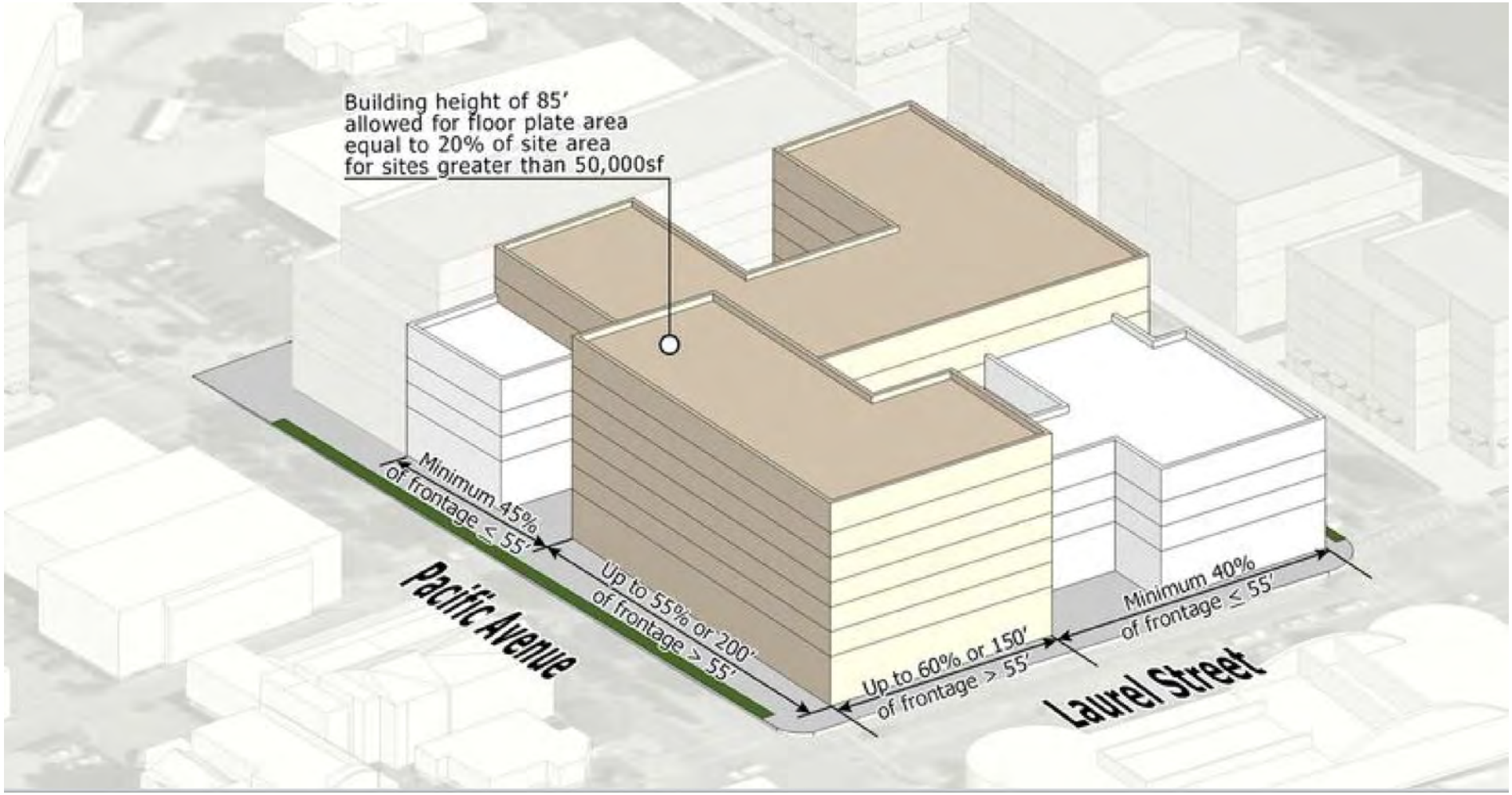
SOURCE: City of Santa Cruz

FIGURE 3-2

Schematic of Proposed Height Distribution on Development Sites

DUDEK

City of Santa Cruz Downtown Plan Amendments EIR



Example of possible distribution of frontage heights along Pacific Avenue and Laurel Street.

DUDEK

SOURCE: City of Santa Cruz

FIGURE 3-3

Proposed Additional Height and Stepbacks Along Pacific Avenue

City of Santa Cruz Downtown Plan Amendments EIR



Example of possible distribution of frontage heights along Front Street and the Maple Street Paseo

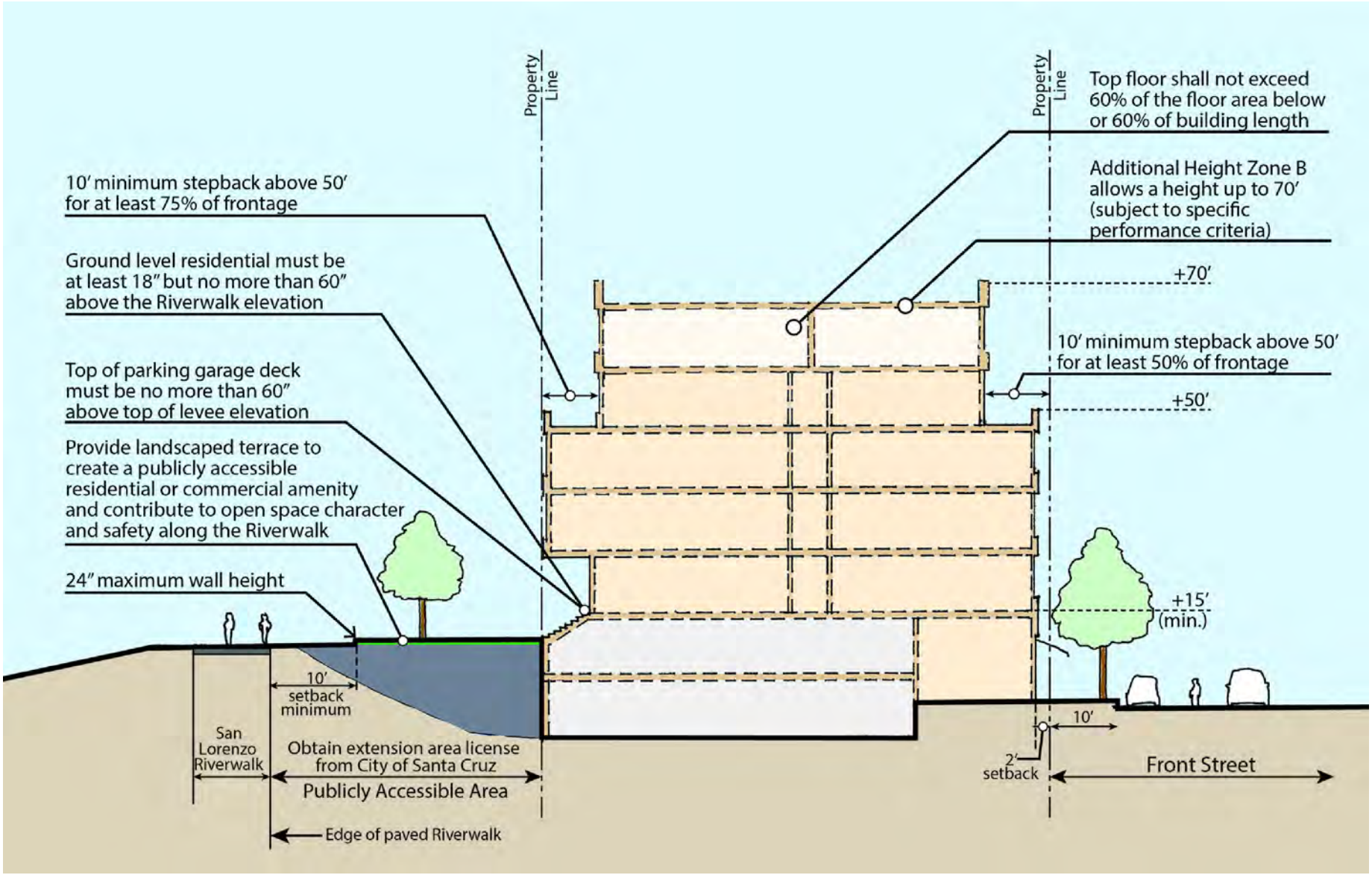
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SOURCE: City of Santa Cruz

FIGURE 3-4

Possible Height Distribution along Front Street

City of Santa Cruz Downtown Plan Amendments EIR



SOURCE: City of Santa Cruz

FIGURE 3-5

Proposed Additional Height and Stepbacks Along Front Street/Riverfront Corridor

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City of Santa Cruz Downtown Plan Amendments EIR

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SOURCE: Kimley Horn

FIGURE 3-6

Project Development Areas

City of Santa Cruz Downtown Plan Amendments EIR

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CHAPTER 4
ENVIRONMENTAL EVALUATION INTRODUCTION

The following sections evaluate the environmental impacts of the proposed residential project:

4.1 Aesthetics

4.2 Air Quality & Greenhouse Gas Emissions

4.3 Biological Resources

4.4 Cultural Resources

4.5 Hydrology

4.6 Public Services and Utilities

4.7 Transportation and Traffic

4.8 Water Supply and Wastewater Treatment

4.9 Land Use

Each section in Chapter 4 generally follows the same format and consists of the following subsections:

- **ENVIRONMENTAL SETTING:** This section describes the existing physical environment and applicable laws and regulations relevant to a discussion of impacts in the topic category. The Environmental Setting sections provide a general overview of the existing conditions throughout the City related to the topic being addressed. Local, State, and federal regulations also are identified and discussed, when relevant.

- **ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES:** The Environmental Impacts and Mitigation Measures section identifies thresholds of significance used to evaluate whether an impact is considered significant, based on standards identified in or criteria derived from the California Environmental Quality Act (CEQA) and State CEQA Guidelines. In some cases, agency policies and regulations or professional judgment are used to further define CEQA standards of significance.

  This section first identifies issues for which no impacts have been identified. The section then evaluates and analyzes significant or potentially significant project impacts, states the level of significance prior to mitigation, and proposes mitigation measures (in bold) that can reduce such impacts. A statement regarding the level of significance of each impact after mitigation follows the mitigation measures for that impact. For impacts found to be less than significant, mitigation measures are not required, but where relevant, the EIR recommends project modifications or appropriate conditions of approval.

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4.1 AESTHETICS

This section analyzes impacts of the proposed project related to aesthetics based on a visual assessment conducted as part of the preparation of this EIR, which includes consideration of photo simulations prepared for the City Planning and Community Development Department by McCann Adams Studio. This section also draws from the City of Santa Cruz *General Plan 2030* EIR (SCH#2009032007), which was certified on June 26, 2012, regarding background information on aesthetics and scenic views. The General Plan EIR is available for review at the City of Santa Cruz Planning and Community Development Department (809 Center Street, Room 107, Santa Cruz, California) during business hours: Monday through Thursday, 8 AM to 12 PM and 1 PM to 5 PM. The General Plan EIR is also available online on the City's website at: http://www.cityofsantacruz.com/departments/planning-and-community-development/general-plan-2030.

Public and agency comments related to visual impacts were received during the public scoping period in response to the Notice of Preparation (NOP). Issues raised in these comments include:

- ❒ Concerns were raised regarding potential impacts of the proposed new height standards along Front Street and to public views along the Riverwalk and adjacent public recreational facilities.
- ❒ The CEQA analysis should include a visual resource analysis that includes visual simulations from all appropriate public vantage points, including from both sides of the Riverwalk, the Soquel Avenue and Laurel Street bridges, and San Lorenzo Park.
- ❒ Story poles should be erected along the river levee to assess visual impacts of the heights of new buildings.
- ❒ The EIR should evaluate alternatives to the proposed new height standards that meet most of the project objectives but also reduce potential aesthetic impacts.

To the extent that issues identified in public comments involve potentially significant effects on the environment according to the California Environmental Quality Act (CEQA) and/or are raised by responsible agencies, they are identified and addressed within this EIR. Public comments received during the public scoping period are included in Appendix B.

4.1.1 Environmental Setting

Regulatory Setting

There are no known federal regulations regarding aesthetics or project design review. City regulations and permits related to development and design standards are summarized in the following section.

In 2013, Senate Bill 743 was passed that changed CEQA as codified in California Public Resources Code section 21099, which became effective in January 2014. Under this law, projects located

within one-half mile of a major transit stop or facility are considered "transit-oriented development". Pursuant to section 21099(d)(1), aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment. Section 21099(d)(2)(A) further indicates that this subdivision does not affect, change, or modify the authority of a lead agency to consider aesthetic impacts pursuant to local design review ordinances or other discretionary powers provided by other laws or policies. This change does not affect the analysis of the proposed Downtown Plan amendments as the aesthetics issue exemption does not apply to plans, but it could apply to future CEQA analyses of specific development projects.

City Regulations and Permits

Zoning Regulations

Chapter 24.12 of the City of Santa Cruz Zoning Code provides community design standards related to site layout, parking, landscaping, fencing and other design features. The Zoning Code (Municipal Code section 24.22.162) defines building height as the vertical distance from average grade to the average midpoint of the highest pitched roof. Section 24.12.150 of the Zoning Code indicates that the height limitations do not apply to roof structures for the housing of elevators, stairways, tanks, ventilating fans, air conditioning, or similar equipment used solely to operate and maintain a building.

The Central Business District (CBD) zone (Municipal Code Chapter 24.10, Part 24) implements the Land Use Plan, Development Standards and Design Guidelines of the Downtown Recovery Plan (DRP). It supports the purpose of the Plan, in the context of the General Plan, which aims to make downtown the urban center of the city, with the many functions a city center serves. This section of the Zoning Code is also part of the Local Coastal Implementation Plan. Section 24.10.2301, Uses, Development Standards and Design Guidelines, also adopts by reference and includes Chapter 4 of the DRP, as amended, in the CBD zone district. This section indicates that the policies and regulations set forth in Chapter 4 of the DRP shall control all uses in the CBD, Central Business District, and its four subdistricts: Pacific Avenue Retail District; Front Street Riverfront Corridor; Cedar Street Village Corridor; and North Pacific Area.

Chapter 4 of the DRP identifies land uses, development standards and design guidelines for each of the four subdistricts. Elements addressed include:

- ❒ Building heights
- ❒ Building massing and stepbacks
- ❒ Building façade guidelines, including window treatments, roofs, building materials, colors and landscaping
- ❒ Storefront guidelines
- ❒ Pedestrian passages and courtyards

Chapter 4 also allows additional height above the 50-foot base feet under certain conditions with a requirement that a detailed visual analysis of the proposed building be prepared to determine the visual impact of the development. See Figure 3-1 in Section 3, Project Description, which shows the existing areas where additional building height may be allowed.

Required Permits

Design Permit. The City's Zoning Code requires a "design permit" for most new construction in the City of Santa Cruz, including new construction of commercial structures and multiple dwellings containing three or more dwelling units. The purpose of the design permit is to promote the public health, safety and general welfare through the review of architectural and site development proposals and through application of recognized principles of design, planning and aesthetics and qualities typifying the Santa Cruz community. Pursuant to the Design Permit requirements (Zoning Code Section 24.08.430), findings must be made that address 17 identified criteria before the City issues a design permit. Chapter 24.12 of the Zoning Code provides "Community Design Standards" that address general site design standards, parking, advertising and signs, underground utilities, historic preservation, and other provisions for specific uses. The criteria to be addressed in findings for a Design Permit include:

1. Consistency with physical development policies of the General Plan and Local Coastal Program (LCP), if located in the coastal zone.
2. Compatible exterior design and appearance with other existing buildings and structures in neighborhoods which have established architectural character worthy of preservation.
3. Respect design principles in terms of maintaining a balance of scale, form and proportion, using design components which are harmonious, and materials and colors which blend with elements of the site plan and surrounding areas.
4. Site planning that takes into account uses other than that of a proposed project.
5. Orientation and location of buildings, structures, open spaces and other features to maintain natural resources including significant trees, maintain a compatible relationship to and preserve solar access of adjacent properties, and minimize alteration of natural land forms.
6. Protection of views along the ocean and of scenic coastal areas, and where appropriate and feasible, restore and enhance visual quality of visually degraded areas.
7. Site layout to minimize the effect of traffic conditions on abutting streets.
8. Encourage alternatives to travel by automobile where appropriate, through the provision of facilities for pedestrians, bicyclists, and public transit.
9. Provision of open space and landscaping which complement buildings and structures.
10. Reasonably protect against external and internal noise, vibration and other factors which may tend to make the environment less desirable and respect the need for privacy of adjacent residents.
11. Provision of complementary signs.

12. Structural designs to take advantage of natural elements such as solar radiation, wind, and landscaping for heating, cooling and ventilation.
13. Incorporation of water-conservation features and landscaping.
14. Reuse of heat generated by machinery in industrial zones.
15. Design of buildings in industrial zones to make use of natural lighting wherever possible.
16. Solar heating systems for hot tubs and swimming pools.
17. Compatible siting and design along West Cliff Drive streetscape.

Planned Development Permit

The Planned Development Permit (PD) regulations in the Zoning Code (24.08.720) allow a variation in height not to exceed one story or 20 percent of height limit (in feet) above what is allowed in the district in which the project is located, with approval of a Planned Development Permit. Properties must be 20,000+ square feet in size and meet other requirements for the additional height to be considered. Five findings must be made with the approval of a Planned Development Permit related to consistency with the General Plan, LCP, and other regulations; variations that serve public purposes and are coordinated with surrounding development; and provision of amenities. Overall, the amenity level of the development and the amount of open space shall be greater than what would have been permitted by the underlying district regulations.

Study Area

The project area consists of the area covered by the Downtown Recovery Plan and the Central Business District zone, and specifically the lower downtown area generally between Soquel Avenue and Laurel Street on the north and south, and Cedar Street and the San Lorenzo River on the west and east. (Locations are shown on Figures 1-2 and 2-1 in Section 3, Project Description.) The proposed project includes a General Plan amendment to the land use designation text for the downtown portion of the Regional Visitor Commercial land use designation. The study area includes properties adjacent to the western San Lorenzo River levee.

The study area includes the Santa Cruz Metro Transit Center (Pacific Station) that serves areas within the City and County. This transit center qualifies as a major transit stop when evaluating projects for CEQA purposes per SB743, as codified in Public Resources Code 21099, transit priority projects. All of the properties within the defined study area are located within one-half mile or less from the METRO Pacific Station. The proximity of future development to this transit facility has a direct relationship on the applicability of CEQA with respect to evaluating aesthetic impacts for project-level impact analysis. See Section 4.1.2, Impacts and Mitigation Measures, for further discussion.

Regional Setting

The visual character of the City of Santa Cruz is influenced by a blend of natural features, historic neighborhoods and other development. Santa Cruz is strongly characterized by its coastal location along Monterey Bay, which defines the city's entire southern boundary. Open space areas, including those that make up the City's greenbelt, also are significant contributors to Santa Cruz's natural setting. The Santa Cruz Mountains and its foothills on the north provide a backdrop of open space views and offer panoramic views of the City and ocean (City of Santa Cruz, April 2012, DEIR volume). Key natural and open space features include:

- The coastline and beaches,
- The San Lorenzo River and other watercourses, parks and open space, and
- The background view of the Santa Cruz Mountains.

According to the City's General Plan, varied topography shapes the city's character and creates many public views throughout the community, including views of Monterey Bay and the City as a whole. Arroyos and steep coastal cliffs are identified as providing the greatest variation in the City's topography. Other features include pronounced hills—most notably the coastal terraces of the UCSC campus, Pogonip, the Carbonera area, and DeLaveaga Park; smaller hills—such as Beach Hill and Mission Hill—act as community landmarks; and shallow slopes toward Monterey Bay (City of Santa Cruz, June 2012). Ridgelines along Escalona Drive and Grandview Street mark significant changes of elevation.

Open space areas, including those that make up the City's Greenbelt, are significant contributors to Santa Cruz's natural setting and aesthetic quality. Pogonip, DeLaveaga Park, Arana Gulch, Neary Lagoon, Younger Lagoon, Antonelli Pond, Arroyo Seco Canyon, the Moore Creek Preserve, and the Jessie Street Marsh are identified in the General Plan as being important natural features that provide scenic amenities and contribute to the identity of surrounding residential neighborhoods (City of Santa Cruz, June 2012).

Visual Character of the Project Area

The project area is located within downtown Santa Cruz and is located to the west of the San Lorenzo River. The visual character of downtown is defined by existing development, as well as views of and along the San Lorenzo River at some elevated locations, such as bridges and from the Riverwalk. Downtown is characterized by a mix of primarily commercial buildings, some of which have upper floor office and residential units. The area supports a mix of both pre- and post- Loma Prieta earthquake constructed structures with a variety of architectural styles and building heights. Most of the buildings constructed after the earthquake are located north of Cathcart Street.

Rows of deciduous trees line both sides of Pacific Avenue and create a broad canopy along the street except during the winter months. The streetscape has a varied but uniformed appearance

with a mix of buildings. Front Street is characterized by a mix of older buildings south of Soquel Avenue and has few street trees than Pacific Avenue.

The San Lorenzo River is a prominent natural and visual feature in the City and is prominently visible from numerous locations in the downtown, including the Soquel Avenue and Broadway Bridges. From these vantage points views of the river are the predominant visual feature, which is framed by the Santa Cruz Mountains to the north and Beach Hill to the south. Existing development is mostly visible along the west side of the river levee.

The project area subject to changes in building height is located along Pacific Avenue and Front Street generally between Laurel Street on the south and Cathcart Street on the north, with the west side of Front Street up to Soquel Avenue. The area is characterized by a mix of commercial structures with some upper floor office uses. South of Cathcart, residential uses are limited primarily to the building at 1010 Pacific Avenue. Buildings along Front Street are a mix of mostly older buildings of varying architectural styles, sizes and heights. The older buildings along Front Street are generally one story and approximately 16-20 feet in height. Buildings are a mix of two and three stories along Pacific Avenue and generally one story in height along Front Street. There is less street tree landscaping along lower Front Street. Photos of representative views in the project area and downtown are shown on Figure 4.1-1.

The area along Pacific Avenue north of Cathcart is within the Additional Height Zone A as set forth in the existing DRP, as is the property at 1010 Pacific Avenue. Properties in this zone may be allowed additional building heights to 75 feet over the base height of 50 feet in specified conditions. Most of the buildings downtown are approximately 50 feet in height, which is the base building height required by DRP, except for areas along Cedar Street that have a 35-foot height limit. Some existing older buildings in the project area south of Cathcart are one or two stories and less than 50 feet in height. Rooftop mechanical equipment that often extends the base height limits as permitted by the DRP and City regulations. Buildings that exceed 50 feet in height are summarized on Table 4.1-1, some of which are shown on Figure 4.1-2. The tallest building in the project area is located at 1010 Pacific Avenue, which is 66.5 feet in height (76.5 feet to top of elevator structure).

Scenic Views

Within the City of Santa Cruz, prominent scenic views are primarily those that are oriented toward Monterey Bay and the Pacific Ocean or toward the Santa Cruz Mountains that frame the northern boundary of Santa Cruz (City of Santa Cruz, April 2012, DEIR volume). There are no designated scenic highways or roads within the City. The General Plan 2030 defines a scenic highway or scenic route as “a highway, road, drive, or street that, in addition to its transportation function, provides opportunities for the enjoyment of natural and man- made scenic resources and access or direct views to areas or scenes of exceptional beauty or historic or cultural interest.” None of the streets in the project area meet this definition, with the exception of a portion of Beach Street in the beach area.

TABLE 4.1-1: Buildings in Downtown That Exceed 50 Feet in Height

Building	Building Height in Feet
1547 Pacific - Approved	60 feet-5 stories
1375 Pacific, Rittenhouse Building	• 80 feet – Top of Mechanical Equipment/Elevator • ~ 50 feet – Top of Stepback Parapet
110 Cooper Street at Pacific, Cooper House	• 80 feet – Top of Penthouse Roof • ~ 50 feet – Top of Stepback Parapet
1344 Pacific, Hotel Palomar	92 feet
Front Street/Soquel Parking Garage	58.5 – Top of Tower Elevator
1200 Pacific, Redtree Building	64.5 – Building Height
1124 Pacific, Del Mar Theater	Estimated 60 feet with marquee
1101 Pacific, University Town Center	69.5 – Top of Roof
1010 Pacific	• 76.5 – Top of Elevator Penthouse • 66.5 – Top of 6th Floor • 50.0 – Top of Parapet
725 Front St.	~52 feet, plus elevator equipment room

The Santa Cruz downtown is an area characterized by primarily commercial, but also office and some upper floor residential uses. According to maps developed for the City's *General Plan 2030* and included in the General Plan EIR, the project site is not within a mapped scenic panoramic view (City of Santa Cruz, April 2012, DEIR volume-Figure 4.3-1). Urban views, including those of the downtown project area, are identified along the San Lorenzo levee (Ibid.). The existing LCP identifies Beach Hill as part of an urban skyline with "visually distinctive structures" (City of Santa Cruz, 1994-Map CD-3).

The prominent views along the river levee are those of the river corridor, adjacent riparian vegetation where it exists, and distant mountains to the north. To the south, views of some buildings on Beach Hill are available at some locations from the project area. In locations where views of the downtown area are available, the views are dominated by structural development with some landscaping and significant street tree canopy along Pacific Avenue, especially north of Cathcart.

Scenic Resources

The San Lorenzo River is east of a portion of the downtown study area and is a prominent natural and open space feature in the area. The DRP indicates that the river offers potential as an open space, habitat and a recreational amenity and provides opportunities for creation of linkages to the downtown. The DRP recommends creation of a riverfront connection at the terminus of Cathcart Street and the enhancement of that street as a strong pedestrian and visual linkage between Pacific Avenue and the river. Other pedestrian linkages to the river are suggested opposite from the Metro Center in the vicinity of Elm Street, and across from the existing Maple Street alley.

Landmarks are distinctive built and natural features that are highly visible or that help to define the identity of a particular place. In addition, to historical landmarks as discussed in Section 4.3, Cultural Resources, the General Plan 2030 defines "landmark" as a visually prominent or outstanding structure or natural feature that functions as a point of orientation or identification. The City has approximately 35 City-listed historic landmarks and approximately 600 listed historic structures, some of which may also be considered scenic resources depending on the visual prominence and the character of the building (City of Santa Cruz, April 2012, DEIR volume). In downtown, the Civic Center, Town Clock are identified as visual landmarks in the City's General Plan. The Boardwalk and Santa Cruz Wharf are identified as landmarks in the beach area, and none are identified along Ocean Street.

4.1.2 Impacts and Mitigation Measures

Thresholds of Significance

In accordance with the California Environmental Quality Act (CEQA); State CEQA Guidelines (including Appendix G); City of Santa Cruz plans, policies and/or guidelines; and agency and professional standards, a project impact would be considered significant if the project would:

1a Eliminate or substantially adversely affect, modify, or obstruct a visually prominent or significant public scenic vista, public viewing area, or public view corridor, including views of the ocean, to and along the shoreline, and panoramic background mountain views;

1b Eliminate or substantially adversely affect significant scenic resources along a scenic highway or designated scenic roadway, including, but not limited to, visually prominent trees, rock outcrops, or historic buildings, or visually prominent trees or historic-landmark buildings in other locations within the City;

1c Substantially degrade the existing visual character or quality of the surrounding area--i.e., be incompatible with the scale of the surrounding area or substantially detract from the aesthetic character of the neighborhood; or

1d Create a new source of substantial light or glare that would adversely affect daytime or nighttime views or activities in the area, or pose a nuisance. This includes ambient nighttime illumination levels that would be increased beyond the property line, or use of highly reflective building materials.

As previously indicated, Public Resources Code section 21099, effective January 2014, defines projects located within one-half mile of a major transit stop or facility as considered transit oriented development. Section 21099(d)(1) further indicates that: "Aesthetic and parking impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment." While, this provision does not apply to the proposed Plan amendments, it may be applicable to future development projects as the study area is within one-half mile of the Santa Cruz Metro Transit Center, a major transit facility. State law continues to allow local jurisdictions the ability

to consider design review as part of a discretionary permit project level evaluation, including consideration of aesthetic impacts pursuant to local design review ordinances or other discretionary powers provided by other laws or policies.

Analytical Method

The proposed project consists of amendments to the City's Downtown Recovery Plan, General Plan, Local Coastal Plan and Zoning Code regarding development in the downtown area, Central Business District and in areas designated RVC in the General Plan. The proposed project would not directly result in new development. However, the proposed Downtown Plan amendment would expand areas for potential additional building height that could accommodate intensified redevelopment of existing developed sites. The proposed General Plan amendment would increase FAR in areas within downtown that are designated as RVC in the General Plan. The proposed LCP and Zoning Code amendments would not result in changes that could indirectly lead to intensified development or air emissions. The Zoning Code amendments consist of minor text revisions to the Central Business District zone related to references to the Downtown Plan and outdoor extension areas. The revisions also add a new section on "parklets", which is intended to enhance the pedestrian ambiance of the CBD zone district by creating useable outdoor spaces.

The analysis reviews the potential increased heights and intensified development that could occur as a result of the proposed amendments based site visits to view the study area from different vantage points in the vicinity to characterize the visual setting and visibility of the project area. Six massing studies were prepared for the City Planning and Community Development Department by McCann Adams Studio to show existing and proposed allowable building heights superimposed on photos. Representative views were developed along the San Lorenzo River, Front Street and Pacific Avenue. The EIR evaluates the potential changes to the visual character of the downtown based on both existing conditions and the incremental difference between what is allowed under the existing Downtown Recovery Plan and what would potentially be allowed with the proposed amendments that form the project for CEQA purposes.

Impacts and Mitigation Measures

The following analysis assesses impacts on scenic views (1a), scenic resources (1b), the visual character of the site and surrounding area (1c), and light and glare (1d).

Impact 4.1-1: **Scenic Views.** Future development accommodated by the proposed plan amendments would not eliminate or substantially adversely affect, modify, or obstruct a visually prominent or significant public scenic vista. Therefore, project would result in a *less-than-significant impact* to scenic views (1a).

Future development in the area as a result of the proposed Downtown Plan amendment could be constructed at taller heights than currently permitted, but taller buildings would not obstruct or remove scenic views in the downtown. There are no mapped panoramic views across or from the downtown area as shown in the City's General Plan 2030 EIR (City of Santa Cruz, April 2012, DEIR volume-Figure 4.3-1). However, taller buildings adjacent to San Lorenzo River would be visible from locations along the levee Riverwalk and from Laurel Street and Soquel Avenue bridges. The buildings would be in locations of existing buildings and would not block views of the river. Effects of new development on the visual character of the area as a result of the proposed Plan amendments is discussed in Impact 4.1-3.

Development along the river would obscure a portion of distant mountain views to the north, which would also occur under the allowed existing heights without the proposed amendments. However, these areas are limited, and most distant mountain views would be maintained. Depending on the actual height and extent of future development, a portion of the distant view Beach Hill could be blocked. However, from the levee or Soquel Avenue bridge, the view of Beach Hill is primarily of the upper canopy and not the older Victorian structures that are identified as "distinctive" in the LCP. Furthermore, it is a minor part of the background view from vantage points in which the river is the primary component of views. Therefore, no significant impacts to scenic views would occur as a result of the proposed project.

The proposed General Plan amendment would revise General Plan text to increase the upper level of permissible floor area ratio (FAR) for the RVC land use designation in the downtown from 3.5 to 5.0. FAR is the gross floor area permitted on a site divided by the total net area of the site. For example, on a site with 10,000 net sq. ft. of land area, a FAR of 1.0 will allow a maximum of 10,000 gross square feet of building floor area to be built. On the same site, a FAR of 3.5 would allow 35,000 sq. ft. of floor area, which is the current limit in the downtown RVC designation. The proposed increase in FAR to 5.0 would allow 50,000 square feet of building, or essentially five floors on the entire site. Future development needs to comply with the Downtown Plan standards for the based height (currently 55 feet along Pacific Avenue and 35 feet along Front Street. If the Additional Height Zones are not amended it might be possible to achieve a larger building along Pacific Avenue, but the Front Street height would not allow a full 5.0 FAR. This increase in FAR without a height increase is similar to what other development has achieved through Planned Developments on some parcels larger than 20,000 square feet in the downtown. As a result, the proposed General Plan amendment would not result in substantially larger buildings based on the existing height limitations and the General Plan amendment would not result in any potential significant impacts to scenic views.

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

Impact 4.1-2: **Scenic Resources.** Future development accommodated by the proposed plan amendments would not result in elimination or a substantial adverse effect to scenic resources, and there would be *no impact* to a scenic resource (1b).

The project areas are not located adjacent to or in proximity to a local or state scenic highway or road. All of the project study area is currently developed and there ae no known scenic resources in the study area, except for the Beach Boardwalk, which is an identified visual landmark. The San Lorenzo River is an important natural feature in the area. While street trees exist in some portions of the study area, no individual tree is visually prominent, and landscaping would be provided with any future development. The proposed project would not affect adjacent natural features of the San Lorenzo River. Neither the proposed project nor subsequent development on the site would have an adverse effect on scenic resources as none are present on the project site. Therefore, the proposed Plan amendments would not indirectly lead to impacts on scenic resources.

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

Impact 4.1-3: **Visual Character of the Surrounding Area.** The proposed project would result in amendments to the DRP and General Plan that would allow increased heights of 20 to 35 feet over existing allowable standards, and future development could result in taller and more massive buildings. With implementation of required development standards for massing, required percentage variation of heights, and upper-level skyline variation, future buildings would be of similar height and scale as the other taller buildings in the downtown area, which already contains several multi-story buildings of varied height, and would not substantially degrade the visual character of the surrounding area (1c). This is considered a *less-than-significant impact*.

The proposed project would extend the zones for Additional Height Zones to three new areas:

- ❒ Additional Height Zone A (up to 75 feet in height) along the west side of Pacific Avenue between Cathcart and Laurel,
- ❒ Additional Height Zone A (up to 85 feet in height) on the west side Front Street and east side of Pacific between Laurel and Soquel, and
- ❒ Additional Height Zone B (up to 70 feet in height) along the east side of Front adjacent to the San Lorenzo River.

The proposed amendments also would increase the base building height from 50 to 55 feet for the Additional Height Zone A areas, but the base height east of Front Street would remain at 50 feet. Under the existing DRP, development along Pacific Avenue must conform to the base height requirements, except where Additional Heights may be applied. The proposed DRP amendment

would decrease the property size eligible for additional height from 20,000 to 15,000 square feet. The maximum height for mechanical equipment would increase from 55 to 65 feet with a reduction in the mechanical equipment setback from 25 to 15 feet.

The combined result of the proposed DRP amendments would be potential development of larger and more massive buildings. However, the proposed DRP amendment includes standards to limit the percentage of coverage of buildings with allowed additional height. For Additional Height Zone B, upper floor stepbacks/setbacks also would be required along the Front/Riverfront Corridor. The proposed amendments modify the Additional Height Zone A upper floor stepback requirements. A stepback is generally an upper floor setback from the edge of the building to help break up building mass. The proposed amendments would change the existing upper level 42 or 52 degree stepback standard to standard that would allow a certain percentage of a site to have heights over a specified limit. According to City staff, this "volumetric approach" is intended to ensure both vertical and horizontal building variation to avoid monolithic structures. In addition to the upper level requirements for Additional Height Zone B and the maximum height percentages in Additional Height Zone A, all of the study area includes a requirement for recessed breaks or horizontal variations to avoid long blank walls. Further description of upper floor coverage and stepbacks with the proposed amendments is provided below.

- For sites that are eligible for additional height in Additional Height Zone A, the footprint of portions of the building at or above 55 feet to a height of 75 feet may comprise up to 60% of the site area. For assembled sites greater than 50,000 square feet, buildings may achieve an 85-foot height for up to 20% of the total area in the area proposed for this additional height allowance. Figure 3-2 in Section 3 of this EIR provides a schematic that shows proposed distribution of building height on different size sites.

  Along Pacific Avenue, portions of buildings that exceed the maximum base height of 55 feet may occupy up to 55% of the length of the property line along the street or 200 feet, whichever is less. Any additional height above the base height must be set back from the building wall by at least 15 feet. An example of the potential distribution of height that is included in the proposed revised Downtown Plan is shown on Figure 3-3 in Section 3.

  Along Front Street, portions of buildings that exceed the maximum base height of 55 feet may occupy up to 60% of the length of the property line along the street or 180 feet, whichever is less with the proposed amendment. Any additional height above the base height must be set back from the building wall by at least 15 feet.

- For the Front Street/Riverfront Corridor, the proposed amendments require a minimum 10-foot stepback from Front Street for development above 50 feet in height and at least 50% of the building frontage along Front Street and Soquel Avenue must have a 10-foot stepback for development above 50 feet. Along the west side of the Riverwalk, a 10-foot setback from the exterior building face would be required for development above 50 feet. The proposed amendments allow up to 25% of the Riverwalk building frontage to encroach into the required 10-foot setpback area to provided massing variation. See Figure 3-4 in Section 3, which depicts heights and stepbacks along Front Street and adjacent to the San Lorenzo River. The proposed amendments also permit top floor

cantilevered portions of the building to encroach over the property line a maximum of 5 feet in order to provide architectural interest to the façade, which shall not exceed 25 percent of the total building frontage along the riverfront.

- ❒ Along Laurel Street, Cathcart Street and Soquel Avenue, portions of buildings that exceed the maximum base height of 55 feet may occupy up to 60% of the length of the property line or 150 feet, whichever is less. Any additional height above the base height must be set back from the building wall by at least 15 feet.
- ❒ Along the Maple Street extension to Front Street, the proposed amendment requires the building frontage to be stepped back by 10 feet above a height of 50 feet. In addition to the 'build to' line, the Maple Street building face shall incorporate at least one recessed break, open to the sky, no less than 25 feet wide and no less than 10 feet in depth from Maple Street .

Figures 4.1-3A through 4.1-3C provide diagrams superimposed on photographs that show outlines of potential building mass with additional heights as seen from the San Lorenzo River, Pacific Avenue and Front Street, respectively. The diagrams do not represent actual projects or architecture as no project applications have been submitted, but they are intended to conceptually represent the upper limits of structural massing that could occur over time. The building mass depicted may or may not occur. Furthermore, achieving the maximum heights illustrated in the diagram can only occur on properties that meet the minimum parcel sizes required by the DRP for additional height; the illustrations assume that parcels have been combined in order to be eligible for additional heights. It is noted that as part of the EIR scoping process, a request was made that story poles be erected along the river levee for the entire comment period for the public to assess the visual impact of the heights of new buildings. However, use of story poles is more typically done at a project level and in certain situations where photosimulations may not be appropriate. The project consists of a series of plan amendments, and there are no specific building locations or designs proposed at this time. To erect story poles on all of the private properties potentially affected by the DRP amendments is not feasible, and furthermore, it would be speculative to try to predict where the tallest portions of the buildings would potentially be located. The photosimulations, while not required under CEQA, provide a scaled, accurate depiction of potential building mass as seen from pedestrian viewpoints, sufficient to inform the public and City decision makers about the hypothetical appearance of full buildout under the DRP amendments.

The purpose of Figures 4.1-3A through 4.1-3C is to illustrate a reasonable worst-case scenario at buildout under the existing and proposal DRP development standards. As can be seen, potential future worst-case development could appear more massive than existing development in all locations compared to existing conditions. However, illustrating the worst-case scenario does not typically reflect actual development pattern over time. The diagrams also show existing height limits that have been in effect since 1991, but very few properties in the downtown are built to the existing additional height limits. Nonetheless, the illustrations show that the additional future buildings could appear more massive than existing development, although this change would be noticeable even with more buildout under the existing 50-foot height limits

generally in the areas south of Cathcart. There is no required presumption under CEQA that taller buildings are necessarily a substantial adverse change in the existing visual environment. Such determinations are made on a case-by-case basis at a lead agency's discretion and in consideration of the relevant environmental setting or context, which here, is a nearly fully developed urban area. Future proposed buildings with additional height would not be considered to be substantially out of scale with other existing buildings in the downtown area. There are about a dozen existing buildings in downtown that exceed 55 feet in height.

Additionally, under the existing Planned Development regulations, a 20% increase in height could be allowed for properties larger than 20,000 square feet with specified findings. Thus, some buildings could reach a height of 60 feet under existing regulations without the proposed project amendments. In addition to the existing Planned Development process, which is an existing procedure that could allow for heights to exceed the underlying base height, the State Density Bonus law allows for a full story or floor to be provided as a possible concession, in exchange for providing a 100 percent affordable housing project. Granting such a concession as mandated under state law could also result in buildings about 10 feet taller than the underlying development standards.

Although, it is not known how future projects will be developed, it is conservatively concluded that the proposed expansion of Additional Height Zones could lead to taller and more massive development. According to the DRP, the intent of the existing additional height standards "is not to create a five-story downtown, but rather to preserve the overall character and scale of the historic core while allowing some intensification and increased height on larger parcels". There is no evidence from the aesthetic analysis that leads to the conclusion that the proposed development standards would promote the development of a uniformly five-story downtown, any more than the existing development standards (particularly along the east of Front Street) have led to the development of a continuous three-story, or 50-foot downtown. Based on the historic development pattern in the City, a varied-height downtown is the most likely result of the DRP amendments.

Both existing and proposed DRP development standards include design guidelines to break up overall building mass, including limits on upper floor coverage where additional heights are achieved and required upper floor stepbacks in some areas. As a result, building mass would be broken up and there would not be full coverage of the additional upper floors where additional heights may be allowed. The proposed Plan amendments also require building recesses, and the existing and revised building and storefront design standards and guidelines in the DRP serve to break up building mass. Other design guidelines call for variation in rooflines along Pacific Avenue. Although maximum height of mechanical equipment would increase with the proposed amendments, the proposed amendments require that rooftop equipment be completely concealed from view and integrated within the architectural design of the building. The use of landscaped roof terraces and gardens is also recommended. In the Front/Riverfront Corridor, the proposed amendments promote skyline variation, the top floor shall not exceed 60% of the floor area below or 60% of the building length as measured along Front Street or the Riverwalk. An

exception may be considered where the project includes a publicly accessible passageway to the Riverwalk. In this area, the DRP requires creative and integrated roof designs.





Thus, existing and proposed design guidelines include design standards that will result in buildings of variable height, massing and architectural treatments, and the extent of allowable additional height is restricted to larger properties, i.e., 15,000 square feet. The design guidelines address many architectural features, including building facades and windows, as well as building materials, colors and lighting. For example, building facades are required to provide visual variation at specified intervals with use of architectural elements, building materials or building planes in order to avoid large expanses of horizontal or vertical wall surface. Furthermore, continued landscaping with street trees along Pacific and Front Street, as well as along on the inland side of the Riverwalk, will further screen building mass in all areas. The dense canopy along Pacific often screens upper floors from a distance softens views of larger buildings and maintains a pedestrian-level scale, as shown on the photos to the right. With implementation of requirements to limit upper floor heights, provision of stepbacks, implementation of design treatments to minimize building mass, and compliance with the Downtown Plan development standards and design guidelines, potential intensified development resulting from additional allowed heights would not significantly alter the visual character of the study area from what might be developed under the allowable standards or taller buildings that have been constructed in the downtown area.

This conclusion also is consistent with state law that will be applicable to future mixed-use projects proposed in the downtown area. As previously indicated, CEQA provides that aesthetic impacts of a residential, mixed-use residential, or employment center project on an infill site within a transit priority area shall not be considered significant impacts on the environment, although design review would still be required pursuant to local City requirements and regulations.

In allowing additional building heights, both the existing DRP and proposed amendments require the City to make findings including that: a) the additional height will contribute to an improved social and economic environment by including new housing; and b) the form of the development promotes the appearance of a grouping of buildings rather than large, monolithic building masses. Furthermore, both the existing Plan and proposed amendment require that development projects provide a visual analysis for the Additional Height Zone A. The

requirement, including three-dimensional perspectives is added as part of the proposed amendment for Additional Height Zone B to determine the visual impact of the views from key locations, including views from Front Street and from the Soquel and Laurel bridges and the levee opposite the project site from a pedestrian level view. Architectural and design features of future proposed projects, as well as compliance with the Downtown Plan development and design standards and guidelines will be further reviewed by City staff as part of the Design Permit process.

The proposed General Plan amendment also would revise General Plan text to increase the upper level of permissible floor area ratio (FAR) for the RVC land use designation in the downtown area from 3.5 to 5.0. As discussed in Impact 4.1-1, future development would need to comply with existing height limits established in Downtown Plan. It is possible that some future development could result in slightly more massive buildings along Pacific Avenue under the existing Downtown Recovery Plan standards than would otherwise be allowed under the existing FAR designation, however, buildings would not be taller or substantially degrade the visual character of these areas.

Mitigation Measures

No mitigation measures are required as the proposed incremental increase in height regulations of the project would not lead to a substantial degradation of the visual character of the surrounding area.

Impact 4.1-4: **Introduction of Light and Glare.** The proposed project would result in amendments to the DRP and General Plan that would allow increased heights and building coverage, and future development would include exterior and interior lighting typical of residential developments, but would not result in introduction of a major new source of light or glare (1d). Thus, this is considered a *less-than-significant impact*.

Future development accommodated by the proposed project would not result in introduction of a major new source of light or glare, although there will be introduction of windows and exterior building lighting typically associated with commercial development. This type of lighting would be oriented so as to not create offsite light. Windows along Pacific are required to be recessed. Furthermore, the use of reflective or tinted glass is prohibited on ground floors.

Exterior building lighting will be further reviewed as part of the Design Permit review for future site-specific developments, and the project will be conditioned to install lighting such that it is directed downward and does not create light onto adjacent properties. The DRP requires buildings to low-level lighting in the building façade. Therefore, the project would not result in a significant impact related to creation of a new source of substantial light or glare.

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

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Looking North on Pacific Avenue from Front Street



Looking South from Water Street



Looking North From Laurel Street Bridge



Looking South on Pacific - Hotel Palomar

DUDEK

FIGURE 4.1-1

Photos of Downtown and Project Area

City of Santa Cruz Downtown Plan Amendments EIR

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1200 Pacific - 64.5 feet tall



1375 Pacific Avenue - 50 feet tall



1010 Pacific - 66.5-76.5 feet tall



1101 Pacific ˜ 69.5 feet tall

DUDEK

FIGURE 4.1-2

Downtown Taller Buildings

City of Santa Cruz Downtown Plan Amendments EIR

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Proposed Additional Height: 70'
- Top floor is limited to 60% of the floor below (area and length) or 60% of project site when the project includes a publicly accessible connection to the Riverwalk.
- 10 ft. minimum stepback above 50 ft. for at least 75% of the building frontage along the Riverwalk

Base Height: 50'

VIEW FROM SOQUEL BRIDGE LOOKING SOUTH ALONG THE RIVERWALK
Draft: March 27, 2017



VIEW FROM LAUREL BRIDGE LOOKING NORTH ALONG THE RIVERWALK
Draft: March 27 2017

NOTE: This line diagram visual simulation does not represent actual projects or architecture. The diagram is intended to conceptually represent the upper limits of development mass that could occur over a period of decades. The mass depicted in this diagram may or may not ever be built. For the purposes of evaluating potential environmental impacts, the diagrams are intentionally exaggerated to illustrate a reasonable worst-case scenario at build-out under the existing and proposed regulations. Illustrating the worst-case scenario does not typically reflect actual development pattern over time. The diagram also shows the existing height limits and setback requirements, which have been in effect since 1991. Very few of the existing properties in the downtown are built to these existing limits. Achieving the maximum heights illustrated in this diagram can only occur on properties that meet the minimum parcel sizes required by the Downtown Plan. This illustration assumes that parcels have been combined in order to meet the standards necessary to achieve the maximum build out.

DUDEK

SOURCE: McCann Adams Studio

FIGURE 4.1-3A
Visual Simulation of Proposed Project Along Riverwalk

City of Santa Cruz Downtown Plan Amendments EIR

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VIEW FROM LAUREL STREET LOOKING NORTH ALONG FRONT STREET

Draft: March 27, 2017



VIEW FROM SOQUEL STREET LOOKING SOUTH ALONG FRONT STREET

Draft: March 27, 2017

NOTE: This line diagram visual simulation does not represent actual projects or architecture. The diagram is intended to conceptually represent the upper limits of development mass that could occur over a period of decades. The mass depicted in this diagram may or may not ever be built. For the purposes of evaluating potential environmental impacts, the diagrams are intentionally exaggerated to illustrate a reasonable worst-case scenario at build-out under the existing and proposed regulations. Illustrating the worst-case scenario does not typically reflect actual development pattern over time. The diagram also shows the existing height limits and setback requirements, which have been in effect since 1991. Very few of the existing properties in the downtown are built to these existing limits. Achieving the maximum heights illustrated in this diagram can only occur on properties that meet the minimum parcel sizes required by the Downtown Plan. This illustration assumes that parcels have been combined in order to meet the standards necessary to achieve the maximum build out.

DUDEK

SOURCE: McCann Adams Studio

FIGURE 4.1-3B

Visual Simulation of Proposed Project Along Pacific Avenue

City of Santa Cruz Downtown Plan Amendments EIR

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VIEW FROM THE NIAC BUILDING LOOKING NORTH ALONG FRONT STREET

Draft: March 27, 2017



VIEW NEAR LAUREL STREET LOOKING NORTH ALONG PACIFIC AVENUE

Draft: March 27, 2017

NOTE: This line diagram visual simulation does not represent actual projects or architecture. The diagram is intended to conceptually represent the upper limits of development mass that could occur over a period of decades. The mass depicted in this diagram may or may not ever be built. For the purposes of evaluating potential environmental impacts, the diagrams are intentionally exaggerated to illustrate a reasonable worst-case scenario at build-out under the existing and proposed regulations. Illustrating the worst-case scenario does not typically reflect actual development pattern over time. The diagram also shows the existing height limits and setback requirements, which have been in effect since 1991. Very few of the existing properties in the downtown are built to these existing limits. Achieving the maximum heights illustrated in this diagram can only occur on properties that meet the minimum parcel sizes required by the Downtown Plan. This illustration assumes that parcels have been combined in order to meet the standards necessary to achieve the maximum build out.

DUDEK

SOURCE: McCann Adams Studio

FIGURE 4.1-3C

Visual Simulation of Proposed Project Along Front Street

City of Santa Cruz Downtown Plan Amendments EIR

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4.2 AIR QUALITY AND GREENHOUSE GAS EMISSIONS

This section analyzes impacts of the proposed project related to project air emissions, including greenhouse gas (GHG) emissions, based on air quality modeling conducted as part of the preparation of this EIR. The results of the air modeling are summarized in this section, and are included in Appendix E. This section also draws from the City of Santa Cruz *General Plan 2030* EIR (SCH#2009032007), which was certified on June 26, 2012, regarding background information on climate change. The General Plan EIR is incorporated by reference in accordance with section 15150 of the State CEQA Guidelines. Relevant discussions are summarized below under the "Climate Change" subsection. The General Plan EIR is available for review at the City of Santa Cruz Planning and Community Development Department (809 Center Street, Room 107, and Santa Cruz, California) during business hours: Monday through Thursday, 8 AM to 12 PM and 1 PM to 5 PM. The General Plan EIR is also available online on the City's website at: http://www.cityofsantacruz.com/government/city-departments/planning-and-community-development/general-plan.

Public and agency comments related to air quality and emissions were received during the public scoping period in response to the Notice of Preparation (NOP). Issues raised in these comments include:

- Potential creation of a "urban heat island" due to an increase in building mass.

To the extent that issues identified in public comments involve potentially significant effects on the environment according to the California Environmental Quality Act (CEQA) and/or are raised by responsible agencies, they are identified and addressed within this EIR. Public comments received during the public scoping period are included in Appendix B.

4.2.1 Environmental Setting

Regulatory Setting

Air quality within the Monterey Bay region is addressed through the efforts of various federal, state, regional, and local government agencies. These agencies, as discussed below, work jointly, as well as individually, to improve air quality through legislation, regulations, planning, policy making, education, and a variety of programs.

Criteria Air Pollutants

Criteria air pollutants are defined as pollutants for which the United States Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established ambient air quality standards, or criteria, for outdoor concentrations to protect public health. The standards identify levels of "criteria pollutants" that are regarded as the maximum levels of ambient (background) air pollutants considered to have an adequate margin of safety necessary

to protect the public health and welfare. The standards are designed to protect the most sensitive people from illness or discomfort. Criteria pollutants include ozone (O_3), nitrogen dioxide (NO_2), carbon monoxide (CO), sulfur dioxide (SO_2), coarse particulate matter (PM_{10}), fine particulate matter ($PM_{2.5}$), and lead. In California, sulfates (SO_4), hydrogen sulfide (H_2S), vinyl chloride, and visibility-reducing particles are also regulated as criteria air pollutants. An area is designated as "in attainment" when it is in compliance with the federal and/or state standards as further discussed below.

Federal. The federal Clean Air Act (FCAA), passed in 1970 and last amended in 1990, forms the basis for the national air pollution control effort. The EPA is responsible for implementing most aspects of the FCAA, including setting National Ambient Air Quality Standards (NAAQS) for criteria air pollutants; setting hazardous air pollutant standards; approving state attainment plans; setting motor vehicle emissions standards; issuing stationary source emissions standards and permits; and establishing acid rain control measures, stratospheric O_3 protection measures, and enforcement provisions.

The NAAQS describe acceptable air quality conditions designed to protect the health and welfare of citizens of the nation. The NAAQS (other than for O_3, NO_2, SO_2, PM_{10}, $PM_{2.5}$, and those based on annual averages or arithmetic mean) are not to be exceeded more than once per year. NAAQS for O_3, NO_2, SO_2, PM_{10}, and $PM_{2.5}$ are based on statistical calculations over 1- to 3-year periods, depending on the pollutant. The FCAA requires the EPA to reassess the NAAQS at least every five years to determine whether adopted standards are adequate to protect public health based on current scientific evidence. States with areas that exceed the NAAQS must prepare a state implementation plan that demonstrates how those areas will attain the standards within mandated time frames.

State. The FCAA delegates the regulation of air pollution control and the enforcement of the NAAQS to the states. The CARB, a department of the California Environmental Protection Agency (CalEPA), oversees air quality planning and control throughout California. Its responsibility lies with ensuring compliance with the California Clean Air Act (CCAA) and its amendments, as well as responding to the FCAA requirements and regulating emissions from motor vehicles sold in California. It also sets fuel specifications to further reduce vehicular emissions. CARB establishes the California Ambient Air Quality Standards (CAAQs), pursuant to the CCAA, which are generally more restrictive than the NAAQS. These standards apply to the same criteria pollutants as the FCAA and also include SO_4, H_2S, visibility reducing particles, and vinyl chloride.

The CAAQs describe adverse conditions; pollution levels must be below these standards before an air basin can attain the standard. Air quality is considered "in attainment" if pollutant levels are continuously below the CAAQs and violate the standards no more than once each year. The CAAQs for O_3, CO, SO_2 (1-hour and 24-hour), NO_2, PM_{10}, $PM_{2.5}$, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded.

Regional. Regulatory oversight for air quality in the North Central Coast Air Basin (NCCAB) in which the City of Santa Cruz is located, rests at the regional level with the Monterey Bay Unified Air Pollution Control District (MBUAPCD),[1] the CARB at the state level, and the EPA Region IX office at the federal level. The MBUAPCD is one of 35 air districts established to protect air quality in California. The NCCAB is comprised of Santa Cruz, Monterey, and San Benito Counties. The MBUAPCD has primary responsibility for local air quality by controlling air pollution from stationary sources of air pollution. The District has adopted a number of rules affecting both stationary and area-wide sources of emissions for the purpose of achieving the state and federal ambient air quality standard (AAQS) for O_3.

The CCAA requires each nonattainment district in the state to adopt a plan showing how the CAAQS for O_3 would be met with subsequent updates every three years. The MBUAPCD adopted its first Air Quality Management Plan (AQMP) in 1991 and has subsequently updated the AQMP seven times.

Local. The City of Santa Cruz addresses odors and pollutants in its Municipal Code. Section 24.14.264 prohibits emission of odorous gases or matter in readily detectable quantities. Section 24.14.272 prohibits emissions from any source that exceed permissible amounts or limits established by the MBUAPCD.

Toxic Air Pollutants

A substance is considered toxic if it has the potential to cause adverse health effects in humans, including increasing the risk of cancer upon exposure or acute and/or chronic non-cancer health effects. A toxic substance released into the air is considered a toxic air contaminant (TAC). TACs are identified by federal and state agencies based on a review of available scientific evidence. Examples include certain aromatic and chlorinated hydrocarbons, certain metals, and asbestos. TACs are generated by a number of sources, including stationary sources such as dry cleaners, gas stations, combustion sources, and laboratories; mobile sources such as automobiles; and area sources such as landfills. Adverse health effects associated with exposure to TACs may include carcinogenic (i.e., cancer-causing) and noncarcinogenic effects. Noncarcinogenic effects typically affect one or more target organ systems and may be experienced from short-term (acute) or long-term (chronic) exposure to a given TAC.

Federal. At the federal level, TACs are identified as Hazardous Air Pollutants (HAPs). The 1977 FCAA amendments required the EPA to identify National Emission Standards for Hazardous Air Pollutants (NESHAPS) to protect public health and welfare. HAPs include certain volatile organic chemicals, pesticides, herbicides, and radionuclides that present a tangible hazard based on scientific studies of exposure to humans and other mammals. Under the 1990 FCAA Amendments, which expanded the control program for HAPs, 189 substances and chemical families were identified as HAPs.

[1] The District has changed its name to the Monterey Bay Air Resources District (MBARD). In this report, references to agency publications or guidance that predate the official name change use MBUAPCD.

State. The state Air Toxics Program was established in 1983. The California TAC list identifies more than 700 pollutants, of which carcinogenic and non-carcinogenic toxicity criteria have been established for a subset of these pollutants pursuant to the California Health and Safety Code. The state list includes the federal HAPs. The Air Toxics "Hot Spots" Information and Assessment Act of 1987 (AB 2588) seeks to identify and evaluate risk from air toxics sources; however, AB 2588 does not regulate air toxics emissions. TAC emissions from individual facilities are quantified and prioritized. "High-priority" facilities are required to perform a health risk assessment, and if specific thresholds are exceeded, are required to communicate the results to the public in the form of notices and public meetings.

Diesel particulate matter (DPM) was identified as a TAC by the state of California in 1998. The CARB developed a comprehensive strategy to control DPM emissions. In 2000, CARB approved a Diesel Risk Reduction Plan to reduce diesel emissions from new and existing diesel-fueled vehicles and engines. The regulation is anticipated to result in an 80 percent decrease in statewide diesel health risk by 2020 compared with to the diesel risk in 2000 (CARB 2000). Additional regulations apply to new trucks and diesel fuel, including the On-Road Heavy Duty Diesel Vehicle (In-Use) Regulation, the On-Road Heavy Duty (New) Vehicle Program, and the In Use Off-Road Diesel Vehicle Regulation, and the New Off-Road Compression-Ignition (Diesel) Engines and Equipment program. All of these regulations and programs have timetables by which manufacturers must comply and existing operators must upgrade their diesel powered equipment.

Regional. Air quality control agencies, including the MBUAPCD, must incorporate air toxics control measures into their regulatory programs or adopt equally stringent control measures as rules within six months of adoption by CARB. The MBUAPD also regulates TACs from new or modified sources under Rule 1000, a Board-approved protocol that applies to any source which requires a permit to construct or operate pursuant to MBUAPCD regulations and has the potential to emit carcinogenic or noncarcinogenic TACs. The MBUAPCD's Rule 1000 also requires sources of carcinogenic TACs to install best control technology and reduce cancer risk to less than one incident per 100,000 population. Sources of noncarcinogenic TACs must apply reasonable control technology. The MBUAPCD also implements Rule 1003, Air Toxic Emissions Inventory and Risk Assessments, which establishes and implements the Air Toxics Hot Spots Act. Rule 1003 also requires that any increased cancer risk resulting from an existing facility's emissions is less than one incident per 100,000 population (Monterey Bay Unified Air Pollution Control District, February 2008).

Study Area

Regional Setting and Climate

The project study area includes a portion of the downtown area in the City of Santa Cruz. The project study area is located within the NCCAB, which is just south of the San Francisco Bay Area

Air Basin, and covers an area of 5,159 square miles. The NCCAB consists of the counties of Santa Cruz, San Benito, and Monterey. Topography and meteorology heavily influence air quality. In the project vicinity, the northwest sector of the basin is dominated by the Santa Cruz Mountains, which exert a strong influence on atmospheric circulation, which results in generally good air quality. Small inland valleys such as Scotts Valley with low mountains on two sides have poorer circulation than at Santa Cruz on the coastal plain (Monterey Bay Air Pollution Control District, February 2008).

The semi-permanent high pressure cell in the eastern Pacific is the basic controlling factor in the climate of the NCCAB. In the summer, the high pressure cell is dominant and causes persistent west and northwest winds over the entire California coast. Air descends in the Pacific High, forming a stable temperature inversion of hot air over a cool coastal layer of air. The onshore air currents pass over cool ocean waters to bring fog and relatively cool air into the coastal valleys. The warmer air aloft acts as a lid to inhibit vertical air movement (Monterey Bay Unified Air Pollution Control District, February2008).

Sensitive Receptors

The MBUAPCD's *CEQA Guidelines* (Guidelines) defines a sensitive receptor generically as any residence including private homes, condominiums, apartments, and living quarters; educational facilities such as preschools and kindergarten through grade twelve (K-12) schools; daycare centers; and health care facilities such as hospitals or retirement and nursing homes. Sensitive receptors include long-term care hospitals, hospices, prisons, and dormitories or similar live-in housing. The MBUAPCD's Guidelines indicate that identification of sensitive receptors in the vicinity of a project site should be determined as part of the CEQA review with an analysis of whether a project would expose sensitive receptors to significant amounts of pollution. The sensitive receptors closest to the project study area are residential uses located along Pacific Avenue within the study area.

Effects of Air Pollutants

Ozone, the primary constituent of smog, is not directly emitted but is formed in the atmosphere over several hours from combinations of various precursors in the presence of sunlight. Nitrogen oxides (NO_x) and reactive organic gases (ROGs, also termed volatile organic compounds or VOCs) are considered to be the primary compounds, or precursors, contributing to the formation of ozone. Ozone is viewed as both a secondary pollutant and a regional pollutant. The primary sources of ROG within the planning area are on- and off-road motor vehicles, cleaning and surface coatings, solvent evaporation, landfills, petroleum production and marketing, and prescribed burning. The primary sources of NOx are on- and off-road motor vehicles, stationary source fuel combustion, and industrial processes (Monterey Bay Unified Air Pollution Control District, August 2008). Short-term exposure to O_3 results in injury and damage to the lung, decreases in pulmonary function, and impairment of immune mechanisms (Ibid.).

Coarse particulates refer to particulate matter less than 10 microns in diameter (PM_{10}). In 1997, EPA adopted a fine particulate matter standard of 2.5 microns or less in diameter ($PM_{2.5}$), and CARB adopted an annual $PM_{2.5}$ standard in 2002. PM_{10} and $PM_{2.5}$ are respirable particulate matter that are classified as primary or secondary depending on their origin. Primary particles are unchanged after being directly emitted (e.g., road dust) and are the most commonly analyzed and modeled form of PM_{10}. Because it is emitted directly and has limited dispersion characteristics, this type of PM_{10} is considered a localized pollutant. In addition, secondary PM_{10} can be formed in the atmosphere through atmospheric chemical and photochemical reactions.

PM_{10} and $PM_{2.5}$ are respirable particulate matter and because of their small size, they can be inhaled deep into the lungs and are therefore a health concern. Key health effects categories associated with PM include: premature mortality; aggravation of respiratory and cardiovascular disease; changes in lung function and increased respiratory symptoms; and altered respiratory defense mechanisms (Monterey Bay Unified Air Pollution Control District, February 2008).

Carbon monoxide (CO) is an odorless, colorless gas that is emitted by mobile and stationary sources as a result of incomplete combustion of hydrocarbons or other carbon-based fuels. Because it is directly emitted from combustion engines, CO can have adverse localized impacts, primarily in areas of heavy traffic congestion. Because it is emitted directly and has limited dispersion characteristics, CO is considered a localized pollutant (Monterey Bay Unified Air Pollution Control District, February 2008).

When CO combines with hemoglobin in the blood, the oxygen-carrying capacity of the blood is reduced and the release of oxygen is inhibited or slowed. This condition puts the following at risk: patients with angina, persons with other cardiovascular diseases, chronic obstructive lung disease, or asthma; persons with anemia, and fetuses. At higher levels, CO also affects the central nervous system. Symptoms of exposure may include headaches, dizziness, sleepiness, nausea, vomiting, confusion, and disorientation (Monterey Bay Unified Air Pollution Control District, February 2008). At high concentrations, CO can reduce the oxygen-carrying capacity of the blood and cause unconsciousness and death.

Existing Air Quality Conditions

Ambient Air Quality Standards

As indicated above, AAQS are set to establish levels of air quality that must be maintained to protect the public from the adverse effects of air pollution. State standards are established to protect public health, including the most sensitive members of the population. National standards include a primary standard to protect public health and a secondary standard to protect the public welfare including property, vegetation, and visibility. However, the numerical values for both standards are the same (Monterey Bay Unified Air Pollution Control District, August 2008). As indicated above, the federal and state governments have established AAQS for

six criteria pollutants: ozone, CO, NO_2, SO_2, PM_{10}, PM_{25}, and lead. State standards also include SO_4, H_2S, visibility reducing particles, and vinyl chloride.

Local Ambient Air Quality and Attainment Status

Ambient air quality is monitored at nine stations within the NCCAB. The network includes seven stations operated by the MBUAPCD and one station operated by the National Park Service at the Pinnacles National Monument. The monitoring stations operated by the MBUAPCD are part of the State and Local Air Monitoring Systems (SLAMS) network, and are located in Santa Cruz, Scotts Valley, Felton, Hollister, King City, Salinas, and Carmel Valley. The MBUAPCD also carries out wood smoke monitoring as needed, including seasonal monitoring of wood stove use in areas like the San Lorenzo Valley area in Santa Cruz County, large controlled burns such as those conducted at Fort Ord and some of those conducted for agricultural management, and for catastrophic events such as large structural fires and wildfires.

Designations in relation to state standards are made by the CARB, while designations in relation to national standards are made by the EPA. State designations are updated annually, while the national designations are updated either when the standards change or when an area requests re-designation due to changes in air quality. Designations are made according to air basin, and in some cases designations are made at the county level (Monterey Unified Air Pollution Control District, August 2008). Designations are made for each criteria pollutant according to the categories listed below. Nonattainment designations are of most concern because they indicate that unhealthy levels of the pollutant exist in the area, which typically triggers a need to develop a plan to achieve the applicable standards (Ibid.).

- **Attainment** – Air quality in the area meets the standard.
- **Nonattainment Transitional** – Air quality is approaching the standard (State only).
- **Nonattainment** – Air quality in the area fails to meet the applicable standard.
- **Unclassified** – Insufficient data to designate area, or designations have yet to be made.

Table 4.2-1 summarizes the attainment status for criteria pollutants in the NCCAB. In summary, the NCCAB is designated as a nonattainment area for state O_3 standards and PM_{10} standards. The NCCAB is designated as unclassified or attainment for all other state and federal standards (California Air Resources Board, 2016; U.S. EPA, 2017).

CO emissions are generated by motor vehicles from traffic. Congested intersections with a large volume of traffic have the greatest potential to cause high-localized concentrations of carbon monoxide. Air pollutant monitoring data indicate that CO levels have been at healthy levels (i.e., below state and federal standards) for years, reflecting improvements in tailpipe emissions controls. As a result, the region has been designated as attainment/unclassified for the standard. Ambient air quality monitoring at a station in Santa Cruz measured CO concentrations and found that highest measured level over any eight-hour averaging period during the last three years is

less than 1.0 parts per million (ppm), compared to the ambient air quality standard of 9.0 ppm (City of Santa Cruz, April 2012, DEIR volume).

TABLE 4.2-1: North Central Coast Air Basin Attainment Classification

Pollutant	Averaging Time	Designation/Classification
Federal Standards		
O_3	8 hours	Unclassifiable/Attainment
NO_2	1 hour, annual arithmetic mean	Unclassifiable/Attainment
CO	1 hour; 8 hours	Unclassifiable/Attainment
SO_2	24 hours; annual arithmetic mean	Unclassifiable/Attainment
PM_{10}	24 hours	Unclassifiable/Attainment
$PM_{2.5}$	24 hours; annual arithmetic mean	Unclassifiable/Attainment
Lead	Quarter; 3-month average	Unclassifiable/Attainment
State Standards		
O_3	1 hour; 8 hours	Nonattainment (Transitional)[a]
NO_2	1 hour; annual arithmetic mean	Attainment
CO	1 hour; 8 hours	Monterey Co. – Attainment
		San Benito Co. – Unclassified
		Santa Cruz Co. – Unclassified
SO_2	1 hour; 24 hours	Attainment
PM_{10}	24 hours; annual arithmetic mean	Nonattainment
$PM_{2.5}$	Annual arithmetic mean	Attainment
Lead[b]	30-day average	Attainment
SO_4	24 hours	Attainment
H_2S	1 hour	Unclassified
Vinyl chloride[b]	24 hours	No designation
Visibility-reducing particles	8 hours (10:00 a.m.–6:00 p.m.)	Unclassified

Sources: CARB 2016; EPA 2017.
Notes: CO = carbon monoxide; H_2S = hydrogen sulfide; NO_2 = nitrogen dioxide; O_3 = ozone; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter; SO_2 = sulfur dioxide; SO_4 = sulfates
[a] Nonattainment-transitional is a subcategory of the nonattainment designation category for state standards that indicates that the area is nearing attainment.
[b] CARB has identified lead and vinyl chloride as TACs with no threshold level of exposure for adverse health effects determined.

Odors

Odors represent emissions of one or more pollutants that are a nuisance to healthy persons and may trigger asthma episodes in people with sensitive airways. Pollutants associated with objectionable odors include sulfur compounds and methane. Typical sources of odors include landfills, rendering plants, chemical plants, agricultural uses, wastewater treatment plants, and

refineries. Odors are a complex problem that can be caused by minute quantities of substances (Monterey Bay Unified Air Pollution Control District, February 2008). Because people have mixed reactions to odors, the nuisance level of an odor varies. There are no known sources of objectionable odors in the vicinity of the proposed project.

Air Basin Plans

Air Quality Management Plan

The 1991 AQMP for the Monterey Bay Area was the first plan prepared in response to the CCAA of 1988 that established specific planning requirements to meet the O_3 standard. The Act requires that the AQMP be updated every three years. The most recent update was adopted in March 2017, and is an update to the elements included in the 2012 AQMP for the years 2012-2015. The primary elements updated from the 2012 AQMP include the air quality trends analysis, emission inventory, and mobile source programs.

The NCCAB is a nonattainment area for the CAAQS for both O_3 and PM_{10}. The AQMP addresses only attainment of the O_3 CAAQS. Attainment of the PM_{10} CAAQS is addressed in the MBUAPCD's Particulate Plan, which was adopted in December 2005 and is summarized further below. Maintenance of the 8-hour NAAQS for $O_3$is addressed in the District's "Federal Maintenance Plan for the Monterey Bay Region," which was adopted in March 2007 and also is summarized below.

A review of the air monitoring data for 2013-2015 indicates that there were fewer exceedance days compared to previous periods (MBARD, March 2017). The long-term trend shows progress has been made toward achieving O_3 standards. The number of exceedance days has continued to decline during the past 10 years despite population increases (Ibid.).

The MBUAPCD's 2017 AQMP identifies a continued trend of declining O_3 emissions in the NCCAB primarily related to lower vehicle miles traveled. Therefore, the MBUAPCD determined progress was continuing to be made toward attaining the 8-hour O_3 standard during the three-year period reviewed (Monterey Bay Air Resources District, March 2017).

Federal Maintenance Plan

The "Federal Maintenance Plan" (May 2007) presents the strategy for maintaining the NAAQS for O_3 in the NCCAB. It is an update to the 1994 Federal Maintenance Plan, which was prepared for maintaining the 1-hour NAAQS for O_3 that since has been revoked and is superseded by the current 8-hour O_3 standard. Effective June 15, 2004, the U.S. EPA designated the NCCAB as an attainment area for the 8-hour NAAQS for O_3. The plan includes an emission inventory for the years 1990 to 2030 for VOC and NO_X, the two primary O_3 precursor gases, as explained above. A contingency plan is included to ensure that any future violation of the standard is promptly corrected (Monterey Bay Unified Air Pollution Control District, May 2007).

Particulate Matter Plan

The purpose of the "Particulate Matter Plan" (December 2005) is to fulfill the requirements of Senate Bill 655, which was approved by the California Legislature in 2003 with the objective of reducing public exposure to particulate matter. The legislation requires CARB, in conjunction with local air pollution control districts, to adopt a list of the most readily available, feasible, and cost-effective control measures that could be implemented by air pollution control districts to reduce ambient levels of particulate matter in their air basins (Monterey Bay Unified Air Pollution Control District, December 2005). The Plan's proposed activities include control measures for fugitive dust, public education, administrative functions, and continued enhancements to the MBUAPCD's Smoke Management and emission reduction incentive programs.

Climate Change

A full discussion of global climate change is presented in the *General Plan 2030* EIR (DEIR pages 4.12-1 to 4.12-20 and FEIR pages 3-26 to 3-27), which is incorporated by reference; key elements of the discussion are summarized below and have been updated where relevant. Climate change refers to any significant change in measures of climate, such as average temperature, precipitation, or wind patterns over a period of time. Climate change may result from natural factors, natural processes, and human activities that change the composition of the atmosphere and alter the surface and features of the land. Significant changes in global climate patterns recently have been associated with global warming, an average increase in the temperature of the atmosphere near the Earth's surface, attributed to accumulation of greenhouse gas (GHG) emissions in the atmosphere. GHGs trap heat in the atmosphere, which in turn heats the surface of the Earth. Some GHGs occur naturally and are emitted to the atmosphere through natural processes, while others are created and emitted solely through human activities. Climate change models predict changes in temperature, precipitation patterns, water availability, and rising sea levels, and these altered conditions can have impacts on natural and human systems in California that can affect California's public health, habitats, ocean and coastal resources, water supplies, agriculture, forestry, and energy use.

Greenhouse Gas Emissions

GHGs include, but are not limited to, carbon dioxide (CO_2), methane (CH_4), nitrous oxide (N_2O), O_3, fluorinated gases (hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF_6) and nitrogen trifluoride (NF_3)), chlorofluorocarbons (CFCs), and hydrochlorofluorocarbons (HCFCs), in addition to water vapor.[2] Some GHGs, such as CO_2, CH_4, and N_2O, occur naturally and are emitted to the atmosphere through natural processes and human activities. Of these gases, CO_2 and CH_4 are emitted in the greatest quantities from human activities. Some industrial gases

[2] California Health and Safety Code 38505 identifies seven GHGs that CARB is responsible to monitor and regulate to reduce emissions: CO_2, CH_4, N_2O, SF_6, HFCs, PFCs, and NF_3.

are also GHGs that have a much greater heat-absorption potential than CO_2, include fluorinated gases, such as HFCs, PFCs, and SF_6, which are associated with certain industrial products and processes.

According to the U.S. EPA's *Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990–2014* (U.S. Environmental Protection Agency 2016), total United States GHG emissions were approximately 6,870.5 million metric tons (MMT) CO_2E[3] in 2014. The primary GHG emitted by human activities in the United States was CO_2, which represented approximately 80.9 percent of total GHG emissions (5,556.0 MMT CO_2E). The largest source of CO_2, and of overall GHG emissions, was fossil-fuel combustion, which accounted for approximately 93.7 percent of CO_2 emissions in 2014 (5,208.2 MMT CO_2E). Total United States GHG emissions have increased by 7.4 percent from 1990 to 2014, and emissions increased from 2013 to 2014 by 1.0 percent (70.5 MMT CO_2E). Since 1990, United States GHG emissions have increased at an average annual rate of 0.3 percent; however, overall, net emissions in 2014 were 8.6 percent below 2005 levels (Ibid.).

According to California's 2000–2014 GHG emissions inventory (2016 edition), California emitted 441.5 MMT CO_2E in 2014, including emissions resulting from out-of-state electrical generation (California Air Resources Board 2016). As with nationwide emissions, the primary GHG emitted by human activities in California was CO_2, which represented approximately 84.3 percent of total GHG emissions. The largest sources of GHG emissions in California were transportation and industrial uses, followed by electric power production from both in-state and out-of-state sources, residential and commercial activities, agriculture, high global-warming potential substances, and recycling and waste (Ibid.).

During the 2000 to 2014 period, per capita GHG emissions in California have continued to drop from a peak in 2001 of 13.9 MT per person to 11.4 MT per person in 2014, representing an 18 percent decrease. In addition, total GHG emissions in 2014 were 2.8 MMT CO_2E less than 2013 emissions. The declining trend in GHG emissions, coupled with programs that will continue to provide additional GHG reductions going forward, demonstrates that California is on track to meet the 2020 target of 431 MMT CO_2E (California Air Resources Board 2016).

California Regulations and Plans

The State of California passed the Global Warming Solutions Act of 2006 (AB 32), which requires reduction of GHG emissions generated within California. The Governor's Executive Order S-3-05 and AB 32 (Health and Safety Code, Section 38501 et seq.) both seek to achieve 1990 emissions levels by the year 2020. Executive Order S-3-05 further requires that California's GHG emissions

[3] The Intergovernmental Panel on Climate Change (IPCC) developed the Global Warming Potential (GWP) concept to compare the ability of each greenhouse gas to trap heat in the atmosphere relative to another gas. The reference gas used is CO_2, and GWP weighted emissions are measured in teragrams (or million metric tons) of CO_2 equivalent (Tg CO_2E). A million metric tons of CO_2 equivalent also is referenced as $MMTCO_2E$ (City of Santa Cruz, April 2012, DEIR volume).

be 80 percent below 1990 levels by the year 2050. Senate Bill 32 requires the CARB to ensure that statewide GHG emissions are reduced to 40 percent below 1990 levels by 2030.

In 2007 the CARB approved a statewide limit on the GHG emissions level for year 2020 consistent with the determined 1990 baseline (427 million metric tons (MMT) CO_2E). In 2008, the CARB adopted the *Climate Change Scoping Plan: A Framework for Change* (*Scoping Plan*) in accordance with Health and Safety Code Section 38561. The *Scoping Plan* establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions for various emission sources/sectors to 1990 levels by 2020. CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of approximately 28.5 percent from the otherwise projected 2020 emissions level; i.e., those emissions that would occur in 2020, absent GHG-reducing laws and regulations (referred to as "Business-As-Usual" [BAU]).

The Scoping Plan identified 18 emissions-reduction measures that address cap-and-trade programs, vehicle gas standards, energy efficiency, low carbon fuel standards, renewable energy, regional transportation-related greenhouse gas targets, vehicle efficiency measures, goods movement, solar roofs program, industrial emissions, high speed rail, green building strategy, recycling, sustainable forests, water, and air. The key elements of the Scoping Plan include the following:

1. Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
2. Achieving a statewide renewable energy mix of 33 percent;
3. Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system and caps sources contributing 85 percent of California's GHG emissions;
4. Establishing targets for transportation-related GHG emissions for regions throughout California, and pursuing policies and incentives to achieve those targets;
5. Adopting and implementing measures pursuant to existing state laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard (LCFS 17 Cal. Code Regs. Section 95480 et seq.); and
6. Creating targeted fees, including a public goods charge on water use, fees on high global warming potential (GWP) gases, and a fee to fund the administrative costs of the State of California's long-term commitment to AB 32 implementation.

In the 2011 Final Supplement to the *Scoping Plan's* Functional Equivalent Document, the CARB revised its estimates of the projected 2020 emissions level in light of the economic recession and the availability of updated information about GHG reduction regulations. Based on the new economic data, the CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of 21.7 percent (down from 28.5 percent) from the BAU conditions. When the 2020 emissions level projection was updated to

account for newly implemented regulatory measures, including Pavley I (model years 2009–2016) and the Renewable Portfolio Standard (12 to 20 percent), the CARB determined that achieving the 1990 emissions level in 2020 would require a reduction in GHG emissions of 16 percent (down from 28.5 percent) from the BAU conditions.

In 2014, the CARB adopted the *First Update to the Climate Change Scoping Plan: Building on the Framework* (*First Update*). The stated purpose is to "highlight California's success to date in reducing its GHG emissions and lay the foundation for establishing a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050." The *First Update* found that California is on track to meet the 2020 emissions reduction mandate established by AB 32, and noted that California could reduce emissions further by 2030 to levels squarely in line with those needed to stay on track to reduce emissions to 80 percent below 1990 levels by 2050 if the state realizes the expected benefits of existing policy goals.

In conjunction with the *First Update*, the CARB identified "six key focus areas comprising major components of the state's economy to evaluate and describe the larger transformative actions that will be needed to meet the state's more expansive emission reduction needs by 2050." Those six areas are: 1) energy; 2) transportation (vehicles/equipment, sustainable communities, housing, fuels, and infrastructure); 3) agriculture; 4) water; 5) waste management; and, 6) natural and working lands. The *First Update* identifies key recommended actions for each sector that will facilitate achievement of Executive Order S-3-05's 2050 reduction goal. Based on the CARB's research efforts presented in the *First Update*, it has a "strong sense of the mix of technologies needed to reduce emissions through 2050." Those technologies include energy demand reduction through efficiency and activity changes; large-scale electrification of on-road vehicles, buildings and industrial machinery; decarbonizing electricity and fuel supplies; and, the rapid market penetration of efficient and clean energy technologies.

As part of the *First Update*, the CARB recalculated the state's 1990 emissions level using more recent global warming potentials identified by the Intergovernmental Panel on Climate Change. Using the recalculated 1990 emissions level (431 MMT CO_2E) and the revised 2020 emissions level projection identified in the 2011 Final Supplement, the CARB determined that achieving the 1990 emissions level by 2020 would require a reduction in GHG emissions of approximately 15 percent (instead of 28.5 percent or 16 percent) from the BAU conditions. The update also recommends that a statewide mid-term target and mid-term and long-term sector targets be established toward meeting the 2050 goal established by EO S-3-05 (i.e., reduce California's GHG emissions to 80 percent below 1990 levels), although no specific recommendations are made. The declining trend in GHG emissions, coupled with programs that will continue to provide additional GHG reductions going forward, demonstrates that California is on track to meet the 2020 target of 431 MMT CO_2E (California Air Resources Board, May 2014).

On January 20, 2017, CARB released The *2017 Climate Change Scoping Plan Update (Second Update)* for public review and comment (California Air Resources Board, January 2017). This

update proposes the CARB's strategy for achieving the states 2030 GHG target, including continuing the Cap-and-Trade Program through 2030 and includes a new approach to reduce GHGs from refineries by 20 percent. The *Second Update* incorporates approaches to cutting super pollutants from the Short Lived Climate Pollutants Strategy (such as black carbon), acknowledges the need for reducing emissions in agriculture and highlights the work underway to ensure that California's natural and working lands increasingly sequester carbon. When discussing project-level GHG emissions reduction actions and thresholds, the *Second Update* states "achieving no net increase in GHG emissions is the correct overall objective, but it may not be appropriate or feasible for every development project. And the inability to mitigate a project's GHG emissions to zero does not necessarily imply a substantial contribution to the cumulatively significant environmental impact of climate change under CEQA."

For local governments, the *Second Update* replaced the initial Scoping Plan's 15% reduction goal with a recommendation to aim for a community-wide goal of no more than 6 MT CO_2E per capita by 2030 and no more than 2 MT CO_2E per capita by 2050, which are consistent with the state's long-term goals. These goals are appropriate for the plan level (city, county, subregional, or regional level, as appropriate), but not for specific individual projects because they include all emissions sectors in the State. The *Second Update* recognized the benefits of local government GHG planning (e.g., through climate action plans (CAPs)) and provide more information regarding tools the CARB is working on to support those efforts. It also recognizes the CEQA streamlining provisions for project level review where there is a legally adequate CAP. It is expected that CARB will consider the *Second Update* for approval in the spring or summer 2017.

The Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32, Senate Bill 32 and the Executive Orders and establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. A project is considered consistent with the statutes and Executive Orders if it meets the general policies in reducing GHG emissions in order to facilitate the achievement of the state's goals and does not impede attainment of those goals. As discussed in several cases, a given project need not be in perfect conformity with each and every planning policy or goals to be consistent. A project would be consistent, if it will further the objectives and not obstruct their attainment.

City of Santa Cruz Climate Action Plan

The City's *General Plan 2030* includes goals, policies, and actions on climate change, including reducing community-wide GHG emissions 30 percent by 2020, reducing GHG emissions 80 percent by 2050 (compared to 1990 levels), and for all new buildings to be emissions-neutral by 2030. In October 2012, the City adopted a *Climate Action Plan* (CAP) that outlines the actions the City will take over the next 10 years to reduce GHGs by 30 percent and to implement the policies and actions identified in the *General Plan 2030*. The CAP addresses citywide GHG reduction strategies. The CAP provides City emissions inventories, identifies an emissions reduction target for the year 2020, and includes measures to reduce energy use, reduce vehicle trips, implement water conservation programs, reduce emissions from waste collection, increase use of solar systems, and develop public partnerships to aide sustainable practices. Measures are outlined

for the following sectors: municipal, residential, commercial, and community programs. The CAP includes an implementation chapter that identifies tracking and reporting of the success of the measures, including City staff responsibilities.

4.2.2 Impacts and Mitigation Measures

Thresholds of Significance

In accordance with the California Environmental Quality Act (CEQA); State CEQA Guidelines (including Appendix G); City of Santa Cruz plans, policies, and/or guidelines; and agency and professional standards, a project impact would be considered significant if the project would:

2a Conflict with or obstruct implementation of the air quality management plan;

2b Violate any air quality standards or contribute substantially to an existing or projected air quality violation, i.e. result in generation of emissions of or in excess of 137 pounds per day for ROG or NO_x, 550 pounds per day of carbon monoxide, 150 pounds per day of sulfur oxides (SO_x), 82 pounds per day of PM_{10} (due to construction with minimal earthmoving on 8.1 or more acres per day or grading/excavation site on 2.2 or more acres per day for PM_{10}), and/or 55 pounds per day of $PM_{2.5}$ pursuant to impact criteria for significance developed by the MBARD (MBUAPCD, "CEQA Air Quality Guidelines," February 2008 and February 2016);

2c Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is in non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);

2d Expose sensitive receptors (i.e., residents, schools, hospitals) to substantial pollutant concentrations, i.e. those that exceed the MBUAPCD standards identified above and/or toxic air contaminants that exceed health exposure rates;

2e Create objectionable odors in substantial concentrations, affecting a substantial number of people, which could result in injury, nuisance, or annoyance to a considerable number of persons, or would endanger the comfort, health, or safety of the public;

2f Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or

2g Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The State CEQA Guidelines do not prescribe specific methodologies for performing a GHG emissions assessment, establish specific thresholds of significance, or mandate specific mitigation measures. Rather, the CEQA Guidelines emphasize the lead agency's discretion to determine the appropriate methodologies and thresholds of significance that are consistent with the manner in which other impact areas are handled in CEQA. Global climate change is a

cumulative impact; a project participates in this potential impact through its incremental contribution combined with the cumulative increase of all other sources of GHGs. There are currently no established thresholds for assessing whether the GHG emissions of a project in the NCCAB would be considered a cumulatively considerable contribution to global climate change, except the MBUAPCD has an adopted guideline for stationary source projects in which a project would not have not a significant GHG emissions impact if the project emits less than 10,000 MT/yr CO_2E or complies with regulations or requirements adopted to implement a statewide, regional or local plan for the reduction or mitigation of GHG emissions (Monterey Bay Unified Air Pollution Control District, February 2016).

Analytical Method

The proposed project consists of amendments to the City's Downtown Recovery Plan, General Plan, Local Coastal Plan and Zoning Code regarding development in the downtown area and Central Business District. The proposed project would not directly result in new development. However, the proposed Downtown Plan amendment would expand areas for potential additional building height that could accommodate intensified redevelopment of existing developed sites. City staff estimates that the proposed amendments could indirectly lead to development, resulting in a potential net increase of 711 new residential units and 2,200 square feet of office space with a net decrease of approximately 14,700 square feet of commercial building space over existing conditions within the downtown area. The proposed General Plan amendment would increase FAR in areas designated as RVC in the General Plan. The proposed LCP and Zoning Code amendments would not result in changes that could indirectly lead to intensified development or air emissions.

The air quality analysis used the California Emissions Estimator Model (CalEEMod), which is currently being recommended by the MBUAPCD. The CalEEMod Version 2016.3.1 was used to estimate potential project-generated criterial pollutant and GHG emissions with projected buildout resulting from the proposed plan amendments, including an estimated reduction in existing commercial uses. No specific development projects are proposed, and no project-site specific development applications have been submitted to the City. City Planning Department staff estimate that potential development and buildout estimated for the purpose of assessing environmental impacts would occur over 25 years. Construction emissions cannot be determined in the absence of specific development projects with identified construction schedules and equipment. Emissions from the operational phase of future development supported by the project and for the reduced commercial area were estimated using CalEEMod default emission factor values for mobile, area, and energy sources. In addition, project-specific trip generation and water demand rates identified in this EIR were incorporated into CalEEMod. Model outputs and assumptions are included in Appendix E.

Impacts and Mitigation Measures

As described in the Initial Study (see Appendix A), exposure to diesel emission during construction would result in a less-than-significant impact (2d), and the project would not result in creation of objectionable odors (2e). Thus, no further discussion is required for these topics. The project would not conflict with or obstruct implementation of the AQMP (2a) or conflict with GHG reduction plans (2g) as explained below. The impact analyses address criteria pollutant emissions and potential violation of an air quality standard (2b) and GHG emissions (2f). Cumulative impacts (2c) are addressed in Chapter 5, CEQA Considerations.

Conflicts with Adopted Plans – No Impact

Effective September 1, 2011 the MBUAPCD Board approved a new procedure for determining whether a residential project conflicts with the District's adopted AQMP. The procedure uses AMBAG's adopted housing unit forecast instead of population, and the MBUAPCD has developed a spreadsheet to assist jurisdictions with developing calculations, which was used to determine whether the proposed project conflicts with the AQMP as described below.

The City had 23,693 existing dwelling units as of January 1, 2017, and approximately 389 residential units have been constructed, are under construction or have been approved. With existing units, approved units and the proposed project increase of 711 residential units, there would be a total of 24,793 dwelling units within the City. Development that could occur as a result of the proposed project is estimated to occur over the next 20-25 years. Housing units with the addition of the proposed project would be below the current AMBAG forecast of 28,297 dwelling units for the year 2030 and 29,335 units in the year 2035. The proposed project with buildout under the General Plan and accounting for units that have been constructed and occupied since the General Plan was adopted, would result in approximately 27,244 dwelling units, which is within AMBAG forecasts for 2030 and 2035. Therefore, growth that could be accommodated by the proposed project is consistent with the AQMP, and would not conflict with or obstruct implementation of the AQMP (2a).

With regards to GHG reduction plans, the Scoping Plan, approved by CARB on December 12, 2008, provides a framework for actions to reduce California's GHG emissions and requires CARB and other state agencies to adopt regulations and other initiatives to reduce GHGs. As such, the Scoping Plan is not directly applicable to specific projects. In the Final Statement of Reasons for the Amendments to the CEQA Guidelines, the California Natural Resources Agency (CNRA) observed that "[t]he [Scoping Plan] may not be appropriate for use in determining the significance of individual projects because it is conceptual at this stage and relies on the future development of regulations to implement the strategies identified in the Scoping Plan" (California Natural Resources Agency, 2009). Under the Scoping Plan, however, there are several state regulatory measures aimed at the identification and reduction of GHG emissions. CARB and other state agencies have adopted many of the measures identified in the Scoping Plan. Most of these measures focus on area source emissions (e.g., energy usage, high-GWP GHGs in consumer products) and changes to the vehicle fleet (i.e., hybrid, electric, and more fuel-efficient vehicles)

and associated fuels (e.g., LCFS), among others. The Scoping Plan recommends strategies for implementation at the statewide level to meet the goals of AB 32 and establishes an overall framework for the measures that will be adopted to reduce California's GHG emissions. The project would comply with all applicable regulations adopted in furtherance of the Scoping Plan to the extent required by law.

The proposed project consists of amendments to the City's Downtown Recovery Plan, General Plan, LCP and Zoning Code to accommodate intensified development in the downtown area. To this extent, the proposed amendments are consistent with the sustainable transportation and land use planning goals set forth in the City's Climate Action Plan that encourage higher density development along transit corridors and activity centers to support efficient, accessible, and sustainable transportation options. Based on the preceding considerations, the proposed project would not result in conflicts with an applicable plan, policy or regulation adopted for the purpose of reducing GHG emissions (2g)

Urban Heat Island Effect – No Impact

A comment was raised regarding the potential for subsequent development under the proposed Plan amendments to create an "urban heat island." The phrase "urban heat island" refers to the effect of urbanized areas on surface and air temperature compared to their rural surroundings. Buildings, roads, and other "hardscape" create an island of higher temperatures within the regional landscape. As described by the EPA, "[u]rban heat islands are caused by development and the changes in radiative and thermal properties of urban infrastructure as well as the impacts buildings can have on the local microclimate—for example tall buildings can slow the rate at which cities cool off at night. Heat islands are influenced by a city's geographic location and by local weather patterns, and their intensity changes on a daily and seasonal basis" (U.S. Environmental Protection Agency, 2008). The term is generally used to refer to community-wide effects, particularly for large metropolitan cities. Increased temperatures due to the urban heat island effect may lead to increased energy consumption, which has implications for air quality and GHG emissions. In addition to energy-related increases in air emissions, elevated air temperatures increase the rate of ground-level O_3 formation.

Some cities have adopted strategies to deal with these environmental impacts, such as increasing vegetation and using more energy-efficient building materials. These strategies are often part of more general energy savings or "sustainability" practices and are not identified as "urban heat island effect" mitigation, but nevertheless they provide the benefits of reducing surface and atmospheric heat islands.

In the present case, the downtown area is within an existing urbanized and developed area. The proposed amendment would allow an increment of increased height, but the area already supports existing development, paved areas as well as larger buildings, street trees and landscaping. The area is not within a rural setting and future development would not be of the magnitude to result in creation of the effect referred to as an "urban heat island." Future development would be subject to the City's General Plan 2030, Zoning Code and Green Building

standards regrading energy efficiency. Furthermore, this potential effect is not related to pollutant or greenhouse gas emissions or the thresholds of significance identified for impact analysis, and no further review is required under CEQA.

Impact 4.2-1: Criteria Pollutant Emissions. Future development and growth accommodated by the proposed project would result in emissions of criteria pollutants, but would not exceed adopted thresholds of significance, violate any air quality standard or contribute substantially to an existing or projected air quality violation (2b). This is a *less-than-significan*t impact.

Construction Emissions

Future development accommodated by the proposed plan amendments would result in construction-related emissions that could affect air quality by increasing O_3 precursor and particulate matter emissions for an area that already exceeds California ambient air quality standards for these pollutants. Construction activities include demolition, excavation, grading, vehicle trips (including workers, deliveries and hauling), and vehicle travel on paved and unpaved surfaces. Vehicle and equipment exhaust would generate pollutant emissions. Construction projects may also generate DPM emissions from diesel-fueled equipment.

The proposed project could indirectly lead to new development that could result in generation of particulate emissions from entrained dust, off-road equipment, vehicle emissions, architectural coatings, and asphalt pavement application during construction. Entrained dust results from the exposure of earth surfaces to wind from the direct disturbance and movement of soil, resulting in PM_{10} and $PM_{2.5}$ emissions. Particulate matter emissions can vary daily, depending on various factors, such as the level of activity, type of construction activity taking place, type of equipment in operation, and weather conditions. Internal combustion engines used by construction equipment, vendor trucks (e.g., delivery trucks), and worker vehicles would result in emissions of ROG, NO_x, CO, PM_{10}, and $PM_{2.5}$. The application of architectural coatings, such as exterior application/interior paint and other finishes, and application of asphalt pavement would also produce ROG emissions. Based on MBUAPCD CEQA Guidelines (2008), exhaust emissions from these typical construction activities generally would not result in a significant impact because their emissions are already accounted for in the emissions inventories of the state- and federally-required air plans, and they would not have a significant impact on the attainment and maintenance of the O_3 AAQS.

The scale and timing of construction is unknown, and construction activities would be variable throughout the day and overall construction period. The City's General Plan requires future development projects to implement applicable MBARD control measures and/or air quality mitigations in the design of new projects as set forth in the District's "CEQA Guidelines". The Guidelines provide screening levels for potential significant impacts, and projects that are cover 2.2 or more acres may be required to implement dust suppression measures during construction unless future project-level construction-emissions modeling indicates that pollutant thresholds established by the MBARD would not be exceeded. Therefore, implementation and application

of General Plan policies and MBARD recommended measures, if required, would reduce any future significant project construction emissions to a less-than-significant level.

Operational Emissions

Future development and growth accommodated by the proposed project would generate criteria pollutant emissions from vehicular traffic, area sources (consumer products, architectural coatings, landscaping equipment), and energy sources (natural gas appliances, space and water heating). The reduced commercial area would result in an associated reduction in emissions from these sources. The emissions associated with on-road mobile sources include running and starting exhaust emissions, evaporative emissions, brake and tire wear, and fugitive dust entrainment. The CalEEMod model was utilized to estimate operational emissions for the year 2040, which is the closest selectable year in the model to the earliest year that the project is expected to be built out over 25 years. Default trip rates in CalEEMod were adjusted to match the weekday trips provided by the traffic consultant for the project (Kimley Horn, May 2017). Default water demand estimates in CalEEMod were also adjusted to match the values provided in the City Urban Water Management Plan.

Table 4.2-2 summarizes the results of the emissions modeling. As shown, daily emissions associated with project operation would not exceed the MBUAPCD significance thresholds. The project emissions would be below the significance thresholds adopted by MBUAPCD for evaluating impacts to O_3 and particulate matter, and, thus, the project would not contribute substantially to existing or projected violations of those standards. Therefore, emissions of criteria pollutants associated with operation of the proposed project would result in a less-than-significant impact.

CO emissions from traffic generated by the project would be the pollutant of concern at the local level. Congested intersections with a large volume of traffic have the greatest potential to cause high-localized concentrations of CO. As indicated above, air pollutant monitoring data indicate that CO levels have been at healthy levels (i.e., below state and federal standards) for years, reflecting improvements in tailpipe emissions controls. As a result, the region has been designated as attainment/unclassified for the standard. The MBUAPCD's CEQA Guidelines indicated that a project could result in potentially significant CO emissions if the project would result in a decrease in intersection or road level of service (LOS) from D or better to E or F or increase delays by more than 10 seconds at intersections that operate at E or F. As discussed in Chapter 4.5, Traffic and Transportation, the project would not result in a decrease in intersection LOS to E or F. The project would result in approximately 237 weekday PM peak hour trips distributed to numerous intersections, however, the project would not result in a decrease in operations to a LOS below D, and would result in less than 10 seconds delay at intersections operation at LOS E. Thus, the proposed project does not meet the criteria for potential indirect CO emissions, and the project does not have the potential to cause a CO violation at affected intersections to which the project contributes traffic.

TABLE 4.2-2: Estimated Maximum Daily Operational Project Emissions

Emission Source	ROG	NO_x	CO	SO_x	PM_{10}	$PM_{2.5}$
	(pounds per day)					
Increased Residential and Office Uses						
Area	19.9	0.7	58.6	0.0	0.3	0.3
Energy	0.3	2.6	1.1	0.0	0.2	0.2
Mobile	2.4	10.7	30.8	0.1	18.4	5.0
Subtotal	**22.6**	**14.0**	**90.6**	**0.1**	**19.0**	**5.5**
Reduced Commercial Uses						
Area	0.4	0.0	0.0	0.0	0.0	0.0
Energy	0.0	0.0	0.0	0.0	0.0	0.0
Mobile	0.3	1.1	2.5	0.0	1.3	0.3
Subtotal	**0.6**	**1.1**	**2.5**	**0.0**	**1.3**	**0.3**
Total Net Increase	**22.0**	**12.9**	**88.1**	**0.1**	**17.7**	**5.2**
Emission threshold [1]	**137**	**137**	**550**	**150**	**82**	**55**
Threshold exceeded?	**No**	**No**	**No**	**No**	**No**	**No**

[1] Monterey Bay Unified Air Pollution Control District, February 2008, February 2016.

Notes: Emissions were modeled with CalEEMod 2016.3.1. The maximum of summer or winter values are included above and the totals may not sum exactly due to rounding. In addition, project emissions are based on the "Mitigated" CalEEMod outputs in order to incorporate the 2016 Title 24 standards (i.e., residences and commerical uses that comply with 2016 Title 24 are 28% and 5% more efficient than 2013 Title 24, respectively), high efficiency outdoor lighting, and the 75% waste diversion consistent with State standards (Assembly Bill 341), even though compliance with these standards would not be considered actual mitigation. For the Reduced Commercial scenario, only the 75% waste diversion was assumed with no building energy improvements, since this scenario represents existing uses that would be demolished.

ROG = reactive organic gases; NO_x = oxides of nitrogen; CO = carbon monoxide; SO_x = sulfur oxides; PM_{10} = coarse particulate matter; $PM_{2.5}$ = fine particulate matter.

Area sources = consumer product use, architectural coatings, and landscape maintenance equipment. Energy sources = natural gas appliances. Mobile sources = on-road vehicles.

See Appendix E for detailed results.

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

Impact 4.2-2: Greenhouse Gas (GHG) Emissions. Future development and growth accommodated by the proposed project would result in in GHG emissions, which are not considered significant (2f). Therefore, this is a *less-than-significan*t impact.

Development accommodated by the proposed project is expected to occur over the next 25 years. No stationary source emissions (such as emergency generators) are anticipated with future residential and office space accommodated by the project. Future development would result in GHG emissions from vehicular traffic, area sources (landscaping maintenance), electrical generation, natural gas consumption, water supply and wastewater treatment, and solid waste. The reduced commercial area would result in an associated reduction in emissions from these

sources. Project-specific trip generation rates and indoor water use consistent with the City Urban Water Management Plan were incorporated into the CalEEMod model. As shown in Table 4.2-3, the proposed project is estimated to result in a net increase of approximately 4,053 MT of CO_2E per year.

TABLE 4.2-3: Estimated Annual Operational Project Greenhouse Gas Emissions

	MT CO_2	MT CH_4	MT N_2O	MT CO_2E
Increased Residential and Office Uses				
Area Sources	12.0	0.0	0.0	12.3
Energy	1,813.4	0.1	0.0	1,825.1
Mobile	2,297.2	0.1	0.0	2,298.8
Solid Waste	16.7	1.0	0.0	41.4
Water Supply and Wastewater	37.5	1.0	0.0	68.9
Subtotal	**4,176.8**	**2.2**	**0.0**	**4,246.5**
Reduced Commercial				
Area Sources	0.0	0.0	0.0	0.0
Energy	34.4	0.0	0.0	34.6
Mobile	155.1	0.0	0.0	155.2
Solid Waste	0.8	0.0	0.0	1.9
Water Supply and Wastewater	1.2	0.0	0.0	2.2
Subtotal	**191.5**	**0.0**	**0.0**	**193.9**
			Total Net Increase	**4,052.6**

Notes: Emissions were modeled with CalEEMod 2016.3.1. The annual emission totals may not sum exactly due to rounding. Project emissions are based on the "Mitigated" CalEEMod outputs in order to incorporate the 2016 Title 24 standards (i.e., residences and commerical uses that comply with 2016 Title 24 are 28% and 5% more efficient than 2013 Title 24, respectively), high efficiency outdoor lighting, and the 75% waste diversion consistent with State standards (Assembly Bill 341), even though compliance with these standards would not be considered actual mitigation. For the Reduced Commercial scenario, only the 75% waste diversion was assumed with no building energy improvements, since this scenario represents existing uses that would be demolished.

MT CO_2 – metric tons carbon dioxide; MT CH_4 – metric tons methane; MT N_2O – metric tons nitrous oxide; MT CO_2E – metric tons carbon dioxide equivalent

See Appendix E for detailed results.

The project site is located within the NCCAB under the jurisdiction of the MBARD, which to date, has not adopted significance criteria or thresholds for land use projects. However, in February 2013, a staff report to the District Board indicated that the staff's current recommendation is to further review a GHG threshold of 2,000 MT CO_2E per year for land-use projects or compliance with an adopted GHG Reduction Plan/Climate Action Plan (Monterey Bay Unified Air Pollution Control District, February 2013). This recommendation was made after considering AB 32 goals and scoping plan measures that would reduce regional emissions and MBUAPCD staff's review of thresholds adopted or considered in other air districts throughout the state. The threshold was considered based on projects that would contribute 75-90 percent of future GHG emissions. Other air districts in the State have adopted a threshold of 1,100 MT CO_2E per year for land-use

projects, including the Bay Area Air Quality Management District, Sacramento Metropolitan Air Quality Management District, and San Luis Obispo County Air Pollution Control District (Association of Environmental Professionals 2016). Both the Bay Area and San Luis Obispo air districts also have per service population (i.e., residents plus employees) GHG emission thresholds of 4.6 and 4.9 MT CO_2E per year, respectively, for land-use projects (Ibid.).

Neither the City of Santa Cruz nor the MBUAPCD has adopted GHG emission significance thresholds. The project's estimated GHG emissions (about 4,053 MT/ CO_2E year) would exceed the significance threshold for development projects of 1,100 MT CO_2E per year used in neighboring air districts and the 2,000 MT of CO_2E per year threshold that had been under consideration by the MBUAPCD. However, the per service population emissions for operations would be about 2.4 MT CO_2E per year (based on 4,053 MT CO_2E per year divided by 1,728 service population of the project), which is substantially less than the thresholds established in neighboring air districts.

These quantitative thresholds are based on 2020 reduction goals and although the project buildout is estimated to be approximately 25 years, there are no established protocols or thresholds of significance for post-2020 future-year analysis (i.e., compliance with the Senate Bill 32 goal of reducing GHG emissions to 40% below 1990 levels by 2030 and Executive Order S-3-05 goal of reducing GHG emissions to 80% below 1990 levels by 2050). However, CARB forecasts that compliance with the current Scoping Plan puts the state on a trajectory of meeting these long-term GHG goals, although the specific path to compliance is unknown (CARB 2014). As discussed previously, the project would comply with all applicable state and local GHG reduction regulations and would not conflict with the state's trajectory toward future GHG reductions. In addition, since the specific path to compliance for the state in regards to the long-term goals will likely require development of technology or other changes that are not currently known or available, specific additional mitigation measures for future projects developed as a result of the proposed plan amendments would be speculative and cannot be identified at this time.

With respect to future GHG targets under Senate Bill 32 and Executive Order S-3-05, CARB has also made clear its legal interpretation that it has the requisite authority to adopt whatever regulations are necessary, beyond the AB 32 horizon year of 2020, to meet the reduction targets in 2030 and in 2050; this legal interpretation by an expert agency provides evidence that future regulations will be adopted to continue the state on its trajectory toward meeting these future GHG targets. Additionally, the City's *General Plan 2030* EIR estimated GHG emissions that could result in 2030 from potential development and buildout accommodated by the plan that included 3,350 residential dwelling units and approximately 3,140,000 additional square feet of new commercial, office, and industrial uses. The General Plan EIR analysis determined that the GHG emissions levels associated with potential buildout that would be accommodated by the General Plan would not be considered substantial compared to long-term forecasts and state and regional targets, and would be less than forecast statewide per capita emission rates. The preceding considerations support the conclusion that the project-level emissions are less than

significant and less than cumulatively considerable. Thus, the impact is considered less than significant.

It is expected that GHG emissions resulting from the proposed project would be partially offset by the incorporation of energy and water conserving features and "green" building designs that would be required under City and State building regulations, including the City's Green Building requirements. Furthermore, the City's *General Plan 2030* seeks to reduce citywide contribution to greenhouse gas emissions through land use planning, program development, investment in energy efficient infrastructure, and increased use of renewable energy. Green building policies and actions incorporate energy efficiency measures, water stewardship, use of sustainable building materials derived from renewable resources, reduction of waste through recycling and reuse, and smart growth and sustainable development practices. In addition to defining shorter-term strategies to address likely impacts of climate change on city infrastructure and resources, the City must also set planning goals to minimize future risks of sea level rise and climate change.

The City's General Plan 2030 includes one goal with four polices and 19 accompanying actions that address climate change, including preparation and implementation of a "Climate Action Plan" to attain emissions reductions goals, which has been completed. In particular, the City seeks to achieve a 30% reduction in GHG emissions by 2020 and 80% by 2050 (NRC4.1.1) with all new development being carbon neutral by the year 2030. Other policies and actions seek to reduce vehicle emissions by 30% (NRC4.1.3) in addition with other transportation policies to reduce vehicle trips, and promote energy efficiency. Table 4.2-3 summarizes policies that directly or indirectly reduce greenhouse gas emissions and impacts. Additionally, policies in other chapters of the draft General Plan support local, state and federal actions to reduce carbon dioxide and GHG emissions (HZ2.1.1, HZ2.1.2) and efforts to improve local energy efficiency (NRC7.1), including a reduction in gas and electricity consumption (NRC7.1.1). A number of policies are also directed to reducing automobile trips and creating sustainable development and land use patterns, which would result in further reductions of automobile trips; Goal LU1 and supporting policies and actions seek sustainable land uses within the City.

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

4.3 BIOLOGICAL RESOURCES

This section analyzes impacts of the proposed project on biological resources based on a review of existing city plans and review of potential impacts upon riparian and aquatic habitats and species by Dudek biologists and Kittleson Environmental Consulting as part of the preparation of this EIR. This section also draws from the City of Santa Cruz General Plan 2030 EIR (SCH#2009032007), which was certified on June 26, 2012, regarding background information on regulatory setting and sensitive habitats. The General Plan EIR is incorporated by reference in accordance with section 15150 of the State CEQA Guidelines. Relevant discussions are summarized in subsection 4.3.1. The General Plan EIR is available for review at the City of Santa Cruz Planning and Community Development Department (809 Center Street, Room 107, Santa Cruz, California) during business hours: Monday through Thursday, 8 AM to 12 PM and 1 PM to 5 PM. The General Plan EIR is also available online on the City's website at: http://www.cityofsantacruz.com/government/city-departments/planning-and-community-development/general-plan.

Public and agency comments related to air quality and emissions were received during the public scoping period in response to the Notice of Preparation (NOP). Issues raised in these comments include:

- Analysis of impacts on San Lorenzo River habitat and wildlife, including establishing the appropriate setback of new development, and potential impacts from shading resulting from the proposed building heights.
- Impacts to birds due to new taller buildings and associated shading, glare from east-facing windows, new lighting, and more people in the area.
- Evaluation of the "urban heat island" effect on riparian habitat.

To the extent that issues identified in public comments involve potentially significant effects on the environment according to the California Environmental Quality Act (CEQA) and/or are raised by responsible agencies, they are identified and addressed within this EIR. Public comments received during the public scoping period are included in Appendix B.

4.3.1 Environmental Setting

Regulatory Setting

Federal Regulations

The United States Fish and Wildlife Service (USFWS) is responsible for the protection of terrestrial and freshwater organisms through the federal Endangered Species Act and the Migratory Bird Treaty Act, while the National Oceanic and Atmospheric Administration National Fisheries (NOAA Fisheries) is responsible for protection of anadromous fish (fish that live most of

their adult life in saltwater but spawn in freshwater) and marine wildlife. The U.S. Army Corps of Engineers (ACOE) has primary responsibility for protecting wetlands and jurisdictional "other waters of the U.S." under Section 404 of the Clean Water Act. A brief summary of relevant laws is provided below, and a full description is provided on pages 4.8-1-4,8-6 of the General Plan 2030 EIR (Draft EIR volume), which is incorporated by reference.

Federal Endangered Species Act. The federal Endangered Species Act (ESA) of 1973 (Title 16 United States Code, Section 1531 *et seq*., as amended) prohibits federal agencies from authorizing, permitting or funding any action that would result in biological jeopardy to or take of a species listed as threatened or endangered. NOAA Fisheries jurisdiction under the ESA is limited to the protection of marine mammals and fish and anadromous fish; all other species are within USFWS jurisdiction. ESA defines "take" to mean to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct. Exemptions to the prohibitions against take may be obtained through coordination with the USFWS through interagency consultation for projects with federal involvement (i.e., funded, authorized, or carried out by a Federal agency) pursuant to Section 7 of the ESA; or through the issuance of an incidental take permit under Section 10(a)(1)(B) of the ESA if the applicant submits a habitat conservation plan (HCP) that meets statutory requirements including components to minimize and mitigate impacts associated with the take.

Birds of Conservation Concern. USFWS' *Birds of Conservation Concern* (BCC) (2008) was developed to fulfill the mandate of the 1988 amendment to the Fish and Wildlife Conservation Act (Public Law 100-653 (102 Stat. 3825) to "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act (ESA) of 1973" (U.S. Fish and Wildlife Service, September 2015). The overall goal of the Birds of Conservation Concern is to accurately identify the migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that represent the highest conservation priorities. The bird species included on the BCC lists include nongame birds, gamebirds without hunting seasons, ESA candidate, proposed endangered or threatened, and recently delisted species.

Migratory Bird Treaty Act. All migratory birds and their nests are federally protected under the Migratory Bird Treaty Act of 1918 (MBTA) (Title 16 United States Code, Section 703-712 as amended; 50 Code of Federal Regulations Section 21; and 50 Code of Federal Regulations Section 13) and by California Department of Fish and Wildlife codes that support the act. The MBTA makes it unlawful to "take" any migratory bird or raptor listed in the 50 Code of Federal Regulations Section 10, including their nests, eggs or products.

Wetlands and Waters of the U.S. The ACOE has regulatory authority for activities within wetlands under the Clean Water Act (CWA, 1977, as amended), which serves as the primary federal law protecting the quality of the nation's surface waters. Section 404 of the CWA establishes a program to regulate discharge of dredged or fill material into "waters of the United States," which is administered by the ACOE. The term "waters" includes wetlands and non-

wetland bodies of water that meet specific criteria as defined in the Code of Federal Regulations. In general, a permit must be obtained before fill can be placed in wetlands or other waters of the U.S. The type of permit depends on the amount of acreage and the purpose of the proposed fill, subject to discretion of the Corps. Under Section 404, general permits may be issued on a nationwide, regional, or state basis for particular types of activities that will have only minimal adverse impacts. Individual permits are required for projects with potentially significant impacts.

Under section 401 of the CWA, the California Regional Water Quality Control Boards RWQCB) have regulatory authority over actions in waters of the U.S. through issuance of water quality certifications, which are issued in combination with permits issued by the ACOE under section 404 of the Clean Water Act. A 401 Certification is required from the RWQCB whenever improvements are made within Jurisdictional Waters of the U.S.

State Regulations

The California Department of Fish and Wildlife (CDFW) administers the California Endangered Species Act and protects streams and water bodies through the Streambed Alteration Agreement under Section 1600 of the California Fish and Game Code (CFGC 2005).

California Endangered Species Act. The 1984 California Endangered Species Act (CESA) (Fish & Game Code, Section 2050-2098) declares that deserving plant or animal species be given protection by the State because they are of ecological, historic, educational, recreational, aesthetic, economic, and scientific value to the people of the State. Under state law, plant and animal species may be formally designated rare, threatened, or endangered by official listing by the CDFW. CESA authorizes that entities may take plant or wildlife species listed as endangered or threatened under FESA and CESA, pursuant to a federal incidental take permit issued in accordance with Section 10 of the FESA, if the CDFW certifies that the incidental take statement or incidental take permit is consistent with CESA (Fish & Game Code, Section 2080.1(a). Section 2081(b) and (c) of the CESA allows CDFG to issue an incidental take permit for a state-listed threatened and endangered species only if specific criteria are met. These criteria can be found in Title 14 CCR, Sections 783.4(a) and (b).

Species of Special Concern and Fully Protected Species. In addition to lists of designated Endangered, Threatened, and Rare plant and animal species, the CDFW maintains a list of animal "Species of Special Concern," most of which are species whose breeding populations in California may face extirpation. Although these species have no legal status under the CESA, the CDFW recommends considering these species during analysis of proposed project impacts to protect declining populations, and to avoid the need to list them as threatened or endangered in the future. These species may "be considered rare or endangered [under CEQA] if the species can be shown to meet the criteria". Additionally, the California Fish and Game Code contains lists of vertebrate species designated as "Fully Protected" (California Fish & Game Code 3511 [birds], 4700 [mammals], 5050 [reptiles and amphibians], and 5515 [fish]. No Section 2081(b) permit

may authorize the take of "fully protected" species and "specified birds." If a project is planned in an area where a species or specified bird occurs, an applicant must design the project to avoid all take; the CDFG cannot provide take authorization under CESA.

Streambed Alteration Agreements. Jurisdictional authority of the CDFW over stream areas is established under Section 1600 of the Fish and Game Code, which pertains to activities that would disrupt the natural flow or alter the channel, bed, or bank of any lake, river, or stream. Section 1602 of the Fish and Game Code stipulates that it is unlawful to substantially divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream or lake without notifying the CDFG, incorporating necessary mitigation, and obtaining a Streambed Alteration Agreement. Typical activities that require a Streambed Alteration Agreement include excavation or fill placed within a channel, vegetation clearing, structures for diversion of water, installation of culverts and bridge supports, cofferdams for construction dewatering, and bank reinforcement.

Native Plant Protection. The Native Plant Protection Act of 1977 (NPPA) and implementing regulations pursuant to Section 1900 et seq. of the Fish and Game Code designate rare and endangered plants, and provide specific protection measures for identified populations. It is administered by the CDFG. The NPPA was enacted to "preserve, protect and enhance endangered or rare native plants of this state." The NPPA defines a plant as endangered when its prospects of survival and reproduction are in immediate jeopardy from one or more causes. A rare plant is defined as a plant species that, though not presently threatened with extinction, occurs in such small numbers throughout its range that it may become endangered if its present environment worsens. The NPPA prohibits the take or sale of rare and endangered species in California, except for some exemptions provided by the law.

The California Native Plant Society has prepared and regularly updated an "Inventory of Rare and Endangered Vascular Plants of California." In general, the CDFW qualifies plant species on List 1B (Plants Rare, Threatened, or Endangered in California and Elsewhere) or List 2 (Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere) of the California Native Plant Society's (CNPS) *Inventory of Rare and Endangered Vascular Plants of California* for consideration under CEQA. Species on CNPS List 3 (Plants About Which We Need More Information--A Review List) or List 4 (Plants of Limited Distribution--A Watch List) may, but generally do not, qualify for consideration under CEQA.

Local Regulations

Local Coastal Program (LCP). The Coastal Act defines an "environmentally sensitive area" as "any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments" (Coastal Act section 30107.5). The City's existing certified LCP identifies the following sensitive habitats: wetlands, riparian habitat, grasslands,

mima mounds[1] and habitats that support Ohlone tiger beetle, tidewater goby, burrowing owl, California brown pelican, Monarch butterfly, pigeon guillemot, black swift, Santa Cruz tarplant or American peregrine falcon (City of Santa Cruz, 1994-Map EQ-9). Existing LCP policies seek to preserve and enhance the character and quality of riparian and wetland habitats (EQ 4.2). A separate Creeks Management Plan and policies related to the San Lorenzo River also are part of the LCP as further described below.

General Plan 2030. Four habitat types found within the City of Santa Cruz are recognized as sensitive habitat types: freshwater wetland, salt marsh, riparian forest and scrub, and coastal prairie portions of grassland habitats. Except for freshwater wetland, these habitat types correspond to habitat types that the CNDDB has designated as "high priority." In addition, coastal bird habitat is considered sensitive habitats because of high biological diversity. Additionally, any area supporting a special status species would also be considered a sensitive habitat. Locally, the overwintering monarch butterfly habitat is considered sensitive due to its restricted range and CNDDB ranking as rare. Its habitat is also identified in the City's existing General Plan as being a sensitive habitat. The General Plan sets forth protocols for evaluation of sensitive habitat and sensitive species. For riparian areas, this includes compliance with the *City-Wide Creeks and Wetlands Management Plan.*

Management Plans. Resource management and park plans have been adopted by the City for management of City-owned open space areas. Two plans are pertinent to the project area. The *City-Wide Creeks and Wetlands Management Plan* was adopted by the City in 2007 and approved by the California Coastal Commission as a Local Coastal Plan amendment in October 2007. The *San Lorenzo River Urban Management Plan* was adopted in 2003 for the portion of the river south of Highway 1. Policies developed from recommendations in this plan were included in the LCP as a Coastal Commission-approved LCP amendment in 2004.

The *City-Wide Creeks and Wetlands Management Plan* was adopted by the City Council to provide a comprehensive approach to managing all creeks and wetlands within the City. Long-term goals to manage these resources include reduction and/or elimination of pollutants; improvement of water quality; improvement and restoration of natural habitat; and increased public awareness of the value of watershed quality. The Management Plan recommends development setbacks along each watercourse in the City based on biological, hydrological, and land use characteristics for various watercourse types. The recommended setbacks within a designated management area includes a riparian corridor, a development setback area, and an additional area that extends from the outward edge of the development area. The riparian corridor[2] is adjacent to the watercourse and is the width of a riparian and/or immediate watercourse influence area and is measured from the centerline of the watercourse. The

[1] Mima mounds are A land form of small, distinct raised hummocks amidst shallow depressions, usually supporting native grasslands (City of Santa Cruz, 1994).

[2] The riparian corridor is intended to provide an adequate riparian width to maintain or enhance habitat and water quality values. Allowable uses within the riparian corridor are limited.

development setback area[3] is the area outward from the edge of the designated riparian corridor where development is restricted, providing a buffer between the riparian corridor and development. The management area, riparian corridor, and development setback area distances vary depending on the watercourse area and its categorization.[4] All distances are measured from the centerline of the watercourse outward as shown on the above schematic. The *Plan* establishes the requirements for obtaining a Watercourse Development Permit, and specifies uses permitted within the designated management area, development setback area and riparian corridor. The *management area* is the area where the watercourse regulations would apply.

The *San Lorenzo Urban River Plan* (SLURP) is the outcome of a planning process initiated by City Council in 1999 to update previous plans for the San Lorenzo River that guided flood control, vegetation restoration and public access improvements along the San Lorenzo River. Only the lower portion of the river is within the coastal zone. The need for updated plans was a result of the river levee improvement project in the late 1990s, listing of steelhead and coho salmon as federally threatened species, and federal designation of the San Lorenzo River as critical habitat for these species. The Plan contains recommendations for habitat enhancement, as well as public access and ideas to promote river-oriented development. One of the key goals of the plan is to enhance and restore biotic values of the river, creek and marsh fish and wildlife habitat.

The SLURP includes the Lower *San Lorenzo River and Lagoon Management Plan* as an appendix, which provides resource management and restoration recommendations within the constraints of providing flood protection. Management and restoration recommendations address: annual vegetation management; summer lagoon water level management; enhancement of the aquatic, shoreline and riparian habitats; and marsh restoration.

Municipal Code Regulations. Section 24.14.080 of the City's Municipal Code includes provisions to protect wildlife habitat and protected species for areas specified in the City's existing General Plan (Maps EQ-8 and EQ-9). Section 24.08.21 also regulates development adjacent to city watercourses, consistent with provisions of the adopted *City-Wide Creeks and Wetlands Management Plan*, including requirements for issuance of a "watercourse development permit." The City of Santa Cruz also regulates heritage trees and shrubs through a Heritage Tree Ordinance. Chapter 9.56 of the City Municipal Code defines heritage trees, establishes permit requirements for the removal of a heritage tree, and sets forth tree replacement requirements as adopted by resolution by the City Council. City regulations require tree replacement for removal of a heritage tree to consist of replanting three 15-gallon size trees or one 24-inch size specimen for each heritage tree approved for removal.

[3] The development setback width is intended to provide an appropriate water quality and habitat buffer between the riparian corridor and development within the remaining management area. New development generally would be limited in this area to landscaping and limited pervious surfaces.

[4] The 25 feet outward from the edge of the development setback is intended to provide an adequate area for permit review and to be consistent with the *Management Plan* goals and City of Santa General Plan/LCP policies to maintain or enhance water quality or riparian habitat values.

Study Area

The project area consists of the downtown area generally covered by the Downtown Recovery Plan (DRP) and the Central Business District zone, and specifically the lower downtown area generally between Soquel Avenue and Laurel Street on the north and south, and Cedar Street and the San Lorenzo River on the west and east. (Locations are shown on Figures 1-2 an d 2-1 in Section 3, Project Description.) The proposed project includes an amendment to the land use designation text for the downtown portion of Regional Visitor Commercial land use designation. The study area includes properties adjacent to the western San Lorenzo River levee.

Existing Habitat Areas

The downtown area, including the project area, is developed and does not support special status species or sensitive habitat. However, the eastern edge of the project area is situated along the western San Lorenzo River levee. The San Lorenzo River and associated habitats in the project area are described in the following section. Properties designated RVC in the City's General Plan are located within developed areas and are not within sensitive habitat areas.

San Lorenzo River Setting

The San Lorenzo River is the major watercourse through the City and a major physical feature in the City. The river originates in the Santa Cruz Mountains and traverses through the center of the City. The study area is located adjacent to an approximate .26-mile segment of the river between Soquel Avenue and Broadway.

Following severe flooding in downtown Santa Cruz in the winters of 1938, 1941, and 1955, the ACOE completed a flood control project along San Lorenzo River in 1959 that straightened and confined the river within its current configuration. The project created a channelized flood control channel for the river's lower 2.5 miles below Highway 1. The project included rip-rap levee banks, removal of all vegetation from the banks, and dredging of the river channel bottom with an excavated channel. Operation and maintenance for the original project included annual excavation of the channel, but this proved to be economically and environmentally infeasible for the City (Dudek, August 2016). Significant flood improvements along the river were completed in 2000 as part of the ACOE's San Lorenzo River Flood Control and Environmental Restoration Project. This project raised the river levee heights, provided landscaping and improved the pedestrian/bicycle path on the levee, and rehabilitated three of the four downtown bridges (over the San Lorenzo River) to increase flood flow capacity. The habitat enhancement efforts focused on the land side of the levees in the study area which were landscaped with native trees, shrubs, and groundcover.

The project area is within the "Transitional Reach" of the San Lorenzo River as described in the SLURP. This reach includes the area from Laurel Street Bridge to the Water Street Bridge. Water

levels in this area are influenced by seasonal closures at the downsteam river mouth. When a sandbar creates a closed lagoon at the river mouth, this reach fills with freshwater; at times when there is no sandbar closure, extreme tides can bring saltwater into this reach. During most of the year, this reach is freshwater and includes important riparian habitat areas along San Lorenzo Park to the north of the study area (City of Santa Cruz, June 2003).

San Lorenzo River Habitats

The habitat types most common along the San Lorenzo River within the City of Santa Cruz are ruderal grassland, mixed riparian forest, willow thickets, freshwater marsh, and brackish water tule marsh. The three most prevalent plant communities along the river in the project area are urban landscape, ruderal grassland and mixed riparian forest (City of Santa Cruz, June 2003, Appendix C).

Native riparian tree species present include arroyo willow (*Salix lasiolepis*), white alder (*Alnus rhombifolia*), yellow willow (*Salix lucida* ssp. *lasiandra*), black cottonwood (*Populus trichocarpa*), redwood (*Sequoia sempervirens*) and box-elder (*Acer negundo*). Broadleaf cattail (*Typha latifolia*), floating primrose (*Ludwigia peploides* ssp. *peploides*), and longroot smartweed (*Persicaria amphibia*) are most common in the freshwater marsh habitats in the upstream area, and California bulrush (*Schoenoplectus californicus*) becomes the dominant marsh plant along the water's edge in the downstream areas subject to tidal influence and brackish lagoon conditions. The levee crests are paved and the levee-top ruderal community is regularly mowed and weed-whipped for fire suppression and offers relatively little habitat value (Kittleson Environmental Consulting, January 2016).

Waterside levee slopes throughout the project area are dominated by ruderal grassland with scattered coyote brush (*Baccharis pilularis*), red valerian (*Centranthus ruber*), fennel (*Foeniculum vulgare*), field mustard (*Brassica rapa*) and ice plant (*Carpobrotus edulis*). Dominant species include perennial ryegrass (*Festuca perennis*), wild oat (*Avena fatua*), Himalayan blackberry (*Rubus armeniacus*) and ripgut brome (*Bromus diandrus*). Rip-rap, rock slope protection underlies the waterside levee embankments and is exposed in many places just below the levee crest. Soils placed by the ACOE contractors over newly placed rip-rap on the east side levee have partially eroded in the 15 years since placement, and rock is now visible within the ruderal grasses on the upper slope. Abundant California ground squirrels (*Spermophilus beecheyi*) are present throughout the levees (Kittleson Environmental Consulting, January 2016).

Landside levee slopes were landscaped with a broad assemblage of native trees, shrubs and forbs during the 1999-2003 San Lorenzo River Flood Control Improvement Project. Fence line trees and adjacent landscape shrubs represent a broad mix of native and introduced species (Kittleson Environmental Consulting, January 2016).

San Lorenzo River from the Soquel Avenue Bridge to the Railroad trestle bridge near the river mouth covers approximately 47 acres and is characterized by a single, wide channel that is less heavily vegetated with willow riparian vegetation on its margins and is characterized by

relatively abundant bulrush occurring in a narrow band along both sides of the water's edges. In addition to the numerous ruderal species mentioned above, weedy species such as kikuyugrass (*Pennisetum clandestinum*) and yellow sweet clover (*Melilotus albus*) are prevalent along much of the waterside levee toe (Kittleson Environmental Consulting, January 2016).

The river supports fish species, and a variety of wildlife species utilize the river habitats, particularly avian species. A fall bird survey conducted in 2015 reported that 103 species of birds were observed between the river mouth and Highway 1 during September, October and November 2015. A total of 9,036 birds were identified and counted, representing a wide range of year-round resident waterfowl, wading birds, raptors, songbirds, and migratory species (Kittleson Environmental Consulting, January 2016).

San Lorenzo River Maintenance

The City of Santa Cruz conducts annual vegetation thinning and periodic sandbar "ripping" in certain areas to minimize channel roughness and to facilitate sediment transport though the reach. The City holds a ACOE Section 404 nationwide permit (NWP File 268761S) and obtains CDFW Streambed Alteration Agreements for these activities. River channel maintenance also is permitted by a 5-year Streambed Alteration Agreement (SAA) issued by the CDFW. The SAA allows for routine maintenance activities, including removal of sediment, vegetation and logs in channel beds and vegetation control on banks. The SAA includes 66 "avoidance and minimization measures" to avoid or minimize adverse impacts to fish and wildlife resources, including tree and vegetation replacement under specified conditions. The annual maintenance program limits the size of riparian trees to less than four inches in diameter at breast height, and creates 4 to 10-foot wide riparian strands of immature willow, alder, cottonwood, and California sycamore (*Platanus racemosa*) at the levee toes and on the edges of instream islands. This annual maintenance activity significantly limits bird nesting opportunities by creating sparse riparian patches. The semi-annual bed-ripping activities required to maintain hydraulic capacity in this reach also result in dry sand and gravel bar habitats in the areas upstream of the Water Street Bridge (Kittleson Environmental Consulting, January 2016). Within the project area, typical maintenance is limited to vegetation thinning, mowing, and landscaping of landside levee slopes.

Sensitive Habitat Areas

Sensitive habitats generally include riparian habitat and corridors, wetlands, habitats for legally protected species and CDFW Species of Special Concern, areas of high biological diversity, areas providing important wildlife habitat, and unusual or regionally restricted habitat types. The California Natural Diversity Data Base (CNDDB), managed by CDFW, maintains a working list of "high priority" habitats for inventory (i.e., those habitats that are rare or endangered within the borders of California). CNDDB "high priority" habitats are generally considered sensitive habitats under CEQA.

The project area is currently developed. According to maps developed for the City's General Plan 2030 and included in the General Plan EIR, the project area is not within a mapped sensitive

habitat area (City of Santa Cruz, April 2012, DEIR volume). However, the project area is located adjacent to the San Lorenzo River levees, and the river is mapped as a sensitive riparian habitat in the General Plan 2030. The river also supports special status species as described in the following section. The southern portion of the project study area is located within the coastal zone. The segment of the San Lorenzo River adjacent to the project area also is mapped as sensitive riparian habitat in the City's LCP (City of Santa Cruz, 1994, Map EQ-9).

Special Status Species

Special-status species include species listed as Threatened or Endangered under provisions of the federal ESA and species listed as Rare, Threatened, or Endangered by the state of California under provisions of the CESA and NPPA. Species formally proposed for federal listing by the USFWS are afforded limited legal protection under ESA. Other special-status plant species are those on List 1A, List 1B, or List 2 of the California Native Plant Society (CNPS) *Inventory of Rare and Endangered Vascular Plants of California*. These species are subject to state regulatory authority under CEQA. California "Species of Special Concern" are given special consideration by the CDFW because they are biologically rare, very restricted in distribution, declining throughout their range, or at a critical stage in their life cycle when residing in California or taxa that are closely associated with a habitat that is declining in California (e.g., wetlands) (City of Santa Cruz, April 2012, DEIR volume).

No plant species listed as threatened or endangered by the USFWS or the CDFW are expected to occur in the study area. No species ranked by the California Native Plant Society (CNPS) on List 1 were observed or are expected to be present.

Special status wildlife species known to occur or have potential to occur within the San Lorenzo River and lower San Lorenzo River adjacent to the Main Beach include steelhead (*Oncorhynchus mykiss*), coho salmon (*Oncorhynchus kisutch*), tidewater goby, western pond turtle (*Emys marmorata*), tricolored blackbird (*Agelaius tricolor*), and yellow warbler (*Setophaga petechia*). These species are found within the San Lorenzo River habitats. Steelhead and coho salmon are anadromous fish, spending time in both freshwater and saltwater. The coho salmon population in the San Lorenzo River is identified as being nearly extirpated, however the watershed is identified as a focus population for recovery by the NOAA Fisheries (Dudek, August 2016).

Some bird species are only occasional visitors, such as osprey (*Pandion haliaetus*), a CDFW Watch List (WL) species; olive-sided flycatcher (*Contopus cooperi*), a Species of Special Concern (SSC); and migrating willow flycatchers (*Empidonax traillii*), which are state-listed as endangered (SE), but only where they nest. Others use the area for foraging but do not nest there (e.g., merlin (*Falco columbarius*; WL), peregrine falcon (*Falco peregrinus*; state fully protected and federally delisted), and Vaux's swift (*Chaetura vauxi*; CSC). Brown pelican (*Pelecanus occidentalis*), double-crested cormorant (*Phalacrocorax auritus*), and yellow warbler (*Dendroica petechia brewsteri*), all Species of Special Concern have been reported along the river (City of Santa Cruz, April 2012, DEIR volume).

The California red-legged frog (*Rana draytonii*) is a federally listed threatened species that was historically widely distributed in the central and southern portions of California. The species requires still or slow-moving water during the breeding season, where it deposits large egg masses, usually attached to submergent or emergent vegetation. Breeding typically occurs between December and April, depending on annual environmental conditions and locality. CRLFs are known to exist in the upper San Lorenzo River watershed in Bean Creek and Mountain Charlie Gulch approximately 8 miles north but are not known to occur at proposed project site. The closest known breeding site is the pond at the University of California Santa Cruz (UCSC) Arboretum approximately 1.9 miles west of the project area. The Arboretum pond is in the headwaters of the Moore Creek watershed, which drains the far west side of the city of Santa Cruz. CRLFs are also known to occur in the lower Moore Creek Preserve and the upper reaches of Antonelli Pond, approximately 2.5 miles southwest of the proposed project site (Dudek, August 2016).

CRLFs are not known to occur in the San Lorenzo River or the nearby Neary Lagoon Wildlife Preserve. Other studies in the project area indicate that the species appears to have been extirpated from the lower San Lorenzo River drainage, and the area was excluded from the USFWS critical habitat designation (City of Santa Cruz, July 2005). Additionally, scouring flows that occur during winter and into early spring probably make the river unsuitable for breeding.

Discussion of special status species known to occur in the project area is provided below.

- *Central California Coast (CCC) Steelhead* (*Oncorhynchus mykiss*). The Central California Coast (CCC) steelhead is a federally-listed threatened species. The CCC steelhead ESU (Evolutionarily Significant Unit) includes steelhead in coastal California streams from the Russian River to Aptos Creek, and the drainages of Suisun Bay, San Pablo Bay, and San Francisco Bay, California. CCC steelhead occur in the San Lorenzo River; the river, including the project area, is designated as critical habitat for CCC steelhead. "Critical habitat" is habitat key to the survival of threatened and endangered species, which may require special management considerations or protection. Essential features of critical habitat for steelhead in the project area are estuarine areas free of obstruction and excessive predation with water quality, water quantity, and salinity conditions supporting juvenile and adult physiological transitions between fresh- and saltwater; natural cover such as submerged and overhanging large wood, aquatic vegetation, large rocks and boulders and side channels; and juvenile and adult forage, including aquatic macroinvertebrates and fishes, supporting growth and maturation (Hagar Environmental Science, March 2015). Although variation occurs in coastal California, steelhead usually live in freshwater for one to three years in central California, then spend an additional one to three years in the ocean before returning to their natal stream to spawn.

  Steelhead are present in the project area throughout the year and use the reach for migration to and from the upper watershed during winter and spring, typically from

December through mid-June. The project area provides habitat for migrating steelhead adults and smolts, and the reach to the east of the project area serves as juvenile rearing habitat when lagoon habitat conditions are favorable in summer and fall.

In general, the reach downstream of Soquel Avenue Bridge has limited willow riparian habitat and has narrow tule stands along the edge of water. The riverbed is generally flat and composed primarily of sand with some gravel. Depths are less than 2 feet, but vary with the tides when the lagoon is open. Large instream woody debris, overhanging riparian trees and other potential fish cover are limited in the project reach.

- *Central California Coast (CCC) Coho Salmon* (*Oncorhynchus kisutch*). The Central California Coast (CCC) coho salmon is a state and federally-listed endangered species. The CCC coho salmon ESU (Evolutionarily Significant Unit) ranges from Punta Gorda in southern coastal Humboldt County to Aptos Creek in Santa Cruz County, and the drainages of San Francisco Bay, California. CCC coho salmon historically have occurred in San Lorenzo River. The San Lorenzo River, including the project area, is designated as critical habitat for CCC coho salmon. For coho salmon, essential habitat types in the project area include: juvenile (smolt) migration corridors and adult migration corridors.

  The San Lorenzo River is at the extreme southern end of the range of coho salmon. Recent information documents CCC coho salmon abundance is very low. A self-sustaining run of wild coho has been presumed to be extirpated from the San Lorenzo River since the drought of the late 1980s. Small numbers of adult coho salmon have been observed in the San Lorenzo River in recent years during trapping operations conducted at the Felton Diversion Dam by the Monterey Bay Salmon and Trout Project. The number of coho captured peaked at 183 adults in 1989-1990. In most years, however, few coho have been captured. Possible origins for these fish include: straying from more hospitable nearby drainages including San Vicente, Scott and Waddell Creeks; return of hatchery reared fish released in various locations in the San Lorenzo drainage; and returns from natural production in the basin. No juvenile coho salmon were captured during electrofishing surveys conducted throughout the San Lorenzo River watershed (including both mainstem and tributary locations) between 1994 and 2002 (Hagar Environmental Science, March 2015). The coho salmon population in the San Lorenzo River is identified as being nearly extirpated, however the watershed is identified as a focus population for recovery by the National Marine Fisheries Service (Ibid.).

- *Tidewater Goby.* Tidewater goby (*Eucyclogobius newberryi*) is a federally-listed endangered species, but has been proposed for reclassification as threatened. Tidewater goby also is a State Species of Special Concern. The San Lorenzo River, including the project area, is not within the designated critical habitat for tidewater goby. The tidewater goby is a small, short-lived species that inhabit coastal brackish water habitats entirely within California, ranging from Del Norte County near the Oregon border to northern San Diego County. The species is uniquely adapted to coastal lagoons and the

uppermost brackish zone of larger estuaries, rarely invading marine or freshwater habitats. Tidewater gobies are known to be preyed upon by native species such as small steelhead, prickly sculpin (*Cottus asper*), and staghorn sculpin (*Leptocottus armatus*) (Hagar Environmental Science, March 2015).

Certain physical or biological features and habitat characteristics are believed to be required to sustain the species' life-history processes. These include persistent, shallow (in the range of approximately 0.3 to 6.6 feet), still-to-slow-moving lagoons, estuaries, and coastal streams with salinity up to 12 ppt, that contain one or more of the following:

a) Substrates (e.g., sand, silt, mud) suitable for the construction of burrows for reproduction;
b) Submerged and emergent aquatic vegetation that provides protection from predators and high flow events; or
c) Presence of a sandbar(s) across the mouth of a lagoon or estuary during the late spring, summer, and fall that closes or partially closes the lagoon or estuary, thereby providing relatively stable water levels and salinity (Hagar Environmental Science, March 2015).

Tidewater goby are present in the San Lorenzo Lagoon and have been observed ion the project area. Tidewater goby was identified in the San Lorenzo Lagoon and lower Branciforte Creek Flood Control Channel in 2004. Prior to that time, the species was not known to occupy the San Lorenzo River or Lower Branciforte Creek. During dewatering for major embankment construction by the ACOE, 11 tidewater goby were found in the San Lorenzo River lagoon and, later that fall, numerous tidewater gobies were found in the lower, tidally influenced reach below Ocean Street in the Branciforte Creek concrete channel. Tidewater goby were observed as far upstream as the Water Street Bridge during instream debris removal activities in 2016 (Kittleson, personal communication, 2017).

- ❒ *California Species of Special Concern*. Western pond turtle (*Emys marmorata*) and yellow warbler are California "species of special concern," which are taxa given special consideration because they are biologically rare, very restricted in distribution, declining throughout their range, or at a critical stage in their life cycle when residing in California or taxa that are closely associated with a habitat that is declining in California (e.g., wetlands) (City of Santa Cruz, September 2011). Western pond turtles are known to occur in the San Lorenzo River adjacent to the project area, although they are not known to breed in the project area (Kittleson, personal communication, May 2017). At least one individual Western pond turtle has been observed in the upper transitional reach of the river, in 2015, 2016, and 2017. No western pond turtle records are known from the lower transitional reach in the project area, but suitable habitat exists throughout the lower San Lorenzo River.

Yellow warbler is a potential nesting bird species that occurs in occasional high numbers in migration seasons. Yellow warblers seem to favor willow riparian woodlands in the project area and an average of 3.6 yellow warblers per visit were observed in the fall 2015 surveys. No breeding records are known from the project impact area, but that may reflect a paucity of breeding season observations (Kittleson Environmental Consulting, June 2016).

Tricolored blackbird is a potential nesting bird species that utilizes dense wetland vegetation like that found along San Lorenzo River north of the Water Street Bridge. There are no records of tricolored blackbird nesting activity in the lower San Lorenzo River or elsewhere in the San Lorenzo Watershed (Kittleson Environmental Consulting, June 2016).

Wildlife Movement and Breeding

San Lorenzo River provides habitat for migrating steelhead adults and smolts. For coho salmon, essential habitat types include juvenile (smolt) and adult migration corridors. Although variation occurs in coastal California, steelhead usually live in freshwater for one to three years in central California, then spend an additional one to three years in the ocean before returning to their natal stream to spawn. Steelhead may spawn one to four times over their life. Adult CCC steelhead typically immigrate from the ocean to freshwater between December and April, peaking in January and February, and juveniles migrate as smolts to the ocean from January through May, with peak emigration occurring in April and May (Dudek, August 2016).

Wildlife corridors are segments of land that provide a link between these different habitats while also providing cover. Wildlife dispersal corridors, also called dispersal movement corridors, wildlife corridors or landscape linkages, are features whose primary wildlife function is to connect at least two significant or core habitat areas and which facilitate movement of animals and plants between two or more otherwise disjunct habitats (City of Santa Cruz, April 2012, DEIR volume). Three main corridors have been identified within the City that could provide connectivity between core habitats within or adjacent to the city: western corridor (Moore Creek), central corridor (San Lorenzo River and major tributaries), and eastern corridor (Arana Gulch). The San Lorenzo River and two of its main tributaries, Branciforte Creek and Carbonera Creek, create a potential wildlife corridor in the central portion of the City. Here, a relatively narrow strip of riparian habitat could provide opportunities for wildlife movement between the San Lorenzo River lagoon region and core habitat located within and adjacent Pogonip, UC Santa Cruz, and Henry Cowell (via the San Lorenzo River) and DeLaveaga Park, via Branciforte and Carbonera Creeks (Ibid.).

There are areas along the San Lorenzo River of known bird nesting sites. Native cliff swallows (*Petrochelidon pyrrhonota*), northern rough-winged swallows (*Stelgidopteryx serripennis*) and black phoebes (*Sayornis nigricans*) nest on the bridges that cross the San Lorenzo River. Non-native rock pigeons (*Columba livia*) and house sparrows (*Passer domesticus*) also make use of

the bridges. Other native bird species including pie billed grebe (*Podilymbus podiceps*), marsh wren (*Cistothorus palustris*), song sparrow (*Melospiza melodia*), Anna's hummingbird (*Calypte anna*) and hooded oriole (*Icterus cucullatus*) have been observed nesting in the emergent marsh wetland and willow/cottonwood riparian habitats in the transitional reach of the San Lorenzo River. While killdeer (*Charadrius vociferus*) are known to nest downstream in Mike Fox Park, no ground nesting birds are known to successfully nest in the project area, due to regular human disturbance on the levee slopes and limited available habitat between the levees.

San Lorenzo River Plans

The *City-wide Creeks and Wetlands Management Plan* establishes requirements for structural setbacks and development standards and guidelines that would be applicable to future development along watercourses within the City. Properties within the "management area" defined in the Plan must comply with provisions of the Plan regarding riparian and development setbacks unless an area is governed by a specific management plan. Within the project area, the eastern edges of some properties on the east side of Front Street between Laurel Street and Soquel Avenue are within the defined management area of the San Lorenzo River. Riparian and development setbacks for the San Lorenzo River are not established in the Creeks Plan, but rather, according to the Creeks Plan, all projects in this area are subject to provisions of the SLURP.

The project area is within the "Transitional Reach" of the San Lorenzo River in the SLURP. This reach includes the area from Laurel Street Bridge to the Water Street Bridge. Recommended improvements in the study area include:

- Front Street Plaza at Cathcart or Maple Lane: Construction river view plaza; add riverway makers, directional and interpretive and public art opportunities
- Mimi de Marta Park:
- Urban Interface Connections – the goal of the urban interface connections in the Transitional Reach is to provide features that connect downtown areas with the river via "green corridors" of trees and landscaping via Cathcart St and Maple Lane to the River.

The project area also is located along the "Front Street Riverfront Area" identified in the SLURP as a significant riverfront area that is a prime opportunity site to engage the community with the river with improved public access being a primary goal of the SLURP. Twelve existing specific recommendations for this area are included in the SLURP; those pertinent to the discussion of biological resources include:

- ❒ Maintain maximum heights to 50 feet with development above 35 feet in height stepping back at least 10 feet at an angle not to exceed 42 degrees.
- ❒ Maintain the ten-foot setback area between residential and commercial uses adjacent to the levee trail from the western edge of the trail. The setback area should be filled to raise the adjacent ground-level use to the same elevation as the levee trail. This area should also incorporate outdoor public seating or visually accessible garden space for

residential development. Trees planted as part of the San Lorenzo Flood Control Improvement Project should be maintained and incorporated into new development.

4.3.2 Impacts and Mitigation Measures

Thresholds of Significance

In accordance with the California Environmental Quality Act (CEQA); State CEQA Guidelines (including Appendix G); City of Santa Cruz plans, policies, and/or guidelines; and agency and professional standards, a project impact would be considered significant if the project would:

3a Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service;

3b Have a substantial adverse effect, either directly or through habitat modifications on; or substantially reduce the number or restrict the range of any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;

3c Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

3d Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;

3e Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;

3f Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan;

3g Substantially reduce the habitat of a fish or wildlife species;

3h Cause a fish or wildlife population to drop below self-sustaining levels; or

3i Threaten to eliminate a plant or animal community.

Analytical Method

The proposed project consists of amendments to the City's Downtown Recovery Plan, General Plan, Local Coastal Plan and Zoning Code regarding development in the downtown area and Central Business District. The proposed project would not directly result in new development. However, the proposed Downtown Plan amendment would expand areas for potential additional building height that could accommodate intensified redevelopment of existing developed sites.

The proposed General Plan amendment would increase FAR in downtown areas designated as RVC in the General Plan. The proposed LCP and Zoning Code amendments would not result in changes that could indirectly lead to intensified development. The impact analysis is based on review by local biologist, Gary Kittleson (Kittleson Environmental Consulting) in consultation with Dudek biologists, including review of existing data and studies.

Impacts and Mitigation Measures

The proposed Downtown Plan and General Plan amendments would expand areas for potential additional building height that could accommodate intensified redevelopment of existing developed sites. Thus, future development would not remove or alter sensitive habitat (3b, 3g) or result in permanent fill of wetlands or future development with wetlands or waters of the U.S., and thus would not result in direct or indirect impacts to wetland habitat (3c). The project area is within an existing developed area, and future redevelopment would not affect wildlife movement along the river corridor as future development would be within the existing development footprint in the downtown area. Therefore, adoption and implementation of the proposed plan amendments would not directly or indirectly substantially interfere with wildlife movement or with established wildlife corridors (3d). The proposed amendments to not conflict with policies or regulations protecting biological resources (3e) and there are no Habitat Conservation or Natural Community Plans in the area (3f). The proposed project would not directly or indirectly cause a fish or wildlife species to drop below self-sustaining levels or threaten to eliminate a plant or animal community (3h, 3i).

A comment was raised regarding the potential for subsequent development under the proposed Plan amendments to create an "urban heat island" that would affect riparian vegetation. The phrase "urban heat island" refers to the effect of urbanized areas on surface and air temperature compared to their rural surroundings. Buildings, roads, and other "hardscape" create an island of higher temperatures within the regional landscape. This is addressed in Section 4.2, Air Quality and Greenhouse Gas Emissions.

The following impact analyses address potential indirect impacts to special status species (3a) and sensitive habitat (3b) within the San Lorenzo River corridor, potential impacts to nesting species (3d).

Impact 4.3-1: Indirect Impacts to Special Status Species and Aquatic Habitat. Future development of taller buildings as a result of the proposed Downtown Plan amendments could result in indirect to impacts to riparian and aquatic special status species due to increased shading due to increased building heights, but would not substantially affect habitats (3a). This is considered a *less-than-significant* impact

Additional building height and the resultant increase in shade is not likely to impact the established native riparian tree species in the area. Arroyo willow, white alder, black

cottonwood, and box-elder are all shade-tolerant tree species that are scattered singly along the linear landside slope of the levee and along the water's edge. The maturing landside riparian trees were planted for habitat enhancement and landscape value during the 1999-2003 levee raising project, and some are now greater than 50 feet in height. The waterside riparian trees in lower San Lorenzo River are all subject to regular vegetation management, which limits the size of both individual trees and the width of the riparian buffer zone on the riverbank. Riparian species along the project reach are deciduous and lose leaves during the winter.

Under the proposed building height increases, adjacent riparian habitat will receive less sunlight in late afternoon in winter months, when the potential impact to trees is lessened by their deciduous state. Shading would not substantially change during other times of the year as shown on Figure 4.3-1, which illustrates the change in shadows created by taller buildings with the proposed additional height. As a result, no adverse impacts related to shading are anticipated to either the landside or waterside riparian species.

Cattail, matted water primrose, water smartweed, and tule/bulrush are the dominant marsh plants along the water's edge, which will receive less sunlight in late afternoon in winter months. Due to the distance from proposed structures, increased shade is not anticipated to affect the marsh vegetation. The levee crests are paved and the levee-top ruderal community is regularly mowed and weed-whipped for fire suppression and offers relatively little habitat value under existing or proposed conditions (Kittleson Environmental Consulting, January 2016).

Water temperatures in the lagoon are unlikely to be impacted by the additional building heights. The existing lack of shaded riverine aquatic habitat in the lower San Lorenzo River results in high water temperatures in the lagoon system, particularly in the late summer and fall. These high temperature conditions can be deleterious to salmonid species. High water temperatures and poor water quality conditions are exacerbated by seasonal lagoon closures and low flow conditions into the lagoon. Increased building shadows will not affect direct mid-day solar inputs during any season. High water temperatures are not an issue during winter when added late-afternoon shade may fall on the project reach.

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

Impact 4.3-2: **Indirect Impacts to Sensitive Riparian Habitat.** Future development of taller buildings as a result of the proposed Downtown Plan amendments could result in indirect impacts to birds in the area that could lead to bird mortalities (3b). This is a *potentially significant* impact

The proposed project would not result in new development, and potential future development that could occur as a result of the proposed plan amendments would not be located within riparian or other sensitive habitat areas. Thus, there would be no direct removal of habitat.

Future buildings would be set back from the western edge of the river levee by at least 10 feet which is consistent with City plans. The City-wide Creeks and Wetlands Management Plan references the SLURP as the guiding management plan for the area. The SLURP recommends a 10-foot setback between development and the western edge of the river levee, which also is a SLURP LCP policy. Both the existing and proposed Downtown Plan and LCP policies maintain this setback area, although the LCP policy includes minor language revisions related to use of publicly accessible lands (see revisions in Appendix C). The SLURP recommendations also seek to improve and enhance public access/use of the levee and adjacent areas. The proposed DRP amendment requires that residential and outdoor commercial uses adjacent to the Riverwalk not be sited closer than 10 feet from the western edge of the physical walkway, except where "people-oriented" commercial uses incorporate public access points to the Riverwalk. Therefore, future development accommodated by the Plan amendments would be sited to be consistent with the required setbacks.

The project will result in amendments to the DRP that would allow additional building heights under specified conditions. The proposed project includes both expansion of the Additional Height Zone south of Soquel Avenue along the river and elimination of the SLURP LCP policy to limit heights to 50 feet in the Front Street/Riverfront area. This policy is proposed to be eliminated due to the proposed additional height allowance. The policy was taken from the SLURP, which was intended as a resource protection programmatic guide and not a land use planning document. (See Section 4.9, Land Use, for further discussion.)

Generally building heights along the San Lorenzo River between Soquel Avenue and Broadway could increase from 50 feet under existing plans to 70 feet with the proposed amendments. The extent of the potential increase height would be limited; the proposed Downtown Plan amendments require the top floor of Front Street properties to not exceed 60% of the floor below and 60% of the building length, thereby avoiding a linear wall of building mass. The Downtown Plan allows for consideration or an exception to these standards when a publicly accessible accessway is included as part of the project site upon approval by the City Council upon a positive recommendation by the Planning Director. Additionally, along the west side of the Riverwalk along San Lorenzo River, a 10-foot setback from the exterior building face would be required for development above 50 feet, and the 10-foot setback would be required for at least 50% of the building frontage along Front Street above a height of 50 feet. However, the proposed amendments allow up to 25% of the Riverwalk building frontage to encroach into the required 10-foot setpback area to provided massing variation. The proposed amendments also permit top floor cantilevered portions of the building to encroach over the property line a maximum of 5 feet in order to provide architectural interest to the façade, which shall not exceed 25 percent of the total building frontage along the riverfront. Nonetheless, the potential additional building would not likely result in full coverage of additional floors.

Concerns have been raised regarding potential hazards taller buildings may pose hazards to birds due to placement of reflective windows and/or lighting. Glass windows on buildings of all kinds are a known hazard to birds and cause the deaths of as many as a billion birds a year in the

United States alone (Klem, March 2009). Individual buildings have been estimated to cause one to ten deaths per building per year, while at least one study documented commercial buildings at one location to cause as many as 55 deaths per year (Klem, March 2009, Hager et al., September 2008). The hazard of buildings to birds can vary depending on several aspects of building design, including the amount of glass used, the type of glass used, and the proportion of windows reflecting surrounding vegetation (American Bird Conservancy, 2015, Klem et al., March2009). The two primary hazards of glass for birds are reflectivity and transparency. Viewed from outside buildings, transparent glass often appears highly reflective. Reflective glass presents birds with the appearance of safe routes, shelter, and food. Buildings surrounded by lush landscaping may attract more birds, and reflections of vegetation in windows adjacent to these habitats may lure birds. Green spaces inside buildings, too, may entice birds to inaccessible habitat.

Windowed courtyards and open-topped atria can be hazardous, especially if they are landscaped. Birds fly into developed spaces, and when flushed may attempt try to leave by flying directly toward reflections. Glass skywalks, handrails and building corners with glass are also dangerous because birds can see through them to sky or habitat on the other side. As the amount of glazing increases on a building, the threat also increases. A study in New York found a 10% increase in the area of reflective and transparent glass on a building façade correlated with a 19-32% increase in the number of fatal collisions, in spring and fall, when visiting migrants are present (Klem et al, March 2009).

At night, artificial light degrades the quality of migratory corridors. Flood lights on tall buildings or intense lights that emit light fields that entrap birds reluctant to fly from a lit area into a dark one. This type of lighting has resulted in documented mass mortalities of birds (Evans Ogden, September 1996). Lights disrupt birds' orientation. Birds may cluster around such lights, increasing the likelihood of collisions with the structure or each other. In addition to the hazard from collisions, vital energy stores are consumed in such nonproductive flight. The combination of fog and light doubly affects birds' navigation and orientation (Ibid.). Migrating birds typically fly at heights over 500 feet, but often descend to lower altitudes during bad weather, where they may encounter artificial light from buildings. Water vapor in fog or mist refracts light, greatly increasing the illuminated area around light sources. Birds circle in the illuminated zone, appearing disoriented and unwilling or unable to leave (Evans Ogden, September 1996). They are likely to succumb to lethal collisions, exhaustion, and predators.

A notable, established monitoring program of bird-building collisions is NYC Audubon's Project Safe Flight in Manhattan. Project Safe Flight documented over 5,400 collisions between 1997-2008. Another study (Gelb and Delacretaz, 2009) analyzed this data to determine the critical contributing factors for the structures with the largest number of bird fatalities. The study looked at the 10 most deadly collision sites and found the combination of open space, vegetation, and large windows (greater than 1 meter x 2 meter) to be more predictive of death than building height. The frequency of collisions is highest along façades that have lush exterior vegetation and either reflective or transparent windows. The majority of the collisions occurred

during the daytime and involved migrant species. High-rise buildings and night lighting presented less risk than windows adjacent to open spaces two and half acres or greater in size. The majority of collisions are likely due to high collision sites that feature glass opposite exterior vegetation. The most dangerous building in this study was not a high-rise, but instead was a 6-story office building adjacent to densely vegetated open space.

Increasing the limits on building heights adjacent to the San Lorenzo River could result in impacts to birds from two causes: (1) an increase in the area of glass that would result in mortality to birds mistaking the reflective glass as safe passage to habitat beyond, and (2) an increase in the amount of lighting and the resultant potential for mortality of birds related to disorientation during migration. Most strikes to buildings due to reflective windows are thought to occur closer to the ground (American Bird Conservancy, 2015). Therefore, effects from reflective glass may be lower below 50 feet than above. Also, effects from reflective glass above 50 feet would be partly minimized by the proposed setback requirements that floors above 50 feet occupy no more than 60% of the area of the floor below and no more than 60% of the building length, and that floors above 50 feet be restricted by a 10-foot setback from the building face where it fronts the Riverwalk along the San Lorenzo River. Because of these restrictions, particularly the setbacks from the building face, relatively little surrounding vegetation would be reflected in these upper floors, a factor that should further limit bird mortality, based on data presented in Klem et al. (March, 2009), which showed the proportion of glass reflecting vegetation was a significant predictor of glass strikes.

However, even given these considerations, the generally accepted notion that greater amounts of glass at any height, during any season, and during day or night results in higher mortality from glass strikes, suggests that the increase in the amount of glass along the San Lorenzo River would likely result in an increase in bird mortality. Additional lighting may also result in increased bird mortality from the increased limit on building height. Therefore, the effects of the increased limit on the heights of buildings along the San Lorenzo River because of increased area of reflective glass and an increase in night-time lighting is a *potentially significant impact*.

Mitigation Measures

Implementation of the following mitigation measure will reduce the impact to a less-than-significant level.

MITIGATION 4.3-2: Revise Downtown Plan to include standard for design guidance for bird-safe structures along the San Lorenzo River, including:

- Minimize the overall amount of glass on building exteriors facing the San Lorenzo River.
- Avoid mirrors and large areas of reflective glass.
- Avoid transparent glass skyways, walkways, or entryways, free-standing glass walls, and transparent building corners.

- Utilize glass/window treatments that create a visual signal or barrier to help alert birds to presence of glass. Avoid funneling open space to a building façade.
- Strategically place landscaping to reduce reflection and views of foliage inside or through glass.
- Avoid or minimize up-lighting and spotlights.
- Turn non-emergency lighting off (such as by automatic shutoff), or shield it, at night to minimize light from buildings that is visible to birds, especially during bird migration season (February - May and August - November).

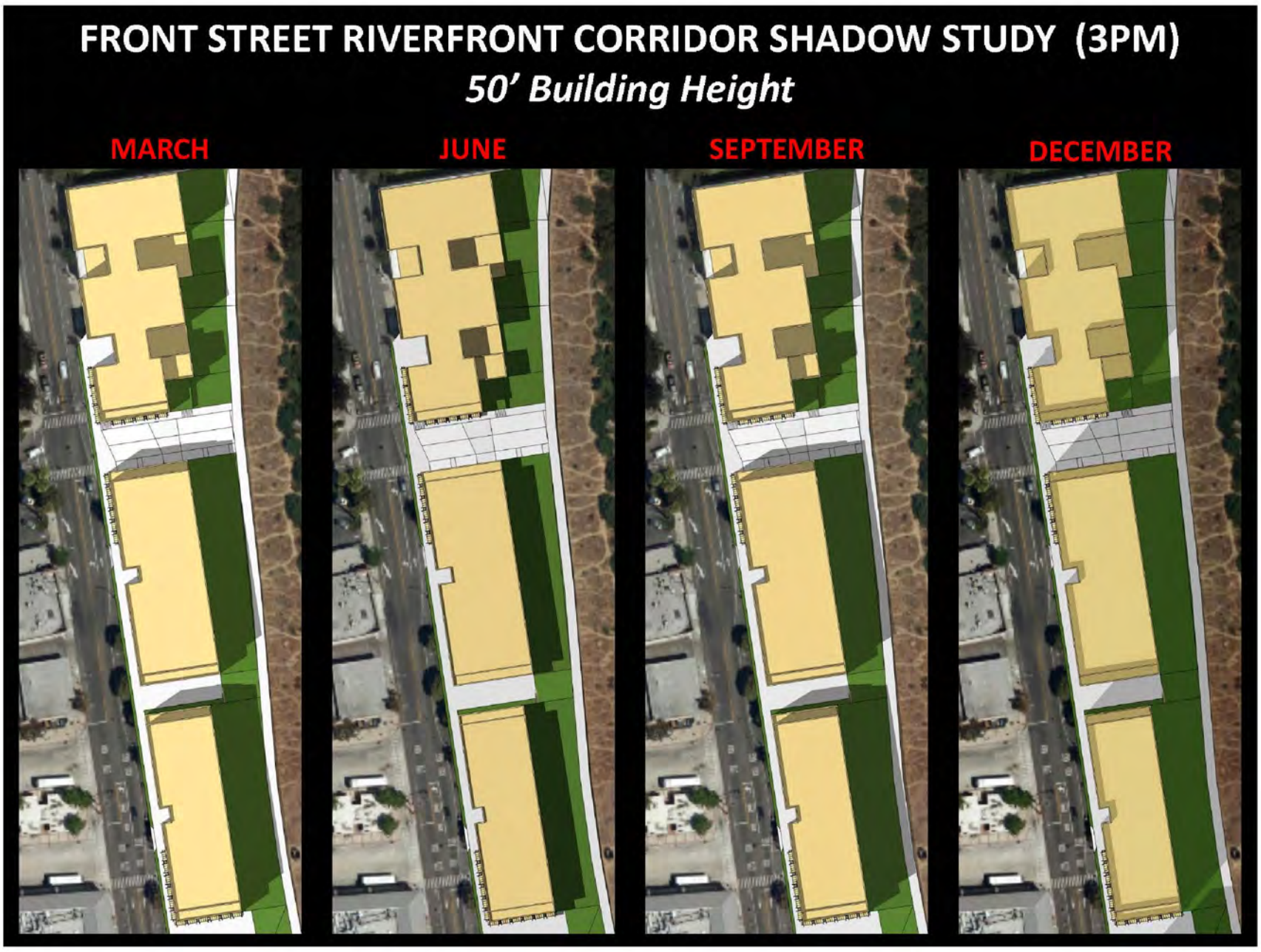
Impact 4.3-3: Indirect Impacts to Nesting Birds. Future development as a result of the proposed Downtown Plan amendments could result in disturbance to nesting birds if any are present in the vicinity of construction sites along the San Lorenzo River (3d). This is a *potentially significant* impact

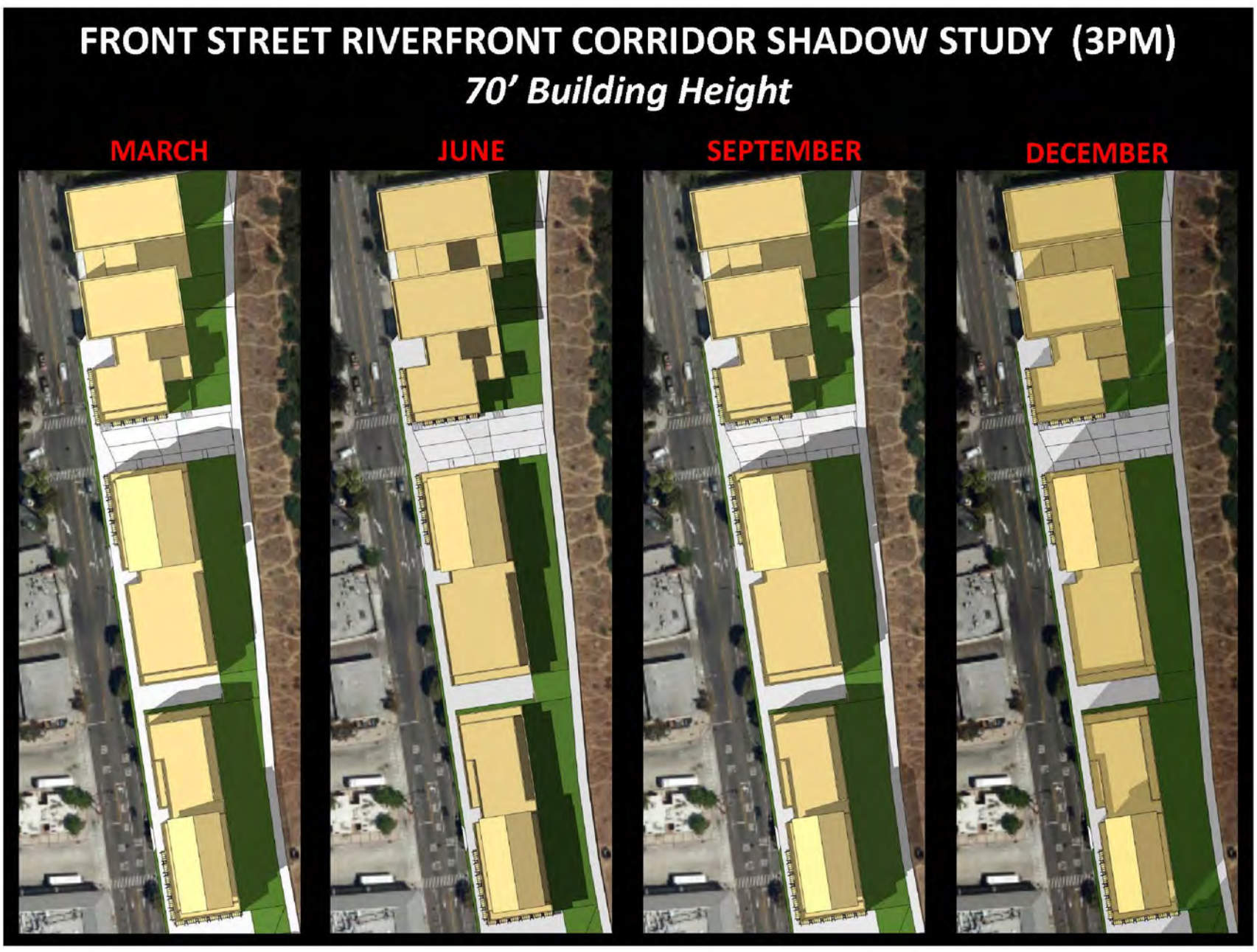
While the project will not directly result in new construction that would affect nesting birds, future development accommodated by the proposed amendments could result in impacts to nesting birds at the time of construction. However, measures in the City-wide Creeks and Wetlands Management Plan include pre-construction surveys where construction may affect nesting birds in order to prevent disturbance if nesting is occurring when construction is initiated. Tree removal during the breeding season (generally March 1 to August 1) also could result in direct mortality to nesting avian species protected under the Migratory Bird Treaty Act (MBTA) due to destruction if active nest sites are present. Construction activity for a prolonged period could affect nesting adults and result in nest abandonment or failure. This is considered *a potentially significant impact*. Implementation of the pre-construction nesting surveys as set forth in the adopted Creeks Plan would reduce impacts to a less-than-significant level.

Mitigation Measures

Implementation of the following mitigation measure will reduce the impact to a less-than-significant level.

MITIGATION 4.3-3: Require that a pre-construction nesting survey be conducted by a qualified wildlife biologist if construction, including tree removal, adjacent to the San Lorenzo River is scheduled to begin between March and late July to determine if nesting birds are in the vicinity of the construction sites. If nesting raptors or other nesting species protected under the MBTA are found, construction may need to be delayed until late-August or after the wildlife biologist has determined the nest is no longer in use or unless a suitable construction buffer zone can be identified by the biologist. (Citywide Creeks and Wetlands Management Plan Standard 12).





DUDEK

SOURCE: McCann Adams Studio

FIGURE 4.3-1

Front Street - Riverfront Corridor Shadow Study

City of Santa Cruz Downtown Plan Amendments EIR

Date: 6/7/2017 Last saved by: Mireia a... Path: Z:\Projects\07110\MAP\DOC\DOCUMENT\EIR\Figure4.3-1_RiverfrontShadowsmxd

4.4 CULTURAL AND TRIBAL CULTURAL RESOURCES

This section analyzes impacts of the proposed project on cultural resources based on a review of existing city plans. Cultural resources encompass paleontological, archaeological, and historic resources. Paleontology is the study of plant and animal fossils; paleontological resources generally are more than 10,000 years old. Archaeology is the study of prehistoric human activities and cultures. Historic resources are associated with the more recent past. In California, historic resources are typically associated with the Spanish, Mexican, and American periods in the state's history (City of Santa Cruz, April 2012, DEIR volume).

This section draws from the City of Santa Cruz *General Plan 2030* EIR (SCH#2009032007), which was certified on June 26, 2012, regarding background information on cultural resources within the City. The General Plan EIR is incorporated by reference in accordance with section 15150 of the State CEQA Guidelines. Relevant discussions are summarized in subsection 4.4.1. The General Plan EIR is available for review at the City of Santa Cruz Planning and Community Development Department (809 Center Street, Room 107, Santa Cruz, California) during business hours: Monday through Thursday, 8 AM to 12 PM and 1 PM to 5 PM. The General Plan EIR is also available online on the City's website at: http://www.cityofsantacruz.com/government/city-departments/planning-and-community-development/general-plan.

Public and agency comments related to visual impacts were received during the public scoping period in response to the Notice of Preparation (NOP). Issues raised in these comments include:

- ❒ Concern regarding potential degradation of the historic district.
- ❒ Concern regarding displacement and/or loss of organizations supporting arts and local cultural events.

To the extent that issues identified in public comments involve potentially significant effects on the environment according to the California Environmental Quality Act (CEQA) and/or are raised by responsible agencies, they are identified and addressed within this EIR. The concern regarding possible displacement of organizations that support arts, music, dance and other cultural programs is not an environmental issue pursuant to CEQA. Public comments received during the public scoping period are included in Appendix B.

4.4.1 Environmental Setting

Regulatory Setting

The following overview of prehistory and history is summarized from the General Plan 2030 EIR (pages 4.9-2 - 4.9-5), which is incorporated by reference.

Federal Regulations

National Register of Historic Places. Federal regulations for cultural resources are primarily governed by Section 106 of the National Historic Preservation Act (NHPA) of 1966, which applies to actions taken by federal agencies. The goal of the Section 106 review process is to offer a measure of protection to sites that are determined eligible for listing on the National Register of Historic Places (NRHP). The criteria for determining NRHP eligibility are found in Title 36 Code of Federal Regulations (CFR) Part 60. Section 106 of the NHPA requires federal agencies to take into account the effects of their undertakings on historic properties and affords the federal Advisory Council on Historic Preservation a reasonable opportunity to comment on such undertakings.

National Historic Landmarks. National Historic Landmarks are nationally significant historic places designated by the Secretary of the Interior because they possess exceptional value or quality in illustrating or interpreting the heritage of the United States. They are places where nationally significant historical events occurred, that are associated with prominent Americans that represent pivotal ideas that shaped the nation, that teach Americans about their ancient past, or that are premier examples of design or construction.

State Regulations

California Register of Historical Resources. The California Register of Historical Resources (California Register) is a guide to cultural resources that must be considered when a government agency undertakes a discretionary action subject to CEQA. The California Register helps government agencies identify, evaluate, and protect California's historical resources, and indicates which properties are to be protected from substantial adverse change (Pub. Resources Code, Section 5024.1(a)). The California Register is administered through the State Office of Historic Preservation (SHPO) that is part of the California State Parks system. A resource must be significant at the local, state, or national level in accordance with one or more of the following criteria set forth in the State CEQA Guidelines at Section 15064.5(a)(3).

In addition to meeting these criteria, the California Register requires that sufficient time must have passes to allow for scholarly perspective, which is generally 50 years according to SHPO publications. The California Register also requires a resource to possess integrity, which is defined as "the authenticity of a historical resource's physical identity evidenced by the survival of characteristics that existed during the resource's period of significance." Archaeological resources can sometimes qualify as "historical resources" (State CEQA Guidelines, Section 15064.5(c)(1)). In addition, Public Resources Code Section 5024 requires consultation with SHPO when a project may impact historical resources located on State-owned land.

Two other programs are administered by the state: California Historical Landmarks and California "Points of Interest." California Historical Landmarks are buildings, sites, features, or events that are of statewide significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other historical value. California Points of Interest are buildings, sites, features, or events that are of local (city or

county) significance and have anthropological, cultural, military, political, architectural, economic, scientific or technical, religious, experimental, or other historical value.

Native American Consultation. Senate Bill 18 (SB 18; Government Code Sections 65352.3, 65352.4) requires that prior to the adoption or amendment of a general plan proposed on or after March 1, 2005, a city or county must consult with Native American tribes with respect to the possible preservation of, or the mitigation of impacts to, specified Native American places, features, and objects located within that jurisdiction. The project requires an amendment to the City's General Plan and the City has complied with the requirements of SB 18.

Assembly Bill 52 (AB 52) went into effect July 1, 2015, and requires lead agencies to consult with all California Native American tribes that have requested formal consultation at the onset of a project, or when a NOP is released. AB 52 also establishes a new class of resources to be evaluated – Tribal Cultural Resources.

Human Remains. Section 7050.5 of the California Health and Safety Code states that in the event of discovery or recognition of any human remains in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent remains until the coroner of the county in which the remains are discovered has determined whether or not the remains are subject to the coroner's authority. If the human remains are of Native American origin, the coroner must notify the Native American Heritage Commission within 24 hours of this identification. The Native American Heritage Commission will identify a Native American Most Likely Descendant (MLD) to inspect the site and provide recommendations for the proper treatment of the remains and associated grave goods. CEQA Guidelines Section 15064.5 directs the lead agency (or applicant), under certain circumstances, to develop an agreement with the Native Americans for the treatment and disposition of the remains.

California Public Resources Code Section 5097.5 prohibits excavation or removal of any "vertebrate paleontological site…or any other archaeological, paleontological or historical feature, situated on public lands, except with express permission of the public agency having jurisdiction over such lands." Unauthorized disturbance or removal is a misdemeanor.

California Environmental Quality Act. State CEQA Guidelines Section 15064.5 defines a "historical resource." If a cultural resource in question is an archaeological resource, CEQA Guidelines Section 15064.5(c)(1)) requires that the lead agency first determine if the resource is a historical resource as defined in Section 15064.5(a). If the resource qualifies as a historical resource, potential adverse impacts must be considered in the same manner as a historical resource (California Office of Historic Preservation 2001a:5). If the archaeological resource does not qualify as a historical resource but does qualify as a "unique archaeological resource," then the archaeological resource is treated in accordance with Public Resources Code Section 21083.2 (see also CEQA Guidelines Section 15069.5(c)(3)).

Local Regulations

The City, as part of its status as a Certified Local Government, has a historic preservation ordinance. The historic preservation ordinance (HPO) provides for the protection, enhancement, and perpetuation of significant cultural resources in the GP Area. The HPO provides the statutory framework for local preservation decisions, and contains sections governing the following topics:

- Historic District Designation (Part 2, Chapter 24.06);
- Historic Landmark Designation (Section 24.12.420);
- Archaeological Resource Procedures (Section 24.12.430);
- Procedure for Amending Historic Building Survey (Section 24.12.440);
- Procedure: New Construction in Historic Districts (Section 24.12.450);
- Historic Alteration Permit (Part 10, Chapter 24.08);
- Historic Demolition Permit (Part 11, Chapter 24.08); and
- Historic Overlay District (Part 22, Chapter 24.10).

Study Area

The project area consists of the downtown area generally covered by the Downtown Recovery Plan (DRP) and the Central Business District zone, and specifically the lower downtown area generally between Soquel Avenue and Laurel Street on the north and south, and Cedar Street and the San Lorenzo River on the west and east. (Locations are shown on Figures 1-2 an d 2-1 in Section 3, Project Description.) The proposed project includes an amendment to the land use designation text for the downtown portion of Regional Visitor Commercial land use designation. The study area includes properties adjacent to the western San Lorenzo River levee.

Historical Background

The following overview is summarized from the General Plan 2030 Draft EIR (pages 4.9-6 – 4.9-16), which is incorporated by reference. (For details on the prehistory and history of the area see pages 4.9-6 -4.9-9.)

Archaeological Resources

Archaeological Resources

A total of 27 documented archaeological sites have been identified within the City's General Plan planning area, of which 20 sites are prehistoric archaeological sites and seven sites are archaeological sites with both a prehistoric and historical component (City of Santa Cruz, April 2012, DEIR volume). Diocarbon and obsidian hydration data indicate that present-day Santa Cruz was occupied beginning in the Early Period, from at least 1750 B.C. and quite possibly earlier. Two sites are considered eligible for listing in the National Register of Historic Places based on the important information they contain for understanding the prehistory of the region. The

Native American Heritage Commission (NAHC) sacred lands file did not list cultural resources in the City (Ibid.).

According to maps included in the General Plan EIR (Figure 4.9-1) and included in the General Plan, all of the project study area is identified as being within a "sensitive" archaeological area in which exemptions to archaeological investigations may apply for specified types of projects. This designation applies to parcels that do not have recorded archaeological sites, but are located within sensitive areas based on review and analysis conducted for the General Plan 2030.

State Assembly Bill 52, effective July 1, 2015, recognizes that California Native American prehistoric, historic, archaeological, cultural, and sacred places are essential elements in tribal cultural traditions, heritages, and identities. The law establishes a new category of resources in the California Environmental Quality Act called "tribal cultural resources" that considers the tribal cultural values in addition to the scientific and archaeological values when determining impacts and mitigation. Public Resources Code section 21074 defines a "tribal cultural resource" as either:

(1) Sites, features, places, cultural landscapes, sacred places and objects with cultural value to a California Nature American tribe that is either listed, or determined to be eligible for listing, on the national, state, or local register of historic resources, or

(2) A resource determined by the lead agency chooses, in its discretion and supported by substantial evidence, to treat as a tribal cultural resource.

The California Public Resources Code section 21084.2 now establishes that "[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment." The Public Resources Code requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project.

Native American Consultation

To date, the City has not been contacted by Native American tribes requesting notification of projects.

Prior to the adoption or amendment of a general plan, Government Code Sections 65352.3 and 65352.4 require a city or county to consult with local Native American tribes that are on the contact list maintained by the Native American Heritage Commission. The purpose is to preserve or mitigate impacts to places, features, and objects described in Public Resources Code Sections 5097.9 and 5097.993 (Native American sanctified cemetery, place of worship, religious or ceremonial site, or sacred shrine located on public property) that are located within a city or county's jurisdiction.

On behalf of the City of Santa Cruz, Dudek contacted Native American tribes and tribal organizations pursuant to the requirements of California Government Code Section 65352.3 (implementation of Senate Bill 18) as part of the preparation of this EIR. On May 24, 2017, a letter was sent to the Native American Heritage Commission (NAHC) in Sacramento requesting a Senate Bill 18 consultation list. NAHC responded that the NAHC Sacred Lands File was completed for the project area, and none were identified. Letters were sent to the tribes and tribal organizations identified by the NAHC to notify them of their opportunity to consult with the City regarding the General Plan Update. No responses to this notification have been received by the City.

Historic Archaeological Resources

Most of the City has the potential to contain historical archaeological deposits. However, some areas exceed this nominal potential and are categorized as sensitive, and other areas have heightened sensitivity due to the presence or proximity of recorded archaeological deposits. There are documented occurrences of archaeological deposits dating to the Spanish and Mexican periods in California. These eras are of high interest due to the relative paucity of intact, recoverable deposits associated with these periods. Sites associated with similar communities have had significant archaeological research value and have been found to be historically significant.

Historic development trends affect whether historical archeological deposits may be present. Two prominent historical periods occurred in Santa Cruz – the Mission Period and American Period. Mission Santa Cruz was established on the banks of the San Lorenzo River in September 1791, and quickly absorbed the surrounding Native American Ohlone population. Another colonial institution, Villa de Branciforte, was established on the other side of the San Lorenzo River across from Mission Santa Cruz in 1797. In 1834, the California missions were secularized, and Mission Santa Cruz lands came under the control of Villa de Branciforte. The second period began in 1848 when California was ceded to the United States under the Treaty of Guadalupe Hidalgo.

According to maps included in the General Plan EIR (Figure 4.9-2) and included in the General Plan, all of the project study area is identified as being within a “sensitive” historical archaeological area the area that was associated with the American Period of development with the area along Ocean Street also associated with the Mission Period. Within this designation, exemptions to archaeological investigations may apply for specified types of projects. One area at Front and Cathcart Streets is identified as a highly sensitive historical archaeological area.

Historic Resources

As one of California’s oldest settlements, founded in 1791, Santa Cruz has many historical buildings. As a result of the City’s *Historic Preservation Plan*, adopted in 1974 as an element of the General Plan, the Historic Preservation Commission and the Historic Preservation Ordinance

(Section 24.12.400 of the City's Zoning Ordinance) were established to protect the City's historic resources. Historic districts may be designated pursuant to criteria and procedures in the Zoning Ordinance as further described below. The City of Santa Cruz has designated historic buildings and landmarks as further described below. Permits are required for alteration or demolition of listed historic buildings or landmarks pursuant to the City of Santa Cruz Municipal Code Chapter 24.08 requirements.

Five styles—and several substyles—of architecture have been identified in the City:

- Spanish Mission and Spanish Colonial Style (1791-1846),
- Salt Box (c. 1850-1870),
- Romantic styles (c. 1850s-1920),
- Victorian styles (c. 1880s-1900), and
- Eclectic styles (1895-1975).

Historic Districts

Historic districts may be designated pursuant to criteria and procedures in the Zoning Ordinance (Part 2 of Section 24.06). A proposed historic district must be a geographically definable area possessing a significant concentration or continuity of sites, buildings, structures, or objects unified by past events, or aesthetically by plan or physical development, and the collective value of the historic district taken together may be greater than the value of each individual structure. Additionally, Part 22 of Section 24.10 of the City's Zoning Ordinance sets forth parameters for establishing historic overlay districts within the City. The purpose of this district is to provide a means to preserve and enhance areas of historic, architectural, and engineering significance located within the city. There are two existing designated local historic districts (Mission Hill and Downtown Neighborhood) and one National Register district (Cowell Limes Work District). Potential historic districts are located in the Beach Hill and Ocean View Street neighborhoods (City of Santa Cruz, April 2012, DEIR volume). While a portion of downtown is located within the Downtown Neighborhood historic district, the project study that is subject to Additional Height Zones is not located within this district.

Historic Buildings and Landmarks

In 1976, the City completed a "Historic Building Survey," which identified and evaluated historic and architecturally significant buildings. The survey, conducted by the firm of Charles Hall Page and Associates, identified 306 properties and structures on the basis of historical and cultural, environmental and architectural significance. Volume I of the survey covered architectural development in the City from approximately 1850 to 1930. The Survey's evaluation of individual buildings considered historical and architectural significance, importance to the neighborhood, desecration of original design, and physical condition, and assigned each an overall rating of exceptional, excellent, good or fair. All properties in the 1976 survey were officially listed and

protected under the City historic preservation policies and regulations (City of Santa Cruz, Santa Cruz Historic Building Survey Volume III).

In 1989, Volume II of the City Historic Building Survey was produced, which catalogues a total of 330 additional structures from three categories: significant buildings from 1930 to 1950; important structures not included in the first survey; and significant vernacular buildings from 1850 to 1910, the latter of which comprise approximately one half of the structures in Volume II. Neighborhood context was emphasized in Volume II, with a focus on contiguous rows of historic buildings. More than 250 of properties in Volume II of the Survey have been listed officially as historic resources (City of Santa Cruz, Santa Cruz Historic Building Survey Volume II). Additionally, as part of the development of Volume II, some of the properties were removed from the master list of historic properties because of demolition that occurred due to damage from the Loma Prieta Earthquake.

In 2013, Volume III of the City Historic Building survey was completed. Volume III of the Survey was prepared for the City under the direction of Leslie Dill, historic architect. The prior survey volumes were used as a framework, and the Historic Context Statement (City of Santa Cruz, 2000) as the guide, in helping identify properties that are worthy of consideration for inclusion in the City's list of historic resources. The Historic Context Statement for the City of Santa Cruz prepared by historian Susan Lehmann describes three themes for understanding the historic development of Santa Cruz: economic development from 1850 to 1950; residential, commercial and institutional architecture from 1850 to 1950; and institutions from 1850 to 1950. Volume III of the survey applies these themes to specific neighborhoods.

The establishment of the California Register of Historical Resources in 1993, and the adoption of guidelines to the California Environmental Quality Act in 1999 that pertain to historic resources, has resulted in a more rigorous framework for the identification and evaluation of historic properties by local jurisdictions. The methods for conducting surveys are specified in National Register Bulletin 24, Guidelines for Local Surveys: a Basis for Preservation Planning. The Secretary of the Interior, through the National Park Service, has developed the National Register program and prepared a number of associated bulletins that address the study and registration of the full range of cultural resources that community planners may encounter. Surveys were prepared consistent with the Secretary of Interior's Standards for Identification.

The City of Santa Cruz has adopted criteria under Municipal Code Section 24.12.440 for listing properties as historic resources. The property can be a building, site, or object, and to be considered, must meet one seven criteria. A historic district must meet two additional criteria. These criteria were also used in the preparation of the surveys.

In 2013, approximately 150 properties were considered, photographed, and given consideration for further research and evaluation. At the direction of City Council an opt-out option was provided for property owners. Of the 139 properties approved by City Council to be included in the Historic Building List, 55 property owners chose to opt-out.

Currently, 623 buildings (569 from Survey I/II and 54 from Survey III), 27 walls, stairways, steps or curbs, as well as 5 hitching posts, hitching rails or mounting blocks are listed in the City's Historic Survey. Buildings of greatest historical and architectural significance have been designated "landmarks" pursuant to section 24.12.430 of the City's Zoning Ordinance. Currently there are 24 designated landmarks in the City. Fourteen properties are listed on the National Register of Historic Places and the following three sites are listed in the California Historical Landmarks: Site of Mission Santa Cruz, Site of Center of Villa Branciforte and the Santa Cruz Beach Boardwalk.

The following locally listed structures are located within the project study area:

- ❒ 112 Elm Street (Survey I/II)
- ❒ 117 Elm Street (Survey I/II)
- ❒ 418 Front Street (Survey III)
- ❒ 428 Front Street (Survey III)
- ❒ 429 Front Street (Survey III)
- ❒ 514-518 Front Street (Survey III)
- ❒ 216 Laurel Street (Survey I/II)
- ❒ 115 Maple Street (Survey I/II)
- ❒ 811 Pacific Avenue (Survey I/II)
- ❒ 1120-1126 Pacific Avenue (Survey I/II)
- ❒ 1132 Pacific Avenue (Survey I/II)
- ❒ 1134 Pacific Avenue (Survey I/II)

Paleontological Resources

Paleontological resources are fossilized remains of plants and animals, and associated deposits. The Society of Vertebrate Paleontology has identified vertebrate fossils, their taphonomic and associated environmental indicators, and fossiliferous deposits as significant nonrenewable paleontological resources.

The cultural resources investigation conducted as part of the General Plan Update identified 48 vertebrate fossil localities within five miles of Santa Cruz. These localities have yielded 786 recorded vertebrate fossil specimens that have been found in the Santa Margarita Sandstone, Santa Cruz Mudstone, Purisima Formation, and from the Late Pleistocene terrace deposits in and near the General Plan planning area. Based on a literature review, four geologic units in the General Plan area are known to contain fossils: Late Pleistocene alluvium; the Purisima

Formation; the Santa Cruz Mudstone; and the Santa Margarita Sandstone (City of Santa Cruz, April 2012, DEIR volume).

As shown on Figure 4.9-5 of the General Plan (City of Santa Cruz, April 2012, DEIR volume), the project area is underlain with Holocene alluvium. Though Holocene alluvium is generally considered too young to contain paleontological resources, this geologic unit is moderately sensitive for paleontological resources because it is underlain by sedimentary geologic units that have a high paleontological sensitivity (City of Santa Cruz, April 2012, DEIR volume).

4.4.2 Impacts and Mitigation Measures

Thresholds of Significance

In accordance with the California Environmental Quality Act (CEQA); State CEQA Guidelines (including Appendix G); City of Santa Cruz plans, policies, and/or guidelines; and agency and professional standards, a project impact would be considered significant if the project would:

4a Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 or to a unique archaeological resources to tribal cultural resources (see definitions below);

4b Disturb any human remains, including those interred outside of formal cemeteries;

4c Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 (see definition below) to include physical demolition, destruction, relocation, or alteration of historic resources or of the immediate surroundings of historic resources, such that the significance of the resources would be materially impaired (see definition below);

4d Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or

4e Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or b) a resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

CEQA defines a "*unique archaeological resource*" as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets one or more of the following criteria:

- Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information; or
- Has a special and particular quality such as being the oldest of its type or the best available example of its type; or
- Is directly associated with a scientifically recognized important prehistoric or historic event or person (PRC §21083.2(g)).

CEQA (Public Resources Code section 21974) defines a "*tribal cultural resource*" as either of the following:

(1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:

(A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.

(B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.

(2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1.

State CEQA Guidelines Section 15064.5 defines a *historical resource* as:

- A resource listed in, or determined to be eligible for listing in, the California Register;
- A resource listed in a local register of historical resources.
- Any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California…Generally, a resource shall be considered by the lead agency to be :historically significant." Generally a resource is considered historically significant if it meets criteria for listing in the California Register of Historical Resources, including:
  - Is associated with events that made a significant contribution to the broad patterns of California's history and cultural heritage.
  - Is associated with the lives of people important in our past.
  - Embodies the distinctive characteristics of a type, period, region, or method of construction, represents the work of an important creative individual, or possesses high artistic values.

- Has yielded or may be likely to yield information important in prehistory or history; OR

❒ A resource determined to be a historical resource by a project's lead agency.

CEQA Guidelines Section 15064.5(b) defines a "*substantial adverse change*" to a historical resource as: "physical demolition, destruction, relocation or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired. The significance of an historical resource is *materially impaired* when a project demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for inclusion in, the California Register of Historical Resources or in registers meeting the definitions in Public Resources Code 5020.1(k) or 5024.1(g).

Analytical Method

The proposed project consists of amendments to the City's Downtown Recovery Plan, General Plan, Local Coastal Plan and Zoning Code regarding development in the downtown area and Central Business District. The proposed project would not directly result in new development. However, the proposed Downtown Plan amendment would expand areas for potential additional building height that could accommodate intensified redevelopment of existing developed sites. The proposed General Plan amendment would increase FAR in downtown areas designated as RVC in the General Plan. The proposed LCP and Zoning Code amendments would not result in changes that could indirectly lead to intensified development. The following impact analyses is based on review of existing data and studies. The analyses are based on review of existing studies and City requirements for evaluation of cultural resources.

Impacts and Mitigation Measures

The following impact analyses address potential impacts to archeological and tribal cultural resources (4a, 4b, 4e), historic resources (4c), and paleontological resources (4d).

Impact 4.4-1: Archaeological and Tribal Cultural Resources. Future development accommodated by the proposed plan amendments could result to impacts to archaeological, historical archaeological, human remains, and/or tribal cultural resources. However, City requirements for cultural resource investigations would ensure that future development projects assess and mitigate potential impacts (4a, 4b, 4e). This is a *less-than-significant* impact.

The proposed project would not result in new development, but could result in intensified development in the project study area. Potential redevelopment of existing properties could occur without the proposed project. The City's General Plan includes a policy that requires preparation of archaeological investigations for any project located within a sensitive

archaeological area (HA1.2.2). The investigation must include archival research, site surveys and necessary supplemental testing as may be required, conducted by a qualified archaeologist, and the significance of identified resources shall be ascertained in accordance with CEQA definitions. The measure requires that the report identify significant impacts and outline mitigation measures if significant impacts are identified, including, but not limited to recovery options and onsite monitoring by an archaeologist during excavation activities. A written report describing the archeological findings of the research or survey shall be provided to the City. This General Plan Action also allows exemption for minor project that generally involve spot excavation to a depth of 12 inches or less below existing grade. Exempt projects may include: building additions, outdoor decks, or excavation in soil that can be documented as previously disturbed.

Additionally, the City's accidental discovery procedures (Municipal Code Section 24.12.430) would also apply to properties in the study area in the event construction encounters unidentified archaeological deposits. This regulation requires that construction be stopped if archaeological resources are encountered during construction, and that the Planning Director be notified and the discovery analyzed. If determined not be an archaeological resource, construction could proceed, but it is determined to be a resource, implementation of appropriate measures would be required.

Future development projects within sensitive archaeological areas are required to prepare these investigations prior to project approval, and any recommendations are included as Conditions of Approval. Therefore, the City's policies and regulations ensure that archaeological and tribal cultural resources are addressed and mitigated as part of further development proposals. Thus, the project would not indirectly lead to potentially significant impacts. Additionally, it is noted that redevelopment of properties in the study area could occur without the proposed project.

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

Impact 4.4-2: Historic Resources. Future development accommodated by the proposed plan amendments could result in impacts to historical resources (4c), however, site-specific redevelopment could occur under existing conditions without the proposed plan amendments (4c). Therefore, this is a *less-than-significant* impact.

The proposed project would not result in new development, but could result in intensified development in the project study area with future development. Potential redevelopment of existing properties could occur without the proposed project. There are 12 structures within the study area that are listed in the City's Historic Building Survey, and may be considered a historic resource. Future development projects would be subject to conducting historical evaluations to determine whether the structure is a historic resource that could be significantly impacted under the definition of CEQA. If a significant impact is identified, appropriate mitigation measures would be required and/or a project-specific CEQA review to consider substantial alteration or

demolition of a historic resource that would substantially and materially alter the significance of the resource. Since redevelopment of properties could occur without the proposed project, the proposed amendments would not lead to development that might not otherwise occur, but only allow for some intensification of development. Therefore, the proposed project would not result in new impacts.

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

Impact 4.4-3: Paleontological Resources. Future development accommodated by the proposed plan amendments could result to impacts to unknown paleontological resources discovered during construction. However, adherence to City procedures would not result in significant impacts (4d). Therefore, this is a *less-than-significant* impact.

According to maps developed for the City's *General Plan 2030* and included in the General Plan EIR, the project study area is mapped as Holocene Alluvium geologic formation. Although this formation is generally considered too young to contain paleontological resources, it is considered moderately sensitive for paleontological resources because it is underlain by sedimentary geologic units that have a high paleontological sensitivity (City of Santa Cruz, April 2012, DEIR volume). The General Plan Action HA1.2.3 requires the City to notify applicants within paleontologically sensitive areas of the potential for encountering such resources during construction and condition approvals that work will be halted and resources examined in the event of encountering paleontological resources during construction. If the find is significant, the City would require treatment of the find in accordance with the recommendations of the evaluating paleontologist. Treatment may include, but is not limited to, specimen recovery and curation or thorough documentation

Therefore, the City's policies ensure that paleontological resources are addressed and mitigated as part of further development proposals. Thus, the project would not indirectly lead to potentially significant impacts. Additionally, it is noted that redevelopment of properties in the study area could occur without the proposed project.

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

4.5 HYDROLOGY AND WATER QUALITY

This section analyzes impacts of the proposed project related to hydrology and water quality based on a review of existing city plans and other exiting data. This section also draws from the City of Santa Cruz *General Plan 2030* EIR (SCH#2009032007), which was certified on June 26, 2012, regarding background information on regulatory setting and surface and groundwater hydrology. The General Plan EIR is incorporated by reference in accordance with section 15150 of the State CEQA Guidelines. Relevant discussions are summarized in subsection 4.3.1. The General Plan EIR is available for review at the City of Santa Cruz Planning and Community Development Department (809 Center Street, Room 107, Santa Cruz, California) during business hours: Monday through Thursday, 8 AM to 12 PM and 1 PM to 5 PM. The General Plan EIR is also available online on the City's website at: http://www.cityofsantacruz.com/government/city-departments/planning-and-community-development/general-plan.

Public and agency comments related to hydrology and water quality were received during the public scoping period in response to the Notice of Preparation (NOP). Issues raised in these comments include:

- ❒ Potential risks of flood hazards, impacts from flooding and requirements for buildings to be elevated if located within a floodplain.
- ❒ Use of Low Impact Development Best Management Practices and standards should be evaluated in the EIR to reduce or eliminate runoff and pollution discharges into the River.

To the extent that issues identified in public comments involve potentially significant effects on the environment according to the California Environmental Quality Act (CEQA) and/or are raised by responsible agencies, they are identified and addressed within this EIR. Public comments received during the public scoping period are included in Appendix B.

4.5.1 Environmental Setting

Regulatory Setting

The following overview summarizes key regulations regarding hydrology and water quality. See the General Plan 2030 EIR (DEIR volume, pages 4.7-1 – 4.7-5), which is incorporated by reference, for further discussion on regulations.

Federal and State Regulations

The Federal Emergency Management Agency (FEMA) – a former independent agency that became part of the new Department of Homeland Security in March 2003 – is tasked with responding to, planning for, recovering from, and mitigating against disasters. Formed in 1979 under an executive order by President Jimmy Carter to merge many of the separate disaster-

related responsibilities of the federal government into one agency, FEMA is responsible for determining flood elevations and floodplain boundaries based on U.S. Army Corps of Engineers studies and approved agencies studies and for coordinating the federal response to floods, earthquakes, hurricanes, and other natural or man-made disasters and providing disaster assistance to states, communities and individuals. FEMA distributes the Flood Insurance Rate Maps (FIRMS), which are used in the National Flood Insurance Program (NFIP). These maps identify the locations of special flood hazard areas (SFHAs), including the 100-year flood zone.

The U.S. Environmental Protection Agency (EPA) is the lead federal agency responsible for water quality management. The Clean Water Act of 1972 (CWA, codified at 33 United States Code Sections 1251-1376) is the primary federal law that regulates the discharge of pollutants to waters of the United States from any point source. Section 401 of the CWA requires water quality certification for any activity, including the construction or operation of a facility, which may result in any discharge into navigable waters. Section 404 of the CWA requires a permit for the discharge of dredged fill material into navigable waters at specified disposal site. In 1987, amendments to the CWA added Section 402(p), which establishes a framework for regulating non-point source stormwater discharges under the National Pollutant Discharge Elimination System (NPDES). Various elements of the CWA address water quality, and they are discussed below.

The California State Water Resources Control Board (State Board) and the nine Regional Water Quality Control Boards (RWQCB) have the responsibility in California to protect and enhance water quality, both through their designation as the lead agencies in implementing the Section 319 non-point source program of the federal Clean Water Act, and through the state's primary water pollution control legislation, the Porter-Cologne Water Quality Control Act of 1969, codified in Division 7 of the California Water Code). Under the Act, the State must adopt water quality policies, plans, and objectives that protect the State's waters for the use and enjoyment of the people. Such "waters of the State" include streams, groundwater, isolated wetlands, and other bodies of water that are not under federal jurisdiction as "waters of the United States" (under the Clean Water Act). The Act sets forth the obligations of the SWRCB and RWQCBs to adopt and periodically update water quality control plans (Basin Plans). Basin Plans are the regional water quality control plans required by both the CWA and Porter-Cologne Act in which beneficial uses, water quality objectives, and implementation programs are established for each of the nine regions in California. The Act also requires waste dischargers to notify the RWQCBs of their activities through the filing of Reports of Waste Discharge (RWD) and authorizes the SWRCB and RWQCBs to issue and enforce waste discharge requirements (WDRs), National Pollutant Discharge Elimination System (NPDES) permits, Section 401 water quality certifications, or other approvals.

Urban runoff and other "non-point source" discharges are regulated by the 1972 Federal Clean Water Act (CWA), through the National Pollutant Discharge Elimination System (NPDES) permit program that has been implemented in two phases through the California Regional Water Quality Control Boards (RWQCB). Phase I regulations, effective since 1990, require NPDES

permits for stormwater discharges for certain specific industrial facilities and construction activities, and for municipalities with a population size greater than 100,000. Phase II regulations expand the NPDES program to include all municipalities with urbanized areas and municipalities with a population size greater than 10,000 and a population density greater than 1,000 persons per square mile. Phase II regulations also expand the NPDES program to include construction sites of one to five acres (City of Santa Cruz, April 2012, DEIR volume).

Construction activity on projects that disturb one or more acres of soil must obtain coverage under the State's General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 99-08-DWQ). Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must list best management practices (BMPs) that the discharger will use to protect stormwater runoff and the placement of those BMPs.

Local Regulations

Stormwater Management Program. The City of Santa Cruz (City) has developed a Storm Water Management Program (SWMP) in order to fulfill the requirements of the Phase II NPDES General Permit for Discharges of Storm Water from Small Municipal Separate Storm Sewer Systems (MS4) (General Permit) and to reduce the amount of pollutants discharged in urban runoff. In compliance with the Phase II regulations, the City's comprehensive SWMP is designed to reduce the discharge of pollutants to the Maximum Extent Practicable (MEP) and to protect water quality (City of Santa Cruz, April 2012, DEIR volume).

In 1998, the City of Santa Cruz adopted an ordinance for "Storm Water and Urban Runoff Pollution Control" (Chapter 16.19 of the city's Municipal Code) as part of its Storm Water Management Program in accordance with the RWQCB's requirements. The ordinance identifies prohibited discharges and required Best Management Practices (BMPs) for construction and new development.

As indicated above, construction activity on projects that disturb one or more acres of soil must obtain coverage under the State's General Permit for Discharges of Storm Water Associated with preparation and implementation of a SWPPP and BMPS to protect water quality during construction. The proposed project would result in grading and development that would disturb over one acre, and thus, the project would be subject to preparing a SWPPP. The City's regulatory requirements and BMPs, as detailed in the "Stormwater Best Management Practices Manual" published by the City's Public Works Department, must be implemented.

The project is subject to the Central Coast Post-Construction Requirements that were enacted by the CCRWQCB in July 2013. Based on the amount of impervious area created by the project, which is greater than 22,500 SF, the project has to meet Tiers 1 thru 4 (Site Design, Water Quality Treatment, Runoff Retention and Peak Flow Management).

Municipal Code Requirements. The Zoning Ordinance, Title 24 of the Municipal Code, currently contains provisions to ensure that new development is designed and constructed in a manner that limits alteration of drainage patterns, prevents erosion, and minimizes long-term impacts on water quality. Chapter 24.14 – Environmental Resource Management – contains a section on Conservation Regulations that includes general provisions for drainage and erosion controls. Section 24.14.050 requires that a drainage plan be submitted for projects, both large and small, when existing drainage patterns would be altered by new construction. A drainage plan must be submitted and reviewed as part of the project approval. In addition, the ordinance requires that stormwater runoff resulting from project development be minimized.

Section 24.14.060 requires preparation and implementation of an erosion control plan for all projects within or adjacent to an erosion hazard area and for development proposals located on slopes in excess of 10 percent. The section sets forth the requirements for the plan.

The Grading Ordinance is a subset of Title 18, Buildings and Construction, of the City's Municipal Code and is included in Chapter 18.45 – Excavation and Grading Regulations." It provides technical regulations of grading and excavation, in conjunction with the Environmental Resource Management provisions (Municipal Code, Title 24, Chapter 24.14), in order to safeguard life, health, safety and the public welfare; protect fish and wildlife, riparian corridors and habitats, water supplies, and private and public property, and to protect the environment from the effects of flooding, accelerated erosion and/or deposition of silt. The ordinance accomplishes this by providing guidelines, regulations, and minimum standards for clearing, excavation, cuts, fills, earth moving, grading operations (including cumulative grading), water runoff and sediment control. In addition, the ordinance includes provisions regarding administrative procedures for issuance of permits and approval of plans and inspections during construction and subsequent maintenance. Section 18.45.110 also provides erosion control requirements for cut/fill slopes in addition to the requirements outlined in Section 24.14.060.

Study Area

The project area consists of the downtown area generally covered by the Downtown Recovery Plan (DRP) and the Central Business District zone, and specifically the lower downtown area generally between Soquel Avenue and Laurel Street on the north and south, and Cedar Street and the San Lorenzo River on the west and east. (Locations are shown on Figures 1-2 an d 2-1 in Section 3, Project Description.) The study area includes properties adjacent to the western San Lorenzo River levee. Since the proposed project includes an amendment to the land use designation text for the Regional Visitor Commercial land use designation, the study area also includes downtown lands located within this designation.

Regional Hydrological Setting

The City of Santa Cruz encompasses approximately 12 square miles between the Monterey Bay and the Santa Cruz Mountains and lies on a narrow coastal plain at the mouth of the San Lorenzo

River. A total of 39 miles of watercourses occur within the City (City of Santa Cruz, April 2012, DEIR volume).

The San Lorenzo River originates in the Santa Cruz Mountains and is the largest drainage in the region. The river flows southward from the Santa Cruz Mountains, traverses through the center of the City, and forms a major physical feature of the region. The downtown area of the City of Santa Cruz is situated on the floodplain of the lower San Lorenzo River.

The San Lorenzo River drains a 138-square mile watershed, featuring forested and urbanized areas within the City and Santa Cruz County. Within the City limits, the lower San Lorenzo River flows southward from the Sycamore Grove area of Pogonip through the center of Santa Cruz, to Monterey Bay. The lower 2.5 miles (south of Highway 1) are channelized in a levee flood control project developed in cooperation with the U.S. Army Corps of Engineers (ACOE) in the late 1950s (City of Santa Cruz, April 2012, DEIR volume). Significant flood improvements along the river were completed in 2000 as part of the ACOE's San Lorenzo River Flood Control and Environmental Restoration Project. This project raised the river levee heights, provided landscaping and improved the pedestrian/bicycle path on the levee, and rehabilitated three of the four downtown bridges (over the San Lorenzo River) to increase flood flow capacity. The habitat enhancement efforts focused on the landside of the levees in the study area which were landscaped with native trees, shrubs, and groundcover.

Stormwater Drainage

The City's storm drain system is comprised of a wide variety of conveyance systems such as underground pipes, small open drainage channels, creeks, and the San Lorenzo River. The system includes numerous storm drain inlets and catch basins (approximately 1,450) throughout the City, and five pump stations that discharge stormwater directly into the San Lorenzo River (City of Santa Cruz, April 2012, DEIR volume).

In general, the City's downtown area drains to the San Lorenzo River. Although some stormwater reaches the river by absorption and gravity, the five pump stations along the river were installed in order to transfer the majority of the stormwater over (actually through) the river levees. There are three pump stations located on the west side of the river and two on the east side (City of Santa Cruz, April 2012, DEIR volume).

State and federal storm water regulations require development and remodeling projects to incorporate design standards BMPs in order to reduce pollutant and storm water discharges to the Maximum Extent Practicable. All future development projects will be subject to the City's mandatory BMPs, including the use of Low Impact Development (LID). LID is a site design approach that uses techniques to slow and infiltrate storm water, mimicking the natural, pre-development hydrology. LID design strategies can be applied to most new or redevelopment projects to meet storm water regulations, reduce downstream flooding and protect natural resources (City of Santa Cruz (City of Santa Cruz, 2014).

The project study areas are primarily located with "Urban Sustainability Areas" defined in the City's BMP Manuals. These areas encompass the City's business centers and primary transportation corridors where the City's General Plan 2030 vision is to promote "Smart Growth" concepts of high density mixed-use development. Certain exemptions to stormwater retention requirements are allowed for high-density projects that meet specified requirements.

Water Quality

Urban development often results in the degradation of water quality due to the introduction of pollutants and erosion due to construction and development. Development and pervious pavement can result in increased runoff and higher velocities in creeks and streams. These changes can, in turn, cause erosion. Urban pollutants may include toxic metals, hydrocarbons, nutrients, suspended solids, and many other chemicals (City of Santa Cruz, April 2012, DEIR to treat stormwater runoff in compliance with federal and state laws.

The primary pollutants of concern in the City watersheds are sediment and silt and fecal indicator bacteria. The City has targeted these primary pollutants of concern in the SWMP because certain water bodies within the City are listed on the Clean Water Act Section 303(3) list as impaired for these specific pollutants as further discussed below (Ibid.). As previously indicated, the City's SWMP is a comprehensive program to reduce the amount of pollutants discharged in urban runoff and to improve and protect water quality that includes requirements for stormwater treatment in development projects in accordance with the federal state requirements.

The Clean Water Act requires states to identify and prepare a list of water bodies that do not meet water quality objectives, and to establish Total Maximum Daily Loads (TMDL) for each water body to ensure attainment of water quality objectives. The City of Santa Cruz storm drain system (MS4) discharges into four water bodies that are currently on the 303(d) list of impaired water bodies, one of which is the San Lorenzo River. The San Lorenzo River is listed for: sediment, nutrients and pathogens. The City's SWMP addresses the primary pollutants of concern through City measures and BMPs to the Maximum Extent Practicable.

Flood Hazards

Flooding and coastal storms present essentially the same risks and are frequently related types of hazards in the City of Santa Cruz. A flood is a natural event for rivers and streams. Coastal storms can cause increases in tidal elevations (called storm surge) wind speed and erosion as well as flooding Floodplains are lowlands adjacent to rivers, lakes and oceans that are subject to recurring floods (City of Santa Cruz, September 2013).

The City of Santa Cruz Climate Adaptation Plan considers flooding and severe coastal storms to be a considerable, potential risk to the city and its residents. Intense, increased rainfall may lead

to larger flood flows. Noted in the CAP are the potential for greater storm surges, wind speeds and resultant coastal erosion. These events are predicted to occur more frequently due to climate change impacts, including the impacts from sea level rise (City of Santa Cruz, 2013).

Flood Hazards

The San Lorenzo River runs through the downtown corridor and the majority of the downtown area is in the San Lorenzo floodplain. Flooding along the coast of Santa Cruz may occur with the simultaneous occurrence of large waves and storm swells during the winter. When storms occur simultaneously with high tides, flood conditions including flooding at the mouth of the San Lorenzo River are exacerbated.

The downtown area and a portion of the beach area are located within the 100-year floodplain of the San Lorenzo River. The Flood Insurance Rate Map (FIRM) is an official map of a community for which the Federal Insurance and Mitigation Administration has delineated the Special Flood Hazard Area. All known areas of the City subject to natural flooding hazards have been designated and mapped by the Federal Emergency Management Agency (FEMA), such as the 100 year floodplain boundaries which appear on FEMA's Flood Insurance Rate Maps (City of Santa Cruz, 2013).

The City of Santa Cruz has worked to improve the flood capacity of the San Lorenzo River levees over the past twenty years. In 2002, FEMA re-designated much of the downtown and beach area from A-11 to the A-99 Flood Zone designation in recognition of the significant flood improvements resulting from the San Lorenzo River Flood Control and Environmental Restoration Project. Under the A-99 designation, new buildings and improvements are no longer mandated to meet FEMA flood construction requirements (City of Santa Cruz, 2013).

The City's adopted "Local Hazard Mitigation Plan, 2012-2017" includes measures that the City intends to implement in response to flood hazards. The City addresses land use within the flood plain in the General Plan as well as actively enforcing building and zoning codes, and other land use regulations concerning development within the 100-year flood plain. The City will continue to work with FEMA and the Army Corps of Engineers to minimize impacts of flooding in Santa Cruz.

High Tide intrusion into the San Lorenzo River and Downtown. The downtown area is situated on the San Lorenzo River floodplain that is underlain by permeable sands and gravels so that the groundwater level beneath the City is essentially the same as the river level. During high tides, and when the San Lorenzo River has been dammed by the sand bar that typically forms across the river mouth in mid- to late summer, the impounded water level rises, at times extending upstream as far as the Highway One bridge. There appears to be a direct connection between the elevation of the water table and the level of the San Lorenzo River. The resulting elevated water table historically led to ground water seeping into the basements of the downtown buildings, resulting in the need for pumping and dewatering during construction. The City Public Works Department pumps ground water as much as 15 hours a day from beneath the

Locust Street parking garage when the river backs up in the summer months (Griggs, Haddad, January 2011).

Due to sediment accumulation in the San Lorenzo River flood control channel, many of the gravity outlets that were constructed to carry water from the low lying areas next to the levees back into the river began to be covered over years ago. The City has replaced flap gates with these new valves on the San Lorenzo River.

Tsunami Hazards

A tsunami is a series of waves generated by an impulsive disturbance in the ocean or in a small, connected body of water. Tsunamis are produced when movement occurs on faults in the ocean floor, usually during very large earthquakes. An earthquake anywhere in the Pacific can cause tsunamis around the entire Pacific basin. Since the Pacific Rim is highly seismically active, tsunamis are not uncommon, although there has been minimal damage and loss of life in Santa Cruz during recorded history (City of Santa Cruz, 2013). However, a tsunami generated by a 9.0 magnitude earthquake in Japan in March 2011 reached Santa Cruz and caused substantial damage to the Santa Cruz Small Craft Harbor. The National Oceanic and Atmospheric Administration operates a tsunami warning system, giving several hours' notice to allow evacuation of threatened areas to prevent injuries.

There are two primary types of tsunami vulnerability in Santa Cruz. The first is a distant source tsunami from elsewhere in the Pacific Ocean. This type of tsunami is capable of causing significant destruction in Santa Cruz. However, this type of tsunami would usually allow time for the Tsunami Warning System for the Pacific Ocean to warn at risk and threatened coastal areas in time for evacuation (City of Santa Cruz, 2013). The more vulnerable risk to the City of Santa Cruz is a tsunami generated as the result of an earthquake along one of the many earthquake faults in the region. A local source tsunami generated by an earthquake on any of the faults affecting Santa Cruz would arrive just minutes after the initial shock. The lack of warning time from such a nearby event would result in higher causalities than if it were a distant tsunami (Ibid.). The City's mitigation strategy includes continuation of an up-to-date Emergency Operations Plan, an effective public information program and continuing collaborative efforts with the County, other Cities, agencies and community organizations to facilitate collaborative efforts in providing up-to-date tsunami mapping, preparation, information, warning dissemination and education.

According to maps prepared for the *General Plan 2030* and included in the General Plan EIR, the downtown and beach areas are located within a potential tsunami inundation area, as are most of the downtown and beach areas of Santa Cruz (City of Santa Cruz, April 2012, DEIR volume-Figure 4.7-2).

Sea Level Rise Hazards

The rise in global sea level is attributed to the thermal expansion of ocean water and the melting of mountain glaciers and ice sheets around the globe. Sea level rise will result in direct and indirect impacts including increased risk of flooding, storm surges and inundations, erosion, and shoreline retreat. Average global sea level has risen between five to nine inches during the 20th century as reported by the International Panel on Climate Change (IPCC), nearly one-tenth of an inch each year (California Environmental Protection Agency, August 2013). Along California's coast, sea level already has risen by an average of seven inches over the last century – three inches at Los Angeles, eight inches at San Francisco, and an estimated six inches at La Jolla near San Diego (Ibid.).

Although sea level rise is not a new phenomenon, having been a major natural component of coastal change throughout time, the current concern is that with increased global warming and melting of ice sheets on Greenland and West Antarctica, the rate of change may increase. The "State of California Sea-Level Rise Guidance Document" (March 2013) provides guidance for incorporating sea-level rise projections into planning and projects in California in response to Governor Schwarzenegger's Executive Order S-13-08, issued on November 14, 2008 that directed state agencies to plan for sea level rise and coastal impacts. According to this document[1], sea level rise is projected (using the year 2000 as a baseline) as: 0.13-0.98 feet between 2000 and 2030; 0.39-2.0 feet between 2000-2050; and 1.38-5.48 feet between 2000 and 2100 (see Table 4.5-1). Impacts of sea level rise in California include flooding and inundation, increased coastal erosion, changes in sediment supply and movement, and saltwater intrusion to varying degrees along the California coast (California Coastal Commission, August 2015).

Portions of downtown and beach areas have been mapped as being within areas of sea level rise. As sea level continues to rise, seawater could extend farther upstream in the San Lorenzo River flood control channel more frequently, and rising gradually to higher elevations. This would lead to a rise in the water table beneath downtown, likely resulting in the need for more pumping and implementation of other adaptation strategies (Griggs, Haddad, January 2011).

In response to impacts of climate change, including rising sea levels, the City has prepared a "Climate Adaptation Plan" with funding from FEMA. The objectives of this Plan are to identify and evaluate the potential impacts of climate change on the City of Santa Cruz, analyze the severity of the hazards that the City faces, and develop potential adaptation responses to reduce the risk and exposure of the City to these hazards. The potential risks were identified in a "Vulnerability Study", prepared as a collaborative effort between the City's Adaptation Team and

[1] The State of California supported the preparation of the 2012 National Research Council's Report, *Sea-Level Rise for the Coasts of California, Oregon and Washington: Past, Present, and Future*, which is currently considered the best available science on sea level rise for California (California Coastal Commission, August 2015). This is estimate is current reference by California: a) March 2013-"State of California Sea Level Rise Document"; b) August 2013-"Indicators of Climate Change in California"; and c) August 2015-"California Coastal Sea Level Rise Policy Guidance."

University of California (UCSC) scientists. The study identified potential facilities vulnerable to risks of sea level rise, including beaches, West Cliff Drive, the City's wastewater treatment facility and the Santa Cruz Harbor (Griggs, Haddad, January 2011). The study also addressed coastal storm and cliff erosions hazards, as well as the potential for increased precipitation and flooding.

TABLE 4.5-1: Sea Level Rise Projections for California

TIME PERIOD	NORTH OF CAPE MENDOCINO	SOUTH OF CAPE MENDOCINO
By 2030	2 – 9 in (-4 – +23 cm)	2 – 12 in (4 – 30 cm)
By 2050	-1 – 19 in (-3 – + 48 cm)	5 – 24 in (12 – 61 cm)
By 2100	4 – 56 in (10 – 143 cm)	17 – 66 in (42 – 167 cm)

SOURCE: National Research Council, 2012 as cited in State of California Sea Level Rise Document, 2013

Based on the Vulnerability Study, the Climate Adaptation Plan identifies 41 priorities and actions to respond to specific risks and hazards related to climate change. Priority actions include #A-9 to protect downtown and the beach area from San Lorenzo River flooding. Activities under consideration for this priority action include evaluation of levees and/or dredging the river to improve water flow. Climate change mitigation and adaptation planning also was identified as a critical action item in the City's Local Hazard Mitigation Plan. FEMA reviews and approves LHMPs and requires an update on a five-year cycle.

4.5.2 Impacts and Mitigation Measures

In accordance with the California Environmental Quality Act (CEQA); State CEQA Guidelines (including Appendix G); City of Santa Cruz plans, policies, and/or guidelines; and agency and professional standards, a project impact would be considered significant if the project would:

5a Substantially alter the existing drainage pattern of the site or area, including through alteration of the course of a stream or river in a manner that could result in substantial off-site erosion or siltation;

5b Substantially increase the rate or amount of surface runoff, which would exceed capacity of existing or planned storm drain facilities, cause downstream or off-site drainage problems, or increase the risk or severity of flooding in downstream areas;

5c Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface water quality;

5d Result in construction of habitable structures within a 100-year floodplain as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard

delineation map, which would expose people or structures to a significant risk of loss, injury or death due to flooding;

5e Locate structures within a 100-year flood hazard area that would impede or redirect flood flows;

5f Expose people or structures to a significant risk of loss, injury, or death involving flooding as a result of the failure of a levee or dam;

5g Expose people or structures to a significant risk of loss, injury or death as a result in inundation by seiche, tsunami, or mudflow.

Analytical Method

The proposed project consists of amendments to the City's Downtown Recovery Plan, General Plan, Local Coastal Plan and Zoning Code regarding development in the downtown area and Central Business District. The proposed project would not directly result in new development. However, the proposed Downtown Plan amendment would expand areas for potential additional building height that could accommodate intensified redevelopment of existing developed sites. The proposed General Plan amendment would increase FAR in areas designated as RVC in the General Plan, but would not lead to development on sites not already considered in the General Plan and General Plan EIR. The proposed LCP and Zoning Code amendments would not result in changes that could indirectly lead to intensified development. The following impact analyses are based on review of existing data and studies.

Impacts and Mitigation Measures

The following impact analyses address potential stormwater impacts (5a, 5b), water quality impacts (5c), and exposure to flood (5d-f) or tsunami (5g) hazards.

Impact 4.5-1: **Stormwater Drainage.** Future development accommodated by the proposed plan amendments could result in stormwater runoff, but would not substantially alter the existing drainage pattern of the area, substantially increase the rate or amount of surface runoff, exceed the capacity of existing or planned storm drain facilities, cause downstream or off-site drainage problems, or increase the risk or severity of flooding in downstream areas (4a, 4b). This is considered a *less-than-significant impact.*

The proposed project would not directly result in new development, but could lead to intensified development in the project study area. The study area is currently developed or paved, and stormwater runoff would not be expected to substantially increase as the area already is developed with impervious surfaces. Stormwater runoff from future development sites would be conveyed to existing storm drainage facilities that ultimately discharge into the San Lorenzo River. Existing City regulations will serve to manage stormwater runoff from future development accommodated by the proposed Plan amendments. Additionally, General Plan policies and

actions require that new development maintain pre-development runoff levels (CC5.1.8). Therefore, the compliance with the City's stormwater regulations will required of future developments that may result from the proposed project. Thus, the project would not indirectly lead to potentially significant stormwater or drainage impacts. Additionally, it is noted that redevelopment of properties in the study area could occur without the proposed project.

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

Impact 4.5-2: Water Quality. Future development accommodated by the proposed plan amendments could result in water quality degradation to San Lorenzo River from automobile oils and greases carried in stormwater runoff. Project grading could also result in erosion and potential downstream sedimentation if not properly managed (4c). However, with compliance with City stormwater regulations and implementation of required controls, this is considered a *less-than-significant impact*.

As indicated in the Impact 4.5-1 discussion, the proposed project would not directly result in new development, but could lead to intensified development in the project study area. The study area is currently developed, and it is expected future development would include enclosed parking garages instead of paved lots. Future development projects will be required to comply with the City's stormwater regulations and required BMPs, which require pre-treatment of runoff. Compliance with City regulations, which were adopted pursuant to federal and state requirements, would include the required measures to protect water quality as determined at the project level, and the proposed project would not indirectly result in a substantial degradation of surface water quality.

Grading for future development projects will be subject to City approval of a grading permit, which includes an approved erosion control plan. For projects over one acre in size, preparation of a Stormwater Pollution Prevention Plan (SWPPP) also is required pursuant to the State's NPDES program. The purpose of a SWPPP is to identify sources of sediment and other pollutants that affect the quality of stormwater discharges and to describe and ensure the implementation of BMPs to reduce or eliminate sediment and other pollutants in stormwater as well as non-stormwater discharges. For projects over one acre in size, a Notice of Intent also is filed with the SWPPP to the RWQCB. The project will be subject to these requirements. Preparation and implementation of the SWPPP and required erosion control plan will ensure that future development projects would not cause any increase in sedimentation, turbidity, or hazardous material concentrations within downstream receiving waters.

With compliance with City stormwater regulations and BMPs, and implementation of SWPPP and erosion control plans as may be required, potential water quality degradation would be controlled, resulting in a less-than-significant impact.

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

Impact 4.5-3: Flood Hazards. Future development accommodated by the proposed plan amendments could result in exposure to flood hazards, including watercourse flooding, sea level rise or tsunami. (5d-g). However, with compliance with federal flood requirements and implementation of City plans and programs, the proposed project would not lead to indirect impacts related to exposure to flood hazards (5d-g). This is considered a *less-than-significant impact*.

Future development accommodated by the proposed general plan could be subject to flood hazards in limited areas. These include areas of the downtown that are located in the San Lorenzo River floodplain, although recent levee improvements have increased flood protection in these areas. As sea level continues to rise, seawater could extend farther upstream in the San Lorenzo River flood control channel more frequently, and rising gradually to higher elevations. This would lead to a rise in the water table beneath downtown. This area of the City has always been vulnerable to an elevated water table but this will become a more significant issue in the future, likely resulting in the need for more pumping and implementation of other adaptation strategies (Griggs, Haddad, January 2011). Recommendations include continued monitoring of City pump stations along the San Lorenzo River with installation of additional monitoring wells and increase pumping capacity as necessary (Ibid.). The City's adopted Climate Adaptation Plan includes a high priority action to implement measures to protect downtown from flooding.

The proposed project would not lessen or worsen the potential for tsunami damage, although it would indirectly lead to intensified development with an increase in the number of people potentially exposed to a tsunami hazards. However, because dangerous tsunamis typically have originated at such a great distance, it is possible to issue fairly long-range warnings of their approach and evacuate people if necessary. Thus, the City's efforts to continue to periodically update its emergency evacuation procedures for tsunami hazard areas as well as coordination with other agencies as outlined in the City's adopted Hazard Mitigation Plan would respond to this concern.

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

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4.6 PUBLIC SERVICES

This section analyzes impacts of the proposed project on the following public services; water and wastewater utility service is addressed in section 4.8:

- ❒ Fire Protection Services
- ❒ Police Protection Services
- ❒ Parks and Recreation
- ❒ Schools
- ❒ Solid Waste Disposal
- ❒ Energy – Electrical and Natural Gas Utilities

This section also draws from the City of Santa Cruz *General Plan 2030* EIR (SCH#2009032007), which was certified on June 26, 2012, regarding background information on regulatory setting. The General Plan EIR is incorporated by reference in accordance with section 15150 of the State CEQA Guidelines. Relevant discussions are summarized in subsection 4.3.1. The General Plan EIR is available for review at the City of Santa Cruz Planning and Community Development Department (809 Center Street, Room 107, Santa Cruz, California) during business hours: Monday through Thursday, 8 AM to 12 PM and 1 PM to 5 PM. The General Plan EIR is also available online on the City's website at: http://www.cityofsantacruz.com/government/city-departments/planning-and-community-development/general-plan.

Public and agency comments were received during the public scoping period in response to the Notice of Preparation (NOP). No comments were received regarding public services. Public comments received during the public scoping period are included in Appendix B.

4.6.1 Environmental Setting

Regulatory Setting

There are a number of state laws and regulations governing the provision of specified services. These are discussed in the General Plan 2030 EIR (DEIR volume) on pages 4.6-1-4.6-2, 4.6-5-4.6-6, 4.6-20, 4.6-21-4.6-22, and 4.6-25, which is incorporated by reference. Key applicable regulations are summarized for each service in the following sections.

Study Area

The project area consists of the downtown area generally covered by the Downtown Recovery Plan (DRP) and the Central Business District zone, and specifically the lower downtown area generally between Soquel Avenue and Laurel Street on the north and south, and Cedar Street and the San Lorenzo River on the west and east. (Locations are shown on Figures 1-2 an d 2-1 in

Section 3, Project Description.) The study area includes properties adjacent to the western San Lorenzo River levee.

Service providers include the City of Santa Cruz for all services, except for schools, which is provided by Santa Cruz City Schools.

Fire Protection Services

The City of Santa Cruz Fire Department is an all hazard emergency response and fire protection agency that serves the City, the University of California at Santa Cruz (UCSC), and participates in mutual aid responses within the County and State. The Fire Department also provides various contract services within the County. Agreements include a long-term contract for full fire protection services with UCSC, specialized arrangements for seasonal lifeguards with the City of Capitola and the Santa Cruz Port District, and an automatic aid agreement with County Fire/CalFire into Paradise Park. The City of Santa Cruz Fire Department maintains mutual aid agreements with all surrounding fire agencies to provide, and receive, aid on an as needed basis. The department is also a participant in the California Fire Assistance Agreement (CFAA) which allows for statewide mutual aid..

The Fire Department provides a variety of services which include fire protection, marine rescue, technical rope/cliff rescue, advanced life support/paramedic, and hazardous materials emergency response. In addition, the department serves the community through a wide array of non-emergency interactions by providing fire prevention, community risk reduction, public education, disaster preparedness training, and ongoing emergency management preparation.

Existing Facilities and Operations

The City of Santa Cruz Fire Department operates out of four fire stations, including a station at the University of California at Santa Cruz, and houses its administrative functions at a separate office downtown. The Department also maintains a Marine Rescue Headquarters (Station Five) on the Municipal Wharf. The Department has seven fire engines, two fire trucks, and other related vehicles and.

The Fire Department has 66 staff, including 21 firefighters/paramedics, 15 fire engineers, 15 fire captains, 3 battalion chiefs, 1 training chief, 1 marine safety office, 1 marine safety captain, 1 fire prevention technician, 1 fire inspector, 1 deputy fire marshal, 1 PMA/OES manager, and 2 administrative staff. Additionally, the Fire Department utilizes 70 seasonal and 20 year-round part-time staff within the Marine Safety Division. Each shift has 18 assigned personnel. The Fire Department has a minimum staffing standard of 15 firefighters and one battalion chief on duty per day.

The number of service calls received by the fire department in 2016 was approximately 8,200 calls. The majority of the calls are for non-fire emergencies, with about 65% of the calls being for

medical assistance. Average response times from each of the four fire stations is approximately 5 minutes. The Department's goal is to respond to emergency medical calls in less than five minutes 90% of the time and to fire emergency calls within eight minutes 90% of the time.

Fire Station #1 at 711 Center Street is within the downtown area and closest to the project area. Discussions with Fire Department staff indicate that the facility size in inadequate for equipment, personnel, and storage (Frawley, personal communication, May 2017). The Department does not have a Training Facility, the construction of which was included as a recommendation in the Department's "Three Year Strategic Plan, 2009-2011." The Plan also recommends improvements to apparatus bays at Stations One and Three to accommodate new equipment, and investigation of constructing a new fire station at the present Station Two location and relocation of Station Four (Marine Rescue Headquarters) (City of Santa Cruz, April 2012, DEIR volume).

Police Protection Services

The City of Santa Cruz Police Department provides crime protection and prevention activities throughout the City, including patrols, response to calls, education and community outreach. Its range of services include patrol, investigations, traffic, parks unit, neighborhood enforcement team, gang unit, dive team, hostage negotiation team, tactical team and School Resource officer. The Department recently initiated an application for mobile phones/IPADs that allows citizens to download Crime Alerts and crime tips. The City has mutual aid agreements with county law enforcement (Sheriff's Office, Capitola, Scotts Valley, Watsonville, California Highway Patrol, State Parks and UCSC Police Departments).

The Police Department operates out of one police station/headquarters, located in downtown Santa Cruz. The Department' existing facility and vehicles are adequate for the existing population, although additional storage space is needed (Martinez, personal communication, May 2017).The Department is currently staffed by 94 authorized sworn officer positions and 28 non-sworn (civilian) positions, including four community service officers and three administrative staff (City of Santa Cruz Police Department, 2015). The Department plans to begin a study on staffing levels, starting in the summer of 2017 (Martinez, personal communication, May 2017).

With a finite amount of resources, the city is divided into five patrol beats that are designed to maximize coverage and provide efficient response to calls for service: West, East, Beach, Central, and Downtown (City of Santa Cruz Police Department, 2015). The Department has divided the City into five main beats, and handled 103,592 calls in 2015 (Ibid.). Approximately 40% of the annual calls are for service in the Downtown area 2017 (Martinez, personal communication, May 2017). The average response time is four minutes, 22 seconds, which is under the Department's target of four minutes, 30 seconds. Dispatching services are provided through the Santa Cruz Consolidated Emergency Communications Center.

Parks and Recreation

Santa Cruz offers residents and visitors a wide range of parks, open space, beaches, trails, and recreational opportunities. The operates and maintains a range of neighborhood parks, community/regional parks, community facilities, and recreational programs. Most of these parks, facilities and programs are operated and maintained by the City Parks and Recreation Department. Some facilities and programs are operated and organized in partnership with community organizations.

The City has responsibility for manages, maintains and operates more than 1,700 acres of parks and open space lands, including various community/recreational facilities. In addition to maintaining the existing park system, the City must develop new parks or add amenities within existing parks to meeting community recreational needs. The City also manages the Heritage Tree Program, Urban Forest Program, as well as maintains street and median landscaping within public rights-of-way. Within the City limits, open space and beaches are also provided on State-owned lands, including three State Park units and the University of California campus.

The General Plan 2030 established per capita goals for neighborhood and community parks to ensure adequate parks throughout the City. The City's standard is provide neighborhood parks at a ratio of 2.0 acres per 1,000 people with a service radius of ½ mile. The City's goad for community parks is 2.5 acres per 1,000 people with a service radius of 1.5 miles. The City is currently underserved for neighborhood and community parks and requires a total of 57 acres to meet these goals (City of Santa Cruz, February 2017). The City is in the process of preparing a Parks Master Plan; a draft plan was released in February 2017.

There are several neighborhorhood and community parks within proximity to the downtown area. The Mimi de Marta Dog Park is located in the vicinity of the project area. In the project area, the San Lorenzo Riverwalk also provides opportunities for access and recreation. Public access is provided by a continuous paved pathway/service road on each side of the levee, extending approximately 2.5 miles on each levee from Highway 1 southward. A new pedestrian-bicycle path and bridge over Branciforte Creek is being constructed. The Riverwalk's multi-use paved trails not only promote connectivity to and from the project area, but also provide opportunities for running, walking, bicycling, or bird watching. According to the Draft Parks Master Plan,

Improved public access is addressed in the *San Lorenzo Urban River Plan.* This document is the outcome of a planning process initiated by City Council in 1999 to update plans for the San Lorenzo River, Jessie Street Marsh, and Branciforte Creek. The plan serves as a guide for restoring and managing natural resources, riverfront development, and public access improvements for the lower San Lorenzo River. It includes conceptual ideas to promote river-oriented development, site specific recommendations for public areas along the river, and restoration recommendations. The SLURP provides recommendations for locations and designs of plazas, unpaved nature loops, interpretive signage and bird viewing locations. Lighting along

the Riverwalk and exercise equipment on the west side of the river south of Laurel Street were recently added. The existing Downtown Recovery Plan also identifies opportunities for public space within the downtown area to include areas along Cedar Street, near the Civic Center and along the San Lorenzo River.

The City imposes a "Parks and Recreation Facilities Tax" (pursuant to Chapter 5.72 of the Municipal Code) on new residential development (including mobile homes) within the City, payable at the time of issuance of a building permit. The collected taxes are placed into a special fund, and "shall be used and expended solely for the acquisition, improvement and expansion of public park, playground and recreational facilities in the city" (section 5.72.100). Projects that have dedicated land or fees in accordance with Municipal Code Chapter 23.28 requirements for subdivisions are exempt from this tax.

Schools

Schools and educational services are provided to City residents by the Santa Cruz City Schools (SCCS), as well as a number of private schools, for grades K through 12. SCCS is composed of two separate districts: the Elementary District (K-6) and the High School District (7-12), governed by a common board and administration. The Elementary District draws students from the City of Santa Cruz and in County locations including Davenport and Soquel. It includes six schools serving approximately 2,000 students. The second district includes two middle schools, three high schools, an independent studies program and a home school program serving a population of 4,660 students (Santa Cruz City Schools, 2017).

The proposed project would be served by SCCS schools including Westlake Elementary, Mission Hill Middle School, and Santa Cruz High School. The capacity of each school serving the project is provided in the City's General Plan EIR (City of Santa Cruz 2012). The SCCS study found that enrollment was under capacity and that enrollment is forecasted to decline over the next ten years (Decision Insite, 2016). The study incorporated current enrollment capacity, feeder district data, county birth rates and plans for new housing in the forecasting methodology.

Current enrollment data as reported by the State Department of Education was compared to capacity as reported in the City's General Plan, which is summarized on Table 4.6-1. The middle school and high school have enrollments that are under capacity based on data reported by the state (California Department of Education, 2017). However, Westlake Elementary is very close to capacity.

Local school districts are empowered under state law to impose school impact fees, which are collected by local governments at the time of building permit issuance. The Santa Cruz City Elementary and High School Districts currently charge school impact fees.

TABLE 4.6-1: School Capacities and Enrollments

School	Capacity[1]	Current Enrollment
Westlake Elementary	604	569
Mission Hill Middle	690	594
Santa Cruz High	1,362	1,027
Total	**2,656**	**2,190**

Source: City of Santa Cruz 2012, Decision Insite, 2016 and California Department of Education, 2017.

1. As reported in the City's General Plan (City of Santa Cruz 2012).

Solid Waste Disposal

Solid waste collection and disposal, including recycling services, are provided by the City of Santa Cruz to residents, businesses and institutions within the City's boundaries, is provided at the Resource Recovery Facility (RRF), which includes a sanitary landfill, recycling center, green waste drop-off area, and Household Hazardous Waste Drop-Off Facility. The City owns and operates this facility, including a Class III sanitary landfill, which is located approximately three miles west of the City off Highway 1 on Dimeo Lane. The site covers 100 acres with approximately 70 acres available for disposal use, and the City's RRF. The RRF only accepts municipal solid waste and serves as a sorting facility to remove any recyclable or composting materials. The Recycling Center accepts a variety of recyclable materials.

In the mid-1990s the permitted disposal area of the landfill increased from 40 to 67 acres. The additional acreage was designed with a liner system that meets EPA requirements for new municipal solid waste landfills. The new area replaced the former leachate evaporation ponds, which were cleaned and closed in 1997. The expansion increased the life of the landfill by approximately 30 years at that time, but the lifespan has been increased through implementation of additional waste reduction measures (City of Santa Cruz, April 2012, DEIR volume).

The City's solid waste operations are in full compliance with federal, state, and local air, water and waste regulations for collection vehicles, processing operations, and landfill disposal operations. The City has implemented several best management practices to improve its solid waste services, including a landfill gas collection system that is used to run an engine to produce electricity and use of bio-diesel for collection and landfill equipment to reduce CHG emissions (City of Santa Cruz, April 2012, DEIR volume).

The City of Santa Cruz met the state-mandated waste diversion goals of 25% of their 1990 waste-streams from landfill disposal by 1995 and 50% by 2000 through community education and the implementation of expanded curbside recycling programs. In the year 2000, the City established a Zero-Waste goal with the ultimate intention of eliminating the City's need for a landfill. As of

2015, the City had achieved a diversion rate of 65-68%, which exceeds the state requirements (City of Santa Cruz, April 2012, DEIR volume).

Assuming growth trends similar to the past 10-15 years in the City of Santa Cruz, the RRF has more than adequate capacity to accommodate all municipal solid waste generated by City residents, visitors and businesses. Based on continued waste reduction, annual aerial surveys, and calculations, the landfill is estimated to have capacity through the year 2056 (City of Santa Cruz, April 2012, DEIR volume). State law requires that facilities begin planning for future waste disposal/reuse facilities at least 15 years in advance of existing landfill closure dates, which would be around the year 2043.

Electrical and Natural Gas Utilities

Pacific Gas and Electric Company (PG&E) provides electrical and natural gas service to the City. Incorporated in California in 1905, PG&E is one of the largest combination natural gas and electric utilities in the United States. PG&E and other utilities in the state are regulated by the California Public Utilities Commission (City of Santa Cruz, April 2012-DEIR volume). It currently provides service to approximately 16 million people throughout a 70,000-square-mile service area in northern and central California from Eureka in the north to Bakersfield in the south, and from the Pacific Ocean in the west to the Sierra Nevada in the east. The service area includes 106,681 circuit miles of electric distribution lines, 18,466 circuit miles of interconnected transmission lines. 42,141 miles of natural gas distribution pipelines and 6,438 miles of transportation pipelines. PG&E and other utilities in the state are regulated by the California Public Utilities Commission (Pacific Gas and Electric Company, 2017).

The state's per capita electrical use has been the lowest or one of lowest of any state in the nation (California Energy Commission, 2017, U.S. Energy Information Administration, 2017). California is among the top states in the nation in net electricity generation from renewable resources. The state leads the nation in net electricity generation from solar, geothermal, and biomass. California is also a leading producer of electricity from conventional hydroelectric power and from wind, ranking fourth in the nation in both. In 2014, California became the first state in the nation to get more than 5% of its utility-scale electricity generation from its solar resource (U.S. Energy Information Administration, 2017). In 2015, California ranked fourth in the nation in conventional hydroelectric generation, second in net electricity generation from all other renewable energy resources, and first as a producer of electricity from biomass, geothermal, and solar energy (Ibid.).

In 2015, the latest year for which data are available, residential, commercial and industrial energy users in the City of Santa Cruz consumed about 245 million kilowatt-hours of electricity and about 12 million therms of natural gas from PG&E. PG&E's power mix in 2015 included 30% from renewable sources, 25% from natural gas, 23% from nuclear, 17% from unspecified sources and 6% large hydropower plants.

There are also over 2,000 residential solar PV systems and about 60 commercial solar PV systems that provide renewable electricity within the City. All residential, commercial, and industrial PG&E electricity accounts will be opted into Monterey Bay Community Power's (MBCP) community choice energy program in Spring 2018. At that time, switching the City's overall electricity procurement to MBCP will increase the proportion of electricity supplied from renewable sources from 30% (with PG&E) to 50% and eventually consumers may elect to pay a premium for electricity from 100% renewable sources.

In 2015, the latest year for which data are available, the City of Santa Cruz's municipal operations consumed about 14 million kilowatt-hours of electricity (~5.7% of overall City use) and about 433,000 therms of natural gas (~3.7% of overall City use). The power mix for municipal operations includes 43% natural gas (from PG&E), 29% electricity (from PG&E), 23% from methane capture and conversion to electricity at the wastewater treatment facility, and 5% solar PV. Methane capture and conversion to electricity and solar PV are considered renewable energy sources. The City plans to install solar PV to increase the proportion of overall energy use met by solar PV from 5% in 2016 to 11% by 2018 and 16% by 2020.

Studies have demonstrated the value and cost-effectiveness of weather-stripping, replacing single pane windows, old appliances and lighting, and increasing insulation in reducing energy use and saving money. Significant energy and cost savings have already been achieved through the implementation of such measures throughout the City of Santa Cruz, although further savings could be achieved (City of Santa Cruz Climate Action Program, October 2012). Over the past 15 years, the combined influences of energy efficiency rebate programs, a public education campaign, and significant increases in energy prices have led to a 22% reduction in energy use within Santa Cruz homes. While this drop in energy use is significant, home energy use in Santa Cruz is again on the rise, but still far below 1996 levels (Ibid.).

In 2007, Santa Cruz became one of the first municipalities in the nation to require new construction to include the adoption of environmentally superior building materials and designs. Builders in Santa Cruz now use best practices for their construction projects that enhance building energy efficiency and water conservation as well as to improve air quality, waste reduction and recycling, and erosion and runoff control. The Green Building Program currently includes residential and commercial development (City of Santa Cruz Climate Action Program, September 2010). Reviews conducted as part of the preparation of the City's draft "Climate Action Plan" indicates that an "award-winning" home under the City's Green Building Program produces a home that is more efficient than standard homes built in 2008 and almost twice as efficient as homes built in 1990 (City of Santa Cruz, September 2010).

The AMBAG Energy Watch Program is a partnership between AMBAG and PG&E, which seeks to reduce energy use in the Monterey Bay region by providing the resources listed below to eligible PG&E customers.

- energy assessments and audits
- direct installation of energy efficient equipment

- technical assistance and financial incentives for energy efficient retrofits in municipal buildings
- energy efficiency seminars and training courses in the region.
- information on other PG&E energy efficiency programs and services

Additionally, the Monterey Bay Regional Energy Plan was prepared by AMBAG to update goals and actions Program regarding energy use in the Monterey Bay region. A draft update to the 2006 Plan reported that the Energy Watch Program tracked and reported the following energy savings in 2008 throughout the region: 5,201,582 kilowatt hours (kWh) for municipalities; 17,697,292 kWh the hospitality industry; and 1,293,653 kWh for residential uses (City of Santa Cruz, April 2012, DEIR volume).

4.6.2 Impacts and Mitigation Measures

Thresholds of Significance

In accordance with the California Environmental Quality Act (CEQA); State CEQA Guidelines (including Appendix G); City of Santa Cruz plans, policies, and/or guidelines; and agency and professional standards, a project impact would be considered significant if the project would:

6a Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or need for new or physical altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:

- Fire Protection
- Police Protection
- Schools;

6b Increase the use of existing neighborhood and community parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated;

6c Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment;

6d Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste disposal needs; or

6e Result in the wasteful or inefficient use of energy.

Analytical Method

The proposed project consists of amendments to the City's Downtown Recovery Plan, General Plan, Local Coastal Plan and Zoning Code regarding development in the downtown area and Central Business District. The proposed project would not directly result in new development. However, the proposed Downtown Plan amendment would expand areas for potential additional building height that could accommodate intensified redevelopment of existing developed sites. City staff estimates that the proposed amendments could indirectly lead to development, resulting in a potential net increase of 711 new residential units and 2,200 square feet of office space with a net decrease of approximately 14,700 square feet of commercial building space over existing conditions within the downtown area. The proposed General Plan amendment would increase FAR in downtown areas designated as RVC in the General Plan. The proposed LCP and Zoning Code amendments would not result in changes that could indirectly lead to intensified development. Future service demands and impacts resulting from the project are assessed based on review existing plans and consultation with staff of agencies responsible for provision of services addressed in this section.

Impacts and Mitigation Measures

The project does not include facilities or require construction or expansion of recreational facilities (6c). The following impact analyses address potential indirect impacts to public services (6a), neighborhood and community parks (6b), landfill capacity (6d), and energy usage (6e).

Impact 4.6-1a: Fire Protection. Adoption of the proposed plan amendments could indirectly result in increased population density associated with potential new development accommodated by the Plan that would result in increased fire protection and emergency service demands. Existing and future development and growth within the City would result in the need to construct new or expanded fire stations, however, the impacts of fire station construction or expansion are not expected to be significant (6a). Therefore this is considered is a *less-than-significan*t impact

The proposed project would not directly result in new development, but could lead to intensified development in the project study area with an increased downtown population. According to the City's Fire Department, the existing downtown fire station is inadequate in terms of space and equipment to meet existing needs, which would be further impacted by development and growth that would be accommodated by the proposed project. Should expansion be proposed, it is likely that expanded or new fire facilities would be within developed downtown and/or eastside locations. Expansion or new construction would be considered infill development on sites surrounded by development. New development and growth accommodated by the draft plan would not reduce response times. However, existing and future growth would require new or physically altered fire protection facilities (Frawley, personal communication, May 2017), but

locations for expansion or construction are within developed areas and are not expected to result in significant physical impacts.

The Department's current need for a Training Facility, however, will continue in the future, and the Department plans to investigate the possibility of consolidating administration and training facilities with future fire station improvements, including potential reconstruction of Fire Station Two and relocation of Fire Station One. No sites have been identified for potential relocation. Fire Station Two is located adjacent to a city-owned, paved, public parking lot. If future expansion were to occur at this location, there are no significant impacts are expected to occur, as the site is within a developed urban area.

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

Impact 4.6-1b: Police Protection. Adoption of the proposed plan amendments could indirectly result in increased population associated with potential development that could be accommodated by the Plan that would result in increased police protection service demands. However, future development and growth would not result in the need to construct new or expanded police facilities (6a). This Therefore this is considered is a *less-than-significan*t impact

The proposed project would not directly result in new development, but could lead to intensified development in the project study area with an increased downtown population. According to the City's Police Department, there are adequate police protection facilities to serve the potential development and growth accommodated by the proposed project and plan amendments. No additional equipment or facilities will be needed to maintain acceptable response times and service levels (Martinez, personal communication, May 2017). New development and growth accommodated by the proposed project would not reduce response times or require new or physically altered police protection facilities that could result in significant physical impacts (Ibid.). Furthermore, it is expected that the change in use and redevelopment will lead to a reduction in crime and calls for service in the project area (Ibid.).

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

Impact 4.6-1c: Schools. Adoption of the proposed plan amendments could indirectly result in increased population associated with potential development that would generate elementary school student enrollments that could exceed capacity of existing schools (6a). This is considered is a *potentially significan*t impact.

The proposed project would not directly result in new development, but could lead to intensified development in the project study area, resulting in increased student enrollments. To

determine whether the project would result in increased demand for school facilities, potential new enrollment as a result of the project was estimated using Census tract data for downtown Santa Cruz. Project school generation was then compared to existing enrollment and capacity.

American Community Survey 5-year Census data provides information on the number of households with children and enrollment. Based on data for the Census tract that contains the project, 11% of households have children and the average household size is 1.83 (American Community Survey 5-year 2011-2015 Table S1101). Census enrollment data shows that the split of enrollment between elementary, middle, and high school is 51%, 27%, and 23% respectively in this Census tract (American Community Survey 5-year 2011-2015 Table S1401). Given the small household size in the project area, it was assumed that households with children are likely to have one child. Applying this information to the project yields a result of 79 new children. It was assumed that all these children would be enrolled in school, which is a conservative assumption as some of these children would be below school-age. Using these assumptions and the Census data split for enrollment the project would generate 40 new elementary school students, 21 middle school students and 18 high school students.

Based on this approach, it is anticipated Santa Cruz High and Mission Hill Middle Schools would remain under capacity with the project. Westlake Elementary School may exceed capacity with the project as shown on Table 4.6-2. However, the development that may occur as a result of the proposed project plan amendments would occur over time; redevelopment of the study area is estimated to occur over 25+ years. School enrollment associated with future development also would increase over time.

TABLE 4.6-2: School Capacities & Projected Enrollments

School	Capacity[1]	Current Enrollment	Enrollment from Project	Percent Capacity with Project
Westlake Elementary	604	569	40	101 – 111%
Mission Hill Middle	690	594	21	89 – 98%
Santa Cruz High	1,362	1,027	18	77 – 92%
TOTAL ALL GRADES	**2,656**	**2,190**	**79**	

Source: City of Santa Cruz 2012, Decision Insite 2016, and California Department of Education 2017.

Notes:

1. As reported in the City's General Plan (City of Santa Cruz 2012).

The General Plan 2030 (2012) includes a number of policies that serve to mitigate potential impacts to existing school facilities as a result of new residential development and population growth including ensuring and planning for adequate school sites (CC8.2, CC8.2.2) and cooperating with the school district to monitor impacts of housing on elementary school populations (CC8.1.1). The General Plan also encourages joint-use facilities that combine educational and community uses (CC8.2.1). SCCS staff indicated that enrollment resulting from growth accommodated by the City's General Plan 2030 could be accommodated within existing

school facilities, including using Natural Bridges Elementary School, if needed. Additionally, the school district collects school impact fees that can be used for facility expansion and/or installation of classroom modules. Such expansion, if required, would be located within existing development footprints and would not be expected to result in significant physical impacts.

The proposed project would not directly result in new development, but increased population resulting from development accommodated by the project could increase student enrollments in grades K-12, which could exceed existing school facility capacities at one school depending on the timing and rate of growth. With required payment of school impact fees to fund necessary facility expansion and/or additions, in conjunction with potential reuse of the former Natural Bridges Elementary School if needed, the impact would be mitigated to a less-than-significant level. Potential addition or expansion of school classroom facilities is not expected to result in significant physical impacts due to the location of existing facilities within developed footprints.

Mitigation Measures

No mitigation measures are required beyond payment of school impact fees that will be collected at the time of issuance of a building permit.

Impact 4.6-2: **Parks and Recreation.** Adoption of the proposed plan amendments could indirectly result in increased population associated with potential development that could be accommodated by the Plan that would result in increased demand for parks and recreational facilities that could result in some deterioration of existing parks and recreational facilities (6b). Therefore this is considered is a *potentially significan*t impact.

The proposed project would not directly result in new development, but could lead to intensified development in the project study area, resulting in increased population and in increased demands for park and recreational facilities. Census data for the tract that contains the downtown project study area shows an average household size of 1.83 (American Community Survey 5-year 2011-2015, Table S1101). Based on this data the proposed project could indirectly result in an increase in the downtown residential population, which currently houses approximately 1,300 people. As previously discussed, the City currently does not meet the desired level of service for neighborhood and community parks and is deficient by approximately 57 acres. Thus, existing developed neighborhood parks could be considered at capacity use, in general, based on the City's park service standards. Based on the City's parks standards set forth in the General Plan, the indirect population that could result from the project would result in the need for approximately 4.5 acres of additional park land.

The proposed project consists of a series of plan amendments and no specific development projects are proposed at this time. At a program level, the City has embarked on the preparation of a Parks Master Plan to identify park needs and improvements. It is expected that this plan will be considered by the City Council in late 2017. Additionally, the City's General Plan 2030 includes a number of policies that serve to mitigate potential impacts to existing parks and

recreation facilities as a result of new residential development and population growth. The policies, which are summarized on Table 4.6-3, address development of new parks which would lessen the projected increased use of existing parks, as well as, maintenance of existing parks and recreational facilities. The General Plan seeks to update and modify park system and park services to accommodate changes in the population and its recreational need (PR1.1.1). A number of policies and actions seek to provide a system of parks and recreational facilities (PR1.1.1), planning for new parks and facilities (PR1.1.2, PR1.1.4), evaluating and acquiring parks (PR1.1.3, PR3.2 [parcels that provide access to City-owned open space lands]), developing new or expanding existing athletic fields (PR1.2.2), and coordinating with local schools to expand park and recreation opportunities (PR1.2.1, PR1.2.3). To this end, the plan establishes service standards (PR1.3, PR1.3.2, PR1.3.3), seeks to ensure that adequate park land is provided in conjunction with new development (PR1.3.1), and requires park dedication or payment of in-lieu fees from new development (PR1.7, PR1.7.1). While specific new park locations are not designated in the proposed General Plan 2030, the policies and actions set forth a strategy to plan and acquire additional park lands in the future. The plan also seeks to ensure that ongoing maintenance needs are addressed in the development and funding plans for any new or expanded parks, recreational facilities, or open space areas (PR1.3.4, PR1.10). Maintenance of the City's Parks and Facilities tax also is recommended (PR1.9, PR1.91, PR1.9.2).

TABLE 4.6-3: General Plan 2030 Policies & Actions that Reduce Parks Impacts

Type of Measure / Action	Policies / Actions
PLAN & PROVIDE FOR NEW PARKS	• Provide & manage parks: PR1.1 • Develop and maintain city Master Parks Plan: PR1.1.2, Pr1.1.4 (plan for adequate parks and recreation facilities) • Level of Service standards: PR1.3, PR1.3.2, PR1.3.3 • Evaluate lands for small parks: PR1.1.3 • Coordinate with schools to expand parks: PR1.2.1, PR1.2.3 • Examine developing new or expanding existing athletic fields: PR1.2.2 • Development park dedication or in-lieu fees: PR1.7, 1.7.1 • Maintain a Parks and Recreation Facilities excise tax on new construction: PR1.9, PR1.9.1, PR1.9.2 • Acquire parcels that provide access to City-owned open space lands and coast: PR3.2
ENSURE MAINTENANCE & MANAGEMENT	• Ensure ongoing maintenance: PR1.3.4 • Identify maintenance funding sources: PR1.10 • Protect & Manage open space: LU2.3 LU2.3.1, LU2.3.2, LU2.3.3, LU2.3.4 (UCSC), LU3.11 • Greenbelt Management: LU2.3.3, LU3.11.3, NRC6.3
PROVIDE ACCESS TO OPEN SPACE LANDS & COAST	• Assure access to open space lands and coast: PR1.6.5, PR3.1 • Coastal access: PR3.2, PR3.3, PR3.3.5 • Access to river & riparian: NRC1.1, NRC1.1.2
PROVIDE TRAILS	▪ Provide and maintain Integrated trail system: PR4.1, PR4.1.1 ▪ Provide and maintain trails in parks: PR4.2, PR4.2.1, PR4.2.2 ▪ Require development to dedicate trails or easements along planned trail routes: PR4.2.3

Furthermore, the City imposes a "Parks and Recreation Facilities Tax" (pursuant to Chapter 5.72 of the Municipal Code) on new residential development (including mobile homes) within the City, payable at the time of issuance of a building permit. The collected taxes collected are placed into a special fund, and "shall be used and expended solely for the acquisition, improvement and expansion of public park, playground and recreational facilities in the city" (section 5.72.100). Projects that have dedicated land or fees in accordance with Municipal Code Chapter 23.28 requirements for subdivisions are exempt from this tax.

Mitigation Measures

With implementation of the proposed General Plan 2030 goals, policies and actions that set forth measures to avoid and minimize adverse impacts on parks and recreational facilities as summarized on Table 4.6-2 and required payment of park fees, the proposed project's indirect impact on parks and recreational facilities would be considered less-than-significant.

Impact 4.6-3: **Solid Waste.** Adoption of the proposed plan amendments could indirectly result in increased population associated with potential development that could be accommodated by the Plan, which could result in indirect generation of solid waste that could be accommodated within the remaining landfill capacity (6d). This Therefore this is considered is a *less-than-significan*t impact.

The proposed project would not directly result in new development, but could lead to intensified development in the project study area, resulting in increased residential and employee population and that would result in increases in solid waste generation. This would be offset by an estimated decrease in existing commercial uses by approximately 14,000 square feet. The City's population is estimated to increase by approximately 1,300 residents as a result of the proposed plan amendments. No development projects are proposed at this time, but development indirectly accommodated by the proposed project is estimated by City staff to occur over 25 years. Thus, impacts to the City's landfill are not expected to be significant as the landfill has been estimated to have a remaining capacity through the year 2058 (City of Santa Cruz, April 2012, DEIR volume).

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

Impact 4.6-4: **Energy Use.** Adoption of the proposed plan amendments could indirectly result in increased population associated with potential development that could be accommodated by the Plan, which could result in indirect increased energy demands, which would not be wasteful or an inefficient use of resources (6e). This is considered is a *less-than-significan*t impact.

Future development would be accommodated by the proposed Plan amendments could result in increased development with consumption of electricity and natural gas for lighting, heating and cooling of residences and other buildings. Energy use resulting from potential new development was factored into the greenhouse gas emissions calculations as discussed in Section 4.2, Air Quality and Greenhouse Gas Emissions. The analysis indicates that residential and commercial uses that comply with the 2016 California Title 24 are 28% and 5% more efficient, respectively, than the 2013 Title 24, and energy efficiency will increase as older buildings are replaced.

Overall, the future consumption of electrical and natural gas resources would not represent unnecessary, inefficient, or wasteful use of resources given the ongoing implementation of the City's Climate Action Plan and General Plan 2030 policies that address lighting and energy conservation measures. Specifically, General Plan GOAL NRC7 seeks to reduce energy use with a significant production and use of renewable energy. Its four policies and accompanying actions would promote reduction of electricity and natural gas consumption, use of renewable energy sources, and use of energy-efficient lighting, vehicles, and water fixtures and appliances.

In addition, new structures will be required to be constructed in accordance with specifications contained in Title 24 of the California Code of Regulations and the City's Green Building Regulations. Anticipated changes in state building and energy efficiency requirements to help reduce greenhouse gas emissions will also reduce the rate of energy consumption increases. Such measures have been factored into California energy forecasts which predict an overall reduction in per capita use of electricity due to energy efficiency standards and conservation.

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

4.7 TRAFFIC & TRANSPORTATION

This section analyzes traffic and transportation impacts of the proposed project based on the trip generation, distribution and level of service analyses prepared by Kimley-Horn (May 2017) that was reviewed by the City of Santa Cruz Public Works Department staff and consulting traffic engineer, Ron Marquez. A summary of the methodology is included in Appendix F of this document.

Public and agency comments related to traffic and transportation were received during the public scoping period in response to the Notice of Preparation (NOP). Issues raised in these comments include:

- Traffic should be considered in the EIR.

To the extent that issues identified in public comments involve potentially significant effects on the environment according to the California Environmental Quality Act (CEQA) and/or are raised by responsible agencies, they are identified and addressed within this EIR. Public comments received during the public scoping period are included in Appendix B.

4.7.1 Environmental Setting

Regulatory Setting

A number of local, regional and state agencies are involved with transportation planning and implementation of transportation programs and improvements within the City of Santa Cruz. The City maintains local roadways and transportation facilities. The California Department of Transportation (Caltrans) has jurisdiction over State highway segments that traverse the City, including portions of Highways 1, 9, and 17. To address roadway and intersection improvements needed as a result of impacts of new development, the City has developed a "Traffic Impact Fee" (TIF) program. The TIF is applied to new development and redevelopment and is collected at the time of issuance of building permits (see discussion below in the "Planned Transportation Improvements" subsection for more details). The City also is active in acquiring transportation funding from federal, state, and local sources.

Other local and regional agencies responsible for transportation services and/or transportation planning are summarized below.

- *The Association of Monterey Bay Area Governments* (AMBAG) is the federally designated Metropolitan Planning Organization (MPO) for transportation planning activities in the tri-county Monterey Bay region (Santa Cruz, Monterey and San Benito counties). It is the lead agency responsible for developing and administering plans and programs to maintain eligibility and receive federal funds for the transportation systems in the region. AMBAG conducts regional transportation planning activities through its Metropolitan Transportation Plan (MTP), the Metropolitan Transportation Improvement Program

(MTIP), maintenance of a regional travel demand model and demographic forecasts. AMBAG works with regional transportation planning agencies, transit providers, the Monterey Bay Unified Air Pollution Control District (MBUAPCD), state and federal governments, and organizations having interest in or responsibility for transportation planning and programming.

- *The Santa Cruz Regional Transportation Commissio*n (SCCRTC) is the State designated Regional Transportation Planning Authority (RTPA) for transportation planning activities in Santa Cruz County. SCCRTC oversees planning and funding programs for local and countywide projects within Santa Cruz County using state and federal transportation funds. The City of Santa Cruz has one City representative on the 12-member SCCRTC board and some City transportation projects are funded through grant programs administered by the SCCRTC.
- *The Santa Cruz Metropolitan Transit District* (SCMTD) provides transit services throughout Santa Cruz County.

Study Area

The project area consists of the downtown area generally covered by the Downtown Recovery Plan (DRP) and the Central Business District zone, and specifically the lower downtown area generally between Soquel Avenue and Laurel Street on the north and south, and Cedar Street and the San Lorenzo River on the west and east. (Locations are shown on Figures 1-2 an d 2-1 in Section 3, Project Description.) The study area includes properties adjacent to the western San Lorenzo River levee.

Since the proposed project includes an amendment to the land use designation text for the Regional Visitor Commercial land use designation, the study area also includes lands located within this designation. In addition to the downtown area, the Regional Visitor Commercial (RVC) land use designation is applied to sites in the Beach area and upper Ocean Street adjacent.

The City's "Transportation Impact Study Guidelines" (2011), requires a traffic impact analyses to be conducted where a project would result in an increase of 50 or more trips during the weekday PM peak hour. In the City of Santa Cruz, the PM peak hour (between 4 PM and 6 PM) generally has the highest number of trips compared to the AM peak hour (between 7 AM and 9 AM) or the midday peak hour (City of Santa Cruz, April 2012-DEIR), and is considered the peak hour period for traffic impact studies in the City.

Based on the Transportation Impact Study Guidelines and the trip generation of the project, study intersections were selected for evaluation by the City Public Works Department and include those listed below. AM and PM peak traffic count data was collected on Thursday, May 22, 2014 and Tuesday November 17, by Kimley-Horn Associates.

1. Front Street / Laurel Street
2. Pacific Avenue / Laurel Street
3. Front Street / Cathcart Street
4. Front Street / Metro Station Driveway
5. Pacific Avenue / Metro Station Driveway
6. Pacific Avenue / Maple Street
7. Pacific Avenue / Front Street / Mission-Water Street
8. Front Street / Soquel Avenue
9. Pacific Avenue / Cathcart Street
10. Soquel Avenue / Pacific Avenue
11. Ocean Street / Water Street
12. Highway 1 / Highway 9
13. Chestnut Street / Mission Street / Highway 1

Roadway Network

Local Streets and Roads

Project site access will be provided primarily from Pacific Avenue, Front Street, Laurel Street and Soquel Avenue. Other local streets and roads include Maple Street, Elm Street and Cathcart Street.

Pacific Avenue is a north-south street and is classified as arterial in the City of Santa Cruz General Plan (City of Santa Cruz, June 2012). Between Laurel Street and Cathcart Street it is a two lane divided roadway. North of Cathcart Street, Pacific becomes a one-way roadway. There is two hour metered on-street parallel parking and sidewalks are present on both sides of the street. SCMTD buses use Pacific Avenue to enter Pacific Station, a large transit center providing regional service to the City of Santa Cruz.

Front Street is a north-south two lane arterial with left turn pockets. Between Cathcart Street and Soquel Avenue, Front Street becomes three lanes. Sidewalks and bicycle lanes are present on both sides of the street. Metered on-street parallel parking is provided on the east side of the street as well. Front Street provides direct access to three surface parking lots and one parking structure. SCMTD buses use Front Street to enter and exit the Metro Station transit center.

Laurel Street is an east-west arterial with left turn pockets. Bicycle lanes and sidewalks are present on both sides of the street. There is no on-street parking allowed on Laurel Street in the study area.

Soquel Avenue is an east-west arterial that provides a major east-west connection over the San Lorenzo River to downtown and to the eastern portion of the City. Near the study area it is a four lane roadway with sidewalks and bicycle lanes on both sides of the street. Limited, metered, parallel parking is provided on both sides of the street between Pacific Avenue and Front Street.

Water Street is an east-west four lane arterial with left turn pockets between Center Street and Branciforte Avenue east of the study area. At its intersection with Center Street, Water Street becomes Mission Street. Between Chestnut Street Extension and Center Street, Mission Street is a two lane arterial. There are bicycle lanes on both sides of the street and crosswalks at every intersection within the study area. There is on-street twelve hour metered parallel parking on the north side of the street between Center Street and River Street. East of Pacific Avenue twelve hour metered on-street parallel parking is available on the south side of the street until River Street.

Cedar Street is a north-south two lane arterial parallel to Pacific Avenue. There are bicycle lanes on both sides of the street and crosswalks at every intersection in the study area. Metered on-street parallel parking is provided as well as access to several paid surface parking lots and parking structure. At its intersection with Laurel Street, vehicles are restricted to right turns only southbound.

River Street is a north-south arterial that parallels the San Lorenzo River. It connects to State Route 9 at its northern terminus with State Route 1. South of Water Street it splits into River Street and S. River Street. River Street terminates at Front Street and S. River Street terminates at Soquel Avenue. Bicycle lanes are provided on both sides of the roadway on River Street between Front Street and State Route 9. While there is no bicycle facility on S. River Street the San Lorenzo Riverwalk runs parallel to it. (See below for more information on the San Lorenzo Riverwalk.) There are textured colored crosswalks connecting to the pedestrian bridge over the San Lorenzo River at the Regal Cinemas theater. Twelve hour metered on-street parallel parking is provided on the west side of S. River Street and on the east side of River Street between Front Street and S. River Street.

State Highways

State highways that are in the vicinity of the project site include segments of State Routes 1 and 17; State Route 1 is located approximately 1/2 mile driving distance northwest of the project site. Though referenced as “state routes” in Caltrans documents, the more common term, “highway”, is used in this EIR. Highways 1 and 17 serve regional traffic, including motorists who commute to jobs in the Santa Clara Valley and motorists who travel into Santa Cruz County for recreational opportunities offered in the county (City of Santa Cruz, April 2012, DEIR volume).

Highway 1 provides access to San Francisco to the north and Monterey to the south. Regionally, Highway 1 is the major inter- and intra-county route for Santa Cruz County. Within the City of Santa Cruz, it is oriented in an east-west direction, although the interregional alignment of Highway 1 is primarily north-south. It is a four-lane arterial along Mission Street from the west

side of Santa Cruz to Chestnut Street Extension, a four-lane expressway between Mission Street-Chestnut Street and River Street, and a four-lane freeway east of River Street. The speed limit on Highway 1 is 25 mph along Mission Street, 45 mph along the expressway section, and 55 and 65 mph on the freeway sections. Recurrent congestion results in queuing on Highway 1 that extends for several miles during peak hours. Accidents, events, and other incidents in the corridor can further increase congestion related delays in either direction, on any day, including weekends (City of Santa Cruz, April 2012, DEIR volume).

Highway 9 is a multi-lane highway between Highway 1 and Encinal Street. It is two-lanes north of Encinal Street that connects the City of Santa Cruz with the San Lorenzo Valley, and eventually, Saratoga and Los Gatos.

Highway 17 connects Santa Cruz with Scotts Valley and San Jose and other Santa Clara County communities. It is a four-lane freeway north of the Highway 1/ Highway 9 intersection. Highway 17 is the primary route between the Santa Clara Valley and Santa Cruz County that serves as both a commute route for Santa Cruz County residents that work in Santa Clara County and as a route for recreational visitors that come to Cruz County. Congestion occurs both during weekday commute times and on summer weekends. This winding, four-lane road has steep sections, frequent road crossings, and substandard median shoulders and outside shoulders for most of its length. In addition to the challenging roadway configuration, weather-related conditions such as thick fog, heavy rains and mudslides affect roadway operations (City of Santa Cruz, April 2012, DEIR volume).

Other Transportation Modes

Pedestrian and Bicycle Facilities

Pedestrian facilities within the study area include sidewalks, crosswalks, ADA ramps and pedestrian signal heads. The sidewalks on Pacific Avenue are 10 to 25 feet wide and crosswalks with ADA ramps are provided at every intersection. The sidewalks on Front Street are generally 8 to 10 feet wide and crosswalks are provided at intersections as well as in front of the Pacific Station transit center. Bicycle amenities include bicycle parking (located at Pacific Station), Class II facilities (bicycle lanes) and the San Lorenzo Riverwalk.

The San Lorenzo Riverwalk is a north-south bicycle and pedestrian path that follows the San Lorenzo River in Santa Cruz for approximately 2.5 miles. The paved trail is on the river levee on both the east and west sides of the river, except for a short segment in the vicinity of the County Building north of Soquel Avenue, which is currently under construction. A pedestrian/bicycle bridge north of Soquel Avenue connects both sides of the levee trail system, and can be accessed from River Street, approximately 750 feet north of the project site.

Public Transit Service

Public transit service in the City and County of Santa Cruz is provided by the Santa Cruz Metropolitan Transit District (SCMTD). Pacific Station, located on the east side of Pacific Avenue between Elm Street and Maple Street, is the largest transit center for SCMTD bus service. There are four bus departure lanes and a staffed customer service information booth. All routes except 33-34, 55, and 72-79 service the station. In September 2016, SCMTD implemented a large service reduction to address funding shortfalls. This reduction affected some of the routes servicing Pacific Station, however it is still provides high frequency service.

Existing Traffic Conditions

According to City data, from the years 2010 to 2014, 63% of commuters within the City drove alone, 11% walked, 10% bicycled, 8% carpooled, 6% took the bus, and 2% used other modes such as taxi, motorcycle (City of Santa Cruz, 2016 Annual Traffic Safety Report). This data shows significant progress towards the City's Climate Action Plan goals to increase biking and walking and decrease single-occupancy vehicle use within the City. Santa Cruz has one of the highest bicycle mode splits in the country, and a lower "Drive Alone" mode split than most California cities (Ibid.).

Vehicle Traffic

Vehicle traffic conditions are measured by average daily traffic (ADT), peak hour traffic volumes, level of service (LOS), average delay, and/or volume to capacity (V/C) ratio. Average daily traffic is the total number of cars passing over a segment of the roadway, in both directions on an average day. Peak hour volumes are the total number of cars passing over a roadway segment during the peak hour in the morning (AM) or afternoon/evening (PM) (City of Santa Cruz, April 2012, DEIR Volume).

To evaluate the performance of roadways and levels of traffic congestion, many jurisdictions, including the city of Santa Cruz, use LOS. "Level of Service" is a qualitative measure that describes the level of traffic congestion and delay at intersections based on the amount of vehicle traffic that a roadway or intersection can accommodate and factors such as maneuverability, driver dissatisfaction, and delay. Traffic flow along roadways is typically controlled by the volume and capacity of the nearest intersection, therefore intersections are analyzed using LOS as an indicator of congestion. Intersections are rated based on a scale of LOS "A" through LOS "F," with LOS A representing free-flowing conditions and LOS F representing congested conditions. The intermediate levels of service represent incremental levels of congestion and delay between these two extremes. Table 4.7-1 relates the operational characteristics to each associated LOS category for signalized and unsignalized intersections.

The signalized intersection LOS methodology addresses the LOS for the intersection as a whole, whereas LOS methodology for unsignalized intersections computes delay for the minor

movements. The critical volume to capacity ratio (V/C) is another measure of the operating conditions of an intersection as opposed to LOS. It is not the average of all the movements at the intersection and is not used as a measure to define the levels of service.

The City of Santa Cruz General Plan 2030 seeks to maintain LOS D or better at signalized intersections during the PM peak hour (Action M3.1.3). However, the General Plan also accepts a lower level of service and higher congestion at major regional intersections if necessary improvements would be prohibitively costly or result in significant, unacceptable environmental impacts (Action M3.1.4).

Caltrans, which has jurisdiction over state highways, endeavors to maintain a target LOS at the transition between LOS C and D. However, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS (Caltrans, December 2002). If an existing State highway facility is operating at less than the appropriate target LOS, the existing LOS should be maintained (Ibid.).

TABLE 4.7-1: Intersection Level of Service Definitions

Level of Service	Description	Signalized (sec/veh.)	Unsignalized (sec/veh.)*
A	Free flow with no delays. Users are virtually unaffected by others in the traffic stream.	≤ 10	≤ 10
B	Stable traffic. Traffic flows smoothly with few delays.	>10 – 20	>10 – 15
C	Stable flow but the operation of individual users becomes affected by other vehicles. Modest delays.	>20 – 35	>15 – 25
D	Approaching unstable flow. Operation of individual users becomes significantly affected by other vehicles. Delays may be more than one cycle during peak hours.	>35 – 55	>25 – 35
E	Unstable flow with operating conditions at or near the capacity level. Long delays and vehicle queuing.	>55 – 80	>35 – 50
F	Forced or breakdown flow that causes reduced capacity. Stop and go traffic conditions. Excessive long delays and vehicle queuing.	> 80	> 50

*Two-way stop control intersection

SOURCE: Transportation Research Board, *Highway Capacity Manual 2010*, National Research Council as cited in City of Santa Cruz General Plan 2030 EIR.

Intersection Levels of Service

Intersection turning movement counts were conducted on Thursday, May 22, 2014 and Tuesday November 17, 2015 at the study intersections during the PM peak period (4:00 pm to 6:00 pm). From these counts the peak one-hour period was identified. Figure 4.7-1 shows the traffic volumes during the PM peak one-hour period. LOS for the project traffic study intersections was calculated using methods defined in the *Highway Capacity Manual, 2010 and 2000* (HCM) and Synchro 8 traffic analysis software. HCM 2010 was used for all intersections except for the intersection of Pacific Avenue / Front Street / Mission-Water Street due to the presence of a fifth approach at this location, which HCM 2010 cannot analyze correctly. Therefore, HCM 2000 was used to analyze this study intersection. The delay and corresponding LOS for each of the study intersections was calculated.

Table 4.7-2 shows the resulting LOS based on approach to the intersection. All intersections operate at an acceptable LOS except Highway 1 / Highway 9 and Chestnut Street / Mission Street, which operate at LOS E.

State Highway Operations

Based on the most recent (2015) Caltrans Traffic Census Program (Caltrans 2015) data, the annual average daily traffic (AADT) on state highways within Santa Cruz is as follows:

- Highway 1
  - At Highway 17, AADT is approximately 61,000 to 86,000 trips with 4,950 to 6,300 trips occurring during the peak hour.
  - At Emeline Street Connection, AADT is approximately 85,000 to 86,000 trips with approximately 5,900 to 6,300 trips occurring during the peak hour.
  - At Morrissey Boulevard, AADT is approximately 85,000 to 94,000 trips with 5,900 to 6,300 trips occurring during the peak hour.
- Highway 17, at Pasatiempo (between Santa Cruz and Scotts Valley). AADT is approximately 67,000 to 70,000 trips with 5,700 to 6,000 trips occurring during the peak hour.
- Highway 9 within Santa Cruz City Limits. AADT is approximately 5,000 to 5,200 trips with 530 to 550 trips occurring during the peak hour as measured at the City limits, north of Encinal.

Review by the City's consulting traffic engineer, Ron Marquez, indicates that the highway segments in the vicinity of the project site are operating at LOS of C and D during the peak hour as summarized on Table 4.7-3.

TABLE 4.7-2: Existing Intersection Weekday PM Peak Hour Levels of Service

#	Intersection	Control Type	Jurisdiction	Threshold[2]	Existing Conditions[1]		
					PM Peak Hour		
					Movement	Delay[3]	LOS
1	Front Street / Laurel Street	Signal	Santa Cruz	D	Overall	30.8	C
2	Pacific Avenue / Laurel Street	Signal	Santa Cruz	D	Overall	17.9	B
3	Front Street / Cathcart Street	Signal	Santa Cruz	D	Overall	19.0	B
4	Front Street / Metro Station Access	Signal	Santa Cruz	D	Overall	4.9	A
5	Pacific Avenue / Metro Station Access	SSSC	Santa Cruz	D	Overall	1.1	A
		Worst Approach	Santa Cruz	D	WB	11.4	B
6	Pacific Avenue / Maple Street	AWSC	Santa Cruz	D	Overall	8.1	A
7	Pacific Avenue / Front Street / Mission-Water Street	Signal	Santa Cruz	D	Overall	20.2	C
8	Front Street / Soquel Avenue	Signal	Santa Cruz	D	Overall	21.9	C
9	Pacific Avenue / Cathcart Street	AWSC	Santa Cruz	D	Overall	8.8	A
10	Soquel Avenue / Pacific Avenue	SSSC	Santa Cruz	D	Overall	3.6	A
		Worst Approach		D	WB	10.3	B
11	Ocean Street / Water Street	Signal	Santa Cruz	D	Overall	35.3	D
12	Highway 1 / Highway 9	Signal	Caltrans	C-D	**Overall**	**71.7**	**E**
13	Chestnut Street / Mission Street / Highway 1	Signal	Caltrans	C-D	**Overall**	**74.1**	**E**

Source: Kimley-Horn May 2017.

Notes:

1. Analysis performed using HCM 2010 methodologies, except for Intersection 7 where HCM 2000 methodology was applied.
2. The City of Santa Cruz has established LOS D as the minimum acceptable LOS for overall intersection operations during the AM and PM peak hours. Caltrans maintains a standard of between LOS C and D.
3. Delay indicated in seconds/vehicle.
4. Intersections that fall below the LOS threshold are shown in **bold**.

TABLE 4.7-3: Existing Highway Traffic Volumes and Peak Hour Levels of Service

Segment	Direction	Number of Lanes	Volume	Max Flow Rate for C	Max Flow Rate for D	LOS
Route 1: Route 9 to Route 17	N	2	2,080	2,761	3,444	C
	S	2	3,120	2,761	3,444	D
Route 1: Route 17 to Emeline	N	2	2,820	2,761	3,444	D
	S	2	1,880	2,761	3,444	C
Route 17: Route 1 to Pasatiempo	N	3	3,300	3,888	5,165	C
	S	3	2,700	3,888	5,165	C
Peak hour volumes from Caltrans 2015 Peak hour factor-.92, free flow speed – 55, heavy vehicle factor-.985 (Exhibit 11-17 HCM 2010)						

SOURCE: Ron Marquez, Traffic Engineer Consultant

Planned Transportation System Improvements

Metropolitan Transportation Improvement Program

AMBAG, as an MPO, is required by state and federal laws to develop and adopt a Metropolitan Transportation Improvement Program (MTIP), a multi-year transportation project program that includes multi-modal projects, including but not limited to major highway, arterial, transit, bikeway and pedestrian projects. The 2016 MTIP is a four-year program that covers the federal fiscal years from October 1, 2016 through September 30, 2020. The MTIP implements the 2035 Monterey Bay Area Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) adopted by the AMBAG Board of Directors in June 2014. The 2035 MTP/SCS is a financially constrained document and includes identified transportation improvement projects for the region. Once the projects are included in the MTP, they become eligible for inclusion in the MTIP and FSTIP. The projects included in the 2016 MTIP are consistent with the 2035 MTP/SCS (AMBAG, September 2016). Planned projects in the vicinity of Ocean Street and Ocean Street Extension include improvements to the Highway/9 intersection, Highway 1 auxiliary lanes (Soquel Avenue to 41st Avenue), and High Occupancy Vehicle (HOV) lanes between the Morrissey and San Andreas interchanges.

City of Santa Cruz Planned Improvements

The City's adopted Capital Improvements Program (CIP) is a multi-year schedule of projects with their associated costs and proposed funding sources. The CIP represents the best efforts to allocate available resources toward projects that maximize benefit and address the most critical needs. Major improvements on the current 2018-2020 CIP include: Highway 1 / Highway 9-River Street intersection improvement (programmed for 2018/19) described below; intersection improvements at the Ocean Street/Water Street intersection (programmed for completion in 2018); Branciforte Creek bike/pedestrian bridge path connection on the San Lorenzo River levee (under construction); and preliminary work to replace the Highway 1 bridge over the San Lorenzo River.

The City of Santa Cruz has adopted a "Traffic Impact Fee" (TIF) program based on future projected trips generated for each new development or redevelopment project. The TIF program, originally adopted in June 2005, evaluated over 60 intersections and identified numerous projects within the City which were needed in order to address the effects of cumulative development, and established fees. The fees are used to fund planned improvements at intersections and roadways included in the program. New development and redevelopment projects are required to pay traffic impact fees, which are paid at the time of building permit issuance. The TIF was updated in November 2012 to reflect traffic conditions associated with buildout accommodated by the City's General Plan as identified in the City's *General Plan 2030* EIR. All of the projects noted above are TIF program intersections, except for the Highway 1 bridge project. The program also funds bike and pedestrian projects (15% of fees collected) and neighborhood improvement projects adjacent to significant development (5% of fee collected).

Bicycle and Pedestrian Improvements

The City's recently adopted *Active Transportation Plan* (2017) includes the following paths that are included in the FY2018-2020 CIP: Branciforte Creek Connection to complete the levee path over Branciforte Creek and under the Soquel Bridge, Monterey Bay Sanctuary Scenic Trail Network Segment 7 along the railroad track on the west side of the City, and the San Lorenzo River Trestle Bridge trail widening project. The Plan also includes numerous other infill and improvements to existing bike and pedestrian facilities.

Regional Transportation Plan Improvements

The SCCRTC periodically completes a Regional Transportation Plan (RTP) and Regional Transportation Improvement Program (RTIP) according to state guidelines to guide short- and long-range transportation planning and project implementation for the county. This 2014 RTP provides guidance for transportation policy and projects through the year 2035. Projects identified in the RTP that are within the project vicinity include:

- Highway 1/Highway 9 Intersection Modifications (also on City CIP and MTIP).
- Highway 1 bridge replacement over San Lorenzo River (also on City CIP).
- Highway 17: Preparation of study to determine long-range solutions to access, operations and safety on this route.
- Branciforte Creek multi-use path and bridge (also on City CIP and under construction)
- Ocean Street Widening from Soquel to East Cliff
- Hwy 1/Mission St at Chestnut/King/Union Intersection Modification
- Pacific Station: Bike Station
- River St/River Street South Intersection Modification
- Water Street Signal Synchronization
- Soquel/Branciforte/Water (San Lorenzo River to Branciforte) Bike Lane Treatments

Planned State Highway Improvements

Highway 1. As indicated above, improvements for the Highway 1 Soquel to Morrissey Auxiliary Lanes Project are complete. In addition, the SCCRTC has been working with Caltrans and the Federal Highway Administration since 1986 on studies for longer-term improvements to Highway 1. The current Caltrans Route Concept Report for Highway 1 includes the addition of HOV lanes to Highway 1 to reduce congestion, encourage carpooling, expand express bus service, and improve safety in the Watsonville to Santa Cruz corridor. (Caltrans, April 2006). This project will add a lane in each direction from Morrissey Boulevard in the City of Santa Cruz to San Andreas/Larkin Valley Road. Caltrans' *Corridor System Management Plan* for Routes 1 and 183 also supports HOV lanes on Highway 1 in conjunction with other transportation demand management strategies (Caltrans, October 2011).

A Draft EIR for the Highway 1 Corridor Investment Program was prepared and released for public review and comment in November 2015 (Caltrans and FHWA, November 2015). The Draft EIR considers three alternatives including an HOV Lane alternative with auxiliary lanes and a Transportation System Management alternative without HOV lanes. A final decision on the preferred alternative has not been made yet. The Draft EIR provides a program level analysis of the Highway 1 corridor alternatives using a two tiered approach. Tier I is a long term, program-level analysis for the future of the Highway 1 corridor between Santa Cruz and Aptos. The Tier I concept for the corridor would be built over time through a series of smaller incremental projects (referred to as Tier II projects). The Tier II analysis includes project-level analysis of smaller incremental projects within the Tier I corridor which would move forward based on available funding. Each of the Tier II projects would undergo separate environmental and public review. Caltrans received a total of 263 letters, emails, and recorded comments from public agencies, organizations and individuals, on the Draft EIR. Based on review of the comments received, the project team has identified a need to update the air quality, natural environment, and traffic operations studies, as well as reporting of the cumulative impacts of the project alternatives prior to completion and release of a Final EIR.

Caltrans has prepared and approved a "Corridor System Management Plan" (CSMP) for Highway 1 from the junction of Highway 68 in Monterey County to King Street/Mission Street in Santa Cruz. The following strategies will be used to manage State Route 1 over the next 20 years:

- Cost-effective maintenance and preservation of the roadway.
- Support improvement of transit service, including new express bus service on HOV lanes if implemented in the Santa Cruz corridor.
- Support land use and transportation planning efforts through participating in local development review and regional planning efforts.
- Reduce congestion through transportation demand management to increase the use of transit, improve bicycle and pedestrian programs, and encourage programs such as carpools, ridesharing, telecommuting, and park-and-ride facilities.

- Implement Intelligent Transportation Systems/Traveler Information/Traffic Management to improve incident management and provide real time traveler information which helps reduce delay.
- Increase modal options such as Caltrain and integrate transit, bicycle and pedestrian transportation into a coordinated multimodal system.
- Collaborate with local partners on a ramp metering plan.
- Operational Improvements, including auxiliary lanes, intersection improvements, and other system refinements to enhance existing services and reduce delay.
- Upgrade intersections to maximize throughput on the State highway and parallel routes.
- Increase the capacity, operational efficiency and connections on parallel roads to reduce local traffic demand on Highway 1.
- Improve mobility, accessibility, reliability, reduce congestion and improve safety by improving capacity on the existing system (Caltrans, October 2011).

Highway 17. Highway 17 connects Santa Cruz with Scotts Valley and San Jose and other Santa Clara County communities. It is a four-lane freeway north of the Highway 1/ Highway 9 intersection. The highway is the primary route between the Santa Clara Valley and Santa Cruz County that serves as both a commute route for Santa Cruz County residents that work in Santa Clara County and for recreational visitors that come to Cruz County. Congestion occurs both during weekday commute times and on summer weekends. This winding, four-lane road has steep sections, frequent road crossings, and substandard median shoulders and outside shoulders for most of its length. In addition to the challenging roadway configuration, weather-related conditions such as thick fog, heavy rains and mudslides affect roadway operations (City of Santa Cruz, April 2012-DEIR volume). According to the Transportation Concept Report for State Route 17 in District 5, (Caltrans District 5, January 2006), the target level of service for Highway 17 between Ocean Street and Scotts Valley is LOS E. The highway segment between Santa Cruz and Scotts Valley is considered to be a four-lane freeway (Caltrans, January 2006).

Highway 9. The current Caltrans Route Concept Report for Highway 9 includes recommendations to widen the shoulders to accommodate bicycle traffic, widening to four lanes from the junction of Highway 1 and Highway 9 to the Santa Cruz city limits, and other left turn improvements outside of the City of Santa Cruz (Caltrans, September 2007).

The Highway 1/Highway 9-River Street intersection, which is controlled by a signal, currently operates at LOS E during the both the PM and Design Day peak hours, which does not meet Caltrans standards. The City is working with Caltrans to implement lane modifications at this intersection. The improvements require Caltrans approval and an encroachment permit. With implementation of these improvements, the intersection would continue to operate at LOS E during the existing PM peak hours, but the average delay would be reduced by approximately 20 seconds.

The following improvements are identified for the Highway 1/Highway 9-River Street intersection, and are included in the current City Traffic Impact Fee (TIF) Program:

- Northbound Approach: Modify the intersection to consist of one left/thru, one-thru, two right lanes and a bike lane; add one northbound lane on Highway 9 and a shoulder/bike lane.
- Southbound Approach: Modify the intersection to consist of two-left, one-left/thru, one-thru, one right lane and a bike lane.
- Eastbound Approach: Reconstruct to consist of two left, three through, and one right-turn lanes.
- Upgrade all sidewalks and access ramps to meet ADA requirements.

Currently, a Project Report, preliminary engineering and associated studies, and environmental review are complete. Construction is anticipated in 2018.

4.7.2 Impacts and Mitigation Measures

Thresholds of Significance

In accordance with the California Environmental Quality Act (CEQA); State CEQA Guidelines (including Appendix G); City of Santa Cruz plans, policies and/or guidelines; and agency and professional standards, a project impact would be considered significant if the project would:

7a Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit (see discussion of City standards below);

7b Change the level of service of a State Highway roadway segment from acceptable operation (LOS A, B, or C) to deficient operation (LOS D, E or F) or result in a change in LOS for a segment currently operating at a deficient level based on Caltrans significance criteria[1];

7c Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;

7d Substantially increase hazards due to a design feature (for example, sharp curves or dangerous intersections) or incompatible uses (for example, farm equipment);

[1] Caltrans. December 2002. "Guide for the Preparation of Traffic Impact Studies."

7e Result in inadequate emergency access; or

7f Conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

The City of Santa Cruz General Plan 2030 strives to maintain a LOS of "D" or better as the acceptable level of service for intersections. A significant impact would result if LOS dropped below a "D" level of service or where a project would contribute traffic increases of more than three percent at intersections currently operating at unacceptable levels (E or F), as further described below. This criteria is applied only to intersections within the City's jurisdiction, but not to Caltrans intersections. The City's General Plan 2030 also accounts for accepting a LOS below "D" at major regional intersections where improvements would be prohibitively costly or result in significant, unacceptable environmental impacts. There are no other adopted plans, ordinances, or policies that establish "measures of effectiveness" for the performance of the circulation system.

For City intersections that already operate at unacceptable levels of service (E or F), the City considers project impacts to be significant if congestion will worsen measurably at the intersection as a result of the project. "Measurably worse" is considered to be a three percent increase in trips at the affected intersection. The City has used the three percent significance criterion for project trip contribution at existing impacted intersections, except for Caltrans-maintained intersections (which are subject to the criteria in 3b above), in part based on directives in the City's existing General Plan to accept a certain level of congestion during peak hours at major intersections, as well as to reflect variations in daily traffic volumes. The three percent criterion has been used throughout the City and is based upon the likelihood that a project will result in an observable increase in congestion at a given intersection or road segment. This is based in part on information provided by Caltrans, in the yearly "Traffic Volumes" reports, which identifies the standard deviation expected with regard to reliability of traffic count data. The standard deviation ranges indicate a 12 percent deviation at 10,000 vehicle trips, meaning that if a traffic count totals 10,000 vehicles per day, then approximately 90 percent of the time, the actual traffic counts will lie within a range of 8,800 to 11,200 vehicles. Thus, the three percent reflects this variation in daily traffic conditions (California Department of Transportation, June 2015).

Regarding Caltrans' intersections and other Caltrans maintained facilities, the Caltrans Traffic Impact Study Guidelines (Caltrans 2002) state that Caltrans endeavors to maintain a target LOS at the transition between LOS C and LOS D on State highway facilities. As such, LOS C through D is considered to be acceptable traffic operations during the peak hour at intersections maintained by Caltrans. The Guidelines also state that if an existing State highway facility is operating at less than the appropriate target LOS, the existing MOE (LOS) should be maintained (Caltrans, 2002).

Vehicle Miles Traveled

In September 2013 Governor Brown signed Senate Bill 743 which made significant changes to how transportation impacts are to be assessed under CEQA. SB 743 directs the Governor's Office of Planning and Research (OPR) to develop a new metric to replace LOS as a measure of impact significance and suggests vehicle miles travelled as that metric. According to the legislation, upon certification of the guidelines, automobile delay, as described solely by LOS shall not be considered a significant impact (Section 21009(a)(2)). SB 743 also creates a new CEQA exemption for certain projects that are consistent with the regional Sustainable Communities Strategy.

OPR has released draft CEQA Guidelines to address this requirement; however, at the time this analysis was completed the Guidelines have not been finalized or certified. It is anticipated that the revisions to the CEQA Guidelines will be finalized in 2017. According to the most recent draft CEQA Guidelines released by the OPR, lead agencies would have a grace period of two years to update and adopt new thresholds once the final Guidelines have been adopted. The City of Santa Cruz will update its transportation standards of significance to reflect SB 743 once the state has finalized the guidelines. Because there are no adopted thresholds and the revised State CEQA Guidelines' have not yet been certified, vehicle miles travelled is not utilized as a standard of significance in this EIR. However, VMT estimates are provided in the Impact 4.7-1 discussion as an informational item.

Analytical Method

The proposed project consists of amendments to the City's Downtown Recovery Plan, General Plan, Local Coastal Plan and Zoning Code regarding development in the downtown area and Central Business District. The proposed project would not directly result in new development. However, the proposed Downtown Plan amendment would expand areas for potential additional building height that could accommodate intensified redevelopment of existing developed sites. City staff estimates that the proposed amendments could indirectly lead to development, resulting in a potential net increase of 711 new residential units and 2,200 square feet of office space with a net decrease of approximately 14,700 square feet of commercial building space over existing conditions within the downtown area. The proposed General Plan amendment would increase FAR in areas designated as RVC in the General Plan, but would not lead to development on sites not already considered in the General Plan and General Plan EIR. The proposed LCP and Zoning Code amendments would not result in changes that could indirectly lead to intensified development.

A project traffic impact study was prepared for the project in accordance with City requirements. As indicated, above, the City of Santa Cruz uses LOS To evaluate the performance of roadways and levels of traffic congestion. The project traffic impact study was based on intersection turning movement counts taken on Thursday, May 22, 2014 and Tuesday November 17, 2015 at the study intersections during the PM peak period (4:00 pm to 6:00 pm), from which the PM peak hour was determined.

The traffic study computed intersection LOS using the 2010 and 2000 HCM methodology and Synchro 8 software. The result of the HCM calculations is an estimate of average control delay at the intersection which corresponds to an LOS grade as shown in Table 4.7-1 above. Project trip generation is provided in the traffic impact study, and traffic distributed on city streets utilizing the City's traffic model that was developed as part of the General Plan 2030 using Traffix software. AMBAG maintains a regional travel demand model, but it was not used as the City's model is more detailed and specific to conditions in the City. The study scenarios analyzed include existing conditions, existing with the project, and cumulative conditions, including the project. The traffic impact analysis also includes evaluation of other travel modes based on adopted regional plans and review with City of Santa Cruz staff.

Impacts and Mitigation Measures

As described in the Initial Study (see Appendix A), there are no adopted congestion management programs[2] for the project area (7c). The following impact analyses address impacts to City streets and intersections (7a) and state highways (7b), the potential to substantially increase hazards or result in inadequate emergency access (7d-e), and potential project conflicts with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities or impacts to the performance of these facilities (7f).

Traffic Impacts

Impact 4.7-1: **Circulation System Impacts.** The project will result in an increase in daily and peak hour trips, but would not cause existing or planned intersections to operate at an unacceptable Level of Service (LOS) or further degrade intersections that already operate at an unacceptable LOS (7a). Therefore, the impact is *less than significant.*

A LOS analysis was completed to comply with City regulations, and as discussed above, LOS is the performance measure used to evaluate the effectiveness of the circulation system. In order to identify the potential traffic impacts of the project using LOS, a multi-step process was utilized. The first step is calculating trip generation, which estimates the total arriving and departing traffic during a peak hour and on a daily basis. Trip generation was estimated for the project by applying vehicle trip generation rates to the project development based on land use. Figure 4.7-2 shows the downtown project area zones and study intersections. Trip rates specific to the downtown area were used from the City of Santa Cruz General Plan EIR (City of Santa Cruz 2012). The project area was divided into zones and trip generation was calculated separately for each zone. Trip generation calculations include a 40 percent trip reduction due to proximity to the downtown transit center, mixed use development, bicycle use and walking trips. The project

[2] The Code of Federal Regulations, Title 23 Volume 1, adopted in April 2005 require Transportation Management Areas (TMAs) to prepare Congestion Management Programs. TMAs are defined as urbanized areas with a population over 200,000. There are eight such areas in California plus Santa Barbara that asked to be included (City of Santa Cruz, 2012).

would generate 293 weekday PM peak hour trips (188 in and 106 out) between 4 and 6 PM and 2,627 daily trips as summarized on Table 4.7-4.

TABLE 4.7-4: Project Trip Generation

Land Uses	Size	Units	Daily Trips	PM Peak Hour		
				Total Peak Hour	IN	OUT
Trip Generation Rates[1]						
Commercial		1,000 Sq Ft	44.32	2.71	44%	56%
Office		1,000 Sq Ft	11.01	1.49	17%	83%
Townhomes[2]		Dwelling Unit(DUs)	7.50	0.62	65%	35%
Apartments		DUs	6.65	0.62	65%	35%
Trips Generated						
Area X - Riverfront						
Commercial	11,171	Sq Ft	496	30	13	17
Office	18,296	Sq Ft	202	27	5	22
Townhomes	321	DUs	2,408	199	129	70
Apartments	0	DUS	0	0	0	0
Area X Total Trips			*3,106*	*256*	*147*	*109*
40% Reduction for Downtown Area[3]			*(1,242)*	*(102)*	*(59)*	*(44)*
Area X Net Trips			***1,864***	***154***	***88***	***65***
Area Y - E. Pacific/W. Front Pacific Station						
Commercial	(27,864)	Sq Ft	(1,236)	(76)	(33)	(43)
Office	(16,105)	Sq Ft	(178)	(24)	(4)	(20)
Townhomes	0	DUs	0	0	0	0
Apartments	370	DUs	2,462	229	149	80
Area Y Total Trips			*1,048*	*129*	*112*	*17*
40% Reduction for Downtown Area[3]			*(419)*	*(52)*	*(45)*	*(7)*
Parking Garage Added Trips[4]				*52*	*26*	*26*
Area Y Net Trips			***629***	***129***	***93***	***36***
Area Z - W. Pacific						
Commercial	2,000	Sq Ft	90	5	2	3
Office	0	Sq Ft	0	0	0	0
Townhomes	0	DUs	0	0	0	0
Apartments	20,000	DUs	134	12	8	4
Area Z Total Trips			*224*	*17*	*10*	*7*
40% Reduction for Downtown Area[3]			*(90)*	*(7)*	*(4)*	*(3)*
Area Z Net Trips			***134***	***10***	***6***	***4***
Total Project Trips			***2,627***	***293***	***188***	***106***

Source: Kimley Horn, May 2017.

Notes:

1. Trip generation rates obtained from Appendix C of the City of Santa Cruz General Plan 2030 EIR.
2. ITE Land Use 270 Rates used for Townhomes per City direction (email correspondence with Ron Marquez dated 04/22/16).
3. 40% Reduction for mixed use development in Downtown Santa Cruz per City direction (email correspondence with Ron Marquez dated 04/22/16).
4. Required parking per City Code= 414+880+871=2,165 spaces. With 20% reduction=1,732, so 259 additional spaces (1,991-1,732) that will generate traffic. 10% in the AM peak = 26 trips; 20% in the PM peak = 52 trips.

The second step of the forecasting process is trip distribution, which identifies the origins and destinations of inbound and outbound project traffic. These origins and destinations are typically based on demographics and existing or anticipated travel patterns in the study area. Figure 4.7-2 shows the trip distribution that was applied to the study area roadway network.

The third step is traffic assignment, which involves the allocation of project traffic to streets and intersections in the study area. Traffic distribution patterns are indicated by percentage orientation, while traffic assignment allocates specific volume forecasts to individual roadway links and intersection turning movements throughout the study area. Figure 4.7-3 depicts project trip assignment.

With the forecasting process complete and project traffic assignments developed, the impact of the project is identified by comparing operational (LOS) conditions with and without the project at the study intersections. Table 4.7-5 summarizes the PM peak hour LOS at the study intersections for Existing Conditions with and without the project. See Figure 4.7-4 for intersection traffic volumes with the addition of project traffic.

As shown, traffic associated with the project will not degrade LOS to below acceptable levels at any of the study intersections under the jurisdiction of the City. The two Caltrans intersections of Highway 1 / Highway 9 and Chestnut Street / Mission Street would continue operate at LOS E as a result of the proposed project. There are improvements identified for the Highway 1/Highway 9-River Street intersection as discussed above, which are included in the current City Traffic Impact Fee (TIF) Program, and the Chestnut Street / Mission Street intersection is included in the RTIP. The improvements are already required under existing conditions without the project. Traffic associated with the project does not further degrade the LOS at the two Caltrans intersections, and would not substantially increase delay. Therefore, based on the significance criteria discussed above, traffic associated with the project would not cause existing or planned intersections to operate at an unacceptable Level of Service (LOS) or further degrade intersections that already operate at an unacceptable LOS. Therefore, the impact is less than significant.

For informational purposes, a per capita VMT resulting from potential development accommodated by the proposed plan amendments was estimated utilizing trip length information from the California Statewide Travel Demand Model and percentages for different trip types, i.e., home to work, included in the CalEEMod air emissions model. Estimated new net development, including reduction in commercial uses, is estimate to result in a total of weekday VMT of 14,059 trips. Based on U.S. Census data for the downtown area and employee projections in the City's General Plan 2030 EIR, total residential and employee population is estimated at approximately 1,280, which results in a weekday per capita VMT of 11.0. According to the Santa Cruz County Regional Transportation Commission, VMT per capita within Santa Cruz County is estimated to decrease by 17% from approximately 15.3 to approximately 12.5 between 2005 and 2035 (Santa Cruz County Regional Transportation Commission. Although no VMT standards have been developed within the City, this preliminary project per capita VMT

estimate shows that VMT would be below existing and projected county-wide estimates, which in large part is a reflection of the project's location downtown and in proximity to transit, bicycle and pedestrian facilities.

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

TABLE 4.7-5: Intersection Weekday PM Peak Hour Levels of Service with Project

#	Intersection	LOS Threshold[1]	Existing Conditions[2]			Existing Plus Project Conditions[2]		
			PM Peak Hour			PM Peak Hour		
			Movement	Delay[3]	LOS	Movement	Delay[3]	LOS
1	Front Street / Laurel Street	D	Overall	30.8	C	Overall	31.2	C
2	Pacific Avenue / Laurel Street	D	Overall	17.9	B	Overall	18.5	B
3	Front Street / Cathcart Street	D	Overall	19.0	B	Overall	18.9	B
4	Front Street / Metro Station Driveway	D	Overall	4.9	A	Overall	5.1	A
5	Pacific Avenue / Metro Station Driveway	D	Overall	1.1	A	Overall	1.1	A
		D	WB	11.4	B	WB	11.6	B
6	Pacific Avenue / Maple Street	D	Overall	8.1	A	Overall	8.2	A
7	Pacific Avenue / Front Street / Mission-Water Street	D	Overall	20.2	C	Overall	21.1	C
8	Front Street / Soquel Avenue	D	Overall	21.9	C	Overall	23.1	C
9	Pacific Avenue / Cathcart Street	D	Overall	8.8	A	Overall	8.9	A
10	Soquel Avenue / Pacific Avenue	D	Overall	3.6	A	Overall	3.6	A
		D	WB	10.3	B	WB	10.3	B
11	Ocean Street / Water Street	D	Overall	35.3	D	Overall	35.6	D
12	Highway 1 / Highway 9	C-D	**Overall**	**71.7**	**E**	**Overall**	**74.1**	**E**
13	Chestnut Street / Mission Street / Highway 1	C-D	**Overall**	**74.1**	**E**	**Overall**	**73.8**	**E**

Impact 4.7-2: **Highway Segment Impacts.** The project will result in an increase in daily and peak hour trips, but would not result in a change to an unacceptable LOS along state highway segments (7a). This is a *less-significant impact*.

The project will result in approximately 38 to 59 additional PM peak hour trips along Highway 1 and 20 additional peak hour trips along Highway 17, representing a 0.2 to 1.8 percent increase. All of the study highway segments would operate at acceptable levels of service according the LOS targets established by Caltrans as summarized on Table 4.7-6.

TABLE 4.7-6: Highway Traffic Volumes and Peak Hour Levels of Service

Segment	Direction	Number of Lanes	Max Flow Rate for C	Max Flow Rate for D	Existing		Existing plus Project			
					Volume	LOS	Project Trips	Volume	Percent Change	LOS
Route 1: Route 9 to Route 17	N	2	2,761	3,444	2,080	C	38	2,118	1.8%	C
	S	2	2,761	3,444	3,120	D	21	3,141	0.7%	D
Route 1: Route 17 to Emeline	N	2	2,761	3,444	2,820	D	24	2,844	0.9%	D
	S	2	2,761	3,444	1,880	C	14	1,894	0.7%	C
Route 17: Route 1 to Pasatiempo	N	3	3,888	5,165	3,300	C	7	3,307	0.2%	C
	S	3	3,888	5,165	2,700	C	13	2,713	0.5%	C
Peak hour volumes from Caltrans 2015 Peak hour factor-.92, free flow speed – 55, heavy vehicle factor-.985 (Exhibit 11-17 HCM 2010)										

SOURCE: Ron Marquez, Traffic Engineer Consultant

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

Access and Hazards

Impact 4.7-3: **Project Access.** The project will not result in creation of hazards due to design of the project circulation system or introduction of incompatible uses (7d). Therefore, the project would result in *no impact*.

The proposed project does not include any design features that would change vehicle circulation or access. The project includes some minor changes to clarify the locations of pedestrian access to open space and areas around downtown. However, these changes do not result in hazardous features such as sharp curves or dangerous intersections. Therefore, there is no impact as a result of the project.

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

Impact 4,7-4: **Emergency Access.** The project will not result in inadequate emergency access (7e). Therefore, the project would result in *no impact*.

There are no proposed changes to vehicle circulation and the proposed project does not modify emergency access from existing conditions. Therefore, there is no impact related to emergency access.

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

Transit, Pedestrian and Bicycle Travel

Impact 4.7-5: **Transit, Pedestrian and Bicycle Travel.** The project will not conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities (7f). Therefore, the project would result in *no impact*.

The Santa Cruz City Council recently accepted an Active Transportation Plan (ATP) (City of Santa Cruz, February 2017). The ATP includes a number of recommendations including programs and projects to create an integrated network of walkways and bikeways that connect neighborhoods to employment centers, commercial land uses, educational facilities, and recreational opportunities. The recommended projects in the ATP are prioritized and ranked based on a number of criteria including crash data, proximity to trip generators, traffic counts and public comments.

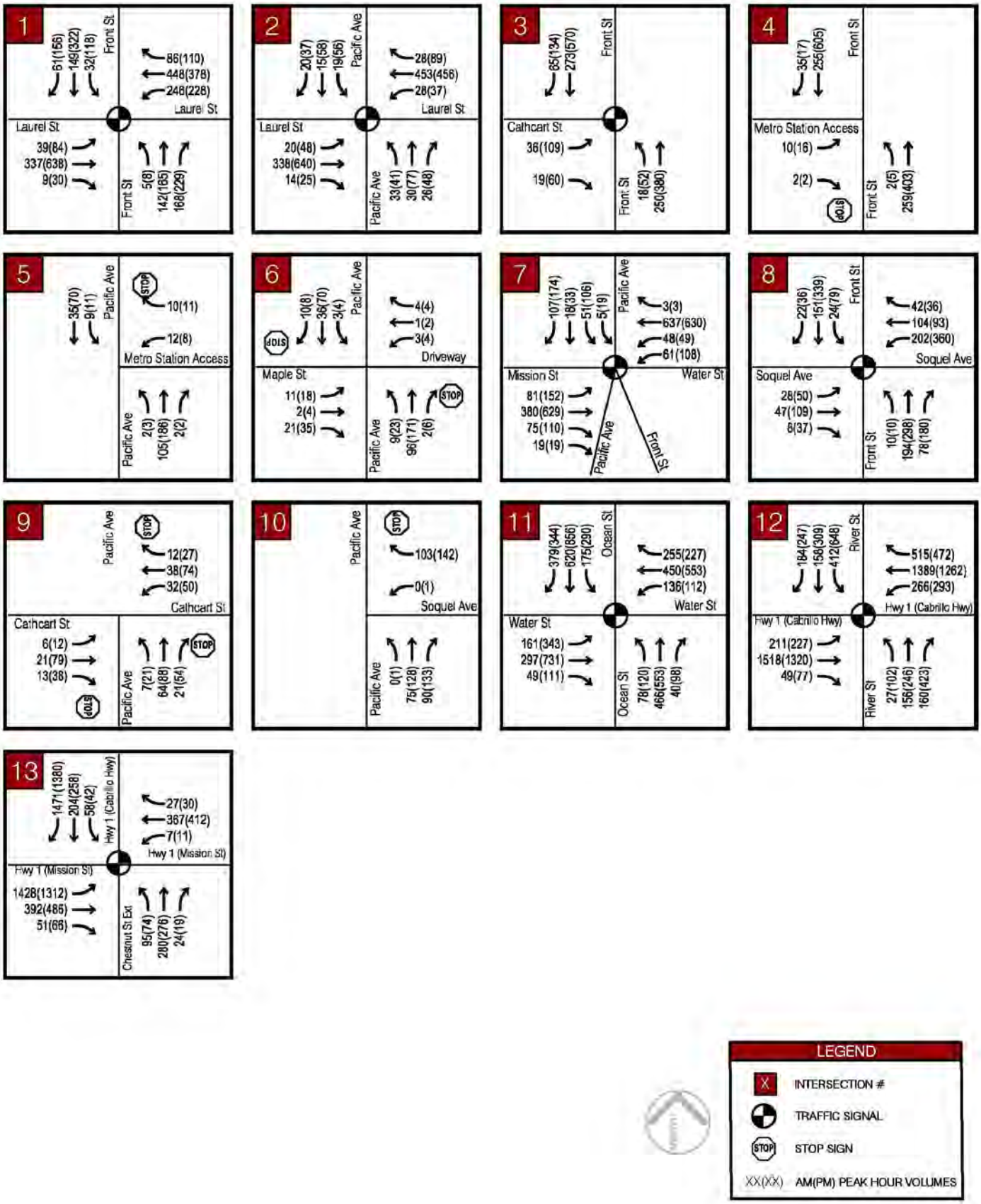
The SCMTD completes a Short Range Transit Plan (SRTP) every five years that contains a review of procedures and an analysis of existing services that results in service improvements and investments. The most recent SRTP (SCMTD 2013) contains a number of policy, practice, and service recommendations. Policy and practice recommendations primarily address SCMTD infrastructure. In 2016, SCMTD underwent a comprehensive operational analysis to reduce operating expenses in order to address a structural deficit of $6.5 million. The operating analysis resulted in a number of service changes that help to reduce operating costs and superseded the recommendations in the SRTP.

The Downtown Recovery Plan has a strong emphasis on pedestrian scale design and accessibility and includes a new pedestrian connection between Pacific Avenue and Front Street in the vicinity of Elm Street as well as bicycle access at the Elm Street extension to the San Lorenzo Riverwalk. None of the design features in the Downtown Recovery Plan conflict with the ATP or the SRTP and the design emphasis on pedestrians supports the objectives and goals of the ATP. Therefore, there is no impact related to conflicts with plans or programs related to active transportation and transit.

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

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SOURCE: Kimley Horn

FIGURE 4.7-1

Existing PM Peak Hour Traffic Volumes

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City of Santa Cruz Downtown Plan Amendments EIR

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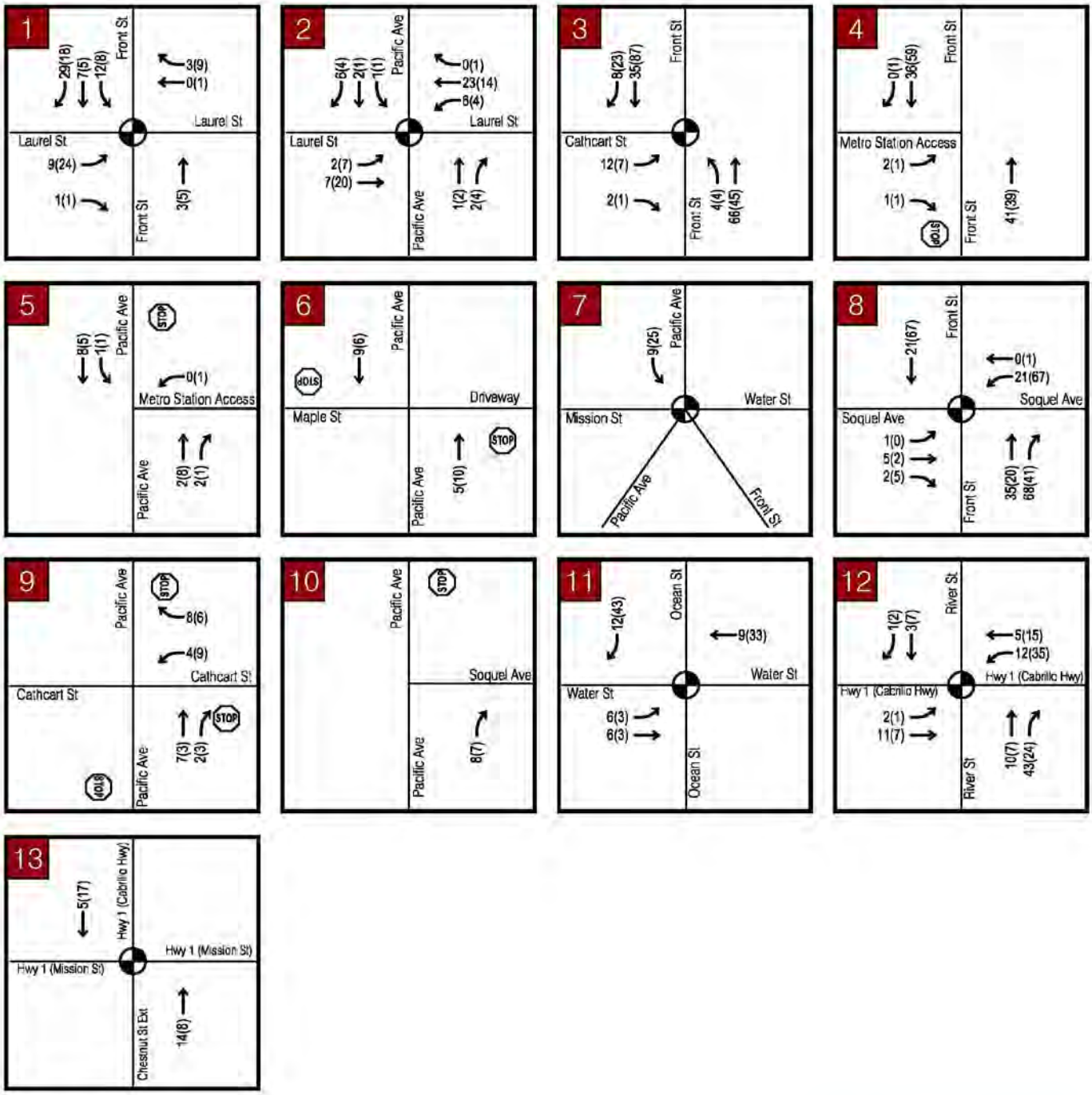
SOURCE: Kimley Horn

FIGURE 4.7-2

Project Trip Distribution

City of Santa Cruz Downtown Plan Amendments EIR

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SOURCE: Kimley Horn

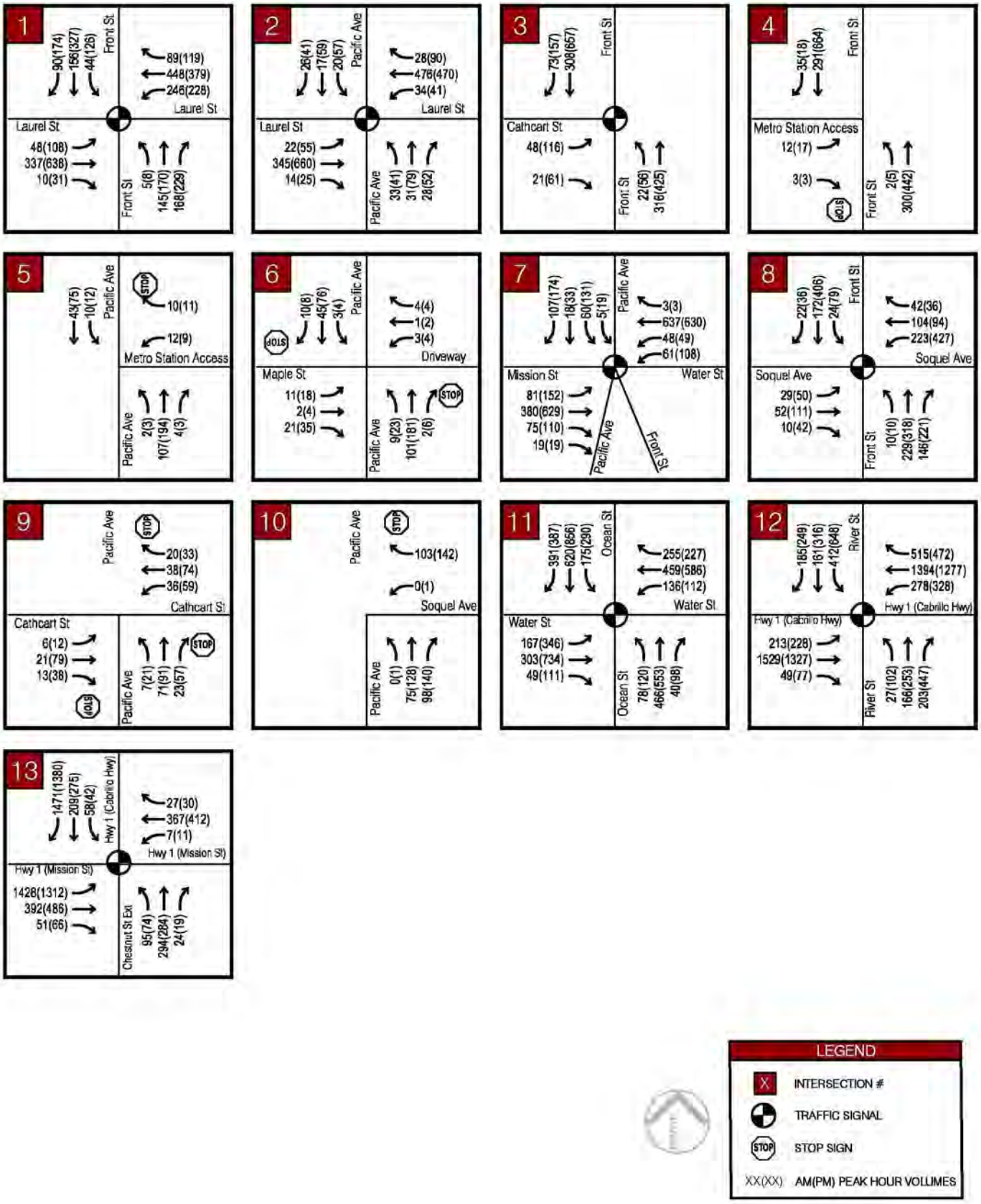
FIGURE 4.7-3

Project Trip Assignment

City of Santa Cruz Downtown Plan Amendments EIR

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SOURCE: Kimley Horn

FIGURE 4.7-4

Peak Hour Traffic Volumes with Project

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City of Santa Cruz Downtown Plan Amendments EIR

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4.8 WATER SUPPLY AND WASTEWATER TREATMENT

This section analyzes impacts of the project's potable water demand on municipal water supplies. This section draws from the City of Santa Cruz *2015 Urban Water Management Plan* (UWMP), which was adopted in August 2016 in accordance with state law. The UWMP, which must be updated every five years, evaluates water supply and demand within the City's water service area over the next 20 years. The 2015 UWMP is incorporated by reference in accordance with section 15150 of the State CEQA Guidelines, and relevant discussions are summarized in section 4.8.1. The 2015 UWMP Plan is available for review at the City of Santa Cruz Water Department (212 Locust Street, Suite A, Santa Cruz, California) during business hours: Monday through Thursday, 8 AM to 12 PM and 1 PM to 5 PM. The plan also is available for review on the City's website at: http://www.cityofsantacruz.com/government/city-departments/water/2015-urban-water-mgmt-plan.

This section also draws from the City of Santa Cruz *General Plan 2030* EIR (SCH#2009032007), which was certified on June 26, 2012, regarding background information on the City's wastewater treatment facility. The General Plan EIR is incorporated by reference in accordance with section 15150 of the State CEQA Guidelines. Relevant discussions are summarized in subsection 4.3.1. The General Plan EIR is available for review at the City of Santa Cruz Planning and Community Development Department (809 Center Street, Room 107, Santa Cruz, California) during business hours: Monday through Thursday, 8 AM to 12 PM and 1 PM to 5 PM. The General Plan EIR is also available online on the City's website at: http://www.cityofsantacruz.com/government/city-departments/planning-and-community-development/general-plan/draft-eir-for-the-draft-general-plan-2030.

Public and agency comments related to water supply / water service were received during the public scoping period in response to the Notice of Preparation (NOP). Issues raised in these comments include:

- ❒ Consideration of solving issues regarding water storage for drought years and sewage treatment for areas along San Lorenzo River served by septic systems.

To the extent that issues identified in public comments involve potentially significant effects on the environment according to the California Environmental Quality Act (CEQA) and/or are raised by responsible agencies, they are identified and addressed within this EIR. Public comments received during the public scoping period are included in Appendix B. It is noted that the comment received in response to the NOP addresses a general issue and does not provide a specific comment regarding the scope of review for the proposed project in this EIR, and is noted. Background information on the City's water and wastewater systems are provided in this section.

4.8.1 Environmental Setting

Regulatory Setting

State Regulations

Water Supply Assessments. In 2001, Senate Bill (SB) 610 amended California law regarding review of water availability for large projects (Section 10910 et seq. of the Water Code; Section 21151.9 of the Public Resources Code [CEQA]; see also Section 15155 of the State CEQA Guidelines). Pursuant to SB 610, preparation of a "water supply assessment" (WSA) is required for projects subject to CEQA that meet specified criteria regarding project size: projects of 500 or more residential units, 500,000 square feet or more of retail commercial space, 250,000 square feet or more of office commercial space, 500 or more hotel rooms, specified industrial uses, or a project that would result in a water demand equal to or greater than the amount needed to serve a 500-unit residential project. These assessments, prepared by "public water systems" responsible for service, address whether there are adequate existing or projected water supplies available to serve proposed projects over a 20-year period, in addition to existing demand and other anticipated development in the service area. The proposed project does not meet the above size requirements that would trigger the preparation of a WSA.

Sustainable Groundwater Management. In 2014, California enacted the "Sustainable Groundwater Management Act" to bring the state's groundwater basins into a more sustainable regime of pumping and recharge. The legislation provides for the sustainable management of groundwater through the formation of local groundwater sustainability agencies (GSAs) and the development and implementation of groundwater sustainability plans (GSPs), and requires GSAs and GSPs for all groundwater basins identified by the California Department of Water Resources (DWR) as high or medium priority. The law also authorizes the intervention of the State Water Resources Control Board in the event that no GSA, or equivalent local authority, is formed for a high- or medium-priority basin, or if an adequate GSP is not submitted for those basins. Additionally, it establishes criteria for the sustainable management of groundwater and authorizes DWR to establish best management practices for groundwater (California Department of Water Resources, December 2016).

The City of Santa Cruz is part of the Santa Cruz Mid-County Groundwater Basin formed pursuant to this legislation. The portion of the City's water service area not represented by the Agency is a remaining portion of the previously designated West Santa Cruz Terrace Basin and this basin is not currently managed by a GSA and may undergo further modification.

Wastewater Treatment. The Clean Water Act (CWA) regulates the discharge of pollutants to waters of the United States from any point source, enacted in 1972. The California State Water Resources Control Board (State Board) and the nine Regional Water Quality Control Boards (RWQCB) have the authority in California to protect and enhance water quality, including administration of the National Pollutant Discharge Elimination System (NPDES) permit program

for discharges, storm water and construction site runoff. The discharge of treated wastewater is included in the NPDES program. The RWQCB regulates operations and discharges from sewage systems through the NPDES permit. Further discussion is provided on pages 4.6-21 to 4.6-22 of the General Plan 2030 EIR (DEIR volume), which is incorporated by reference.

Local Regulations

Water Supply. Title 16 of the City's Municipal Code addresses water, sewers, and other public services. Title 16 chapters relevant to water service include:

- Chapter 16.01 Water Shortage Regulations and Restrictions
- Chapter 16.02 Water Conservation
- Chapter 16.03 Plumbing Fixture Retrofit Regulations
- Chapter 16.04 Water Services
- Chapter 16.05 Loch Lomond Recreation Area, Watershed Lands and Riparian Conservation Areas
- Chapter 16.06 Regulation of Water Wells
- Chapter 16.08 Sewer System: Graywater Systems (section 16.08.065)
- Chapter 16.09 Water System Improvements
- Chapter 16.10 Desalination Plant – Voter Approval
- Chapter 16.11 Water Service Accounts
- Chapter 16.13 Unified Utilities Billing System
- Chapter 16.14 System Development Charges
- Chapter 16.15 Water Use
- Chapter 16.16 Water –Efficient Landscaping
- Chapter 16.24 Utility Service Area Expansion

The City of Santa Cruz has enacted several ordinances regarding water conservation. Chapter 16.01 identifies regulations and restrictions during declared times of water shortages. Chapter 16.02 sets forth water conservation provisions to prevent the waste or unreasonable use or method of use of water. Chapter 16.16 sets forth requirements for water-efficient landscaping and also is intended to comply with the California Government Code section 65591 et seq., the Water Conservation in Landscaping Act. The regulations are applicable to applicants for new, increased, or modified water service within the City's water service area. On June 28, 2011, the City Council adopted Ordinance 2011-04, which amends the Municipal Code and adds a new section (16.08.065) to allow graywater use for irrigation. Graywater is wastewater that originates from showers, bathtubs, bathroom sinks, and clothes washing machines.

Wastewater Treatment. Chapter 16.08 ("Sewer System Ordinance") of the City of Santa Cruz Municipal Code regulates discharge to sanitary sewer and requires that all wastewater be discharged to public sewers, with the exception of graywater as allowed by Municipal Code Chapter 16.08. Septic tanks and cesspools are not allowed within city boundaries except as specified for limited conditions in Chapter 6.20 of the Municipal Code.

Study Area

The project area consists of the downtown area generally covered by the Downtown Recovery Plan (DRP) and the Central Business District zone, and specifically the lower downtown area generally between Soquel Avenue and Laurel Street on the north and south, and Cedar Street and the San Lorenzo River on the west and east. (Locations are shown on Figures 1-2 an d 2-1 in Section 3, Project Description.) The proposed project includes an amendment to the floor area ratio for the downtown portion of Regional Visitor Commercial land use designation. The study area includes properties adjacent to the western San Lorenzo River levee.

Service providers include the City of Santa Cruz for water supply and wastewater treatment.

City Water Service Area

The City of Santa Cruz Water Department serves approximately 24,535 connections in an approximate 20-square mile area. The service area includes the entire City of Santa Cruz, adjoining unincorporated areas of Santa Cruz County, a small part of the City of Capitola, and coastal agricultural lands north of the city. The current population residing in the Santa Cruz water service area is estimated to be 95,251 people. Approximately two thirds of the total population, almost 64,000, lives inside the City limits. Within the City, about 9,100 people including students, faculty, staff, and their families reside on the University of California Santa Cruz campus (City of Santa Cruz, August 2016).

City Wastewater Treatment Service Area

The City of Santa Cruz wastewater treatment facility (WWTF) serves the cities of Santa Cruz and Capitola and parts of unincorporated Santa Cruz County. In addition to the City of Santa Cruz, the WWTF serves the Santa Cruz County Sanitation District and Community Service Areas (CSA) 10 and 57; for further description, see pages 4.6-23 to 4.6-24 of the City's General Plan 2030 EIR (DEIR volume), which is incorporated by reference. The City also provides capacity for the City of Scotts Valley to discharge its treated wastewater into the Pacific Ocean via the City's discharge.

4.8.1.1 Water Service

City Water Service System

Water Supply Sources

The City's water system is comprised of four main sources of supply: San Lorenzo River diversions (including the Tait wells); North Coast spring and creeks; Loch Lomond Reservoir; and the Beltz wells. Over the past decade, the North Coast sources represented 26 percent of the total water supply, the San Lorenzo River represented 55 percent, Newell Creek (Loch Lomond

Reservoir) represented 14 percent, and Beltz wells contributed the remaining 5 percent (City of Santa Cruz, August 2016).

The San Lorenzo River is the City's largest source of water supply. The main surface water diversion, known as the San Lorenzo River Diversion, is located adjacent to the coast pump station on Highway 9 near the City limits just north of Highway 1. Use of this source dates back to the 1870s and was consolidated under public ownership in 1917. The Tait Street Diversion is supplemented by shallow, auxiliary wells located directly across the river, the Tait wells. The other diversion on the San Lorenzo River is Felton Diversion, which is an inflatable dam and intake structure built in 1974, located about 6 miles upstream from the Tait Street Diversion. When the diversion is being operated, water is pumped from this diversion through the Felton Booster Station to Loch Lomond Reservoir. While the City is the largest user of water from the San Lorenzo River basin, two other water districts, several private water companies, and numerous individual property owners share the San Lorenzo River watershed as their primary source for drinking water supply (City of Santa Cruz, August 2016).

The North Coast water sources consist of surface diversions from three coastal creeks and a natural spring located approximately 6 to 8 miles northwest of downtown Santa Cruz. These sources are: Liddell Spring, Laguna Creek, Reggiardo Creek, and Majors Creek. The use of these sources by the City dates back as far as 1890 (City of Santa Cruz, August 2016).

Loch Lomond Reservoir is located near the town of Ben Lomond in the Santa Cruz Mountains. The reservoir was constructed in the 1960s and has a maximum capacity of 2,810 million gallons (mg). In addition to providing surface water storage, the reservoir and surrounding watershed are used for public recreation purposes, including fishing, boating, hiking, and picnicking (swimming and wading are prohibited). In addition to the City, the San Lorenzo Valley Water District is entitled by contract to receive a 314.4 acre-feet per year (AFY) of the water stored in Loch Lomond Reservoir (City of Santa Cruz, August 2016).

The Beltz well system consists of four production wells and two water treatment plants located in the eastern portion of the City water service area. The facilities were originally acquired by the City from the Beltz Water Company in 1964. The majority of the groundwater production of the City's Beltz well field is in a geographical area identified as the Santa Cruz Mid-county Groundwater Basin. Groundwater from this basin is used by the City, the Soquel Creek and Central Water Districts, several small water systems, and numerous private rural water wells. Even though groundwater constitutes only about five percent of the City's water supply, it is a crucial component of the water system for meeting peak season demands, maintaining pressure in the eastern portion of the distribution system, and weathering periods of drought (City of Santa Cruz, August 2016).

Water System Production and Operations

The Water Department follows a variety of policies, procedures and legal restrictions in operating the City's water supply system, and the amount of water produced from each of the City surface water sources is controlled by different water rights and operational agreements. A summary of water rights held by the City of Santa Cruz is provided on page 6-10 of the 2015 UWMP that is incorporated by reference. In general, the system is managed to use available flowing sources to meet daily demands as much as possible. Groundwater and stored water from Loch Lomond are used primarily in the summer and fall months when flows in the coast and river sources decline and additional supply is needed to meet higher daily water demands. In accordance with requirements of its water rights, the City releases a minimum flow of 1.0 cfs from storage in Loch Lomond Reservoir to support fishery resources beneath the dam (City of Santa Cruz, August 2016).

Water production has fluctuated over the past ten years; annual production has ranged from a high of nearly 3,800 million gallons per year (MGY) in 2006 to a low of approximately 2,500 MGY in 2015 (City of Santa Cruz, August 2016). The 2015 water production rate represents production volumes experienced under severe drought conditions during a second year of rationing with emergency water shortage regulations and state-mandated local restrictions in effect.

The 2015 UWMP estimates a 20-year water supply at about 3,200 MGY in the year 2035 based on deliveries for average years, projected water demands, and available surface water flows consistent with ecosystem protection goals regarding fish habitat.

Water is treated at the City's Graham Hill Water Treatment Plant (GHWTP), except for groundwater, which is treated as part of the Beltz well system. The GHWTP complies with all drinking water standards set by the US Environmental Protection Agency and the State Water Resources Control Board Division of Drinking Water (DDW). GHWTP is a conventional surface water treatment plant that was commissioned in 1960 with a capacity of 12 million gallons per day (MGD) plant and has undergone an expansion and numerous plant improvements over the last 55 years. Currently the plant can process up to 16 MGD and a year-round average production of 10 MGD. Continued investment in the plant through replacement and upgrade projects will enhance the water quality treatment process and respond to changes in regulation to maintain an adequate, safe, and reliable supply of water available to the service area. Groundwater treatment occurs within the Beltz well system, and the current operational capacity for production in the Beltz system is approximately 1 MGD when the City draws groundwater (City of Santa Cruz, August 2016).

Water Demand

Water demand in the City's water service area has fluctuated over the past 10 years. The 2015 UWMP indicates that water consumption in the service area ranged between nearly 3,800 MGY in 2006 to approximately 2,500 MGY in 2015 (City of Santa Cruz, August 2016). The 2015 water demand was during the second year of a severe drought with water use restrictions and rationing in place.

The adopted 2015 UWMP forecasts a 20-year water demand forecast at approximately 3,200 MGY. This is slightly reduced from the estimated 3,500 MGY forecast in the 2010 UWMP due to continuing conservation efforts (City of Santa Cruz, August 2016). Until recently, the general trend in system demand was one in which water use rose roughly in parallel with account and population growth over time, except during two major drought periods in the late 1970s and the early 1990s. Around 2000, this pattern changed and system demand began a long period of decline, accelerated by pricing changes, drought, economic downturn, and other factors (Ibid.). The UWMP predicts a decrease in water use of approximately 100 MGY over the next 20 years despite regional population growth forecasts.

Water Supply Reliability and Constraints

There are several constraints and challenges that affect the long-term reliability of the City's water supplies. The primary constraint relates to potential water shortfalls during multi-year droughts. In addition, the City also faces other challenges that potentially could affect water supplies, including: potential flow releases associated with a Habitat Conservation Plan (HCP) currently under development, the outcome of water rights petitions, groundwater availability and climate change issues.

Supply Variability and Availability During Droughts

The City's primary water supply reliability issue relates to potential shortfalls during dry and critically dry years. The City Council-appointed Water Supply Advisory Committee[1] issued the following problem statement, which also is included in the 2015 UWMP, that summarizes the key water supply issues within the City's water service area:

> *Santa Cruz's water supply reliability issue is the result of having only a marginally adequate amount of storage to serve demand during dry and critically dry years when the system's reservoir doesn't fill completely. Both expected requirements for fish flow releases and anticipated impacts of climate change will turn a marginally adequate situation into a seriously inadequate one in the coming years. Santa Cruz's lack of storage makes it particularly vulnerable to multi-year droughts. The key management strategy currently available for dealing with this vulnerability is*

[1] See discussion in the following subsection regarding WSAC.

> *to very conservatively manage available storage. This strategy typically results in regular calls for annual curtailments of demand that may lead to modest, significant, or even critical requirements for reduction. In addition, the Santa Cruz supply lacks diversity, thereby further increasing the system's vulnerability to drought conditions and other risks. The projected worst-year gap between peak-season available supply and demand during an extended drought is about 1.2 billion gallons. While aggressive implementation of conservation programs will help reduce this gap, conservation alone cannot close this gap. The Committee's goal is to establish a reasonable level of reliability for Santa Cruz water customers by substantially decreasing this worst-year gap while also reducing the frequency of shortages in less extreme years.*

As described above, the City's water supply is almost exclusively from local surface water sources whose yield varies from year to year depending on the amount of rainfall received. The water system is capable of meeting demands during normal and wet years, but is vulnerable to shortage in extended dry periods or critically dry periods. The City predicts that future water demand will be met for 90 percent of all normal water years and that existing and planned sources of water available to the City over the next twenty years will meet the predicted service area total annual water demand of about 3,200 to 3,300 MGY (City of Santa Cruz, August 2016).

The UWMP's projections for the year 2035 show a shortfall of approximately 40 MGY during normal periods, 528 MGY during single dry year periods, and 1,250 to 1,639 MGY during multiple dry year periods. The City has not previously seen shortages in normal water years, but expected reductions in water production for ecosystem protection are likely to result in small shortages (1-3 percent) prior to 2020. However, operationally the City predicts sufficient water supplies in normal years to meet demand even though a slight deficit seems to exist in the modelled projections (City of Santa Cruz, August 2016).

In an extreme multi-year drought, available water supplies are estimated to be 25 to 50 percent less than what is available during normal years depending on the severity and duration of the dry years. In multi-year or critical drought conditions, the combination of very low surface flows in the coast and river sources and depleted storage in Loch Lomond Reservoir reduces available supply to a level which cannot support average dry season demands. Compounding the situation is the need to retain a certain amount of water in the reservoir to provide supply if drought conditions continue into the following year. The existing system is not able to provide a reliable supply during multi-year droughts or prolonged periods of drier than normal hydrologic conditions (City of Santa Cruz, August 2016). As the City chose to create a representative average year by using the historic record, the inclusion of the dry years and critically dry years within the average may explain the predicted small deficit. It is important to note that the City predicts the supply and demand volumes to be in balance for 90% of all normal water years for 2020-2035.

Ecosystem Protection

The amount of North Coast water supply sources may change in the future depending on the outcome of a Section 10 Incidental Take Permit application and HCP under development. Since 2002, the City of Santa Cruz has been working toward the development of an HCP that covers effects on anadromous fish incidental to operation and maintenance of the water system, which may result in "take" of threatened and/or endangered species. An HCP is an operational avoidance and minimization and mitigation plan prepared under Section 10 of the Federal Endangered Species Act (FESA) and Section 2081 of the California Fish and Game Code for incidental take of federally or state-listed threatened and endangered species. The City initiated the HCP process because the streams from which the City diverts water currently support steelhead trout (*Oncorhynchus mykiss*), a federally-listed "threatened" species, and the San Lorenzo River and Laguna Creek support coho salmon *(Oncorhynchus kisutch*), a federally and state listed "endangered".

The City has been actively meeting with the federal and state agencies on HCP-related issues and has conducted a number of studies, but permitting has not yet been completed yet. These studies have evaluated what limiting factors may be affecting the threatened and endangered anadromous fish in these streams and measures that the City can take to avoid and minimize effects of its operations on these species. Because these studies indicate that habitat conditions in these streams could be improved with increased instream flows, the City began voluntarily diverting less flow in 2007 on an interim basis in connection with the pursuit of FESA and CESA take authorization as well Streambed Alteration Agreements for its diversion facilities. Although permit negotiations are ongoing, the City forecasts that ultimate compliance will result in less water being available from the City's surface water sources for supply in future years compared to the past. This, in turn, will place greater reliance on water stored in Loch Lomond Reservoir to meet the community's annual water needs and exacerbate the potential vulnerability to shortages described above (City of Santa Cruz, August 2016).

Water Rights Petitions

The City is addressing two water rights issues that may affect the City's water supply. In 2008, the City submitted petitions to the State Water Resources Control Board (SWRCB) to address a historical oversight in the language of the City's water rights documents for Newell Creek and the San Lorenzo River at Felton (Felton Diversion) and to request a time extension for the full development of the 3,000 acre-feet permit to divert water from the San Lorenzo River at Felton and to add the rights of direct diversion at Newell Creek and the Felton Diversion. The City's intent is to eliminate technical constraints for operations of its water supplies. Recently completed water supply planning work done by the Water Supply Advisory Committee (described in more detail below) identified water from the Felton Permits as being critical to meeting the City's projected future demand (City of Santa Cruz, August 2016).

Groundwater Availability and Management

The City has joined with the Soquel Creek and Central Water Districts, the County of Santa Cruz, and private well representatives to form the Santa Cruz Mid-County Groundwater Agency (MGA), the local GSA created pursuant to the requirements of the California Sustainable Groundwater Management Act. The MGA will oversee the preparation of a cooperative groundwater management plan for the now redefined Santa Cruz Mid-County Groundwater Basin, which includes the former Soquel Valley Basin and portions of three adjacent basins – the West Santa Cruz Terrace Basin, the former Santa Cruz Purisima Formation Basin, and the original Pajaro Valley Basin. The Soquel Valley Basin was identified by the State as a groundwater basin subject to critical conditions of overdraft (California Department of Water Resources, December 2016). Over-pumping in the Soquel-Aptos Basin resulted in a groundwater overdraft condition and seawater intrusion along the coast. The portion of the Purisima aquifer from which the City pumps has been recognized locally as being threatened by potential over-pumping with an ongoing risk of seawater intrusion that could jeopardize the future production of the City's groundwater sources (City of Santa Cruz, August 2016).

Climate Change

As the City of Santa Cruz water supply consists of only local sources maintained and recharged by natural processes, the potential effects related to climate change could greatly impact the sources of supply. According to the 2015 UWMP, it is widely accepted that climate change may make the future hydrology drier than the historical record maintained in the region, and general forecasts describe deviation in the seasonal patterns of rainfall with longer and more severe droughts. Additionally, the annual average temperature in the region may increase leading to variability in the rate of evaporative processes that can greatly impact local sources and watersheds. Climate change impacts are likely to be a contributor to a less reliable supply and also a driver for strengthening demand management planning (City of Santa Cruz, August 2016).

Water Supply Planning and Water Shortage Contingency Plan

Given water supply reliability issues discussed in the previous section, the City of Santa Cruz has actively considered and pursued water supply and demand management projects over the past 20 years to supply options and to enhance the reliability of the system. In October 2013, the City Council directed City staff to develop a detailed engagement program for a community examination of water supply issues. City staff developed a framework for a Water Supply Advisory Committee (WSAC), and the Council approved the 14-member WSAC in March 2014. The purpose of the WSAC, as established by Council-approved WSAC charter on June 24, 2014, was to "explore, through an interactive, fact-based process, the City's water profile, including supply, demand and future threats, and analyze potential solutions to deliver a safe, adequate, reliable and environmentally sustainable water supply, and develop strategy recommendations for City Council consideration". The WSAC completed their work in October 2015, and the City Council accepted their Final Report in late 2015 that included the following recommendations for water augmentation strategies:

- Additional water conservation with a goal of achieving an additional 200 to 250 million gallons of demand reduction by the year 2035.
- Passive recharge of regional aquifers by working to develop agreements for delivering surface water as an in lieu supply to the Soquel Creek Water District and/or Scotts Valley Water District so they can "rest their wells", help aquifers recover and store water that can become available to the City of Santa Cruz Water Department in drought years.
- Active recharge of regional aquifers by using existing and some potential new infrastructure in the regionally shared Purisima aquifer in the Soquel-Aptos basin and/or in the Santa Margarita/Lompico/Butano aquifers in the Scotts Valley area to store water that can be available for use by Santa Cruz in drought years.
- A potable water supply using advanced treated recycled water as its source, as a supplemental or replacement supply in the event the groundwater storage strategies described above prove insufficient to meet the Plan's goals of cost effectiveness, timeliness and yield. In the event advanced treated recycled water does not meet the needs, desalination would become the last element (City of Santa Cruz, August 2016).

Upon acceptance of the WSAC report by City Council, development began on the supply augmentation strategy work plan that further defines the components of the implementation plan and timeline included in the WSAC Final Report. The work plan is comprised of the following parts:

- Water Conservation or Demand Management (Strategy 1)
- In lieu water transfers with neighboring agencies (Strategy 1 Element 1)
- Aquifer Storage and Recover (Strategy 1 Element 2)
- Advanced Treated Recycled Water or Seawater Desalination (Strategy 2 Element 3)

The initial phase of the supply augmentation strategy involves enhancement of the existing conservation programs as well as evaluation of the feasibility alternative future supply projects focused on solving the 1.2 billion gallon annual (or 1,200 MGY) shortfall identified in the WSAC report under multiple year droughts. An updated Water Conservation Master Plan was completed in 2016 to define the next generation of water conservation activities. The draft plan includes 35 measures for implementation by 2021, many of which are already underway. The projected per capita water use in gallons per person per day (gpcd) is expected to decline to about 92 gallons per person per day, far below the City's 2020 target of 110 gpcd, and continuing to decline to a level of about 78 gpcd by 2035 (City of Santa Cruz, August 2016).

The City also is working with the Soquel Creek and Scotts Valley Water Districts (SqCWD, SVWD) on an in-lieu transfer project. In-lieu transfers include short-term and long-term projects that would deliver excess City water to SqCWD and/or the Scotts Valley Water District during winter

that would reduce pumping from regional aquifers and assist with groundwater recharge and recovery. The short-term project utilizes existing infrastructure that connects the SqCWD and the City water system and uses surplus water from the City's North Coast sources. A pilot program is in place to collect information related to physical operations, water quality, response of groundwater levels, and the potential to develop a larger and/or long-term project. The long-term project may include higher volumes of water transfers including those from the San Lorenzo River, which would require modifications to the City's water rights. An aquifer storage and recovery (ASR) study is also underway that is looking at regional options for groundwater injection, storage, and future extraction in order to actively recharge regional aquifers. A portion of the water delivered using in-lieu transfers or ASR facilities would be effectively banked in the aquifers to be extracted and returned to the City when needed in future dry years. The City's current work plan indicates that the feasibility of both in-lieu and ASR programs are projected to be understood by the end of 2020 (City of Santa Cruz, March 6, 2017).

Advanced treated recycled water or desalinated water would be developed as a supplemental or replacement supply in the event the groundwater storage strategies described above prove insufficient to meet the plan's goals of cost-effectiveness, timeliness and yield. If it is determined that recycled water cannot meet the City's shortfall needs, desalinated seawater would be used. A recycled water feasibility study is underway, and a desalination project feasibility update is expected to be initiated in May 2017. The City's current work plan indicates that both studies will be complete by the end of the year.

The City will determine which element or elements to pursue based on the outcome of the studies currently in progress.

Additionally, in 2009, the City of Santa Cruz completed a comprehensive update of its Water Shortage Contingency Plan. Since then, the City has had to declare a water shortage in five of the past seven years, including a Stage 3 Water Shortage Emergency in both 2014 and 2015. The City's Water Shortage Contingency Plan describes the conditions which constitute a water shortage and provides guidelines, actions, and procedures for managing water supply and demands during a declared water shortage. The primary focus of the plan is on measures that reduce customer demand for water, but it also covers actions that can be implemented to stretch or increase the water supply (City of Santa Cruz, August 2016).

4.8.1.2 Wastewater Treatment

The City of Santa Cruz owns and operates a regional wastewater treatment facility (WWTF), located on California Street adjacent to Neary Lagoon, that provides secondary level of treatment. The City treats sewage from domestic and industrial sources and discharges the treated effluent into the Pacific Ocean under the provisions of a waste discharge permit (NPDES No. CA0048194) issued by the California RWQCB, Central Coast Region (Order No. R3 - 2005 - 0003). Monterey Bay, into which the region's treated wastewater is disposed, was designated in 1992 as a National Marine Sanctuary. Wastewater influent and effluent characteristics are

carefully monitored for compliance with state water quality requirements. The City also participates in a regional receiving water monitoring program with other dischargers in the Monterey Bay area (City of Santa Cruz Water, April 2012, DEIR volume).

Treatment Levels and Plant Capacity

The City's WWTF was upgraded in 1998 to provide secondary treatment in order to meet state and federal waste discharge requirements, and currently produces wastewater of a quality that would be classified as Disinfected Secondary-23. The treatment process consists of a series of steps, including screening, aerated grit removal, primary sedimentation, trickling filter treatment, solids contact, secondary clarification, and ultraviolet disinfection (City of Santa Cruz, April 2012, DEIR Volume).

The WWTF is not currently permitted for and does not now produce recycled water for offsite reuse. The current level of treatment is not sufficient for general irrigation without additional treatment and facility upgrades. In addition to the treatment upgrades, a distribution system, including pumps, meters, storage facilities, and separate piping would be required to convey the recycled water to customers (City of Santa Cruz, April 2012, DEIR volume). The City of Santa Cruz is actively investigating the feasibility of recycled water.

The WWTF has a permitted wastewater treatment capacity of 17.0 million gallons per day (mgd). In 2016, the WWTP treated 3.3 billion gallons of wastewater effluent at an average daily rate of 9.04 mgd (Ibid.). The Santa Cruz County Sanitation District has treatment capacity rights of 8 mgd at the City of Santa Cruz WWTF. The City contributes approximately 5.0 mgd with a remaining capacity of 4.0 mgd. The Sanitation District contributes 5.5 mgd with a remaining capacity of 2.5 mgd. Approximately 50% of the wastewater treated at the plant is generated within the City of Santa Cruz. The total remaining treatment plant capacity, therefore, is 7.5 mgd.

Treated Effluent Disposal

The treated effluent is disposed into the Monterey Bay via a deep ocean outfall constructed in 1987. The outfall extends 12,250 feet on the ocean bottom and terminates one mile offshore at a depth of approximately 110 feet below sea level. A 1,200-foot diffuser at the end of the pipe provides an initial dilution of greater than 139 parts seawater to one part wastewater (City of Santa Cruz, April 2012, DEIR volume). The City of Scotts Valley discharges its treated effluent via the City's ocean outfall. The Scotts Valley Wastewater Treatment Plant has a permitted capacity of 1.5 million gpd and treats water to secondary and tertiary levels. Secondarily treated effluent that is not used for recycled water is transmitted via a main to Santa Cruz and discharged to the ocean through the outfall shared with the City of Santa Cruz.

Wastewater Collection

The City of Santa Cruz wastewater collection system serves approximately 15,000 connections. The collection system includes 23 pump stations and over 160 miles of sewer pipeline ranging in size from 6 to 54 inches in diameter. The City has a hydraulic model for the sewer system, and continues to focus on collections system projects that reduce infiltration and inflow into the system (City of Santa Cruz, April 2012, DEIR Volume).

4.4.2 Impacts and Mitigation Measures

Standards of Significance

In accordance with the California Environmental Quality Act (CEQA); State CEQA Guidelines (including Appendix G); City of Santa Cruz plans, policies, and/or guidelines; and agency and professional standards, a project impact would be considered significant if the project would:

8a Have insufficient water supplies available to serve the project from existing entitlements and resources, and/or require new or expanded entitlements to serve the project;

8b Require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects; or

8c Substantially deplete groundwater supplies or interfere substantially with groundwater recharge.

8d Result in wastewater flows exceed sewer line or treatment plant capacity or contribute substantial increases to flows in existing sewer lines that exceed capacity.

Analytical Method

The proposed project consists of amendments to the City's Downtown Recovery Plan, General Plan, Local Coastal Plan and Zoning Code regarding development in the downtown area and Central Business District. The proposed project would not directly result in new development. However, the proposed Downtown Plan amendment would expand areas for potential additional building height that could accommodate intensified redevelopment of existing developed sites. City staff estimates that the proposed amendments could indirectly lead to development, resulting in a potential net increase of 711 new residential units and 2,200 square feet of office space with a net decrease of approximately 14,700 square feet of commercial building space over existing conditions within the downtown area. The proposed General Plan amendment would increase FAR in areas designated as RVC in the General Plan, but would not lead to development on sites not already considered in the General Plan and General Plan EIR. The proposed LCP and Zoning Code amendments would not result in changes that could indirectly lead to intensified development. The following impact analyses are based on review of existing data and studies.

Project water demand is estimated based on water demand rates developed as part of the City's 2015 Urban Water Management Plan update. The impact analysis is based on findings of the 2015 UWMP and consultation with City of Santa Cruz Water Department staff. Wastewater generation was reviewed based on review of existing data in the General Plan and review with City staff.

Impacts and Mitigation Measures

No impacts were identified regarding existing or expanded water treatment facilities (8b) as explained below. As indicated in the Initial Study (Appendix A), the project would not affect groundwater recharge (8c). The following analysis assesses impacts to the City of Santa Cruz water supplies as a result of water demand associated with development of the proposed project (8a) and potential impacts to wastewater treatment (8d).

New or Expanded Facilities – No Impact. The City Water Department indicates that the proposed project will not result in the need to construct or expand its water treatment facility or other water infrastructure/facilities to accommodate future water demand resulting from the proposed project (6b) (Goddard, City of Santa Cruz Water Department, personal communication, March 2017). The project would require new domestic, irrigation and fire service connections from existing infrastructure to serve the project, all of which are available. Therefore the project will result in no impacts from the construction of new or expanded water facilities.

Impact 4.8-1: **Water Supply.** Adoption of the proposed plan amendments could indirectly result in intensified development with a demand for potable water in a system that, under existing conditions, has adequate supplies during average and normal years, but is subject to potential supply shortfalls during dry and critically dry years. The additional project demand would not result in a substantial increase during dry years and would not be of a magnitude to affect the level of curtailment that might be in effect (8a). Therefore, the impact is considered a *less-than-significant impact*.

The proposed project would not directly result in new development, but could lead to intensified development in the project study area, resulting in increased water demand over the next 25 years. Based on water demand rates documented in the City's adopted 2015 UWMP, the proposed project could result in a water demand of approximately 29 MGY based on City of Santa Cruz Water Department rates for multi-family dwelling units and office and commercial uses. This demand represents less than one-hundredth of one percent of the total estimated future water demand within the City's service area. Furthermore, the demand is within the amount of new multi-family dwellings considered in demand forecasts for the 2015 UWMP.

The 2015 UWMP documents a trend of declining water demand since the year 2000, and total water demand is projected to decline over the 20-year UWMP period due to continued implementation of conservation programs and other measures. However, as indicated above,

projections for the year 2035 estimate a shortfall of approximately 40 MGY during normal periods, 528 MGY during single dry year periods, and 1,639 MGY during multiple dry year periods (City of Santa Cruz, August 2016). Current water supplies are adequate during average and normal years to serve the project. During periods of dry years and drought, water customers would be subject to water curtailment as enacted by the City. A multiple dry year scenario would require more substantial curtailment of all water customers. However, the proposed project's minimal demand (less than one hundredth of one percent of the total water service area demand) would not have significant effects on the levels of water supply or curtailment that would be required throughout the service area. Therefore, the impact of increased water demand on water supplies due to the proposed project is considered less than significant as there are sufficient supplies from existing sources to serve the project.

Furthermore, the City continues to administer its water conservation program, has completed a Conservation Master Plan, and is implementing a water augmentation plan. The City is has defined water supply augmentation strategies that are being studied in order to provide increased production between 2020 and 2035 to address potential drought shortages. The plan includes the pursuit of the following portfolio of options: continued and enhanced conservation programs; passive recharge of regional aquifers; active recharge of regional aquifers; and a potable supply using advanced treated recycled wastewater or desalinated water if recycled water did not meet City needs. These prospective sources are still under evaluation. A water transfer pilot program is underway for the passive recharge strategy.

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

Impact 4.8-2: **Wastewater Treatment.** Adoption and implementation of the proposed plan amendments could indirectly result in increased development and population growth that would result in indirect generation of wastewater that could be accommodated by the existing wastewater treatment plant (8d). Therefore, the impact is considered a *less-than-significant impact*.

The proposed project would not directly result in new development, but could lead to intensified development in the project study area, resulting in increased water demand over the next 25 years. The City Public Works Department generally estimates wastewater flows as a percentage of water use (City of Santa Cruz, April 2012, DEIR volume). Based on the water demand rates identified in in the Impact 4.8-1 discussion, it is estimated that development accommodated by the proposed project would equate to an average daily wastewater flow increase of approximately 0.060 mgd. This amount is well within the remaining treatment plant capacity – both the permitted capacity as well as the City's remaining portion (4.0 mgd).

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

4.9 LAND USE

This section reviews existing land uses in the vicinity, and applicable policies and regulations that pertain to the project as identified for review in the State CEQA Guidelines.

Public and agency comments related to land use were received during the public scoping period in response to the Notice of Preparation (NOP). Issues raised in these comments include:

- ❒ The standard of review for Local Coastal Plan-Land Use Plan amendments is that they must be consistent with Chapter 3 policies of the Coastal Act.
- ❒ The EIR should evaluate appropriate land use and zoning designations for the locations adjacent to and near the Riverwalk along Front Street, such as mixed-used zoning with visitor-serving and coastal recreational uses.
- ❒ EIR should provide explanation of why San Lorenzo River Urban River Plan (SLURP) policies are being eliminated.
- ❒ Potential conflicts with development patterns in the area due to changes in density resulting from the General Plan and zoning amendments at the City's "urban edge".

To the extent that issues identified in public comments involve potentially significant effects on the environment according to the California Environmental Quality Act (CEQA) and/or are raised by responsible agencies, they are identified and addressed within this EIR. Public comments received during the public scoping period are included in Appendix B. The comment regarding consideration of other land use and zoning designations is noted, but is not within the scope of the proposed amendments. It is noted, however, that both the Community Commercial General Plan designation and the Downtown Recovery Plan encourage mixed uses.

4.9.1 Environmental Setting

Regulatory Setting

The City of Santa Cruz General Plan 2030, the Local Coastal Plan, and Title 24 (Zoning) of the Municipal Code govern land use and development for parcels within City limits. The southern portion of the project area is located within the coastal zone as is the beach area that would be affected by the proposed General Plan amendment.

Vicinity Land Uses

The project area is located within downtown Santa Cruz and is located to the west of the San Lorenzo River. The area is characterized by a mix of primarily commercial buildings, some of which have upper floor office and residential units. The area supports a mix of both pre- and post- Loma Prieta earthquake constructed structures with a variety of architectural styles and

building heights. Most of the buildings constructed after the earthquake are located north of Cathcart Street.

The project area subject to changes in building height is located along Pacific Avenue and Front Street generally between Laurel Street on the south and Cathcart Street on the north, with the west side of Front Street up to Soquel Avenue. The area is characterized by a mix of commercial structures, some of which have upper floor office uses. South of Cathcart, residential uses are limited primarily to the building at 1010 Pacific Avenue. Buildings along Front Street are a mix of mostly older buildings of varying architectural styles, sizes and heights. The older buildings along Front Street are generally one story and approximately 16-20 feet in height. Buildings are a mix of two and three stories along Pacific Avenue and generally one story in height along Front Street. There is less street tree landscaping along lower Front Street. Photos of representative views in the project area and downtown are shown on Figure 4.1-1.

Relevant Plans and Zoning Regulations

General Plan

All areas within the project study area are designated "RVC" (Regional Visitor Commercial) with a 0.25 to 3.5 floor area ration (FAR) in the City's existing *General Plan 2030*. This designation applies to areas that emphasize a variety of commercial uses that serve Santa Cruz residents as well as visitors. Mixed-use development is strongly encouraged in RVC districts. Areas designated RVC include:

- **Downtown Santa Cruz.** Emphasizes a mix of regional office and retail uses, residential and mixed-use developments, restaurants, and visitor attractions such as entertainment venues. The Downtown Recovery Plan provides detailed requirements for this area.
- **South of Laurel.** Emphasizes mixed-use and residential development along with visitor-serving and neighborhood commercial uses to connect the Beach Area with Downtown Santa Cruz. The Beach and South of Laurel Comprehensive Area Plan provides detailed requirements for this area.
- **Beach Area.** Emphasizes visitor-serving commercial uses such as hotels, motels, restaurants, and amusement parks, as well as residential and mixed-use development in the Beach Area neighborhoods. The Beach and South of Laurel Comprehensive Area Plan provides detailed requirements for this area.

For most areas designated RVC, the minimum and maximum development intensity is specified in the Downtown Recovery Plan or the Beach and South of Laurel Comprehensive Area Plan. In areas that are designated RVC but are not addressed in an Area Plan, the minimum FAR is 0.25 and the maximum is 1.75.

Local Coastal Plan

A portion of the downtown and project study area lies within the coastal zone. Pursuant to the California Coastal Act, the City has a Local Coastal Plan (LCP) that was certified by the California Coastal Commission (CCC). The LCP consists of a land use plan, implementing ordinances and maps applicable to the coastal zone portions of the City, and applies to all private and public projects located within the coastal zone. The Land Use Plan consists of: text; policies, programs and maps; Area Plan coastal policies and maps; and a Coastal Access Plan. The Implementation Plan consists of ordinances and regulations used to implement the Land Use Plan, including sections in the Zoning Code. The City is in the process of updating and revising the LCP Land Use Plan as a separate document from the General Plan. The LCP applies to private and public projects located within the coastal zone. Additionally, Chapter 4 of the Downtown Recovery Plan is incorporated by reference in the CBD zone district, and the district is part of the implementation section of the LCP.

In addition to the development standards of Chapter 4, there are several LCP policies that are proposed to be modified. Since the original certification of the City's LCP in 1985, additional plans have been prepared and policies incorporated into the LCP as amendments. The City adopted the San Lorenzo Urban River Plan (SLURP) in 2003 as a resource management protection plan for the river. Subsequent to the City Council approval, several resource-related and land use policies were included in the LCP and approved by the CCC as an amendment to the City's LCP. There are nine coastal policies based on the SLURP that pertain to development along Front Street within the coastal zone.

Downtown Recovery Plan

The Downtown Recovery Plan (DRP) was adopted in 1991 to guide reconstruction of the 1989 Loma Prieta earthquake as the earthquake destroyed significant portions of downtown Santa Cruz. The intent was to establish policies, development standards and guidelines to direct the recovery process toward the rebuilding after the earthquake. In addition to an Introduction, Summary, and Implementation Strategy, the DRP includes the following components:

- ❒ Land Use Plan for four subareas (Chapter 3),
- ❒ Development Standards and Design Guidelines (Chapter 4)
- ❒ Circulation and Parking Plan (Chapter 5)
- ❒ Streetscape and Open Space Plan (Chapter 6).

The DRP has been modified several times over the past 25 years with the most recent change in 2016 to relocate the downtown sign regulations from the DRP to Chapter 24 of the Zoning Code. Implementation of the DRP also included amendments to the Zoning Code. Specifically, DRP Chapter 4—Development Standards and Design Guidelines—is incorporated by reference in Part 24 of the Zoning Code, the Central Business District (CBD).

Zoning Code

The downtown areas are zoned "Commercial Business District" (CBD). This district implements the Land Use Plan, Development Standards and Design Guidelines of the DRP. It is intended to refine the Plan in the area of land use and regulations. It supports the purpose of the DRP, in the context of the General Plan, which aims to make downtown the urban center of the city, with the many functions a city center serves. This section of the Zoning Ordinance is also part of the Local Coastal Implementation Plan. The DRP and CB is divided into four subareas, in order to enhance the character of each by special consideration of the character of each. The Lower Pacific Avenue subdistrict has been added and consists of the CBD District South of Laurel Street. The Lower Pacific Avenue subdistrict is intended to implement the policies of the South of Laurel Plan and is separate from the Downtown Recovery Plan. The project study area is located with the Pacific Avenue Retail subdistrict and the Front Street/Riverfront subdistrict.

4.9.2 Impacts and Mitigation Measures

Thresholds of Significance

In accordance with the California Environmental Quality Act (CEQA); State CEQA Guidelines (including Appendix G); City of Santa Cruz plans, policies and/or guidelines; and agency and professional standards, a project impact would be considered significant if the project would:

9a. Physically divide an established community;

9b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect; or

9c. Conflict with any applicable Habitat Conservation Plan or Natural Community Conservation Plan.

Analytical Method

Site visits of the project vicinity were conducted to ascertain surrounding land uses and development. Relevant City plans were reviewed with regards to land use concerns or policy issues with which the project might result in potential conflicts.

Impacts and Mitigation Measures

As described in the Initial Study (see Appendix A), the project site is located within the developed downtown area of the City, as well as the developed beach area and upper Ocean Street area. The proposed development would not physically divide an established community (9a). There are no adopted Habitat Conservation or Community Conservation Plans in the project area (9c).

The following impact analyses address potential project conflicts with any applicable land use plan, policy, or regulations adopted for the purpose of avoiding or mitigating an environmental effect (9b) .

Impact 4.9-1: **Conflicts with Policies and Regulations.** The proposed project will not conflict with policies or regulations adopted for the purpose of avoiding or mitigating an environmental effect, and therefore, will result in *no impact* related to consistency with local plans and policies.

The following discussion provides an overview of consistency with local plans and policies. The proposed project consists of a series of amendments to the following adopted City plans. Amendment to Municipal Code Section 24.10, Part 24, Central Business District (CBD), of the Zoning Code to modify extension area regulations and add Parklet standards.

- ❒ Downtown Recovery Plan: Amendment to extend Additional Height Zone A, modify Additional Height Zone B, and modify development standards as fully described in Chapter 3, Project Description.

- ❒ General Plan 2030: Amendment to modify Floor Area Ratio for the Regional Visitor Commercial land use designation in the downtown area. The reason for General Plan Amendment is that the CBD zone is the primary zone district that implements the broader RVC General Plan land use designation. The modifications proposed for the CBD additional height Zone A between Pacific Avenue and Front Street would potentially allow for upper level floor area that could exceed the existing 3.5 FAR.

- ❒ Local Coastal Plan (LCP): Amendment to Land Use Plan text to modify San Lorenzo Urban River Plan land use development policies. There are several LCP policies that are proposed to be modified. Since the original certification of the City's LCP in 1985, additional plans have been prepared and policies incorporated into the LCP as amendments. The City adopted the San Lorenzo Urban River Plan (SLURP) in 2003 as a resource management protection plan for the river. Subsequent to the City Council approval, several resource-related and land use policies were included in the LCP and approved by the CCC as an amendment to the City's LCP. There are nine coastal policies based on the SLURP that pertain to development along Front Street within the coastal zone. The proposed amendment would modify one policy, eliminate the other existing eight policies, and add two new LCP policies.

  The LCP policies proposed for deletion address maintenance of 50-foot building heights along Front Street, provision of public amenities, and building architecture. Appendix C lists the policies proposed for deletion with an explanation provided by City Planning Department staff. The primary reason for deletion is either the language is from a process that is now outdated or applies to properties outside of the coastal zone. It is

also noted that the SLURP was intended as a resource protection programmatic guide and not a land use planning document regarding policies on building height. Since the adoption of the SLURP, the City has undertaken a comprehensive effort to update the principal land use document for the area – the Downtown Recovery Plan. Development standards for this area are appropriately located in the DRP and not within the Local Coastal Plan. However, the following three policies proposed for elimination address building height and views, but would be inconsistent with proposed Downtown Plan amendments if those are approved. The proposed amendment includes elimination of the SLURP LCP policy to limit heights to 50 feet in the Front Street/Riverfront area. The policies related to building heights, mass and views; see section 4.1 of this EIR, Aesthetics, for a full discussion of impacts of the proposed amendments on building height, massing and overall aesthetic and visual character of the study areas.

- SRFA – 1 Maintain existing development standards in the Downtown Recovery Plan (DRP) for the Front Street Riverfront Area including principal permitted uses for ground-level and upper-floors, conditional uses, and height and step back requirements. Maintain maximum height restriction to 50 feet with development above 35 feet in height stepping back at least 10 feet at an angle not to exceed 42 degrees. (DRP, p. 47-50)
- SRFA – 10 Maintain views from both taller downtown buildings to the River and from the River trail to distant mountains and ridges, avoiding creation of a development "wall" between the downtown and the River.
- SRFA – 11 Preserve views along the Front Street area to and from Beach Hill, a significant historic feature in this area.

The proposed new LCP SLURP policies are:

- Require new development projects to incorporate design features that encourage active engagement with the Riverwalk such as: filling adjacent to the Riverwalk and landscaping, providing direct physical access to the Riverwalk, including appropriate active commercial and/or residential uses adjacent to the Riverwalk, or providing a combination of these and/or other design features that support the resource enhancement and river engagement policies of the San Lorenzo Urban River Plan.
- Require new development projects to incorporate pedestrian and/or bicycle connections between Front Street and the Riverwalk at appropriate locations such as the extensions from Maple Street and near Elm Street.

California Coastal Commission (CCC) staff have indicated that the standard of review for a LCP amendment is consistency with policies in the Coastal Act. Coastal Act consistency will be made by the CCC at the time the LCP amendment is reviewed.

In accordance with Appendix G of the state CEQA Guidelines, the review focuses on potential project conflicts with policies or regulations adopted for the purpose of avoiding or mitigating an environmental impact. There are no apparent conflicts between the proposed project and applicable plans, policies, or regulations adopted for the purpose of avoiding or mitigating an environmental effect, as summarized in Table 4.9-1 at the end of this section. It is also noted that the proposed Downtown Plan amendments are consistent with General Plan Action CD2.1.7 that calls for an update to the Downtown Recovery Plan to reflect Santa Cruz's successful recovery from the 1989 Loma Prieta earthquake and "to respond to current opportunities and challenges."

The City's General Plan includes a number of policies and actions to promote use of alternative transportation modes. In accordance with significance criteria 3f in Section 4.8 of this EIR, Transportation and Traffic, the General Plan mobility policies were reviewed to determine potential project conflicts with adopted plans, plans or programs regarding public transit, bicycle or pedestrian facilities. The project would not conflict with any such policies as summarized on Table 4.9-1.

It is noted that there are other policies in these plans which are applicable to the project, and which address a broader range of land use, project design, circulation, and planning concerns. Project consistency with local adopted plans and policies will be determined ultimately by the City Council. Because the policy language found in any city or county general plan is often susceptible to varying interpretations, it is often difficult to determine, in a draft EIR, whether a proposed project is consistent or inconsistent with such policies. Case law interpreting the Planning and Zoning Law (Gov. Code, § 65000 et seq.) makes it clear that: (i) the ultimate meaning of such policies is to be determined by the elected city council, as opposed to city staff and EIR consultants, applicants, or members of the public; and (ii) the city council's interpretations of such policies will prevail if they are "reasonable," even though other reasonable interpretations are also possible (*See No Oil, Inc.* v. *City of Los Angeles* (1987) 196 Cal.App.3d 223, 245-246, 249.) Courts also have recognized that, because general plans often contain numerous policies emphasizing differing legislative goals, a development project may be "consistent" with a general plan, taken as a whole, even though the project appears to be inconsistent or arguably inconsistent with some specific policies within a given general plan (*Sequoyah Hills Homeowners Association* v. *City of Oakland* (1993) 23 Cal.App.4th 704, 719). Furthermore, courts strive to "reconcile" or "harmonize" seemingly disparate general plan policies to the extent reasonably possible (*No Oil, supra,* 196 Cal.App.3d at p. 244).

Consistency with Regional Plans

The State CEQA Guidelines section 15125(d) require that a discussion be provided regarding any inconsistencies between a proposed project and applicable general and regional plans. Examples of other regional plans include air quality plans, water quality control plans, regional transportation plans, regional housing allocation plans, habitat conservation plans and regional land use plans. As discussed in section 4.2 of this EIR, Air Quality and Greenhouse Gas Emission, the project would not conflict with the Monterey Bay Unified Air Pollution Control District's "Air

Quality Management Plan". There are no provisions in the current Basin Plan[1] (water quality) that are applicable to the proposed project. There are no Habitat Conservation Plans in the project area or other regional plans with which the project may be in conflict. Applicable regional transportation plans are discussed in Section the TRANSPORTATION and TRAFFIC (Chapter 4.4) section of this EIR. The proposed project consists of residential development and does conflict with regional housing allocation plans.

Mitigation Measures

No mitigation measures are required as a significant impact has not been identified.

[1] Regional Water Quality Control Board, Central Coast Region. June 2011. "Water Quality Control Plan for the Central Coastal Basin."

TABLE 7-1: Potential Project Conflicts with City of Santa Cruz General Plan Policies

[POLICIES RELATED TO MITIGATING ENVIRONMENTAL IMPACTS]

Element	Policy Number	Policy	Potential Conflict
General Plan 2030			
COMMUNITY DESIGN	**CD1.2**	Ensure that the scale, bulk and setbacks of new development preserve important public scenic views and vistas.	NO CONFLICT: Future development would not impact public scenic views.
	CD3.2	Ensure that the scale, bulk and setbacks of new development preserve public views of city landmarks where possible.	NO CONFLICT: Future development would not affect public views or City landmarks as none exist in the vicinity of the project.
LAND USE	**LU1.3**	Ensure that facilities and services required by a development are available, proportionate, and appropriate to development densities and use intensities.	NO CONFLICT: Public services are available.
MOBILITY	**M3.1.3**	Strive to maintain the established "level of service" D or better at signalized intersections.	NO CONFLICT: Project traffic would not result in a decrease in level of service below D at any signalized intersection.
	M3.3.4	Mitigate safety, noise, and air quality impacts from roadways on adjacent land uses through setbacks, landscaping, and other measures.	NO CONFLICT WITH MITIGATION: No significant air emission impacts were identified. Inclusion of structural design features to attenuate exterior noise levels is a required mitigation measure for future development.
CIVIC AND COMMUNITY FACILITIES	**CC5.1.8**	Require new development to maintain predevelopment runoff levels.	NO CONFLICT: Future development accommodated by the proposed Plan amendments will be required to comply with the City's stormwater requirements and regulations.
	CC5.1.9	Reduce stormwater pollution.	NO CONFLICT: Future development would be in compliance with City requirements.
HAZARDS, SAFETY AND NOISE	**HZ2.2.1**	Require future development projects to implement applicable Monterey Bay Unified Air Pollution Control District (MBUAPCD) control measure and/ or air quality mitigations in the design of new projects as set forth in the District's "CEQA Guidelines."	NO CONFLICT: No significant air emission impacts were identified, and no mitigation is required.
	HZ3.1.1	Require land uses to operate at noise levels that do not significantly increase surrounding ambient noise.	NO CONFLICT: No significant impacts were identified related to project increases in ambient noise levels.

TABLE 7-1: Potential Project Conflicts with City of Santa Cruz General Plan Policies

[POLICIES RELATED TO MITIGATING ENVIRONMENTAL IMPACTS]

Element	Policy Number	Policy	Potential Conflict
	HZ3.1.6	Require evaluation of noise mitigation measures for projects that would substantially increase noise.	NO CONFLICT WITH MITIGATION: Inclusion of structural design features in future development to attenuate exterior noise levels is a required mitigation measure.
PARKS, RECREATION,	**PR1.3.1**	Ensure that adequate park land is provided in conjunction with new development.	NO CONFLICT: Future projects will be required to pay park dedication fee.
AND OPEN SPACE	**PR4.2.3**	Require development projects located along planned trail routes to dedicate trails or trail easements.	NO CONFLICT: Proposed Downtown Plan amendments require dedication of access along Cathcart, Maple and Elm Street extensions.
NATRUAL RESOURCES	**NRC1.2.1**	Evaluate new uses for potential impacts to watershed, riverine, stream, and riparian environments.	NO CONFLICT WITH MITIGATION: Potential indirect significant impacts to birds as a result of future construction of taller buildings can be mitigation to a less-than-significant level .
AND CONSERVATION	**NRC2.1.3**	Evaluate development for impacts to special-status plant and animal species.	NO CONFLICT: No potentially significant impacts to special status plant or wildlife species were identified.
LCP Land Use Plan			
COMMUNITY DESIGN	**2.2**	Preserve important public views and viewsheds by ensuring that the scale, bulk and setback of new development does not impede or disrupt them.	NO CONFLICT: Future development would not impact public scenic views.

CHAPTER 5
CEQA CONSIDERATIONS

Section 15126 of the California Environmental Quality Act (CEQA) Guidelines requires that all aspects of a project must be considered when evaluating its impact on the environment, including planning, acquisition, development, and operation. The EIR must also discuss (1) significant environmental effects of the proposed project, (2) significant environmental effects that cannot be avoided if the proposed project is implemented, (3) significant irreversible environmental changes that would result from implementation of the proposed project, and (4) growth-inducing impacts of the proposed project. Chapter 2, Summary, and Sections 4.1 through 4.7 of this EIR provide a comprehensive identification and evaluation of the proposed project's environmental effects, mitigation measures, and the level of impact significance both before and after mitigation. This section addresses the other required topics identified above, as well as cumulative impacts and project alternatives.

5.1 SIGNIFICANT UNAVOIDABLE IMPACTS

The State California Environmental Quality Act (CEQA) Guidelines require a description of any significant impacts, including those that can be mitigated but not reduced to a level of insignificance (section 15126.2(b)). Where there are impacts that cannot be alleviated without imposing an alternative design, their implications and the reasons why the project is being proposed, notwithstanding their effect, should be described. This EIR identified no significant unavoidable project impacts. Significant cumulative impacts were identified for traffic, water supply and schools, but the project's contribution is not cumulatively considerable, except for cumulative traffic impacts.

5.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

The State CEQA Guidelines require a discussion of significant irreversible environmental changes with project implementation, including uses of nonrenewable resources during the initial and continued phases of the project (section 15126.6(c)). The Guidelines indicate that use of nonrenewable resources during the initial and continued phases of the project may be irreversible since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Irreversible damage can also result from environmental accidents associated with the project. Section 15227 further requires this discussion only for adoption of a plan, policy or ordinance by a public agency; the adoption by a Local Agency Formation Commission (LAFCO) of a resolution making determinations; and projects which require preparation of an EIS under the National Environmental Policy Act (NEPA). Since the proposed project consists of amendments

to the Downtown Recovery Plan, General Plan and Local Coastal Plan, a discussion of significant irreversible changes is provided below.

As indicated, in section 15126.2(c):

> Uses of nonrenewable resources during the initial and continued phases of the project may be irreversible, since a large commitment of such resources makes removal or nonuse thereafter unlikely. Primary impacts and, particularly, secondary impacts (such as highway improvement which provides access to a previously inaccessible area) generally commit future generations to similar uses. Also, irreversible damage can result from environmental accidents associated with the project. Irretrievable commitments of resources should be evaluated to assure that such current consumption is justified.

According to section 15126.2(c), a project would generally result in a significant irreversible impact if:

- The project would involve a large commitment of nonrenewable resources during initial and continued phase of the project;
- Primary and secondary impacts would generally commit future generations to similar uses;
- The project would involve uses in which irreversible damage could result from environmental accidents; or
- The proposed consumption of resources is not justified (e.g., the project involves the wasteful use of energy).

Future development accommodated by the proposed plan amendments could result in intensified development in the downtown on sites that are already utilized for urban development and are surrounded by urban development. Both the Downtown Plan and General Plan encourage a mix of land uses in this area. Thus, the proposed Plan would not commit future generations to uses that do not already exist.

Future development would result in the permanent and continued consumption of electricity, natural gas, and fossil fuels. Development accommodated by the proposed plan amendments would irretrievably commit nonrenewable resources to the construction and maintenance of buildings, infrastructure and roadways. Energy demands would result for construction, lighting, heating and cooling of residences, and transportation of people within, to and from the City. However, the consumption of these resources would not represent unnecessary, inefficient, or wasteful use of resources given the implementation of proposed policies that address water, lighting and energy conservation measures. Several policies in the General Plan 2030 promote energy conservation, which could minimize or incrementally reduce the consumption of these resources. Specifically, GOAL NRC7 seeks to reduce energy use with a significant production and

use of renewable energy. Its four policies and accompanying actions would promote reduction of electricity and natural gas consumption, use of renewable energy sources, and use of energy-efficient lighting, vehicles, and water fixtures and appliances. See Section 4.6 for further discussion.)

In addition, new structures will be required to be constructed in accordance with specifications contained in Title 24 of the California Code of Regulations, the City's Green Building Regulations and City regulations regarding water conservation. Anticipated changes in state building and energy efficiency requirements to help reduce greenhouse gas emissions will also reduce the rate of energy consumption increases. However, future construction activities would result in the irretrievable commitment of nonrenewable energy resources, primarily in the form of fossil fuels (including fuel oil, natural gas, and gasoline) for automobiles and construction equipment.

Irreversible changes to the physical environment could occur from accidental release of hazardous materials associated with future development activities. However, environmental accidents would be minimized adherence to federal, state and local regulations. Future development accommodated by the proposed General Plan would be required to comply with all applicable federal, state and local laws regarding, transportation, storage, use and disposal of hazardous materials, which reduces the likelihood and severity of accidents that could result in irreversible environmental damage. Compliance with State and federal hazardous materials regulations would reduce the potential for accidental release of hazardous materials to a less-than-significant level.

No other irreversible changes are expected to result from the adoption and implementation of the proposed amendments.

5.3 GROWTH INDUCEMENT

CEQA requires that any growth-inducing aspect of a project be discussed in an EIR. This discussion should include consideration of ways in which the project could directly or indirectly foster economic or population growth in adjacent and/or surrounding areas. Projects which could remove obstacles to population growth (such as major public service expansion) must also be considered in this discussion. According to CEQA, it must not be assumed that growth in any area is necessarily beneficial, detrimental or of little significance to the environment.

The proposed project would result in a net increase of approximately 711 residential units and 2,200 square feet of office space as well as a net decrease of approximately 14,700 square feet of commercial building space over existing conditions within the study area. Thus, the project would directly foster population growth. The potential increase in office space would be offset by a potential reduction in commercial space, and thus, the project would not be expected to induce substantial economic growth.

The current City of Santa Cruz population is 64,632, and there are an estimated 23,635 housing units in the City. Census data for the tract that contains the downtown project shows an average household size of 1.83 (American Community Survey 5-year 2011-2015 Table S1101), which is slightly below the citywide average household size of 2.4 persons. Based on this data future development accommodated by the proposed plan amendments could result in a population increase of 1,301 to 1,706 persons based on household sizes of 1.83 and 2.4, respectively.

The Association of Monterey Bay Area Governments (AMBAG) develops population and housing forecasts for the region. The current forecast for the City of Santa Cruz in 2020 is 66,860 people and 26,890 housing units. With the additional housing units and population potentially resulting from the proposed project, the City of Santa Cruz will still be below these forecasts. Furthermore, it is expected that development pursuant to the proposed amendments will occur over a 25-year period. Therefore, population and housing growth due to the project is not substantial.

The project does not include offsite improvements or extension of water or sewer into undeveloped areas, and thus, the project site would not remove obstacles to development and population growth. Therefore, the project would not indirectly foster population or economic growth.

5.4 CUMULATIVE IMPACTS

State CEQA Requirements

The State CEQA Guidelines section 15130(a) requires that an EIR discuss cumulative impacts of a project "when the project's incremental effect is cumulatively considerable." As defined in Section 15355, a cumulative impact consists of an impact that is created as a result of the combination of the project evaluated in the EIR together with other projects causing related impacts. As defined in section 15065(a)(3), "cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, other current projects, and probable future projects. Where a lead agency is examining a project with an incremental effect that is not "cumulatively considerable," the lead agency need not consider the effect significant.

CEQA requires an evaluation of cumulative impacts when they are significant. When the combined cumulative impact associated with the project's incremental effect and the effects of other projects is not significant, the EIR shall briefly indicate why the cumulative impact is not significant and is not discussed in further detail in the EIR. Furthermore, according to the California State CEQA Guidelines section 15130 (a)(1), there is no need to evaluate cumulative impacts to which the project does not contribute.

An EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable and thus not significant when, for example, a project funds its fair share of a mitigation measure designed to alleviate the cumulative impact. An EIR shall examine reasonable, feasible options for mitigating or avoiding the project's contribution to any significant cumulative effects.

The discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide detail as great as that provided for the impacts that are attributable to the project alone. The discussion should be guided by standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified project contributes.

CEQA section 21094(e)(1) states that if a lead agency determines that a cumulative effect has been adequately addressed in a prior environmental impact report, that cumulative effect is not required to be examined in a later EIR. The section further indicates that cumulative effects are adequately addressed if the cumulative effect has been mitigated or avoided as a result of the prior EIR and adopted findings or can be mitigated or avoided by site-specific revisions, imposition of conditions or other means in connection with the approval of the later project (subsection (e)(4)). If a cumulative impact was addressed adequately in a prior EIR for a general plan, and the project is consistent with that plan or action, then an EIR for such a project need not further analyze that cumulative impact, as provided in section 15183(j). Therefore, future projects that are determined to be consistent with the General Plan after it is adopted may rely on this analysis to streamline their environmental review. Since, the proposed project is not consistent with the adopted General Plan in that a General Plan amendment and rezoning are part of the project, the General Plan EIR analyses are not used.

Cumulative Analysis

Cumulative Growth and Projects

Discussion of cumulative impacts may consider either a list of past, present, and probable future projects producing cumulative impacts or a summary of growth projections contained in an adopted plan that evaluates conditions contributing to cumulative impacts, such as those contained in a General Plan. The Santa Cruz City Council adopted an updated General Plan in 2012 and certified the accompanying EIR. The analyses in the EIR provide an assessment of cumulative impacts within the City with projected growth in the next 20 years. The buildout estimated for the General Plan EIR assumed the following additional development in the downtown: 299 residential units, and approximately 38,900 and 4,500 square feet of commercial and office space, respectively. Most of this estimated development has occurred, is under construction or has approved permits. Table 5-1 identifies recently constructed, approved, and pending projects within the city of Santa Cruz. Projects within or near downtown are shown in bold typeface.

Table 5-1: City Cumulative Projects (As of May 31, 2017)

	Name/Address	Description	Status
Under Construction			
	2200 Delaware	395,400 sf industrial; 248 maximum residential units (197,100 sf)	1st phase complete
	912 Western Drive	3-lot minor land division	Under construction
	407 Broadway (Hyatt)	106-room hotel	Under construction
	150 Jewell	48 unit memory care facility	Under construction
	555 Pacific	**94 small ownership units (SOU's)/5,000 square feet of commercial space**	**Under construction**
	716-724 Seabright (Seabright Breakers)	11 Townhouses	Under construction
	710 Emeline	Demo. Single-family residence and construct triplex	Under construction
	716 Darwin	15 apartments	Under construction
	1804-1812 Ocean Street Extension	11 Townhouses	Under construction
	313-321-325 Riverside Ave. (Courtyard Marriott)	151-room hotel with meeting room, pool, exercise room - replace 3 existing motels (64 rooms and manager unit) for net increase in 87 rooms	Under construction
	618 Windsor	5 apartments	Under construction
	514 Frederick	4 townhome units	Under construction
	1314-1400 Ocean	8,400 sf commercial development	Under construction
	301 Beach	Add 5 rooms to an existing hotel	Under construction
	745 Ocean (Starbucks)	2,000 sf coffee shop	Under construction
	131 Bixby	Duplex	Under construction
Approved			
	1547 Pacific (Park Pacific)	**63 residential units and 5,750 square feet commercial**	**Approved**
	350 Ocean	63 apartments (with demolition of 20 existing apartments & 2 SFD) and 6,800 sf retail	Approved
	215 Beach (La Bahia)	165 Room Hotel	Approved
	430 South Branciforte	Lot split	Approved
	738 Pacheco	Three lot subdivision	Approved
	1800 Soquel	32 condominium units, 4,000 sq. ft. commercial space	Approved
	214 Plymouth	Three lot subdivision and construction of a duplex on each new lot.	Approved
	800 Soquel	Two units above 2,600 sq. ft. commercial space	Approved
	230 Grandview	Demolish SFR and construct 12 apartment units	Approved
	2415 Mission	14 apartment units	Approved
	413 Laurel	Convert office building to two residential units and one commercial space	Approved
	135 Vista Branciforte	Minor Land Division to create three lots from two	Approved
	108 Sycamore	10 room hotel	Approved
	630 Water	Add 20 SRO units to existing mixed use development	Approved
	716 Monterey	Lot split	Approved
	2424 Mission	Demolish 32 room hotel and construct 60 room hotel	Approved
	148 Sunnyside	Construct two units (demolish single family dwelling)	Approved
	225 Meder	Four townhouse units	Approved
	630 Water	Add 20 SRO units to existing mixed use development	Approved
Pending Applications			
	1930 Ocean Street Extension	40 condominium units	Pending application
	1013 Pacific	Demolish existing mixed-use building and construct 18	Pending application

Table 5-1: City Cumulative Projects (As of May 31, 2017)

Name/Address		Description	Status
		condos and 4,300 sq. ft. commercial space	
	232 River	**12 condominium units**	**Pending application**
	1024 Soquel	13 apartment units, 1,600 sq. ft. commercial space	Pending application
	515 Soquel	Demolish commercial building and construct 51 SRO units and two duplexes	Pending application
	708-720 Water	Demolish commercial buildings and residences and construct a 56-unit apartment complex	Pending application
	231 Surfside	Lot split	Pending application
	550 Second	60 room hotel	Pending application
	530 S. Branciforte	Four condominium units	Pending application
	2656 Mission	New industrial/warehouse building	Pending application
	769 N Branciforte	Three townhouse units	Pending application
	135 Dubois	Self-storage facility	Pending application
	335 Golf Club Drive	10-unit housing for developmentally disabled	Pending application
	724 Darwin	Two duplexes	Pending application
	515 Fair	Lot split, three condominiums, single family home, and ADU on historic site	Pending application
	1547 Pacific	Add 16 units to approved condominium building	Pending application
	801 River	Convert two story office building to triplex	Pending application

There are several projects that are being discussed within the City although there are no current permit applications or site plans:

- ❒ New Library and Public Parking Garage: 113; 119 Lincoln Street; (Cathcart/Cedar parking lot) that is being discussed that would result in relocation of the existing library with net increase of 14,000 square feet for library administration and increase in public parking spaces. The existing library (44,000 square feet) would be converted to office use.
- ❒ Calvary Church Residential Development: 524; 532; 538 Center Street and two City-owned parcels (Parking lot on Center Street) for which a 77-unit housing project is being discussed with retention of the existing church.
- ❒ Sports Stadium (Warriors): expansion is under consideration that would result in a net increase in Net increase of 1,100-1 600 seats from 2,400 existing to 3,500-4,000

These projects are considered reasonably foreseeable since they are under active discussion. Since the proposed project consists of plan amendments that could result in additional development over time, the General Plan EIR buildout assumptions is the scenario used for the following cumulative analyses. The cumulative scenario includes General Plan buildout and University of California Santa Cruz (UCSC) growth and development as addressed in the General Plan EIR plus the potential new development resulting from the proposed project plus the above three projects.

Cumulative Impact Analysis

Aesthetics. The geographic area for consideration of cumulative impacts would be the project study area from which project locations may be visible. There are no other cumulative projects that are within the same viewshed as the project site. Therefore, no cumulative aesthetics impacts have been identified.

Air Quality and Greenhouse House Emissions. The geographic area for consideration of cumulative impacts would be the North Central Coast Air Basin in which the project site is located. According to MBUAPCD CEQA Guidelines, "A consistency analysis and determination serve as the project's analysis of cumulative impacts on regional air quality. Project emissions which are not consistent with the AQMP (Air Quality Management Plan) are not accommodated in the AQMP and will have a significant cumulative impact unless offset." As discussed in Section 4.2 of this EIR, Air Quality and Greenhouse Gas Emissions, the project was found to be consistent with the AQMP based on use of the District's methodology. Therefore, the project's contribution to cumulative air emissions would not be cumulatively considerable. As further discussed in Section 4.2, GHG emissions and effects on global climate change extends beyond the local air basin and is a world-wide issue. Based on the analyses in that section, the project's contribution to global GHG emissions is not cumulatively considerable.

Biological Resources. The geographic area for consideration of cumulative impacts would be the project areas and areas adjacent to the San Lorenzo River. Since most of the development estimated as part of the General Plan EIR has occurred or is underway, and no projects are adjacent to the San Lorenzo River, no potential cumulative impacts to biological resources have been identified.

Cultural Resources. The geographic area for consideration of cumulative impacts would be the project site and areas supporting cultural resources similar to those found in the project area. This EIR considers all potential development in the downtown area. Additionally, impacts to cultural resources are site specific. There are no other areas where other cumulative projects and growth would overlap. Both the City's General Plan 2030 and the University's adopted 2005 LRDP and certified EIR include policies and measures to conduct appropriate review for cultural resources and provide site-specific mitigation as may be required. With implementation of measures required by the City and UCSC for review and mitigation of potential cultural resource impacts associated with new development, potential site-specific impacts would be less than significant. Thus, there would be no significant cumulative impacts related to cultural resources.

Geology and Soils. The geographic area for consideration of cumulative impacts would be the project site and areas within similar seismic or geologic hazard areas as the proposed project. All cumulative projects greater than four units in size would be subject to City requirements for preparation of geotechnical studies. Individual projects would be designed based on site-specific conditions. Therefore, no significant cumulative impacts have been identified regarding geology and soils.

Hydrology and Water Quality. The geographic area for consideration of cumulative impacts would be the project site and areas within the same drainage area in which the project site is located. There are no other cumulative projects that are within the same drainage area as the project site. Therefore, there are no known cumulative impacts related to hydrology and water quality.

Noise. The geographic area for consideration of cumulative impacts would be the project site and areas with similar exposure to noise levels as the project site. There are no other cumulative projects that would be exposed to noise levels similar to the proposed project, and the project would not contribute to cumulative noise impacts.

Public Services and Utilities. The geographic area for consideration of cumulative impacts would be the City of Santa Cruz service area in which the project site is located. All City services supplied to the project site include the entire City, except for water service, which also includes areas located outside the City.

Fire and Police Protection and Solid Waste. The City's Fire and Police Departments and the City's Resource Recovery Center (landfill) serve City residents. No significant cumulative impacts have been identified with buildout under the City's General Plan and other cumulative growth, i.e. UCSC growth, and no new or expanded police or solid waste facilities are needed to serve cumulative growth, including the proposed project.

Cumulative development and growth could result in the need for expanded fire facilities. According to the City's Fire Department, the existing downtown fire station is inadequate in terms of space and equipment to meet existing needs, which would be further impacted by development and growth that would be accommodated by the proposed project and other cumulative development. Should expansion be proposed, it is likely that expanded or new fire facilities would be within developed downtown and/or eastside locations. Expansion or new construction would be considered infill development on sites surrounded by development. However, existing and future growth may require new or physically altered fire protection facilities, but locations for expansion or construction are within developed areas and are not expected to result in significant physical impacts. Therefore, no significant cumulative impact related to fire protection services is anticipated.

Schools. Potential cumulative development that could affect school enrollment includes development and growth within the City and surrounding areas as well as the proposed project. As discussed in Section 4.6 of this EIR, Public Services and Utilities, approximately 80 new students would be generated by future development projects accommodated by the proposed project. The City's General Plan EIR reported a cumulative enrollment estimate of approximately 1,765 students over the next 20 years with cumulative growth in the City and as a result of growth at UCSC, and some schools may exceed capacity depending on the timing of growth. The General Plan 2030 EIR concluded that this is a potentially significant cumulative impact. With

required payment of school impact fees to fund necessary facility expansion and/or additions, in conjunction with use of the former Natural Bridges Elementary School, the impact would be mitigated to a less-than-significant level (City of Santa Cruz, April 2012, DEIR volume).

Potential addition or expansion of school classroom facilities is not expected to result in significant physical impacts due to the location of existing facilities within developed footprints, and future enrollment could accommodated without construction of new schools, although some expansion of existing facilities may be necessary (Ibid.). It is not known which campuses may need to be expanded in the future to accommodate the additional enrollment. The project's incremental contribution to this impact (approximately 80 students) is not cumulatively considerable as the required payment of school impact fees would mitigate the project's cumulative contribution such that it would no longer be considered cumulatively considerable.

Parks and Recreation. The General Plan 2030 EIR concluded that cumulative population growth accommodated by the proposed General Plan and UCSC would not result in significant cumulative impacts to parks as increased use of existing parks is expected to be spread out throughout the City so that no substantial deterioration would occur at any one facility. Cumulative impacts resulting from citywide development growth, including the proposed project and UCSC growth, would not result in a significant impact to parks such that a substantial deterioration would occur at any one facility. Furthermore, the City imposes a "Parks and Recreation Facilities Tax" (pursuant to Chapter 5.72 of the Municipal Code) on new residential development (including mobile homes) within the City, payable at the time of issuance of a building permit. The collected taxes collected are placed into a special fund, and "shall be used and expended solely for the acquisition, improvement and expansion of public park, playground and recreational facilities in the city" (section 5.72.100). Projects that have dedicated land or fees in accordance with Municipal Code Chapter 23.28 requirements for subdivisions are exempt from this tax.

Wastewater Treatment. The geographical area for the analysis of cumulative wastewater impacts includes the area served by the City's wastewater treatment facility (WWTF), which includes the City of Santa Cruz and lands within the Santa Cruz Sanitation District (south to Seascape) and two small county service areas. The City and County each have specified rights to treatment capacity. Wastewater generated by cumulative growth within the City is estimated at approximately 1.35 mgd (City of Santa Cruz, April 2012, DEIR volume). There is adequate remaining capacity within the City's treatment allocation (4.0 mgd remaining) to accommodate cumulative growth with the proposed project. There is adequate capacity to serve cumulative growth within the Santa Cruz County Sanitation District service area (Ibid.). Thus, cumulative impacts on wastewater treatment would be less than significant.

Water Supply. The geographical area for the analysis of cumulative water supply impacts includes the area served by the City's Water Department. Background on the existing and projected future demand and supplies is provided in Section 4.6, Water Supply – Service. As indicated, the 2015 UWMP predicts water supply shortfalls by the year 2035 of 40 approximately

MGY in normal rainfall years, 528 MGY during a single dry year, and 1,639 MGY in multiple dry year periods even though demand is forecast to decrease. Without augmented water supplies, cumulative future water demand during dry periods is considered a potentially significant cumulative impact on water supplies.

As discussed in Section 4.8, the City continues to administer its water conservation program, has completed a Conservation Master Plan, and is implementing a water augmentation plan. The City is has defined water supply augmentation strategies that are being studied in order to provide reliable production during drought shortages between 2020 and 2035 to address potential drought shortages. The plan includes the pursuit of the following portfolio of options: continued and enhanced conservation programs; passive recharge of regional aquifers; active recharge of regional aquifers; and a potable supply using advanced treated recycled wastewater or desalinated water (if recycled water did not meet City needs). A water transfer pilot program is underway for the passive recharge strategy. Supply volumes for the other augmentation elements have not yet been defined, and specific projects have not been selected or constructed, as these prospective sources are still under evaluation. Thus, the long-term provision of augmented water supplies is under development, but uncertain.

The proposed project would result in a net increase in water demand of approximately 29.0 MGY, which is not considered substantial in relation to the estimated future demand in the City's water service area of approximately 3,200 MGY. The project would be subject to City requirements for installation of water conserving fixtures and landscaping in accordance with City Municipal Code and building requirements. Under drought conditions, the project, like other City customers, would be required to curtail water use by varying amounts, depending on the severity of the drought and the level of curtailment set in place by the City. In addition, the project will pay the required "System Development Charge" for the required new service connection. This charge as set forth in Chapter 16.14 of the City's Municipal Code is intended to mitigate the water supply impacts caused by new development in the City of Santa Cruz water service area, and the funds are used for construction of public water system improvements t and conservation programs.

The increase in water demand due to the proposed project would not substantially exacerbate water supply reliability in the future or during a drought because the amount of additional demand when spread across all service area customers would not result in any noticeable increase in the curtailment in customer use that would otherwise be implemented during drought conditions. Additionally, the project payment of the System Development Charge and implementation of other water conservation measures would mitigate the project's contribution to cumulative water supply impacts. Therefore, the project's incremental contribution to a significant cumulative water supply impact would not be cumulatively considerable.

Traffic and Transportation. The geographic area for consideration of cumulative impacts would be those areas of the street network to which the project would contribute trips. Cumulative traffic impacts were analyzed in the *General Plan 2030* EIR based on estimated buildout

accommodated by the General Plan, a number of approved and reasonably foreseeable projects, and long-range growth anticipated for UCSC.

Cumulative traffic volumes were obtained from the City of Santa Cruz 2030 General Plan traffic model for this analysis, which included UCSC development, and was modified to account for a growth factor of 5 percent, which would cover the three projects being discussed that were not included in the General Plan buildout (see page 5-7). Improvements included in the City of Santa Cruz Traffic Impact Fee (TIF) program were assumed to be in place for the cumulative analysis. Weekday PM peak cumulative trips, including the proposed project, are shown on Figure 5-1 at the end of this section.

Cumulative intersection levels of service are summarized on Table 5-2. The following six intersections would operate at an unacceptable level of service under cumulative conditions:

- ❒ Front Street/Laurel Street,
- ❒ Pacific Avenue/Laurel Street,
- ❒ Front Street/Soquel Avenue,
- ❒ Ocean Street/Water Street,
- ❒ Highway 1/Highway 9, and
- ❒ Chestnut Street/Mission Street.

Improvements are planned as part of the City's TIF program at three intersections: Ocean Street/Water Street, Highway 1/ Highway 9, and Chestnut Street/Mission Street, but would not improve operations to an acceptable LOS, although delays may be reduced. The other three impacted intersections are not included in the City's Traffic Impact Fee program as significant cumulative impacts were not identified as part of the General Plan 2030 EIR analysis Cumulative traffic along state highways would contribute to existing and future unacceptable levels of service.

Review by the City's traffic consultant indicates that the other three intersections can be improved to an acceptable level. The Pacific/Laurel intersection LOS can be improved to D with the addition of a southbound left-turn lane, which would require shortening the median. The Front/Laurel intersection LOS can be improved to D with the addition of a westbound lane and right-turn overlap for the north and south right turns. The Front/Soquel intersection LOS can be improved to D with the modification of the signal phasing and separation of the combined westbound through/left turn lane.

The proposed project will contribute to significant cumulative traffic impacts at six locations in the project vicinity and along state highways. Future development projects within the area of the proposed plan amendments will be required to pay the City's traffic impact fee. However, payment of the traffic impact fee and the associated improvements would not mitigate impacts to a less-than-significant level at three intersections: Ocean Street/Water Street, Highway 1/ Highway 9, and Chestnut Street/Mission Street.

TABLE 5-2: Intersection Weekday Cumulative PM Peak Hour Levels of Service with Project

#	Intersection	Control Type	LOS Threshold[1]	Cumulative Plus Project Conditions[2]		
				PM Peak Hour		
				Movement	Delay[3]	LOS
1	Front Street / Laurel Street	Signal	D	**Overall**	**100.2**	**F**
2	Pacific Avenue / Laurel Street	Signal	D	**Overall**	**105.9**	**F**
3	Front Street / Cathcart Street	Signal	D	Overall	23.5	C
4	Front Street / Metro Station Driveway	Signal	D	Overall	6.4	A
5	Pacific Avenue / Metro Station Driveway	SSSC	D	Overall	1.7	A
		Worst Approach	D	WB	10.5	B
6	Pacific Avenue / Maple Street	AWSC	D	Overall	7.7	A
7	Pacific Avenue / Front Street / Mission-Water Street	Signal	D	Overall	32.3	C
8	Front Street / Soquel Avenue	Signal	D	**Overall**	**59.9**	**E**
9	Pacific Avenue / Cathcart Street	AWSC	D	Overall	8.3	A
10	Soquel Avenue / Pacific Avenue	SSSC	D	Overall	4.3	A
		Worst Approach	D	WB	9.5	A
11	Ocean Street / Water Street	Signal	D	**Overall**	**228.1**	**F**
12	Highway 1 / Highway 9	Signal	C-D	**Overall**	**269.2**	**F**
13	Chestnut Street / Mission Street / Highway 1	Signal	C-D	**Overall**	**344.0**	**F**

Source: Kimley-Horn, May 2017.

Notes:

1. The City of Santa Cruz has established LOS D as the minimum acceptable LOS for overall intersection operations during the AM and PM peak hours. However, under the existing General Plan, the City accepts a lower LOS (F) at some major regional intersections per existing Circulation Policy 5.1.2.
2. Analysis performed using HCM 2010 methodologies, except for Intersection 7 where HCM 2000 methodology was applied as explained above.
3. Delay is shown in seconds/vehicle.
4. Intersections that fall below the LOS threshold are shown in **bold**.

Intersection operations could be improved at the other three impacted intersections that the project would contribute cumulative trips. However, these improvements are not included in the TIF program as significant cumulative impacts were not identified in the General Plan 2030 EIR at

these locations. Thus, the proposed project's contribution at these three intersections would be considered cumulatively considerable due to resulting unacceptable LOS with addition of project trips. The following mitigation requires future development to contribute fair share contributions to fund the identified improvements at the following intersections: Front/Soquel, Front/Laurel and Front/Pacific.

MITIGATION 5-1: Require future development projects within the downtown area to contribute fair-share payments for improvements at the following intersections: Front/Soquel (signal timing and lane modifications); Front/Laurel (westbound lane addition and north and south right-turn overlap), and Pacific/Laurel (southbound left-turn lane addition).

With implementation of Mitigation 5-1, significant cumulative impacts at three intersections would be mitigated, and the project's contribution would not be cumulatively considerable. Future development projects in the downtown area would be required to pay the City's traffic impact fees for improvements at the other three intersections, but planned improvements would not result in acceptable levels of service, and no other feasible improvements have been identified. Therefore, cumulative traffic impacts remain significant at three City intersections and along state highways this is a significant cumulative impact, and the project's contribution to cumulative traffic impacts would be cumulatively considerable at these locations.

5.5 PROJECT ALTERNATIVES

According to State CEQA Guidelines (section 15126.6), an EIR shall describe a range of reasonable alternatives to the project or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. The guidelines further require that the discussion focus on alternatives capable of eliminating significant adverse impacts of the project, or reducing them to a level of insignificance even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly. The alternatives analysis also should identify any significant effects that may result from a given alternative. An EIR need not consider every conceivable alternative to a project. Rather, it must consider a reasonable range of potentially feasible alternatives that will foster informed decision-making and public participation. An EIR is not required to consider alternatives which are infeasible.

The lead agency is responsible for selecting a range of potentially feasible project alternatives for examination, and must publicly disclose its reasoning for selecting those alternatives. The range of alternatives is governed by a "rule of reason" that requires the EIR to set forth only those potentially feasible alternatives necessary to permit a reasoned choice. The alternatives shall be limited to those that would avoid or substantially lessen any of the significant effects of the

project. Of those alternatives, the EIR need examine in detail only those that the lead agency determines could feasibly attain most of the basic objectives of the project. An EIR need not consider an alternative whose effect cannot be reasonably ascertained and whose implementation is remote and speculative. Alternatives in an EIR must be "potentially feasible." Agency decision makers ultimately decide what is "actually feasible."

"Feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors (State CEQA Guidelines, section 15364). Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (or already owns the alternative site). None of these factors establishes a fixed limit on the scope of reasonable alternatives. The concept of feasibility also encompasses the question of whether a particular alternative or mitigation measure promotes the underlying goals and objectives of a project. Moreover, feasibility under CEQA encompasses "desirability" to the extent that desirability is based on a reasonable balancing of the relevant economic, environmental, social, legal, and technological factors.

Summary of Significant Impacts and Project Objectives

Significant Project Impacts

The following potentially significant impacts have been identified, all of which can be mitigated to a less-than-significant level, except for cumulative traffic, which would remain significant and unavoidable.

- **Biological Resources** - Impact 4.3-2: Indirect Impacts to Sensitive Riparian Habitat.
  Future development of taller buildings as a result of the proposed Downtown Plan amendments could result in indirect impacts to birds in the area that could lead to bird mortalities.

- **Biological Resources** - Impact 4.3-3: Indirect Impacts to Nesting Birds.
  Future development as a result of the proposed Downtown Plan amendments could result in disturbance to nesting birds if any are present in the vicinity of construction sites along the San Lorenzo River.

- **Public Services** - Impact 4.6-1c: Schools.
  Adoption of the proposed plan amendments could indirectly result in increased population associated with potential development that would generate elementary school student enrollments that could exceed capacity of existing schools.

- ❒ **Public Services** - Impact 4.6-2: Parks and Recreation.
  Adoption of the proposed plan amendments could indirectly result in increased population associated with potential development that could be accommodated by the Plan that would result in increased demand for parks and recreational facilities that could result in some deterioration of existing parks and recreational facilities.

- ❒ **Noise** - Noise-1: Exposure to Noise.
  Future development in the project area would be exposed to exterior and / or interior noise levels that exceed local and state requirements. However, the project area is not within locations that would expose people to noise in excess of established standards.

- ❒ **Cumulative Traffic Impacts.**
  The proposed project will contribute to significant cumulative traffic impacts at six locations.

Summary of Project Objectives

1. Support the following First Principles of the Downtown Plan:
   - *Form and Character.* New buildings should be allowed to develop individual character while retaining qualities of the historic townscape. Issues of articulation, materials, signage, setbacks, scale, massing, form, bulk, solar access and height are critical.
   - *Housing.* Significant new housing opportunities should be targeted throughout the downtown, including Pacific Avenue, the San Lorenzo riverfront, and South of Laurel. Housing should be comprised of a mix of apartments and condominiums. SRO housing should be replaced and dispersed throughout the downtown area.
   - *Accessibility.* A downtown that aesthetically integrates access as a primary design criterion for all improvements to ensure increased opportunities for the public to participate in commercial, governmental, residential, social and cultural activities.
   - *Open Space and Streetscape.* A strong network of public and private open spaces (streets, sidewalks, public parks, plazas, passageways and courtyards) that creates a socially active and pedestrian-oriented downtown core should be emphasized.
   - *Circulation.* Downtown should be predominantly pedestrian in nature; movement should be carefully structured to reinforce the character of the place. Pedestrian, bicycle, and transit access to the downtown should be enhanced.
   - *Parking.* Parking in the downtown core should continue to be provided by the Parking District in a centralized fashion, to maximize shared use and minimize the quantity of stored vehicles.
2. Increase opportunities for all types of housing in downtown.

3. Encourage and incentivize maximum public access to the San Lorenzo River.
4. Achieve superior connections to the San Lorenzo River above the existing DRP and existing SLURP policies consistent with Section 30211 of the Coastal Act.
5. Ensure that development adjacent to the Riverwalk will be designed to prevent impacts to the adjacent sensitive San Lorenzo River and will incentivize clean-up of degraded areas along the levee.
6. Enhance opportunities to view and interact with the San Lorenzo River as a coastal resource.
7. Create development standards that will incentivize development of key east-west public passageways between Pacific Avenue and the Riverwalk.

Alternatives Considered

Section 15126.6(c) of State CEQA Guidelines indicates that the range of potential alternatives shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. The EIR should briefly describe the rationale for selecting the alternatives to be discussed.

The EIR also should identify any alternatives that were considered by the lead agency but were rejected as infeasible, and briefly explain the reasons underlying the lead agency's determination. Among the factors that may be used to eliminate alternatives from detailed consideration in an EIR are: (1) failure to meet most of the basic project objectives, (2) infeasibility, or (3) inability to avoid significant environmental impacts. The City considered other locations for additional height zones in the downtown area, but none were identified. The Additional Height Zone A already exists along Pacific Avenue north of Cathcart.

Based on the above discussion, the following section evaluates the following alternatives:

- ❒ No Project – Required by CEQA
- ❒ Alternative 1 – Reduced Height for Expanded Additional Height Zone A to 75 feet and Elimination of Additional Height Zone B
- ❒ Alternative 2 – Reduced Height for Additional Height Zone A to 75 feet along Pacific/Front and Reduced Height for Additional Height Zone B to 60 feet along the San Lorenzo River with Development Standard Modifications: eliminate encroachment over property line and require 10-foot setback above 50 feet

Each alternative is described and analyzed below, and the ability to meet project objectives is addressed. Table 5-3 summarizes key components of the alternatives.

Table 5-3: Summary of Alternatives

	Proposed Project	No Project	Alternative 1	Alternative 2
Project Size-Net Change Over Existing Conditions				
▪ Residential Units	711	437	437	645
▪ Commercial Square Footage	(-14,695 sf)	(-23,990 sf)	(-14,695 sf)	(-14,695 sf)
▪ Office Square	2,190 sf	(-5,205 sf)	2,190 sf	2,190 sf
Impacts				
▪ Daily Trips	2,627	1,075	1,339	2,275
▪ Peak Hour Trips	293	119	132	214
▪ Annual Water Demand (MGY)	29	16.6	17.4	26.1

No Project Alternative

Section 15126.6(e) of the State CEQA Guidelines requires that the impacts of a "no project" alternative be evaluated in comparison to the proposed project. Section 15126(e) also requires that the No Project Alternative discuss the existing conditions that were in effect at the time the Notice of Preparation was published, as well as what would be reasonably expected to occur in the foreseeable future if the project were not approved, based on current plans and consistent with available infrastructure and community services.

Project Description. Under the No Project Alternative, none of the proposed DRP, General Plan, LCP or Municipal Code amendments would be implemented. Additional Height zones would not be extended along Pacific Avenue, Front Street or the San Lorenzo River. However, redevelopment could occur under the existing General Plan and Downtown Recovery Plan without the amendments. Under the No Project Alternative, none of the project impacts identified in this EIR would occur. However, since redevelopment of the downtown area could occur without the amendments, some level of development would be reasonably expected to occur over the next 25 years.

City Planning Department staff developed an estimate of potential buildout without the proposed amendments to identify potential development under the existing DRP. The affected area was divided into three segments as shown on Figure 3-6 in section 3, Project Description City staff identified broad development assumptions for these areas, which are included in Appendix D. Table 5-4 summarizes potential development under existing plans without the proposed project. City staff estimates indicate that development under existing plans could result in a net increase of approximately 437 residential units and a net decrease of approximately 23,990 square feet of commercial and 5,100 square feet of office space over existing conditions. Development under existing plans without the proposed amendment could result in approximately 274 fewer residential units than the proposed project and a greater decrease in commercial and office square footage than the proposed project.

TABLE 5-4: Potential Development/Buildout Assumptions With Existing General Plan and Downtown Recovery Plan

	Area X Riverfront	Area Y E. Pacific/W. Front Pacific Station	Area Z W. Pacific	Totals	Change from Existing Conditions (Includes demolition and reconstruction)
Baseline/Existing Conditions					
Property Area	146,000 sf (3.35 acres)	222,200 sf (5.10 acres)	148,800 sf (3.42 acres)	517,000 sf (11.87 acres)	N/A
Commercial	62,000 sf	74,864 sf	182,836 sf	**319,700 sf**	N/A
Office	N/A	56,105 sf	65,761 sf	**121,866 sf**	N/A
Residential	N/A	113 units	56 units	**169 units**	N /A
Parking	164 spaces	186 spaces	97 spaces	**447 spaces**	N /A
2030 General Plan – No Amendments (Units are totals, reflecting both demolition and reconstruction)					
Commercial	65,875 sf	47,000 sf	182,836 sf	**295,711 sf**	-23,989
Office	11,000 sf	40,000 sf	65,761 sf	**116,761 sf**	-5,105
Residential	190 units	360 units	56 units	**606 units**	+437
Parking	265 spaces	1,610 spaces	97 spaces	**1,972 spaces**	+1,525

SOURCE: City of Santa Cruz Planning and Community Development

Impacts. Since redevelopment of downtown properties could occur under existing conditions without the proposed plan amendments, some of the impacts identified in this EIR could result at some unknown time in the future and at an unknown magnitude depending on the proposal as discussed in the following section.

- ***Aesthetics:*** Under this alternative, the Additional Height Zones would not be extended along Pacific and Front Streets or along the San Lorenzo River. The existing base height would remain at 50 feet. Under the existing DRP, all buildings must conform to the 50-foot base height requirements. Along Pacific Avenue, the second story must be at least 50 percent of the first floor area and located toward the street frontage. Uninhabitable mechanical penthouses are permitted to a maximum height of 55 feet, provided that such penthouses are set back a minimum of 25 feet from any exposed face of the buildings and are out of the pedestrian's view. Sloping roofs also are permitted up to a maximum height of 55 feet, provided that they do not penetrate a 42 degree angle measured back from the 50-foot Base Height eaves line.

  The existing Additional Height Zone B would remain in effect under the No Project Alternative, which affects approximately 10 properties south of Cathcart Street. The additional building height limit for these properties, if they meet the eligibility criteria, is 60 feet. Uninhabitable mechanical penthouses are be permitted to project 5 feet above the approved additional height of building, provided that such penthouses are set back a

minimum of 25 feet from any exposed face of the building and are out of the pedestrian's view.

Under the No Project alternative, additional heights of 20 to 35 feet above the 50-foot base height limit would be eliminated. Figures 4.1-3A through 4.1-3C in Section 4.1, Aesthetics, show the base height limit under existing plans as well as with the potential additional heights with the proposed plan amendments as seen from the San Lorenzo River, Pacific Avenue and Front Street, respectively. The diagrams do not represent actual projects or architecture, but show potential building mass depicted, which may or may not occur. The diagrams do not show any architectural designs that typically would be employed to break up building mass.

The less-than-significant impacts on the visual character of the surrounding area would be reduced with elimination of the expanded Additional Height Zones. Future development would be allowed to construct buildings to the 50-foot base height limit, similar to existing downtown building heights north of Cathcart Street. Required street tree plantings, if similar to those along Pacific, would substantially screen upper levels from many pedestrian-level views. Since development would be consistent with development in the downtown area north of Cathcart, there would be no substantial change or degradation to visual character of the project area. Thus, eliminating the incremental height increase of 20 to 35 feet above the 50-foot base height with the No Project alternative would eliminate less-than-significant aesthetic impacts when compared to the Project.

- ***Air Quality and Greenhouse Gas Emissions:*** This alternative would result in potentially less future development than the proposed project with an accompanying reduction in vehicle trips, energy use and water use. Thus, this alternative would result in a reduced level of air emissions than the less-than-significant impact identified for the proposed project.
- ***Biological Resources:*** Under this alternative additional building heights of 20 to 35 feet above the 50-foot base height limit would be eliminated. While any new development would be taller than existing development in the study area, impacts related to shading would be reduced with minor shading impacts occurring only for a limited duration during the winter, which were not found to result in significant impacts to aquatic habitat or species. Potential indirect impacts to birds in the area would be reduced with the lower heights along the San Lorenzo River Riverwalk, but not eliminated, as potential concerns regarding reflective glass and lighting would also be a concern under the No Project Alternative. Similarly, potential construction-related disturbance to nesting birds could also occur under this alternative. Mitigation for both these impacts would be required as with the proposed project.
- ***Cultural Resources:*** Under this alternative, the potential for increased building heights would be eliminated, but future development could occur within the same overall development area as the proposed project. Since the overall development footprint

would not change, potential impacts to cultural resources (archaeological, tribal cultural, historical, or paleontological) would remain unchanged.

- ***Hydrology and Water Quality:*** Under this alternative, the potential for increased building heights would be eliminated, but future development could occur within the same overall development area as the proposed project. Potential impacts related to hydrology and water quality would remain unchanged.
- ***Public Services:*** Potential future development under the No Project alternative would result in 274 fewer residential units than the proposed project with a net decrease in commercial and office space. As a result, residential and employee population would be reduced with an accompanying reduction in demand for public services. Significant impacts related to schools and park and recreational facilities would be reduced but not eliminated. Other identified less-than-significant fire protection, police protection, and solid waste disposal impacts also would be reduced.
- ***Traffic and Transportation:*** Under this alternative, the potential for increased building heights would be eliminated, which would result in decreased potential development intensity. Thus, this alternative would result in reduced daily and peak hour trips as summarized on Table 5-4. Daily and peak hour trips would be reduced by approximately 60%. The less-than-significant impacts identified for the proposed project would be further reduced with the No Project alternative.
- ***Water Supply and Wastewater Utilities:*** Under this alternative, the potential for increased building heights would be eliminated, which would result in decreased potential development intensity. Potential future development under the No Project Alternative with existing General Plan and DRP provisions could lead to an increase in water demand of approximately 16.6 MGY based on water demand rates for multi-family homes identified in the City's adopted 2015 Urban Water Management Plan and commercial and office demand rates in the General Plan 2030 EIR. This alternative would reduce estimated project water use by more than half of the estimated project demand. Wastewater generation would also be substantially reduced, although no significant impacts were identified for either of these utilities.
- ***Noise:*** This alternative would result in fewer residential units potentially constructed in the downtown area. However, given the location portions of the study area adjacent to streets with future predicted higher noise levels, there would still be exposure of future residential units to roadway noise. The mitigation requiring an acoustical study to determine building design and materials still would still be needed.
- ***Cumulative Traffic Impacts:*** This alternative would result peak hour trips by approximately 60% of what is estimated with the proposed project. Significant cumulative traffic impacts would be reduced, but not to a less-than-significant level at three intersections that cannot be improved to acceptable levels (Highway 1/Highway 9, Mission/Chestnut, and Ocean/Water).
- ***Other Impacts:*** No new impacts have been identified with this alternative.

Ability to Meet Project Objectives. The No Project Alternative would meet three project objectives. With no proposed plan changes, the existing DRP would continue to support the First Principles of the plan (#1), and housing opportunities would continue to be encouraged (#2). Any development would need to meet existing DRP development standards for sensitive siting and design next to the river (#5). The No Project alternative would not include the incentives to create two new linkages to the San Lorenzo River and Riverwalk through extensions of Elm and Maple Streets, and would not fully meet the project objectives to increase public access. (#3, 4, 6, 7).

Alternative 1 - Reduced Height for Expanded Additional Height Zone A and Elimination of Additional Height Zone B

Project Description. This alternative includes expansion of Additional Height Zone A as with the proposed project, but the maximum height for the Additional Height Zone A would be limited to 75 feet with elimination of the 85 maximum height limit along the east side of Pacific Avenue and the west side of Front Street. This would result in an additional height limit that is consistent with existing limits for this zone as applied to Pacific Avenue north of Cathcart Street. Additionally, the proposed Additional Height Zone B would be eliminated so no additional height above the existing 50-foot base height would be permitted on the east side of Front Street and along the River.

Based on City Planning Department staff review, the maximum height limit change from 85 to 75 feet would affect the size of individual residential units, potentially eliminating a mezzanine feature, but the overall number of units and non-residential square footage would not change from the proposed project. Due to Building Code requirements, the increased height from 75 to 85 feet would allow for a mezzanine feature but would not allow for an additional building floor without changing the construction type to meet high-rise building standards. The elimination of the proposed Additional Height Zone B area would result in the same potential development as allowed under the existing DRP without the proposed plan amendments for the Front Street/Riverfront area. The commercial and office square footage estimated for the lower floors would not change from the proposed project in any location. Potential development under this alternative could result in a net increase of approximately 437 residential units, a net increase of approximately 2,190 square feet of office use, and a net decrease of approximately 14,690 square feet of commercial building space over existing conditions.

Impacts. Potential impacts of this Alternative are discussed in the following section.

- ❒ ***Aesthetics:*** Under this alternative, the Additional Height Zone A would be limited to 75 feet, resulting in a reduction of maximum building height from 85 to 75 feet along the east side of Pacific Avenue and the west side of Front Street. There would be no increase in additional building heights over the existing 50-foot base height along the east side of Front Street and along the San Lorenzo River Riverwalk.

Future development would be required to construct buildings to the 50-foot base height limit with a maximum floor area percentage above the 50-foot base height in Additional Height Zone A. Buildings developed to the existing base height limits would be similar to existing downtown building heights north of Cathcart Street. Required street tree plantings, if similar to those along Pacific, would substantially screen upper levels from many pedestrian-level views. Potential development along Pacific would be taller than existing development along Pacific south of Cathcart (except for the existing building at 1010 Pacific) and may be considered out of character with some existing buildings. However, development along Pacific and Front and adjacent to the San Lorenzo River would be consistent with development in the downtown area north of Cathcart and would not result in a significant degradation of the visual character of the surrounding area. Thus, Alternative 1 would reduce less-than-significant impacts on aesthetics compared to the proposed project.

- ***Air Quality and Greenhouse Gas Emissions:*** This alternative would result in potentially less future development than the proposed project with an accompanying reduction in vehicle trips, energy use and water use. Thus, this alternative would result in a reduced level of air emissions than the less-than-significant impact identified for the project.
- ***Biological Resources:*** Under this alternative additional building heights above the 50-foot base height limit along the San Lorenzo River would be eliminated. While any new redevelopment could be taller than existing development on the east side of Front Street, impacts related to shading would be reduced with minor shading effects occurring during winter, which were not found to result in significant impacts to aquatic habitat or species. Potential indirect impacts to birds in the area would be reduced with the lower heights, but not eliminated, as potential concerns regarding reflective glass and lighting would also be a concern under the No Project Alternative. Similarly, potential construction-related disturbance to nesting birds could also occur under this alternative. Mitigation for both these impacts would be required as with the proposed project.
- ***Cultural Resources:*** Under this alternative, the potential for increased building heights would be eliminated, but future development could occur within the same overall development area as the proposed project. Since the overall development footprint would not change, potential impacts to cultural resources (archaeological, tribal cultural, historical, or paleontological) would remain unchanged.
- ***Hydrology and Water Quality:*** Under this alternative, the potential for increased building heights would be eliminated, but future development could occur within the same overall development area as the proposed project. Potential impacts related to hydrology and water quality would remain unchanged.
- ***Public Services:*** Potential future development under the this alternative would result in 274 fewer residential units than the proposed project with a net increase in office space and a net decrease in commercial space the same as the project. As a result, residential population would be reduced with an accompanying reduction in demand for public

services. Significant impacts related to schools and park and recreational facilities would be reduced but not eliminated. Other identified less-than-significant fire protection, police protection, and solid waste disposal impacts also would be reduced.

- ***Traffic and Transportation:*** Under this alternative, the potential for increased building heights adjacent to the San Lorenzo River would be eliminated, which would result in decreased potential development intensity. Thus, this alternative would result in reduced daily and peak hour trips as summarized on Table 5-4. Daily and peak hour trips would be reduced by approximately 50%. The less-than-significant impacts identified for the proposed project would be further reduced with the No Project alternative.
- ***Water Supply and Wastewater Utilities:*** Under this alternative, the potential for increased building heights would be eliminated, which would result in decreased potential development intensity. Potential future development under the No Project Alternative with existing General Plan and DRP provisions could lead to an increase in water demand of approximately 17.4 MGY based on water demand rates for multi-family homes identified in the City's adopted 2015 Urban Water Management Plan and commercial and office demand rates in the General Plan 2030 EIR. This alternative would reduce estimated project water use by more than half of the proposed project demand. Wastewater generation would also be substantially reduced, although no significant impacts were identified for either of these utilities.
- ***Noise:*** This alternative would result in fewer residential units potentially constructed in the downtown area. However, given the location portions of the study area adjacent to streets with future predicted higher noise levels, there would still be exposure of future residential units to roadway noise. The mitigation requiring an acoustical study to determine building design and materials still would still be needed.
- ***Cumulative Traffic Impacts:*** This alternative would result peak hour trips by approximately 50% of what is estimated with the proposed project. Significant cumulative traffic impacts would be reduced, but not to a less-than-significant level at three intersections that cannot be improved acceptable levels (Highway 1/Highway 9, Mission/Chestnut, and Ocean/Water).
- ***Other Impacts:*** No new impacts have been identified with this alternative.

Ability to Meet Project Objectives. Alternative 1 would meet three project objectives. With no proposed plan changes, the existing DRP would continue to support the First Principles of the plan (#1), and housing opportunities would continue to be encouraged, although with reduced opportunities (#2). Any development would need to meet existing DRP development standards for sensitive siting and design next to the river (#5). This alternative would include the incentives to create two new linkages to the San Lorenzo River and Riverwalk through extensions of Elm and Maple Streets, although incentives may be limited with elimination of additional building heights. Thus, this alternative would partially meet the project objectives to increase public access. (#3, 4, 6, 7).

Alternative 2 - Reduced Height for Expanded Additional Height Zones A and B

Project Description. Under this alternative, the proposed expansion of the Additional Height Zones would be modified. The Alternative includes expansion of Additional Height Zone A as with the proposed project, but the maximum height for the Additional Height Zone A would be limited to 75 feet with elimination of the 85 maximum height limit along the east side of Pacific Avenue and the west side of Front Street. This would result in an additional height limit that is consistent with existing limits for this zone as applied to Pacific Avenue north of Cathcart Street. Additionally, the maximum building heights in the Additional Height Zone B would along the east side of Front Street and adjacent to the San Lorenzo River would be reduced from 70 to 60 feet. The proposed Development Standards would be modified under this alternative to eliminate encroachment over property line and to require a 10-foot setback for buildings above 50 feet.

Based on City Planning Department staff review, the maximum height limit change from 85 to 75 feet would affect the size of individual residential units, potentially eliminating a mezzanine feature, but the overall number of units and non-residential square footage would not change from the proposed project. Due to Building Code requirements, the increased height from 75 to 85 feet would allow for a mezzanine feature but would not allow for an additional building floor, without changing the construction type to meet high-rise building standards. However, reduction of maximum height from 70 to 60 feet in the Additional Height Zone B would in elimination of a top floor, resulting in a reduction of housing units from the proposed project. The commercial and office square footage estimated for the lower floors would not change from the proposed project. As a result, potential development under this alternative could result in a net increase of approximately 645 residential units, a net increase of approximately 2,190 square feet of office use, and a net decrease of approximately 14,690 square feet of commercial building space over existing conditions.

Impacts. Potential impacts of this Alternative are discussed in the following section.

Impacts. Potential impacts of this Alternative are discussed in the following section.

- ***Aesthetics:*** Under this alternative, there would be a 10-foot reduction in maximum building heights in both Additional Height Zone A and B. Potential development along Front Street adjacent to the San Lorenzo River and along Pacific Avenue would be taller than existing development along Pacific Avenue and Front Street south of Cathcart (except for the existing building at 1010 Pacific) and may be considered out of character with some existing buildings. However, potential future development would be consistent with the Additional Height Zone permitted north of Cathcart, and thus, would not result in a significant degradation of the visual character of the surrounding area. Thus, the Alternative 2 would slightly reduce less-than-significant impacts on aesthetics.
- ***Air Quality and Greenhouse Gas Emissions:*** This alternative would result in potentially less future development than the proposed project with an accompanying reduction in

vehicle trips, energy use and water use. Thus, this alternative would result in a reduced level of air emissions than the less-than-significant impact identified for the project.

- ***Biological Resources:*** Under this alternative, additional maximum building heights along the San Lorenzo River would be reduced by 10 feet. While any new development would be taller than existing development in the study area, impacts related to shading would be slightly reduced with minor shading effects during winter, which were not found to result in significant impacts to aquatic habitat or species. Potential indirect impacts to birds in the area would be reduced with the lower heights, but not eliminated, as potential concerns regarding reflective glass and lighting would also be a concern under the No Project Alternative. Similarly, potential construction-related disturbance to nesting birds could also occur under this alternative. Mitigation for both these impacts would be required as with the proposed project.
- ***Cultural Resources:*** Under this alternative, the potential for increased building heights would be eliminated, but future development could occur within the same overall development area as the proposed project. Since the overall development footprint would not change, potential impacts to cultural resources (archaeological, tribal cultural, historical, or paleontological) would remain unchanged.
- ***Hydrology and Water Quality:*** Under this alternative, the potential for increased building heights would be eliminated, but future development could occur within the same overall development area as the proposed project. Potential impacts related to hydrology and water quality would remain unchanged.
- ***Public Services:*** Potential future development under this alternative would result in 66 fewer residential units than the proposed project with the same net increase in office space and a net decrease in commercial space as with the proposed project. As a result, residential population would be reduced with an accompanying reduction in demand for public services. Significant impacts related to schools and park and recreational facilities would be reduced but not eliminated. Other identified less-than-significant fire protection, police protection, and solid waste disposal impacts also would be reduced.
- ***Traffic and Transportation:*** Under this alternative, the potential for increased building heights adjacent to the San Lorenzo River would be eliminated, which would result in decreased potential development intensity. Thus, this alternative would result in reduced daily and peak hour trips as summarized on Table 5-4. Daily and peak hour trips would be slightly less than the proposed project. The less-than-significant impacts identified for the proposed project would be further reduced with the No Project alternative.
- ***Water Supply and Wastewater Utilities:*** Under this alternative, the potential for increased building heights would be eliminated, which would result in decreased potential development intensity. Potential future development under the No Project Alternative with existing General Plan and DRP provisions could lead to an increase in water demand of approximately 26 MGY based on water demand rates for multi-family

homes identified in the City's adopted 2015 Urban Water Management Plan and commercial and office demand rates in the General Plan 2030 EIR. This alternative would reduce estimated project water use by more than half of the proposed project demand. Wastewater generation would also be substantially reduced, although no significant impacts were identified for either of these utilities.

- ***Noise:*** This alternative would result in fewer residential units potentially constructed in the downtown area. However, given the location portions of the study area adjacent to streets with future predicted higher noise levels, there would still be exposure of future residential units to roadway noise. The mitigation requiring an acoustical study to determine building design and materials still would still be needed.
- ***Cumulative Traffic Impacts:*** This alternative would slightly reduce peak hour trips from those estimated with the proposed project. Significant cumulative impacts would remain with the project's contribution being cumulatively considerable.
- ***Other Impacts:*** No new impacts have been identified with this alternative.

Ability to Meet Project Objectives. Alternative 2 would meet three project objectives. With no proposed plan changes, the existing DRP would continue to support the First Principles of the plan (#1), and housing opportunities would continue to be encouraged, although with reduced opportunities (#2). Any development would need to meet existing DRP development standards for sensitive siting and design next to the river (#5). This alternative would include the incentives to create two new linkages to the San Lorenzo River and Riverwalk through extensions of Elm and Maple Streets and would meet the project objectives to increase public access, although incentives may be limited with a reduction of additional building heights. Thus, this alternative would partially meet the project objectives to increase public access (#3, 4, 6, 7).

Environmentally Superior Alternative

According to CEQA Guidelines section 15126.6(e), if the environmentally superior alternative is the "no project" alternative, the EIR shall also identify an environmentally superior alternative among the other alternatives. Furthermore, Sections 21002 and 21081 of CEQA require lead agencies to adopt feasible mitigation measures or feasible alternatives in order to substantially lessen or avoid otherwise significant adverse environmental effects, unless specific social or other conditions make such mitigation measures or alternatives infeasible. Where the environmentally superior alternative also is the no project alternative, CEQA Guidelines in Section 15126(d)(4) requires the EIR to identify an environmentally superior alternative from among the other alternatives.

In the present case, none of the alternatives, including the No Project Alternative would eliminate significant project impacts and cumulative impacts related to traffic, although all alternatives would result reduce the level of impact. Table 5-5 presents a comparison of project impacts between the proposed project and the alternatives. Excluding the No Project Alternative, Alternative 1 – Reduced Height for Additional Height Zone A and Elimination of

Additional Height Zone B – is considered the environmentally superior alternative of the alternatives considered. Although it would not reduce significant impacts to less-than-significant levels, it could result in the greatest reduction of traffic and water demand impacts and reduce some of the other identified significant impacts. However, it would not fully meet project objectives.

Table 5-5 is on the next page.

Table 5-5: Comparison of Impacts of Project Alternatives

Environmental Issue	PP	NP	ALT 1	ALT 2
Aesthetics 4.1-1: Scenic Views	LS	LS -	LS -	LS -
Aesthetics 4.1-3: Degradation of Visual Character	LS	LS-	LS -	LS -
Aesthetics 4.1-4: Light and Glare	LS	LS -	LS -	LS -
Air Quality 4.2-1: Pollutant Emissions	LS	LS -	LS -	LS -
Air Quality 4.2-2: GHG Emissions	LS	LS -	LS -	LS -
Biological Resources 4.3-1: Aquatic Habitat/Species	LS	LS -	LS	LS
Biological Resources 4.3-2: Riparian Habitat-Birds	LSM	LSM -	LSM	LSM
Biological Resources 4.3-3: Nesting Birds	LSM	LSM	LSM	LSM
Cultural Resources 4.4-1: Archaeological Resources	LS	LS	LS	LS
Cultural Resources 4.4-2: Historical Resources	LS	LS	LS	LS
Cultural Resources 4.4-3: Paleontological Resources	LS	LS	LS	LS
Hydrology 4.5-1: Stormwater Drainage	LS	LS	LS	LS
Hydrology 4.5-2: Water Quality	LS	LS	LS	LS
Hydrology 4.5-3: Flood Hazards	LS	LS	LS	LS
Public Services 4.6-1a: Fire Protection	LS	LS -	LS -	LS -
Public Services 4.6-1b: Police Protection	LS	LS -	LS -	LS -
Public Services 4.6-1c: Schools	LSM	LSM -	LSM -	LSM -
Public Services 4.6-2: Parks and Recreation	LSM	LSM -	LSM -	LSM -
Public Services 4.6-3: Solid Waste	LS	LS -	LS -	LS -
Traffic 4.7-1: Circulation System Impacts	LS	LS -	LS -	LS -
Traffic 4.7-2: Highway Impacts	LS	LS -	LS -	LS -
Water & Wastewater 4.8-1: Water Supply	LS	LS -	LS -	LS -
Water & Wastewater 4.8-2: Wastewater	LS	LS -	LS -	LS -
Noise: Exposure to Noise	LSM	LSM -	LSM -	LSM -
Cumulative Traffic	SU	SU -	SU -	SU -
New Significant Impacts		None	None	None

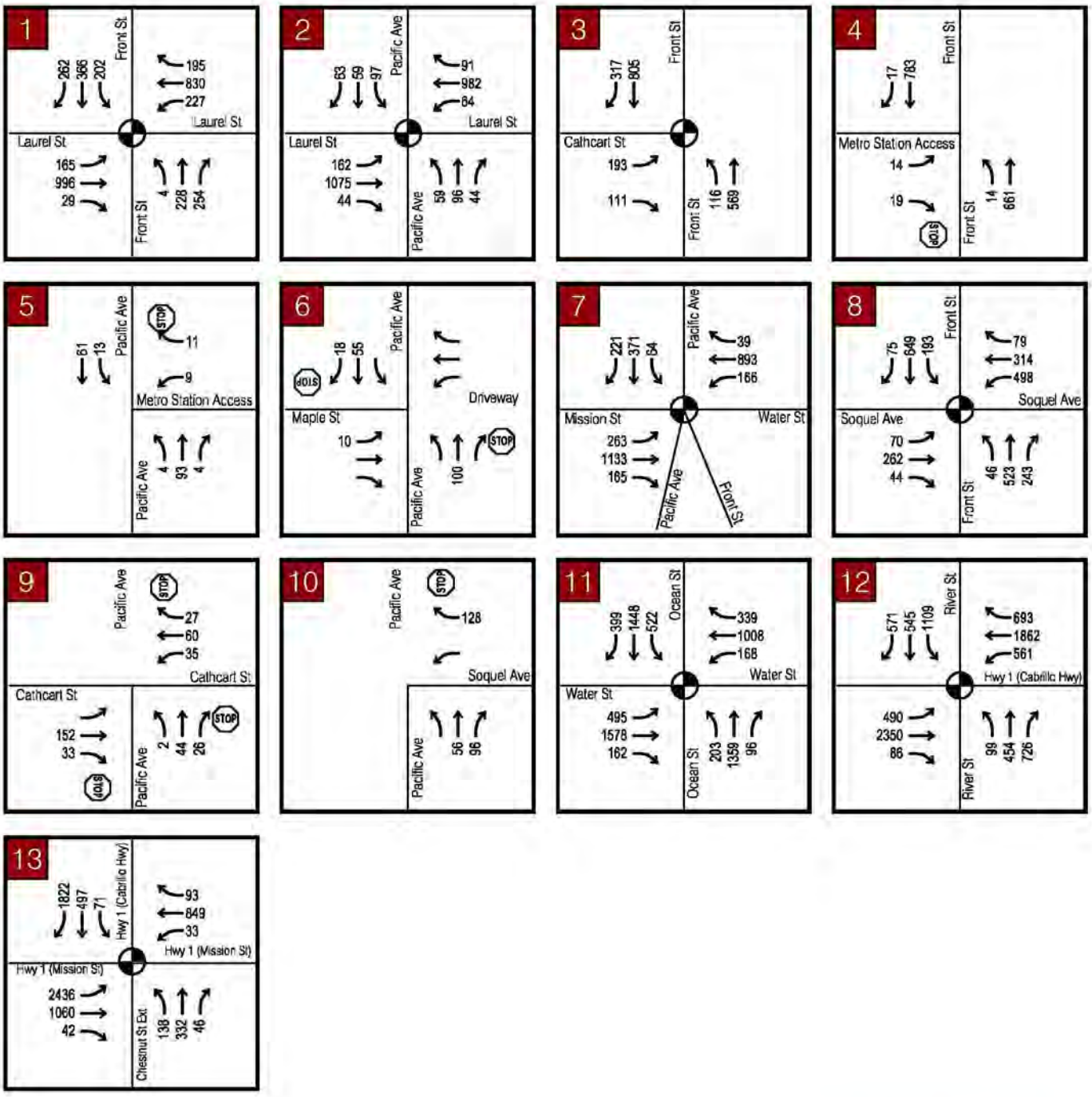
Notes:

PP = Proposed Project
NP = No Project
ALT1 = Reduced Height for Expanded Additional Height Zone A and Elimination of Additional Height Zone B
ALT2 = Reduced Height for Additional Height Zone A to 75 feet along Pacific/Front and Reduced Height for Additional Height Zone B to 60 feet along the San Lorenzo River with Development Standard Modifications

Impact without Mitigation / Impact with Mitigation

NI = No Impact
LS = Less than significant impact
S = Significant
LSM = Less than significant with mitigation
SU = Significant unavoidable impact
+ = Greater adverse impact than proposed project
- = Lesser adverse impact than proposed project

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SOURCE: Kimley Horn

FIGURE 5.1
Cumulative Trips

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City of Santa Cruz Downtown Plan Amendments EIR

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CHAPTER 6
REFERENCES AND LIST OF PREPARERS

6.1 AGENCIES AND PERSONS CONTACTED

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Parks and Recreation Department: Noah Downing, Mauro Garcia

Police Department: Rick Martinez

Water Department: Toby Goddard, Katie Moore, Sarah Easley Perez

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6.3 EIR TEAM

Dudek

Stephanie Strelow, Project Manager

Dave Compton, Biological Resources

Matthew Morales, Technical Resource Specialist, Air Quality

Anais Schenk, Environmental Specialist / Planner

Tyler Friesen, Graphics

Consultants

Gary Kittleson, Kittleson Environmental Consulting, Biological Resources

Kimley Horn, Transportation and Traffic Engineering

APPENDIX A
Notice of Preparation and Initial Study

APPENDIX A

ZONING / PERMIT PROCESSING
831/420-5100 • FAX 831/420-5434
COMPREHENSIVE PLANNING
831/420-5180 • FAX 831/420-5101

CITY OF SANTA CRUZ

INSPECTION SERVICES
831/420-5120 • FAX 831/420-5434
PLANNING ADMINISTRATION
831/420-5110 • FAX 831/420-5101

PLANNING AND COMMUNITY DEVELOPMENT DEPARTMENT
809 Center Street • Room 206 • Santa Cruz, CA 95060 • www.cityofsantacruz.com
Alex Khoury, Acting Director

February 15, 2017

NOTICE OF PREPARATION OF AN ENVIRONMENTAL IMPACT REPORT

RE: Downtown Recovery Plan, General Plan and Local Coastal Plan Amendments

To Interested Agencies and Persons:

The City of Santa Cruz, as the lead agency, is preparing an Environmental Impact Report on the project described herein. Please respond with written comments regarding the scope and the content of the EIR as it may relate to your agency's area of statutory responsibility or your areas of concern or expertise. Your agency may need to use the EIR prepared by our agency when considering your permit or other approval for the project, if any is required. ***Responses are due within 30 days of the receipt of this Notice, as provided by State law.*** The contact person's name and address are listed below. Please include the name and phone number of a contact person at your agency in your response.

1. **Project Location.** The project area consists of an approximate 12-acre portion of the downtown area of the city of Santa Cruz in the area generally bounded by Laurel Street on the south, the San Lorenzo River on the east, Cathcart Street and Soquel Avenue on the north, and Cedar Street on the west. See the attached Location Map and Figure 1 in the attached Initial Study for project area boundaries.

2. **Project Description.** The proposed project consists of a series of amendments to the City's Downtown Recovery Plan (DRP), General Plan 2030 (GP), and Local Coastal Plan (LCP). The DRP amendments include revisions to Plan text and modifications to development guidelines and standards. The focus of the DRP amendment is to expand the location in which the "Additional Height Zones" are applied and revisions to the Chapter 4 Development Standards of the DRP. The primary proposed modification under consideration is an increase in allowable building heights in the lower Pacific Avenue area to Laurel Street and along the San Lorenzo Riverfront. The proposed General Plan amendment would the floor area ratio (FAR) for the Regional Visitor Commercial land use designation in areas where expanded height would permitted as the building height increases would also result in an increased FAR. The proposed LCP amendments include changes to policies for the San Lorenzo Urban River Plan (SLURP) component of the LCP.

The proposed amendments and potential increased building heights could result in additional development. City staff estimates that the proposed amendment to height zones could result in a net increase of approximately 711 residential units and approximately 2,200 square feet of office space with a net decrease of approximately 14,700 square feet of commercial building space over existing conditions within the study area. In comparison to potential redevelopment that could occur under the adopted *General Plan 2030*, City staff estimates that potential additional development resulting from the proposed DRP amendments could result in an increase of approximately 274 residential units and approximately 16,600 square feet of commercial and office space over what could be developed under the General Plan without the proposed DRP amendments.

3. **Project Applicant.** The City of Santa Cruz is the project proponent.

4. **Probable Environmental Effects of the Project.** After completing a preliminary review of the project, as described in Section 15060 of the CEQA Guidelines, and preparing an Initial Study for the project, which is attached or is available for review on the City's website at: http://www.cityofsantacruz.com/departments/planning-and-community-development/environmental-documents, the City has determined that an EIR should be prepared to assess the potentially significant environmental impacts of this project. The City has identified the following possible effects of the project as topics for analysis in the EIR. The City will consider the written comments received in response to this Notice of Preparation in determining whether any additional topics should be studied in the Draft EIR.

   - *Aesthetics* – Potential aesthetic impacts related to increased building heights will be reviewed based in part on results of a building massing study prepared for the City's Planning and Community Development Department.

   - *Air Quality and Greenhouse Gas Emissions (GHG)* – Potential impacts resulting from emissions related to potential future development will be reviewed.

   - *Biological Resources* – Potential impacts to San Lorenzo River habitat and species due potential development resulting from increased building heights will be reviewed.

   - *Cultural Resources* – Potential impacts to historical resources with redevelopment under the proposed plan amendments will be reviewed.

   - *Hydrology and Water Quality* – Exposure to flood hazards.

   - *Public Services and Utilities* – Fire and police protection services, schools, parks and recreation, wastewater treatment, municipal water service and solid waste disposal will be reviewed based on potential future development that could occur as a result of the proposed amendments.

   - *Traffic and* Transportation – Findings of a traffic impact analysis, which is being prepared for the City's Planning and Community Development Department, will be provided and supplemented as needed in the EIR. Updated traffic counts and level of service analyses

will be provided at area intersections. The review will address other modes of transportation in the area, including transit, pedestrian and bicycle circulation.

- *Land Use* - Review of potential project conflicts with plans, policies or regulations adopted for the purpose of avoiding or mitigating an environmental effect will be provided in the EIR.

4. **Contact Person Name and Phone Number:**

Ron Powers, Principal Planner
City of Santa Cruz Planning and Community Development Department
809 Center Street, Rm. 206
Santa Cruz, CA 95060
Phone: 831 420-5216
Email: RPowers@cityofsantacruz.com

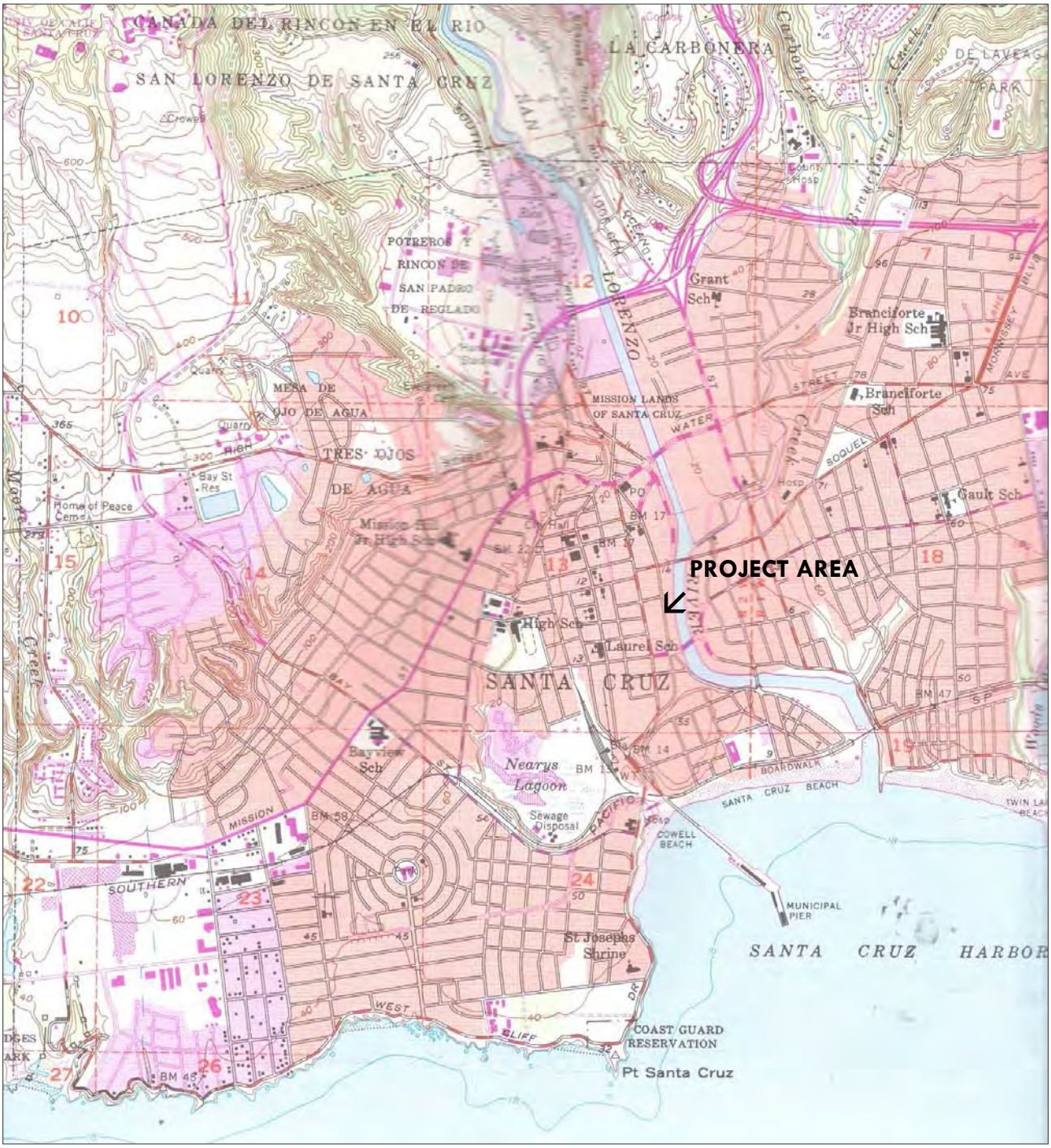
Responses to this Notice of Preparation are due by **March 17, 2017**.

Sincerely,

Ron Powers
Principal Planer

Attachments:
Location Map
Initial Study (Online at: http://www.cityofsantacruz.com/departments/planning-and-community-development/environmental-documents)

LOCATION MAP



City of Santa Cruz
INITIAL STUDY / ENVIRONMENTAL CHECKLIST

I. BACKGROUND & PROJECT DESCRIPTION

1. **Application No:** Not Applicable
2. **Project Title:** Downtown Recovery Plan Amendments
3. **Lead Agency Name and Address:**
   City of Santa Cruz
   809 Center Street, Room 107
   Santa Cruz, CA 95060
4. **Contact Person and Phone Number:** Ron Powers, (831) 420-5216
   RPowers@cityofsantacruz.com
5. **Project Location:** A portion of the downtown area of the city of Santa Cruz in the area generally bounded by Laurel Street on the south; the San Lorenzo River on the east; Cathcart Street and Soquel Avenue on the north; and Cedar Street on the west. Figure 1 shows the boundary of the project area.
6. **Project Applicant's/Sponsor's Name and Address:**
   City of Santa Cruz
7. **General Plan Designation:** Regional Visitor Commercial, except for the Metro Station property that is designated Community Facilities.
8. **Zoning:** CBD-Central Business District, except for the Metro Station property that is zoned PF-Public Facilities. The southern portion of the study area is zoned CZ-O Coastal Zone Overlay Boundary,
9. **Project Description:**

Background. The Downtown Recovery Plan (DRP) was adopted in 1991 to guide post-Loma Prieta earthquake reconstruction as the earthquake destroyed significant portions of downtown Santa Cruz. The intent was to establish policies, standards and guidelines to direct the recovery process toward the rebuilding after the earthquake. The DRP was adopted as a specific plan (pursuant to California Government Code requirements) to implement policies in the downtown area, and implementation also included amendments to the Zoning Ordinance. Specifically, DRP Chapter 4, the Development Standards and Design Guidelines, are incorporated by reference in Part 24 of the Zoning Ordinance, the Central Business District (CBD). The DRP has been modified several times over the past 25 years with the most recent change in 2016 to relocate the downtown sign regulations from the DRP to Chapter 24 of the Zoning Code.

The City Planning and Community Development Department and the Planning Commission began working on development standards for the Pacific Avenue Retail District and the Front Street/Riverfront Corridor at the request of the City Council in October 2014. The Planning Commission established two subcommittees to review and develop recommendations. The recommended amendments were forwarded to the City Council and in October 2016, the City Council directed staff to initiate environmental review on the proposed amendments.

Project Overview. The proposed project consists of a series of amendments to the City's DRP, the GP 2030, and the LCP. The DRP amendments include revisions to Plan text and modifications to development guidelines and standards. The focus of the proposed DRP amendment is to expand the location in which the "Additional Height Zones" are applied and revisions to the Chapter 4 Development Standards of the DRP. The primary proposed modification would increase allowable building heights in the lower Pacific Avenue and lower Front Street areas and along the San Lorenzo River, between Cathcart and Laurel Streets. According to the City, these changes were initiated to provide more opportunities for housing in the core of the downtown. Increasing densities in the downtown is consistent with the overarching objectives of the City to maintain a compact downtown with a dense urban core in exchange for retaining a strong greenbelt. This amendment includes modifications to the format of the original DRP with the creation of a more formal Use Chart for ground level and upper level uses, as well as consolidating language relating to design guidelines and development standards. This amendment also includes the renaming of the plan to eliminate the "Recovery" from the title that was formerly associated with the post-earthquake reconstruction that is now mostly complete.

The proposed General Plan amendment would increase the upper limit of the floor area ratio (FAR) for the Regional Visitor Commercial land use designation in areas where expanded height would be permitted. As the building height increases would also result in an increased FAR. The proposed LCP amendments include changes to policies for the San Lorenzo Urban River Plan (SLURP) component of the LCP as further described below.

Summary of Proposed DRP Changes. The proposed amendments include minor revisions to text, reorganization of text, elimination of outdated text, and addition of new text and exhibits, including modifications to development standards regarding building height. Key proposed changes are summarized below and in Table 1.

- ❒ Remove references to the High Density Overlay (HDO) District, which was repealed in 2016 due to redundancy with the adopted *General Plan 2030* and Housing Element.
- ❒ Reorganize and combine Guideline language with Development Standard language into the same section with new standards for public passageways along Cathcart, Elm and Maple Streets.
- ❒ Introduce a percentage footprint with varying height limits for the Pacific Avenue Retail District and west of Front Street for projects taller than 55 feet. This volumetric approach is intended to ensure both vertical and horizontal variation to avoid monolithic structures.

- ❒ Increases allowable maximum building heights in three locations as shown on Figure 2 and summarized below:
  - Additional Height to 75 Feet: Extends the existing zone for additional height to the area along the west side of Pacific Avenue between Cathcart Street and Laurel Street under specified conditions. Current allowable heights are 50 to 60 feet.
  - Additional Height to 85 Feet: Extends the existing zone for additional height to 75 feet between Pacific Avenue and Front Street (between Cathcart and Laurel) under certain conditions and up to 85 feet for a smaller portion of large sites. Current allowable heights are primarily feet except for parcels south of Cathcart that are within 60 to 75 height zones.
  - Additional Height to 70 Feet: Creates a new zone that would change the maximum height from 50 feet to 70 feet feet under specific conditions along the east side of Front Street between Soquel Avenue and Laurel Street.

    The Draft Plan requires the top floor of Front Street properties to not exceed 60% of the floor below and 60% of the building length, thereby ensuring that the skyline views will avoid a linear wall of building mass.
- ❒ Change the upper level stepback 42 degree or 52 degree standard to a numeric stepback approach above a specific height. A stepback is generally an upper floor building setback.
- ❒ The Draft Plan includes language to require the sloped side of the river levee between the levee and the private property to be filled with earth to achieve a similar elevation between the Riverwalk and the adjacent private development for the purposes of encouraging more connections to the Riverwalk. The original DRP did encourage filling along the levee, but the proposed language makes this public objective a mandatory design feature for new development.
- ❒ Include a Use Chart in a table format for both ground level and upper level uses for each of the four CBD subdistricts. This modification allows for easier reference with notes to details about particular uses. Very few changes are proposed to the allowable uses, but the proposed revisions include prohibition of cannabis dispensary facilities as a result of the passage of state Proposition 64, the ballot measure to allow personal recreational use of marijuana.

  Neither the existing DRP nor the proposed amendments provide an exhaustive list of all potential and foreseen uses for the CBD subdistricts. The proposed DP does include more uses not mentioned in the original DRP, including required Community Care, Family Day Care and Supportive and Transitional Housing uses that are required by State Law. The proposed DP also includes a provision that allows the Zoning Administrator to determine whether a proposed unlisted use would be considered similar in nature to other listed uses that support the objectives of the DP and the CBD.

Potential Downtown Plan Area Buildout with Amendments. The proposed amendments will allow increased building heights in specified locations and under specified conditions. City Planning Department staff developed an estimate of potential buildout without and with the

proposed amendments for the purpose of evaluating potential environmental impacts as part of the CEQA review. It is estimated that the proposed amendment to expand the Additional Height Zones" could result in a net increase of approximately 711 residential units and approximately 2,200 square feet of office space with a net decrease of approximately 14,700 square feet of commercial building space over existing conditions within the study area. In comparison to potential redevelopment under the adopted *General Plan 2030*, City staff estimates that potential additional development resulting from the proposed DRP amendments could result in an increase of approximately 274 residential units and approximately 16,600 square feet of commercial and office space over what could be developed under the existing General Plan without the proposed DRP amendments.

Summary of Proposed LCP Amendment. A portion of the downtown lies within the coastal zone. Chapter 4 of the Downtown Recovery Plan is incorporated by reference in the CBD zone district, and the district is part of the implementation section of the LCP. Thus, revisions to the DRP Chapter 4 require review and approval by the California Coastal Commission.

In addition to the development standards of Chapter 4, there are also several LCP land use policies that are proposed to be modified. Since the original certification of the City's LCP in 1985, additional plans have been prepared and policies incorporated into the LCP as amendments. The City adopted the San Lorenzo Urban River Plan (SLURP) in 2003 as a resource management protection plan for the river. Subsequent to the City Council approval, several resource-related and land use policies were included in the LCP by the Coastal Commission as an amendment to the City's LCP. There are 11 SLURP policies that pertain to Front Street development, several of which are directed to areas outside of the coastal zone. The proposed amendment would remove these policies, nine of which are certified LCP polices, and add two new LCP policies.

10. Public Agencies Whose Approval or Review Is Required:

- California Coastal Commission: Approval of LCP amendment

II. ENVIRONMENTAL SETTING

The city of Santa Cruz is located at the northern edge of Monterey Bay. The project area encompasses approximately 12 acres in the lower downtown area of the City of Santa Cruz within the boundaries of the existing adopted DRP. Boundaries of the DRP plan area are: Laurel Street on the south, Cedar and Center Streets on the west, River and Water Streets on the north, and the top of the west levee of the San Lorenzo River on the east. The project area is the portion of the DRP area that is generally bounded by Laurel Street on the south; the San Lorenzo River on the east; Cathcart Street and Soquel Avenue on the north; and Cedar Street on the west. The project area is developed primarily with a mix of commercial uses with some upper floor office and residential uses. The area also includes the approximately 2-acre Metro Station, owned and operated by the Santa Cruz Metropolitan Transit District that serves as the bus plaza for the downtown area.

Table 1: Summary of Key Proposed DRP Amendments

Chapter	Existing	Proposed
Introduction, Executive Summary, Chapters 1, 2 and 3	Downtown Recovery Plan	All references to the updated plan refer to the plan as Downtown Plan (DP), except where specifically referring to the original document.
	The existing DRP uses the 1989 Loma Prieta earthquake as a baseline for describing character of the CBD zone. Language indicating historic character or historic fabric of the CBD meant pre-1989 earthquake character.	Some language has been modified to note that the City has had 25 years of post-earthquake development and recognizes that the CBD character has changed.
	Summary of the Plan Recommendations	Text clarifies that language represents recommendations in 1991.
	References to flood improvements.	Updated to reflect improvements to the San Lorenzo River levee made since the Loma Prieta earthquake.
	Descriptions and boundaries of the four CBD subdistricts - Pacific Avenue Retail, Front Street / Riverfront Corridor, Cedar Street Village Corridor, and North Pacific.	The general descriptions of the purposes and character of these four areas remain the same. The height map is moved to Chapter 4 with the other Development Standards.
	Reference and description of the High Density Overlay (HDO) District.	Text eliminated as the HDO was repealed in 2016.
Chapter 4 Prohibited Uses	The DRP was formatted to describe allowable uses by each of the four CBD subdistricts and further defined by ground floor and upper floor uses. The allowable uses were written in paragraph form and repeated for each subdistrict.	Reorganizes the allowable uses for all the CBD districts into a table format, similar to the Citywide code update format that will be more consistent with all zoning districts in the future. Adds two tables: one for ground level uses and one for upper floor uses.
	Prohibited uses are listed within Chapter 4 of the Plan. The Plan also includes a list of amortized uses that are to be phased out by October 2020.	Adds Medical and Recreational cannabis service providers to the list of prohibited uses within the Central Business District. No change is proposed for the types of uses that are listed to be phased out of the CBD by October 2020.
	Existing "Additional Height Zones" are located generally north of Cathcart and west of Front Street.	Expands zones of additional height to areas along lower Pacific Avenue and lower Front Street.
Chapters 5, 6 and 7	Circulation and Parking Plan, Streetscape and Open Space Plan, and Implementation and Management Strategy chapters remain intact.	The language of Chapters 5, 6 and 7 were not re-addressed with this update.
Appendices	Appendix 3 – Sign Regulations 5 – Floor Area Ratio (ordinance) 6 – Additional Height Zone C (specific to upper Pacific Avenue) 7 – Live Entertainment (ordinance)	Appendix 3 – Downtown Sign regulations previously were moved to the Zoning Ordinance, Chapter 24.12. Appendix 5 – Floor Area Ratio ordinance appendix deleted as being obsolete in the CBD. Appendix 6 – The Additional Height Zone C and the High Density Overlay Zone have been eliminated. Height Zone C is integrated with Additional Height Zone A; HDO Zone was repealed in 2016. Appendix 7 – Live Entertainment ordinance are in the Zoning Code Chapter 24.
Exhibits	Downtown Landscape Program	No change.
List of Maps and Diagrams	Land Use Concept Height Housing Zone A – Additional Height Standards Zone B – Additional Height Standards Many other diagrams listed.	Land Use Concept remains the same Height Map relocated to Chapter 4. Housing Map deleted as it represented the High Density Overlay Zone, which is now obsolete with the General Plan 2030. Additional Height Zones A and B are in Chapter 4.

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APPENDIX A



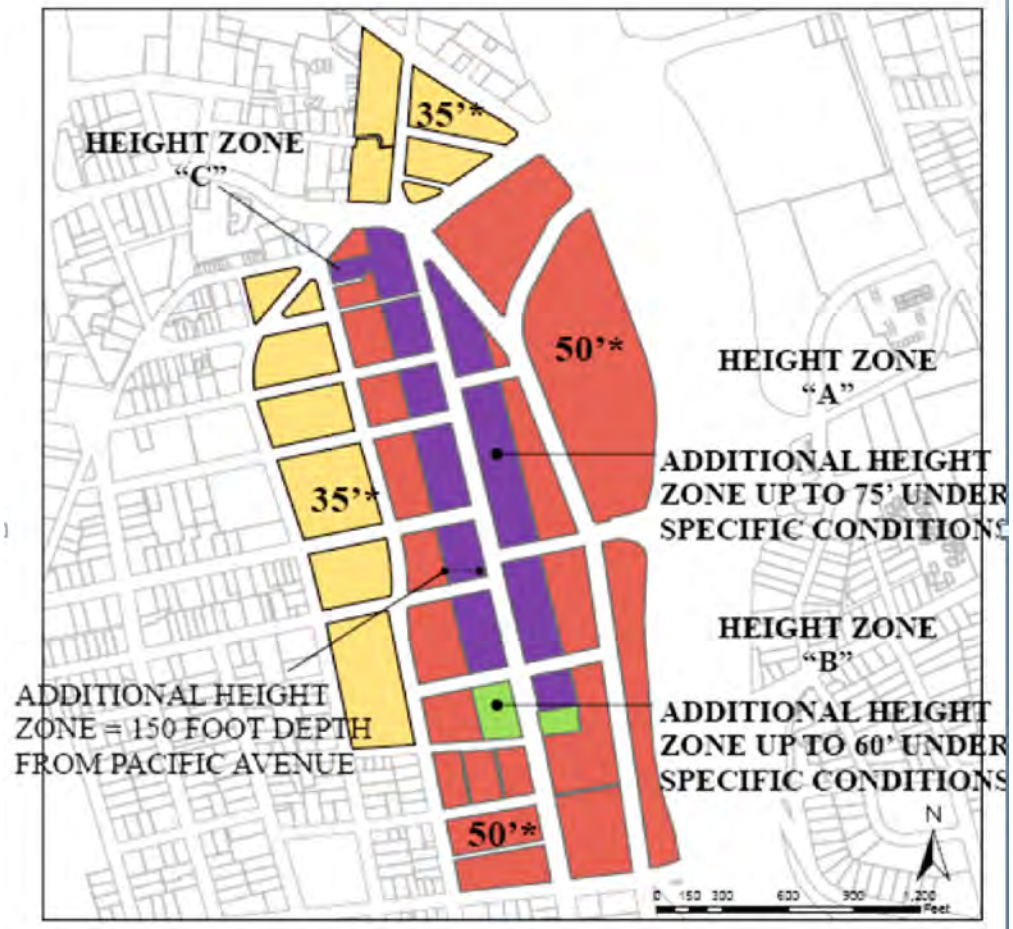
DUDEK

SOURCE: Bing (accessed 2017), County of Santa Cruz 2015

FIGURE 1

Plan Area Location Map

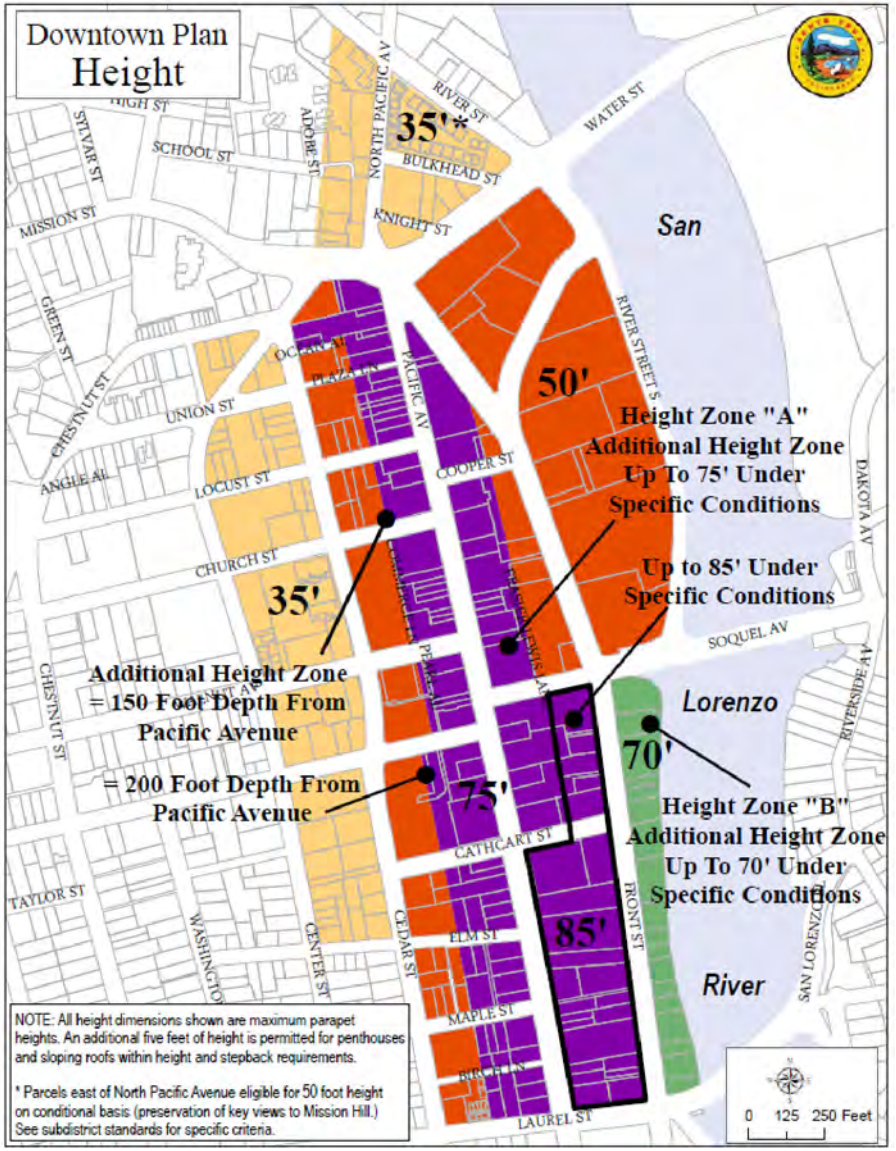
Existing Additional Height Zones



NOTE: ALL HEIGHT DIMENSIONS SHOWN ARE MAXIMUM PARAPET HEIGHTS. AN ADDITIONAL FIVE FEET OF HEIGHT IS PERMITTED FOR PENTHOUSES AND SLOPING ROOFS WITHIN HEIGHT AND STEPBACK REQUIREMENTS.

* PARCELS EAST OF NORTH PACIFIC AVENUE ELIGIBLE FOR 50 FOOT HEIGHT ON CONDITIONAL BASIS (PRESERVATION OF KEY VIEWS TO MISSION HILL).

Proposed Additional Height Zones



SOURCE: City of Santa Cruz Planning and Community Development Department

FIGURE 2

Existing and Proposed Additional Height Zones

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III. ENVIRONMENTAL CHECKLIST

Environmental Factors Potentially Affected by the Project: The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

✓	Aesthetics		Agricultural & Forest Resources	✓	Air Quality
✓	Biological Resources	✓	Cultural Resources & Tribal Cultural Resources	✓	Geology / Soils
✓	Greenhouse Gas Emissions		Hazards & Hazardous Materials	✓	Hydrology / Water Quality
✓	Land Use / Planning		Mineral Resources	✓	Noise
✓	Population / Housing	✓	Public Services	✓	Recreation
✓	Transportation / Traffic	✓	Utilities/Service Systems	✓	Mandatory Findings of Significance

Instructions to Environmental Checklist

1. A brief explanation is required (see VI. "Explanation of Environmental Checklist Responses") for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question (see V. Source List, attached). A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).

2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.

3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that any effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.

4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level.

5. Earlier Analysis may be used where, pursuant to the tiering, program EIR, or other CEQA process, one or more effects have been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case a discussion should identify the following on attached sheets:

    a) *Earlier Analysis used*. Identify earlier analyses and state where they are available for review.
    b) *Impacts adequately addressed*. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
    c) *Mitigation measures.* For effects that are "Less than Significant with Mitigation Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.

6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.

7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.

8. The explanation of each issue should identify:
    a) The significance criteria or threshold, if any, used to evaluation each question; and
    b) The mitigation measure identified, if any, to reduce the impact to less than significance.

ENVIRONMENTAL IMPACTS Issues (and Supporting Information Sources):	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
1. AESTHETICS. Would the project:				
a) Have a substantial adverse effect on a scenic vista?			✓	
b) Substantially damage scenic resources, including but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?			✓	
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	✓			
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			✓	
2. AGRICULTURE AND FOREST RESOURCES. In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement Methodology provided in Forest Protocols adopted by the California Air Resources Board. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use? (V.1b-Figure 4.15-1 in DEIR)				✓
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				✓
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?				✓
d) Result in the loss of forest land or conversion of forest land to non-forest use?				✓
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use?				✓

ENVIRONMENTAL IMPACTS Issues (and Supporting Information Sources):	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
3. AIR QUALITY. Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	✓			
b) Violate any air quality standard or contribute to an existing or projected air quality violation?			✓	
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			✓	
d) Expose sensitive receptors to substantial pollutant concentrations?			✓	
e) Create objectionable odors affecting a substantial number of people?				✓
4. BIOLOGICAL RESOURCES. Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			✓	
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?			✓	
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?				✓
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?		✓		
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				✓

ENVIRONMENTAL IMPACTS Issues (and Supporting Information Sources):	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				✓
5. CULTURAL RESOURCES. Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	✓			
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?			✓	
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			✓	
d) Disturb any human remains, including those interred outside of formal cemeteries?			✓	
e) Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074?				✓
6. GEOLOGY AND SOILS. Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42. (V.Ia)				✓
ii. Strong seismic ground shaking?			✓	
iii. Seismic-related ground failure, including liquefaction?			✓	
iv. Landslides? (V.Ib-DEIR Figure 4.10-3)				✓
b) Result in substantial soil erosion or the loss of topsoil?			✓	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			✓	

ENVIRONMENTAL IMPACTS Issues (and Supporting Information Sources):	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property? (V.8b)				✓
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				✓
7. GREENHOUSE GAS EMISSIONS. Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			✓	
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?				✓
8. HAZARDS AND HAZARDOUS MATERIALS. Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?				✓
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?				✓
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within ¼ miles of an existing or proposed school?				✓
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				✓
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				✓
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				✓
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?				✓
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires,				✓

ENVIRONMENTAL IMPACTS Issues (and Supporting Information Sources):	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?				
9. HYDROLOGY AND WATER QUALITY. Would the project:				
a) Violate any water quality standards or waste discharge requirements?				✓
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local ground water table level (for example, the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?				✓
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?				✓
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?				✓
e) Create or contribute runoff water which would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?			✓	
f) Otherwise substantially degrade water quality?			✓	
g) Place housing within a 100-year flood-hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map? (V.1b-Figure 4.7-1 in DEIR)	✓			
h) Place within a 100-year flood-hazard area structures which would impede or redirect flood flows? (V.1b-Figure 4.7-1 in DEIR)	✓			
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				✓
j) Inundation by seiche, tsunami, or mudflow? (V.1b-Figure 4.7-2 in DEIR)	✓			

ENVIRONMENTAL IMPACTS Issues (and Supporting Information Sources):	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
10. LAND USE AND PLANNING. Would the project:				
a) Physically divide an established community?				✓
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				✓
c) Conflict with any applicable Habitat Conservation Plan or Natural Community Conservation Plan?				✓
11. MINERAL RESOURCES. Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state? (V.1a)				✓
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?				✓
12. NOISE: Would the project:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies?		✓		
b) Exposure of persons to or generation of excessive ground borne vibration or ground borne noise levels?				✓
c) Substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			✓	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?			✓	
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				✓
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				✓

ENVIRONMENTAL IMPACTS Issues (and Supporting Information Sources):	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
13. POPULATION AND HOUSING. Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	✓			
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				✓
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				✓
14. PUBLIC SERVICES. Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or need for new or physical altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:				
a) Fire protection?			✓	
b) Police protection?			✓	
c) Schools?			✓	
d) Parks?			✓	
e) Other public facilities?				✓
15. RECREATION. Would the project:				
a) Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?			✓	
b) Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				✓
16. TRANSPORTATION/TRAFFIC. Would the project:				
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	✓			
b) Conflict with an applicable congestion management program, including, but not limited to level of				✓

ENVIRONMENTAL IMPACTS Issues (and Supporting Information Sources):	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
service standard and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?				
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				✓
d) Substantially increase hazards due to a design feature (for example, sharp curves or dangerous intersections) or incompatible uses (for example, farm equipment)?				✓
e) Result in inadequate emergency access?				✓
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?				✓
17. UTILITIES AND SERVICE SYSTEMS. Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				✓
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction or which could cause significant environmental effects?			✓	
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				✓
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	✓			
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			✓	
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?			✓	
g) Comply with federal, state, and local statutes and regulations related to solid waste?				✓

ENVIRONMENTAL IMPACTS Issues (and Supporting Information Sources):	Potentially Significant Issues	Potentially Significant Unless Mitigation Incorporated	Less Than Significant Impact	No Impact
18. MANDATORY FINDINGS OF SIGNIFICANCE. Would the project:				
a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?				✓
b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of the past projects, the effects of other current projects, and the effects of probable future projects.)		✓		
c) Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?				✓

DISCUSSION OF ENVIRONMENTAL CHECKLIST

See Section **VI--ENVIRONMENTAL EVALUATION** for discussion.

IV. DETERMINATION

On the basis of this initial evaluation:

I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.	
I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.	
I find that the proposed project MAY have a significant effect on the environment and an ENVIRONMENTAL IMPACT REPORT is required.	✓*
I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect (1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and (2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.	
I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.	

Ron Powers, Principal Planner

2/14/2017
Date

* Topics to be addressed in EIR as identified and discussed in this Initial Study include:

- Aesthetics
- Air Quality and Greenhouse Gas Emissions
- Biological Resources – Riparian Habitat
- Cultural Resources – Historic Resources
- Hydrology – Exposure to Flood Hazards
- Public Services and Utilities
- Transportation and Traffic
- Land Use Review of Project Conflicts with Adopted Plans and Regulations

V. REFERENCES AND DATA SOURCE LIST

1. City of Santa Cruz General Plan and EIR
   a) Adopted June 26, 2012. *General Plan 2030*. Available online at: http://www.cityofsantacruz.com/departments/planning-and-community-development/general-plan-2030
   b) April 2012. "City of Santa Cruz *General Plan 2030* Final EIR." [SCH#2009032007] Certified June 26, 2012. Includes Draft EIR document, dated September 2011. Available online at: http://www.cityofsantacruz.com/departments/planning-and-community-development/general-plan-2030

2. City of Santa Cruz Adopted Plans.
   a) Adopted August 2016. *2015 Urban Water Management Plan*. Prepared by City of Santa Cruz Water Department.
   b) Adopted 2013. *City of Santa Cruz Local Hazard Mitigation Plan 2012-2017.*
   c) Adopted by City Council on February 28, 2006 and certified by the California Coastal Commission on May 9, 2008. *City-wide Creeks and Wetlands Management Plan*.

3. City of Santa Cruz Redevelopment Agency. July 1991. *Final Environmental Impact Report for the City of Santa Cruz Downtown Recovery Plan*. Includes Draft Environmental Impact Report, dated May 1991, prepared by EIP Associates.

4. Monterey Bay Unified Air Pollution Control District.
   a) April 17, 2013, Adopted. "Triennial Plan Revision 2009 – 2011." Final.
   b) August 2008. *2008 Air Quality Management Plan for the Monterey Bay Region*.
   c) February 2008. "CEQA Air Quality Guidelines."
   d) Adopted April 1996-Revised February 2016. *Guidelines for Implementing the California Environmental Quality Act*.

Initial Study Preparation: Dudek (Stephanie Strelow and Anais Schenk) in association with the City of Santa Cruz Planning and Community Development Department

VI. EXPLANATION OF ENVIRONMENTAL CHECKLIST RESPONSES

Introduction

As defined in the State CEQA Guidelines (section 15382 [pursuant to Public Resources Code sections 21083 and 21068]), a "significant effect on the environment" is:

> ...a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a

> significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether a physical change is significant.

Section 15064(d) of the State CEQA Guidelines indicates that an evaluation of significant effects " shall consider direct physical changes in the environment which may be caused by the project and reasonably foreseeable indirect physical changes in the environment which may be caused by the project." This section further specifies that an indirect physical change in the environment is a physical change in the environment which is not immediately related to the project, but which is caused indirectly by the project. An indirect physical change is to be considered only if that change is a reasonably foreseeable impact which may be caused by the project.

The proposed project consists of amendments to the adopted DRP, GP and LCP. Adoption of the plan amendments would not directly result in development, and the proposed amendments do not include site-specific development. However, the proposed amendments would expand the geographical areas in which increased building heights may be allowed under specified conditions, which could result in additional building floors as part of future redevelopment in the area. Therefore, the amendments could lead to reasonably foreseeable indirect physical changes in the environment as discussed below. For the purposes of the CEQA analysis, City staff has estimated a potential net increase in future development of approximately 711 residential units and approximately 2,200 square feet of office space with a net decrease of approximately 14,700 square feet of commercial building space within the study area.

1. <u>Aesthetics</u>.

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

- *Have a substantial adverse effect on a scenic vista;*
- *Substantially damage scenic resources, including visually prominent trees, rock outcrops, or historic buildings along a state scenic highway;*
- *Substantially degrade the existing visual character or quality of the site and surroundings, i.e., be incompatible with the scale or visual character of the surrounding area; or*
- *Create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.*

The project area is located along lower Pacific Avenue and lower Front Street, extending to the San Lorenzo River on the east and almost to Cedar Street on the west. According to maps developed for the City's *General Plan 2030* and included in the General Plan EIR, the project site is not within a mapped panoramic view. Urban views, including those of the project site, are identified along the San Lorenzo levee (SOURCE V.1c-Figure 4.3-1).

The existing DRP allows for building height increases to up to 75 feet in specified situations along Pacific Avenue north of Cathcart Street and for an already developed parcel on the southeast

corner of Cathcart and Pacific. The proposed amendments would permit Increases in allowable heights in three locations as shown on Figure 2. The EIR for the DRP concluded that the additional height areas would not significantly impact the visual character of the area with implementation of the development standards and design guidelines included in the DRP, including upper floor setbacks.

Although, the proposed project does not include site-specific development proposal, the proposed amendments would expand the geographical areas in which increased building heights may be allowed under specified conditions. The Plan also includes design guidelines and development standards that would remain largely unchanged and would serve to guide structural siting and design. However, analysis of potential increases in building height and effects of future development on the visual character of the project area and surroundings require further review in an EIR. The analysis will review potential future building mass and scale based on a building mass study being prepared for the City Planning and Community Development Department. The EIR analysis will address impacts to scenic views, scenic resources, and light and glare, although no significant impacts are anticipated.

2. <u>Agriculture and Forest Resources</u>.

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

- *Convert prime farmland, unique farmland or farmland of state importance to non-agricultural uses;*
- *Conflict with existing zoning for agricultural use or a Williamson Act contract;*
- *Conflict with existing zoning for, or cause rezoning of, forest land;*
- *Result in the loss of forest land or conversion of forest land to non-forest use; or*
- *Involve other changes to the existing environment which, due to their location or nature, could result in conversion of farmland to non-agricultural use or conversion of forest land to non-forest use.*

The project area does not contain prime or other agricultural lands as mapped on the State Farmland Mapping and Monitoring Program, but is designated as "Urban and Built-up Land" (SOURCE V.1b-DEIR Figure 4.3-1). The area is not designated for agricultural uses in the City's General Plan and is not located adjacent to lands that are in agricultural production. Therefore, the project would not interfere or conflict with agricultural operations. There are planted street trees within the project area, but these trees are not considered timber resources. The project area is not zoned Timberland Preserve. Thus, the proposed project would not result in or lead to the conversion of agricultural or forest lands to other uses.

3. <u>Air Quality</u>.

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

- *Conflict with or obstruct implementation of the applicable air quality plan;*

- *Violate any air quality standards or contribute substantially to an existing or projected air quality violation, i.e. result in generation of emissions of or in excess of 137 pounds per day for VOC or No_x, 550 pounds per day of carbon monoxide, 150 pounds per day of sulfur oxides (SO_x), and/or 82 pounds per day of PM_{10} (due to construction with minimal earthmoving on 8.1 or more acres per day or grading/excavation site on 2.2 or more acres per day for PM_{10}) pursuant to impact criteria for significance developed by the MBUAPCD (MBUAPCD, "CEQA Air Quality Guidelines," February 2008);*
- *Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors);*
- *Expose sensitive receptors to substantial pollution concentrations; or*
- *Create objectionable odors affecting a substantial number of people.*

(a) Conflict with Air Quality Management Plan. In 1991, the Monterey Bay Unified Air Pollution Control District (MBUAPCD), now named to the Monterey Bay Air Resources District (MBARD), adopted the *Air Quality Management Plan* (AQMP) for the Monterey Bay region in response to the California Clean Air Act of 1988, which established specific planning requirements to meet the ozone standards. The MBUAPCD has updated the AQMP five times. The most recent update, the Triennial Plan Revision 2009-2011, adopted in 2013, builds on and updates information developed in past AQMPs. The primary elements from the 2008 AQMP that were updated in the 2012 revision include the air quality trends analysis, emission inventory, and mobile source programs (SOURCE V.4a). The proposed project could indirectly lead to increased development intensity as properties in the project area redevelop due to proposed expansion of "Additional Height Zones" and potential increased building heights. Potential conflicts with the AQMP will reviewed in the EIR based on MBARD methodologies.

(b-c) Project Emissions. To protect public health, both the U.S. Environmental Protection Agency (EPA) and the California Air Resources Board (CARB) have established ambient air quality standards (AAQS) that are the maximum levels of ambient (background) air pollutants considered safe, with an adequate margin of safety to protect public health and welfare. The national standards address six criteria pollutants, including ozone, carbon monoxide, nitrogen dioxide, sulfur dioxide, fine particulate matter (both PM_{10} and $PM_{2.5}$, which refer to particles less than 10 microns and 2.5 microns, respectively), and lead. The state standards, which are generally more stringent than the federal standards, apply to the same pollutants as the federal standards do, but also include sulfate, hydrogen sulfide, and vinyl chloride.

The North Central Coast Air Basin (NCCAB), in which the project site is located, is under the jurisdiction of the MBARD and includes Santa Cruz, Monterey and San Benito Counties. The NCCAB is currently in attainment for the federal PM_{10}, ozone, nitrogen dioxide, sulfur dioxide, and carbon monoxide standards and is unclassified or attainment for the federal PM_{25} and lead standards. The basin is designated non-attainment for the state ozone and PM_{10} standards, and is in attainment for all other state standards, except for carbon monoxide for which it is unclassified. The MBARD's 2013 AQMP identifies a continued trend of declining ozone emissions in the Air Basin primarily related to lower vehicle miles traveled (SOURCE V.4a).

The project could indirectly result in generation of air emissions through new regional vehicle trips associated with potential future development accommodated by the proposed plan amendments. The timing, rate and amount of future development are not known. Future development projects are required to conduct air emissions calculations for projects whose size exceeds significant screening sizes presented in the AQMP to determine whether emissions exceed MBARD's adopted significance thresholds or potentially violate air quality standards. However, potential indirect impacts related to air emissions resulting from future development will be evaluated in an EIR. The MBARD's "CEQA Air Quality Guidelines," indicate that 8.1 acres could be graded per day with minimal earthmoving or 2.2 acres per day with grading and excavation without exceeding the PM_{10} threshold of 82 lbs/day. The project area is approximately 12 acres in size, comprised of multiple properties. It is unlikely that any single future development project would exceed these guidelines.

(d) Sensitive Receptors. The project area is located within the developed downtown area of the city of Santa Cruz. Some existing buildings support upper level residential uses, and the DRP supports additional upper floor residential uses. Given the City's existing General Plan designations and zone districts, future development would consist of a mix of commercial and residential uses, but would not be expected to result in industrial development or uses that typically could expose sensitive receptors to substantial pollutant concentrations from a stationary emissions source. For CEQA purposes, a sensitive receptor is defined as any residence, including private homes, condominiums, apartments, and living quarters; education resources such as preschools and kindergarten through grade twelve (k-12) schools; daycare centers; and health care facilities such as hospitals or retirement and nursing homes (SOURCE V.4c).

Diesel particulate matter was identified as a toxic air contaminant (TAC) by the State of California in 1998. Following the identification of diesel as a TAC, the California Air Resources Board (CARB) developed a comprehensive strategy to control diesel PM emissions. The "Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles"—a document approved by ARB in September 2000—set goals to reduce diesel PM emissions in California by 75% by 2010 and 85% by 2020. This objective would be achieved by a combination of approaches (including emission regulations for new diesel engines and low sulfur fuel program). An important part of the Diesel Risk Reduction Plan is a series of measures for various categories of in-use on- and off-road diesel engines, which are generally based on the following types of controls:

- Retrofitting engines with emission control systems, such as diesel particulate filters or oxidation catalysts,
- Replacement of existing engines with new technology diesel engines or natural gas engines, and
- Restrictions placed on the operation of existing equipment.

Once the Diesel Risk Reduction Plan was adopted, the CARB started developing emission regulations for a number of categories of in-use diesel vehicles and equipment. In July 2007, the CARB adopted regulations for in-use, off-road diesel vehicles that will significantly reduce

particulate matter emissions by requiring fleet owners to accelerate turnover to cleaner engines and install exhaust retrofits.

Future development in the project area as a result of the proposed amendments would result in construction that may involve use of trucks and equipment that will emit diesel exhaust, including diesel particulate matter, a designated toxic air contaminant. There are some existing sensitive receptors (residential uses) within the project area that could be exposed to diesel exhaust emissions associated with future construction in the area. It is noted that future redevelopment of the study area could occur without the proposed plan amendments, but the proposed DRP amendment could result in additional building height and floors. Construction-related diesel emissions would be of limited duration (i.e., primarily during grading) and temporary. Furthermore, the State is implementing emission standards for different classes of on- and off-road diesel vehicles and equipment. Additionally, Title 13 of the California Code of Regulations (section 2485(c)(1)) prohibits idling of a diesel engine for more than five minutes in any location. Thus, it is not expected that the proposed project would indirectly expose sensitive receptors to diesel emissions and associated risks, but this will be further reviewed in the EIR.

(e) Odors. The proposed DRP, GP and LCP amendments would not result in changes to the type of permitted commercial and residential uses for the area. These existing permitted uses within the City's developed downtown setting typically would not be the type to create objectionable odors.

4. Biological Resources.

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

- *Have a substantial adverse effect, either directly or through habitat modifications on; or substantially reduce the number or restrict the range of any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;*
- *Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or US Fish and Wildlife Service;*
- *Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;*
- *Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;*
- *Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;*
- *Conflict with the provisions of an adopted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other approved local, regional, or state habitat conservation plan;*
- *Substantially reduce the habitat of a fish or wildlife species;*

- *Cause a fish or wildlife population to drop below self-sustaining levels; or*
- *Threaten to eliminate a plant or animal community.*

(a-c) Special Status Species and Sensitive Habitat Areas. The project area is currently developed and does not support special status species. According to maps developed for the City's *General Plan 2030* and included in the General Plan EIR, the project area is not within a mapped sensitive habitat area (SOURCE V.1c-Figure 4.8-3). However, the San Lorenzo River is located along the eastern edge of the study area. The City's *City-wide Creeks and Wetlands Management Plan* establishes requirements for structural setbacks and development standards and guidelines that would be applicable to future development. The proposed plan amendments would expand areas where additional building heights may be permitted. Although, taller buildings would not be expected to adversely affect the adjacent river habitat, potential effects on aquatic habitat and species due to potential increased building heights and increased shadows and/or lighting will be further assessed in an EIR.

(d) Wildlife Movement/Nesting. Wildlife corridors are segments of land that provide a link between these different habitats while also providing cover. Wildlife dispersal corridors, also called dispersal movement corridors, wildlife corridors or landscape linkages, are features whose primary wildlife function is to connect at least two significant or core habitat areas and which facilitate movement of animals and plants between two or more otherwise disjunct habitats (SOURCE V.1b-DEIR). Three main corridors have been identified within the City that could provide connectivity between core habitats within or adjacent to the city: western corridor (Moore Creek), central corridor (San Lorenzo River and major tributaries), and eastern corridor (Arana Gulch) (Ibid.).

The project area is within an existing developed area, and future redevelopment would not affect wildlife movement along the river corridor as future development would be within the existing development footprint in the downtown area. Furthermore, future development with or without the proposed plan amendments would be required to comply the City's *City-wide Creeks and Wetlands Management Plan*, which establishes requirements for structural setbacks that would protect wildlife movement in the corridor. Therefore, adoption and implementation of the proposed plan amendments would not directly or indirectly substantially interfere with wildlife movement or with established wildlife corridors.

There are areas along the San Lorenzo River of known bird nesting sites. Further review of adjacent habitat and resources will be provided in an EIR. While the project will not directly result in new construction that would affect nesting birds, future development accommodated by the proposed amendments could result in impacts to nesting birds at the time of construction. However, measures in the *City-wide Creeks and Wetlands Management Plan* include pre-construction surveys where construction may affect nesting birds in order to prevent disturbance if nesting is occurring when construction is initiated. Tree removal during the breeding season (generally March 1 to August 1) also could result in direct mortality to nesting avian species protected under the Migratory Bird Treaty Act due to destruction if active nest sites are present. Construction activity for a prolonged period could affect nesting adults and result in nest

abandonment or failure. This is considered *a potentially significant impact*. Implementation of the pre-construction nesting surveys as set forth in the adopted Creeks Plan would reduce impacts to a less-than-significant level.

(e) Conflicts with Local Ordinances - Tree Removal. There are planted street trees throughout the downtown area. Future development under the DRP could result in tree removal, which could also occur under existing conditions without the proposed plan amendments.

Chapter 9.56 of the City Municipal Code defines heritage trees, establishes permit requirements for the removal of a heritage tree, and sets forth mitigation requirements as adopted by resolution by the City Council. Resolution NS-23,710 adopted by the City Council in April 1998 establishes the criteria for permitting removal of a heritage tree and indicates that one or more of the following findings must be made by the Director of Parks and Recreation:

1) The heritage tree or heritage shrub has, or is likely to have, an adverse effect upon the structural integrity of a building, utility, or public or private right of way;
2) The physical condition or health of the tree or shrub, such as disease or infestation, warrants alteration or removal; or
3) A construction project design cannot be altered to accommodate existing heritage trees or heritage shrubs.

City regulations require tree replacement for approved to include replanting three 15-gallon or one 24-inch size specimen or the current retail value which shall be determined by the Director of Parks and Recreation. Removal would be permitted if found in accordance with the above criteria and requirements. Approval of a tree removal permit automatically requires replacement trees as set forth above. Removal of a heritage tree that is consistent with the criteria, provisions, and requirements set forth in City ordinances is not considered a significant impact. Since future development would be subject to City regulations, any future removal of trees would be required to comply with City requirements, and therefore, any removed heritage trees would be replaced in the ratio required by the City and no significant impacts related to conflicts with local ordinances would occur.

(f) Habitat Conservation Plans. There are no adopted Habitat Conservation or Natural Community Conservation Plans in the project vicinity.

5. Cultural Resources.

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

- *Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5 of the State CEQA Guidelines*;*
- *Cause a substantial adverse change in the significance of an archaeological resource;*
- *Disturb any human remains, including those interred outside of formal cemeteries;*

- *Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature; or*
- *Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code 21074.*

**Pursuant to CEQA Guidelines, "historical resources include a resource listed in, or determined to be eligible for listing in the California Register of Historical Resources; a resource included in a local register of historical resources; and any object, building, structure, site, area, place, record, or manuscript which a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California.*

A "substantial adverse change in the significance of an historical resource" means physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historical resource would be materially impaired. The significance of an historical resource is materially impaired when a project demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources or local register of historical places.

(a) Historical Resources. According to maps developed for the City's *General Plan 2030* and included in the General Plan EIR, the southwestern corner of the project area may be within a designated national historic district (SOURCE V.1c-DEIR Figure 4.9-4). Additionally, there are some structures within the study area that included in the City's Historic Building Survey. The proposed DRP, GP and LCP amendments do not change the area of future development, and the overall potential building footprints would remain unchanged. The proposed DRP amendments would allow for increased height in specific locations and under specified conditions, but would not change the area in which development and/or redevelopment could occur under existing adopted plans. However, potential indirect impacts to historical resources as a result of the project's proposed increased heights will be assessed in an EIR.

(b, d) Archaeological Resources. According to maps developed for the City's *General Plan 2030* and included in the General Plan EIR, the project site is within a mapped "sensitive" archaeological area (SOURCE V.1b-DEIR Figure 4.9-1) and within a "sensitive" historical archaeological area (SOURCE V.1b-DEIR Figure 4.9-3). The DRP EIR reported that archaeological sensitive areas are within several blocks of the downtown area, and excavations for large buildings and other construction could uncover buried unknown resources, although deep subsurface prehistoric sites were not expected (SOURCE V.3).

The City's General Plan (Action HA1.2.2) requires preparation of archaeological investigations on sites proposed for development within designated sensitive archaeological and/or historical archaeological areas, except for exempt uses within "sensitive" areas as described below.

> HA1.2.2. Require preparation of archaeological investigations on sites proposed for development within areas identified as "Highly Sensitive" or "Sensitive" on the "Areas of Historical Archaeological Sensitivity" map, except for exempt uses within "Sensitive" areas as described below, prior to approval of development

> permits. The investigation shall include archival research, site surveys and necessary supplemental testing as may be required, conducted by a qualified archaeologist. The significance of identified resources shall be ascertained in accordance with CEQA definitions, and impacts and mitigation measures outlined if significant impacts are identified, including, but not limited to recovery options and onsite monitoring by an archaeologist during excavation activities. A written report describing the archeological findings of the research or survey shall be provided to the City. Minor projects with little excavation may be exempt from this requirement. Minor projects generally involve spot excavation to a depth of 12 inches or less below existing grade, or uses that have virtually no potential of resulting in significant impacts to archaeological deposits. Exempt projects may include: building additions, outdoor decks, or excavation in soil that can be documented as previously disturbed.

The General Plan EIR included Mitigation Measure 4.9-1 that requires archaeological investigations for any designated site within areas of archaeological sensitivity as well as sensitive historical archaeological areas. Therefore, future site-specific development projects in designated sensitive areas would be required to comply with this provision and conduct archaeological investigations and incorporate measures if needed to mitigation impacts to archaeological resources. Additionally, all development is subject to provisions of the City's Municipal Code section 24.12.430 that requires construction to stop if archaeological resources or human remains are accidentally discovered during construction and sets forth a procedure for notification, evaluation and mitigation, if the find is determined to be a significant resource. The DRP EIR includes Mitigation 4.3-1 that requires stopping of construction if cultural resources are identified, which is similar to the provisions of the City's Municipal Code described above.

The proposed DRP, GP and LCP amendments do not change the area of future development, and the overall potential building footprints would remain unchanged. The proposed DRP amendments would allow for increased height in specific locations and under specified conditions, but would not change the area in which development and/or redevelopment is currently permitted. Therefore, with implementation of required archaeological investigations required by the General Plan, future development indirectly accommodated under the existing DRP or with the proposed DRP and LCP amendments would not result in a significant impact.

(c) Paleontological Resources. According to maps developed for the City's *General Plan 2030* and included in the General Plan EIR, the project area is located within an area mapped as Holocene Alluvium formation (SOURCE V.1b-DEIR Figure 4.9-5). Four geologic units within the City are known to contain fossils: Late Pleistocene alluvium; the Purisima Formation; the Santa Cruz Mudstone; and the Santa Margarita Sandstone (SOURCE V.1b-DEIR). Although Holocene alluvium is generally considered too young to contain paleontological resources, this geologic unit is moderately sensitive for paleontological resources because it is underlain by sedimentary geologic units that have a high paleontological sensitivity (Ibid.). General Plan Action HA1.2.3 requires the City to notify applicants within paleontologically sensitive areas of the potential for encountering such resources during construction and condition approvals that work would be halted and resources

examined in the event of encountering paleontological resources during construction. If the find is significant, the City would require treatment of the find in accordance with the recommendations of the evaluating paleontologist. Treatment may include, but is not limited to, specimen recovery and curation or thorough documentation.

The proposed DRP, GP and LCP amendments do not change the area of future development, and overall building footprints would remain unchanged. Future construction within the project area could result in discovery of unknown paleontological resources with or without the proposed project. With application of the notification process required by the General Plan, future development would not result in significant impacts in the event that paleontological resources are discovered during construction.

(e) Tribal Cultural Resources. State Assembly Bill 52, effective July 1, 2015, recognizes that California Native American prehistoric, historic, archaeological, cultural, and sacred places are essential elements in tribal cultural traditions, heritages, and identities. The law establishes a new category of resources in the California Environmental Quality Act called "tribal cultural resources" that considers the tribal cultural values in addition to the scientific and archaeological values when determining impacts and mitigation. Public Resources Code section 21074 defines a "tribal cultural resource" as either:

(1) Sites, features, places, cultural landscapes, sacred places and objects with cultural value to a California Nature American tribe that is either listed, or determined to be eligible for listing, on the national, state, or local register of historic resources, or

(2) A resource determined by the lead agency chooses, in its discretion and supported by substantial evidence, to treat as a tribal cultural resource.

The California Public Resources Code section 21084.2 now establishes that "[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment." The Public Resources Code requires a lead agency to consult with any California Native American tribe that requests consultation and is traditionally and culturally affiliated with the geographic area of a proposed project. No Native American tribe has contacted the City of Santa Cruz and requested consultation.

6. Geology and Soils.

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

- *Expose people or structures to potential substantial adverse effects resulting from the rupture of a known earthquake fault, seismic ground shaking, landslides, or seismic-related ground-failure, including liquefaction, and that cannot be mitigated through the use of standard engineering design techniques;*

- *Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the project and potentially result in an onsite or offsite landslide or slope failure;*
- *Result in substantial soil erosion or the loss of topsoil and subsequent sedimentation into local drainage facilities and water bodies;*
- *Be located on an expansive soil, as defined by the Uniform Building Code (1997) or subject or other soil constraints that might result in deformation of foundations or damage to structures, creating substantial risks to life or property; or*
- *Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available.*

(a-ii-iv,c) Seismic and Geologic Hazards. The project site is located in a seismically active region of California and the region is considered to be subject to very intense shaking during a seismic event. The City of Santa Cruz is situated between two major active faults: the San Andreas, approximately 11.5 miles to the northeast and the San Gregorio, approximately nine miles to the southwest. There are no active fault zones or risk of fault rupture within the City (SOURCE V.1b-DEIR).

According to maps developed as part of the City's recently adopted *General Plan 2030* and included in the General Plan and General Plan EIR, the project area is located in an area identified as being subject to liquefaction hazards (SOURCE V.1a and V.1b-DEIR Figure 4.10-4). According to maps developed as part of the City's recently adopted *General Plan 2030* and included in the General Plan EIR, the project site is not located in a mapped landslide area (SOURCE V.1b-DEIR Figure 4.10-3.

The proposed DRP, GP and LCP amendments do not change the area of future development, and overall building footprints would remain unchanged. The DRP EIR reported that the age and construction of buildings was a determining factor related to damages sustained during the 1989 Loma Prieta earthquake rather than the property location, especially unreinforced masonry buildings. However, all new construction must conform to the requirements of the California Building Code (CBC). Adherence to existing regulations and standards, including the CBC would minimize harm to people and structures from adverse geologic events and conditions. Buildings will be required to be designed in accordance with the latest edition of the California Building Code, which sets forth structural design parameters for buildings to withstand seismic shaking without substantial structural damage. Conformance to the CBC as required by state law and the City would ensure the maximum practicable protection available for structures and their associated trenches, excavations and foundations. Project designs are required to include the application of CBC Seismic Zone 4 standards (SOURCE V.1b-DEIR volume). The continuation of design review and code enforcement to meet current seismic standards is the primary mitigation strategy to avoid or reduce damage from an earthquake, and seismic safety standards are a requirement for all building permits (SOURCE V.2b). It is also noted that since the 1989 Loma Prieta Earthquake, all commercial and public buildings have been seismically retrofitted, and as infrastructure is repaired or replaced, updated seismic safety standards are incorporated (Ibid.).

Typically, standard geotechnical engineering procedures, soil testing, and proper design can identify and mitigate liquefiable soils. By using the most up-to-date standards, potential damage

related to liquefaction, including subsidence and settlement, can be reduced to levels that are generally considered acceptable (SOURCE V.1b-DEIR volume). Section 24.14.070 of the City's Municipal Code requires preparation of a site-specific geotechnical investigation for all development, except less than four units, in areas identified in the General Plan as having a high liquefaction potential to assess the degree of potential liquefaction and recommend appropriate design/mitigation measures.

Therefore, future development in the project area with or without the proposed plan amendments would be required to be designed in accordance with CBC requirements and recommendations of project-level geotechnical reports, which would avoid potentially significant impacts due to exposure to seismic hazards, including liquefaction.

(b, d) Soils and Erosion. The project area is currently developed. According to the City's General Plan EIR, the project site is not located within an area subject to high erosion (SOURCE V.1b-DEIR volume). The proposed DRP and LCP amendments do not change the area of future development, and overall building footprints would remain unchanged. Therefore, no impacts would directly or indirectly occur with adoption and implementation of the proposed plan amendments.

(e) Use of Septic Systems. The project will be connected to City sanitary sewers, and would not use septic systems.

7. Greenhouse Gas Emissions.

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

- *Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment; or*
- *Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.*

(a-b) Greenhouse Gas Emissions. Climate change refers to any significant change in measures of climate, such as average temperature, precipitation, or wind patterns over a period of time. Climate change may result from natural factors, natural processes, and human activities that change the composition of the atmosphere and alter the surface and features of the land. Significant changes in global climate patterns have recently been associated with global warming, an average increase in the temperature of the atmosphere near the Earth's surface, attributed to accumulation of greenhouse house gas (GHG) emissions in the atmosphere. Greenhouse gases trap heat in the atmosphere, which in turn heats the surface of the Earth. Some GHGs occur naturally and are emitted to the atmosphere through natural processes, while others are created and emitted solely through human activities (SOURCE V.1b-DEIR volume). Climate change models predict changes in temperature, precipitation patterns, water availability, and rising sea levels, and these altered conditions can have impacts on natural and human systems in California that

can affect California's public health, habitats, ocean and coastal resources, water supplies, agriculture, forestry, and energy use (Ibid.).

The most common GHG that results from human activity is carbon dioxide, followed by methane and nitrous oxide (SOURCE V.1b-DEIR volume). The primary contributors to GHG emissions in California are transportation, electric power production, industry, agriculture and forestry, and other sources, including commercial and residential uses. Approximately 81% of California's emissions are carbon dioxide produced from fossil fuel combustion (Ibid.).

The State of California passed the Global Warming Solutions Act of 2006 (AB 32), which requires reductions of GHG emissions generated within California. The Governor's Executive Order S-3-05 and AB 32 (Health & Safety Code, § 38501 et seq.) both seek to achieve 1990 emissions levels by the year 2020. Executive Order S-3-05 further requires that California's GHG emissions be 80 percent below 1990 levels by the year 2050. AB 32 defines GHGs to include carbon dioxide, methane, nitrous oxide, hydrocarbons, perfluorocarbons and sulfur hexafluoride.

The CARB is the lead agency for implementing AB32. In accordance with provisions of AB 32, CARB has completed a statewide Greenhouse Gas Inventory that provides estimates of the amount of GHGs emitted to, and removed from, the atmosphere by human activities within California. In accordance with requirements of AB32, a Scoping Plan was adopted by CARB in December 2008 and updated in 2014. The Scoping Plan and 2014 Update identify emissions reduction measures and actions related to energy, transportation, agriculture, water conservation and management, waste management, natural resources, green building, and cap-and-trade actions.

The City's *General Plan 2030* includes goals, policies and actions on climate change, including reducing community-wide greenhouse gas emissions 30 percent by 2020, reducing 80 percent by 2050 (compared to 1990 levels), and for all new buildings to be emissions neutral by 2030. In October 2012, the City also adopted a "Climate Action Plan" that outlines the actions the City will take over the next ten years to reduce greenhouse gasses by 30%. The CAP addresses citywide greenhouse emissions and reduction strategies. The CAP outlines the actions the City and its partners may take pertaining to reduction of greenhouse gas emissions to meet the goals and implement the policies and actions identified in the *General Plan 2030*. The CAP provides City emissions inventories, identifies an emissions reduction target for the year 2020, and includes measures to reduce energy use, reduce vehicle trips, implement water conservation programs, reduce emissions from waste collection, increase solar systems, and develop public partnerships to aide sustainable practices. Measures are outlined for the following sectors: municipal, residential, commercial, and community programs.

The project could indirectly result in generation of air emissions through new regional vehicle trips associated with potential future development accommodated by the proposed plan amendments. The timing, rate and amount of future development are not known. Future development projects are required to conduct air emissions calculations for projects whose size exceeds significant screening sizes presented in the AQMP to determine whether emissions exceed MBARD's adopted significance thresholds or potentially violate air quality standards, and emissions

calculations include GHG emissions. However, indirect GHG emissions resulting from future development accommodated by the proposed project will be evaluated in the EIR as part of the air quality analysis. Potential project conflicts with the City's adopted CAP will be addressed in the EIR.

8. Hazards.

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

- *Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;*
- *Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment;*
- *Emit hazardous emissions or handle hazardous materials or waste within ¼ miles of an existing or proposed school;*
- *Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment;*
- *Impair the implementation of or physically interfere with an adopted emergency response or evacuation plan; or*
- *Expose people or structures to a significant risk of loss, injury or death involving wildland fires.*

(a-d) Hazardous Materials. The project consists of adoption of amendments to the adopted DRP, GP and LCP. The proposed DRP and LCP amendments do not change the area of future development or uses permitted in the area. The range of commercial and residential uses allowed in the downtown area typically would not result in creation of risks associated with hazardous material transport, use, or disposal and would not result in exposure to health hazards or creation of a health hazard. The project area is not included on a list of hazardous materials compiled pursuant to Government Code section 65962.5 (known as the Cortese List).

(e-f) Location Near Airports. The site is not located near an airport or airstrip. The site is not included in a state hazardous materials site list.

(g) Emergency Response. The City of Santa Cruz has an Emergency Operations Plan (EOP) that details the City's concept of operations in response to disasters. The EOP outlines how information and resources are coordinated for disasters or threat of disasters. The City of Santa Cruz Emergency Operations Center Manager endeavors to conduct annual trainings, tabletop exercises and other drills that support the preparedness and response capabilities of city staff and the readiness of the Emergency Operations Center. Information updates and tabletop discussions are conducted to clarify staff roles and responsibilities in the EOC, in the Department Operations Centers (DOCs) and in the field to help protect people and property (SOURCE V.2b). The proposed plan amendments and potential future development accommodated by the DRP proposed

expansion of additional height zones would not impair or physically interfere with the implementation of this emergency operations plan.

(h) Wildland Fire Hazard. According to maps developed as part of the City's recently adopted *General Plan 2030* and included in the General Plan EIR and General Plan, the project area is not located within a high fire hazard area (SOURCE V.1b-DEIR Figure 4.6-1). The project area is within the developed downtown of the city of Santa Cruz.

9. Hydrology.

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

- *Violate any water quality standards or waste discharge requirements;*
- *Substantially deplete groundwater supplies or interfere substantially with groundwater recharge;*
- *Substantially alter the existing drainage pattern of the site or area or alteration of a stream in a manner that would result in substantial offsite erosion or siltation or flooding;*
- *Substantially increase the rate or amount of surface runoff which would exceed capacity of existing or planned storm drain facilities, cause downstream or offsite drainage problems, or increase the risk or severity of flooding in downstream areas;*
- *Substantially degrade surface water quality;*
- *Result in construction of habitable structures within a 100-year floodplain as mapped on a Federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map, which would expose people or structures to a significant risk of loss, injury or death due to flooding;*
- *Locate structures within a 100-year flood hazard area that would impede or redirect flood flows;*
- *Expose people or structures to a significant risk of loss, injury, or death involving flooding as a result of the failure of a levee or dam; or*
- *Expose people or structures to a significant risk of loss, injury or death as a result in inundation by seiche, tsunami, or mudflow.*

(a) Violation of Water Quality Standards. The proposed project does not include discharges that would result in violation of water quality standards.

(b) Groundwater. The project site is located within a developed area and would not affect groundwater supplies.

(c-e, f) Drainage and Water Quality. The project area is served by a public storm drainage system. The area is developed with nearly, if not all of the area, covered with impervious surfaces. Future redevelopment would not substantially increase impervious surfaces and would not alter existing drainage patterns. Future development would be subject to the City's stormwater management requirements in which both volume and quality of stormwater runoff would be assessed.

Construction activity on projects that disturb one or more acres of soil must obtain coverage under the State's General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit, 99-08-DWQ). Construction activity subject to this permit includes clearing, grading, and disturbances to the ground such as stockpiling or excavation. The Construction General Permit requires the development and implementation of a Storm Water Pollution Prevention Plan (SWPPP). The SWPPP must list best management practices (BMPs) that the discharger would use to protect storm water runoff and the placement of those BMPs.

The proposed DRP, GP and LCP amendments do not change the area of future development, and the overall potential building footprints would remain unchanged. The proposed DRP amendments would allow for increased height in specific locations and under specified conditions, but would not change the area in which development and/or redevelopment is currently permitted. Therefore, with implementation of required stormwater management plans, future development indirectly accommodated under the existing DRP or with the proposed DRP and LCP amendments would not result in a significant impact related to drainage. The City's regulatory requirements and BMPs, as detailed in the "Stormwater Best Management Practices Manual" published by the City's Public Works Department, must be implemented, and projects over one acre in size would be required to prepare a SWPPP to protect water quality during construction.

(g-j) Flood Hazards. According to maps developed as part of the City's recently adopted *General Plan 2030* and included in the General Plan and General Plan EIR, the project area, as is all of the Downtown area, is located in an area identified as being subject to flood hazards along the San Lorenzo River (SOURCE V1.a and V.1b-DEIR Figure 4.7-1). According to maps developed as part of the City's recently adopted *General Plan 2030* and included in the General Plan and General Plan EIR, the project site is located in a mapped tsunami inundation zone (SOURCE V1.a and V.1b-DEIR Figure 4.10-3). As indicated above, the proposed DRP, GP and LCP amendments do not change the area of future development, and the overall potential building footprints would remain unchanged. The proposed DRP amendments would allow for increased height in specific locations and under specified conditions, but would not change the area in which development and/or redevelopment is currently permitted. However, review of hazards due to potential San Lorenzo River flooding, tsunami inundation and sea level rise in the project area will be examined in the EIR.

10. Land Use and Planning.

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

- *Physically divide an established community;*
- *Conflict with any applicable City land use plan, policy or regulation adopted for the purpose of avoiding or mitigating an environmental effect; or*
- *Conflict with any applicable Habitat Conservation Plan or Natural Community Conservation Plan.*

The project site is located at the edge of a developed area of the City. Construction of the project would not physically divide an established community.

(b-c) Consistency with Local Policies/ Plans. Review of potential project conflicts with plans, policies or regulations adopted for the purpose of avoiding or mitigating an environmental effect will be assessed in the EIR. The project site is not subject to any Habitat Conservation or Natural Community Conservation Plans.

12. Noise.

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

- *Expose persons to or generate noise levels in excess of standards established in the County's "Land Use Compatibility for Community Noise" chart;*
- *Expose persons to or generate excessive groundborne vibration or groundborne noise levels;*
- *Result in a substantial permanent increase in ambient noise levels above existing levels if it will expose outdoor activity areas of noise-sensitive land uses to a 5 dB increase in noise where existing noise levels are below 60 dBA L_{dn}, a 3 dB increase in noise where existing noise levels are between 60 and 65 dBA L_{dn}, or a 1.2 dB increase in noise where existing noise levels are above 65 dBA L_{dn}. An outdoor noise standard of 65 dBA (CNEL) at the property line shall be used in the assessment of operational noise impacts; or*
- *Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above existing levels.*

The project site is not located near an airport or private airstrip.

(a-b) Exposure to Noise. The project area is located in the downtown area of the city of Santa Cruz. Ambient noise levels are characterized by vehicular traffic, activities along Pacific and adjoining streets, and in limited cases music venues. Existing and future noise contours for selected roadways were updated as part of the City's *General Plan 2030*. An existing sound level of 65-66 decibels (dBA), measured in Ldn (Day/Night Average Sound Level), was identified within approximately 70 to 90 feet of the centerline of Front Street south of Soquel Avenue with an estimated future sound level of 66-67 dBA with General Plan buildout. An existing sound level of 60 dBA was identified within approximately 80 feet of the centerline of Pacific Avenue between Mission Street and Laurel Street with an estimated future sound level of 62 dBA (SOURCE V.1b-DEIR volume).

For commercial uses, normally acceptable exterior noise levels are 70 decibels and conditionally acceptable levels are identified as 60-70 dBA (SOURCE V.1b-DEIR volume). For multi-family residential uses, normally acceptable exterior noise levels are 65 decibels and conditionally acceptable levels are identified as 60-70 decibels (Ibid.). An interior CNEL of 45 dBA is mandated by the State of California Noise Insulation Standards (California Code of Regulations, Title 24, Part 6, Section T25 28) for multiple-family dwellings and hotel and motel rooms. Since normal noise attenuation

within residential structures with closed windows is about 20 dBA, an exterior noise exposure of 65 dBA Ldn allows the interior standard to be met without any specialized structural attenuation (e.g., dual paned windows) (Ibid.). For typical residential construction (i.e., light frame construction with ordinary sash windows), the minimum amount of exterior to interior noise reduction is at least 20 dBA with exterior doors and windows closed and approximately 15 dBA with windows partially open for ventilation. Buildings constructed of stucco or masonry with dual-glazed windows and solid core exterior doors can be expected to achieve an exterior to interior noise reduction of approximately 25-30 dBA (Ibid.).

Impact Analysis. Future development in the project area would be exposed to exterior and / or interior noise levels that exceed local and state requirements. However, the project area is not within locations that would expose people to noise in excess of established standards. This is considered a *less-than-significant impact*.

The proposed DRP, GP and LCP amendments do not change the area of future development, and overall building footprints would remain unchanged. However, proposed amendments to expand areas of increased height could result in additional residential development in upper floors of future buildings, which could exposure additional residents to noise from traffic and activities in the downtown area. City staff has estimated a potential increase of approximately 711 residential units, which represents approximately 274 more units than potentially could be potentially developed under the existing General Plan. However, existing and future ambient noise levels would be within acceptable or conditionally acceptable ranges. Furthermore, Mitigation Measures 4.6-2(a) and 4.6-2(b) in the DRP EIR call for preparation and implementation of noise studies for projects that could be exposed to noise levels in excess of those defined as "normally acceptable" (SOURCE V.3), and as indicated above, window, insulation and other building material selection can reduce interior sound levels.

Implementation of the following mitigation would reduce the impact to a less-than-significant level.

> MITIGATION MEASURE NOISE-1: Require preparation and implementation of acoustical studies for future residential development along Front Street to specific building design features that meet state interior sound levels.

(c) Permanent Noise Increases. The proposed DRP, GP and LCP amendments do not change the type of future uses that could occur in the area. Future redevelopment of ground floor commercial uses and upper floor residential or office uses would not be types of land uses that would result in new substantial sources of noise and no impact is anticipated.

(d) Temporary Noise. There would be a temporary increase in existing noise levels during construction of development projects accommodated by the existing DRP and with proposed amendments. The proposed project would not directly result in temporary increases in noise due to construction as no development projects are proposed as part of the proposed project. Noise impacts resulting from construction depend on the noise generated by various pieces of

construction equipment, the timing and duration of noise-generating activities, and the distance between construction noise sources and noise-sensitive receptors, as well as existing ambient noise levels. Noise generated during construction would vary throughout the construction period and on any given day, depending on the construction phase and the type and amount of equipment used at the construction site. The highest noise levels would be generated during grading of the site, with lower noise levels occurring during building construction and finishing. Overall, construction noise levels would be temporary, short-term and fluctuate throughout the construction period. Because construction noise impacts would be temporary, the impact of construction noise would be less than significant.

The General Plan EIR concluded that future development would result in construction of varying sound level and duration, which could be an annoyance to adjacent residents. However, with implementation of the General Plan policies to minimize exposure to construction noise levels, the increase in temporary noise levels from construction-related activities would be considered a less-than-significant impact. The General Plan seeks to ensure that construction activities are managed to minimize overall noise impacts on surrounding land uses (HZ3.1.3). Development projects are reviewed on a case-by-case basis, and typical conditions of approval include limiting the day and times of day during which construction and/or heavy construction can be conducted, provision of notification to neighbors regarding construction schedules, and implementation of a process to receive and respond to noise complaints. These are some of the types of measures that would be implemented by the City to manage and minimize construction noise impacts. Therefore, temporary increased noise levels during construction of future development projects is considered a *less-than-significant* impact.

13. <u>Population and Housing</u>.

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

- *Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure;*
- *Displace substantial numbers of existing housing units, necessitating the construction of replacement housing elsewhere; or*
- *Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.*

<u>(a) Population Growth</u>. The proposed project could lead to increased development intensity as properties in the project area redevelop due to proposed expansion of "Additional Height Zones" and future development of additional upper floor residential units. Population growth would be dependent on the type and size of residential units, which is not known. As previously indicated, City staff has estimated a potential increase of approximately 711 residential units as a result of the proposed DRP amendments, which represents approximately 274 more units than potentially could be potentially developed under the existing General Plan. It is expected that this potential

residential development and associated population would be within regional population and housing projections over the next 20 years. However, population growth resulting from the project will be addressed in the Growth Inducement section of the EIR.

(b) Housing. Future redevelopment in the project area will be on sites that do not currently support residential units, and thus, the proposed project is not expected to indirectly result in displacement of existing housing or people.

14. Public Services.

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

- *Result in substantial adverse physical impacts associated with provision of new or physically altered facilities, the construction of which could cause significant impacts, in order to maintain acceptable service for fire protection, police protection, schools and parks.*

The proposed project could lead to increased development intensity as properties in the project area redevelop due to proposed expansion of "Additional Height Zones". Future development would be served by existing public services. Potential impacts on fire protection, police protection, parks and recreational services and schools will be evaluated in an EIR.

15. Recreation.

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

- *Increase the use of existing parks or recreational facilities such that substantial physical deterioration would occur or be accelerated; or*
- *Include recreational facilities or require construction or expansion of recreational facilities which might have an adverse physical effect on the environment.*

Santa Cruz offers residents and visitors a wide range of parks, open space, beaches, trails, and recreational opportunities. The City has responsibility for management, maintenance and operation of over 1,700 acres of parks and open space lands, and various community/recreational facilities, and oversees development of new parks and improvements within City-owned parks, open space, and community facilities. In the project area, the San Lorenzo River Walk provides pedestrian and bicycle access to the multi-use path on the river levee.

The proposed project could lead to increased development intensity as properties in the project area redevelop due to proposed expansion of "Additional Height Zones". Future development would be served by existing public services. Potential impacts on parks will be evaluated in an EIR.

16. Transportation/Traffic.

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

- *Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit;*
- *Change the level of service of a State Highway roadway segment from acceptable operation (LOS A, B, or C) to deficient operation (LOS D, E or F);*
- *Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways;*
- *Substantially increase hazards due to a design feature (for example, sharp curves or dangerous intersections) or incompatible uses (for example, farm equipment);*
- *Result in inadequate emergency access; or*
- *Conflict with adopted policies, plans, programs that support supporting alternative transportation (for example, bus turnouts, bicycle racks).*

There are no adopted congestion management programs (CMP) within the City or region nor is the project area located near an airport. Therefore, therefore there are no impacts related to conflicts with an applicable CMP or air traffic patterns.

a, d-f) Traffic and Transportation System Performance. The project area is located in the lower downtown area along Pacific Avenue and Front Street. The proposed project could lead to increased development intensity as properties in the project area redevelop due to proposed expansion of "Additional Height Zones" and future development of additional upper floor residential units. Thus, the project could indirectly result in a net increase of residential units and office space with a net decrease in commercial space, which would result in a change in trip generation and traffic in the area. Impacts on the transportation system will be evaluated in the EIR base on a traffic analysis prepared for the City Planning Department. The analysis will include signalized intersections where 25 or more net new trips are added per the City's Traffic Impact Study Guidelines(City of Santa Cruz, *Traffic Impact Study Guidelines* 2009). Changes to level of service on the State Highway system will also be analyzed.

The project area also supports the Santa Cruz Metropolitan Transit District's downtown bus station, and transit, pedestrian and bicycle trips are prevalent in the area. The DRP includes standards and guidelines to design for and promote pedestrian circulation in the downtown area. Alternate travel modes will be considered in the traffic impact evaluation. Review of other potential impacts including design hazards, emergency access, and conflicts with alternative transportation plans will also be provided in the EIR.

17. Utilities and Service Systems.

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

- *Exceed wastewater treatment requirements of the Regional Water Quality Control Board;*
- *Result in a water demand that exceeds water supplies available from existing entitlements and resources, and new or expanded supplies or entitlements may be needed;*
- *Require or result in construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;*
- *Require or result in construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;*
- *Result in wastewater flows exceed treatment plant capacity; or*
- *Be served by a landfill with insufficient permitted capacity to accommodate the project's solid waste demands.*

The proposed project could lead to increased development intensity as properties in the project area redevelop due to proposed expansion of "Additional Height Zones". Future development would be served by existing public utilities, including wastewater/collection and treatment, municipal water service and solid waste disposal. Potential impacts on these utilities will be evaluated in an EIR. See subsection 9(c-d) above regarding storm drainage.

18. Mandatory Findings of Significance.

In accordance with the California Environmental Quality Act (CEQA), State CEQA Guidelines, City of Santa Cruz plans and policies, and agency and professional standards, a project impact would be considered significant if the project would:

- *Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory;*
- *Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of the past projects, the effects of other current projects, and the effects of probable future projects.); or*
- *Have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly.*

(a) Quality of the Environment. The proposed project could result in indirect impacts to biological and cultural (historical) resources as discussed above in sections 4a-d and 5a, respectively, which will be further evaluated in an EIR.

(b) Cumulative Impacts. Cumulative impacts will be reviewed in the EIR.

(c) Substantial Adverse Effects on Human Beings. No environmental effects have been identified that would have direct or indirect adverse effects on human beings.

APPENDIX B
Notice of Preparation Comments

STATE OF CALIFORNIA—NATURAL RESOURCES AGENCY
EDMUND G. BROWN JR., *GOVERNOR*

CALIFORNIA COASTAL COMMISSION
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SANTA CRUZ, CA 95060
PHONE: (831) 427-4863
FAX: (831) 427-4877
WEB: WWW.COASTAL.CA.GOV

March 2, 2017

Ron Powers
City of Santa Cruz Planning and Community Development Department
809 Center Street, Room 206
Santa Cruz, CA 95060

Subject: Notice of Preparation of EIR: Downtown Recovery Plan, General Plan and Local Coastal Plan Amendments

Dear Ron:

Thank you for the opportunity to provide written comments on the Notice of Preparation (NOP) for the Downtown Recovery Plan (DRP), General Plan and Local Coastal Program (LCP) amendments project. As a preliminary matter, we would like to acknowledge our shared goal with the City to provide better pedestrian access connections between the City's downtown area and the San Lorenzo Riverwalk, and to improve the Riverwalk as a public access and recreation focal point for the City's downtown area. We believe that the Riverwalk is an extremely under-utilized public access and recreation feature of the City, and strongly support improved user experience for this area. The purpose of this letter is to help the City realize these goals by facilitating the Commission's review of the proposed changes to the certified LCP.

Local Coastal Program Amendment
The NOP correctly notes that several of the proposed amendments include changes to the City's certified LCP, and will therefore require Commission approval of an LCP amendment. In fact, the proposed amendments include both Land Use Plan (LUP) Policy changes, including to the San Lorenzo Urban River Plan (SLURP), as well as Implementation Plan (IP) standards, including the Central Business District Zone standards. The standard of review for LUP amendments is that they must be consistent with and adequate to carry out the Chapter 3 policies of the Coastal Act; and the standard of review for IP amendments is that they must be consistent with and adequate to carry out the policies of the certified LUP.

Project Description/Goals
The September 15, 2016 Staff Report to the Planning Commission stated that the project was intended to be consistent with the following Coastal Act policies related to access and recreation, protection of sensitive biologic resources, and protection of visual resources:

- Encourage and incentivize maximum public access to the San Lorenzo River in accordance with Section 30210 of the Coastal Act.

- Achieve superior connections to the San Lorenzo River above the existing DRP and existing SLURP policies, consistent with Section 30211 of the Coastal Act.

- Ensure that development adjacent to the Riverwalk will be designed to prevent impacts to the adjacent sensitive San Lorenzo River and will incentivize clean-up of degraded areas along the levee, consistent with Section 30240 of the Coastal Act. The DRP will continue to be sensitive to the pedestrian experience along the Riverwalk with design guidelines and upper floor step backs and open river pedestrian connections that will provide light, air and open space between buildings.

- Enhance opportunities to view and interact with the San Lorenzo River as a coastal resource consistent with Section 30251 of the Coastal Act. The DRP standards ensure that development will be sited and designed to be visually compatible with the surrounding downtown, while promoting new open space pedestrian plazas and passageways to the Riverwalk.

We would recommend that the CEQA document include these project goals as key objectives of the project.

Impact Analysis - *Aesthetics*
We have some concerns regarding the proposed new height standards along Front Street, which have the potential to impact public views along the Riverwalk and adjacent public recreational facilities. We would therefore request that the CEQA analysis include a visual resource analysis that includes extensive visual simulations from all appropriate public vantage points, including from along both sides of the Riverwalk, from the Soquel Avenue and Laurel Street bridges, from San Lorenzo Park, etc. The simulations should include a comparison between existing development and as proposed under the new height standards so that potential impacts to public views can be evaluated. The City should also consider installing story poles to show the limits of the proposed new height standards. In addition, the CEQA document should evaluate alternatives to the proposed new height standards that meet most of the project objectives but also reduce potential aesthetic impacts.

Biological Resources
The Coastal Act and LCP require that new development avoid impacts to environmentally sensitive habitat. The CEQA document should include an analysis of how the project may impact the San Lorenzo River, including: 1) establishing the appropriate setback of new development, and 2) potential impacts from shading resulting from the proposed building heights.

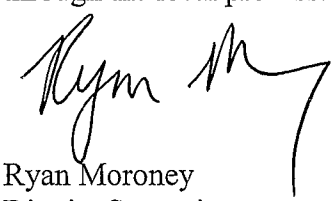
Hazards
The Coastal Act and LCP require that new development be sited and designed to avoid hazards. The CEQA document should analyze the project's location with respect to potential impacts from flooding. This analysis should account for the effects of sea level rise.

Land Use
The Coastal Act and LCP prioritize visitor serving and coastal recreational uses over residential uses. The CEQA document should evaluate appropriate land use and zoning designations for the locations adjacent to and near the Riverwalk along Front Street. Specifically, the CEQA document should evaluate requiring a mixed use zoning for this area, especially along the Riverwalk, with visitor serving and coastal recreational uses (e.g. restaurants with outdoor seating, bike/kayak rental, etc.) on the ground floor, and residential uses on higher floors.

Recreation
We understand that some initial conceptual renderings of the project suggested transferring public right-of-way along the Riverwalk (and associated fill area) to the project developer. However, for the portion of the property located in the Coastal Zone, we believe that the entire public space between the Riverwalk and the proposed buildings along Front Street should be fully utilized for public purposes, including maximization of public access and recreation. Moreover, any such transfer of property would require a Coastal Development Permit that would be appealable to the Commission.

Water Quality
Finally, the Coastal Act and LCP require that erosion control measures be implemented to prevent siltation of streams and coastal lagoons, that discharge of polluted runoff be minimized, and that on-site detention and other appropriate storm water best management practices be used to reduce pollution from urban runoff. The CEQA document should evaluate implementation of Low Impact Development Best Management Practice standards such as bioretention/bioswales, permeable pavers/concrete, roof runoff catchment system and parking lot runoff catchment system for storage; and reuse on site and underground retention/detention units that include additional pre-filtration to remove hydrocarbons, metals, and other potential pollutants generated in the automobile use areas, including for new development along Front Street as well as proposed improvements to the levy system (i.e. the filling of the sloped levy) with the goal of reducing or eliminating runoff and pollution discharges into the River.

Thank you for your consideration of these comments. We look forward to working with the City through the local process.



Ryan Moroney
District Supervisor
Central Coast District Office

DEPARTMENT OF TRANSPORTATION
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PHONE (805) 549-3101
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http://www.dot.ca.gov/dist05/

Serious drought
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March 22, 2017

SCr: 1-18.73
SCH#: 2017022050

Mr. Ron Powers
Principal Planner
City of Santa Cruz
809 Center Street, Rm 206
Santa Cruz, CA 95060

COMMENTS TO THE DOWNTOWN RECOVERY PLAN ADMENDMENTS (DRP)

The California Department of Transportation (Caltrans), District 5, Development Review, has reviewed the Downtown Recovery Plan Amendments. As noted, this project will require amendments to the City's General Plan 2030, and the Local Coastal Plan that include revisions to the Plan text, modifications to guidelines and standards, and changes to coastal policies. As stated, the proposed Downtown Recovery Plan (DRP) amendment would expand the location in which the "Additional Height Zones" are applied and revisions to the Chapter 4 Development Standards of the DRP. The primary focus of the DRP would be to increase allowable building heights in the lower Pacific Avenue and lower Front Street areas and along the San Lorenzo River, between Cathcart and Laurel Streets that could lead to increased upper floor residential development.

Caltrans supports local planning efforts that are consistent with State planning priorities intended to support smart growth, promote equity, strengthen the economy, protect the environment, promote public health and safety, and makes the connection to climate change goals. We accomplish this by working with local jurisdictions to achieve a shared vision of how the transportation system should and can accommodate interregional and local travel.

1. To ensure the traffic study in the Draft Environmental Impact Report (EIR) includes the information needed to analyze the impacts (both cumulative and project specific) of this effort, it is recommended that the analysis be prepared in accordance with the Department's *"Guide for the Preparation of Traffic Impact Studies,"* which can be found at: http://www.dot.ca.gov/hq/tpp/offices/ocp/igr_ceqa_files/tisguide.pdf.

2. The traffic study should include information on existing volumes within the study area, including the State transportation system, and should be based on recent traffic volumes less than two years old. Counts older than two years cannot be used as a baseline. Feel free to contact us for assistance in acquiring the most recent data available.

3. Please be aware that comments to this and any subsequent EIR for the project, will stress the importance of using the Association of Monterey Bay Area Governments Model for completing the traffic analysis.

4. The Draft EIR should also include an analysis of the multimodal travel demand expected from the proposed project. This analysis should also identify potentially significant adverse impacts from such demands and the subsequent mitigation measure to address them. Early collaboration, such as sharing the analysis and findings with Caltrans prior to official circulation, can lead to better outcomes for all stakeholders.

5. Projects that support smart growth principles which include improvements to pedestrian, bicycle, and transit infrastructure (or other key Transportation Demand Strategies) are supported by Caltrans and are consistent with our mission, vision, and goals.

6. At any time during the environmental review and approval process, Caltrans retains the statutory right to request a formal scoping meeting to resolve any issues of concern. Such formal scoping meeting requests are allowed per the provisions of the California Public Resources Code Section 21083.9 [a] [1].

7. In addition, any work within the State right-of-way will require an encroachment permit issued from Caltrans. Detailed information such as complete drawings, biological and cultural resource findings, hydraulic calculations, environmental reports, traffic study, etc., may need to be submitted as part of the encroachment permit process.

Should you have any questions, or need further clarification on any of the items discussed above, please contact me at (805) 549-3099 or by email at: jennifer.calate@dot.ca.gov.

Sincerely,



JENNIFER CALATE
Associate Transportation Planner
District 5 Development Review Coordinator
jennifer.calate@dot.ca.gov

cc: Kelly McClendon (D5)



U.S. Department of Homeland Security
FEMA Region IX
1111 Broadway, Suite 1200
Oakland, CA. 94607-4052

FEMA

February 23, 2017

Ron Powers, Principal Planner
City of Santa Cruz
Planning and Community Development Department
809 Center Street, Room 206
Santa Cruz, California 95060

Dear Mr. Powers:

This is in response to your request for comments regarding the Notice of Preparation of Environmental Impact Report re: Downtown Recovery Plan, General Plan and Local Coastal Plan Amendments in the City of Santa Cruz.

Please review the current effective countywide Flood Insurance Rate Maps (FIRMs) for the County of Santa Cruz (Community Number 060353) and City of Santa Cruz (Community Number 060355), Maps revised May 16, 2012. Please note that the City of Santa Cruz, Santa Cruz County, California is a participant in the National Flood Insurance Program (NFIP). The minimum, basic NFIP floodplain management building requirements are described in Vol. 44 Code of Federal Regulations (44 CFR), Sections 59 through 65.

A summary of these NFIP floodplain management building requirements are as follows:

- All buildings constructed within a riverine floodplain, (i.e., Flood Zones A, AO, AH, AE, and A1 through A30 as delineated on the FIRM), must be elevated so that the lowest floor is at or above the Base Flood Elevation level in accordance with the effective Flood Insurance Rate Map.

- If the area of construction is located within a Regulatory Floodway as delineated on the FIRM, any ***development*** must not increase base flood elevation levels. **The term *development* means any man-made change to improved or unimproved real estate, including but not limited to buildings, other structures, mining, dredging, filling, grading, paving, excavation or drilling operations, and storage of equipment or materials.** A hydrologic and hydraulic analysis must be performed *prior* to the start of development, and must demonstrate that the development would not cause any rise in base flood levels. No rise is permitted within regulatory floodways.

- All buildings constructed within a coastal high hazard area, (any of the "V" Flood Zones as delineated on the FIRM), must be elevated on pilings and columns, so that the lowest horizontal structural member, (excluding the pilings and columns), is elevated to or above the base flood elevation level. In addition, the posts and pilings foundation and the structure attached thereto, is anchored to resist flotation, collapse and lateral movement due to the effects of wind and water loads acting simultaneously on all building components.

- Upon completion of any development that changes existing Special Flood Hazard Areas, the NFIP directs all participating communities to submit the appropriate hydrologic and hydraulic data to FEMA for a FIRM revision. In accordance with 44 CFR, Section 65.3, as soon as practicable, but not later than six months after such data becomes available, a community shall notify FEMA of the changes by submitting technical data for a flood map revision. To obtain copies of FEMA's Flood Map Revision Application Packages, please refer to the FEMA website at http://www.fema.gov/business/nfip/forms.shtm.

Please Note:

Many NFIP participating communities have adopted floodplain management building requirements which are more restrictive than the minimum federal standards described in 44 CFR. Please contact the local community's floodplain manager for more information on local floodplain management building requirements. The City of Santa Cruz floodplain manager can be reached by calling Eric Marlatt, Zoning Administrator, at (831) 420-5115. The Santa Cruz County floodplain manager can be reached by calling Antonella Gentile, Planner, at (831) 454-3164.

If you have any questions or concerns, please do not hesitate to call Michael Hornick of the Mitigation staff at (510) 627-7260.

Sincerely,

Gregor Blackburn, CFM, Branch Chief
Floodplain Management and Insurance Branch

cc:
Eric Marlatt, Zoning Administrator, City of Santa Cruz
Antonella Gentile, Planner, Santa Cruz County
Maggie Dutton, State of California, Department of Water Resources, South Central Region Office
Michael Hornick, NFIP Compliance Officer, DHS/FEMA Region IX
Alessandro Amaglio, Environmental Officer, DHS/FEMA Region IX

From: Jean Brocklebank [mailto:jeanbean@baymoon.com]
Sent: Wednesday, March 15, 2017 8:24 PM
To: Ron Powers
Subject: Downtown Recovery Plan, General Plan and Local Coastal Plan Amendments

Dear Mr. Powers ~

Please accept these comments for consideration.

Friends of San Lorenzo River Wildlife (FoCLB) is concerned about all potential environmental impacts to wildlife and wildlife habitat, as a result of proposed amendments to the Downtown Recovery Plan.

Any development along the river corridor will impact avian species. East-facing windows will reflect the rising sun and cause confusion for birds. More birds are killed by flying into building windows than by any other means. FoCLB expects the City to address this impact and research ways to prevent bird deaths due to new buildings, regardless of height.

There is precedence for our request. Close to home, on Tuesday March 7, 2017 the San Jose City Council voted to prioritize working on ***bird-safe design guidelines for buildings near creeks***. City staff will begin work on studying this issue over the coming year, and will bring their recommendations to the City Council when this work is finished.

The documents of the San Jose City Council, which explain their wise action, can be found here for your review:

March 7, 2017 City Council Meeting (see Consent Agenda item 3.3 Memorandum):
http://sanjose.granicus.com/GeneratedAgendaViewer.php?event_id=ab6006f9-5128-44f5-b750-e2f3c2e336fe

Memorandum with bird buildings (see #7 Riparian Corridor & Bird-Safe Buildings):
http://sanjose.granicus.com/MetaViewer.php?view_id=&event_id=2674&meta_id=619420

In general, FoCLB wants development farther away from the river and the Riverwalk. This will allow people to enjoy the river without buildings being built almost on top of it. FoCLB opposes any amendment that will provide development adjacent to the river that allows increased building heights.

Sincerely,
Jean Brocklebank
Michael Lewis
on behalf of Friends of San Lorenzo River Wildlife

SANTA CRUZ COUNTY GROUP
Of The Ventana Chapter
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https://ventana2.sierraclub.org/santacruz/
e-mail: sierraclubsantacruz@gmail.com

March 15, 2017

To:
Ron Powers, Principal Planner
City of Santa Cruz Planning and Community Development
809 Center Street, Rm. 206
Santa Cruz, CA 95060

Subject: Comments on EIR for Downtown Recovery Plan

Dear Ron Powers,

The Sierra Club appreciates the opportunity to respond to the Notice of Preparation of an Environmental Impact Report for the Downtown Recovery Plan (DRP), General Plan and Coastal Plan Amendments.

Issues of environmental concern that will have a potentially significant impact are listed in the Initial Study/Environmental checklist and we anticipate responding to those depending on the findings in the draft EIR. The specific issues listed below are those we feel need careful, in-depth review via the EIR or are those we see as not included in the Initial Study.

- The amendment to eliminate 9 of the 11 policies in the 2003 San Lorenzo Urban River Plan (SLURP) needs its own section and full explanation for such action with alternatives. These 9 policies are certified under the Local Coastal Plan. SLURP was intended to protect, restore and enhance this important riparian natural resource. It has never been fully implemented nor replaced with a Plan to reflect the environmental goals and recommendations in the 2030 General Plan.

- Any analysis of the impacts on wildlife species can be determined only by a thorough, current baseline study of the San Lorenzo River (SLR) riparian fish, wildlife and fauna by qualified biologists specializing in such species. We request that such study be undertaken.

- The EIR should include study of the Urban Heat Island effect on riparian habitat from this scale of urban development as well as the impacts on birds and other wildlife generated from the additional lighting, glass windows and people.

- The Aesthetics section appears to be limited in its inclusion of the various view-sheds that will be impacted by building heights up to 85 feet along the SLR. For example, the view from the eastern side of the river is not but should be included. The EIR should include renditions that are realistic, not distorted via aerial views or placing people in the foreground, which minimizes the background scale of the proposed structures.

We look forward to seeing the above issues addressed in the draft EIR.

Sincerely,

Greg McPheeters
Chair, Santa Cruz Group, Sierra Club

From: Ron Powers [mailto:RPowers@cityofsantacruz.com]
Sent: Tuesday, June 20, 2017 1:34 PM
To: Stephanie Strelow
Subject: FW: Downtown Update Plan - Zoning and Climate Change

On Jun 16, 2017, at 1:43 AM, Candace Brown <clbrown23@gmail.com> wrote:

Dear Ron and Alex and Maggie,

Maggie, Please pass this email to the Planning Commission members regarding new building heights.

Ron, You mentioned that Climate Change issues are in the June 15th Staff Report to the Planning Commission and I have not found it in the document yet. Do you have a page reference? I assume the worst case scenario impacts of Climate Change on the Downtown Update Program EIR will be considered.

Can you also please pass along your presentation of tonight, June 15th, at the Planning Commission too. Thanks.

Alex and Ron, Note in Miami, now new buildings and wastewater infrastructure are five feet higher due to Climate Change. This is an extensive article on the impacts.
http://www.bbc.com/future/story/20170403-miamis-fight-against-sea-level-rise

Canada is waking up to the issue of Climate Change and changes now being considered in the National Building Code of Canada.
https://www.desmog.ca/2017/03/07/canada-s-buildings-will-finally-be-built-climate-change-mind

Is Flood Management built into the future Santa Cruz code? Impacts are in sufficient base floor heights, drainage systems, backwater valves in sewer systems so they don't back-up into basements, storm drains and where to divert water that overrun the system during flooding. Electrical systems need to be adequately protected and back-up systems should not be in basements. These issues could be dealt with in the Zoning or Building Codes.
http://www.intactcentreclimateadaptation.ca/wp-content/uploads/2016/10/Intact-Centre-Climate-Change-and-the-Preparedness-of-Canadian-Provinces-and-Yukon-Oct-2016.pdf#page=14

Thanks, Candace Brown
Cell: 1-818-203-4965

----Original Message-----
From: Gillian Greensite [mailto:gumtree@pacbell.net]
Sent: Friday, June 23, 2017 10:07 AM
To: Ron Powers
Subject: Downtown Recovery Plan

Hi Ron,

As part of the EIR, I and others request that story poles be erected along the river levee for the entire comment period in order for the public to assess the visual impact of the heights of new buildings. Even if exact heights in exact locations are not yet determined, the massing studies gave sufficient detail to erect such poles in the sites proposed for development.

Thank you,

Gillian

-----Original Message-----
From: Gillian Greensite [mailto:gumtree@pacbell.net]
Sent: Saturday, June 24, 2017 6:36 AM
To: Ron Powers
Subject: Re: Downtown Recovery Plan

Hi Ron,
Thanks for your reply. The poles could be located on the levee since the yards of the housing would be level with the levee according to renditions shown at the various meetings. However I do note that you say you cannot accommodate the request.

Regarding photo simulations, this is to request that they avoid birds eye views and avoid placing people etc. in the foreground which distorts the scale of the building in the background. Besides views from the east side of the river and from Front St. it would be helpful to have a view from the perspective of a person walking the levee, showing the building heights on the same plane as the person.

Thank you,
Gillian

From: Debbie Hencke [mailto:dhencke@gmail.com]
Sent: Friday, March 17, 2017 12:06 PM
To: Ron Powers
Cc: Cynthia Chase; David Terrazas; Sandy Brown; Chris Krohn; Cynthia Mathews; Richelle Noroyan; Martine Watkins
Subject: Response to planned EIR

RE: Downtown Recovery Plan, General Plan and Local Coastal Plan Amendments

Concerning the 85 feet height and other tall buildings in a 12 square mile area:

The plan as presented is a disaster. It degrads the beautiful historic district that we have all come to care about. It will obliterate the River views and the uniqueness of being able to walk and lunch along it. What you're proposing as far as height of 85 feet will just keep going up with the planning departments' unabashed granting of variances. Santa Cruz does not want to become another San Francisco or Los Angeles.

We are the smallest county (except for SF) in the state. Do NOT destroy the future with what you think is ok or are told "is the future." If you want a Facebook or Google campus look try San Jose. If you feel you must build because the State tells you to, then confront the reality of this small county and limited resources and change the State. We have the most parks of any county in the state and we can't have both - unabashed development and a huge percentage of land tied up in parks. The State needs to rethink where to build, not Santa Cruz.

Remember that for every apartment you build at the current cost of rent, you need 4-5 low income wage earners to do their laundry, shopping/retail, shoe repair, food outlets, bakeries, restaurants, parking monitoring, etc. - all low income wages and where are those workers going to live? If you think the homeless population is a problem now, it will only continue to worsen and in the experience of other large cities who have built tall buildings, make the area a slum.

There seems to be no consideration of traffic. Assuming people will get out of their cars is not a model that has been proven effective nor viable. While the current health emphasis is on being healthy, people get old and bodies break down. Not everyone can ride a bike or walk miles. It is unrealistic to think in Utopian terms than an area will be "self contained." People want to explore their surroundings, travel and connect in ways that this project does not take into consideration. Traffic is already at a standstill on beautiful days and weekends. Where is the realistic traffic issues in this EIR presentation?

There is no consideration of sewage and water issues that plague this county. Drawing water from the River is the same as injecting treated sewage into the aquifers. There is no way to remove the multitude of chemicals from the septic systems of thousands upstream. There are hormones, antibiotics, chemotherapy agents, and so on to say nothing of the cleaning and auto chemicals people use that find their way into septic systems and the river. What you should be focusing on is the storage of water for drought years and sewage treatment upstream as well as locally. The water issue needs to be solved first.

Lastly, people come to Santa Cruz because of its small town uniqueness. They don't come here to look at 85 foot buildings surrounding the river or even other higher density buildings They come because it is unique. Turning this area into some utopian concept is not going to draw people or solve the housing situation. It is not a draw for tourism and economic viability.

This plan is not the answer to the housing shortage if one considers the true consequences of such development including water and traffic issues.

Thank you for your attention.

Debbie Hencke
831-359-9391 cell
160 Pine Flat Rd.
Santa Cruz, Ca. 95060
alternate:
419 Morrisseey Blvd.
Santa Cruz, Ca. 95062

Ron Powers, Principal Planner 3/16/17
City of Santa Cruz Planning and Community Development
809 Center Street, Rm. 206
Santa Cruz, CA 95060

Dear Ron Powers,

Thank you for the opportunity to comment on the Notice of Preparation of an Environmental Impact Report for the Downtown Recovery Plan.

Here are some items I like to address:

1. AESTHETICS. Would the project:

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

The development is close to the riparian corridor. The additional lights will have impact on the wildlife, birds. There is no mention of consideration to this impact, which deserves to be addressed
Environmental impacts:**Potentially Significant Issues**

3. AIR QUALITY.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non- attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?

The intended height, the additional traffic, increase of building mass have the potential to create "Urban Heat Island" effect. This is contrary to Santa Cruz Climate Change Policy.

4. BIOLOGICAL RESOURCES.

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special- status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

The San Lorenzo River(SLR) Steelhead, Coho are on the endangered species list. The SLR is also an important water & land migratory bird corridor. The impact of the Front St development on the wildlife has to be addressed due to height, building mass & additional lightening.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.

This impact can only be determined on hand of a thorough, current data baseline study of the SLR riparian fish, wildlife & fauna inventory.

Environmental impacts:**Potentially Significant Issues**

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The Front St Development requires that 9 out of 11 SLURP policies get eliminated, because they are in conflict w/the Development. The development is not in compliance w/The 2030 General Master Plan Environment Goals & Recommendations. Thus it is in conflict w/local policies of protecting biological resources.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

As of this date City of Santa Cruz doesn't a Habitat Conservation Plan in place. This fact makes it hard to determine if a conflict exists.

Environmental impacts:**Potentially Significant Issues**

18. MANDATORY FINDINGS OF SIGNIFICANCE.

a) Have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self- sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?

This potential can only be evaluated by a data baseline study of existing fish, wildlife, fauna inventory, which doesn't exist @ this time. It's impossible to know the impacts w/out a current inventory.
Environmental impacts:**Potentially Significant Issues**

b) Have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of the past projects, the effects of other current projects, and the effects of probable future projects.)

response to a) applies

Environmental impacts:**Potentially Significant Issues**

Respectful thank you.

jane mio

Dear Planning Commissioners & City Council Members,

The Front St. development guidelines lack sufficient attention to the fact that the intended development is right next to a Riparian Corridor, an important watershed, which require specific considerations.
The potential light impact & bird-safe building guidelines are not adequately addressed.
It is worth noting that other Bay-area Cities have integrated the safe-bird building issue in their planning process:
http://www.greenfoothills.org/speak-up-for-birds-in-san-jose/
San Francisco & Sunnyvale have bird-safe ordinances as well.
http://sunnyvale.ca.gov/Portals/0/Sunnyvale/CDD/Planning/Planning%20Library/BirdSafeGuidelines.pdf
http://sf-planning.org/standards-bird-safe-buildings

Here are my comments for Attachment 4 pertaining to Local Coastal Program SLURP policies, which are conceptual ideas/recommendations in Chapter 6 Significant Riverfront Areas.

SRFA-1

Eliminating the entire section w/out including language that addresses the San Lorenzo River identity as an important consideration in the planning process is not in line with the General 2030 Master Plan, Park & Rec. 2030 Master Plan nor the San Lorenzo Urban River Plan.
The height & setback need to be evaluated in regard to their impact on the river environment.

The San Lorenzo Urban River Plan states in "1.4 Relationship to Existing City Plans" page 13:

Future updates of the General Plan and Local Coastal Program will incorporate recommendations from the San Lorenzo Urban River Plan for "significant riverfront areas" including Front Street, Salz Tannery, and Beach Flats, ..etc. Additionally, the recommendations of the Urban River Plan should be referenced in regional plans referring to the San Lorenzo River and watershed.

SRFA 3:

This section deserves to be reviewed & evaluated with regard towards responsible environment policies/guidelines.

The stated building materials absorb/reflect less heat, which benefit the health of the watershed & the Climate Change condition.

The language of SRFA 3 might not be appropriate for LCP. On the other hand these are worthwhile concepts for a City, which views itself as environment conscious.

Revising SRFA 3 will incorporate the 1.4 San Lorenzo Urban River Plan section, which states:

The (Downtown Recovery) Plan identifies the River as a major downtown open space, and recognizes its potential "as a naturalistic open space, wildlife habitat, and recreational amenity: a garden promenade that can provide a more contemplative and reflective experience to the hustle and bustle of Pacific Avenue."

SRFA 10

Eliminating this section is essential allowing for a development "wall" along the watershed & is channelizing the river view & diminishes the **2030 Park& Rec.Master Plan** goal, which states:

... is a prime opportunity to revisite for revitalization of the **San Lorenzo Riverwalk** and show case one of Santa Cruz's natural assets.

Furthermore this SFRA 10 San Lorenzo Urban River Plan concept echoes the General Plan 2030 statement:

The San Lorenzo Urban River Plan—a 20-year comprehensive plan for the areas of the San Lorenzo River, Branciforte Creek, and Jessie Street Marsh within city limits promotes conserving the river as a wildlife area and enhancing it with complementary river oriented development.

Thank you very much for reading my concerns

jane mio

From: Jack Nelson [mailto:nelsontrio@cruzio.com]
Sent: Friday, March 17, 2017 11:51 PM
To: Ron Powers
Subject: Downtown Plan, NOP for EIR

March 17, 2017

Subject: Comments on Notice of Preparation for EIR, Downtown Plan update

Friendly greetings Ron:

That's a lot of good work in that Initial Study which I've viewed from online.

My comments regard item 9. i) in the I.S. checklist, which has "No Impact" checked for this question:

Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

This initial "no impact" finding suggests the City could be working from obsolete findings and science on the level of risk to downtown from flooding.

Risk is the word, because there is no certainty about when or how much downtown Santa Cruz may be flooded by the effects of climate change and sea level rise.

I wonder, will the EIR be examining…

— Cyclical, extreme atmospheric river storm events of the severity that flooded the Central Valley in 1861, with new research on California storm sediments finding these events have been cyclical and may be more likely in a warming world. What is the level of risk to downtown S.C.?

— Regional climate modeling finding more midwinter extreme precipitation events likely in our region, as climate change proceeds.

— Concern regarding point of no return on collapse of West Antarctic ice sheet, producing sea level rise in tens of feet. New Federal direction toward "no action" on climate action suggests this concern is a higher risk scenario, potentially unfolding in this century.

— Paleoclimate findings: in Earth's past when atmospheric CO2 is at 400 ppm, sea level response is sea level at tens of feet higher than present sea level, with a hotter world and minimal global cryosphere.

I understand the I.S. discussion (p.37) about not increasing the allowed footprint of future structures, however all these higher structures will be at risk—how much?—even if they do not decrease floodplain capacity. Is it appropriate for the City to grant further development entitlements in a high risk / inevitable risk location?

Thanks for your consideration. Scientific and literature references available on request.

best,

Jack Nelson
land use & environmental planner, retired
127 Rathburn Way, Santa Cruz CA 95062
(831) 429-6149

APPENDIX C
Proposed Plan and Ordinance Text Amendments

APPENDIX C – PLAN AND ORDINANCE TEXT CHANGES

Revisions to Plans and Municipal Code are shown with underlined text for additions and ~~strikeout text~~ for deletions.

Downtown Recovery Plan

See: http://www.cityofsantacruz.com/government/city-departments/planning-and-community-development/downtown-recovery-plan-amendments

General Plan Amendment

Chapter 4 - Land Use, page 41, Revise as shown:

Regional Visitor Commercial (RVC), 0.25 to 3.5 FAR.
Applies to areas that emphasize a variety of commercial uses that serve Santa Cruz residents as well as visitors. Mixed-use development is strongly encouraged in RVC districts.

Downtown Santa Cruz. (0.25 to 5.0 FAR) Emphasizes a mix of regional office and retail uses, residential and mixed-use developments, restaurants, and visitor attractions such as entertainment venues. The Downtown Recovery Plan provides detailed requirements for this area.

> *Reason for General Plan Amendment: The Central Business District (CBD) zone is the primary zone district that implements the broader RVC General Plan land use designation. The modifications proposed for the CBD additional height Zone A between Pacific Avenue and Front Street would potentially allow for upper level floor area that could exceed the existing 3.5 FAR. The FAR limit is one of three development standards that work together to address bulk and mass of new construction: 1) FAR, 2) Height, and 3) establishing a percentage limitation of varying heights in direct relationship to the size of the property (a volumetric standard).*

Local Coastal Plan Amendment – San Lorenzo Urban River Plan Policies

Significant Riverfront Areas

Front Street

NEW POLICY

- SRFA – 1 Require new development projects to incorporate design features that encourage active engagement with the Riverwalk such as: filling adjacent to the Riverwalk with landscaping, providing direct physical access to the Riverwalk, including appropriate active commercial and/or residential uses adjacent to the Riverwalk, or a combination of these and/or other design features that support the resource enhancement and river engagement policies of the San Lorenzo Urban River Plan.

- NEW POLICY
  SRFA – 2 Require new development projects to incorporate pedestrian and/or bicycle connections between Front Street and the Riverwalk at appropriate locations such as the extensions from Maple Street and Elm Street.

- ~~SRFA – 1 Maintain existing development standards in the Downtown Recovery Plan (DRP) for the Front Street Riverfront Area including principal permitted uses for ground level and upper floors, conditional uses, and height and step back requirements. Maintain maximum height restriction to 50 feet with development above 35 feet in height stepping back at least 10 feet at an angle not to exceed 42 degrees. (DRP, p. 47-50)~~

  Reason For Deletion: The amendments to the Downtown Recovery Plan (DRP) make this policy obsolete. This policy language was a reference to the DRP from the SLURP. The SLURP was intended as a resource protection programmatic guide and not a land use planning document. The SLURP process did not have the benefit of any land use planning guidance for architecture or urban design. Since the adoption of the SLURP, the City has undertaken a comprehensive effort to update the principal land use document for the area – the Downtown Recovery Plan. Development standards for this area are appropriately located in the DRP and not within the Local Coastal Plan.

- SRFA –3~~2~~ Maintain the ten-foot setback area between residential and commercial uses adjacent to the levee trail from the western edge of the trail. The ~~setback~~ area between the property line and the Riverwalk shall ~~should~~ be filled to raise the adjacent ground-level use to ~~the same~~ a similar or higher elevation as the Riverwalk ~~elevation as the levee trail~~. ~~This area~~ The public lands between the Riverwalk and the private property may ~~should also~~ incorporate publicly accessible commercial or residential amenities, such as outdoor public seating ~~or visually accessible garden space for residential development~~. Trees planted as part of the San Lorenzo Flood Control Improvement Project should be maintained and incorporated into new development where feasible and not in conflict with the required fill or publicly accessible amenities. (DRP, p. 51)

- ~~SRFA –3 Maintain design guidelines for residential and commercial development with the exception of limiting building materials to more natural wood, brick and stone; avoid overuse of concrete and stucco. (DRP, p. 51)~~

  Reason for Deletion: This language is not appropriate for the LCP. It is too detailed and most of the downtown is outside of the Coastal Zone.

- ~~SRFA –4 The "river promenade" proposed in the original San Lorenzo Design Concept Plan between Soquel Drive and Laurel Street should be re-conceptualized as a more natural, less formal looking "trail" with adjacent garden space and native trees to be accommodated in the ten-foot setback area.~~

  Reason for Deletion: Levee Trail complete; referenced area mostly outside the Coastal Zone.

- ~~SRFA 5 Establish a river plaza or park within the Front Street Riverfront Area between Soquel Drive and Laurel Street on the west bank (upstream orientation). Redevelopment of the Metro Station affords an opportunity for connecting a plaza or park with a public area on the east side of Front Street. Other favorable sites are the terminus with Cathcart Street and the terminus with Maple Street (Figures 49 & 50).~~

  Reason for Deletion: The Downtown Plan language continues to promote the accessible links to the Riverwalk as indicated in the new policies 1 and 2. .

- ~~SRFA – 6 Maintain the wooden roof-truss buildings along Front Street as architectural artifacts to demonstrate the "working waterfront" character of the area.~~

  Reason for Deletion: It is unclear where this policy came from. The 'historic' buildings were constructed in the 1920s to 1940s and relate to the auto-service industry and automobile culture, not a "working waterfront".

- ~~SRFA –7 Ensure that any parcel consolidation strategy provides for public access from the Front Street sidewalk to the levee. Maintain the ten-foot step back requirement between buildings included in the Downtown Recovery Plan for any development. Encourage pedestrian traffic through creative inviting design and incorporate water features, gardens, paving, and stairways up the levee as design features.~~

  Reason for Deletion: The proposed policies better reflect the combined intentions and direction for land use in this area.

- ~~SRFA – 10 Maintain views from both taller downtown buildings to the River and from the River trail to distant mountains and ridges, avoiding creation of a development "wall" between the downtown and the River.~~

  Reason for Deletion: The City does not protect views of the river from private buildings. Front Street and the Riverwalk are perpendicular to the mountain views, therefore, the

policy is not needed to preserve any distant views. The development will be required to have accessible connections to the Riverwalk, which will prevent a development wall between the downtown and the river.

- ~~SRFA – 11 Preserve views along the Front Street area to and from Beach Hill, a significant historic feature in this area.~~

  Reason for Deletion: This policy is too vague and is not a resource-related policy that follows the other parts of the SLURP.

Municipal Code – Zoning Ordinance Amendments

Section 1. Part 24 of the Santa Cruz Municipal Code is hereby amended to read as follows:

Part 24: CENTRAL BUSINESS DISTRICT (CBD)~~* Editor's Note: Former Part 24: GM-O Garden Mall Overlay District, previously codified herein and containing portions of Ord. 91-23 was repealed and replaced in its entirety by Ord. 91-29.~~

Section 24.10.2300 of the Santa Cruz Municipal Code is hereby amended to read as follows:

24.10.2300 PURPOSE.
This part implements the Land Use Plan, Development Standards and Design Guidelines of the Downtown ~~Recovery~~ Plan (Plan), a specific plan. It is intended to refine the Plan in the area of land use and regulations. It supports the purpose of the Plan, in the context of the General Plan, which aims to ~~make~~ maintain downtown the urban center of the city, with the many functions a city center serves. ~~This s~~ Section 24.10 of the Zoning Ordinance is also part of the Local Coastal Implementation Plan.

The Central Business District Zone of the Downtown ~~Recovery~~Plan is divided into four subareas, in order to enhance the character of each by special consideration of the character of each. A fifth area, CBD Subdistrict E, ~~The~~ Lower Pacific Avenue, ~~subdistrict has been added and consists of the CBD District South of Laurel Street. The Lower Pacific Avenue subdistrict is intended to~~ implements the policies of the Beach and South of Laurel Plan and is separate from the Downtown ~~Recovery~~ Plan.

Section 24.10.2301 of the Santa Cruz Municipal Code is hereby amended to read as follows:

24.10.2301 USES, DEVELOPMENT STANDARDS AND DESIGN GUIDELINES~~* Editor's Note: As amended by Ord. 2000-03, the effective date of this section is July 31, 2000~~

Chapter 4 of the Downtown ~~Recovery~~ Plan, as amended, is hereby adopted by reference, and the Planning and Community Development Department shall maintain copies of the Downtown Plan is both hard copy and electronic form ~~three copies of Chapter 4 of the Downtown Recovery Plan are and shall be maintained on file in the office of the city clerk~~, for use and examination by the public. The policies and regulations set forth in Chapter 4 of the Downtown Recovery Plan shall control all uses in the CBD, Central Business District, and its four subdistricts: Pacific Avenue Retail District; Front Street Riverfront Corridor; Cedar Street Village Corridor; and North Pacific Area.

Section 24.10.2330 of the Santa Cruz Municipal Code is hereby amended to read as follows:

24.10.2330 DEMOLITION CONTROL.

The purpose of demolition control is to provide for orderly change and development of the area in accordance with the General Plan and the Downtown ~~Recovery~~ Plan. It is intended to provide a means whereby existing buildings and structures are evaluated for their reuse potential before demolition is allowed.

1. No demolition permit as authorized by the Uniform Building Code shall be issued unless the replacement use and any use, design or other permits, as applicable, have been approved by the city, except as provided below.
    a. Where the replacement use of the site requires no building permit, a demolition permit may be issued as approved by the decision-making body in connection with its action in approving the replacement use of the site.
    b. Where the replacement use requires a building permit, but there is a practical hardship in delaying the demolition permit until a valid building permit is issued, the approving body may authorize demolition before issuance of a building permit if it finds that there is a practical hardship and prior demolition is consistent with the General Plan and the Downtown ~~Recovery~~ Plan. The approving body may require such security as it deems necessary to assure the construction of the replacement project, and may establish time requirements for performance.
2. The decision-making body shall consider any demolition application at the time it considers any necessary permits or actions for the replacement project after demolition. It shall approve demolition after evaluating it for consistency with the General Plan and Downtown ~~Recovery~~ Plan, and taking into account reasonable alternatives for reuse and cost benefits to the community.

Section 24.10.2340 of the Santa Cruz Municipal Code is hereby amended to read as follows:

24.10.2340 EXTENSION AREAS.

The purpose of extension areas is to enhance the pedestrian ambiance of ~~Pacific Avenue~~ the Central Business District and the San Lorenzo Riverwalk, by introducing uses attractive to pedestrians into the pedestrian environment, configured and arranged in ways which activate and enliven the public streets and the San Lorenzo Riverwalk.

1. Revocable License Required. No person shall use an extension area unless a valid revocable license to operate a business has been obtained pursuant to this part.
2. Revocable License Application. Application for a revocable license shall be made jointly by the property owner and the business operator of the business located on the property adjacent to the extension area, and shall be filed with the planning department on the appropriate application form, accompanied with the following information:
    a. Name and address of the property owner and business operator. Both parties or their authorized representatives shall sign the application.
    b. The expiration date of the business license of the business intending to operate the extension area.

c. For extension areas adjacent to public streets and pedestrian lanes within the Central Business District, a drawing showing the extension area in its relationship to the building, sidewalk and street, for the extension area and thirty feet along the sidewalk in either direction. The drawing shall show dimensions of the extension area, locating doorways and access points, show width of sidewalk (distance from curb to building face and property line), existing and projected pedestrian traffic movements, location of utilities that might affect or be affected by the application proposal, parking meters, bus stops, benches, trees, landscaping, trash receptacles and other street furniture, or any other potential sidewalk obstruction.

   The drawing of the extension area shall show its intended use, any furniture or display stands, fixtures, signs, canopies and other overhead appurtenances, landscaping and planters, trash receptacles, and any other matter to be placed in the area.

d. For extension areas adjacent to the San Lorenzo Riverwalk, a drawing showing the extension area in its relationship to the building, the Riverwalk, for the extension area and thirty feet along the Riverwalk in either direction. The drawing shall show dimensions of the extension area, locating doorways and access points, show proposed hardscape and landscape improvements between the existing Riverwalk and the development project relating to the extension area, location of utilities that might affect or be affected by the application proposal, benches, trees, landscaping, planters, trash receptacles and other furniture, or any other potential pedestrian obstruction.

   The drawing of the extension area shall show its intended use, any furniture or display stands, fixtures, signs, canopies and other overhead appurtenances, landscaping and planters, trash receptacles, and any other items to be placed in the area.

ed. Other information which may be required to act on the revocable license.

3. Location and Design Requirements. Chapter 4 of the Downtown ~~Recovery~~ Plan describes the use, location and design requirements for extension areas.

The remainder of the section remains unchanged except for deletion of the word Recovery from Downtown ~~Recovery~~ Plan in subsections 6b4 and 6c1.

Section 24.10.2341 of the Santa Cruz Municipal Code is hereby added to read as follows:

24.10.2341 PARKLETS

The purpose of parklets is to enhance the pedestrian ambiance of the CBD zone district by creating useable outdoor spaces that encourage a sense of community and that provide a tool for economic development.

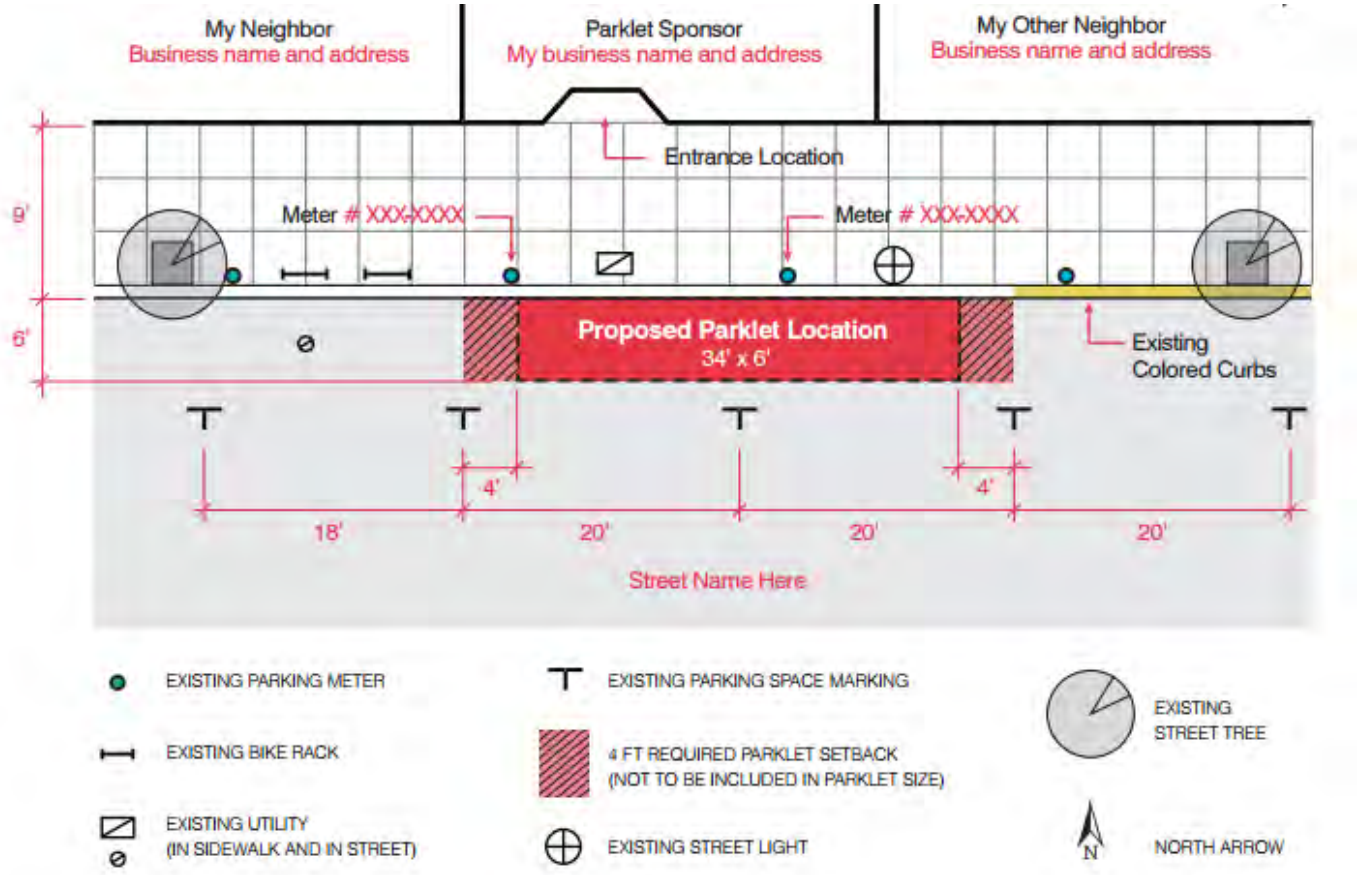
1. No person shall construct or use a parklet unless a Design Permit has been obtained pursuant to Part 5 of Chapter 24.08 and a valid revocable license to operate a business has been obtained pursuant to Section 24.10.2340 of this Chapter.
2. No person shall begin construction of a parklet without first obtaining a Temporary Encroachment Permit to allow for construction to take place within the public right of way.
3. All parklets shall be maintained as private spaces and the business licensed to operate the parklet shall be responsible to maintain the parklet in good condition.
4. Parklets may only be constructed on streets with speed limits of 25 mph or lower.
5. Construction Standards.
    a. The parklet must be located at least one parking space or 20' from any corner.
    b. A minimum of two parking spaces shall be maintained between each parklet.
    c. The structure shall not be located in front of a fire hydrant, above a fire hydrant shut-off valve or over utility or manhole covers.
    d. The parklet shall not replace blue zones designated for disabled parking.
    e. The parklet shall not be more than six feet wide and shall provide four foot setbacks from each parking tee.
    f. The parklet length may consist of two parking spaces maximum per business and the parking spaces shall be located adjacent to the front of the business.
    g. Reflective elements are required at the outside corners of the structure.
    h. Soft hit posts shall be installed at the outside edges of the structure.
    i. The parklet shall provide all features necessary to comply with current ADA requirements.
    j. Bolting or penetrating the surface of the roadway in any way shall not be permitted.
    k. The platform surface shall be flush with the grade of the adjacent sidewalk with a maximum gap of one-half inch.
    l. The structure shall not impede the flow of curbside drainage and shall not be constructed over a storm drain.
    m. Overhead elements shall provide a minimum vertical clearance of 84" above grade.
    n. The edges/railings shall be spaced appropriately to allow for the ability to see inside the parklet during all hours.
    o. The edges/railings shall be designed to discourage sitting on railings.
    p. The top edge of the parklet edges/railings shall be round to prevent the resting of food and drinks.
    q. The exterior edge/railing shall be a minimum of 30 inches tall. If alcohol will be consumed in the parklet, the edge/railing shall be a minimum of 42 inches tall.
    r. There shall be no electrical fixtures or features within the parklet. All lighting must originate from the associated business and may not shine into the street or otherwise

interfere with vehicular travel. Battery or solar powered lighting elements are permitted within the parklet.

s. All moveable barriers and furniture used in the parklet shall be bolted down or shall be removed from the public right of way during non-operating hours.

6. Design Criteria.
   a. The parklet shall be an open design that allows for pedestrians on either side of the street to see into the parklet. Continuous opaque walls are not permitted.
   b. The parklet should be designed as an extension of the sidewalk and should have multiple points of entry.
   c. Parklets should include permanent or movable seating.
   d. The design should include planting areas that utilize native, drought-tolerant plants. Plantings can be used to discourage seating in areas such as the tops of walls.
   e. The parklet design should utilize sustainable, locally-sourced materials that are easy to maintain.
   f. Signage or other advertising matter is not permitted to be installed on or within the parklet with the exception of a notice of private property/right to refuse service no greater than 11" x 5" in size. Sandwich board signs are prohibited at all times.
7. Operational Conditions
   a. If a business changes ownership, the new business owner must obtain a new Extension License per Section 24.10.2340. A Design Permit may be required to recognize changes to the parklet.
   b. The parklet shall operate consistent with the restaurant hours of operation and shall not operate past 11:00 p.m. Parklets shall be closed or gated when not in use.
   c. Outdoor entertainment is prohibited within the parklet.
   d. The business associated with a parklet shall obtain a trespass letter with the Santa Cruz Police Department prior to operation of the parklet.
   e. Prior to the commencement of use, security cameras shall be installed outside to cover the entire parklet and front sidewalk areas. Cameras shall be placed in positions where the exterior lighting does not bleed into the coverage.
   f. Parklets and plantings shall be maintained in good condition, free of graffiti and litter. Elements that are visually or structurally degraded shall be replaced expeditiously.
   g. Patrons of the parklet shall not be permitted to sit on the edges/railings.
   h. Smoking is not permitted within parklets.
   i. The parklet shall be reviewed annually by the Planning Department for compliance with conditions of approval and to ensure that the parklet is maintained in good condition and does not create a nuisance to pedestrians or adjacent businesses.

8. Removal
   a. The sponsor, at their own expense, shall be required to remove the parklet and restore the public right of way to the standards of the Public Works Department if desired by the sponsor or if requested by the City of Santa Cruz for utility repair and maintenance, streetscape improvements, or other improvements that interfere with the location of the parklet.
   b. If the parklet is removed temporarily for streetscape or utility improvements, the sponsor shall be responsible for the costs of removing, storing, and re-installing the parklet.
   c. In the case of an emergency, the city may remove the parklet without prior notice to the applicant. The sponsor is responsible for restoring any damage to the parklet.



APPENDIX D
Buildout Assumptions

Assumptions for Downtown Recovery Plan Amendment
Study Area - See Map (West side of Pacific Avenue from Cathcart to Laurel, East Side of Pacific, and all the parcels fronting the west side of Front Street between Soquel Avenue and Laurel Street)
Downtown Parcel and Footprint Spreadsheet dated 6-9-2015
January 6, 2017

	Area X Riverfront	**Area Y E. Pacific/W. Front Pacific Station**	**Area Z W. Pacific**	**Totals**	**Change from Existing Conditions (Includes demolition and reconstruction)**
Baseline/Existing Conditions					
Property Area	146,000 sf (3.35 acres)	222,200 sf (5.10 acres)	148,800 sf (3.42 acres)	517,000 sf (11.87 acres)	N/A
Commercial	62,000 sf	74,864 sf	182,836 sf	**319,700 sf**	N/A
Office	N/A	56,105 sf	65,761 sf	**121,866 sf**	N/A
Residential	N/A	113 units	56 units	**169 units**	N /A
Parking	164 spaces	186 spaces	97 spaces	**447 spaces**	N /A
2030 General Plan – No Amendments (Units are totals, reflecting both demolition and reconstruction)					
Commercial	65,875 sf	47,000 sf	182,836 sf	**295,711 sf**	-23,989
Office	11,000 sf	40,000 sf	65,761 sf	**116,761 sf**	-5,105
Residential	190 units	360 units	56 units	**606 units**	437
Parking	265 spaces	1,610 spaces	97 spaces	**1,972 spaces**	+1,525
Buildout Assumptions with Proposed Downtown Plan Amendments (Units are totals, reflecting both demolition and reconstruction)					
Commercial	73,171 sf	47,000 sf	184,836 sf	**305,007 sf**	**-14,693 sf**
Office	18,296 sf	40,000 sf	65,761 sf	**124,057 sf**	**+2,191 sf**
Residential	321 units	483 units	76 units	**880 units**	**+711 units**
Parking	397 spaces	1,924 spaces	117 spaces	**2,438 spaces**	**+1,991 spaces**

GENERAL ASSUMPTIONS FOR AREA X

Ground Level (Same in GP Buildout or with Downtown Plan Amendments)
Requires removal of structures to accommodate parking.
169 spaces exist now and area could accommodate up to 265 spaces and 33,000 sf retail/non-residential uses and remaining area in open space connections to the river.

Second (Riverwalk) Level (Same in GP Buildout or with Downtown Plan Amendments)
25% commercial to connect to Riverwalk and at north and south ends of Area X = 21,875 square feet
75% residential or 66 units

Combined Third and Fourth Levels (Same in GP Buildout or with Downtown Plan Amendments)
15% Office and hotel use split between the uses
    11,000 square feet of Office
    11,000 square feet of hotel use
85% residential = 124 units

Combined Fifth and Sixth Levels (not feasible under existing General Plan Buildout, only applies to Downtown Plan Amendments)
10% Office and Commercial (could include restaurant) split between uses
    7,296 square feet of Office
    7,296 square feet of Commercial (restaurant)
90% Residential = 131 units

TOTAL AREA X ASSUMPTIONS UNDER GENERAL PLAN 2030 WITHOUT DOWNTOWN PLAN AMENDMENTS

190 total housing units (66 units 2nd flr + 62 units 3rd flr + 62 units 4th flr)
65,875 sf Commercial (retail, restaurant or hotel) (33,000 sf 1st flr + 21,875 sf 2nd level (Riverwalk), 5,500 sf 3rd flr + 5,500 sf 4th flr)
11,000 sf Commercial (office) (5,500 sf 3rd + 5,500 sf 4th level)
265 total ground level parking spaces accommodated at the Front Street ground level (no structured parking with this scenario)

TOTAL AREA X ASSUMPTIONS UNDER BUILDOUT WITH PROPOSED DOWNTOWN PLAN AMENDMENTS

321 total housing units (66 units 2nd flr + 62 units 3rd flr + 62 units 4th flr + 131 units 5th and 6th flrs)
73,171 sf Commercial (retail, restaurant or hotel) (33,000 sf 1st flr + 21,875 sf 2nd Riverwalk level flr, 5,500 sf 3rd flr + 5,500 4th flr + 7,296 sf 5th and 6th flrs)
18,296 sf Commercial (office) (5,500 sf 3rd + 5,500 sf 4th level + 7,296 sf 5th and 6th flrs)
397 total parking spaces (265 ground level parking spaces + 132 structured)

GENERAL ASSUMPTIONS FOR AREA Y

AREA Y GENERAL PLAN 2030 BUILDOUT WITHOUT THE PROPOSED DOWNTOWN PLAN AMENDMENTS:

Metro Site:
90 units
720 parking spaces (180 spaces per level X 4 levels)
25,000 sf Commercial at ground level
15,000 sf Office

Devcon Properties LLC and adjacent Parcels by proposed Maple Street:
157 units (55 2BR and 102 1BR/Studio)
250 parking spaces
15,000 sf Commercial

City Parking Garage on Lot 7:
640 parking spaces (160 spaces per level X 4 levels)
7,000 sf Commercial

Total parking for this area would be about 1,610 spaces (720 + 250 + 640). 186 parking spaces would be removed and replaced for a net increase of 1,424, resulting in a total of **1,610 spaces for Area Y**)

AREA Y BUILDOUT WITH THE DOWNTOWN PLAN AMENDMENTS. The assumptions for the Commercial and Office stay the same, but housing and parking would increase for the respective projects. Devcon Properties LLC project would be able to construct an additional **76 units above the 50' level** and the City's housing by Metro could build **30 additional units with the allowable floors above 50 feet**.

The Metro and City parking garages would be able to construct a combined **340 more spaces** with the additional height proposed for the DRP.

Metro Site:
120 units
900 parking spaces (180 spaces per level X 5 levels)
25,000 sf Commercial
15,000 sf Office

Devcon Properties LLC and adjacent Parcels by proposed Maple Street:
250 units (87 2BR and 163 1BR/Studio)
329 parking spaces
15,000 sf Commercial

City Parking Garage:
800 parking spaces (160 spaces per level X 5 levels)
7,000 sf Commercial

Total new parking for Area Y would be about 1,964 spaces (900 = 329 = 800). 186 parking spaces would be removed and replaced for a net increase of 1,830, resulting in a total of **1,964 spaces for Area Y**) Various scenarios could be assumed for parking modifications and on and off-site programs, mechanical stacking, payment of deficiency and in-lieu fees, reduction is parking ratio standards and other factors. Parking code changes are not part of the Downtown Recovery Plan changes and for the purposes of the buildout scenarios, the number of units and the square footages are assumed *reasonable worst-case scenarios* for under the proposed development standard modifications. This area assumes potentially 2 large public parking garages, which is unlikely in a short-term scenario, but both have been included for the purposes of the CEQA analysis.

TOTAL AREA Y ASSUMPTIONS UNDER GENERAL PLAN 2030 WITHOUT DOWNTOWN PLAN AMENDMENTS

247 total housing units (90 units + 157 units)
47,000 sf Commercial (retail, restaurant) (25,000 sf + 15,000 sf + 7,000 sf)
40,000 sf Commercial (office) (15,000 sf + 25,000 sf)
1,610 total parking spaces (720 spaces + 250 spaces + 640 spaces)

TOTAL AREA Y ASSUMPTIONS WITH PROPOSED DOWNTOWN PLAN AMENDMENTS

370 total housing units (120 units + 250 units)
47,000 sf Commercial (retail, restaurant) (25,000 sf + 25,000 sf + 7,000 sf)
15,000 sf Commercial (office) (15,000 sf)
1,964 total parking spaces (900 spaces + 264 spaces + 800 spaces)

GENERAL ASSUMPTIONS FOR AREA Z: West Side of Pacific Avenue between Cathcart Street and Laurel Street

Area Z has well-established businesses on all properties. There is little to no space available for adding parking, therefore the opportunity for redevelopment is limited. Under existing DRP regulations, the height limit would allow most properties to add a floor or even two. But for the purposes of estimating the buildout under the existing GP 2030, the GP EIR assumed this area was already built-out. In order to have the traffic analysis include additional reasonable worst-case assumptions, it is assumed that the NW corner property at Pacific and Laurel could be redeveloped to add a floor and accommodate some housing in a mixed use project.

Under the proposed DRP modifications, the NW corner property at Pacific and Laurel would assume adding two floors of residential for a total of 20 new housing units and another 2,000 square feet of ground level retail. These units would be small units and both the buildout and proposed DRP plan amendment scenarios assume the same number of parking spaces would be constructed in either scenario. Assumptions are made that the size of the units would require 1 space per unit.

TOTAL AREA Z ASSUMPTIONS UNDER GENERAL PLAN 2030 WITHOUT DOWNTOWN PLAN AMENDMENTS

56 total housing units
182,836 sf Commercial
97 total parking spaces

TOTAL AREA Y ASSUMPTIONS WITH PROPOSED DOWNTOWN PLAN AMENDMENTS

76 total housing units
184,836 sf Commercial
117 total parking spaces

APPENDIX E
Air Quality and GHG Emissions Calculations

Available on CD & City Website at:
http://www.cityofsantacruz.com/government/city-departments/planning-and-community-development-2/environmental-documents

Santa Cruz Downtown Recovery Plan

CalEEMod Version 2016.3.1 Outputs

Annual, Summer, Winter, Mitigation Report

Santa Cruz Downtown Recovery Plan

Santa Cruz County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	2.19	1000sqft	0.05	2,191.00	0
Enclosed Parking with Elevator	1,991.00	Space	0.00	796,400.00	0
Apartments Mid Rise	390.00	Dwelling Unit	6.00	390,000.00	944
Condo/Townhouse	321.00	Dwelling Unit	5.00	321,000.00	777

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	1.8	**Precipitation Freq (Days)**	61
Climate Zone	5			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	372.88	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity adjusted based on 50% RPS by year 2030

Land Use - Adjusted population based on average City household size of 2.42 persons per du

Construction Phase - Modeling operations only

Vehicle Trips - Trip rates from TIA adjusted based on City-recommended 40% reduction based on mixed-use in Downtown Santa Cruz

Water And Wastewater - Water demand based on City Water Department

Energy Mitigation - Residences and commerical uses that comply with 2016 Title 24 are 28% and 5% more efficient than 2013 Title 24, respectively. Weighted average for project = 28%

Waste Mitigation - 75% waste diversion consistent with AB 341

Table Name	Column Name	Default Value	New Value
tblLandUse	BuildingSpaceSquareFeet	2,190.00	2,191.00
tblLandUse	LandUseSquareFeet	2,190.00	2,191.00
tblLandUse	LotAcreage	17.92	0.00
tblLandUse	LotAcreage	10.26	6.00
tblLandUse	LotAcreage	20.06	5.00
tblLandUse	Population	1,115.00	944.00
tblLandUse	Population	918.00	777.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	372.88
tblProjectCharacteristics	OperationalYear	2018	2040
tblTripsAndVMT	WorkerTripNumber	169.00	0.00
tblVehicleTrips	ST_TR	6.39	3.83
tblVehicleTrips	ST_TR	5.67	4.39
tblVehicleTrips	ST_TR	2.46	1.47
tblVehicleTrips	SU_TR	5.86	3.52
tblVehicleTrips	SU_TR	4.84	3.75
tblVehicleTrips	SU_TR	1.05	0.63
tblVehicleTrips	WD_TR	6.65	3.99
tblVehicleTrips	WD_TR	5.81	4.50
tblVehicleTrips	WD_TR	11.03	6.57
tblWater	IndoorWaterUseRate	25,410,069.99	16,370,250.00
tblWater	IndoorWaterUseRate	20,914,442.22	13,473,975.00
tblWater	IndoorWaterUseRate	389,236.91	39,438.00
tblWater	OutdoorWaterUseRate	16,019,391.95	543,037.50
tblWater	OutdoorWaterUseRate	13,185,191.84	543,037.50
tblWater	OutdoorWaterUseRate	238,564.56	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.5205	0.0845	7.3254	3.9000e-004		0.0408	0.0408		0.0408	0.0408	0.0000	12.0267	12.0267	0.0115	0.0000	12.3148
Energy	0.0729	0.6228	0.2659	3.9700e-003		0.0503	0.0503		0.0503	0.0503	0.0000	2,221.9672	2,221.9672	0.1306	0.0374	2,236.3673
Mobile	0.3995	1.8629	5.2304	0.0250	3.1397	0.0124	3.1521	0.8410	0.0115	0.8526	0.0000	2,297.2355	2,297.2355	0.0616	0.0000	2,298.7764
Waste						0.0000	0.0000		0.0000	0.0000	66.8043	0.0000	66.8043	3.9480	0.0000	165.5049
Water						0.0000	0.0000		0.0000	0.0000	9.4807	27.9922	37.4729	0.9759	0.0234	68.8574
Total	**3.9929**	**2.5702**	**12.8217**	**0.0293**	**3.1397**	**0.1035**	**3.2432**	**0.8410**	**0.1026**	**0.9437**	**76.2850**	**4,559.2215**	**4,635.5066**	**5.1277**	**0.0608**	**4,781.8208**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	3.5205	0.0845	7.3254	3.9000e-004		0.0408	0.0408		0.0408	0.0408	0.0000	12.0267	12.0267	0.0115	0.0000	12.3148
Energy	0.0553	0.4724	0.2017	3.0100e-003		0.0382	0.0382		0.0382	0.0382	0.0000	1,813.3595	1,813.3595	0.1090	0.0304	1,825.1446
Mobile	0.3995	1.8629	5.2304	0.0250	3.1397	0.0124	3.1521	0.8410	0.0115	0.8526	0.0000	2,297.2355	2,297.2355	0.0616	0.0000	2,298.7764
Waste						0.0000	0.0000		0.0000	0.0000	16.7011	0.0000	16.7011	0.9870	0.0000	41.3762
Water						0.0000	0.0000		0.0000	0.0000	9.4807	27.9922	37.4729	0.9759	0.0234	68.8574
Total	**3.9753**	**2.4198**	**12.7575**	**0.0284**	**3.1397**	**0.0914**	**3.2311**	**0.8410**	**0.0905**	**0.9315**	**26.1818**	**4,150.6139**	**4,176.7957**	**2.1451**	**0.0539**	**4,246.4694**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.44**	**5.85**	**0.50**	**3.27**	**0.00**	**11.74**	**0.37**	**0.00**	**11.84**	**1.29**	**65.68**	**8.96**	**9.90**	**58.17**	**11.45**	**11.20**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.3995	1.8629	5.2304	0.0250	3.1397	0.0124	3.1521	0.8410	0.0115	0.8526	0.0000	2,297.2355	2,297.2355	0.0616	0.0000	2,298.7764
Unmitigated	0.3995	1.8629	5.2304	0.0250	3.1397	0.0124	3.1521	0.8410	0.0115	0.8526	0.0000	2,297.2355	2,297.2355	0.0616	0.0000	2,298.7764

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,556.10	1,493.70	1372.80	4,381,832	4,381,832
Condo/Townhouse	1,444.50	1,409.19	1203.75	4,047,830	4,047,830
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	14.39	3.22	1.38	26,130	26,130
Total	3,014.99	2,906.11	2,577.93	8,455,792	8,455,792

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	7.30	7.50	44.00	18.80	37.20	86	11	3
Condo/Townhouse	10.80	7.30	7.50	44.00	18.80	37.20	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.607849	0.022927	0.205901	0.103922	0.009867	0.003828	0.022612	0.014637	0.001269	0.001293	0.004540	0.000840	0.000515
Enclosed Parking with Elevator	0.607849	0.022927	0.205901	0.103922	0.009867	0.003828	0.022612	0.014637	0.001269	0.001293	0.004540	0.000840	0.000515

Apartments Mid Rise	0.607849	0.022927	0.205901	0.103922	0.009867	0.003828	0.022612	0.014637	0.001269	0.001293	0.004540	0.000840	0.000515
Condo/Townhouse	0.607849	0.022927	0.205901	0.103922	0.009867	0.003828	0.022612	0.014637	0.001269	0.001293	0.004540	0.000840	0.000515

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,266.3759	1,266.3759	0.0985	0.0204	1,274.9106
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	1,500.8983	1,500.8983	0.1167	0.0242	1,511.0135
NaturalGas Mitigated	0.0553	0.4724	0.2017	3.0100e-003		0.0382	0.0382		0.0382	0.0382	0.0000	546.9836	546.9836	0.0105	0.0100	550.2340
NaturalGas Unmitigated	0.0729	0.6228	0.2659	3.9700e-003		0.0503	0.0503		0.0503	0.0503	0.0000	721.0689	721.0689	0.0138	0.0132	725.3539

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	4.46144e+006	0.0241	0.2056	0.0875	1.3100e-003		0.0166	0.0166		0.0166	0.0166	0.0000	238.0792	238.0792	4.5600e-003	4.3600e-003	239.4940
Condo/Townhouse	9.00834e+006	0.0486	0.4151	0.1766	2.6500e-003		0.0336	0.0336		0.0336	0.0336	0.0000	480.7191	480.7191	9.2100e-003	8.8100e-003	483.5758
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	42549.2	2.3000e-004	2.0900e-003	1.7500e-003	1.0000e-005		1.6000e-004	1.6000e-004		1.6000e-004	1.6000e-004	0.0000	2.2706	2.2706	4.0000e-005	4.0000e-005	2.2841

Total		**0.0729**	**0.6228**	**0.2659**	**3.9700e-003**		**0.0503**	**0.0503**		**0.0503**	**0.0503**	**0.0000**	**721.0689**	**721.0689**	**0.0138**	**0.0132**	**725.3538**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	3.49779e+006	0.0189	0.1612	0.0686	1.0300e-003		0.0130	0.0130		0.0130	0.0130	0.0000	186.6555	186.6555	3.5800e-003	3.4200e-003	187.7647
Condo/Townhouse	6.72104e+006	0.0362	0.3097	0.1318	1.9800e-003		0.0250	0.0250		0.0250	0.0250	0.0000	358.6602	358.6602	6.8700e-003	6.5800e-003	360.7915
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	31255.1	1.7000e-004	1.5300e-003	1.2900e-003	1.0000e-005		1.2000e-004	1.2000e-004		1.2000e-004	1.2000e-004	0.0000	1.6679	1.6679	3.0000e-005	3.0000e-005	1.6778
Total		**0.0553**	**0.4724**	**0.2017**	**3.0200e-003**		**0.0382**	**0.0382**		**0.0382**	**0.0382**	**0.0000**	**546.9836**	**546.9836**	**0.0105**	**0.0100**	**550.2340**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.76334e+006	298.2438	0.0232	4.8000e-003	300.2538
Condo/Townhouse	1.71488e+006	290.0474	0.0226	4.6700e-003	292.0021
Enclosed Parking with Elevator	5.36774e+006	907.8748	0.0706	0.0146	913.9934
General Office Building	27979.1	4.7323	3.7000e-004	8.0000e-005	4.7642
Total		**1,500.8983**	**0.1167**	**0.0242**	**1,511.0135**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	1.66216e+006	281.1304	0.0219	4.5200e-003	283.0251
Condo/Townhouse	1.64265e+006	277.8300	0.0216	4.4700e-003	279.7024
Enclosed Parking with Elevator	4.15848e+006	703.3471	0.0547	0.0113	708.0872
General Office Building	24054.6	4.0685	3.2000e-004	7.0000e-005	4.0959
Total		**1,266.3759**	**0.0985**	**0.0204**	**1,274.9106**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	3.5205	0.0845	7.3254	3.9000e-004		0.0408	0.0408		0.0408	0.0408	0.0000	12.0267	12.0267	0.0115	0.0000	12.3148
Unmitigated	3.5205	0.0845	7.3254	3.9000e-004		0.0408	0.0408		0.0408	0.0408	0.0000	12.0267	12.0267	0.0115	0.0000	12.3148

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4630					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.8369					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2207	0.0845	7.3254	3.9000e-004		0.0408	0.0408		0.0408	0.0408	0.0000	12.0267	12.0267	0.0115	0.0000	12.3148
Total	**3.5205**	**0.0845**	**7.3254**	**3.9000e-004**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**12.0267**	**12.0267**	**0.0115**	**0.0000**	**12.3148**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.4630					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	2.8369					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	0.2207	0.0845	7.3254	3.9000e-004		0.0408	0.0408		0.0408	0.0408	0.0000	12.0267	12.0267	0.0115	0.0000	12.3148
Total	**3.5205**	**0.0845**	**7.3254**	**3.9000e-004**		**0.0408**	**0.0408**		**0.0408**	**0.0408**	**0.0000**	**12.0267**	**12.0267**	**0.0115**	**0.0000**	**12.3148**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	37.4729	0.9759	0.0234	68.8574
Unmitigated	37.4729	0.9759	0.0234	68.8574

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	16.3702 / 0.543037	20.4969	0.5346	0.0128	37.6891
Condo/Townhouse	13.474 / 0.543037	16.9274	0.4400	0.0106	31.0783
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	0.039438 / 0	0.0486	1.2900e-003	3.0000e-005	0.0900
Total		**37.4729**	**0.9759**	**0.0234**	**68.8574**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e

Land Use	Mgal	MT/yr			
Apartments Mid Rise	16.3702 / 0.543037	20.4969	0.5346	0.0128	37.6891
Condo/Townhouse	13.474 / 0.543037	16.9274	0.4400	0.0106	31.0783
Enclosed Parking with Elevator	0 / 0	0.0000	0.0000	0.0000	0.0000
General Office Building	0.039438 / 0	0.0486	1.2900e-003	3.0000e-005	0.0900
Total		**37.4729**	**0.9759**	**0.0234**	**68.8574**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	16.7011	0.9870	0.0000	41.3762
Unmitigated	66.8043	3.9480	0.0000	165.5049

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e

Land Use	tons	MT/yr			
Apartments Mid Rise	179.4	36.4166	2.1522	0.0000	90.2205
Condo/Townhouse	147.66	29.9737	1.7714	0.0000	74.2584
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	2.04	0.4141	0.0245	0.0000	1.0259
Total		**66.8043**	**3.9480**	**0.0000**	**165.5049**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	44.85	9.1041	0.5380	0.0000	22.5551
Condo/Townhouse	36.915	7.4934	0.4429	0.0000	18.5646
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000
General Office Building	0.51	0.1035	6.1200e-003	0.0000	0.2565
Total		**16.7011**	**0.9870**	**0.0000**	**41.3762**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Santa Cruz Downtown Recovery Plan

Santa Cruz County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	2.19	1000sqft	0.05	2,191.00	0
Enclosed Parking with Elevator	1,991.00	Space	0.00	796,400.00	0
Apartments Mid Rise	390.00	Dwelling Unit	6.00	390,000.00	944
Condo/Townhouse	321.00	Dwelling Unit	5.00	321,000.00	777

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	1.8	**Precipitation Freq (Days)**	61
Climate Zone	5			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	372.88	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity adjusted based on 50% RPS by year 2030

Land Use - Adjusted population based on average City household size of 2.42 persons per du

Construction Phase - Modeling operations only

Vehicle Trips - Trip rates from TIA adjusted based on City-recommended 40% reduction based on mixed-use in Downtown Santa Cruz

Water And Wastewater - Water demand based on City Water Department

Energy Mitigation - Residences and commerical uses that comply with 2016 Title 24 are 28% and 5% more efficient than 2013 Title 24, respectively. Weighted average for project = 28%

Waste Mitigation - 75% waste diversion consistent with AB 341

Table Name	Column Name	Default Value	New Value
tblLandUse	BuildingSpaceSquareFeet	2,190.00	2,191.00
tblLandUse	LandUseSquareFeet	2,190.00	2,191.00
tblLandUse	LotAcreage	17.92	0.00
tblLandUse	LotAcreage	10.26	6.00
tblLandUse	LotAcreage	20.06	5.00
tblLandUse	Population	1,115.00	944.00
tblLandUse	Population	918.00	777.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	372.88
tblProjectCharacteristics	OperationalYear	2018	2040
tblTripsAndVMT	WorkerTripNumber	169.00	0.00
tblVehicleTrips	ST_TR	6.39	3.83
tblVehicleTrips	ST_TR	5.67	4.39
tblVehicleTrips	ST_TR	2.46	1.47
tblVehicleTrips	SU_TR	5.86	3.52
tblVehicleTrips	SU_TR	4.84	3.75
tblVehicleTrips	SU_TR	1.05	0.63
tblVehicleTrips	WD_TR	6.65	3.99
tblVehicleTrips	WD_TR	5.81	4.50
tblVehicleTrips	WD_TR	11.03	6.57
tblWater	IndoorWaterUseRate	25,410,069.99	16,370,250.00
tblWater	IndoorWaterUseRate	20,914,442.22	13,473,975.00
tblWater	IndoorWaterUseRate	389,236.91	39,438.00
tblWater	OutdoorWaterUseRate	16,019,391.95	543,037.50
tblWater	OutdoorWaterUseRate	13,185,191.84	543,037.50
tblWater	OutdoorWaterUseRate	238,564.56	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	19.8467	0.6759	58.6029	3.1100e-003		0.3260	0.3260		0.3260	0.3260	0.0000	106.0569	106.0569	0.1017	0.0000	108.5983
Energy	0.3992	3.4123	1.4568	0.0218		0.2758	0.2758		0.2758	0.2758		4,355.3008	4,355.3008	0.0835	0.0799	4,381.1822
Mobile	2.4401	10.1922	30.1498	0.1463	18.3647	0.0701	18.4348	4.9046	0.0651	4.9697		14,831.5765	14,831.5765	0.3827		14,841.1427
Total	**22.6861**	**14.2805**	**90.2095**	**0.1712**	**18.3647**	**0.6719**	**19.0366**	**4.9046**	**0.6669**	**5.5715**	**0.0000**	**19,292.9342**	**19,292.9342**	**0.5678**	**0.0799**	**19,330.9233**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	19.8467	0.6759	58.6029	3.1100e-003		0.3260	0.3260		0.3260	0.3260	0.0000	106.0569	106.0569	0.1017	0.0000	108.5983
Energy	0.3029	2.5885	1.1050	0.0165		0.2092	0.2092		0.2092	0.2092		3,303.8146	3,303.8146	0.0633	0.0606	3,323.4475
Mobile	2.4401	10.1922	30.1498	0.1463	18.3647	0.0701	18.4348	4.9046	0.0651	4.9697		14,831.5765	14,831.5765	0.3827		14,841.1427
Total	**22.5897**	**13.4566**	**89.8576**	**0.1660**	**18.3647**	**0.6053**	**18.9700**	**4.9046**	**0.6003**	**5.5049**	**0.0000**	**18,241.4480**	**18,241.4480**	**0.5476**	**0.0606**	**18,273.1886**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.42**	**5.77**	**0.39**	**3.07**	**0.00**	**9.91**	**0.35**	**0.00**	**9.99**	**1.20**	**0.00**	**5.45**	**5.45**	**3.55**	**24.15**	**5.47**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.4401	10.1922	30.1498	0.1463	18.3647	0.0701	18.4348	4.9046	0.0651	4.9697		14,831.5765	14,831.5765	0.3827		14,841.1427
Unmitigated	2.4401	10.1922	30.1498	0.1463	18.3647	0.0701	18.4348	4.9046	0.0651	4.9697		14,831.5765	14,831.5765	0.3827		14,841.1427

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,556.10	1,493.70	1372.80	4,381,832	4,381,832
Condo/Townhouse	1,444.50	1,409.19	1203.75	4,047,830	4,047,830
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	14.39	3.22	1.38	26,130	26,130
Total	3,014.99	2,906.11	2,577.93	8,455,792	8,455,792

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	7.30	7.50	44.00	18.80	37.20	86	11	3
Condo/Townhouse	10.80	7.30	7.50	44.00	18.80	37.20	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.607849	0.022927	0.205901	0.103922	0.009867	0.003828	0.022612	0.014637	0.001269	0.001293	0.004540	0.000840	0.000515
Enclosed Parking with Elevator	0.607849	0.022927	0.205901	0.103922	0.009867	0.003828	0.022612	0.014637	0.001269	0.001293	0.004540	0.000840	0.000515
Apartments Mid Rise	0.607849	0.022927	0.205901	0.103922	0.009867	0.003828	0.022612	0.014637	0.001269	0.001293	0.004540	0.000840	0.000515
Condo/Townhouse	0.607849	0.022927	0.205901	0.103922	0.009867	0.003828	0.022612	0.014637	0.001269	0.001293	0.004540	0.000840	0.000515

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.3029	2.5885	1.1050	0.0165		0.2092	0.2092		0.2092	0.2092		3,303.8146	3,303.8146	0.0633	0.0606	3,323.4475
NaturalGas Unmitigated	0.3992	3.4123	1.4568	0.0218		0.2758	0.2758		0.2758	0.2758		4,355.3008	4,355.3008	0.0835	0.0799	4,381.1822

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	12223.1	0.1318	1.1264	0.4793	7.1900e-003		0.0911	0.0911		0.0911	0.0911		1,438.0133	1,438.0133	0.0276	0.0264	1,446.5587
Condo/Townhouse	24680.4	0.2662	2.2745	0.9679	0.0145		0.1839	0.1839		0.1839	0.1839		2,903.5730	2,903.5730	0.0557	0.0532	2,920.8275
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	116.573	1.2600e-003	0.0114	9.6000e-003	7.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		13.7145	13.7145	2.6000e-004	2.5000e-004	13.7960
Total		**0.3992**	**3.4123**	**1.4568**	**0.0218**		**0.2758**	**0.2758**		**0.2758**	**0.2758**		**4,355.3008**	**4,355.3008**	**0.0835**	**0.0798**	**4,381.1822**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	9.58299	0.1034	0.8831	0.3758	5.6400e-003		0.0714	0.0714		0.0714	0.0714		1,127.4108	1,127.4108	0.0216	0.0207	1,134.1105
Condo/Townhouse	18.4138	0.1986	1.6970	0.7221	0.0108		0.1372	0.1372		0.1372	0.1372		2,166.3296	2,166.3296	0.0415	0.0397	2,179.2030
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0.0856303	9.2000e-004	8.4000e-003	7.0500e-003	5.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004		10.0742	10.0742	1.9000e-004	1.8000e-004	10.1340
Total		**0.3029**	**2.5885**	**1.1050**	**0.0165**		**0.2092**	**0.2092**		**0.2092**	**0.2092**		**3,303.8146**	**3,303.8146**	**0.0633**	**0.0606**	**3,323.4475**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	19.8467	0.6759	58.6029	3.1100e-003		0.3260	0.3260		0.3260	0.3260	0.0000	106.0569	106.0569	0.1017	0.0000	108.5983
Unmitigated	19.8467	0.6759	58.6029	3.1100e-003		0.3260	0.3260		0.3260	0.3260	0.0000	106.0569	106.0569	0.1017	0.0000	108.5983

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.5371					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	15.5444					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7652	0.6759	58.6029	3.1100e-003		0.3260	0.3260		0.3260	0.3260		106.0569	106.0569	0.1017		108.5983
Total	**19.8467**	**0.6759**	**58.6029**	**3.1100e-003**		**0.3260**	**0.3260**		**0.3260**	**0.3260**	**0.0000**	**106.0569**	**106.0569**	**0.1017**	**0.0000**	**108.5983**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.5371					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	15.5444					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7652	0.6759	58.6029	3.1100e-003		0.3260	0.3260		0.3260	0.3260		106.0569	106.0569	0.1017		108.5983
Total	**19.8467**	**0.6759**	**58.6029**	**3.1100e-003**		**0.3260**	**0.3260**		**0.3260**	**0.3260**	**0.0000**	**106.0569**	**106.0569**	**0.1017**	**0.0000**	**108.5983**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Santa Cruz Downtown Recovery Plan

Santa Cruz County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
General Office Building	2.19	1000sqft	0.05	2,191.00	0
Enclosed Parking with Elevator	1,991.00	Space	0.00	796,400.00	0
Apartments Mid Rise	390.00	Dwelling Unit	6.00	390,000.00	944
Condo/Townhouse	321.00	Dwelling Unit	5.00	321,000.00	777

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	1.8	**Precipitation Freq (Days)**	61
Climate Zone	5			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	372.88	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity adjusted based on 50% RPS by year 2030

Land Use - Adjusted population based on average City household size of 2.42 persons per du

Construction Phase - Modeling operations only

Vehicle Trips - Trip rates from TIA adjusted based on City-recommended 40% reduction based on mixed-use in Downtown Santa Cruz

Water And Wastewater - Water demand based on City Water Department

Energy Mitigation - Residences and commerical uses that comply with 2016 Title 24 are 28% and 5% more efficient than 2013 Title 24, respectively. Weighted average for project = 28%

Waste Mitigation - 75% waste diversion consistent with AB 341

Table Name	Column Name	Default Value	New Value
tblLandUse	BuildingSpaceSquareFeet	2,190.00	2,191.00
tblLandUse	LandUseSquareFeet	2,190.00	2,191.00
tblLandUse	LotAcreage	17.92	0.00
tblLandUse	LotAcreage	10.26	6.00
tblLandUse	LotAcreage	20.06	5.00
tblLandUse	Population	1,115.00	944.00
tblLandUse	Population	918.00	777.00
tblOffRoadEquipment	UsageHours	6.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	372.88
tblProjectCharacteristics	OperationalYear	2018	2040
tblTripsAndVMT	WorkerTripNumber	169.00	0.00
tblVehicleTrips	ST_TR	6.39	3.83
tblVehicleTrips	ST_TR	5.67	4.39
tblVehicleTrips	ST_TR	2.46	1.47
tblVehicleTrips	SU_TR	5.86	3.52
tblVehicleTrips	SU_TR	4.84	3.75
tblVehicleTrips	SU_TR	1.05	0.63
tblVehicleTrips	WD_TR	6.65	3.99
tblVehicleTrips	WD_TR	5.81	4.50
tblVehicleTrips	WD_TR	11.03	6.57
tblWater	IndoorWaterUseRate	25,410,069.99	16,370,250.00
tblWater	IndoorWaterUseRate	20,914,442.22	13,473,975.00
tblWater	IndoorWaterUseRate	389,236.91	39,438.00
tblWater	OutdoorWaterUseRate	16,019,391.95	543,037.50
tblWater	OutdoorWaterUseRate	13,185,191.84	543,037.50
tblWater	OutdoorWaterUseRate	238,564.56	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	19.8467	0.6759	58.6029	3.1100e-003		0.3260	0.3260		0.3260	0.3260	0.0000	106.0569	106.0569	0.1017	0.0000	108.5983
Energy	0.3992	3.4123	1.4568	0.0218		0.2758	0.2758		0.2758	0.2758		4,355.3008	4,355.3008	0.0835	0.0799	4,381.1822
Mobile	2.2278	10.6877	30.8462	0.1407	18.3647	0.0702	18.4349	4.9046	0.0652	4.9698		14,256.9926	14,256.9926	0.3909		14,266.7649
Total	**22.4737**	**14.7760**	**90.9059**	**0.1655**	**18.3647**	**0.6720**	**19.0367**	**4.9046**	**0.6670**	**5.5716**	**0.0000**	**18,718.3503**	**18,718.3503**	**0.5760**	**0.0799**	**18,756.5454**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	19.8467	0.6759	58.6029	3.1100e-003		0.3260	0.3260		0.3260	0.3260	0.0000	106.0569	106.0569	0.1017	0.0000	108.5983
Energy	0.3029	2.5885	1.1050	0.0165		0.2092	0.2092		0.2092	0.2092		3,303.8146	3,303.8146	0.0633	0.0606	3,323.4475
Mobile	2.2278	10.6877	30.8462	0.1407	18.3647	0.0702	18.4349	4.9046	0.0652	4.9698		14,256.9926	14,256.9926	0.3909		14,266.7649
Total	**22.3773**	**13.9521**	**90.5541**	**0.1603**	**18.3647**	**0.6054**	**18.9701**	**4.9046**	**0.6004**	**5.5050**	**0.0000**	**17,666.8641**	**17,666.8641**	**0.5559**	**0.0606**	**17,698.8107**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.43**	**5.58**	**0.39**	**3.18**	**0.00**	**9.91**	**0.35**	**0.00**	**9.98**	**1.20**	**0.00**	**5.62**	**5.62**	**3.50**	**24.15**	**5.64**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	2.2278	10.6877	30.8462	0.1407	18.3647	0.0702	18.4349	4.9046	0.0652	4.9698		14,256.9926	14,256.9926	0.3909		14,266.7649
Unmitigated	2.2278	10.6877	30.8462	0.1407	18.3647	0.0702	18.4349	4.9046	0.0652	4.9698		14,256.9926	14,256.9926	0.3909		14,266.7649

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Apartments Mid Rise	1,556.10	1,493.70	1372.80	4,381,832	4,381,832
Condo/Townhouse	1,444.50	1,409.19	1203.75	4,047,830	4,047,830
Enclosed Parking with Elevator	0.00	0.00	0.00		
General Office Building	14.39	3.22	1.38	26,130	26,130
Total	3,014.99	2,906.11	2,577.93	8,455,792	8,455,792

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Apartments Mid Rise	10.80	7.30	7.50	44.00	18.80	37.20	86	11	3
Condo/Townhouse	10.80	7.30	7.50	44.00	18.80	37.20	86	11	3
Enclosed Parking with Elevator	9.50	7.30	7.30	0.00	0.00	0.00	0	0	0
General Office Building	9.50	7.30	7.30	33.00	48.00	19.00	77	19	4

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
General Office Building	0.607849	0.022927	0.205901	0.103922	0.009867	0.003828	0.022612	0.014637	0.001269	0.001293	0.004540	0.000840	0.000515
Enclosed Parking with Elevator	0.607849	0.022927	0.205901	0.103922	0.009867	0.003828	0.022612	0.014637	0.001269	0.001293	0.004540	0.000840	0.000515
Apartments Mid Rise	0.607849	0.022927	0.205901	0.103922	0.009867	0.003828	0.022612	0.014637	0.001269	0.001293	0.004540	0.000840	0.000515
Condo/Townhouse	0.607849	0.022927	0.205901	0.103922	0.009867	0.003828	0.022612	0.014637	0.001269	0.001293	0.004540	0.000840	0.000515

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Exceed Title 24

Install High Efficiency Lighting

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	0.3029	2.5885	1.1050	0.0165		0.2092	0.2092		0.2092	0.2092		3,303.8146	3,303.8146	0.0633	0.0606	3,323.4475
NaturalGas Unmitigated	0.3992	3.4123	1.4568	0.0218		0.2758	0.2758		0.2758	0.2758		4,355.3008	4,355.3008	0.0835	0.0799	4,381.1822

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	12223.1	0.1318	1.1264	0.4793	7.1900e-003		0.0911	0.0911		0.0911	0.0911		1,438.0133	1,438.0133	0.0276	0.0264	1,446.5587
Condo/Townhouse	24680.4	0.2662	2.2745	0.9679	0.0145		0.1839	0.1839		0.1839	0.1839		2,903.5730	2,903.5730	0.0557	0.0532	2,920.8275
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	116.573	1.2600e-003	0.0114	9.6000e-003	7.0000e-005		8.7000e-004	8.7000e-004		8.7000e-004	8.7000e-004		13.7145	13.7145	2.6000e-004	2.5000e-004	13.7960
Total		**0.3992**	**3.4123**	**1.4568**	**0.0218**		**0.2758**	**0.2758**		**0.2758**	**0.2758**		**4,355.3008**	**4,355.3008**	**0.0835**	**0.0798**	**4,381.1822**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	9.58299	0.1034	0.8831	0.3758	5.6400e-003		0.0714	0.0714		0.0714	0.0714		1,127.4108	1,127.4108	0.0216	0.0207	1,134.1105
Condo/Townhouse	18.4138	0.1986	1.6970	0.7221	0.0108		0.1372	0.1372		0.1372	0.1372		2,166.3296	2,166.3296	0.0415	0.0397	2,179.2030
Enclosed Parking with Elevator	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000
General Office Building	0.0856303	9.2000e-004	8.4000e-003	7.0500e-003	5.0000e-005		6.4000e-004	6.4000e-004		6.4000e-004	6.4000e-004		10.0742	10.0742	1.9000e-004	1.8000e-004	10.1340
Total		**0.3029**	**2.5885**	**1.1050**	**0.0165**		**0.2092**	**0.2092**		**0.2092**	**0.2092**		**3,303.8146**	**3,303.8146**	**0.0633**	**0.0606**	**3,323.4475**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	19.8467	0.6759	58.6029	3.1100e-003		0.3260	0.3260		0.3260	0.3260	0.0000	106.0569	106.0569	0.1017	0.0000	108.5983
Unmitigated	19.8467	0.6759	58.6029	3.1100e-003		0.3260	0.3260		0.3260	0.3260	0.0000	106.0569	106.0569	0.1017	0.0000	108.5983

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.5371					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	15.5444					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7652	0.6759	58.6029	3.1100e-003		0.3260	0.3260		0.3260	0.3260		106.0569	106.0569	0.1017		108.5983
Total	**19.8467**	**0.6759**	**58.6029**	**3.1100e-003**		**0.3260**	**0.3260**		**0.3260**	**0.3260**	**0.0000**	**106.0569**	**106.0569**	**0.1017**	**0.0000**	**108.5983**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	2.5371					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	15.5444					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	1.7652	0.6759	58.6029	3.1100e-003		0.3260	0.3260		0.3260	0.3260		106.0569	106.0569	0.1017		108.5983
Total	**19.8467**	**0.6759**	**58.6029**	**3.1100e-003**		**0.3260**	**0.3260**		**0.3260**	**0.3260**	**0.0000**	**106.0569**	**106.0569**	**0.1017**	**0.0000**	**108.5983**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CalEEMod Version: CalEEMod.2016.3.1

Date: 5/24/2017 11:34 AM

Santa Cruz Downtown Recovery Plan

Santa Cruz County, Mitigation Report

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	15.63	15.63	15.63	15.65	15.63
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	24.14	24.15	24.15	23.93	24.14	24.14	0.00	24.14	24.14	24.11	24.07	24.14
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	0.09	0.31		
No	Land Use	Improve Walkability Design	0.00			

No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			
No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"				
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program				

	Commute	Commute Subtotal	0.00			
No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	100.00
No	Use Low VOC Paint (Residential Exterior)	100.00
No	Use Low VOC Paint (Non-residential Interior)	150.00
No	Use Low VOC Paint (Non-residential Exterior)	150.00
No	Use Low VOC Paint (Parking)	150.00
No	% Electric Lawnmower	
No	% Electric Leafblower	
No	% Electric Chainsaw	

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
Yes	Exceed Title 24	28.00	
Yes	Install High Efficiency Lighting	16.00	
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00

Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy		
No	Use Reclaimed Water		
No	Use Grey Water		
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction		
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape		

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services	75.00
Percent Reduction in Waste Disposed	

Santa Cruz Downtown Recovery Plan – Reduced Commercial Uses

CalEEMod Version 2016.3.1 Outputs

Annual, Summer, Winter, Mitigation Report

Santa Cruz DRP - Reduced Commercial

Santa Cruz County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Strip Mall	14.69	1000sqft	0.34	14,693.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	1.8	**Precipitation Freq (Days)**	61
Climate Zone	5			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	372.88	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity adjusted based on 50% RPS by year 2030

Land Use - Amount of commercial uses reduced

Construction Phase - Modeling operations only

Vehicle Trips - Trip rates from TIA adjusted based on City-recommended 40% reduction based on mixed-use in Downtown Santa Cruz

Energy Use - Historical energy use factors assumed for commercial uses to be removed

Water And Wastewater - Water use based on City Water Department

Waste Mitigation - 75% waste diversion consistent with AB 341

Table Name	Column Name	Default Value	New Value
tblLandUse	BuildingSpaceSquareFeet	14,690.00	14,693.00
tblLandUse	LandUseSquareFeet	14,690.00	14,693.00

tblOffRoadEquipment	UsageHours	6.00	0.00
tblProjectCharacteristics	CO2IntensityFactor	641.35	372.88
tblProjectCharacteristics	OperationalYear	2018	2040
tblTripsAndVMT	WorkerTripNumber	1.00	0.00
tblVehicleTrips	ST_TR	42.04	25.10
tblVehicleTrips	SU_TR	20.43	12.20
tblVehicleTrips	WD_TR	44.32	26.46
tblWater	IndoorWaterUseRate	1,088,125.34	969,738.00
tblWater	OutdoorWaterUseRate	666,915.53	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0676	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.6000e-004	3.6000e-004	0.0000	0.0000	3.9000e-004
Energy	4.3000e-004	3.8700e-003	3.2500e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	34.3875	34.3875	2.4300e-003	5.6000e-004	34.6159
Mobile	0.0378	0.1777	0.3923	1.6900e-003	0.2035	8.9000e-004	0.2044	0.0545	8.2000e-004	0.0553	0.0000	155.0775	155.0775	4.5300e-003	0.0000	155.1907
Waste						0.0000	0.0000		0.0000	0.0000	3.1301	0.0000	3.1301	0.1850	0.0000	7.7547
Water						0.0000	0.0000		0.0000	0.0000	0.3077	0.8875	1.1952	0.0317	7.6000e-004	2.2135
Total	**0.1059**	**0.1815**	**0.3957**	**1.7100e-003**	**0.2035**	**1.1800e-003**	**0.2047**	**0.0545**	**1.1100e-003**	**0.0556**	**3.4378**	**190.3529**	**193.7906**	**0.2236**	**1.3200e-003**	**199.7752**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	0.0676	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.6000e-004	3.6000e-004	0.0000	0.0000	3.9000e-004
Energy	4.3000e-004	3.8700e-003	3.2500e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	34.3875	34.3875	2.4300e-003	5.6000e-004	34.6159
Mobile	0.0378	0.1777	0.3923	1.6900e-003	0.2035	8.9000e-004	0.2044	0.0545	8.2000e-004	0.0553	0.0000	155.0775	155.0775	4.5300e-003	0.0000	155.1907
Waste						0.0000	0.0000		0.0000	0.0000	0.7825	0.0000	0.7825	0.0463	0.0000	1.9387
Water						0.0000	0.0000		0.0000	0.0000	0.3077	0.8875	1.1952	0.0317	7.6000e-004	2.2135
Total	**0.1059**	**0.1815**	**0.3957**	**1.7100e-003**	**0.2035**	**1.1800e-003**	**0.2047**	**0.0545**	**1.1100e-003**	**0.0556**	**1.0902**	**190.3529**	**191.4430**	**0.0849**	**1.3200e-003**	**193.9591**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**68.29**	**0.00**	**1.21**	**62.04**	**0.00**	**2.91**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0378	0.1777	0.3923	1.6900e-003	0.2035	8.9000e-004	0.2044	0.0545	8.2000e-004	0.0553	0.0000	155.0775	155.0775	4.5300e-003	0.0000	155.1907
Unmitigated	0.0378	0.1777	0.3923	1.6900e-003	0.2035	8.9000e-004	0.2044	0.0545	8.2000e-004	0.0553	0.0000	155.0775	155.0775	4.5300e-003	0.0000	155.1907

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Strip Mall	388.70	368.72	179.22	548,125	548,125
Total	388.70	368.72	179.22	548,125	548,125

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Strip Mall	0.607849	0.022927	0.205901	0.103922	0.009867	0.003828	0.022612	0.014637	0.001269	0.001293	0.004540	0.000840	0.000515

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000	0.0000	30.1692	30.1692	2.3500e-003	4.9000e-004	30.3725
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000	0.0000	30.1692	30.1692	2.3500e-003	4.9000e-004	30.3725
NaturalGas Mitigated	4.3000e-004	3.8700e-003	3.2500e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	4.2183	4.2183	8.0000e-005	8.0000e-005	4.2434
NaturalGas Unmitigated	4.3000e-004	3.8700e-003	3.2500e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	4.2183	4.2183	8.0000e-005	8.0000e-005	4.2434

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Strip Mall	79048.3	4.3000e-004	3.8700e-003	3.2500e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	4.2183	4.2183	8.0000e-005	8.0000e-005	4.2434
Total		**4.3000e-004**	**3.8700e-003**	**3.2500e-003**	**2.0000e-005**		**2.9000e-004**	**2.9000e-004**		**2.9000e-004**	**2.9000e-004**	**0.0000**	**4.2183**	**4.2183**	**8.0000e-005**	**8.0000e-005**	**4.2434**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Strip Mall	79048.3	4.3000e-004	3.8700e-003	3.2500e-003	2.0000e-005		2.9000e-004	2.9000e-004		2.9000e-004	2.9000e-004	0.0000	4.2183	4.2183	8.0000e-005	8.0000e-005	4.2434

Total		**4.3000e-004**	**3.8700e-003**	**3.2500e-003**	**2.0000e-005**		**2.9000e-004**	**2.9000e-004**		**2.9000e-004**	**2.9000e-004**	**0.0000**	**4.2183**	**4.2183**	**8.0000e-005**	**8.0000e-005**	**4.2434**

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Strip Mall	178373	30.1692	2.3500e-003	4.9000e-004	30.3725
Total		**30.1692**	**2.3500e-003**	**4.9000e-004**	**30.3725**

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Strip Mall	178373	30.1692	2.3500e-003	4.9000e-004	30.3725
Total		**30.1692**	**2.3500e-003**	**4.9000e-004**	**30.3725**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	0.0676	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.6000e-004	3.6000e-004	0.0000	0.0000	3.9000e-004
Unmitigated	0.0676	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.6000e-004	3.6000e-004	0.0000	0.0000	3.9000e-004

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	0.0102					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0574					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.6000e-004	3.6000e-004	0.0000	0.0000	3.9000e-004
Total	**0.0676**	**0.0000**	**1.9000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**3.6000e-004**	**3.6000e-004**	**0.0000**	**0.0000**	**3.9000e-004**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					

Architectural Coating	0.0102					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Consumer Products	0.0574					0.0000	0.0000		0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Landscaping	2.0000e-005	0.0000	1.9000e-004	0.0000		0.0000	0.0000		0.0000	0.0000	0.0000	3.6000e-004	3.6000e-004	0.0000	0.0000	3.9000e-004
Total	**0.0676**	**0.0000**	**1.9000e-004**	**0.0000**		**0.0000**	**0.0000**		**0.0000**	**0.0000**	**0.0000**	**3.6000e-004**	**3.6000e-004**	**0.0000**	**0.0000**	**3.9000e-004**

7.0 Water Detail

7.1 Mitigation Measures Water

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	1.1952	0.0317	7.6000e-004	2.2135
Unmitigated	1.1952	0.0317	7.6000e-004	2.2135

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Strip Mall	0.969738 / 0	1.1952	0.0317	7.6000e-004	2.2135
Total		**1.1952**	**0.0317**	**7.6000e-004**	**2.2135**

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Strip Mall	0.969738 / 0	1.1952	0.0317	7.6000e-004	2.2135
Total		**1.1952**	**0.0317**	**7.6000e-004**	**2.2135**

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	0.7825	0.0463	0.0000	1.9387
Unmitigated	3.1301	0.1850	0.0000	7.7547

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Strip Mall	15.42	3.1301	0.1850	0.0000	7.7547
Total		**3.1301**	**0.1850**	**0.0000**	**7.7547**

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Strip Mall	3.855	0.7825	0.0463	0.0000	1.9387
Total		**0.7825**	**0.0463**	**0.0000**	**1.9387**

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Santa Cruz DRP - Reduced Commercial

Santa Cruz County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Strip Mall	14.69	1000sqft	0.34	14,693.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	1.8	**Precipitation Freq (Days)**	61
Climate Zone	5			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	372.88	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity adjusted based on 50% RPS by year 2030

Land Use - Amount of commercial uses reduced

Construction Phase - Modeling operations only

Vehicle Trips - Trip rates from TIA adjusted based on City-recommended 40% reduction based on mixed-use in Downtown Santa Cruz

Energy Use - Historical energy use factors assumed for commercial uses to be removed

Water And Wastewater - Water use based on City Water Department

Waste Mitigation - 75% waste diversion consistent with AB 341

Table Name	Column Name	Default Value	New Value
tblLandUse	BuildingSpaceSquareFeet	14,690.00	14,693.00
tblLandUse	LandUseSquareFeet	14,690.00	14,693.00
tblOffRoadEquipment	UsageHours	6.00	0.00

tblProjectCharacteristics	CO2IntensityFactor	641.35	372.88
tblProjectCharacteristics	OperationalYear	2018	2040
tblTripsAndVMT	WorkerTripNumber	1.00	0.00
tblVehicleTrips	ST_TR	42.04	25.10
tblVehicleTrips	SU_TR	20.43	12.20
tblVehicleTrips	WD_TR	44.32	26.46
tblWater	IndoorWaterUseRate	1,088,125.34	969,738.00
tblWater	OutdoorWaterUseRate	666,915.53	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3705	1.0000e-005	1.4900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Energy	2.3400e-003	0.0212	0.0178	1.3000e-004		1.6100e-003	1.6100e-003		1.6100e-003	1.6100e-003		25.4789	25.4789	4.9000e-004	4.7000e-004	25.6303
Mobile	0.2513	1.0449	2.3423	0.0105	1.2667	5.3200e-003	1.2720	0.3383	4.9300e-003	0.3432		1,065.1892	1,065.1892	0.0296		1,065.9295
Total	**0.6242**	**1.0661**	**2.3616**	**0.0106**	**1.2667**	**6.9400e-003**	**1.2736**	**0.3383**	**6.5500e-003**	**0.3448**		**1,090.6713**	**1,090.6713**	**0.0301**	**4.7000e-004**	**1,091.5632**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3705	1.0000e-005	1.4900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Energy	2.3400e-003	0.0212	0.0178	1.3000e-004		1.6100e-003	1.6100e-003		1.6100e-003	1.6100e-003		25.4789	25.4789	4.9000e-004	4.7000e-004	25.6303
Mobile	0.2513	1.0449	2.3423	0.0105	1.2667	5.3200e-003	1.2720	0.3383	4.9300e-003	0.3432		1,065.1892	1,065.1892	0.0296		1,065.9295
Total	**0.6242**	**1.0661**	**2.3616**	**0.0106**	**1.2667**	**6.9400e-003**	**1.2736**	**0.3383**	**6.5500e-003**	**0.3448**		**1,090.6713**	**1,090.6713**	**0.0301**	**4.7000e-004**	**1,091.5632**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2513	1.0449	2.3423	0.0105	1.2667	5.3200e-003	1.2720	0.3383	4.9300e-003	0.3432		1,065.1892	1,065.1892	0.0296		1,065.9295
Unmitigated	0.2513	1.0449	2.3423	0.0105	1.2667	5.3200e-003	1.2720	0.3383	4.9300e-003	0.3432		1,065.1892	1,065.1892	0.0296		1,065.9295

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Strip Mall	388.70	368.72	179.22	548,125	548,125
Total	388.70	368.72	179.22	548,125	548,125

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Strip Mall	0.607849	0.022927	0.205901	0.103922	0.009867	0.003828	0.022612	0.014637	0.001269	0.001293	0.004540	0.000840	0.000515

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					

NaturalGas Mitigated	2.3400e-003	0.0212	0.0178	1.3000e-004		1.6100e-003	1.6100e-003		1.6100e-003	1.6100e-003		25.4789	25.4789	4.9000e-004	4.7000e-004	25.6303
NaturalGas Unmitigated	2.3400e-003	0.0212	0.0178	1.3000e-004		1.6100e-003	1.6100e-003		1.6100e-003	1.6100e-003		25.4789	25.4789	4.9000e-004	4.7000e-004	25.6303

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Strip Mall	216.571	2.3400e-003	0.0212	0.0178	1.3000e-004		1.6100e-003	1.6100e-003		1.6100e-003	1.6100e-003		25.4789	25.4789	4.9000e-004	4.7000e-004	25.6303
Total		**2.3400e-003**	**0.0212**	**0.0178**	**1.3000e-004**		**1.6100e-003**	**1.6100e-003**		**1.6100e-003**	**1.6100e-003**		**25.4789**	**25.4789**	**4.9000e-004**	**4.7000e-004**	**25.6303**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Strip Mall	0.216571	2.3400e-003	0.0212	0.0178	1.3000e-004		1.6100e-003	1.6100e-003		1.6100e-003	1.6100e-003		25.4789	25.4789	4.9000e-004	4.7000e-004	25.6303
Total		**2.3400e-003**	**0.0212**	**0.0178**	**1.3000e-004**		**1.6100e-003**	**1.6100e-003**		**1.6100e-003**	**1.6100e-003**		**25.4789**	**25.4789**	**4.9000e-004**	**4.7000e-004**	**25.6303**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3705	1.0000e-005	1.4900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Unmitigated	0.3705	1.0000e-005	1.4900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0560					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3144					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4000e-004	1.0000e-005	1.4900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Total	**0.3706**	**1.0000e-005**	**1.4900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.2100e-003**	**3.2100e-003**	**1.0000e-005**		**3.4200e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e

SubCategory	lb/day										lb/day					
Architectural Coating	0.0560					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3144					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4000e-004	1.0000e-005	1.4900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Total	**0.3706**	**1.0000e-005**	**1.4900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.2100e-003**	**3.2100e-003**	**1.0000e-005**		**3.4200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

Santa Cruz DRP - Reduced Commercial

Santa Cruz County, Winter

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Strip Mall	14.69	1000sqft	0.34	14,693.00	0

1.2 Other Project Characteristics

Urbanization	Urban	**Wind Speed (m/s)**	1.8	**Precipitation Freq (Days)**	61
Climate Zone	5			**Operational Year**	2040
Utility Company	Pacific Gas & Electric Company				
CO2 Intensity (lb/MWhr)	372.88	**CH4 Intensity (lb/MWhr)**	0.029	**N2O Intensity (lb/MWhr)**	0.006

1.3 User Entered Comments & Non-Default Data

Project Characteristics - CO2 intensity adjusted based on 50% RPS by year 2030

Land Use - Amount of commercial uses reduced

Construction Phase - Modeling operations only

Vehicle Trips - Trip rates from TIA adjusted based on City-recommended 40% reduction based on mixed-use in Downtown Santa Cruz

Energy Use - Historical energy use factors assumed for commercial uses to be removed

Water And Wastewater - Water use based on City Water Department

Waste Mitigation - 75% waste diversion consistent with AB 341

Table Name	Column Name	Default Value	New Value
tblLandUse	BuildingSpaceSquareFeet	14,690.00	14,693.00
tblLandUse	LandUseSquareFeet	14,690.00	14,693.00
tblOffRoadEquipment	UsageHours	6.00	0.00

tblProjectCharacteristics	CO2IntensityFactor	641.35	372.88
tblProjectCharacteristics	OperationalYear	2018	2040
tblTripsAndVMT	WorkerTripNumber	1.00	0.00
tblVehicleTrips	ST_TR	42.04	25.10
tblVehicleTrips	SU_TR	20.43	12.20
tblVehicleTrips	WD_TR	44.32	26.46
tblWater	IndoorWaterUseRate	1,088,125.34	969,738.00
tblWater	OutdoorWaterUseRate	666,915.53	0.00

2.0 Emissions Summary

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3705	1.0000e-005	1.4900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Energy	2.3400e-003	0.0212	0.0178	1.3000e-004		1.6100e-003	1.6100e-003		1.6100e-003	1.6100e-003		25.4789	25.4789	4.9000e-004	4.7000e-004	25.6303
Mobile	0.2229	1.0772	2.4956	0.0101	1.2667	5.3300e-003	1.2720	0.3383	4.9500e-003	0.3432		1,022.2697	1,022.2697	0.0308		1,023.0394
Total	**0.5958**	**1.0985**	**2.5149**	**0.0102**	**1.2667**	**6.9500e-003**	**1.2736**	**0.3383**	**6.5700e-003**	**0.3449**		**1,047.7519**	**1,047.7519**	**0.0313**	**4.7000e-004**	**1,048.6731**

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	0.3705	1.0000e-005	1.4900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Energy	2.3400e-003	0.0212	0.0178	1.3000e-004		1.6100e-003	1.6100e-003		1.6100e-003	1.6100e-003		25.4789	25.4789	4.9000e-004	4.7000e-004	25.6303
Mobile	0.2229	1.0772	2.4956	0.0101	1.2667	5.3300e-003	1.2720	0.3383	4.9500e-003	0.3432		1,022.2697	1,022.2697	0.0308		1,023.0394
Total	**0.5958**	**1.0985**	**2.5149**	**0.0102**	**1.2667**	**6.9500e-003**	**1.2736**	**0.3383**	**6.5700e-003**	**0.3449**		**1,047.7519**	**1,047.7519**	**0.0313**	**4.7000e-004**	**1,048.6731**

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N20	CO2e
Percent Reduction	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**	**0.00**

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.2229	1.0772	2.4956	0.0101	1.2667	5.3300e-003	1.2720	0.3383	4.9500e-003	0.3432		1,022.2697	1,022.2697	0.0308		1,023.0394
Unmitigated	0.2229	1.0772	2.4956	0.0101	1.2667	5.3300e-003	1.2720	0.3383	4.9500e-003	0.3432		1,022.2697	1,022.2697	0.0308		1,023.0394

4.2 Trip Summary Information

	Average Daily Trip Rate			Unmitigated	Mitigated
Land Use	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
Strip Mall	388.70	368.72	179.22	548,125	548,125
Total	388.70	368.72	179.22	548,125	548,125

4.3 Trip Type Information

	Miles			Trip %			Trip Purpose %		
Land Use	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Strip Mall	9.50	7.30	7.30	16.60	64.40	19.00	45	40	15

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
Strip Mall	0.607849	0.022927	0.205901	0.103922	0.009867	0.003828	0.022612	0.014637	0.001269	0.001293	0.004540	0.000840	0.000515

5.0 Energy Detail

Historical Energy Use: Y

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
NaturalGas Mitigated	2.3400e-003	0.0212	0.0178	1.3000e-004		1.6100e-003	1.6100e-003		1.6100e-003	1.6100e-003		25.4789	25.4789	4.9000e-004	4.7000e-004	25.6303
NaturalGas Unmitigated	2.3400e-003	0.0212	0.0178	1.3000e-004		1.6100e-003	1.6100e-003		1.6100e-003	1.6100e-003		25.4789	25.4789	4.9000e-004	4.7000e-004	25.6303

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Strip Mall	216.571	2.3400e-003	0.0212	0.0178	1.3000e-004		1.6100e-003	1.6100e-003		1.6100e-003	1.6100e-003		25.4789	25.4789	4.9000e-004	4.7000e-004	25.6303
Total		**2.3400e-003**	**0.0212**	**0.0178**	**1.3000e-004**		**1.6100e-003**	**1.6100e-003**		**1.6100e-003**	**1.6100e-003**		**25.4789**	**25.4789**	**4.9000e-004**	**4.7000e-004**	**25.6303**

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Strip Mall	0.216571	2.3400e-003	0.0212	0.0178	1.3000e-004		1.6100e-003	1.6100e-003		1.6100e-003	1.6100e-003		25.4789	25.4789	4.9000e-004	4.7000e-004	25.6303
Total		**2.3400e-003**	**0.0212**	**0.0178**	**1.3000e-004**		**1.6100e-003**	**1.6100e-003**		**1.6100e-003**	**1.6100e-003**		**25.4789**	**25.4789**	**4.9000e-004**	**4.7000e-004**	**25.6303**

6.0 Area Detail

6.1 Mitigation Measures Area

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	0.3705	1.0000e-005	1.4900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Unmitigated	0.3705	1.0000e-005	1.4900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	0.0560					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3144					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4000e-004	1.0000e-005	1.4900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Total	**0.3706**	**1.0000e-005**	**1.4900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.2100e-003**	**3.2100e-003**	**1.0000e-005**		**3.4200e-003**

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					

Architectural Coating	0.0560					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	0.3144					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Landscaping	1.4000e-004	1.0000e-005	1.4900e-003	0.0000		1.0000e-005	1.0000e-005		1.0000e-005	1.0000e-005		3.2100e-003	3.2100e-003	1.0000e-005		3.4200e-003
Total	**0.3706**	**1.0000e-005**	**1.4900e-003**	**0.0000**		**1.0000e-005**	**1.0000e-005**		**1.0000e-005**	**1.0000e-005**		**3.2100e-003**	**3.2100e-003**	**1.0000e-005**		**3.4200e-003**

7.0 Water Detail

7.1 Mitigation Measures Water

8.0 Waste Detail

8.1 Mitigation Measures Waste

Institute Recycling and Composting Services

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type

10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type

Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type

User Defined Equipment

Equipment Type	Number

11.0 Vegetation

CalEEMod Version: CalEEMod.2016.3.1

Date: 5/24/2017 11:43 AM

Santa Cruz DRP - Reduced Commercial

Santa Cruz County, Mitigation Report

Operational Percent Reduction Summary

Category	ROG	NOx	CO	SO2	Exhaust PM10	Exhaust PM2.5	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction												
Architectural Coating	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Consumer Products	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Hearth	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Landscaping	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Mobile	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Natural Gas	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Indoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Water Outdoor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Operational Mobile Mitigation

Project Setting:

Mitigation	Category	Measure	% Reduction	Input Value 1	Input Value 2	Input Value 3
No	Land Use	Increase Density	0.00			
No	Land Use	Increase Diversity	-0.01	0.13		
No	Land Use	Improve Walkability Design	0.00			

No	Land Use	Improve Destination Accessibility	0.00			
No	Land Use	Increase Transit Accessibility	0.25			
No	Land Use	Integrate Below Market Rate Housing	0.00			
	Land Use	Land Use SubTotal	0.00			
No	Neighborhood Enhancements	Improve Pedestrian Network				
No	Neighborhood Enhancements	Provide Traffic Calming Measures				
No	Neighborhood Enhancements	Implement NEV Network	0.00			
	Neighborhood Enhancements	Neighborhood Enhancements Subtotal	0.00			
No	Parking Policy Pricing	Limit Parking Supply	0.00			
No	Parking Policy Pricing	Unbundle Parking Costs	0.00			
No	Parking Policy Pricing	On-street Market Pricing	0.00			
	Parking Policy Pricing	Parking Policy Pricing Subtotal	0.00			
No	Transit Improvements	Provide BRT System	0.00			
No	Transit Improvements	Expand Transit Network	0.00			
No	Transit Improvements	Increase Transit Frequency	0.00			
	Transit Improvements	Transit Improvements Subtotal	0.00			
		Land Use and Site Enhancement Subtotal	0.00			
No	Commute	Implement Trip Reduction Program				
No	Commute	Transit Subsidy				
No	Commute	Implement Employee Parking "Cash Out"				
No	Commute	Workplace Parking Charge				
No	Commute	Encourage Telecommuting and Alternative Work Schedules	0.00			
No	Commute	Market Commute Trip Reduction Option	0.00			
No	Commute	Employee Vanpool/Shuttle	0.00		2.00	
No	Commute	Provide Ride Sharing Program				

	Commute	Commute Subtotal	0.00			
No	School Trip	Implement School Bus Program	0.00			
		Total VMT Reduction	0.00			

Area Mitigation

Measure Implemented	Mitigation Measure	Input Value
No	Only Natural Gas Hearth	
No	No Hearth	
No	Use Low VOC Cleaning Supplies	
No	Use Low VOC Paint (Residential Interior)	100.00
No	Use Low VOC Paint (Residential Exterior)	100.00
No	Use Low VOC Paint (Non-residential Interior)	150.00
No	Use Low VOC Paint (Non-residential Exterior)	150.00
No	Use Low VOC Paint (Parking)	150.00
No	% Electric Lawnmower	
No	% Electric Leafblower	
No	% Electric Chainsaw	

Energy Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Exceed Title 24		
No	Install High Efficiency Lighting		
No	On-site Renewable		

Appliance Type	Land Use Subtype	% Improvement
ClothWasher		30.00
DishWasher		15.00

Fan		50.00
Refrigerator		15.00

Water Mitigation Measures

Measure Implemented	Mitigation Measure	Input Value 1	Input Value 2
No	Apply Water Conservation on Strategy		
No	Use Reclaimed Water		
No	Use Grey Water		
No	Install low-flow bathroom faucet	32.00	
No	Install low-flow Kitchen faucet	18.00	
No	Install low-flow Toilet	20.00	
No	Install low-flow Shower	20.00	
No	Turf Reduction		
No	Use Water Efficient Irrigation Systems	6.10	
No	Water Efficient Landscape		

Solid Waste Mitigation

Mitigation Measures	Input Value
Institute Recycling and Composting Services	75.00
Percent Reduction in Waste Disposed	

APPENDIX F
Traffic Memo

Level of Service Calculations are available on CD & City Website at:
http://www.cityofsantacruz.com/government/city-departments/planning-and-community-development-2/environmental-documents

Kimley»Horn

MEMORANDUM

To: Ron Powers, City of Santa Cruz

From: Frederik Venter, Reaa Ali, Kimley-Horn

Date: May 10, 2017

Subject: **Santa Cruz Downtown Recovery Plan Amendment – Traffic Study**

This memorandum contains the traffic analysis for the Downtown Recovery Plan Project (Project), located in the City of Santa Cruz Downtown area. The objective of this project is to evaluate the traffic and circulation impacts of increasing the building densities and land use changes in Downtown Santa Cruz. The study area bounded by the San Lorenzo River, Soquel Avenue in the north, Laurel Street in the south, and the first block immediately west of Pacific Avenue. The Pacific Avenue portion of the study area is bounded by Cathcart Street on the north and Laurel Street on the south. The Front Street portion of the study area is bounded by Soquel Avenue on the north and Laurel Street on the south. The study area is divided into three areas defined as Areas X, Y, and Z for traffic assignment and analysis purposes. **Figure 1** shows the Study Area.

The traffic analysis contained in this memorandum evaluates the addition of the Downtown Recovery Plan Specific Plan to the existing conditions and cumulative conditions. This memorandum discusses the results of the traffic volumes and LOS developed for the following development scenarios and peak periods:

1. Existing (AM and PM)
2. Existing plus Project (AM and PM)
3. Cumulative plus Project (PM only) – The City General Plan was only developed for the PM peak hour, which represents the worst-case analysis. The PM peak hour volumes are typically higher in the PM compared to the AM peak hour.

The following intersections are included in the study:

1. Front Street and Laurel Street
2. Pacific Avenue and Laurel Street
3. Front Street and Cathcart Street
4. Front Street and Metro Station Access
5. Pacific Avenue and Metro Station Access
6. Pacific Avenue and Maple Street
7. Pacific Avenue and Front Street/Mission-Water Street
8. Front Street and Soquel Avenue
9. Pacific Avenue and Cathcart Street
10. Soquel Avenue and Pacific Avenue
11. Ocean Street and Water Street
12. Highway 1 and Highway 9
13. Chestnut Street and Mission Street



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Figure 1
Study Area

TRAFFIC VOLUMES/DATA COLLECTION

Intersection turning movement counts were collected for the AM (7:00 am – 9:00 am) and PM (4:00 pm – 6:00 pm) peak periods during the weekday when local schools were in session. Some data previously available was also used in the technical analysis. Previously available data was utilized for Intersections 1, 2, 3, 4, 8, and 11. The traffic counts for these intersections were collected on Thursday, May 22, 2014. For intersections 5, 6, 7, 9, 10, 12, and 13, data collection was conducted on Tuesday, November 17, 2015.

Cumulative conditions volumes were obtained from the City of Santa Cruz 2030 General Plan (GP) (PM peak hour only). This development scenario accounts for growth per the General Plan including growth for the University of Santa Cruz and also newer approved projects in and around the downtown area which were not reflected in the GP. The latter resulted in an approximate 5% increase in GP volumes at the study intersections.

TRIP GENERATION

The number of trips anticipated to be generated by the proposed project were derived using trip generation rates obtained from Appendix C of the City's General Plan for the Downtown area. The proposed project is understood to consist of commercial, office, and residential (townhomes and apartments) land uses. Since the General Plan only specifies the daily and PM peak hour trip rates, the AM peak hour trip rates were calculated by applying the proportion of the AM peak hour trip rate to the daily rate for these land uses as found in the Institute of Transportation Engineers (ITE) *Trip Generation Manual, 9th Edition*. The following land use codes (LU) from the ITE *Trip Generation Manual* were used: Shopping Center (LU 820) for commercial; General Office Building (LU 710) for office; Residential Condominium/Townhouse (LU 230) for townhomes; and Apartment (LU 220) for apartments.

Trip generation calculations were performed by study area – Area X, Y, and Z of the project, and include a 40% trip reduction for mixed use development in the Downtown Area. The reductions are generated by proximity to the Transit center, mixed use development and, bicycle use and walking trips. The area also proposes added parking in downtown. Additional trips were assumed to be generated by the parking structure as indicted in the trip generation table. The added trips were based on the anticipated parking spaces that would not be utilized by the new land uses in the DRP and accounted for approximately 20% of the spaces at 85% parking occupancy, which is conservative. The anticipated trip generation characteristics for the proposed project are depicted in **Table 1**.

The proposed project trips were distributed on the transportation network based on distribution percentages provided by the City of Santa Cruz. **Figure 2** shows the in and out percent distribution near the project. The resulting AM and PM peak-hour traffic volumes attributed to the proposed project are illustrated in **Figure 3**.

Table 1. Project Trip Generation

Land Uses	Project Size[6]		WEEKDAY	AM PEAK HOUR[2]					PM PEAK HOUR				
			Daily Trips	Total Peak Hour	% Of ADT	IN	/	OUT	Total Peak Hour	% Of ADT	IN	/	OUT
City of Santa Cruz General Plan 2030 Future City Buildout Trip Generation Rates[1]													
Commercial		1,000 Sq Ft	44.32	1.00	2%	62%	/	38%	2.71	6%	44%	/	56%
Office		1,000 Sq Ft	11.01	1.56	14%	88%	/	12%	1.49	14%	17%	/	83%
Townhomes[3]		Dwelling Unit(s)	7.50	0.51	7%	22%	/	78%	0.62	8%	65%	/	35%
Apartments		Dwelling Unit(s)	6.65	0.51	8%	20%	/	80%	0.62	9%	65%	/	35%
Trips Generated													
Area X - Riverfront													
Commercial	11.171	1,000 Sq Ft	496	11		7	/	4	30		13	/	17
Office	18.296	1,000 Sq Ft	202	29		26	/	3	27		5	/	22
Townhomes	321	Dwelling Unit(s)	2,408	164		36	/	128	199		129	/	70
Apartments	0	Dwelling Unit(s)	0	0		0	/	0	0		0	/	0
Total Area X Trips			*3,106*	*204*		*69*	/	*135*	*256*		*147*	/	*109*
40% Reduction for Downtown Area[4]			*(1,242)*	*(82)*		*(28)*	/	*(54)*	*(102)*		*(59)*	/	*(44)*
Net Area X Trips			***1,864***	***122***		***41***	/	***81***	***154***		***88***	/	***65***
Area Y - E. Pacific/W. Front Pacific Station													
Commercial	(27.864)	1,000 Sq Ft	(1,236)	(28)		(17)	/	(11)	(76)		(33)	/	(43)
Office	(16.105)	1,000 Sq Ft	(178)	(25)		(22)	/	(3)	(24)		(4)	/	(20)
Townhomes	0	Dwelling Unit(s)	0	0		0	/	0	0		0	/	0
Apartments	370	Dwelling Unit(s)	2,462	189		38	/	151	229		149	/	80
Total Area Y Trips			*1,048*	*136*		*(1)*	/	*137*	*129*		*112*	/	*17*
40% Reduction for Downtown Area[4]			*(419)*	*(54)*		*0*	/	*(55)*	*(52)*		*(45)*	/	*(7)*
Parking Garage Added Trips[5]				*26*		*20*	/	*6*	*52*		*26*	/	*26*
Net Area Y Trips			***629***	***108***		***19***	/	***88***	***129***		***93***	/	***36***
Area Z - W. Pacific													
Commercial	2	1,000 Sq Ft	90	2		1	/	1	5		2	/	3
Office	0	1,000 Sq Ft	0	0		0	/	0	0		0	/	0
Townhomes	0	Dwelling Unit(s)	0	0		0	/	0	0		0	/	0
Apartments	20	Dwelling Unit(s)	134	10		2	/	8	12		8	/	4
Total Area Z Trips			*224*	*12*		*3*	/	*9*	*17*		*10*	/	*7*
40% Reduction for Downtown Area[4]			*(90)*	*(5)*		*(1)*	/	*(4)*	*(7)*		*(4)*	/	*(3)*
Net Area Z Trips			***134***	***7***		***2***	/	***5***	***10***		***6***	/	***4***
Total New Downtown Recovery Plan Buildout Trips			***2,627***	***237***		***63***	/	***174***	***293***		***188***	/	***106***

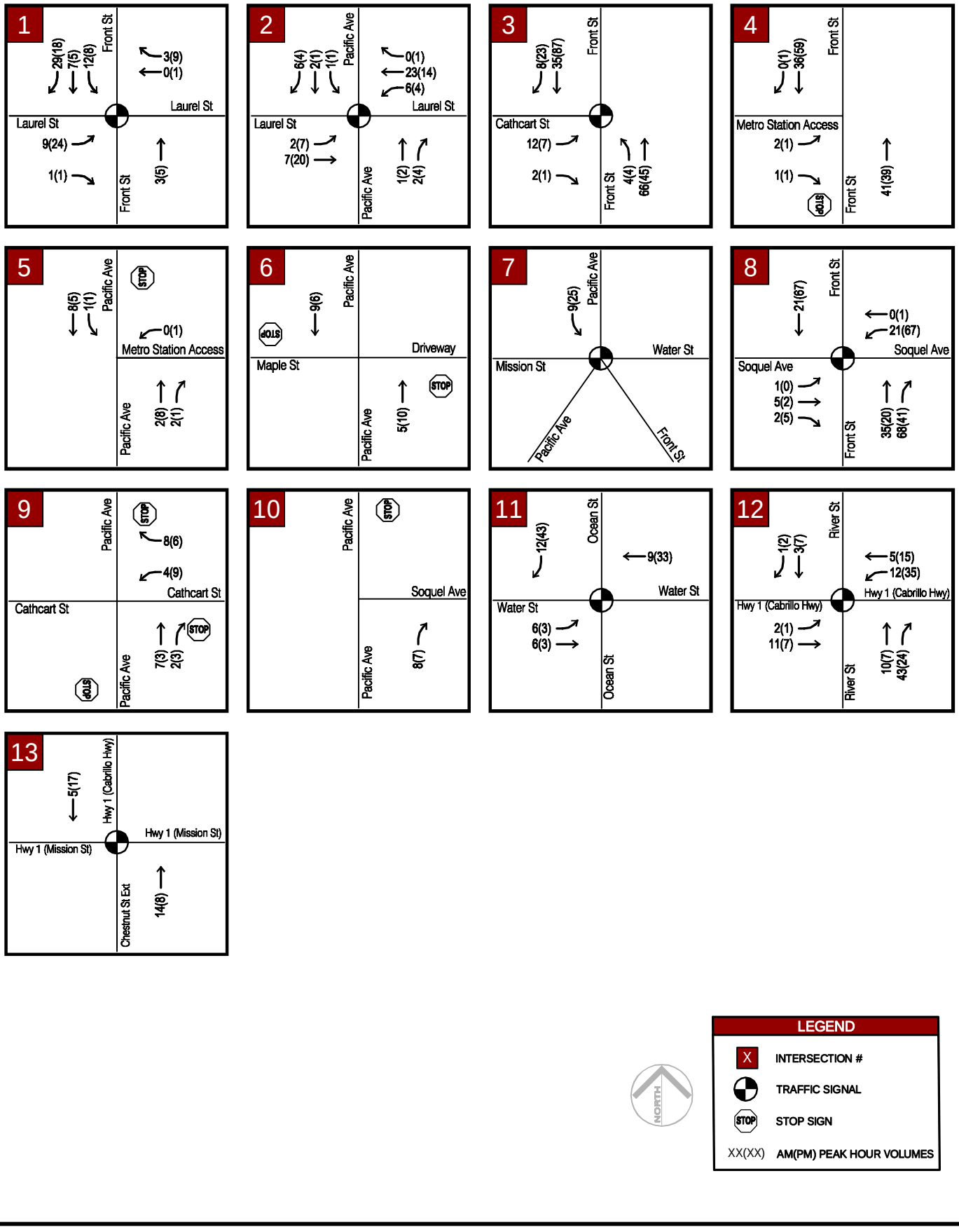
Notes:

1. Trip generation rates obtained from Appendix C of the City of Santa Cruz General Plan 2030 Draft EIR, September 2011.
2. The AM Peak Hour rates for Commercial, Office, Townhomes, and Apartment uses was calculated by applying the proportion of the AM peak hour rate to the daily rate for Shopping Center (LUC 820), General Office Building (LUC 710), Residential Condominium/Townhouse (LU 230), and Apartment (LUC 220), respectively. The in/out percentages for the uses were obtained from these same ITE LUCs.
3. ITE Land Use 270 Rates used for Townhomes per City direction (email correspondence with Ron Marquez dated 04/22/16).
4. 40% Reduction for mixed use development in Downtown Santa Cruz per City direction (email correspondence with Ron Marquez dated 04/22/16).
5. Required parking per City Code= 414+880+871=2,165 spaces. With 20% reduction=1,732, so 259 aditional spaces (1,991-1,732) that will generate traffic. 10% in the AM peak = 26 trips, 20% in the PM peak = 52 trips.
6. Total project size can be obtained by calculating the sum of each land use for Area X, Area Y, and Area Z.
   Commercial land use = 11,171 sf + (-27,864 sf) + 2,000 sf = -14,693 sf
   Office land use = 18,296 sf + (-16,105 sf) + 0 sf = +2,191 sf
   Residential land use = 321 units + 370 units + 20 units = +711 units



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Figure 2
Project Trip Distribution



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Figure 3
Project Trip Assignment

TRAFFIC IMPACT ANALYSIS METHODOLOGY

Consistent with the City of Santa Cruz TIA Guidelines, the concept of Level of Service (LOS) is utilized to analyze both the signalized and unsignalized study intersections. The LOS of a transportation facility is a qualitative measure used to describe operational conditions. LOS ranges from A (best), which represents minimal delay, to F (worst), which represents heavy delay and a facility that is operating at or near its functional capacity. As defined in Section 4.4 of the City of Santa Cruz 2030 General Plan Draft EIR, the City of Santa Cruz has established LOS D as the minimum acceptable LOS for overall intersection operations during weekday AM and PM peak hours. However, due to environmental, economic, and/or feasibility constraints with implementing improvements at certain major regional intersections, the City accepts a lower LOS at these locations under the current General Plan per existing Circulation Policy 5.1.2. The threshold for each study intersection is specified in the LOS analysis tables below.

Intersection Levels of Service for this study were determined using methods defined in the *Highway Capacity Manual, 2010 and 2000 (HCM)*, and appropriate traffic analysis software. The *HCM* includes procedures for analyzing side-street stop controlled (SASS), all-way stop controlled (AWSC), and signalized intersections and *HCM 2010* uses multimodal analysis principles (bicycle and pedestrians). The SASS procedure defines LOS as a function of average control delay for each minor street approach movement. Conversely, the AWSC and signalized intersection procedures define LOS as a function of average control delay for the intersection. *HCM 2010* was used for all intersections except for Intersection 7 due to the presence of a fifth approach at this location, which HCM 2010 cannot analyze correctly and *HCM 2000* was used to analyze this study intersection.

EXISTING AND EXISTING PLUS PROJECT CONDITIONS

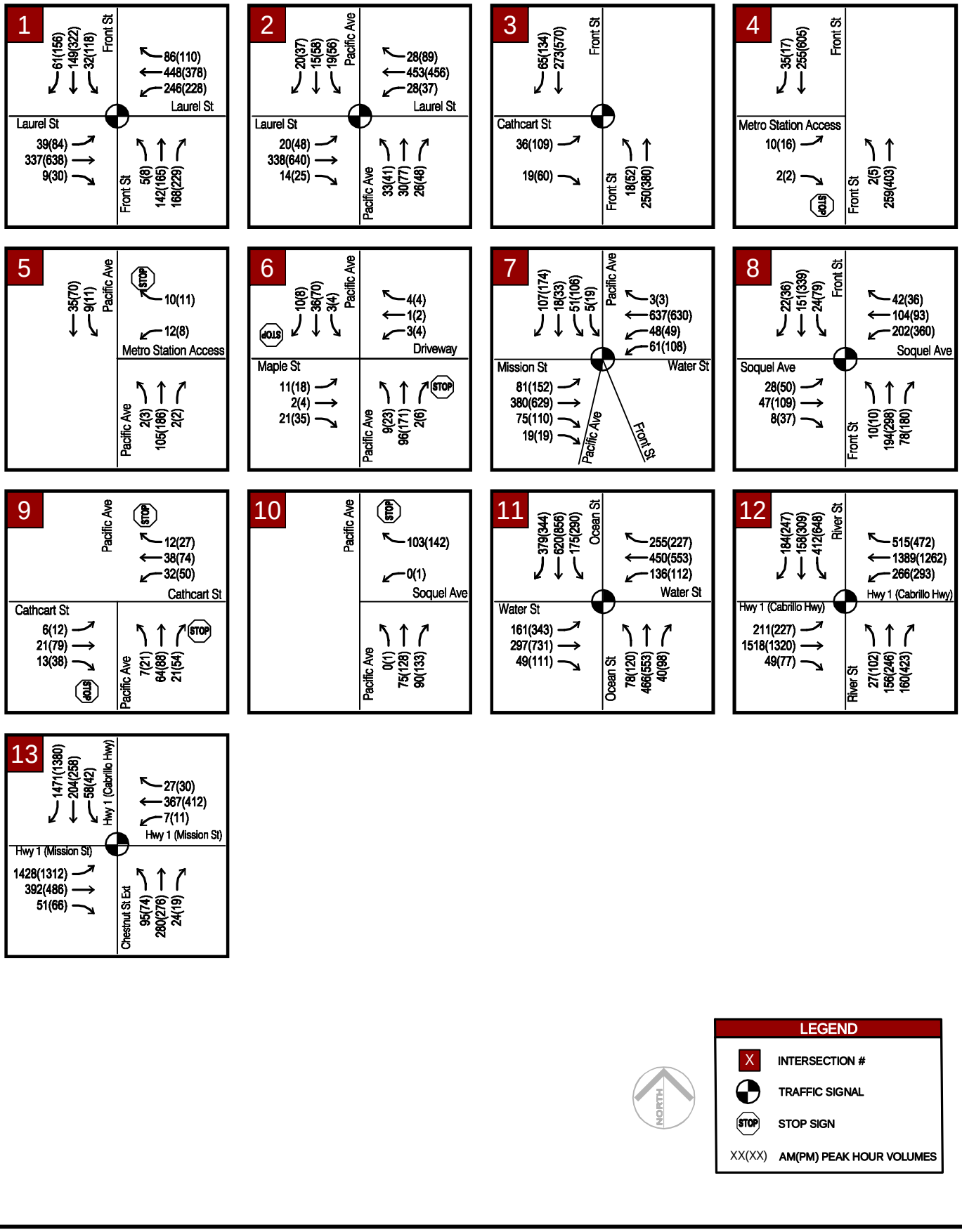
Traffic volumes for Existing conditions were obtained from traffic counts. Peak-hour traffic associated with the proposed Downtown Recovery Plan amendments was added to the Existing traffic volumes to generate traffic volumes for Existing plus Project conditions. **Figures 4 and 5** show the volumes at the study intersections under Existing and Existing plus Project conditions.

Table 2 below presents the peak-hour intersection operating conditions for the Existing and Existing plus Project development scenarios.

As indicated in **Table 2**, the study intersections operate at LOS A through LOS F under Existing conditions and with the addition of project traffic during the AM and PM peak hours. The addition of project trips does not worsen the LOS at the study intersections lower than the minimum acceptable LOS accept at the following intersection.

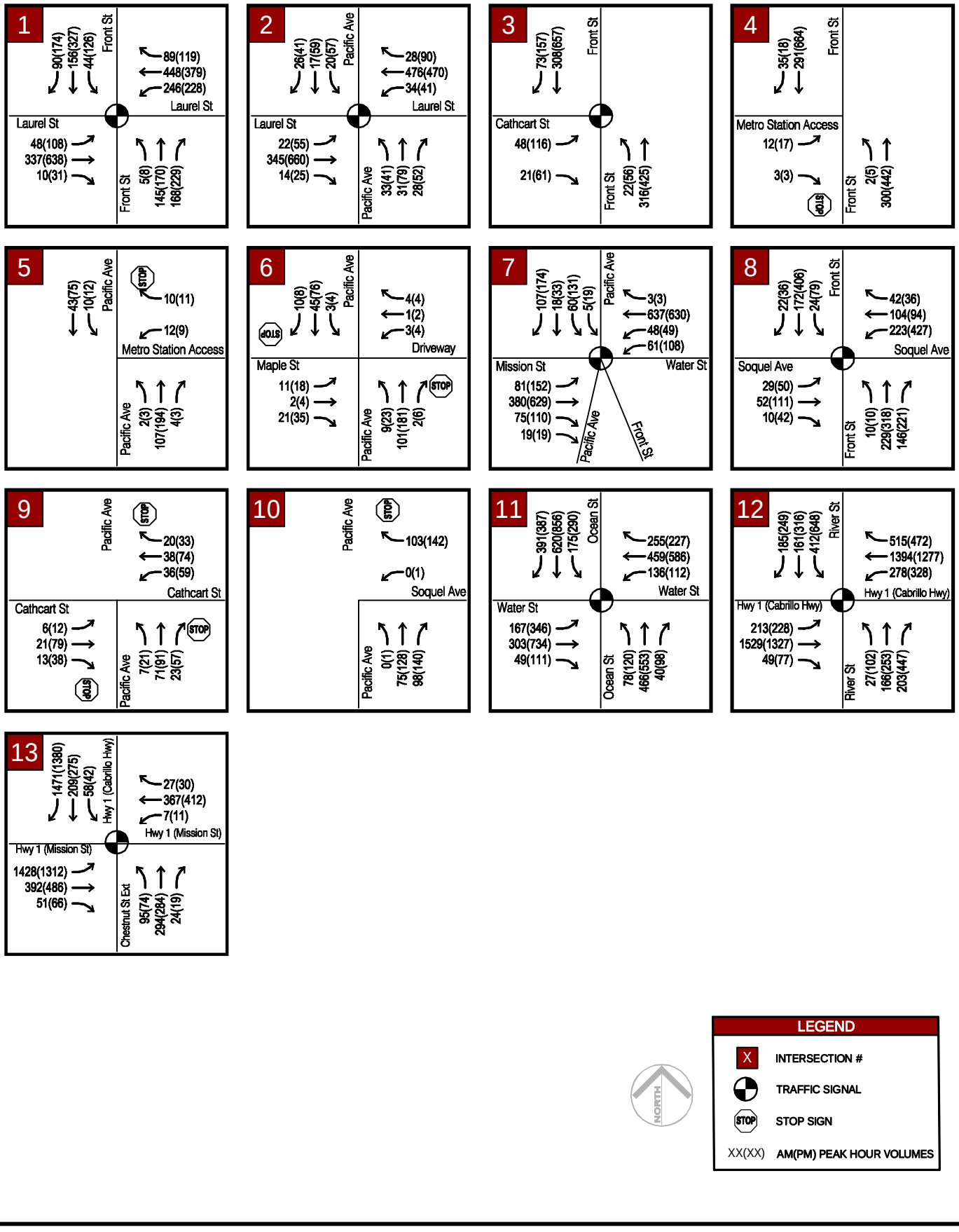
Intersection #12, Highway 1/Highway 9, is currently operating at LOS E and would continue to operate at LOS E with the addition of the project.

Intersection #13, Chestnut Street/Mission Street, is currently operating at LOS F in the AM peak hour and LOS E in the PM peak hour, and would continue to operate at these conditions with the addition of the project.



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Figure 4
Existing Trips



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Figure 5
Existing plus Project Trips

Table 2. Existing and Existing plus Project Conditions Levels of Service

#	Intersection	Control Type	City of Santa Cruz Threshold[2]	Existing Conditions[1]						Existing Plus Project Conditions[1]					
				AM Peak Hour			PM Peak Hour			AM Peak Hour			PM Peak Hour		
				Movement	Delay[3]	LOS	Movement	Delay[3]	LOS	Movement	Delay[3]	LOS	Movement	Delay[3]	LOS
1	Front Street / Laurel Street	Signal	D	Overall	26.4	C	Overall	30.8	C	Overall	27.2	C	Overall	31.2	C
2	Pacific Avenue / Laurel Street	Signal	D	Overall	14.5	B	Overall	17.9	B	Overall	15.0	B	Overall	18.5	B
3	Front Street / Cathcart Street	Signal	D	Overall	16.2	B	Overall	19.0	B	Overall	16.2	B	Overall	18.9	B
4	Front Street / Metro Station Access	Signal	D	Overall	5.3	A	Overall	4.9	A	Overall	6.0	A	Overall	5.1	A
5	Pacific Avenue / Metro Station Access	SSSC	D	Overall	1.7	A	Overall	1.1	A	Overall	1.6	A	Overall	1.1	A
		Worst Approach	D	WB	9.5	A	WB	11.4	B	WB	9.6	A	WB	11.6	B
6	Pacific Avenue / Maple Street	AWSC	D	Overall	7.6	A	Overall	8.1	A	Overall	7.7	A	Overall	8.2	A
7	Pacific Avenue / Front Street / Mission-Water Street	Signal	D	Overall	17.7	B	Overall	20.2	C	Overall	17.7	B	Overall	21.1	C
8	Front Street / Soquel Avenue	Signal	D	Overall	18.6	B	Overall	21.9	C	Overall	19.2	B	Overall	23.1	C
9	Pacific Avenue / Cathcart Street	AWSC	D	Overall	8.0	A	Overall	8.8	A	Overall	8.1	A	Overall	8.9	A
10	Soquel Avenue / Pacific Avenue	SSSC	D	Overall	3.7	A	Overall	3.6	A	Overall	3.6	A	Overall	3.6	A
		Worst Approach	D	WB	9.6	A	WB	10.3	B	WB	9.7	A	WB	10.3	B
11	Ocean Street / Water Street	Signal	F	Overall	22.6	C	Overall	35.3	D	Overall	22.8	C	Overall	35.6	D
12	Highway 1 / Highway 9	Signal	F	Overall	**58.0**	**E**	Overall	**71.7**	**E**	Overall	**59.5**	**E**	Overall	**74.1**	**E**
13	Chestnut Street / Mission Street	Signal	F	Overall	**140.9**	**F**	Overall	**74.1**	**E**	Overall	**140.4**	**F**	Overall	**73.8**	**E**

Notes:

1. Analysis performed using HCM 2010 methodologies, except for Intersection 7 where HCM 2000 methodology was applied.
2. The City of Santa Cruz has established LOS D as the minimum acceptable LOS for overall intersection operations during the AM and PM peak hours. However, under the existing General Plan, the City accepts a lower LOS (F) at some major regional intersections per existing Circulation Policy 5.1.2.
3. Delay indicated in seconds/vehicle.
4. Intersections that fall below City standard are shown in **bold**.

CUMULATIVE PLUS PROJECT CONDITIONS

Peak-hour traffic volumes for Cumulative conditions were obtained from the City of Santa Cruz 2030 General Plan and include the growth anticipated by the University of Santa Cruz. These volumes were increased by an additional 5% at all approaches except at the bus driveways to account for other currently planned projects not envisioned in the General Plan Environmental Impact Report.

Figure 6 shows the traffic volumes at the study intersections under this development scenario. Planned improvements, included in the City Traffic Impact Fee Program, was assumed to be constructed for GP scenario analysis.

Peak-hour traffic associated with the proposed Downtown Recovery Plan amendments was added to the Cumulative traffic volumes and Levels of Service were determined at the study intersections.

Table 3 presents the peak-hour intersection operating conditions for this analysis scenario.

As indicated in **Table 3**, the study intersections operate at LOS A through LOS F during the PM peak hour.

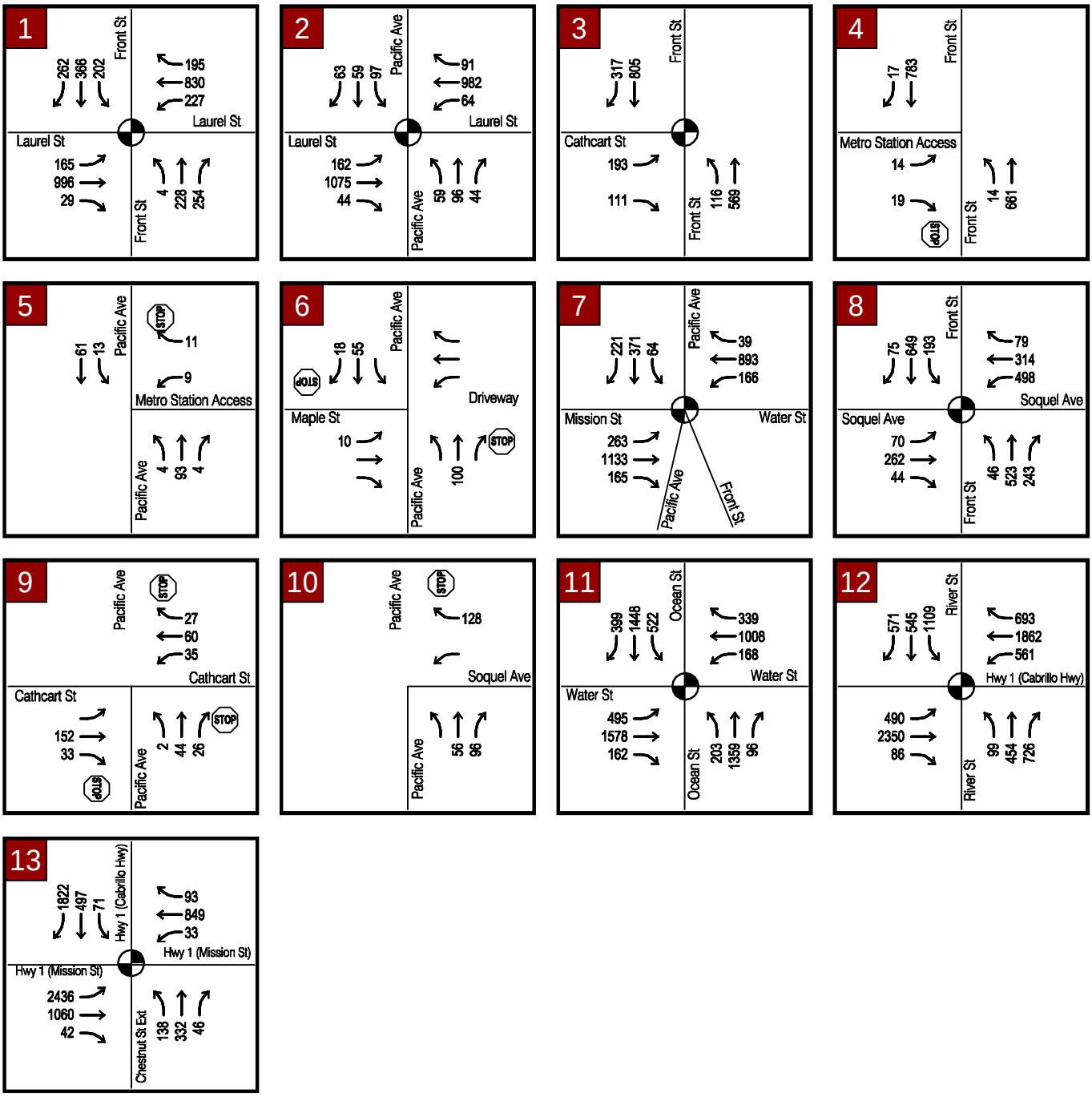
- Intersection #1, Front Street and Laurel Street, would fail in the PM peak hour
- Intersection #2, Pacific Avenue and Laurel Street, would fail in the PM peak hour
- Intersection #8, Front Street and Soquel Avenue, would fail in the PM peak hour
- Intersection #11, Ocean Street and Water Street, would fail in the PM peak hour
- Intersection #12, Highway 1/Highway 9, would fail in the PM peak hour
- Intersection #13, Chestnut Street/Mission Street, would fail in the PM peak hour.

Table 3. Cumulative plus Project Conditions Levels of Service

#	Intersection	Control Type	City of Santa Cruz Threshold[2]	Cumulative Plus Project Conditions[1]		
				PM Peak Hour		
				Movement	Delay[3]	LOS
1	Front Street / Laurel Street	Signal	D	Overall	**100.2**	**F**
2	Pacific Avenue / Laurel Street	Signal	D	Overall	**105.9**	**F**
3	Front Street / Cathcart Street	Signal	D	Overall	23.5	C
4	Front Street / Metro Station Access	Signal	D	Overall	6.4	A
5	Pacific Avenue / Metro Station Access	SSSC	D	Overall	1.7	A
		Worst Approach	D	WB	10.5	B
6	Pacific Avenue / Maple Street	AWSC	D	Overall	7.7	A
7	Pacific Avenue / Front Street / Mission-Water Street	Signal	D	Overall	32.3	C
8	Front Street / Soquel Avenue	Signal	D	Overall	**59.9**	**E**
9	Pacific Avenue / Cathcart Street	AWSC	D	Overall	8.3	A
10	Soquel Avenue / Pacific Avenue	SSSC	D	Overall	4.3	A
		Worst Approach	D	WB	9.5	A
11	Ocean Street / Water Street	Signal	F	Overall	**228.1**	**F**
12	Highway 1 / Highway 9	Signal	F	Overall	**269.2**	**F**
13	Chestnut Street / Mission Street	Signal	F	Overall	**344.0**	**F**

Notes:

1. Analysis performed using HCM 2010 methodologies, except for Intersection 7 where HCM 2000 methodology was applied.
2. The City of Santa Cruz has established LOS D as the minimum acceptable LOS for overall intersection operations during the AM and PM peak hours. However, under the existing General Plan, the City accepts a lower LOS (F) at some major regional intersections per existing Circulation Policy 5.1.2.
3. Delay indicated in seconds/vehicle.
4. Intersection geometry under cumulative plus project conditions was improved at the following intersections per modifications noted under the City's Capital Improvement Projects list: Highway 1 & Highway 9; Ocean Street & Water Street; and Chestnut Street and Mission Street.
5. Intersections that fall below City standard are shown in **bold.**



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Figure 6
Cumulative plus Project Trips

APPENDICES

Appendix A. Synchro Analysis Reports

Appendix B. Synchro Timing Reports

Appendix A

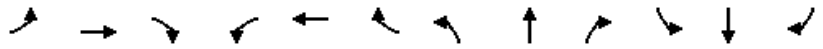
Synchro Analysis Reports

Santa Cruz DRP Study
1: Front Street & Laurel Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	39	337	9	246	448	86	5	142	168	32	149	61
Future Volume (veh/h)	39	337	9	246	448	86	5	142	168	32	149	61
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1853	1900	1845	1863	1845	1583	1827	1881	1743	1827	1792
Adj Flow Rate, veh/h	42	366	10	267	487	93	5	154	183	35	162	66
Adj No. of Lanes	1	2	0	1	1	1	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	2	2	3	2	3	20	4	1	9	4	6
Cap, veh/h	375	1466	40	317	710	597	8	285	249	46	326	272
Arrive On Green	0.22	0.42	0.42	0.18	0.38	0.38	0.01	0.16	0.16	0.03	0.18	0.18
Sat Flow, veh/h	1723	3501	95	1757	1863	1568	1508	1827	1599	1660	1827	1524
Grp Volume(v), veh/h	42	184	192	267	487	93	5	154	183	35	162	66
Grp Sat Flow(s),veh/h/ln	1723	1760	1836	1757	1863	1568	1508	1827	1599	1660	1827	1524
Q Serve(g_s), s	1.4	5.0	5.0	10.8	16.1	2.9	0.2	5.7	8.0	1.5	5.9	2.7
Cycle Q Clear(g_c), s	1.4	5.0	5.0	10.8	16.1	2.9	0.2	5.7	8.0	1.5	5.9	2.7
Prop In Lane	1.00		0.05	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	375	737	769	317	710	597	8	285	249	46	326	272
V/C Ratio(X)	0.11	0.25	0.25	0.84	0.69	0.16	0.63	0.54	0.73	0.76	0.50	0.24
Avail Cap(c_a), veh/h	375	737	769	502	710	597	82	398	348	90	398	332
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.0	13.9	13.9	29.1	19.1	15.0	36.5	28.6	29.6	35.5	27.2	25.9
Incr Delay (d2), s/veh	0.6	0.8	0.8	7.4	5.3	0.6	60.5	1.6	4.9	22.0	1.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	2.6	2.7	5.8	9.3	1.3	0.2	3.0	3.9	1.0	3.1	1.2
LnGrp Delay(d),s/veh	23.7	14.7	14.7	36.5	24.4	15.5	97.0	30.2	34.5	57.5	28.4	26.4
LnGrp LOS	C	B	B	D	C	B	F	C	C	E	C	C
Approach Vol, veh/h		418			847			342			263	
Approach Delay, s/veh		15.6			27.2			33.5			31.8	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.2	34.8	4.4	17.1	20.0	32.0	6.0	15.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	21.0	23.0	4.0	16.0	16.0	28.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	12.8	7.0	2.2	7.9	3.4	18.1	3.5	10.0
Green Ext Time (p_c), s	0.5	5.2	0.0	1.7	0.0	4.0	0.0	1.4

Intersection Summary	
HCM 2010 Ctrl Delay	26.4
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	20	338	14	28	453	28	33	30	26	19	15	20
Future Volume (veh/h)	20	338	14	28	453	28	33	30	26	19	15	20
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1520	1872	1900	1845	1862	1900	1900	1549	1900	1900	1630	1900
Adj Flow Rate, veh/h	23	393	16	33	527	33	38	35	30	22	17	23
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	0	1	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	25	1	1	3	2	2	0	13	13	13	13	13
Cap, veh/h	85	946	38	103	918	57	446	181	156	160	118	121
Arrive On Green	0.06	0.53	0.53	0.06	0.53	0.53	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1448	1786	73	1757	1734	109	1389	771	661	374	501	516
Grp Volume(v), veh/h	23	0	409	33	0	560	38	0	65	62	0	0
Grp Sat Flow(s),veh/h/ln	1448	0	1859	1757	0	1843	1389	0	1432	1390	0	0
Q Serve(g_s), s	1.0	0.0	9.0	1.2	0.0	14.0	0.0	0.0	2.5	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.0	0.0	9.0	1.2	0.0	14.0	1.1	0.0	2.5	2.2	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.06	1.00		0.46	0.35		0.37
Lane Grp Cap(c), veh/h	85	0	984	103	0	975	446	0	337	399	0	0
V/C Ratio(X)	0.27	0.00	0.42	0.32	0.00	0.57	0.09	0.00	0.19	0.16	0.00	0.00
Avail Cap(c_a), veh/h	341	0	984	413	0	975	446	0	337	399	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	30.6	0.0	9.7	30.7	0.0	10.8	20.3	0.0	20.8	20.7	0.0	0.0
Incr Delay (d2), s/veh	1.7	0.0	1.3	1.8	0.0	2.5	0.4	0.0	1.3	0.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	4.9	0.6	0.0	7.7	0.6	0.0	1.1	1.0	0.0	0.0
LnGrp Delay(d),s/veh	32.3	0.0	10.9	32.4	0.0	13.3	20.7	0.0	22.1	21.6	0.0	0.0
LnGrp LOS	C		B	C		B	C		C	C		
Approach Vol, veh/h		432			593			103			62	
Approach Delay, s/veh		12.1			14.3			21.6			21.6	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	40.0		20.0	8.0	40.0		20.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	4.0	36.0		16.0	4.0	36.0		16.0
Max Q Clear Time (g_c+I1), s	3.2	11.0		4.2	3.0	16.0		4.5
Green Ext Time (p_c), s	0.0	7.0		0.6	0.0	6.5		0.5

Intersection Summary	
HCM 2010 Ctrl Delay	14.5
HCM 2010 LOS	B

Santa Cruz DRP Study
3: Front Street & Cathcart Street



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	36	19	18	250	273	65
Future Volume (veh/h)	36	19	18	250	273	65
Number	5	12	3	8	4	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1638	1810	1712	1743	1706	1900
Adj Flow Rate, veh/h	41	22	21	287	314	75
Adj No. of Lanes	1	1	1	1	2	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	16	5	11	9	11	11
Cap, veh/h	440	434	345	1087	950	224
Arrive On Green	0.28	0.28	0.21	0.62	0.36	0.36
Sat Flow, veh/h	1560	1538	1630	1743	2690	613
Grp Volume(v), veh/h	41	22	21	287	194	195
Grp Sat Flow(s),veh/h/ln	1560	1538	1630	1743	1620	1598
Q Serve(g_s), s	1.6	0.9	0.9	6.3	7.3	7.5
Cycle Q Clear(g_c), s	1.6	0.9	0.9	6.3	7.3	7.5
Prop In Lane	1.00	1.00	1.00			0.38
Lane Grp Cap(c), veh/h	440	434	345	1087	591	583
V/C Ratio(X)	0.09	0.05	0.06	0.26	0.33	0.34
Avail Cap(c_a), veh/h	440	434	345	1087	591	583
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	22.5	22.2	26.8	7.2	19.5	19.5
Incr Delay (d2), s/veh	0.4	0.2	0.3	0.1	1.5	1.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.8	0.4	0.4	3.1	3.5	3.6
LnGrp Delay(d),s/veh	22.9	22.4	27.1	7.3	21.0	21.1
LnGrp LOS	C	C	C	A	C	C
Approach Vol, veh/h	63			308	389	
Approach Delay, s/veh	22.7			8.7	21.0	
Approach LOS	C			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		28.0	22.0	35.0				57.0
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		24.0	18.0	31.0				53.0
Max Q Clear Time (g_c+I1), s		3.6	2.9	9.5				8.3
Green Ext Time (p_c), s		0.1	0.0	4.2				4.7

Intersection Summary	
HCM 2010 Ctrl Delay	16.2
HCM 2010 LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	10	2	2	259	255	35
Future Volume (veh/h)	10	2	2	259	255	35
Number	5	12	3	8	4	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	950	1900	950	1810	1632	1900
Adj Flow Rate, veh/h	12	2	2	305	300	41
Adj No. of Lanes	0	0	1	1	1	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	100	5	5	5
Cap, veh/h	11	2	563	1425	1108	151
Arrive On Green	0.02	0.02	0.79	0.79	0.79	0.79
Sat Flow, veh/h	715	119	528	1810	1406	192
Grp Volume(v), veh/h	15	0	2	305	0	341
Grp Sat Flow(s),veh/h/ln	893	0	528	1810	0	1598
Q Serve(g_s), s	0.6	0.0	0.0	1.7	0.0	2.3
Cycle Q Clear(g_c), s	0.6	0.0	2.4	1.7	0.0	2.3
Prop In Lane	0.80	0.13	1.00			0.12
Lane Grp Cap(c), veh/h	14	0	563	1425	0	1259
V/C Ratio(X)	1.10	0.00	0.00	0.21	0.00	0.27
Avail Cap(c_a), veh/h	440	0	563	1425	0	1259
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.0	0.0	1.5	1.1	0.0	1.2
Incr Delay (d2), s/veh	141.6	0.0	0.0	0.3	0.0	0.5
Initial Q Delay(d3),s/veh	4.2	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.7	0.0	0.0	1.0	0.0	1.1
LnGrp Delay(d),s/veh	165.8	0.0	1.5	1.4	0.0	1.7
LnGrp LOS	F		A	A		A
Approach Vol, veh/h	15			307	341	
Approach Delay, s/veh	165.8			1.4	1.7	
Approach LOS	F			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		4.6		36.0				36.0
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		20.0		32.0				32.0
Max Q Clear Time (g_c+I1), s		2.6		4.3				4.4
Green Ext Time (p_c), s		0.0		4.3				4.3

Intersection Summary	
HCM 2010 Ctrl Delay	5.3
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	10	105	2	9	35
Future Vol, veh/h	12	10	105	2	9	35
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	12	10	13	100	100	8
Mvmt Flow	15	12	130	2	11	43

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	196	131	0	0	132	0
Stage 1	131	-	-	-	-	-
Stage 2	65	-	-	-	-	-
Critical Hdwy	6.52	6.3	-	-	5.1	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.39	-	-	3.1	-
Pot Cap-1 Maneuver	771	898	-	-	1019	-
Stage 1	871	-	-	-	-	-
Stage 2	933	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	763	898	-	-	1019	-
Mov Cap-2 Maneuver	763	-	-	-	-	-
Stage 1	871	-	-	-	-	-
Stage 2	923	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.5	0	1.8
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	819	1019	-
HCM Lane V/C Ratio	-	-	0.033	0.011	-
HCM Control Delay (s)	-	-	9.5	8.6	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Intersection Delay, s/veh	7.6
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	11	2	21	0	3	1	4	0	9	96	2
Future Vol, veh/h	0	11	2	21	0	3	1	4	0	9	96	2
Peak Hour Factor	0.92	0.80	0.80	0.80	0.92	0.80	0.80	0.80	0.92	0.80	0.80	0.80
Heavy Vehicles, %	2	9	50	14	2	33	0	0	2	0	16	0
Mvmt Flow	0	14	3	26	0	4	1	5	0	11	120	3
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.4	7.8	7.8
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	32%	38%	6%
Vol Thru, %	90%	6%	12%	73%
Vol Right, %	2%	62%	50%	20%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	107	34	8	49
LT Vol	9	11	3	3
Through Vol	96	2	1	36
RT Vol	2	21	4	10
Lane Flow Rate	134	42	10	61
Geometry Grp	1	1	1	1
Degree of Util (X)	0.15	0.048	0.013	0.068
Departure Headway (Hd)	4.044	4.09	4.606	3.983
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	884	862	766	892
Service Time	2.083	2.179	2.703	2.038
HCM Lane V/C Ratio	0.152	0.049	0.013	0.068
HCM Control Delay	7.8	7.4	7.8	7.3
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.5	0.2	0	0.2

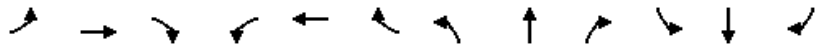
Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↕	
Traffic Vol, veh/h	0	3	36	10
Future Vol, veh/h	0	3	36	10
Peak Hour Factor	0.92	0.80	0.80	0.80
Heavy Vehicles, %	2	0	41	10
Mvmt Flow	0	4	45	13
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.3
HCM LOS	A

Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	SBL2	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	380	75	19	61	48	637	3	5	51	18	107
Future Volume (vph)	81	380	75	19	61	48	637	3	5	51	18	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0				4.0	4.0
Lane Util. Factor	1.00	0.95	1.00		1.00	1.00	0.95				1.00	1.00
Frt	1.00	1.00	0.85		1.00	1.00	1.00				1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	0.95	1.00				0.96	1.00
Satd. Flow (prot)	1736	3471	1524		1597	1770	3537				1619	1599
Flt Permitted	0.95	1.00	1.00		0.95	0.95	1.00				0.96	1.00
Satd. Flow (perm)	1736	3471	1524		1597	1770	3537				1619	1599
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	91	427	84	21	69	54	716	3	6	57	20	120
RTOR Reduction (vph)	0	0	31	0	0	0	1	0	0	0	0	88
Lane Group Flow (vph)	91	427	74	0	69	54	718	0	0	0	83	32
Heavy Vehicles (%)	4%	4%	5%	10%	13%	2%	2%	0%	0%	19%	0%	1%
Turn Type	Prot	NA	Perm		Prot	Prot	NA		Perm	Perm	NA	Perm
Protected Phases	5	2			1	1	6				8	
Permitted Phases			2						8	8		8
Actuated Green, G (s)	8.2	40.9	40.9		7.6	7.6	40.3				22.1	22.1
Effective Green, g (s)	8.2	40.9	40.9		7.6	7.6	40.3				22.1	22.1
Actuated g/C Ratio	0.10	0.50	0.50		0.09	0.09	0.49				0.27	0.27
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0	4.0				4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0				3.0	3.0
Lane Grp Cap (vph)	172	1718	754		146	162	1725				433	427
v/s Ratio Prot	c0.05	0.12			0.04	0.03	c0.20					
v/s Ratio Perm			0.05								0.05	0.02
v/c Ratio	0.53	0.25	0.10		0.47	0.33	0.42				0.19	0.08
Uniform Delay, d1	35.4	12.0	11.1		35.6	35.1	13.6				23.4	22.6
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00				1.00	1.00
Incremental Delay, d2	2.9	0.1	0.1		2.4	1.2	0.7				1.0	0.3
Delay (s)	38.3	12.1	11.1		38.0	36.3	14.3				24.3	23.0
Level of Service	D	B	B		D	D	B				C	C
Approach Delay (s)		15.7					17.7				23.5	
Approach LOS		B					B				C	

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.36		
Actuated Cycle Length (s)	82.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	36.2%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	28	47	8	202	104	42	10	194	78	24	151	22
Future Volume (veh/h)	28	47	8	202	104	42	10	194	78	24	151	22
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1837	1900	1792	1827	1827	1900	1729	1900	1638	1607	1900
Adj Flow Rate, veh/h	33	55	9	178	201	0	12	226	91	28	176	26
Adj No. of Lanes	0	2	0	1	1	1	0	2	0	1	1	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	6	3	4	8	8	8	16	19	19
Cap, veh/h	62	109	18	929	994	845	71	469	180	223	288	43
Arrive On Green	0.05	0.05	0.05	0.54	0.54	0.00	0.21	0.21	0.21	0.21	0.21	0.21
Sat Flow, veh/h	1156	2054	346	1707	1827	1553	45	2227	853	931	1369	202
Grp Volume(v), veh/h	51	0	46	178	201	0	177	0	152	28	0	202
Grp Sat Flow(s),veh/h/ln	1780	0	1776	1707	1827	1553	1702	0	1422	931	0	1571
Q Serve(g_s), s	1.7	0.0	1.6	3.3	3.5	0.0	0.0	0.0	5.9	1.7	0.0	7.3
Cycle Q Clear(g_c), s	1.7	0.0	1.6	3.3	3.5	0.0	5.6	0.0	5.9	7.6	0.0	7.3
Prop In Lane	0.65		0.19	1.00		1.00	0.07		0.60	1.00		0.13
Lane Grp Cap(c), veh/h	95	0	95	929	994	845	420	0	300	223	0	331
V/C Ratio(X)	0.54	0.00	0.49	0.19	0.20	0.00	0.42	0.00	0.51	0.13	0.00	0.61
Avail Cap(c_a), veh/h	541	0	540	929	994	845	1001	0	797	549	0	880
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	28.8	0.0	28.8	7.2	7.3	0.0	21.7	0.0	21.8	25.2	0.0	22.3
Incr Delay (d2), s/veh	4.6	0.0	3.9	0.5	0.5	0.0	0.7	0.0	1.3	0.2	0.0	1.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	0.9	1.7	1.9	0.0	2.7	0.0	2.4	0.5	0.0	3.3
LnGrp Delay(d),s/veh	33.5	0.0	32.6	7.7	7.8	0.0	22.4	0.0	23.1	25.4	0.0	24.2
LnGrp LOS	C		C	A	A		C		C	C		C
Approach Vol, veh/h		97			379			329			230	
Approach Delay, s/veh		33.0			7.7			22.7			24.3	
Approach LOS		C			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		7.3		17.2		38.0		17.2
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		19.0		35.0		34.0		35.0
Max Q Clear Time (g_c+I1), s		3.7		9.6		5.5		7.9
Green Ext Time (p_c), s		0.4		3.6		1.7		3.6

Intersection Summary	
HCM 2010 Ctrl Delay	18.6
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	8
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Vol, veh/h	0	6	21	13	0	32	38	12	0	7	64	21	0	0	0	0
Future Vol, veh/h	0	6	21	13	0	32	38	12	0	7	64	21	0	0	0	0
Peak Hour Factor	0.92	0.81	0.81	0.81	0.92	0.81	0.81	0.81	0.92	0.81	0.81	0.81	0.92	0.81	0.81	0.81
Heavy Vehicles, %	2	16	9	15	2	28	2	25	2	0	4	28	2	0	0	0
Mvmt Flow	0	7	26	16	0	40	47	15	0	9	79	26	0	0	0	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.7	8.4	7.8
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	8%	15%	39%
Vol Thru, %	70%	53%	46%
Vol Right, %	23%	33%	15%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	92	40	82
LT Vol	7	6	32
Through Vol	64	21	38
RT Vol	21	13	12
Lane Flow Rate	114	49	101
Geometry Grp	1	1	1
Degree of Util (X)	0.131	0.059	0.129
Departure Headway (Hd)	4.14	4.285	4.605
Convergence, Y/N	Yes	Yes	Yes
Cap	871	823	771
Service Time	2.14	2.38	2.678
HCM Lane V/C Ratio	0.131	0.06	0.131
HCM Control Delay	7.8	7.7	8.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0.2	0.4

Intersection	
Int Delay, s/veh	3.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	103	75	90	0	0
Future Vol, veh/h	0	103	75	90	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	4	6	5	0	0
Mvmt Flow	0	123	89	107	0	0

Major/Minor	Minor1		Major1	
Conflicting Flow All	-	143	0	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	6.24	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	3.336	-	-
Pot Cap-1 Maneuver	0	899	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	-	899	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	9.6	0
HCM LOS	A	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1
Capacity (veh/h)	-	-	899
HCM Lane V/C Ratio	-	-	0.136
HCM Control Delay (s)	-	-	9.6
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	161	297	49	136	450	255	78	466	40	175	620	379
Future Volume (veh/h)	161	297	49	136	450	255	78	466	40	175	620	379
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1822	1900	1881	1827	1863	1845	1845	1900	1863	1845	1845
Adj Flow Rate, veh/h	173	319	53	146	484	0	84	501	43	188	667	0
Adj No. of Lanes	2	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	4	1	4	2	3	3	0	2	3	3
Cap, veh/h	276	664	109	191	861	393	109	991	457	241	1250	559
Arrive On Green	0.08	0.22	0.22	0.11	0.25	0.00	0.06	0.28	0.28	0.14	0.36	0.00
Sat Flow, veh/h	3375	2977	489	1792	3471	1583	1757	3505	1615	1774	3505	1568
Grp Volume(v), veh/h	173	184	188	146	484	0	84	501	43	188	667	0
Grp Sat Flow(s),veh/h/ln	1688	1731	1736	1792	1736	1583	1757	1752	1615	1774	1752	1568
Q Serve(g_s), s	3.2	5.9	6.0	5.0	7.8	0.0	3.0	7.6	1.2	6.5	9.6	0.0
Cycle Q Clear(g_c), s	3.2	5.9	6.0	5.0	7.8	0.0	3.0	7.6	1.2	6.5	9.6	0.0
Prop In Lane	1.00		0.28	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	276	386	387	191	861	393	109	991	457	241	1250	559
V/C Ratio(X)	0.63	0.48	0.49	0.76	0.56	0.00	0.77	0.51	0.09	0.78	0.53	0.00
Avail Cap(c_a), veh/h	689	734	736	619	1963	895	386	1652	761	697	2257	1010
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	28.3	21.5	21.5	27.6	20.9	0.0	29.4	19.1	16.8	26.6	16.3	0.0
Incr Delay (d2), s/veh	2.3	0.9	0.9	6.2	0.6	0.0	10.9	0.4	0.1	5.4	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	2.9	3.0	2.8	3.8	0.0	1.8	3.7	0.6	3.5	4.7	0.0
LnGrp Delay(d),s/veh	30.6	22.4	22.5	33.8	21.5	0.0	40.3	19.5	16.9	32.0	16.6	0.0
LnGrp LOS	C	C	C	C	C		D	B	B	C	B	
Approach Vol, veh/h		545			630			628			855	
Approach Delay, s/veh		25.0			24.4			22.1			20.0	
Approach LOS		C			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.8	18.2	7.9	26.7	9.2	19.8	12.6	22.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	22.0	27.0	14.0	41.0	13.0	36.0	25.0	30.0
Max Q Clear Time (g_c+I1), s	7.0	8.0	5.0	11.6	5.2	9.8	8.5	9.6
Green Ext Time (p_c), s	0.3	5.4	0.1	9.7	0.3	6.0	0.5	8.4

Intersection Summary	
HCM 2010 Ctrl Delay	22.6
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	211	1518	49	266	1389	515	27	156	160	412	158	184
Future Volume (veh/h)	211	1518	49	266	1389	515	27	156	160	412	158	184
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1827	1827	1792	1712	1810	1810	1610	1727	1743
Adj Flow Rate, veh/h	218	1565	0	274	1432	0	28	161	165	425	163	190
Adj No. of Lanes	1	3	0	2	3	1	1	1	2	2	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	4	4	6	11	5	5	18	10	9
Cap, veh/h	238	2388	0	314	2154	658	235	261	391	613	356	305
Arrive On Green	0.14	0.47	0.00	0.09	0.43	0.00	0.14	0.14	0.14	0.21	0.21	0.21
Sat Flow, veh/h	1757	5204	0	3375	4988	1524	1630	1810	2707	2975	1727	1482
Grp Volume(v), veh/h	218	1565	0	274	1432	0	28	161	165	425	163	190
Grp Sat Flow(s),veh/h/ln	1757	1679	0	1688	1663	1524	1630	1810	1354	1487	1727	1482
Q Serve(g_s), s	23.8	46.0	0.0	15.5	44.4	0.0	2.9	16.2	10.8	25.7	16.1	22.7
Cycle Q Clear(g_c), s	23.8	46.0	0.0	15.5	44.4	0.0	2.9	16.2	10.8	25.7	16.1	22.7
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	238	2388	0	314	2154	658	235	261	391	613	356	305
V/C Ratio(X)	0.92	0.66	0.00	0.87	0.66	0.00	0.12	0.62	0.42	0.69	0.46	0.62
Avail Cap(c_a), veh/h	344	2388	0	417	2154	658	235	261	391	613	356	305
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	82.8	38.9	0.0	86.9	43.9	0.0	72.3	78.0	75.7	71.3	67.5	70.1
Incr Delay (d2), s/veh	22.4	1.4	0.0	14.4	1.6	0.0	1.0	10.5	3.3	6.3	4.2	9.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	13.0	21.6	0.0	7.9	20.7	0.0	1.4	8.9	4.2	11.1	8.1	10.1
LnGrp Delay(d),s/veh	105.2	40.4	0.0	101.3	45.6	0.0	73.3	88.4	79.0	77.7	71.7	79.4
LnGrp LOS	F	D		F	D		E	F	E	E	E	E
Approach Vol, veh/h		1783			1706			354			778	
Approach Delay, s/veh		48.3			54.5			82.8			76.8	
Approach LOS		D			D			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	32.1	96.0		32.0	30.2	87.8		44.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	24.0	92.0		28.0	38.0	78.0		40.0
Max Q Clear Time (g_c+I1), s	17.5	48.0		18.2	25.8	46.4		27.7
Green Ext Time (p_c), s	0.5	35.9		1.1	0.5	27.2		2.7

Intersection Summary	
HCM 2010 Ctrl Delay	58.0
HCM 2010 LOS	E

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1428	392	51	7	367	27	95	280	24	58	204	1471
Future Volume (veh/h)	1428	392	51	7	367	27	95	280	24	58	204	1471
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1839	1900	1900	1849	1900	1881	1883	1900	1881	1845	1827
Adj Flow Rate, veh/h	1587	436	57	8	408	0	106	311	27	64	227	1634
Adj No. of Lanes	2	1	0	0	2	0	1	2	0	1	2	2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	4	4	3	3	3	1	1	1	1	3	4
Cap, veh/h	1222	554	72	10	520	0	139	1052	91	84	1000	1182
Arrive On Green	0.35	0.35	0.35	0.15	0.15	0.00	0.08	0.32	0.32	0.05	0.29	0.29
Sat Flow, veh/h	3514	1594	208	66	3629	0	1792	3333	288	1792	3505	2733
Grp Volume(v), veh/h	1587	0	493	223	193	0	106	166	172	64	227	1634
Grp Sat Flow(s),veh/h/ln	1757	0	1803	1846	1757	0	1792	1789	1832	1792	1752	1367
Q Serve(g_s), s	39.0	0.0	27.5	13.1	11.8	0.0	6.5	7.9	8.0	4.0	5.6	32.0
Cycle Q Clear(g_c), s	39.0	0.0	27.5	13.1	11.8	0.0	6.5	7.9	8.0	4.0	5.6	32.0
Prop In Lane	1.00		0.12	0.04		0.00	1.00		0.16	1.00		1.00
Lane Grp Cap(c), veh/h	1222	0	627	271	258	0	139	564	578	84	1000	1182
V/C Ratio(X)	1.30	0.00	0.79	0.82	0.75	0.00	0.77	0.29	0.30	0.76	0.23	1.38
Avail Cap(c_a), veh/h	1222	0	627	362	345	0	655	564	578	639	1000	1182
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.6	0.0	32.8	46.4	45.8	0.0	50.7	29.0	29.0	52.8	30.6	27.2
Incr Delay (d2), s/veh	140.6	0.0	6.6	10.7	6.1	0.0	8.5	0.3	0.3	13.0	0.1	177.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	42.7	0.0	14.8	7.5	6.2	0.0	3.5	3.9	4.1	2.3	2.7	47.4
LnGrp Delay(d),s/veh	177.2	0.0	39.4	57.1	51.9	0.0	59.2	29.2	29.3	65.8	30.7	204.8
LnGrp LOS	F		D	E	D		E	C	C	E	C	F
Approach Vol, veh/h		2080			416			444			1925	
Approach Delay, s/veh		144.6			54.7			36.4			179.7	
Approach LOS		F			D			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.5	12.7	36.0		43.0	9.3	39.4
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		22.0	41.0	32.0		39.0	40.0	33.0
Max Q Clear Time (g_c+I1), s		15.1	8.5	34.0		41.0	6.0	10.0
Green Ext Time (p_c), s		1.3	0.6	0.0		0.0	0.2	2.3

Intersection Summary	
HCM 2010 Ctrl Delay	140.9
HCM 2010 LOS	F

Notes

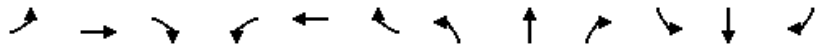
User approved volume balancing among the lanes for turning movement.

Santa Cruz DRP Study
1: Front Street & Laurel Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	84	638	30	228	378	110	8	165	229	118	322	156
Future Volume (veh/h)	84	638	30	228	378	110	8	165	229	118	322	156
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1897	1900	1900	1881	1900	1900	1881	1900	1827	1900	1900
Adj Flow Rate, veh/h	89	679	32	243	402	117	9	176	244	126	343	166
Adj No. of Lanes	1	2	0	1	1	1	1	1	1	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	0	0	0	1	0	0	1	0	4	0	0
Cap, veh/h	372	1237	58	286	567	486	16	355	305	158	514	437
Arrive On Green	0.21	0.35	0.35	0.16	0.30	0.30	0.01	0.19	0.19	0.09	0.27	0.27
Sat Flow, veh/h	1774	3506	165	1810	1881	1615	1810	1881	1615	1740	1900	1615
Grp Volume(v), veh/h	89	349	362	243	402	117	9	176	244	126	343	166
Grp Sat Flow(s),veh/h/ln	1774	1803	1868	1810	1881	1615	1810	1881	1615	1740	1900	1615
Q Serve(g_s), s	3.2	11.9	11.9	10.0	14.5	4.2	0.4	6.4	11.0	5.4	12.3	6.4
Cycle Q Clear(g_c), s	3.2	11.9	11.9	10.0	14.5	4.2	0.4	6.4	11.0	5.4	12.3	6.4
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	372	636	659	286	567	486	16	355	305	158	514	437
V/C Ratio(X)	0.24	0.55	0.55	0.85	0.71	0.24	0.55	0.50	0.80	0.80	0.67	0.38
Avail Cap(c_a), veh/h	372	636	659	332	567	486	95	394	338	205	523	444
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.1	19.8	19.8	31.3	23.7	20.1	37.7	27.7	29.6	34.0	24.8	22.6
Incr Delay (d2), s/veh	1.5	3.4	3.3	16.7	7.3	1.2	25.3	1.1	11.8	15.1	3.2	0.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.7	6.5	6.7	6.3	8.6	2.0	0.3	3.4	5.9	3.3	6.8	2.9
LnGrp Delay(d),s/veh	26.6	23.2	23.1	48.0	31.1	21.3	63.0	28.8	41.4	49.1	28.0	23.2
LnGrp LOS	C	C	C	D	C	C	E	C	D	D	C	C
Approach Vol, veh/h		800			762			429			635	
Approach Delay, s/veh		23.5			35.0			36.7			30.9	
Approach LOS		C			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.1	30.9	4.7	24.7	20.0	27.0	10.9	18.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	14.0	25.0	4.0	21.0	16.0	23.0	9.0	16.0
Max Q Clear Time (g_c+I1), s	12.0	13.9	2.4	14.3	5.2	16.5	7.4	13.0
Green Ext Time (p_c), s	0.1	5.5	0.0	2.6	0.1	3.7	0.0	1.4

Intersection Summary	
HCM 2010 Ctrl Delay	30.8
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	640	25	37	456	89	41	77	48	56	58	37
Future Volume (veh/h)	48	640	25	37	456	89	41	77	48	56	58	37
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1900	1900	1900	1894	1900	1900	1843	1900	1900	1808	1900
Adj Flow Rate, veh/h	51	681	27	39	485	95	44	82	51	60	62	39
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	0	1	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	10	0	0	0	0	0	0	5	5	5	5	5
Cap, veh/h	99	962	38	106	814	159	402	250	156	167	161	81
Arrive On Green	0.06	0.53	0.53	0.06	0.53	0.53	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1645	1815	72	1810	1539	301	1314	1064	662	401	684	347
Grp Volume(v), veh/h	51	0	708	39	0	580	44	0	133	161	0	0
Grp Sat Flow(s),veh/h/ln	1645	0	1887	1810	0	1841	1314	0	1726	1431	0	0
Q Serve(g_s), s	2.0	0.0	19.2	1.4	0.0	14.8	0.0	0.0	4.3	2.6	0.0	0.0
Cycle Q Clear(g_c), s	2.0	0.0	19.2	1.4	0.0	14.8	2.0	0.0	4.3	6.9	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.16	1.00		0.38	0.37		0.24
Lane Grp Cap(c), veh/h	99	0	1001	106	0	973	402	0	406	409	0	0
V/C Ratio(X)	0.51	0.00	0.71	0.37	0.00	0.60	0.11	0.00	0.33	0.39	0.00	0.00
Avail Cap(c_a), veh/h	386	0	1001	425	0	973	402	0	406	409	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	31.0	0.0	12.0	30.8	0.0	11.1	20.7	0.0	21.6	22.4	0.0	0.0
Incr Delay (d2), s/veh	4.1	0.0	4.2	2.1	0.0	2.7	0.5	0.0	2.2	2.8	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.0	0.0	11.0	0.8	0.0	8.1	0.7	0.0	2.3	3.0	0.0	0.0
LnGrp Delay(d),s/veh	35.1	0.0	16.2	32.9	0.0	13.7	21.2	0.0	23.7	25.2	0.0	0.0
LnGrp LOS	D		B	C		B	C		C	C		
Approach Vol, veh/h		759			619			177			161	
Approach Delay, s/veh		17.5			15.0			23.1			25.2	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	40.1		20.0	8.1	40.0		20.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	16.0	36.0		16.0	16.0	36.0		16.0
Max Q Clear Time (g_c+I1), s	3.4	21.2		8.9	4.0	16.8		6.3
Green Ext Time (p_c), s	0.0	7.7		1.1	0.1	9.0		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	17.9
HCM 2010 LOS	B

Santa Cruz DRP Study
3: Front Street & Cathcart Street



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	109	60	52	380	570	134
Future Volume (veh/h)	109	60	52	380	570	134
Number	5	12	3	8	4	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1845	1810	1827	1860	1900
Adj Flow Rate, veh/h	114	62	54	396	594	140
Adj No. of Lanes	1	1	1	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	3	5	4	1	1
Cap, veh/h	464	406	365	1182	1103	259
Arrive On Green	0.26	0.26	0.21	0.65	0.39	0.39
Sat Flow, veh/h	1792	1568	1723	1827	2934	668
Grp Volume(v), veh/h	114	62	54	396	369	365
Grp Sat Flow(s),veh/h/ln	1792	1568	1723	1827	1767	1742
Q Serve(g_s), s	4.3	2.6	2.2	8.3	13.7	13.8
Cycle Q Clear(g_c), s	4.3	2.6	2.2	8.3	13.7	13.8
Prop In Lane	1.00	1.00	1.00			0.38
Lane Grp Cap(c), veh/h	464	406	365	1182	686	676
V/C Ratio(X)	0.25	0.15	0.15	0.33	0.54	0.54
Avail Cap(c_a), veh/h	464	406	365	1182	686	676
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	24.9	24.3	27.3	6.8	20.1	20.1
Incr Delay (d2), s/veh	1.3	0.8	0.9	0.2	3.0	3.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	1.2	1.1	4.2	7.2	7.2
LnGrp Delay(d),s/veh	26.2	25.1	28.1	6.9	23.1	23.2
LnGrp LOS	C	C	C	A	C	C
Approach Vol, veh/h	176			450	734	
Approach Delay, s/veh	25.8			9.5	23.2	
Approach LOS	C			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		26.0	22.0	37.0				59.0
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		22.0	18.0	33.0				55.0
Max Q Clear Time (g_c+I1), s		6.3	4.2	15.8				10.3
Green Ext Time (p_c), s		0.4	0.1	6.8				9.2

Intersection Summary	
HCM 2010 Ctrl Delay	19.0
HCM 2010 LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	16	2	5	403	605	17
Future Volume (veh/h)	16	2	5	403	605	17
Number	5	12	3	8	4	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	976	1900	1056	1900	1839	1900
Adj Flow Rate, veh/h	17	2	5	420	630	18
Adj No. of Lanes	0	0	1	1	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	80	0	1	1
Cap, veh/h	15	2	469	1508	1412	40
Arrive On Green	0.02	0.02	0.79	0.79	0.79	0.79
Sat Flow, veh/h	782	92	442	1900	1779	51
Grp Volume(v), veh/h	20	0	5	420	0	648
Grp Sat Flow(s),veh/h/ln	920	0	442	1900	0	1830
Q Serve(g_s), s	0.8	0.0	0.2	2.5	0.0	4.8
Cycle Q Clear(g_c), s	0.8	0.0	5.0	2.5	0.0	4.8
Prop In Lane	0.85	0.10	1.00			0.03
Lane Grp Cap(c), veh/h	18	0	469	1508	0	1452
V/C Ratio(X)	1.10	0.00	0.01	0.28	0.00	0.45
Avail Cap(c_a), veh/h	387	0	469	1508	0	1452
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.0	0.0	2.2	1.2	0.0	1.4
Incr Delay (d2), s/veh	127.4	0.0	0.0	0.5	0.0	1.0
Initial Q Delay(d3),s/veh	4.7	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	1.5	0.0	2.7
LnGrp Delay(d),s/veh	153.1	0.0	2.3	1.6	0.0	2.4
LnGrp LOS	F		A	A		A
Approach Vol, veh/h	20			425	648	
Approach Delay, s/veh	153.1			1.6	2.4	
Approach LOS	F			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		4.8		38.0				38.0
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		18.0		34.0				34.0
Max Q Clear Time (g_c+I1), s		2.8		6.8				7.0
Green Ext Time (p_c), s		0.0		8.3				8.3

Intersection Summary	
HCM 2010 Ctrl Delay	4.9
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	8	11	186	2	11	70
Future Vol, veh/h	8	11	186	2	11	70
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	100	90	4	100	90	1
Mvmt Flow	9	12	207	2	12	78

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	310	208	0	0	209	0
Stage 1	208	-	-	-	-	-
Stage 2	102	-	-	-	-	-
Critical Hdwy	7.4	7.1	-	-	5	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	6.4	-	-	-	-	-
Follow-up Hdwy	4.4	4.11	-	-	3.01	-
Pot Cap-1 Maneuver	520	653	-	-	975	-
Stage 1	640	-	-	-	-	-
Stage 2	726	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	513	653	-	-	975	-
Mov Cap-2 Maneuver	513	-	-	-	-	-
Stage 1	640	-	-	-	-	-
Stage 2	717	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.4	0	1.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	586	975	-
HCM Lane V/C Ratio	-	-	0.036	0.013	-
HCM Control Delay (s)	-	-	11.4	8.7	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	18	4	35	0	4	2	4	0	23	171	6
Future Vol, veh/h	0	18	4	35	0	4	2	4	0	23	171	6
Peak Hour Factor	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93
Heavy Vehicles, %	2	0	0	0	2	0	0	0	2	0	7	0
Mvmt Flow	0	19	4	38	0	4	2	4	0	25	184	6
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.6	7.5	8.5
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	12%	32%	40%	5%
Vol Thru, %	85%	7%	20%	85%
Vol Right, %	3%	61%	40%	10%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	200	57	10	82
LT Vol	23	18	4	4
Through Vol	171	4	2	70
RT Vol	6	35	4	8
Lane Flow Rate	215	61	11	88
Geometry Grp	1	1	1	1
Degree of Util (X)	0.245	0.073	0.013	0.101
Departure Headway (Hd)	4.097	4.267	4.47	4.141
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	869	845	805	852
Service Time	2.161	2.267	2.474	2.232
HCM Lane V/C Ratio	0.247	0.072	0.014	0.103
HCM Control Delay	8.5	7.6	7.5	7.7
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1	0.2	0	0.3

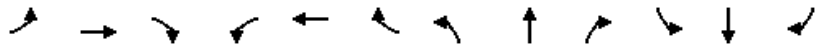
Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	4	70	8
Future Vol, veh/h	0	4	70	8
Peak Hour Factor	0.92	0.93	0.93	0.93
Heavy Vehicles, %	2	0	17	0
Mvmt Flow	0	4	75	9
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.7
HCM LOS	A

Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	SBL2	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	152	629	110	19	108	49	630	3	19	106	33	174
Future Volume (vph)	152	629	110	19	108	49	630	3	19	106	33	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0				4.0	4.0
Lane Util. Factor	1.00	0.95	1.00		1.00	1.00	0.95				1.00	1.00
Frt	1.00	1.00	0.85		1.00	1.00	1.00				1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	0.95	1.00				0.96	1.00
Satd. Flow (prot)	1787	3574	1590		1787	1770	3572				1747	1599
Flt Permitted	0.95	1.00	1.00		0.95	0.95	1.00				0.96	1.00
Satd. Flow (perm)	1787	3574	1590		1787	1770	3572				1747	1599
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	163	676	118	20	116	53	677	3	20	114	35	187
RTOR Reduction (vph)	0	0	32	0	0	0	1	0	0	0	0	129
Lane Group Flow (vph)	163	676	106	0	116	53	679	0	0	0	169	58
Heavy Vehicles (%)	1%	1%	1%	5%	1%	2%	1%	0%	5%	5%	3%	1%
Turn Type	Prot	NA	Perm		Prot	Prot	NA		Perm	Perm	NA	Perm
Protected Phases	5	2			1	1	6				8	
Permitted Phases			2						8	8		8
Actuated Green, G (s)	12.6	39.4	39.4		9.2	9.2	36.0				22.0	22.0
Effective Green, g (s)	12.6	39.4	39.4		9.2	9.2	36.0				22.0	22.0
Actuated g/C Ratio	0.15	0.48	0.48		0.11	0.11	0.44				0.27	0.27
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0	4.0				4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0				3.0	3.0
Lane Grp Cap (vph)	272	1704	758		199	197	1556				465	425
v/s Ratio Prot	c0.09	c0.19			0.06	0.03	c0.19					
v/s Ratio Perm			0.07								0.10	0.04
v/c Ratio	0.60	0.40	0.14		0.58	0.27	0.44				0.36	0.14
Uniform Delay, d1	32.6	13.9	12.1		34.9	33.6	16.2				24.6	23.1
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00				1.00	1.00
Incremental Delay, d2	3.5	0.2	0.1		4.3	0.7	0.9				2.2	0.7
Delay (s)	36.2	14.1	12.2		39.2	34.4	17.1				26.8	23.7
Level of Service	D	B	B		D	C	B				C	C
Approach Delay (s)		17.5					21.2				25.2	
Approach LOS		B					C				C	

Intersection Summary			
HCM 2000 Control Delay	20.2	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.43		
Actuated Cycle Length (s)	82.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	44.6%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	109	37	360	93	36	10	298	180	79	339	36
Future Volume (veh/h)	50	109	37	360	93	36	10	298	180	79	339	36
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1859	1900	1900	1877	1900	1900	1831	1900	1881	1818	1900
Adj Flow Rate, veh/h	53	115	39	238	295	0	11	314	189	83	357	38
Adj No. of Lanes	0	2	0	1	1	1	0	2	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	0	3	0	5	5	5	1	5	5
Cap, veh/h	83	187	66	757	786	676	58	668	385	274	525	56
Arrive On Green	0.09	0.09	0.09	0.42	0.42	0.00	0.32	0.32	0.32	0.32	0.32	0.32
Sat Flow, veh/h	880	1978	693	1810	1877	1615	24	2056	1186	901	1616	172
Grp Volume(v), veh/h	109	0	98	238	295	0	282	0	232	83	0	395
Grp Sat Flow(s),veh/h/ln	1815	0	1736	1810	1877	1615	1809	0	1457	901	0	1788
Q Serve(g_s), s	4.3	0.0	4.0	6.5	8.0	0.0	0.0	0.0	9.5	6.0	0.0	14.2
Cycle Q Clear(g_c), s	4.3	0.0	4.0	6.5	8.0	0.0	9.1	0.0	9.5	15.5	0.0	14.2
Prop In Lane	0.49		0.40	1.00		1.00	0.04		0.81	1.00		0.10
Lane Grp Cap(c), veh/h	172	0	165	757	786	676	638	0	473	274	0	581
V/C Ratio(X)	0.64	0.00	0.59	0.31	0.38	0.00	0.44	0.00	0.49	0.30	0.00	0.68
Avail Cap(c_a), veh/h	441	0	422	757	786	676	995	0	767	456	0	941
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	32.3	0.0	32.2	14.4	14.9	0.0	20.0	0.0	20.1	26.3	0.0	21.7
Incr Delay (d2), s/veh	3.9	0.0	3.4	1.1	1.4	0.0	0.5	0.0	0.8	0.6	0.0	1.4
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	0.0	2.1	3.5	4.4	0.0	4.7	0.0	3.9	1.5	0.0	7.2
LnGrp Delay(d),s/veh	36.2	0.0	35.6	15.5	16.2	0.0	20.4	0.0	20.9	26.9	0.0	23.1
LnGrp LOS	D		D	B	B		C		C	C		C
Approach Vol, veh/h		207			533			514			478	
Approach Delay, s/veh		35.9			15.9			20.6			23.8	
Approach LOS		D			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		11.0		28.1		35.0		28.1
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		18.0		39.0		31.0		39.0
Max Q Clear Time (g_c+I1), s		6.3		17.5		10.0		11.5
Green Ext Time (p_c), s		0.8		6.5		2.4		7.1

Intersection Summary		
HCM 2010 Ctrl Delay		21.9
HCM 2010 LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	8.8
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Vol, veh/h	0	12	79	38	0	50	74	27	0	21	88	54	0	0	0	0
Future Vol, veh/h	0	12	79	38	0	50	74	27	0	21	88	54	0	0	0	0
Peak Hour Factor	0.92	0.91	0.91	0.91	0.92	0.91	0.91	0.91	0.92	0.91	0.91	0.91	0.92	0.91	0.91	0.91
Heavy Vehicles, %	2	0	0	2	2	22	2	14	2	0	1	9	2	0	0	0
Mvmt Flow	0	13	87	42	0	55	81	30	0	23	97	59	0	0	0	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.3	9.2	8.7
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	13%	9%	33%
Vol Thru, %	54%	61%	49%
Vol Right, %	33%	29%	18%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	163	129	151
LT Vol	21	12	50
Through Vol	88	79	74
RT Vol	54	38	27
Lane Flow Rate	179	142	166
Geometry Grp	1	1	1
Degree of Util (X)	0.221	0.171	0.221
Departure Headway (Hd)	4.444	4.355	4.803
Convergence, Y/N	Yes	Yes	Yes
Cap	810	824	748
Service Time	2.466	2.382	2.829
HCM Lane V/C Ratio	0.221	0.172	0.222
HCM Control Delay	8.7	8.3	9.2
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.8	0.6	0.8

Intersection	
Int Delay, s/veh	3.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	142	128	133	0	0
Future Vol, veh/h	1	142	128	133	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	1	0	0
Mvmt Flow	1	154	139	145	0	0

Major/Minor	Minor1		Major1	
Conflicting Flow All	211	211	0	0
Stage 1	211	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.4	6.2	-	-
Critical Hdwy Stg 1	5.4	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-
Pot Cap-1 Maneuver	782	834	-	-
Stage 1	829	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	782	834	-	-
Mov Cap-2 Maneuver	782	-	-	-
Stage 1	829	-	-	-
Stage 2	-	-	-	-

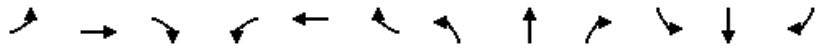
Approach	WB	NB
HCM Control Delay, s	10.3	0
HCM LOS	B	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1
Capacity (veh/h)	-	-	834
HCM Lane V/C Ratio	-	-	0.185
HCM Control Delay (s)	-	-	10.3
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	343	731	111	112	553	227	120	553	98	290	856	344
Future Volume (veh/h)	343	731	111	112	553	227	120	553	98	290	856	344
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1881	1900	1900	1881	1900	1900	1881	1881	1881	1900	1863
Adj Flow Rate, veh/h	357	761	116	117	576	0	125	576	102	302	892	0
Adj No. of Lanes	2	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	1	1	0	1	0	0	1	1	1	0	2
Cap, veh/h	447	1016	155	148	996	450	157	832	372	343	1219	535
Arrive On Green	0.13	0.33	0.33	0.08	0.28	0.00	0.09	0.23	0.23	0.19	0.34	0.00
Sat Flow, veh/h	3442	3111	474	1810	3574	1615	1810	3574	1599	1792	3610	1583
Grp Volume(v), veh/h	357	437	440	117	576	0	125	576	102	302	892	0
Grp Sat Flow(s),veh/h/ln	1721	1787	1798	1810	1787	1615	1810	1787	1599	1792	1805	1583
Q Serve(g_s), s	9.6	20.8	20.9	6.1	13.3	0.0	6.5	14.1	5.0	15.7	20.8	0.0
Cycle Q Clear(g_c), s	9.6	20.8	20.9	6.1	13.3	0.0	6.5	14.1	5.0	15.7	20.8	0.0
Prop In Lane	1.00		0.26	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	447	584	587	148	996	450	157	832	372	343	1219	535
V/C Ratio(X)	0.80	0.75	0.75	0.79	0.58	0.00	0.80	0.69	0.27	0.88	0.73	0.00
Avail Cap(c_a), veh/h	684	710	714	246	1196	541	265	935	418	525	1472	646
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	40.4	28.7	28.7	43.1	29.7	0.0	42.8	33.6	30.1	37.6	27.9	0.0
Incr Delay (d2), s/veh	3.9	3.5	3.5	9.1	0.5	0.0	8.8	1.9	0.4	10.7	1.5	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.8	10.8	10.8	3.4	6.6	0.0	3.6	7.2	2.2	8.7	10.5	0.0
LnGrp Delay(d),s/veh	44.3	32.2	32.2	52.2	30.2	0.0	51.7	35.5	30.5	48.2	29.4	0.0
LnGrp LOS	D	C	C	D	C		D	D	C	D	C	
Approach Vol, veh/h		1234			693			803			1194	
Approach Delay, s/veh		35.7			33.9			37.4			34.2	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.8	35.2	12.3	36.3	16.4	30.6	22.3	26.2
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	13.0	38.0	14.0	39.0	19.0	32.0	28.0	25.0
Max Q Clear Time (g_c+I1), s	8.1	22.9	8.5	22.8	11.6	15.3	17.7	16.1
Green Ext Time (p_c), s	0.1	8.4	0.1	9.5	0.8	8.9	0.7	6.1

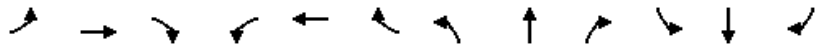
Intersection Summary	
HCM 2010 Ctrl Delay	35.3
HCM 2010 LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	227	1320	77	293	1262	472	102	246	423	648	309	247
Future Volume (veh/h)	227	1320	77	293	1262	472	102	246	423	648	309	247
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1847	1900	1845	1863	1810	1881	1845	1881	1863	1845	1863
Adj Flow Rate, veh/h	241	1404	0	312	1343	0	109	262	450	689	329	263
Adj No. of Lanes	1	3	0	2	3	1	1	1	2	2	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	3	3	3	2	5	1	3	1	2	3	2
Cap, veh/h	260	1922	0	353	1727	522	341	352	536	833	447	383
Arrive On Green	0.15	0.38	0.00	0.10	0.34	0.00	0.19	0.19	0.19	0.24	0.24	0.24
Sat Flow, veh/h	1792	5208	0	3408	5085	1538	1792	1845	2814	3442	1845	1583
Grp Volume(v), veh/h	241	1404	0	312	1343	0	109	262	450	689	329	263
Grp Sat Flow(s),veh/h/ln	1792	1680	0	1704	1695	1538	1792	1845	1407	1721	1845	1583
Q Serve(g_s), s	25.8	46.4	0.0	17.5	46.0	0.0	10.2	26.0	29.9	36.8	31.9	29.3
Cycle Q Clear(g_c), s	25.8	46.4	0.0	17.5	46.0	0.0	10.2	26.0	29.9	36.8	31.9	29.3
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	260	1922	0	353	1727	522	341	352	536	833	447	383
V/C Ratio(X)	0.93	0.73	0.00	0.88	0.78	0.00	0.32	0.75	0.84	0.83	0.74	0.69
Avail Cap(c_a), veh/h	323	1922	0	456	1727	522	341	352	536	833	447	383
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	81.9	51.5	0.0	85.8	57.5	0.0	67.7	74.1	75.7	69.7	67.9	66.9
Incr Delay (d2), s/veh	28.3	2.5	0.0	15.0	3.5	0.0	2.5	13.4	14.6	9.2	10.4	9.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	14.8	22.0	0.0	9.0	22.1	0.0	5.3	14.6	12.7	18.6	17.6	13.9
LnGrp Delay(d),s/veh	110.2	54.0	0.0	100.9	61.0	0.0	70.2	87.5	90.3	78.9	78.2	76.5
LnGrp LOS	F	D		F	E		E	F	F	E	E	E
Approach Vol, veh/h		1645			1655			821			1281	
Approach Delay, s/veh		62.2			68.5			86.7			78.3	
Approach LOS		E			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	34.1	78.0		41.0	32.2	69.9		51.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	26.0	74.0		37.0	35.0	65.0		47.0
Max Q Clear Time (g_c+I1), s	19.5	48.4		31.9	27.8	48.0		38.8
Green Ext Time (p_c), s	0.6	21.5		1.8	0.4	15.0		3.7

Intersection Summary	
HCM 2010 Ctrl Delay	71.7
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1312	486	66	11	412	30	74	276	19	42	258	1380
Future Volume (veh/h)	1312	486	66	11	412	30	74	276	19	42	258	1380
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1882	1900	1900	1850	1900	1881	1900	1900	1900	1900	1863
Adj Flow Rate, veh/h	1353	501	68	11	425	0	76	285	20	43	266	1423
Adj No. of Lanes	2	1	0	0	2	0	1	2	0	1	2	2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	3	3	3	1	0	0	0	0	2
Cap, veh/h	1237	561	76	13	539	0	100	1112	78	56	1083	1263
Arrive On Green	0.35	0.35	0.35	0.15	0.15	0.00	0.06	0.32	0.32	0.03	0.30	0.30
Sat Flow, veh/h	3583	1623	220	87	3608	0	1792	3424	239	1810	3610	2787
Grp Volume(v), veh/h	1353	0	569	234	202	0	76	149	156	43	266	1423
Grp Sat Flow(s),veh/h/ln	1792	0	1843	1845	1757	0	1792	1805	1858	1810	1805	1393
Q Serve(g_s), s	38.0	0.0	32.2	13.5	12.1	0.0	4.6	6.7	6.8	2.6	6.1	33.0
Cycle Q Clear(g_c), s	38.0	0.0	32.2	13.5	12.1	0.0	4.6	6.7	6.8	2.6	6.1	33.0
Prop In Lane	1.00		0.12	0.05		0.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	1237	0	637	283	269	0	100	586	603	56	1083	1263
V/C Ratio(X)	1.09	0.00	0.89	0.83	0.75	0.00	0.76	0.26	0.26	0.76	0.25	1.13
Avail Cap(c_a), veh/h	1237	0	637	369	351	0	668	586	603	756	1083	1263
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	0.0	34.1	45.2	44.6	0.0	51.2	27.4	27.4	52.9	29.1	25.5
Incr Delay (d2), s/veh	55.0	0.0	15.1	11.2	6.4	0.0	11.0	0.2	0.2	18.7	0.1	67.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	28.2	0.0	18.9	7.8	6.4	0.0	2.6	3.4	3.5	1.6	3.1	31.0
LnGrp Delay(d),s/veh	91.0	0.0	49.2	56.4	51.0	0.0	62.2	27.6	27.6	71.6	29.2	93.1
LnGrp LOS	F		D	E	D		E	C	C	E	C	F
Approach Vol, veh/h		1922			436			381			1732	
Approach Delay, s/veh		78.6			53.9			34.5			82.8	
Approach LOS		E			D			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.9	10.2	37.0		42.0	7.4	39.7
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		22.0	41.0	33.0		38.0	46.0	28.0
Max Q Clear Time (g_c+I1), s		15.5	6.6	35.0		40.0	4.6	8.8
Green Ext Time (p_c), s		1.4	0.4	0.0		0.0	0.1	1.8

Intersection Summary	
HCM 2010 Ctrl Delay	74.1
HCM 2010 LOS	E

Notes

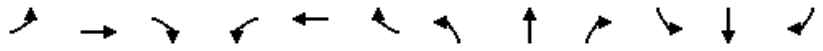
User approved volume balancing among the lanes for turning movement.

Santa Cruz DRP Study
1: Front Street & Laurel Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	48	337	10	246	448	89	5	145	168	44	156	90
Future Volume (veh/h)	48	337	10	246	448	89	5	145	168	44	156	90
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1810	1852	1900	1845	1863	1845	1583	1827	1881	1743	1827	1792
Adj Flow Rate, veh/h	52	366	11	267	487	97	5	158	183	48	170	98
Adj No. of Lanes	1	2	0	1	1	1	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	5	2	2	3	2	3	20	4	1	9	4	6
Cap, veh/h	372	1441	43	316	703	592	8	286	250	58	340	284
Arrive On Green	0.22	0.41	0.41	0.18	0.38	0.38	0.01	0.16	0.16	0.03	0.19	0.19
Sat Flow, veh/h	1723	3489	105	1757	1863	1568	1508	1827	1599	1660	1827	1524
Grp Volume(v), veh/h	52	184	193	267	487	97	5	158	183	48	170	98
Grp Sat Flow(s),veh/h/ln	1723	1760	1834	1757	1863	1568	1508	1827	1599	1660	1827	1524
Q Serve(g_s), s	1.8	5.1	5.1	10.9	16.4	3.0	0.2	5.9	8.1	2.1	6.2	4.2
Cycle Q Clear(g_c), s	1.8	5.1	5.1	10.9	16.4	3.0	0.2	5.9	8.1	2.1	6.2	4.2
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	372	727	757	316	703	592	8	286	250	58	340	284
V/C Ratio(X)	0.14	0.25	0.25	0.84	0.69	0.16	0.63	0.55	0.73	0.83	0.50	0.35
Avail Cap(c_a), veh/h	372	727	757	497	703	592	81	394	345	89	394	328
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.5	14.3	14.3	29.4	19.5	15.3	36.8	28.9	29.8	35.6	27.1	26.3
Incr Delay (d2), s/veh	0.8	0.8	0.8	7.7	5.6	0.6	60.6	1.7	5.0	29.3	1.1	0.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	2.6	2.7	5.9	9.5	1.4	0.2	3.1	3.9	1.4	3.2	1.8
LnGrp Delay(d),s/veh	24.3	15.1	15.1	37.1	25.0	15.9	97.4	30.6	34.8	64.9	28.2	27.0
LnGrp LOS	C	B	B	D	C	B	F	C	C	E	C	C
Approach Vol, veh/h		429			851			346			316	
Approach Delay, s/veh		16.2			27.8			33.8			33.4	
Approach LOS		B			C			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	17.3	34.7	4.4	17.8	20.0	32.0	6.6	15.6
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	21.0	23.0	4.0	16.0	16.0	28.0	4.0	16.0
Max Q Clear Time (g_c+I1), s	12.9	7.1	2.2	8.2	3.8	18.4	4.1	10.1
Green Ext Time (p_c), s	0.5	5.3	0.0	1.8	0.1	4.0	0.0	1.5

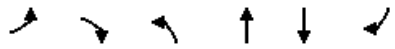
Intersection Summary	
HCM 2010 Ctrl Delay	27.2
HCM 2010 LOS	C



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	22	345	14	34	476	28	33	31	28	20	17	26
Future Volume (veh/h)	22	345	14	34	476	28	33	31	28	20	17	26
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1520	1872	1900	1845	1862	1900	1900	1544	1900	1900	1611	1900
Adj Flow Rate, veh/h	26	401	16	40	553	33	38	36	33	23	20	30
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	0	1	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	25	1	1	3	2	2	0	13	13	13	13	13
Cap, veh/h	85	947	38	103	921	55	447	175	160	143	118	134
Arrive On Green	0.06	0.53	0.53	0.06	0.53	0.53	0.24	0.24	0.24	0.24	0.24	0.24
Sat Flow, veh/h	1448	1788	71	1757	1740	104	1376	743	681	314	501	569
Grp Volume(v), veh/h	26	0	417	40	0	586	38	0	69	73	0	0
Grp Sat Flow(s),veh/h/ln	1448	0	1859	1757	0	1843	1376	0	1424	1384	0	0
Q Serve(g_s), s	1.2	0.0	9.3	1.5	0.0	14.9	0.0	0.0	2.6	0.0	0.0	0.0
Cycle Q Clear(g_c), s	1.2	0.0	9.3	1.5	0.0	14.9	1.1	0.0	2.6	2.7	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.06	1.00		0.48	0.32		0.41
Lane Grp Cap(c), veh/h	85	0	984	103	0	976	447	0	335	395	0	0
V/C Ratio(X)	0.31	0.00	0.42	0.39	0.00	0.60	0.09	0.00	0.21	0.18	0.00	0.00
Avail Cap(c_a), veh/h	341	0	984	413	0	976	447	0	335	395	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	30.7	0.0	9.7	30.8	0.0	11.0	20.3	0.0	20.9	20.9	0.0	0.0
Incr Delay (d2), s/veh	2.0	0.0	1.3	2.4	0.0	2.7	0.4	0.0	1.4	1.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.5	0.0	5.0	0.8	0.0	8.2	0.6	0.0	1.2	1.2	0.0	0.0
LnGrp Delay(d),s/veh	32.7	0.0	11.0	33.2	0.0	13.8	20.7	0.0	22.3	21.9	0.0	0.0
LnGrp LOS	C		B	C		B	C		C	C		
Approach Vol, veh/h		443			626			107			73	
Approach Delay, s/veh		12.3			15.0			21.7			21.9	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	40.0		20.0	8.0	40.0		20.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	16.0	36.0		16.0	16.0	36.0		16.0
Max Q Clear Time (g_c+I1), s	3.5	11.3		4.7	3.2	16.9		4.6
Green Ext Time (p_c), s	0.0	7.3		0.6	0.0	6.6		0.6

Intersection Summary	
HCM 2010 Ctrl Delay	15.0
HCM 2010 LOS	B



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	48	21	22	316	308	73
Future Volume (veh/h)	48	21	22	316	308	73
Number	5	12	3	8	4	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1638	1810	1712	1743	1706	1900
Adj Flow Rate, veh/h	55	24	25	363	354	84
Adj No. of Lanes	1	1	1	1	2	0
Peak Hour Factor	0.87	0.87	0.87	0.87	0.87	0.87
Percent Heavy Veh, %	16	5	11	9	11	11
Cap, veh/h	422	416	364	1107	951	223
Arrive On Green	0.27	0.27	0.22	0.64	0.36	0.36
Sat Flow, veh/h	1560	1538	1630	1743	2692	611
Grp Volume(v), veh/h	55	24	25	363	218	220
Grp Sat Flow(s),veh/h/ln	1560	1538	1630	1743	1621	1598
Q Serve(g_s), s	2.3	1.0	1.0	8.2	8.4	8.6
Cycle Q Clear(g_c), s	2.3	1.0	1.0	8.2	8.4	8.6
Prop In Lane	1.00	1.00	1.00			0.38
Lane Grp Cap(c), veh/h	422	416	364	1107	591	583
V/C Ratio(X)	0.13	0.06	0.07	0.33	0.37	0.38
Avail Cap(c_a), veh/h	422	416	364	1107	591	583
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	23.4	23.0	26.0	7.1	19.8	19.9
Incr Delay (d2), s/veh	0.6	0.3	0.4	0.2	1.8	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.4	0.5	3.9	4.1	4.1
LnGrp Delay(d),s/veh	24.1	23.2	26.4	7.3	21.6	21.7
LnGrp LOS	C	C	C	A	C	C
Approach Vol, veh/h	79			388	438	
Approach Delay, s/veh	23.8			8.5	21.7	
Approach LOS	C			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		27.0	23.0	35.0				58.0
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		23.0	19.0	31.0				54.0
Max Q Clear Time (g_c+I1), s		4.3	3.0	10.6				10.2
Green Ext Time (p_c), s		0.2	0.0	5.0				5.8

Intersection Summary	
HCM 2010 Ctrl Delay	16.2
HCM 2010 LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	12	3	2	300	291	35
Future Volume (veh/h)	12	3	2	300	291	35
Number	5	12	3	8	4	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	950	1900	950	1810	1650	1900
Adj Flow Rate, veh/h	14	4	2	353	342	41
Adj No. of Lanes	0	0	1	1	1	0
Peak Hour Factor	0.85	0.85	0.85	0.85	0.85	0.85
Percent Heavy Veh, %	0	0	100	5	5	5
Cap, veh/h	12	4	540	1429	1142	137
Arrive On Green	0.02	0.02	0.79	0.79	0.79	0.79
Sat Flow, veh/h	652	186	508	1810	1446	173
Grp Volume(v), veh/h	19	0	2	353	0	383
Grp Sat Flow(s),veh/h/ln	885	0	508	1810	0	1619
Q Serve(g_s), s	0.8	0.0	0.0	2.1	0.0	2.7
Cycle Q Clear(g_c), s	0.8	0.0	2.8	2.1	0.0	2.7
Prop In Lane	0.74	0.21	1.00			0.11
Lane Grp Cap(c), veh/h	17	0	540	1429	0	1279
V/C Ratio(X)	1.13	0.00	0.00	0.25	0.00	0.30
Avail Cap(c_a), veh/h	402	0	540	1429	0	1279
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	20.5	0.0	1.6	1.1	0.0	1.2
Incr Delay (d2), s/veh	143.0	0.0	0.0	0.4	0.0	0.6
Initial Q Delay(d3),s/veh	8.5	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	1.1	0.0	1.4
LnGrp Delay(d),s/veh	172.0	0.0	1.6	1.6	0.0	1.8
LnGrp LOS	F		A	A		A
Approach Vol, veh/h	19			355	383	
Approach Delay, s/veh	172.0			1.6	1.8	
Approach LOS	F			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		4.8		37.0				37.0
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		19.0		33.0				33.0
Max Q Clear Time (g_c+I1), s		2.8		4.7				4.8
Green Ext Time (p_c), s		0.0		5.1				5.1

Intersection Summary	
HCM 2010 Ctrl Delay	6.0
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	1.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	12	10	107	4	10	43
Future Vol, veh/h	12	10	107	4	10	43
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	81	81	81	81	81	81
Heavy Vehicles, %	12	10	13	100	100	8
Mvmt Flow	15	12	132	5	12	53

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	213	135	0	0	137	0
Stage 1	135	-	-	-	-	-
Stage 2	78	-	-	-	-	-
Critical Hdwy	6.52	6.3	-	-	5.1	-
Critical Hdwy Stg 1	5.52	-	-	-	-	-
Critical Hdwy Stg 2	5.52	-	-	-	-	-
Follow-up Hdwy	3.608	3.39	-	-	3.1	-
Pot Cap-1 Maneuver	753	893	-	-	1014	-
Stage 1	867	-	-	-	-	-
Stage 2	920	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	744	893	-	-	1014	-
Mov Cap-2 Maneuver	744	-	-	-	-	-
Stage 1	867	-	-	-	-	-
Stage 2	909	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	9.6	0	1.6
HCM LOS	A		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	805	1014	-
HCM Lane V/C Ratio	-	-	0.034	0.012	-
HCM Control Delay (s)	-	-	9.6	8.6	0
HCM Lane LOS	-	-	A	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	11	2	21	0	3	1	4	0	9	101	2
Future Vol, veh/h	0	11	2	21	0	3	1	4	0	9	101	2
Peak Hour Factor	0.92	0.80	0.80	0.80	0.92	0.80	0.80	0.80	0.92	0.80	0.80	0.80
Heavy Vehicles, %	2	9	50	14	2	33	0	0	2	0	16	0
Mvmt Flow	0	14	3	26	0	4	1	5	0	11	126	3
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.4	7.8	7.9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	8%	32%	38%	5%
Vol Thru, %	90%	6%	12%	78%
Vol Right, %	2%	62%	50%	17%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	112	34	8	58
LT Vol	9	11	3	3
Through Vol	101	2	1	45
RT Vol	2	21	4	10
Lane Flow Rate	140	42	10	72
Geometry Grp	1	1	1	1
Degree of Util (X)	0.158	0.049	0.013	0.081
Departure Headway (Hd)	4.052	4.118	4.744	4.004
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	881	854	759	887
Service Time	2.096	2.218	2.744	2.064
HCM Lane V/C Ratio	0.159	0.049	0.013	0.081
HCM Control Delay	7.9	7.4	7.8	7.4
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	0.6	0.2	0	0.3

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

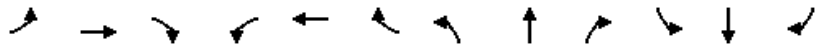
Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	3	45	10
Future Vol, veh/h	0	3	45	10
Peak Hour Factor	0.92	0.80	0.80	0.80
Heavy Vehicles, %	2	0	41	10
Mvmt Flow	0	4	56	13
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.4
HCM LOS	A

Santa Cruz DRP Study
7: Pacific Street & Front Street & Mission Street/Water Street

Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	SBL2	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	81	380	75	19	61	48	637	3	5	60	18	107
Future Volume (vph)	81	380	75	19	61	48	637	3	5	60	18	107
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0				4.0	4.0
Lane Util. Factor	1.00	0.95	1.00		1.00	1.00	0.95				1.00	1.00
Frt	1.00	1.00	0.85		1.00	1.00	1.00				1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	0.95	1.00				0.96	1.00
Satd. Flow (prot)	1736	3471	1524		1597	1770	3537				1608	1599
Flt Permitted	0.95	1.00	1.00		0.95	0.95	1.00				0.96	1.00
Satd. Flow (perm)	1736	3471	1524		1597	1770	3537				1608	1599
Peak-hour factor, PHF	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89	0.89
Adj. Flow (vph)	91	427	84	21	69	54	716	3	6	67	20	120
RTOR Reduction (vph)	0	0	31	0	0	0	1	0	0	0	0	88
Lane Group Flow (vph)	91	427	74	0	69	54	718	0	0	0	93	32
Heavy Vehicles (%)	4%	4%	5%	10%	13%	2%	2%	0%	0%	19%	0%	1%
Turn Type	Prot	NA	Perm		Prot	Prot	NA		Perm	Perm	NA	Perm
Protected Phases	5	2			1	1	6				8	
Permitted Phases			2						8	8		8
Actuated Green, G (s)	8.2	40.9	40.9		7.6	7.6	40.3				22.1	22.1
Effective Green, g (s)	8.2	40.9	40.9		7.6	7.6	40.3				22.1	22.1
Actuated g/C Ratio	0.10	0.50	0.50		0.09	0.09	0.49				0.27	0.27
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0	4.0				4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0				3.0	3.0
Lane Grp Cap (vph)	172	1718	754		146	162	1725				430	427
v/s Ratio Prot	c0.05	0.12			0.04	0.03	c0.20					
v/s Ratio Perm			0.05								0.06	0.02
v/c Ratio	0.53	0.25	0.10		0.47	0.33	0.42				0.22	0.08
Uniform Delay, d1	35.4	12.0	11.1		35.6	35.1	13.6				23.5	22.6
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00				1.00	1.00
Incremental Delay, d2	2.9	0.1	0.1		2.4	1.2	0.7				1.2	0.3
Delay (s)	38.3	12.1	11.1		38.0	36.3	14.3				24.7	23.0
Level of Service	D	B	B		D	D	B				C	C
Approach Delay (s)		15.7					17.7				23.7	
Approach LOS		B					B				C	

Intersection Summary			
HCM 2000 Control Delay	17.7	HCM 2000 Level of Service	B
HCM 2000 Volume to Capacity ratio	0.37		
Actuated Cycle Length (s)	82.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	36.7%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	29	52	10	223	104	42	10	229	146	24	172	22
Future Volume (veh/h)	29	52	10	223	104	42	10	229	146	24	172	22
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1841	1900	1792	1825	1827	1900	1714	1900	1638	1606	1900
Adj Flow Rate, veh/h	34	60	12	190	218	0	12	266	170	28	200	26
Adj No. of Lanes	0	2	0	1	1	1	0	2	0	1	1	0
Peak Hour Factor	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86	0.86
Percent Heavy Veh, %	0	0	0	6	3	4	8	8	8	16	19	19
Cap, veh/h	62	116	24	855	914	778	65	489	296	218	362	47
Arrive On Green	0.06	0.06	0.06	0.50	0.50	0.00	0.26	0.26	0.26	0.26	0.26	0.26
Sat Flow, veh/h	1093	2040	420	1707	1825	1553	30	1883	1141	834	1393	181
Grp Volume(v), veh/h	56	0	50	190	218	0	246	0	202	28	0	226
Grp Sat Flow(s),veh/h/ln	1786	0	1767	1707	1825	1553	1696	0	1359	834	0	1574
Q Serve(g_s), s	2.0	0.0	1.8	4.1	4.5	0.0	0.0	0.0	8.5	2.0	0.0	8.2
Cycle Q Clear(g_c), s	2.0	0.0	1.8	4.1	4.5	0.0	8.1	0.0	8.5	10.5	0.0	8.2
Prop In Lane	0.61		0.24	1.00		1.00	0.05		0.84	1.00		0.12
Lane Grp Cap(c), veh/h	102	0	101	855	914	778	498	0	353	218	0	409
V/C Ratio(X)	0.55	0.00	0.50	0.22	0.24	0.00	0.49	0.00	0.57	0.13	0.00	0.55
Avail Cap(c_a), veh/h	515	0	510	855	914	778	975	0	743	457	0	860
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	30.2	0.0	30.2	9.2	9.3	0.0	21.1	0.0	21.2	25.8	0.0	21.1
Incr Delay (d2), s/veh	4.5	0.0	3.8	0.6	0.6	0.0	0.8	0.0	1.5	0.3	0.0	1.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.1	0.0	1.0	2.0	2.4	0.0	3.9	0.0	3.4	0.5	0.0	3.6
LnGrp Delay(d),s/veh	34.7	0.0	34.0	9.8	9.9	0.0	21.8	0.0	22.7	26.0	0.0	22.2
LnGrp LOS	C		C	A	A		C		C	C		C
Approach Vol, veh/h		106			408			448			254	
Approach Delay, s/veh		34.4			9.9			22.2			22.7	
Approach LOS		C			A			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		7.8		21.1		37.0		21.1
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		19.0		36.0		33.0		36.0
Max Q Clear Time (g_c+I1), s		4.0		12.5		6.5		10.5
Green Ext Time (p_c), s		0.4		4.6		1.8		4.7

Intersection Summary	
HCM 2010 Ctrl Delay	19.2
HCM 2010 LOS	B

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	8.1
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Vol, veh/h	0	6	21	13	0	36	38	20	0	7	71	23	0	0	0	0
Future Vol, veh/h	0	6	21	13	0	36	38	20	0	7	71	23	0	0	0	0
Peak Hour Factor	0.92	0.81	0.81	0.81	0.92	0.81	0.81	0.81	0.92	0.81	0.81	0.81	0.92	0.81	0.81	0.81
Heavy Vehicles, %	2	16	9	15	2	28	2	25	2	0	4	28	2	0	0	0
Mvmt Flow	0	7	26	16	0	44	47	25	0	9	88	28	0	0	0	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	7.7	8.5	7.9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	7%	15%	38%
Vol Thru, %	70%	53%	40%
Vol Right, %	23%	33%	21%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	101	40	94
LT Vol	7	6	36
Through Vol	71	21	38
RT Vol	23	13	20
Lane Flow Rate	125	49	116
Geometry Grp	1	1	1
Degree of Util (X)	0.145	0.061	0.148
Departure Headway (Hd)	4.175	4.418	4.584
Convergence, Y/N	Yes	Yes	Yes
Cap	863	814	773
Service Time	2.179	2.426	2.667
HCM Lane V/C Ratio	0.145	0.06	0.15
HCM Control Delay	7.9	7.7	8.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.5	0.2	0.5

Intersection	
Int Delay, s/veh	3.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	103	75	98	0	0
Future Vol, veh/h	0	103	75	98	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	84	84	84	84	84	84
Heavy Vehicles, %	0	4	6	5	0	0
Mvmt Flow	0	123	89	117	0	0

Major/Minor	Minor1		Major1	
Conflicting Flow All	-	148	0	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	6.24	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	3.336	-	-
Pot Cap-1 Maneuver	0	894	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	-	894	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	9.7	0
HCM LOS	A	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1
Capacity (veh/h)	-	-	894
HCM Lane V/C Ratio	-	-	0.137
HCM Control Delay (s)	-	-	9.7
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	167	303	49	136	459	255	78	466	40	175	620	391
Future Volume (veh/h)	167	303	49	136	459	255	78	466	40	175	620	391
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1827	1822	1900	1881	1827	1863	1845	1845	1900	1863	1845	1845
Adj Flow Rate, veh/h	180	326	53	146	494	0	84	501	43	188	667	0
Adj No. of Lanes	2	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Percent Heavy Veh, %	4	4	4	1	4	2	3	3	0	2	3	3
Cap, veh/h	284	682	110	191	871	397	109	984	454	241	1242	556
Arrive On Green	0.08	0.23	0.23	0.11	0.25	0.00	0.06	0.28	0.28	0.14	0.35	0.00
Sat Flow, veh/h	3375	2987	481	1792	3471	1583	1757	3505	1615	1774	3505	1568
Grp Volume(v), veh/h	180	187	192	146	494	0	84	501	43	188	667	0
Grp Sat Flow(s),veh/h/ln	1688	1731	1737	1792	1736	1583	1757	1752	1615	1774	1752	1568
Q Serve(g_s), s	3.3	6.0	6.2	5.1	8.0	0.0	3.0	7.7	1.3	6.6	9.8	0.0
Cycle Q Clear(g_c), s	3.3	6.0	6.2	5.1	8.0	0.0	3.0	7.7	1.3	6.6	9.8	0.0
Prop In Lane	1.00		0.28	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	284	395	397	191	871	397	109	984	454	241	1242	556
V/C Ratio(X)	0.63	0.47	0.48	0.76	0.57	0.00	0.77	0.51	0.09	0.78	0.54	0.00
Avail Cap(c_a), veh/h	681	725	728	612	1940	885	382	1632	752	688	2230	998
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	28.5	21.5	21.6	28.0	21.1	0.0	29.8	19.4	17.1	26.9	16.6	0.0
Incr Delay (d2), s/veh	2.3	0.9	0.9	6.2	0.6	0.0	10.9	0.4	0.1	5.5	0.4	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.6	3.0	3.0	2.8	3.9	0.0	1.8	3.7	0.6	3.6	4.8	0.0
LnGrp Delay(d),s/veh	30.9	22.4	22.5	34.2	21.7	0.0	40.6	19.8	17.2	32.4	16.9	0.0
LnGrp LOS	C	C	C	C	C		D	B	B	C	B	
Approach Vol, veh/h		559			640			628			855	
Approach Delay, s/veh		25.1			24.5			22.4			20.3	
Approach LOS		C			C			C			C	

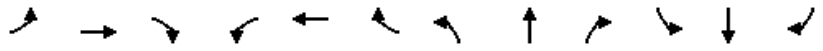
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	10.9	18.7	8.0	26.8	9.4	20.2	12.7	22.1
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	22.0	27.0	14.0	41.0	13.0	36.0	25.0	30.0
Max Q Clear Time (g_c+I1), s	7.1	8.2	5.0	11.8	5.3	10.0	8.6	9.7
Green Ext Time (p_c), s	0.3	5.5	0.1	9.7	0.3	6.2	0.4	8.4

Intersection Summary	
HCM 2010 Ctrl Delay	22.8
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	213	1529	49	278	1394	515	27	166	203	412	161	185
Future Volume (veh/h)	213	1529	49	278	1394	515	27	166	203	412	161	185
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1845	1900	1827	1827	1792	1712	1810	1810	1610	1727	1743
Adj Flow Rate, veh/h	220	1576	0	287	1437	0	28	171	209	425	166	191
Adj No. of Lanes	1	3	0	2	3	1	1	1	2	2	1	1
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	3	3	3	4	4	6	11	5	5	18	10	9
Cap, veh/h	239	2339	0	328	2120	648	252	280	419	599	348	298
Arrive On Green	0.14	0.46	0.00	0.10	0.43	0.00	0.15	0.15	0.15	0.20	0.20	0.20
Sat Flow, veh/h	1757	5204	0	3375	4988	1524	1630	1810	2707	2975	1727	1482
Grp Volume(v), veh/h	220	1576	0	287	1437	0	28	171	209	425	166	191
Grp Sat Flow(s),veh/h/ln	1757	1679	0	1688	1663	1524	1630	1810	1354	1487	1727	1482
Q Serve(g_s), s	24.0	47.3	0.0	16.3	45.1	0.0	2.9	17.1	13.7	25.8	16.5	22.9
Cycle Q Clear(g_c), s	24.0	47.3	0.0	16.3	45.1	0.0	2.9	17.1	13.7	25.8	16.5	22.9
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	239	2339	0	328	2120	648	252	280	419	599	348	298
V/C Ratio(X)	0.92	0.67	0.00	0.88	0.68	0.00	0.11	0.61	0.50	0.71	0.48	0.64
Avail Cap(c_a), veh/h	335	2339	0	435	2120	648	252	280	419	599	348	298
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	82.6	40.5	0.0	86.3	45.0	0.0	70.4	76.5	75.0	72.1	68.4	71.0
Incr Delay (d2), s/veh	23.7	1.6	0.0	14.3	1.8	0.0	0.9	9.6	4.2	7.0	4.6	10.1
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	8.3	22.2	0.0	8.3	21.1	0.0	1.4	9.3	5.4	11.2	8.3	10.2
LnGrp Delay(d),s/veh	106.4	42.0	0.0	100.7	46.8	0.0	71.3	86.0	79.2	79.1	73.1	81.1
LnGrp LOS	F	D		F	D		E	F	E	E	E	F
Approach Vol, veh/h		1796			1724			408			782	
Approach Delay, s/veh		49.9			55.7			81.5			78.3	
Approach LOS		D			E			F			E	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	32.8	94.0		34.0	30.4	86.4		43.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	25.0	90.0		30.0	37.0	78.0		39.0
Max Q Clear Time (g_c+I1), s	18.3	49.3		19.1	26.0	47.1		27.8
Green Ext Time (p_c), s	0.6	33.8		1.4	0.5	26.7		2.6

Intersection Summary	
HCM 2010 Ctrl Delay	59.5
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1428	392	51	7	367	27	95	294	24	58	209	1471
Future Volume (veh/h)	1428	392	51	7	367	27	95	294	24	58	209	1471
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1845	1839	1900	1900	1849	1900	1881	1883	1900	1881	1845	1827
Adj Flow Rate, veh/h	1587	436	57	8	408	0	106	327	27	64	232	1634
Adj No. of Lanes	2	1	0	0	2	0	1	2	0	1	2	2
Peak Hour Factor	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90
Percent Heavy Veh, %	3	4	4	3	3	3	1	1	1	1	3	4
Cap, veh/h	1209	548	72	10	518	0	138	1075	88	84	1020	1196
Arrive On Green	0.34	0.34	0.34	0.15	0.15	0.00	0.08	0.32	0.32	0.05	0.29	0.29
Sat Flow, veh/h	3514	1594	208	66	3629	0	1792	3348	275	1792	3505	2733
Grp Volume(v), veh/h	1587	0	493	223	193	0	106	174	180	64	232	1634
Grp Sat Flow(s),veh/h/ln	1757	0	1803	1846	1757	0	1792	1788	1834	1792	1752	1367
Q Serve(g_s), s	39.0	0.0	28.0	13.3	11.9	0.0	6.6	8.3	8.4	4.0	5.7	33.0
Cycle Q Clear(g_c), s	39.0	0.0	28.0	13.3	11.9	0.0	6.6	8.3	8.4	4.0	5.7	33.0
Prop In Lane	1.00		0.12	0.04		0.00	1.00		0.15	1.00		1.00
Lane Grp Cap(c), veh/h	1209	0	620	271	257	0	138	574	589	84	1020	1196
V/C Ratio(X)	1.31	0.00	0.79	0.82	0.75	0.00	0.77	0.30	0.31	0.76	0.23	1.37
Avail Cap(c_a), veh/h	1209	0	620	358	341	0	632	574	589	711	1020	1196
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	37.2	0.0	33.6	47.0	46.4	0.0	51.3	28.9	29.0	53.4	30.5	27.2
Incr Delay (d2), s/veh	146.8	0.0	7.1	11.2	6.3	0.0	8.5	0.3	0.3	12.9	0.1	170.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.4	0.0	15.2	7.6	6.2	0.0	3.6	4.2	4.3	2.3	2.8	46.9
LnGrp Delay(d),s/veh	184.0	0.0	40.7	58.1	52.7	0.0	59.8	29.2	29.3	66.3	30.6	197.4
LnGrp LOS	F		D	E	D		E	C	C	E	C	F
Approach Vol, veh/h		2080			416			460			1930	
Approach Delay, s/veh		150.0			55.6			36.3			173.0	
Approach LOS		F			E			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.6	12.8	37.0		43.0	9.3	40.4
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		22.0	40.0	33.0		39.0	45.0	28.0
Max Q Clear Time (g_c+I1), s		15.3	8.6	35.0		41.0	6.0	10.4
Green Ext Time (p_c), s		1.3	0.6	0.0		0.0	0.2	2.2

Intersection Summary	
HCM 2010 Ctrl Delay	140.4
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Santa Cruz DRP Study
1: Front Street & Laurel Street

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	108	638	31	228	379	119	8	170	229	126	327	174
Future Volume (veh/h)	108	638	31	228	379	119	8	170	229	126	327	174
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1897	1900	1900	1881	1900	1900	1881	1900	1827	1900	1900
Adj Flow Rate, veh/h	115	679	33	243	403	127	9	181	244	134	348	185
Adj No. of Lanes	1	2	0	1	1	1	1	1	1	1	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	2	0	0	0	1	0	0	1	0	4	0	0
Cap, veh/h	370	1226	60	285	564	484	16	353	303	167	522	443
Arrive On Green	0.21	0.35	0.35	0.16	0.30	0.30	0.01	0.19	0.19	0.10	0.27	0.27
Sat Flow, veh/h	1774	3500	170	1810	1881	1615	1810	1881	1615	1740	1900	1615
Grp Volume(v), veh/h	115	350	362	243	403	127	9	181	244	134	348	185
Grp Sat Flow(s),veh/h/ln	1774	1802	1867	1810	1881	1615	1810	1881	1615	1740	1900	1615
Q Serve(g_s), s	4.2	12.0	12.0	10.0	14.7	4.6	0.4	6.6	11.1	5.8	12.5	7.2
Cycle Q Clear(g_c), s	4.2	12.0	12.0	10.0	14.7	4.6	0.4	6.6	11.1	5.8	12.5	7.2
Prop In Lane	1.00		0.09	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	370	631	654	285	564	484	16	353	303	167	522	443
V/C Ratio(X)	0.31	0.55	0.55	0.85	0.72	0.26	0.55	0.51	0.81	0.80	0.67	0.42
Avail Cap(c_a), veh/h	370	631	654	330	564	484	94	392	337	204	522	443
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.7	20.1	20.1	31.5	24.0	20.4	37.9	28.0	29.9	34.0	24.7	22.8
Incr Delay (d2), s/veh	2.2	3.5	3.4	16.9	7.6	1.3	25.3	1.2	12.3	16.9	3.2	0.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.3	6.5	6.8	6.3	8.8	2.2	0.3	3.5	5.9	3.6	6.9	3.3
LnGrp Delay(d),s/veh	27.9	23.6	23.5	48.4	31.5	21.8	63.2	29.2	42.1	50.9	28.0	23.4
LnGrp LOS	C	C	C	D	C	C	E	C	D	D	C	C
Approach Vol, veh/h		827			773			434			667	
Approach Delay, s/veh		24.1			35.2			37.2			31.3	
Approach LOS		C			D			D			C	

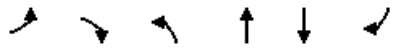
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.1	30.9	4.7	25.1	20.0	27.0	11.4	18.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	14.0	25.0	4.0	21.0	16.0	23.0	9.0	16.0
Max Q Clear Time (g_c+I1), s	12.0	14.0	2.4	14.5	6.2	16.7	7.8	13.1
Green Ext Time (p_c), s	0.1	5.5	0.0	2.6	0.2	3.7	0.0	1.3

Intersection Summary	
HCM 2010 Ctrl Delay	31.2
HCM 2010 LOS	C

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	55	660	25	41	470	90	41	79	52	57	59	41
Future Volume (veh/h)	55	660	25	41	470	90	41	79	52	57	59	41
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1900	1900	1900	1894	1900	1900	1844	1900	1900	1805	1900
Adj Flow Rate, veh/h	59	702	27	44	500	96	44	84	55	61	63	44
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	0	1	0
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	10	0	0	0	0	0	0	5	5	5	5	5
Cap, veh/h	107	968	37	106	812	156	392	243	159	161	155	87
Arrive On Green	0.07	0.53	0.53	0.06	0.53	0.53	0.23	0.23	0.23	0.23	0.23	0.23
Sat Flow, veh/h	1645	1818	70	1810	1545	297	1307	1042	682	381	665	371
Grp Volume(v), veh/h	59	0	729	44	0	596	44	0	139	168	0	0
Grp Sat Flow(s),veh/h/ln	1645	0	1888	1810	0	1842	1307	0	1724	1416	0	0
Q Serve(g_s), s	2.4	0.0	20.1	1.6	0.0	15.5	0.0	0.0	4.6	2.8	0.0	0.0
Cycle Q Clear(g_c), s	2.4	0.0	20.1	1.6	0.0	15.5	2.1	0.0	4.6	7.4	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.16	1.00		0.40	0.36		0.26
Lane Grp Cap(c), veh/h	107	0	1005	106	0	968	392	0	403	403	0	0
V/C Ratio(X)	0.55	0.00	0.73	0.42	0.00	0.62	0.11	0.00	0.34	0.42	0.00	0.00
Avail Cap(c_a), veh/h	384	0	1005	423	0	968	392	0	403	403	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	31.0	0.0	12.2	31.1	0.0	11.4	20.9	0.0	21.9	22.8	0.0	0.0
Incr Delay (d2), s/veh	4.4	0.0	4.6	2.6	0.0	2.9	0.6	0.0	2.3	3.2	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.2	0.0	11.6	0.9	0.0	8.6	0.7	0.0	2.5	3.1	0.0	0.0
LnGrp Delay(d),s/veh	35.4	0.0	16.7	33.7	0.0	14.3	21.5	0.0	24.2	25.9	0.0	0.0
LnGrp LOS	D		B	C		B	C		C	C		
Approach Vol, veh/h		788			640			183			168	
Approach Delay, s/veh		18.1			15.6			23.5			25.9	
Approach LOS		B			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.0	40.5		20.0	8.5	40.0		20.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	16.0	36.0		16.0	16.0	36.0		16.0
Max Q Clear Time (g_c+I1), s	13.6	22.1		9.4	4.4	17.5		6.6
Green Ext Time (p_c), s	0.0	7.7		1.1	0.1	9.1		1.3

Intersection Summary	
HCM 2010 Ctrl Delay	18.5
HCM 2010 LOS	B



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	116	61	56	425	657	157
Future Volume (veh/h)	116	61	56	425	657	157
Number	5	12	3	8	4	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1845	1810	1827	1860	1900
Adj Flow Rate, veh/h	121	64	58	443	684	164
Adj No. of Lanes	1	1	1	1	2	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	1	3	5	4	1	1
Cap, veh/h	443	387	345	1204	1165	279
Arrive On Green	0.25	0.25	0.20	0.66	0.41	0.41
Sat Flow, veh/h	1792	1568	1723	1827	2922	678
Grp Volume(v), veh/h	121	64	58	443	427	421
Grp Sat Flow(s),veh/h/ln	1792	1568	1723	1827	1767	1740
Q Serve(g_s), s	4.6	2.7	2.4	9.3	15.9	16.0
Cycle Q Clear(g_c), s	4.6	2.7	2.4	9.3	15.9	16.0
Prop In Lane	1.00	1.00	1.00			0.39
Lane Grp Cap(c), veh/h	443	387	345	1204	728	717
V/C Ratio(X)	0.27	0.17	0.17	0.37	0.59	0.59
Avail Cap(c_a), veh/h	443	387	345	1204	728	717
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	25.8	25.1	28.1	6.5	19.4	19.4
Incr Delay (d2), s/veh	1.5	0.9	1.1	0.2	3.5	3.5
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.5	1.3	1.2	4.6	8.4	8.3
LnGrp Delay(d),s/veh	27.4	26.0	29.2	6.7	22.8	22.9
LnGrp LOS	C	C	C	A	C	C
Approach Vol, veh/h	185			501	848	
Approach Delay, s/veh	26.9			9.3	22.9	
Approach LOS	C			A	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		25.0	21.0	39.0				60.0
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		21.0	17.0	35.0				56.0
Max Q Clear Time (g_c+I1), s		6.6	4.4	18.0				11.3
Green Ext Time (p_c), s		0.4	0.1	7.9				11.2

Intersection Summary	
HCM 2010 Ctrl Delay	18.9
HCM 2010 LOS	B

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	17	3	5	442	664	18
Future Volume (veh/h)	17	3	5	442	664	18
Number	5	12	3	8	4	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	985	1900	1056	1900	1841	1900
Adj Flow Rate, veh/h	18	3	5	460	692	19
Adj No. of Lanes	0	0	1	1	1	0
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	0	0	80	0	1	1
Cap, veh/h	16	3	443	1505	1412	39
Arrive On Green	0.02	0.02	0.79	0.79	0.79	0.79
Sat Flow, veh/h	757	126	417	1900	1783	49
Grp Volume(v), veh/h	22	0	5	460	0	711
Grp Sat Flow(s),veh/h/ln	925	0	417	1900	0	1832
Q Serve(g_s), s	0.9	0.0	0.2	2.9	0.0	5.7
Cycle Q Clear(g_c), s	0.9	0.0	5.8	2.9	0.0	5.7
Prop In Lane	0.82	0.14	1.00			0.03
Lane Grp Cap(c), veh/h	20	0	443	1505	0	1451
V/C Ratio(X)	1.11	0.00	0.01	0.31	0.00	0.49
Avail Cap(c_a), veh/h	388	0	443	1505	0	1451
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	21.0	0.0	2.5	1.2	0.0	1.5
Incr Delay (d2), s/veh	125.4	0.0	0.0	0.5	0.0	1.2
Initial Q Delay(d3),s/veh	5.5	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	0.9	0.0	0.0	1.6	0.0	3.2
LnGrp Delay(d),s/veh	151.8	0.0	2.6	1.7	0.0	2.7
LnGrp LOS	F		A	A		A
Approach Vol, veh/h	22			465	711	
Approach Delay, s/veh	151.8			1.8	2.7	
Approach LOS	F			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		4.9		38.0				38.0
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		18.0		34.0				34.0
Max Q Clear Time (g_c+I1), s		2.9		7.7				7.8
Green Ext Time (p_c), s		0.0		9.3				9.3

Intersection Summary	
HCM 2010 Ctrl Delay	5.1
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	1.1

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	11	194	3	12	75
Future Vol, veh/h	9	11	194	3	12	75
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	90	90	90	90	90	90
Heavy Vehicles, %	100	90	4	100	90	1
Mvmt Flow	10	12	216	3	13	83

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	327	217	0	0	219	0
Stage 1	217	-	-	-	-	-
Stage 2	110	-	-	-	-	-
Critical Hdwy	7.4	7.1	-	-	5	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	6.4	-	-	-	-	-
Follow-up Hdwy	4.4	4.11	-	-	3.01	-
Pot Cap-1 Maneuver	507	645	-	-	966	-
Stage 1	633	-	-	-	-	-
Stage 2	719	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	500	645	-	-	966	-
Mov Cap-2 Maneuver	500	-	-	-	-	-
Stage 1	633	-	-	-	-	-
Stage 2	709	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	11.6	0	1.2
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	571	966	-
HCM Lane V/C Ratio	-	-	0.039	0.014	-
HCM Control Delay (s)	-	-	11.6	8.8	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Intersection Delay, s/veh	8.2
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	18	4	35	0	4	2	4	0	23	181	6
Future Vol, veh/h	0	18	4	35	0	4	2	4	0	23	181	6
Peak Hour Factor	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93	0.92	0.93	0.93	0.93
Heavy Vehicles, %	2	0	0	0	2	0	0	0	2	0	7	0
Mvmt Flow	0	19	4	38	0	4	2	4	0	25	195	6
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.6	7.6	8.6
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	11%	32%	40%	5%
Vol Thru, %	86%	7%	20%	86%
Vol Right, %	3%	61%	40%	9%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	210	57	10	88
LT Vol	23	18	4	4
Through Vol	181	4	2	76
RT Vol	6	35	4	8
Lane Flow Rate	226	61	11	95
Geometry Grp	1	1	1	1
Degree of Util (X)	0.257	0.073	0.013	0.109
Departure Headway (Hd)	4.102	4.304	4.509	4.152
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	867	837	798	850
Service Time	2.168	2.304	2.511	2.246
HCM Lane V/C Ratio	0.261	0.073	0.014	0.112
HCM Control Delay	8.6	7.6	7.6	7.8
HCM Lane LOS	A	A	A	A
HCM 95th-tile Q	1	0.2	0	0.4

Intersection	
Intersection Delay, s/veh	
Intersection LOS	

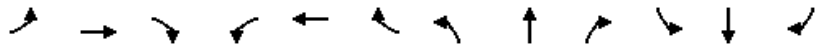
Movement	SBU	SBL	SBT	SBR
Lane Configurations				
Traffic Vol, veh/h	0	4	76	8
Future Vol, veh/h	0	4	76	8
Peak Hour Factor	0.92	0.93	0.93	0.93
Heavy Vehicles, %	2	0	17	0
Mvmt Flow	0	4	82	9
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.8
HCM LOS	A

Santa Cruz DRP Study
7: Pacific Street & Front Street & Mission Street/Water Street

Movement	EBL	EBT	EBR	EBR2	WBL2	WBL	WBT	WBR	SBL2	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (vph)	152	629	110	19	108	49	630	3	19	131	33	174
Future Volume (vph)	152	629	110	19	108	49	630	3	19	131	33	174
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0	4.0				4.0	4.0
Lane Util. Factor	1.00	0.95	1.00		1.00	1.00	0.95				1.00	1.00
Frt	1.00	1.00	0.85		1.00	1.00	1.00				1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	0.95	1.00				0.96	1.00
Satd. Flow (prot)	1787	3574	1590		1787	1770	3572				1744	1599
Flt Permitted	0.95	1.00	1.00		0.95	0.95	1.00				0.96	1.00
Satd. Flow (perm)	1787	3574	1590		1787	1770	3572				1744	1599
Peak-hour factor, PHF	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
Adj. Flow (vph)	163	676	118	20	116	53	677	3	20	141	35	187
RTOR Reduction (vph)	0	0	33	0	0	0	1	0	0	0	0	111
Lane Group Flow (vph)	163	676	105	0	116	53	679	0	0	0	196	76
Heavy Vehicles (%)	1%	1%	1%	5%	1%	2%	1%	0%	5%	5%	3%	1%
Turn Type	Prot	NA	Perm		Prot	Prot	NA		Perm	Perm	NA	Perm
Protected Phases	5	2			1	1	6				8	
Permitted Phases			2						8	8		8
Actuated Green, G (s)	12.6	37.4	37.4		9.2	9.2	34.0				24.0	24.0
Effective Green, g (s)	12.6	37.4	37.4		9.2	9.2	34.0				24.0	24.0
Actuated g/C Ratio	0.15	0.45	0.45		0.11	0.11	0.41				0.29	0.29
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0	4.0				4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0	3.0				3.0	3.0
Lane Grp Cap (vph)	272	1618	719		199	197	1470				506	464
v/s Ratio Prot	c0.09	c0.19			0.06	0.03	c0.19					
v/s Ratio Perm			0.07								0.11	0.05
v/c Ratio	0.60	0.42	0.15		0.58	0.27	0.46				0.39	0.16
Uniform Delay, d1	32.6	15.3	13.2		34.9	33.6	17.7				23.4	21.8
Progression Factor	1.00	1.00	1.00		1.00	1.00	1.00				1.00	1.00
Incremental Delay, d2	3.5	0.2	0.1		4.3	0.7	1.0				2.2	0.8
Delay (s)	36.2	15.4	13.3		39.2	34.4	18.7				25.7	22.6
Level of Service	D	B	B		D	C	B				C	C
Approach Delay (s)		18.6					22.5				24.2	
Approach LOS		B					C				C	

Intersection Summary			
HCM 2000 Control Delay	21.1	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.45		
Actuated Cycle Length (s)	82.6	Sum of lost time (s)	12.0
Intersection Capacity Utilization	46.0%	ICU Level of Service	A
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	50	111	42	427	94	36	10	318	221	79	406	36
Future Volume (veh/h)	50	111	42	427	94	36	10	318	221	79	406	36
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1859	1900	1900	1880	1900	1900	1832	1900	1881	1817	1900
Adj Flow Rate, veh/h	53	117	44	520	0	0	11	335	233	83	427	38
Adj No. of Lanes	0	2	0	2	0	1	0	2	0	1	1	0
Peak Hour Factor	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95	0.95
Percent Heavy Veh, %	4	4	4	0	3	0	5	5	5	1	5	5
Cap, veh/h	80	182	71	1467	0	655	54	674	451	266	573	51
Arrive On Green	0.09	0.09	0.09	0.41	0.00	0.00	0.35	0.35	0.35	0.35	0.35	0.35
Sat Flow, veh/h	851	1939	753	3619	0	1615	21	1934	1295	848	1644	146
Grp Volume(v), veh/h	113	0	101	520	0	0	320	0	259	83	0	465
Grp Sat Flow(s),veh/h/ln	1817	0	1726	1810	0	1615	1811	0	1439	848	0	1791
Q Serve(g_s), s	4.8	0.0	4.4	7.9	0.0	0.0	0.0	0.0	11.3	6.8	0.0	18.0
Cycle Q Clear(g_c), s	4.8	0.0	4.4	7.9	0.0	0.0	18.0	0.0	11.3	18.1	0.0	18.0
Prop In Lane	0.47		0.44	1.00		1.00	0.03		0.90	1.00		0.08
Lane Grp Cap(c), veh/h	171	0	162	1467	0	655	679	0	502	266	0	625
V/C Ratio(X)	0.66	0.00	0.62	0.35	0.00	0.00	0.47	0.00	0.52	0.31	0.00	0.74
Avail Cap(c_a), veh/h	368	0	350	1467	0	655	958	0	729	400	0	907
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	34.6	0.0	34.4	16.3	0.0	0.0	20.3	0.0	20.4	27.6	0.0	22.6
Incr Delay (d2), s/veh	4.3	0.0	3.8	0.7	0.0	0.0	0.5	0.0	0.8	0.7	0.0	1.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	2.6	0.0	2.3	4.0	0.0	0.0	5.6	0.0	4.6	1.6	0.0	9.3
LnGrp Delay(d),s/veh	38.9	0.0	38.3	17.0	0.0	0.0	20.8	0.0	21.2	28.3	0.0	24.6
LnGrp LOS	D		D	B			C		C	C		C
Approach Vol, veh/h		214			520			579			548	
Approach Delay, s/veh		38.6			17.0			21.0			25.1	
Approach LOS		D			B			C			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		11.4		31.5		36.0		31.5
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0		40.0		32.0		40.0
Max Q Clear Time (g_c+I1), s		6.8		20.1		9.9		20.0
Green Ext Time (p_c), s		0.7		7.4		1.9		7.5

Intersection Summary		
HCM 2010 Ctrl Delay		23.1
HCM 2010 LOS		C

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	8.9
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations																
Traffic Vol, veh/h	0	12	79	38	0	59	74	33	0	21	91	57	0	0	0	0
Future Vol, veh/h	0	12	79	38	0	59	74	33	0	21	91	57	0	0	0	0
Peak Hour Factor	0.92	0.91	0.91	0.91	0.92	0.91	0.91	0.91	0.92	0.91	0.91	0.91	0.92	0.91	0.91	0.91
Heavy Vehicles, %	2	0	0	2	2	22	2	14	2	0	1	9	2	0	0	0
Mvmt Flow	0	13	87	42	0	65	81	36	0	23	100	63	0	0	0	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.3	9.4	8.9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	12%	9%	36%
Vol Thru, %	54%	61%	45%
Vol Right, %	34%	29%	20%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	169	129	166
LT Vol	21	12	59
Through Vol	91	79	74
RT Vol	57	38	33
Lane Flow Rate	186	142	182
Geometry Grp	1	1	1
Degree of Util (X)	0.231	0.173	0.244
Departure Headway (Hd)	4.48	4.393	4.815
Convergence, Y/N	Yes	Yes	Yes
Cap	802	817	746
Service Time	2.507	2.424	2.844
HCM Lane V/C Ratio	0.232	0.174	0.244
HCM Control Delay	8.9	8.3	9.4
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.9	0.6	1

Intersection	
Int Delay, s/veh	3.6

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	1	142	128	140	0	0
Future Vol, veh/h	1	142	128	140	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	1	0	0
Mvmt Flow	1	154	139	152	0	0

Major/Minor	Minor1		Major1	
Conflicting Flow All	215	215	0	0
Stage 1	215	-	-	-
Stage 2	0	-	-	-
Critical Hdwy	6.4	6.2	-	-
Critical Hdwy Stg 1	5.4	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	3.5	3.3	-	-
Pot Cap-1 Maneuver	778	830	-	-
Stage 1	826	-	-	-
Stage 2	-	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	778	830	-	-
Mov Cap-2 Maneuver	778	-	-	-
Stage 1	826	-	-	-
Stage 2	-	-	-	-

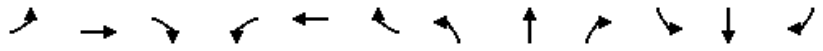
Approach	WB	NB
HCM Control Delay, s	10.3	0
HCM LOS	B	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1
Capacity (veh/h)	-	-	830
HCM Lane V/C Ratio	-	-	0.186
HCM Control Delay (s)	-	-	10.3
HCM Lane LOS	-	-	B
HCM 95th %tile Q(veh)	-	-	0.7

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	346	734	111	112	586	227	120	553	98	290	856	387
Future Volume (veh/h)	346	734	111	112	586	227	120	553	98	290	856	387
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1881	1900	1900	1881	1900	1900	1881	1881	1881	1900	1863
Adj Flow Rate, veh/h	360	765	116	117	610	0	125	576	102	302	892	0
Adj No. of Lanes	2	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96	0.96
Percent Heavy Veh, %	2	1	1	0	1	0	0	1	1	1	0	2
Cap, veh/h	447	1022	155	148	1002	453	157	829	371	343	1216	533
Arrive On Green	0.13	0.33	0.33	0.08	0.28	0.00	0.09	0.23	0.23	0.19	0.34	0.00
Sat Flow, veh/h	3442	3113	472	1810	3574	1615	1810	3574	1599	1792	3610	1583
Grp Volume(v), veh/h	360	439	442	117	610	0	125	576	102	302	892	0
Grp Sat Flow(s),veh/h/ln	1721	1787	1798	1810	1787	1615	1810	1787	1599	1792	1805	1583
Q Serve(g_s), s	9.8	21.0	21.0	6.1	14.2	0.0	6.5	14.2	5.0	15.7	20.9	0.0
Cycle Q Clear(g_c), s	9.8	21.0	21.0	6.1	14.2	0.0	6.5	14.2	5.0	15.7	20.9	0.0
Prop In Lane	1.00		0.26	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	447	587	590	148	1002	453	157	829	371	343	1216	533
V/C Ratio(X)	0.81	0.75	0.75	0.79	0.61	0.00	0.80	0.69	0.28	0.88	0.73	0.00
Avail Cap(c_a), veh/h	645	707	711	245	1228	555	264	930	416	522	1465	643
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	40.6	28.7	28.7	43.3	30.0	0.0	43.0	33.8	30.3	37.8	28.1	0.0
Incr Delay (d2), s/veh	4.9	3.6	3.6	9.1	0.6	0.0	8.9	2.0	0.4	10.9	1.6	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	5.0	11.0	11.0	3.4	7.1	0.0	3.6	7.2	2.2	8.8	10.7	0.0
LnGrp Delay(d),s/veh	45.5	32.3	32.3	52.5	30.6	0.0	51.9	35.8	30.7	48.6	29.6	0.0
LnGrp LOS	D	C	C	D	C		D	D	C	D	C	
Approach Vol, veh/h		1241			727			803			1194	
Approach Delay, s/veh		36.1			34.1			37.6			34.4	
Approach LOS		D			C			D			C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	11.8	35.5	12.3	36.4	16.5	30.9	22.4	26.3
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	13.0	38.0	14.0	39.0	18.0	33.0	28.0	25.0
Max Q Clear Time (g_c+I1), s	8.1	23.0	8.5	22.9	11.8	16.2	17.7	16.2
Green Ext Time (p_c), s	0.1	8.5	0.1	9.4	0.7	9.2	0.7	6.1

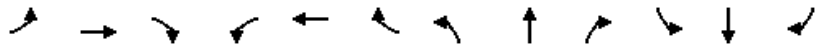
Intersection Summary	
HCM 2010 Ctrl Delay	35.6
HCM 2010 LOS	D



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	228	1327	77	328	1277	472	102	253	447	648	316	249
Future Volume (veh/h)	228	1327	77	328	1277	472	102	253	447	648	316	249
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1847	1900	1845	1863	1810	1881	1845	1881	1863	1845	1863
Adj Flow Rate, veh/h	243	1412	0	349	1359	0	109	269	476	689	336	265
Adj No. of Lanes	1	3	0	2	3	1	1	1	2	2	1	1
Peak Hour Factor	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94	0.94
Percent Heavy Veh, %	1	3	3	3	2	5	1	3	1	2	3	2
Cap, veh/h	262	1874	0	388	1726	522	347	357	545	824	442	379
Arrive On Green	0.15	0.37	0.00	0.11	0.34	0.00	0.19	0.19	0.19	0.24	0.24	0.24
Sat Flow, veh/h	1792	5207	0	3408	5085	1538	1792	1845	2814	3442	1845	1583
Grp Volume(v), veh/h	243	1412	0	349	1359	0	109	269	476	689	336	265
Grp Sat Flow(s),veh/h/ln	1792	1680	0	1704	1695	1538	1792	1845	1407	1721	1845	1583
Q Serve(g_s), s	26.3	48.0	0.0	19.9	47.3	0.0	10.3	27.0	32.2	37.4	33.3	30.0
Cycle Q Clear(g_c), s	26.3	48.0	0.0	19.9	47.3	0.0	10.3	27.0	32.2	37.4	33.3	30.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	262	1874	0	388	1726	522	347	357	545	824	442	379
V/C Ratio(X)	0.93	0.75	0.00	0.90	0.79	0.00	0.31	0.75	0.87	0.84	0.76	0.70
Avail Cap(c_a), veh/h	328	1874	0	451	1726	522	347	357	545	824	442	379
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	82.8	53.8	0.0	85.9	58.5	0.0	68.0	74.8	76.9	71.0	69.5	68.2
Incr Delay (d2), s/veh	27.9	2.9	0.0	18.9	3.7	0.0	2.4	13.7	17.5	9.8	11.7	10.3
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	15.1	22.9	0.0	10.4	22.7	0.0	5.3	15.2	13.9	18.9	18.4	14.2
LnGrp Delay(d),s/veh	110.7	56.7	0.0	104.8	62.2	0.0	70.4	88.5	94.4	80.9	81.2	78.5
LnGrp LOS	F	E		F	E		E	F	F	F	F	E
Approach Vol, veh/h		1655			1708			854			1290	
Approach Delay, s/veh		64.6			70.9			89.4			80.5	
Approach LOS		E			E			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	26.4	77.0		42.0	32.7	70.6		51.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	22.0	73.0		38.0	36.0	63.0		47.0
Max Q Clear Time (g_c+I1), s	21.9	50.0		34.2	28.3	49.3		39.4
Green Ext Time (p_c), s	0.5	19.7		1.5	0.4	12.3		3.6

Intersection Summary	
HCM 2010 Ctrl Delay	74.1
HCM 2010 LOS	E



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	1312	486	66	11	412	30	74	284	19	42	275	1380
Future Volume (veh/h)	1312	486	66	11	412	30	74	284	19	42	275	1380
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1882	1900	1900	1850	1900	1881	1900	1900	1900	1900	1863
Adj Flow Rate, veh/h	1353	501	68	11	425	0	76	293	20	43	284	1423
Adj No. of Lanes	2	1	0	0	2	0	1	2	0	1	2	2
Peak Hour Factor	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97	0.97
Percent Heavy Veh, %	1	1	1	3	3	3	1	0	0	0	0	2
Cap, veh/h	1238	561	76	13	539	0	100	1114	76	56	1083	1263
Arrive On Green	0.35	0.35	0.35	0.15	0.15	0.00	0.06	0.32	0.32	0.03	0.30	0.30
Sat Flow, veh/h	3583	1623	220	87	3608	0	1792	3431	233	1810	3610	2787
Grp Volume(v), veh/h	1353	0	569	234	202	0	76	153	160	43	284	1423
Grp Sat Flow(s),veh/h/ln	1792	0	1843	1845	1757	0	1792	1805	1859	1810	1805	1393
Q Serve(g_s), s	38.0	0.0	32.2	13.5	12.1	0.0	4.6	6.9	7.0	2.6	6.6	33.0
Cycle Q Clear(g_c), s	38.0	0.0	32.2	13.5	12.1	0.0	4.6	6.9	7.0	2.6	6.6	33.0
Prop In Lane	1.00		0.12	0.05		0.00	1.00		0.13	1.00		1.00
Lane Grp Cap(c), veh/h	1238	0	637	283	269	0	100	586	604	56	1083	1263
V/C Ratio(X)	1.09	0.00	0.89	0.83	0.75	0.00	0.76	0.26	0.26	0.76	0.26	1.13
Avail Cap(c_a), veh/h	1238	0	637	369	351	0	668	586	604	757	1083	1263
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.0	0.0	34.1	45.2	44.6	0.0	51.2	27.4	27.4	52.9	29.3	25.5
Incr Delay (d2), s/veh	55.0	0.0	15.1	11.2	6.4	0.0	11.0	0.2	0.2	18.7	0.1	67.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	28.2	0.0	18.9	7.8	6.4	0.0	2.6	3.5	3.6	1.6	3.3	31.0
LnGrp Delay(d),s/veh	91.0	0.0	49.2	56.4	51.0	0.0	62.2	27.7	27.7	71.6	29.4	93.1
LnGrp LOS	F		D	E	D		E	C	C	E	C	F
Approach Vol, veh/h		1922			436			389			1750	
Approach Delay, s/veh		78.6			53.9			34.4			82.2	
Approach LOS		E			D			C			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		20.9	10.2	37.0		42.0	7.4	39.7
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		22.0	41.0	33.0		38.0	46.0	28.0
Max Q Clear Time (g_c+I1), s		15.5	6.6	35.0		40.0	4.6	9.0
Green Ext Time (p_c), s		1.4	0.4	0.0		0.0	0.1	1.9

Intersection Summary	
HCM 2010 Ctrl Delay	73.8
HCM 2010 LOS	E

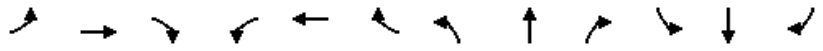
Notes

User approved volume balancing among the lanes for turning movement.

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	165	996	29	227	830	195	4	228	254	202	366	262
Future Volume (veh/h)	165	996	29	227	830	195	4	228	254	202	366	262
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1898	1900	1900	1881	1900	1900	1881	1900	1827	1900	1900
Adj Flow Rate, veh/h	179	1083	32	247	902	212	4	248	276	220	398	285
Adj No. of Lanes	1	2	0	1	1	1	1	1	1	1	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	0	0	0	1	0	0	1	0	4	0	0
Cap, veh/h	357	1327	39	286	616	529	8	365	313	131	504	429
Arrive On Green	0.20	0.37	0.37	0.16	0.33	0.33	0.00	0.19	0.19	0.08	0.27	0.27
Sat Flow, veh/h	1774	3577	106	1810	1881	1615	1810	1881	1615	1740	1900	1615
Grp Volume(v), veh/h	179	546	569	247	902	212	4	248	276	220	398	285
Grp Sat Flow(s),veh/h/ln	1774	1803	1880	1810	1881	1615	1810	1881	1615	1740	1900	1615
Q Serve(g_s), s	7.1	21.7	21.7	10.6	26.0	8.1	0.2	9.7	13.2	6.0	15.5	12.5
Cycle Q Clear(g_c), s	7.1	21.7	21.7	10.6	26.0	8.1	0.2	9.7	13.2	6.0	15.5	12.5
Prop In Lane	1.00		0.06	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	357	669	697	286	616	529	8	365	313	131	504	429
V/C Ratio(X)	0.50	0.82	0.82	0.86	1.46	0.40	0.52	0.68	0.88	1.67	0.79	0.66
Avail Cap(c_a), veh/h	357	669	697	296	616	529	91	379	325	131	504	429
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	28.2	22.5	22.5	32.6	26.7	20.7	39.5	29.7	31.1	36.7	27.1	26.0
Incr Delay (d2), s/veh	4.9	10.6	10.2	21.8	217.9	2.3	45.2	4.6	22.7	334.0	8.2	3.9
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.0	12.7	13.2	7.0	50.6	3.9	0.2	5.5	7.8	15.0	9.2	6.0
LnGrp Delay(d),s/veh	33.1	33.1	32.8	54.4	244.6	22.9	84.7	34.3	53.8	370.7	35.3	29.9
LnGrp LOS	C	C	C	D	F	C	F	C	D	F	D	C
Approach Vol, veh/h		1294			1361			528			903	
Approach Delay, s/veh		33.0			175.5			44.9			115.3	
Approach LOS		C			F			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	16.6	33.4	4.3	25.1	20.0	30.0	10.0	19.4
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	13.0	29.0	4.0	18.0	16.0	26.0	6.0	16.0
Max Q Clear Time (g_c+I1), s	12.6	23.7	2.2	17.5	9.1	28.0	8.0	15.2
Green Ext Time (p_c), s	0.0	4.7	0.0	0.4	0.3	0.0	0.0	0.2

Intersection Summary	
HCM 2010 Ctrl Delay	100.2
HCM 2010 LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	162	1075	44	64	982	91	59	96	44	97	59	63
Future Volume (veh/h)	162	1075	44	64	982	91	59	96	44	97	59	63
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1727	1900	1900	1900	1897	1900	1900	1837	1900	1900	1808	1900
Adj Flow Rate, veh/h	176	1168	48	70	1067	99	64	104	48	105	64	68
Adj No. of Lanes	1	1	0	1	1	0	1	1	0	0	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	10	0	0	0	0	0	0	5	5	5	5	5
Cap, veh/h	221	1006	41	119	833	77	299	258	119	159	87	71
Arrive On Green	0.13	0.56	0.56	0.07	0.49	0.49	0.22	0.22	0.22	0.22	0.22	0.22
Sat Flow, veh/h	1645	1812	74	1810	1710	159	1278	1191	550	410	401	326
Grp Volume(v), veh/h	176	0	1216	70	0	1166	64	0	152	237	0	0
Grp Sat Flow(s),veh/h/ln	1645	0	1887	1810	0	1869	1278	0	1740	1136	0	0
Q Serve(g_s), s	7.7	0.0	41.0	2.8	0.0	36.0	0.0	0.0	5.5	9.9	0.0	0.0
Cycle Q Clear(g_c), s	7.7	0.0	41.0	2.8	0.0	36.0	4.3	0.0	5.5	15.4	0.0	0.0
Prop In Lane	1.00		0.04	1.00		0.08	1.00		0.32	0.44		0.29
Lane Grp Cap(c), veh/h	221	0	1048	119	0	910	299	0	377	316	0	0
V/C Ratio(X)	0.80	0.00	1.16	0.59	0.00	1.28	0.21	0.00	0.40	0.75	0.00	0.00
Avail Cap(c_a), veh/h	356	0	1048	392	0	910	299	0	377	316	0	0
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	0.00	0.00
Uniform Delay (d), s/veh	31.0	0.0	16.4	33.5	0.0	19.0	24.4	0.0	24.9	29.6	0.0	0.0
Incr Delay (d2), s/veh	6.5	0.0	83.1	4.5	0.0	134.9	1.6	0.0	3.2	15.0	0.0	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	3.9	0.0	45.1	1.5	0.0	52.6	1.2	0.0	3.0	6.1	0.0	0.0
LnGrp Delay(d),s/veh	37.5	0.0	99.5	38.1	0.0	153.8	26.0	0.0	28.1	44.7	0.0	0.0
LnGrp LOS	D		F	D		F	C		C	D		
Approach Vol, veh/h		1392			1236			216			237	
Approach Delay, s/veh		91.7			147.3			27.5			44.7	
Approach LOS		F			F			C			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	8.9	45.0		20.0	13.9	40.0		20.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	16.0	36.0		16.0	16.0	36.0		16.0
Max Q Clear Time (g_c+I1), s	11.8	43.0		17.4	9.7	38.0		7.5
Green Ext Time (p_c), s	0.1	0.0		0.0	0.2	0.0		1.7

Intersection Summary	
HCM 2010 Ctrl Delay	105.9
HCM 2010 LOS	F



Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	193	111	116	569	805	317
Future Volume (veh/h)	193	111	116	569	805	317
Number	5	12	3	8	4	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1845	1810	1827	1850	1900
Adj Flow Rate, veh/h	210	121	126	618	875	345
Adj No. of Lanes	1	1	1	1	2	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	3	5	4	1	1
Cap, veh/h	400	350	324	1247	1103	433
Arrive On Green	0.22	0.22	0.19	0.68	0.45	0.45
Sat Flow, veh/h	1792	1568	1723	1827	2560	969
Grp Volume(v), veh/h	210	121	126	618	622	598
Grp Sat Flow(s),veh/h/ln	1792	1568	1723	1827	1758	1679
Q Serve(g_s), s	8.8	5.5	5.4	13.8	25.8	26.0
Cycle Q Clear(g_c), s	8.8	5.5	5.4	13.8	25.8	26.0
Prop In Lane	1.00	1.00	1.00			0.58
Lane Grp Cap(c), veh/h	400	350	324	1247	786	751
V/C Ratio(X)	0.52	0.35	0.39	0.50	0.79	0.80
Avail Cap(c_a), veh/h	400	350	324	1247	786	751
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	29.0	27.8	30.2	6.5	20.1	20.2
Incr Delay (d2), s/veh	4.8	2.7	3.5	0.3	8.0	8.6
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	4.9	2.6	2.9	7.0	14.2	13.7
LnGrp Delay(d),s/veh	33.9	30.4	33.7	6.8	28.1	28.8
LnGrp LOS	C	C	C	A	C	C
Approach Vol, veh/h	331			744	1220	
Approach Delay, s/veh	32.6			11.3	28.4	
Approach LOS	C			B	C	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4				8
Phs Duration (G+Y+Rc), s		23.0	20.0	42.0				62.0
Change Period (Y+Rc), s		4.0	4.0	4.0				4.0
Max Green Setting (Gmax), s		19.0	16.0	38.0				58.0
Max Q Clear Time (g_c+I1), s		10.8	7.4	28.0				15.8
Green Ext Time (p_c), s		0.7	0.2	7.6				19.6

Intersection Summary	
HCM 2010 Ctrl Delay	23.5
HCM 2010 LOS	C

Movement	EBL	EBR	NBL	NBT	SBT	SBR
Lane Configurations						
Traffic Volume (veh/h)	14	19	14	661	783	17
Future Volume (veh/h)	14	19	14	661	783	17
Number	5	12	3	8	4	14
Initial Q (Qb), veh	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00	1.00	1.00			1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1112	1900	1056	1900	1850	1900
Adj Flow Rate, veh/h	15	21	15	718	851	18
Adj No. of Lanes	0	0	1	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	0	0	80	0	1	1
Cap, veh/h	13	19	376	1503	1428	30
Arrive On Green	0.03	0.03	0.79	0.79	0.79	0.79
Sat Flow, veh/h	402	563	360	1900	1805	38
Grp Volume(v), veh/h	37	0	15	718	0	869
Grp Sat Flow(s),veh/h/ln	993	0	360	1900	0	1843
Q Serve(g_s), s	1.5	0.0	0.8	5.8	0.0	8.5
Cycle Q Clear(g_c), s	1.5	0.0	9.3	5.8	0.0	8.5
Prop In Lane	0.41	0.57	1.00			0.02
Lane Grp Cap(c), veh/h	33	0	376	1503	0	1458
V/C Ratio(X)	1.14	0.00	0.04	0.48	0.00	0.60
Avail Cap(c_a), veh/h	349	0	376	1503	0	1458
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	22.0	0.0	3.7	1.6	0.0	1.9
Incr Delay (d2), s/veh	114.2	0.0	0.2	1.1	0.0	1.8
Initial Q Delay(d3),s/veh	6.4	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	1.4	0.0	0.1	3.2	0.0	4.8
LnGrp Delay(d),s/veh	142.6	0.0	3.9	2.7	0.0	3.7
LnGrp LOS	F		A	A		A
Approach Vol, veh/h	37			733	869	
Approach Delay, s/veh	142.6			2.7	3.7	
Approach LOS	F			A	A	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4				8
Phs Duration (G+Y+Rc), s		5.5		40.0				40.0
Change Period (Y+Rc), s		4.0		4.0				4.0
Max Green Setting (Gmax), s		16.0		36.0				36.0
Max Q Clear Time (g_c+I1), s		3.5		10.5				11.3
Green Ext Time (p_c), s		0.0		14.1				13.9

Intersection Summary	
HCM 2010 Ctrl Delay	6.4
HCM 2010 LOS	A

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Int Delay, s/veh	1.7

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	9	11	93	4	13	61
Future Vol, veh/h	9	11	93	4	13	61
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	0	-	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	0
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	100	90	4	100	90	1
Mvmt Flow	10	12	101	4	14	66

Major/Minor	Minor1		Major1		Major2	
Conflicting Flow All	198	103	0	0	105	0
Stage 1	103	-	-	-	-	-
Stage 2	95	-	-	-	-	-
Critical Hdwy	7.4	7.1	-	-	5	-
Critical Hdwy Stg 1	6.4	-	-	-	-	-
Critical Hdwy Stg 2	6.4	-	-	-	-	-
Follow-up Hdwy	4.4	4.11	-	-	3.01	-
Pot Cap-1 Maneuver	613	758	-	-	1080	-
Stage 1	725	-	-	-	-	-
Stage 2	732	-	-	-	-	-
Platoon blocked, %			-	-		-
Mov Cap-1 Maneuver	605	758	-	-	1080	-
Mov Cap-2 Maneuver	605	-	-	-	-	-
Stage 1	725	-	-	-	-	-
Stage 2	722	-	-	-	-	-

Approach	WB	NB	SB
HCM Control Delay, s	10.5	0	1.5
HCM LOS	B		

Minor Lane/Major Mvmt	NBT	NBR	WBLn1	SBL	SBT
Capacity (veh/h)	-	-	681	1080	-
HCM Lane V/C Ratio	-	-	0.032	0.013	-
HCM Control Delay (s)	-	-	10.5	8.4	0
HCM Lane LOS	-	-	B	A	A
HCM 95th %tile Q(veh)	-	-	0.1	0	-

Intersection	
Intersection Delay, s/veh	7.7
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR
Lane Configurations												
Traffic Vol, veh/h	0	10	0	0	0	0	0	0	0	0	100	0
Future Vol, veh/h	0	10	0	0	0	0	0	0	0	0	100	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	0	0	0	2	0	0	0	2	0	7	0
Mvmt Flow	0	11	0	0	0	0	0	0	0	0	109	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	SB
Opposing Lanes	1	1	1
Conflicting Approach Left	SB	NB	EB
Conflicting Lanes Left	1	1	1
Conflicting Approach Right	NB	SB	WB
Conflicting Lanes Right	1	1	1
HCM Control Delay	7.6	0	7.7
HCM LOS	A	-	A

Lane	NBLn1	EBLn1	WBLn1	SBLn1
Vol Left, %	0%	100%	0%	0%
Vol Thru, %	100%	0%	100%	75%
Vol Right, %	0%	0%	0%	25%
Sign Control	Stop	Stop	Stop	Stop
Traffic Vol by Lane	100	10	0	73
LT Vol	0	10	0	0
Through Vol	100	0	0	55
RT Vol	0	0	0	18
Lane Flow Rate	109	11	0	79
Geometry Grp	1	1	1	1
Degree of Util (X)	0.124	0.013	0	0.091
Departure Headway (Hd)	4.098	4.424	4.234	4.142
Convergence, Y/N	Yes	Yes	Yes	Yes
Cap	875	798	0	864
Service Time	2.121	2.513	2.326	2.171
HCM Lane V/C Ratio	0.125	0.014	0	0.091
HCM Control Delay	7.7	7.6	7.3	7.6
HCM Lane LOS	A	A	N	A
HCM 95th-tile Q	0.4	0	0	0.3

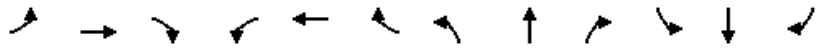
Intersection	
Intersection Delay, s/veh	
Intersection LOS	

Movement	SBU	SBL	SBT	SBR
Lane Configurations			↕	
Traffic Vol, veh/h	0	0	55	18
Future Vol, veh/h	0	0	55	18
Peak Hour Factor	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	0	17	0
Mvmt Flow	0	0	60	20
Number of Lanes	0	0	1	0

Approach	SB
Opposing Approach	NB
Opposing Lanes	1
Conflicting Approach Left	WB
Conflicting Lanes Left	1
Conflicting Approach Right	EB
Conflicting Lanes Right	1
HCM Control Delay	7.6
HCM LOS	A

Movement	EBL	EBT	EBR	WBL2	WBL	WBT	WBR	SBL	SBT	SBR
Lane Configurations										
Traffic Volume (vph)	263	1133	165	0	166	893	39	64	371	221
Future Volume (vph)	263	1133	165	0	166	893	39	64	371	221
Ideal Flow (vphpl)	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Total Lost time (s)	4.0	4.0	4.0		4.0	4.0			4.0	4.0
Lane Util. Factor	1.00	0.95	1.00		1.00	0.95			1.00	1.00
Frt	1.00	1.00	0.85		1.00	0.99			1.00	0.85
Flt Protected	0.95	1.00	1.00		0.95	1.00			0.99	1.00
Satd. Flow (prot)	1787	3574	1599		1770	3553			1826	1599
Flt Permitted	0.95	1.00	1.00		0.95	1.00			0.99	1.00
Satd. Flow (perm)	1787	3574	1599		1770	3553			1826	1599
Peak-hour factor, PHF	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Adj. Flow (vph)	286	1232	179	0	180	971	42	70	403	240
RTOR Reduction (vph)	0	0	0	0	0	3	0	0	0	75
Lane Group Flow (vph)	286	1232	179	0	180	1010	0	0	473	165
Heavy Vehicles (%)	1%	1%	1%	1%	2%	1%	0%	5%	3%	1%
Turn Type	Prot	NA	Perm	Prot	Prot	NA		Perm	NA	Perm
Protected Phases	5	2		1	1	6			8	
Permitted Phases			2					8		8
Actuated Green, G (s)	16.9	37.5	37.5		11.5	32.1			28.0	28.0
Effective Green, g (s)	16.9	37.5	37.5		11.5	32.1			28.0	28.0
Actuated g/C Ratio	0.19	0.42	0.42		0.13	0.36			0.31	0.31
Clearance Time (s)	4.0	4.0	4.0		4.0	4.0			4.0	4.0
Vehicle Extension (s)	3.0	3.0	3.0		3.0	3.0			3.0	3.0
Lane Grp Cap (vph)	339	1505	673		228	1281			574	503
v/s Ratio Prot	c0.16	c0.34			0.10	0.28				
v/s Ratio Perm			0.11						0.26	0.10
v/c Ratio	0.84	0.82	0.27		0.79	0.79			0.82	0.33
Uniform Delay, d1	34.8	22.7	16.8		37.6	25.4			28.2	23.3
Progression Factor	1.00	1.00	1.00		1.00	1.00			1.00	1.00
Incremental Delay, d2	17.1	3.6	0.2		16.4	5.0			12.7	1.7
Delay (s)	51.9	26.3	17.0		54.0	30.4			40.9	25.1
Level of Service	D	C	B		D	C			D	C
Approach Delay (s)		29.7				34.0			35.6	
Approach LOS		C				C			D	

Intersection Summary			
HCM 2000 Control Delay	32.3	HCM 2000 Level of Service	C
HCM 2000 Volume to Capacity ratio	0.85		
Actuated Cycle Length (s)	89.0	Sum of lost time (s)	12.0
Intersection Capacity Utilization	73.6%	ICU Level of Service	D
Analysis Period (min)	15		
c Critical Lane Group			



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	70	262	44	498	314	79	46	523	243	193	649	75
Future Volume (veh/h)	70	262	44	498	314	79	46	523	243	193	649	75
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1900	1848	1900	1900	1858	1900	1900	1830	1900	1881	1819	1900
Adj Flow Rate, veh/h	76	285	48	441	481	0	50	568	264	210	705	82
Adj No. of Lanes	0	2	0	1	1	1	0	2	0	1	1	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	4	4	4	0	3	0	5	5	5	1	5	5
Cap, veh/h	91	357	63	462	474	412	52	622	449	256	768	89
Arrive On Green	0.14	0.14	0.14	0.26	0.26	0.00	0.48	0.48	0.48	0.48	0.48	0.48
Sat Flow, veh/h	640	2508	440	1810	1858	1615	24	1296	936	663	1600	186
Grp Volume(v), veh/h	216	0	193	441	481	0	459	0	423	210	0	787
Grp Sat Flow(s),veh/h/ln	1817	0	1771	1810	1858	1615	756	0	1500	663	0	1786
Q Serve(g_s), s	11.3	0.0	10.3	23.5	25.0	0.0	6.8	0.0	20.0	27.0	0.0	40.2
Cycle Q Clear(g_c), s	11.3	0.0	10.3	23.5	25.0	0.0	47.0	0.0	20.0	47.0	0.0	40.2
Prop In Lane	0.35		0.25	1.00		1.00	0.11		0.62	1.00		0.10
Lane Grp Cap(c), veh/h	259	0	252	462	474	412	403	0	720	256	0	857
V/C Ratio(X)	0.83	0.00	0.77	0.95	1.01	0.00	1.14	0.00	0.59	0.82	0.00	0.92
Avail Cap(c_a), veh/h	297	0	289	462	474	412	403	0	720	256	0	857
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	0.00	1.00	1.00	0.00	1.00
Uniform Delay (d), s/veh	40.9	0.0	40.4	35.9	36.5	0.0	22.7	0.0	18.5	37.2	0.0	23.7
Incr Delay (d2), s/veh	16.4	0.0	10.2	32.0	45.0	0.0	87.9	0.0	1.3	18.6	0.0	14.7
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	6.9	0.0	5.8	15.9	18.7	0.0	20.7	0.0	8.5	7.0	0.0	23.2
LnGrp Delay(d),s/veh	57.3	0.0	50.6	67.9	81.5	0.0	110.5	0.0	19.7	55.8	0.0	38.4
LnGrp LOS	E		D	E	F		F		B	E		D
Approach Vol, veh/h		409			922			882			997	
Approach Delay, s/veh		54.1			75.0			67.0			42.1	
Approach LOS		D			E			E			D	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2		4		6		8
Phs Duration (G+Y+Rc), s		18.0		51.0		29.0		51.0
Change Period (Y+Rc), s		4.0		4.0		4.0		4.0
Max Green Setting (Gmax), s		16.0		47.0		25.0		47.0
Max Q Clear Time (g_c+I1), s		13.3		49.0		27.0		49.0
Green Ext Time (p_c), s		0.6		0.0		0.0		0.0

Intersection Summary		
HCM 2010 Ctrl Delay		59.9
HCM 2010 LOS		E

Notes

User approved volume balancing among the lanes for turning movement.

Intersection	
Intersection Delay, s/veh	8.3
Intersection LOS	A

Movement	EBU	EBL	EBT	EBR	WBU	WBL	WBT	WBR	NBU	NBL	NBT	NBR	SBU	SBL	SBT	SBR
Lane Configurations			↕				↕				↕					
Traffic Vol, veh/h	0	0	152	33	0	35	60	27	0	2	44	26	0	0	0	0
Future Vol, veh/h	0	0	152	33	0	35	60	27	0	2	44	26	0	0	0	0
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Heavy Vehicles, %	2	0	0	2	2	22	2	14	2	0	1	9	2	0	0	0
Mvmt Flow	0	0	165	36	0	38	65	29	0	2	48	28	0	0	0	0
Number of Lanes	0	0	1	0	0	0	1	0	0	0	1	0	0	0	0	0

Approach	EB	WB	NB
Opposing Approach	WB	EB	
Opposing Lanes	1	1	0
Conflicting Approach Left		NB	EB
Conflicting Lanes Left	0	1	1
Conflicting Approach Right	NB		WB
Conflicting Lanes Right	1	0	1
HCM Control Delay	8.3	8.5	7.9
HCM LOS	A	A	A

Lane	NBLn1	EBLn1	WBLn1
Vol Left, %	3%	0%	29%
Vol Thru, %	61%	82%	49%
Vol Right, %	36%	18%	22%
Sign Control	Stop	Stop	Stop
Traffic Vol by Lane	72	185	122
LT Vol	2	0	35
Through Vol	44	152	60
RT Vol	26	33	27
Lane Flow Rate	78	201	133
Geometry Grp	1	1	1
Degree of Util (X)	0.096	0.225	0.165
Departure Headway (Hd)	4.424	4.033	4.492
Convergence, Y/N	Yes	Yes	Yes
Cap	815	875	786
Service Time	2.424	2.126	2.586
HCM Lane V/C Ratio	0.096	0.23	0.169
HCM Control Delay	7.9	8.3	8.5
HCM Lane LOS	A	A	A
HCM 95th-tile Q	0.3	0.9	0.6

Intersection	
Int Delay, s/veh	4.3

Movement	WBL	WBR	NBT	NBR	SBL	SBT
Lane Configurations						
Traffic Vol, veh/h	0	128	56	96	0	0
Future Vol, veh/h	0	128	56	96	0	0
Conflicting Peds, #/hr	0	0	0	0	0	0
Sign Control	Stop	Stop	Free	Free	Free	Free
RT Channelized	-	None	-	None	-	None
Storage Length	-	0	-	-	-	-
Veh in Median Storage, #	0	-	0	-	-	-
Grade, %	0	-	0	-	-	0
Peak Hour Factor	92	92	92	92	92	92
Heavy Vehicles, %	0	0	2	1	0	0
Mvmt Flow	0	139	61	104	0	0

Major/Minor	Minor1		Major1	
Conflicting Flow All	-	113	0	0
Stage 1	-	-	-	-
Stage 2	-	-	-	-
Critical Hdwy	-	6.2	-	-
Critical Hdwy Stg 1	-	-	-	-
Critical Hdwy Stg 2	-	-	-	-
Follow-up Hdwy	-	3.3	-	-
Pot Cap-1 Maneuver	0	945	-	-
Stage 1	0	-	-	-
Stage 2	0	-	-	-
Platoon blocked, %			-	-
Mov Cap-1 Maneuver	-	945	-	-
Mov Cap-2 Maneuver	-	-	-	-
Stage 1	-	-	-	-
Stage 2	-	-	-	-

Approach	WB	NB
HCM Control Delay, s	9.5	0
HCM LOS	A	

Minor Lane/Major Mvmt	NBT	NBR	WBLn1
Capacity (veh/h)	-	-	945
HCM Lane V/C Ratio	-	-	0.147
HCM Control Delay (s)	-	-	9.5
HCM Lane LOS	-	-	A
HCM 95th %tile Q(veh)	-	-	0.5

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	495	1578	162	168	1008	339	203	1359	96	522	1448	399
Future Volume (veh/h)	495	1578	162	168	1008	339	203	1359	96	522	1448	399
Number	5	2	12	1	6	16	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1863	1881	1900	1900	1881	1900	1900	1881	1881	1881	1900	1863
Adj Flow Rate, veh/h	538	1715	176	183	1096	0	221	1477	104	567	1574	0
Adj No. of Lanes	2	2	0	1	2	1	1	2	1	1	2	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	2	1	1	0	1	0	0	1	1	1	0	2
Cap, veh/h	344	1175	119	121	1162	525	136	953	426	314	1324	581
Arrive On Green	0.10	0.36	0.36	0.07	0.32	0.00	0.08	0.27	0.27	0.17	0.37	0.00
Sat Flow, veh/h	3442	3278	331	1810	3574	1615	1810	3574	1599	1792	3610	1583
Grp Volume(v), veh/h	538	923	968	183	1096	0	221	1477	104	567	1574	0
Grp Sat Flow(s),veh/h/ln	1721	1787	1823	1810	1787	1615	1810	1787	1599	1792	1805	1583
Q Serve(g_s), s	12.0	43.0	43.0	8.0	35.8	0.0	9.0	32.0	6.1	21.0	44.0	0.0
Cycle Q Clear(g_c), s	12.0	43.0	43.0	8.0	35.8	0.0	9.0	32.0	6.1	21.0	44.0	0.0
Prop In Lane	1.00		0.18	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	344	640	653	121	1162	525	136	953	426	314	1324	581
V/C Ratio(X)	1.56	1.44	1.48	1.52	0.94	0.00	1.63	1.55	0.24	1.81	1.19	0.00
Avail Cap(c_a), veh/h	344	640	653	121	1162	525	136	953	426	314	1324	581
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	0.00
Uniform Delay (d), s/veh	54.0	38.5	38.5	56.0	39.4	0.0	55.5	44.0	34.5	49.5	38.0	0.0
Incr Delay (d2), s/veh	267.2	207.3	225.2	270.3	14.9	0.0	313.8	252.5	0.3	376.2	92.9	0.0
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	18.5	58.0	62.4	13.0	20.1	0.0	16.3	49.2	2.8	43.1	39.0	0.0
LnGrp Delay(d),s/veh	321.2	245.8	263.7	326.3	54.3	0.0	369.3	296.5	34.8	425.7	130.9	0.0
LnGrp LOS	F	F	F	F	D		F	F	C	F	F	
Approach Vol, veh/h		2429			1279			1802			2141	
Approach Delay, s/veh		269.6			93.2			290.4			209.0	
Approach LOS		F			F			F			F	

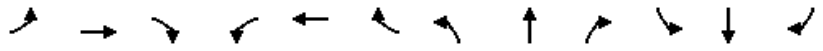
Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2	3	4	5	6	7	8
Phs Duration (G+Y+Rc), s	12.0	47.0	13.0	48.0	16.0	43.0	25.0	36.0
Change Period (Y+Rc), s	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Max Green Setting (Gmax), s	8.0	43.0	9.0	44.0	12.0	39.0	21.0	32.0
Max Q Clear Time (g_c+I1), s	10.0	45.0	11.0	46.0	14.0	37.8	23.0	34.0
Green Ext Time (p_c), s	0.0	0.0	0.0	0.0	0.0	1.2	0.0	0.0

Intersection Summary	
HCM 2010 Ctrl Delay	228.1
HCM 2010 LOS	F

Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	490	2350	86	561	1862	693	99	454	726	1109	545	571
Future Volume (veh/h)	490	2350	86	561	1862	693	99	454	726	1109	545	571
Number	5	2	12	1	6	16	7	4	14	3	8	18
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1846	1900	1845	1863	1810	1881	1845	1881	1863	1845	1863
Adj Flow Rate, veh/h	533	2554	0	610	2024	0	108	493	789	1205	592	621
Adj No. of Lanes	1	3	0	2	3	1	1	1	2	2	1	1
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	3	3	3	2	5	1	3	1	2	3	2
Cap, veh/h	340	1839	0	392	1475	446	349	360	549	843	452	388
Arrive On Green	0.19	0.37	0.00	0.12	0.29	0.00	0.19	0.19	0.19	0.25	0.25	0.25
Sat Flow, veh/h	1792	5205	0	3408	5085	1538	1792	1845	2814	3442	1845	1583
Grp Volume(v), veh/h	533	2554	0	610	2024	0	108	493	789	1205	592	621
Grp Sat Flow(s),veh/h/ln	1792	1680	0	1704	1695	1538	1792	1845	1407	1721	1845	1583
Q Serve(g_s), s	38.0	73.0	0.0	23.0	58.0	0.0	10.3	39.0	39.0	49.0	49.0	49.0
Cycle Q Clear(g_c), s	38.0	73.0	0.0	23.0	58.0	0.0	10.3	39.0	39.0	49.0	49.0	49.0
Prop In Lane	1.00		0.00	1.00		1.00	1.00		1.00	1.00		1.00
Lane Grp Cap(c), veh/h	340	1839	0	392	1475	446	349	360	549	843	452	388
V/C Ratio(X)	1.57	1.39	0.00	1.56	1.37	0.00	0.31	1.37	1.44	1.43	1.31	1.60
Avail Cap(c_a), veh/h	340	1839	0	392	1475	446	349	360	549	843	452	388
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	1.00	0.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	81.0	63.5	0.0	88.5	71.0	0.0	69.0	80.5	80.5	75.5	75.5	75.5
Incr Delay (d2), s/veh	268.5	178.3	0.0	262.6	172.0	0.0	2.3	183.6	207.2	199.9	154.6	282.2
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	44.2	64.3	0.0	25.1	50.7	0.0	5.4	38.2	31.0	46.7	44.4	51.9
LnGrp Delay(d),s/veh	349.5	241.8	0.0	351.1	243.0	0.0	71.2	264.1	287.7	275.4	230.1	357.7
LnGrp LOS	F	F		F	F		E	F	F	F	F	F
Approach Vol, veh/h		3087			2634			1390			2418	
Approach Delay, s/veh		260.4			268.0			262.5			285.5	
Approach LOS		F			F			F			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs	1	2		4	5	6		8
Phs Duration (G+Y+Rc), s	27.0	77.0		43.0	42.0	62.0		53.0
Change Period (Y+Rc), s	4.0	4.0		4.0	4.0	4.0		4.0
Max Green Setting (Gmax), s	23.0	73.0		39.0	38.0	58.0		49.0
Max Q Clear Time (g_c+I1), s	25.0	75.0		41.0	40.0	60.0		51.0
Green Ext Time (p_c), s	0.0	0.0		0.0	0.0	0.0		0.0

Intersection Summary	
HCM 2010 Ctrl Delay	269.2
HCM 2010 LOS	F



Movement	EBL	EBT	EBR	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations												
Traffic Volume (veh/h)	2436	1060	42	33	849	93	138	332	46	71	497	1822
Future Volume (veh/h)	2436	1060	42	33	849	93	138	332	46	71	497	1822
Number	1	6	16	5	2	12	3	8	18	7	4	14
Initial Q (Qb), veh	0	0	0	0	0	0	0	0	0	0	0	0
Ped-Bike Adj(A_pbT)	1.00		1.00	1.00		1.00	1.00		1.00	1.00		1.00
Parking Bus, Adj	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Adj Sat Flow, veh/h/ln	1881	1882	1900	1900	1852	1900	1881	1900	1900	1900	1900	1863
Adj Flow Rate, veh/h	2648	1152	46	36	923	0	150	361	50	77	540	1980
Adj No. of Lanes	2	1	0	0	2	0	1	2	0	1	2	2
Peak Hour Factor	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
Percent Heavy Veh, %	1	1	1	3	3	3	1	0	0	0	0	2
Cap, veh/h	1430	717	29	23	623	0	186	752	103	100	676	1022
Arrive On Green	0.40	0.40	0.40	0.18	0.18	0.00	0.10	0.24	0.24	0.06	0.19	0.19
Sat Flow, veh/h	3583	1797	72	129	3567	0	1792	3189	438	1810	3610	2787
Grp Volume(v), veh/h	2648	0	1198	514	445	0	150	203	208	77	540	1980
Grp Sat Flow(s),veh/h/ln	1792	0	1869	1845	1759	0	1792	1805	1823	1810	1805	1393
Q Serve(g_s), s	49.0	0.0	49.0	22.0	22.0	0.0	10.1	11.9	12.1	5.2	17.5	23.0
Cycle Q Clear(g_c), s	49.0	0.0	49.0	22.0	22.0	0.0	10.1	11.9	12.1	5.2	17.5	23.0
Prop In Lane	1.00		0.04	0.07		0.00	1.00		0.24	1.00		1.00
Lane Grp Cap(c), veh/h	1430	0	746	331	315	0	186	426	430	100	676	1022
V/C Ratio(X)	1.85	0.00	1.61	1.55	1.41	0.00	0.81	0.48	0.48	0.77	0.80	1.94
Avail Cap(c_a), veh/h	1430	0	746	331	315	0	584	426	430	516	676	1022
HCM Platoon Ratio	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Upstream Filter(I)	1.00	0.00	1.00	1.00	1.00	0.00	1.00	1.00	1.00	1.00	1.00	1.00
Uniform Delay (d), s/veh	36.9	0.0	36.9	50.4	50.4	0.0	53.8	40.4	40.5	57.2	47.7	31.9
Incr Delay (d2), s/veh	385.8	0.0	278.9	263.2	203.7	0.0	7.9	0.8	0.8	11.6	6.7	425.8
Initial Q Delay(d3),s/veh	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
%ile BackOfQ(50%),veh/ln	100.7	0.0	82.9	35.3	28.4	0.0	5.4	6.0	6.2	2.9	9.4	77.6
LnGrp Delay(d),s/veh	422.7	0.0	315.8	313.6	254.1	0.0	61.7	41.2	41.3	68.8	54.4	457.7
LnGrp LOS	F		F	F	F		E	D	D	E	D	F
Approach Vol, veh/h		3846			959			561			2597	
Approach Delay, s/veh		389.4			286.0			46.7			362.3	
Approach LOS		F			F			D			F	

Timer	1	2	3	4	5	6	7	8
Assigned Phs		2	3	4		6	7	8
Phs Duration (G+Y+Rc), s		26.0	16.8	27.0		53.0	10.8	33.0
Change Period (Y+Rc), s		4.0	4.0	4.0		4.0	4.0	4.0
Max Green Setting (Gmax), s		22.0	40.0	23.0		49.0	35.0	28.0
Max Q Clear Time (g_c+I1), s		24.0	12.1	25.0		51.0	7.2	14.1
Green Ext Time (p_c), s		0.0	0.8	0.0		0.0	0.2	2.5

Intersection Summary	
HCM 2010 Ctrl Delay	344.0
HCM 2010 LOS	F

Notes

User approved volume balancing among the lanes for turning movement.

Appendix B

Synchro Timing Reports

Santa Cruz DRP Study
1: Front Street & Laurel Street

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	39	337	246	448	86	5	142	168	32	149	61
Future Volume (vph)	39	337	246	448	86	5	142	168	32	149	61
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases					6			8			4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	20.0	27.0	25.0	32.0	32.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (%)	25.0%	33.8%	31.3%	40.0%	40.0%	10.0%	25.0%	25.0%	10.0%	25.0%	25.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	16.2	28.8	15.6	28.3	28.3	4.0	11.4	11.4	4.0	14.4	14.4
Actuated g/C Ratio	0.22	0.40	0.22	0.39	0.39	0.06	0.16	0.16	0.06	0.20	0.20
v/c Ratio	0.11	0.27	0.71	0.67	0.14	0.06	0.54	0.45	0.38	0.45	0.15
Control Delay	26.0	18.1	37.3	25.6	2.6	37.2	35.9	8.7	48.3	29.7	0.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.0	18.1	37.3	25.6	2.6	37.2	35.9	8.7	48.3	29.7	0.7
LOS	C	B	D	C	A	D	D	A	D	C	A
Approach Delay		18.9		26.7			21.4			24.9	
Approach LOS		B		C			C			C	

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 72.4	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 23.7	Intersection LOS: C
Intersection Capacity Utilization 51.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Front Street & Laurel Street



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases					6			8			4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	20.0	27.0	25.0	32.0	32.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (%)	25.0%	33.8%	31.3%	40.0%	40.0%	10.0%	25.0%	25.0%	10.0%	25.0%	25.0%
Maximum Green (s)	16.0	23.0	21.0	28.0	28.0	4.0	16.0	16.0	4.0	16.0	16.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0
90th %ile Green (s)	16.0	23.0	21.0	28.0	28.0	4.0	16.0	16.0	4.0	16.0	16.0
90th %ile Term Code	MaxR	MaxR	Max	MaxR	MaxR	Max	Max	Max	Max	Max	Max
70th %ile Green (s)	16.0	24.8	19.2	28.0	28.0	0.0	13.5	13.5	4.0	21.5	21.5
70th %ile Term Code	MaxR	Hold	Gap	MaxR	MaxR	Skip	Gap	Gap	Max	Hold	Hold
50th %ile Green (s)	16.0	27.5	16.5	28.0	28.0	0.0	11.6	11.6	4.0	19.6	19.6
50th %ile Term Code	MaxR	Hold	Gap	MaxR	MaxR	Skip	Gap	Gap	Max	Hold	Hold
30th %ile Green (s)	16.0	31.1	12.9	28.0	28.0	0.0	9.5	9.5	0.0	9.5	9.5
30th %ile Term Code	MaxR	Hold	Gap	MaxR	MaxR	Skip	Hold	Hold	Skip	Gap	Gap
10th %ile Green (s)	16.0	34.2	9.8	28.0	28.0	0.0	7.2	7.2	0.0	7.2	7.2
10th %ile Term Code	MaxR	Hold	Gap	MaxR	MaxR	Skip	Hold	Hold	Skip	Gap	Gap

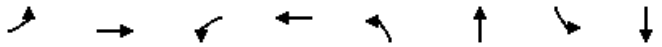
Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 72.4
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 80
70th %ile Actuated Cycle: 77.5
50th %ile Actuated Cycle: 75.6
30th %ile Actuated Cycle: 65.5
10th %ile Actuated Cycle: 63.2

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	20	338	28	453	33	30	19	15
Future Volume (vph)	20	338	28	453	33	30	19	15
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	5	2	1	6		8		4
Permitted Phases					8		4	
Detector Phase	5	2	1	6	8	8	4	4
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	20.0	40.0	20.0	40.0	20.0	20.0	20.0	20.0
Total Split (%)	25.0%	50.0%	25.0%	50.0%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	None	Max	Max	Max	Max	Max
Act Effct Green (s)	6.7	36.3	6.8	36.3	16.1	16.1		16.1
Actuated g/C Ratio	0.10	0.56	0.10	0.56	0.25	0.25		0.25
v/c Ratio	0.16	0.39	0.18	0.54	0.10	0.17		0.17
Control Delay	30.8	10.6	30.5	12.6	21.9	15.1		16.6
Queue Delay	0.0	0.0	0.0	4.5	0.0	0.0		0.0
Total Delay	30.8	10.6	30.5	17.1	21.9	15.1		16.6
LOS	C	B	C	B	C	B		B
Approach Delay		11.7		17.9		17.6		16.6
Approach LOS		B		B		B		B

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 64.8	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 15.5	Intersection LOS: B
Intersection Capacity Utilization 41.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 2: Pacific Avenue & Laurel Street





Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6		8		4
Permitted Phases					8		4	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	20.0	40.0	20.0	40.0	20.0	20.0	20.0	20.0
Total Split (%)	25.0%	50.0%	25.0%	50.0%	25.0%	25.0%	25.0%	25.0%
Maximum Green (s)	16.0	36.0	16.0	36.0	16.0	16.0	16.0	16.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Max	None	Max	Max	Max	Max	Max
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
90th %ile Green (s)	8.5	36.0	8.7	36.2	16.0	16.0	16.0	16.0
90th %ile Term Code	Gap	MaxR	Gap	Hold	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	7.4	36.0	7.5	36.1	16.0	16.0	16.0	16.0
70th %ile Term Code	Gap	MaxR	Gap	Hold	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	0.0	36.0	0.0	36.0	16.0	16.0	16.0	16.0
50th %ile Term Code	Skip	MaxR	Skip	MaxR	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	0.0	36.0	0.0	36.0	16.0	16.0	16.0	16.0
30th %ile Term Code	Skip	MaxR	Skip	MaxR	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	0.0	36.0	0.0	36.0	16.0	16.0	16.0	16.0
10th %ile Term Code	Skip	MaxR	Skip	MaxR	MaxR	MaxR	MaxR	MaxR

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 64.8
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 72.7
70th %ile Actuated Cycle: 71.5
50th %ile Actuated Cycle: 60
30th %ile Actuated Cycle: 60
10th %ile Actuated Cycle: 60

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	36	19	18	250	273
Future Volume (vph)	36	19	18	250	273
Turn Type	Prot	Perm	Prot	NA	NA
Protected Phases	5		3	8	4
Permitted Phases		5			
Detector Phase	5	5	3	8	4
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0
Total Split (s)	28.0	28.0	22.0	57.0	35.0
Total Split (%)	32.9%	32.9%	25.9%	67.1%	41.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	Max	Max	Max	None	Max
Act Effct Green (s)	24.0	24.0	18.0	53.0	31.0
Actuated g/C Ratio	0.28	0.28	0.21	0.62	0.36
v/c Ratio	0.09	0.05	0.06	0.26	0.33
Control Delay	23.3	9.9	27.4	8.0	18.5
Queue Delay	0.0	0.0	0.0	1.5	0.0
Total Delay	23.3	9.9	27.4	9.5	18.5
LOS	C	A	C	A	B
Approach Delay	18.6			10.7	18.5
Approach LOS	B			B	B

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 85	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.33	
Intersection Signal Delay: 15.3	Intersection LOS: B
Intersection Capacity Utilization 25.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: Front Street & Cathcart Street



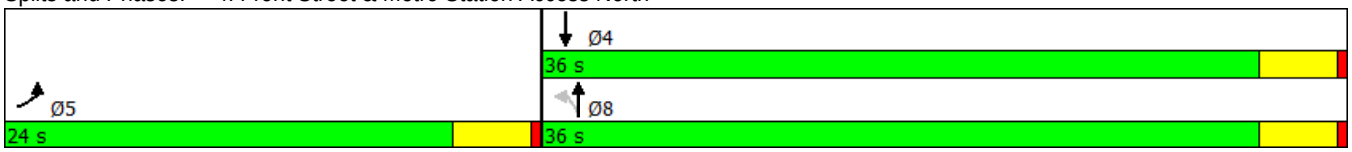
Lane Group	EBL	EBR	NBL	NBT	SBT
Protected Phases	5		3	8	4
Permitted Phases		5			
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0
Total Split (s)	28.0	28.0	22.0	57.0	35.0
Total Split (%)	32.9%	32.9%	25.9%	67.1%	41.2%
Maximum Green (s)	24.0	24.0	18.0	53.0	31.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0
Recall Mode	Max	Max	Max	None	Max
Walk Time (s)	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0
90th %ile Green (s)	24.0	24.0	18.0	53.0	31.0
90th %ile Term Code	MaxR	MaxR	MaxR	Hold	MaxR
70th %ile Green (s)	24.0	24.0	18.0	53.0	31.0
70th %ile Term Code	MaxR	MaxR	MaxR	Hold	MaxR
50th %ile Green (s)	24.0	24.0	18.0	53.0	31.0
50th %ile Term Code	MaxR	MaxR	MaxR	Hold	MaxR
30th %ile Green (s)	24.0	24.0	18.0	53.0	31.0
30th %ile Term Code	MaxR	MaxR	MaxR	Hold	MaxR
10th %ile Green (s)	24.0	24.0	18.0	53.0	31.0
10th %ile Term Code	MaxR	MaxR	MaxR	Hold	MaxR

Intersection Summary
Cycle Length: 85
Actuated Cycle Length: 85
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 85
70th %ile Actuated Cycle: 85
50th %ile Actuated Cycle: 85
30th %ile Actuated Cycle: 85
10th %ile Actuated Cycle: 85

Lane Group	EBL	NBL	NBT	SBT
Lane Configurations				
Traffic Volume (vph)	10	2	259	255
Future Volume (vph)	10	2	259	255
Turn Type	Prot	Perm	NA	NA
Protected Phases	5		8	4
Permitted Phases		8		
Detector Phase	5	8	8	4
Switch Phase				
Minimum Initial (s)	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0
Total Split (s)	24.0	36.0	36.0	36.0
Total Split (%)	40.0%	60.0%	60.0%	60.0%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	Max	Max	Max
Act Effct Green (s)	6.5	50.8	50.8	50.8
Actuated g/C Ratio	0.12	0.95	0.95	0.95
v/c Ratio	0.13	0.00	0.18	0.22
Control Delay	23.6	1.5	1.2	1.3
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	23.6	1.5	1.2	1.3
LOS	C	A	A	A
Approach Delay	23.6		1.2	1.3
Approach LOS	C		A	A

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 53.6	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.22	
Intersection Signal Delay: 1.7	Intersection LOS: A
Intersection Capacity Utilization 25.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 4: Front Street & Metro Station Access North



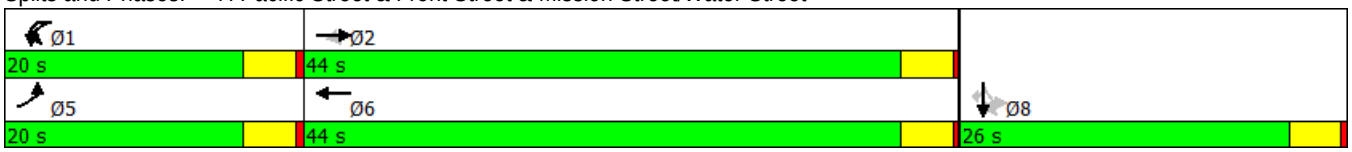
Lane Group	EBL	NBL	NBT	SBT
Protected Phases	5		8	4
Permitted Phases		8		
Minimum Initial (s)	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0
Total Split (s)	24.0	36.0	36.0	36.0
Total Split (%)	40.0%	60.0%	60.0%	60.0%
Maximum Green (s)	20.0	32.0	32.0	32.0
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	Max	Max	Max
Walk Time (s)	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0
90th %ile Green (s)	8.8	47.0	47.0	47.0
90th %ile Term Code	Gap	Dwell	Dwell	Dwell
70th %ile Green (s)	0.0	47.0	47.0	47.0
70th %ile Term Code	Skip	Dwell	Dwell	Dwell
50th %ile Green (s)	0.0	47.0	47.0	47.0
50th %ile Term Code	Skip	Dwell	Dwell	Dwell
30th %ile Green (s)	0.0	47.0	47.0	47.0
30th %ile Term Code	Skip	Dwell	Dwell	Dwell
10th %ile Green (s)	0.0	47.0	47.0	47.0
10th %ile Term Code	Skip	Dwell	Dwell	Dwell

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 53.6
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 63.8
70th %ile Actuated Cycle: 51
50th %ile Actuated Cycle: 51
30th %ile Actuated Cycle: 51
10th %ile Actuated Cycle: 51

Lane Group	EBL	EBT	EBR	WBL2	WBL	WBT	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	81	380	75	61	48	637	18	107
Future Volume (vph)	81	380	75	61	48	637	18	107
Turn Type	Prot	NA	Perm	Prot	Prot	NA	NA	Perm
Protected Phases	5	2		1	1	6	8	
Permitted Phases			2					8
Detector Phase	5	2	2	1	1	6	8	8
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	8.0	20.0	20.0	20.0
Total Split (s)	20.0	44.0	44.0	20.0	20.0	44.0	26.0	26.0
Total Split (%)	22.2%	48.9%	48.9%	22.2%	22.2%	48.9%	28.9%	28.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	Max	Max	Max
Act Effct Green (s)	9.6	40.8	40.8	8.9	8.9	40.2	22.1	22.1
Actuated g/C Ratio	0.12	0.50	0.50	0.11	0.11	0.49	0.27	0.27
v/c Ratio	0.45	0.25	0.13	0.40	0.28	0.41	0.19	0.23
Control Delay	41.5	13.0	6.8	41.6	37.9	15.0	26.4	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.5	13.0	6.8	41.6	37.9	15.0	26.4	6.6
LOS	D	B	A	D	D	B	C	A
Approach Delay		16.1				18.7	14.7	
Approach LOS		B				B	B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 81.7	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 17.2	Intersection LOS: B
Intersection Capacity Utilization 36.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Pacific Street & Front Street & Mission Street/Water Street



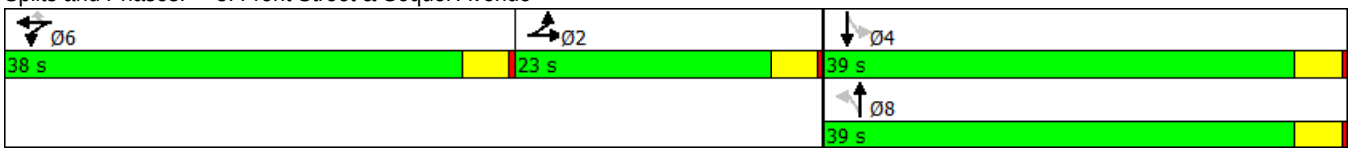
Lane Group	EBL	EBT	EBR	WBL2	WBL	WBT	SBT	SBR
Protected Phases	5	2		1	1	6	8	
Permitted Phases			2					8
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	8.0	20.0	20.0	20.0
Total Split (s)	20.0	44.0	44.0	20.0	20.0	44.0	26.0	26.0
Total Split (%)	22.2%	48.9%	48.9%	22.2%	22.2%	48.9%	28.9%	28.9%
Maximum Green (s)	16.0	40.0	40.0	16.0	16.0	40.0	22.0	22.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag	Lag	Lead	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	Max	Max	Max
Walk Time (s)		5.0	5.0			5.0	5.0	5.0
Flash Dont Walk (s)		11.0	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0			0	0	0
90th %ile Green (s)	13.6	40.9	40.9	12.7	12.7	40.0	22.0	22.0
90th %ile Term Code	Gap	Hold	Hold	Gap	Gap	MaxR	MaxR	MaxR
70th %ile Green (s)	11.3	40.8	40.8	10.5	10.5	40.0	22.0	22.0
70th %ile Term Code	Gap	Hold	Hold	Gap	Gap	MaxR	MaxR	MaxR
50th %ile Green (s)	9.7	40.8	40.8	8.9	8.9	40.0	22.0	22.0
50th %ile Term Code	Gap	Hold	Hold	Gap	Gap	MaxR	MaxR	MaxR
30th %ile Green (s)	8.1	40.6	40.6	7.5	7.5	40.0	22.0	22.0
30th %ile Term Code	Gap	Hold	Hold	Gap	Gap	MaxR	MaxR	MaxR
10th %ile Green (s)	0.0	40.0	40.0	0.0	0.0	40.0	22.0	22.0
10th %ile Term Code	Skip	Hold	Hold	Skip	Skip	MaxR	MaxR	MaxR

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 81.7
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 87.6
70th %ile Actuated Cycle: 85.3
50th %ile Actuated Cycle: 83.7
30th %ile Actuated Cycle: 82.1
10th %ile Actuated Cycle: 70

Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	47	202	104	42	10	194	24	151
Future Volume (vph)	47	202	104	42	10	194	24	151
Turn Type	NA	Split	NA	Perm	Perm	NA	Perm	NA
Protected Phases	2	6	6			8		4
Permitted Phases				6	8		4	
Detector Phase	2	6	6	6	8	8	4	4
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	23.0	38.0	38.0	38.0	39.0	39.0	39.0	39.0
Total Split (%)	23.0%	38.0%	38.0%	38.0%	39.0%	39.0%	39.0%	39.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lag	Lead	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	Max	Max	None	None	None	None
Act Effct Green (s)	7.2	34.6	34.6	34.6		13.3	13.3	13.3
Actuated g/C Ratio	0.11	0.53	0.53	0.53		0.20	0.20	0.20
v/c Ratio	0.25	0.20	0.20	0.06		0.50	0.17	0.61
Control Delay	28.0	11.0	10.9	3.3		21.6	24.5	31.8
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	28.0	11.0	10.9	3.3		21.6	24.5	31.8
LOS	C	B	B	A		C	C	C
Approach Delay	28.0		10.0			21.6		30.9
Approach LOS	C		B			C		C

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 64.9	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.61	
Intersection Signal Delay: 19.8	Intersection LOS: B
Intersection Capacity Utilization 41.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: Front Street & Soquel Avenue



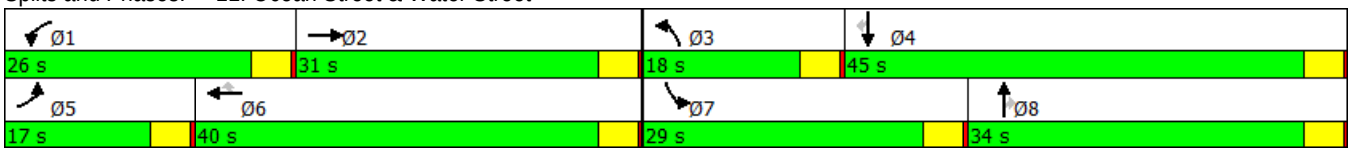
Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	2	6	6			8		4
Permitted Phases				6	8		4	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	23.0	38.0	38.0	38.0	39.0	39.0	39.0	39.0
Total Split (%)	23.0%	38.0%	38.0%	38.0%	39.0%	39.0%	39.0%	39.0%
Maximum Green (s)	19.0	34.0	34.0	34.0	35.0	35.0	35.0	35.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lag	Lead	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Max	Max	Max	None	None	None	None
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
90th %ile Green (s)	9.0	34.0	34.0	34.0	19.4	19.4	19.4	19.4
90th %ile Term Code	Gap	MaxR	MaxR	MaxR	Hold	Hold	Gap	Gap
70th %ile Green (s)	7.9	34.0	34.0	34.0	15.7	15.7	15.7	15.7
70th %ile Term Code	Gap	MaxR	MaxR	MaxR	Hold	Hold	Gap	Gap
50th %ile Green (s)	7.2	34.0	34.0	34.0	13.4	13.4	13.4	13.4
50th %ile Term Code	Gap	MaxR	MaxR	MaxR	Hold	Hold	Gap	Gap
30th %ile Green (s)	6.5	34.0	34.0	34.0	11.3	11.3	11.3	11.3
30th %ile Term Code	Gap	MaxR	MaxR	MaxR	Hold	Hold	Gap	Gap
10th %ile Green (s)	0.0	34.0	34.0	34.0	8.0	8.0	8.0	8.0
10th %ile Term Code	Skip	MaxR	MaxR	MaxR	Hold	Hold	Gap	Gap

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 64.9
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 74.4
70th %ile Actuated Cycle: 69.6
50th %ile Actuated Cycle: 66.6
30th %ile Actuated Cycle: 63.8
10th %ile Actuated Cycle: 50

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	161	297	136	450	255	78	466	40	175	620	379
Future Volume (vph)	161	297	136	450	255	78	466	40	175	620	379
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases					6			8			4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	17.0	31.0	26.0	40.0	40.0	18.0	34.0	34.0	29.0	45.0	45.0
Total Split (%)	14.2%	25.8%	21.7%	33.3%	33.3%	15.0%	28.3%	28.3%	24.2%	37.5%	37.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	Min	None	Min	Min	None	Min	Min
Act Effct Green (s)	10.0	17.0	12.7	19.7	19.7	9.8	20.3	20.3	14.8	28.4	28.4
Actuated g/C Ratio	0.12	0.21	0.16	0.24	0.24	0.12	0.25	0.25	0.18	0.35	0.35
v/c Ratio	0.42	0.52	0.53	0.58	0.47	0.40	0.58	0.08	0.59	0.55	0.50
Control Delay	40.9	33.1	42.9	32.0	6.8	44.8	31.2	0.3	41.9	25.6	5.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	40.9	33.1	42.9	32.0	6.8	44.8	31.2	0.3	41.9	25.6	5.0
LOS	D	C	D	C	A	D	C	A	D	C	A
Approach Delay		35.5		26.2			30.9			21.4	
Approach LOS		D		C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 81.8	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 26.8	Intersection LOS: C
Intersection Capacity Utilization 53.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Ocean Street & Water Street



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases					6			8			4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	17.0	31.0	26.0	40.0	40.0	18.0	34.0	34.0	29.0	45.0	45.0
Total Split (%)	14.2%	25.8%	21.7%	33.3%	33.3%	15.0%	28.3%	28.3%	24.2%	37.5%	37.5%
Maximum Green (s)	13.0	27.0	22.0	36.0	36.0	14.0	30.0	30.0	25.0	41.0	41.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	Min	None	Min	Min	None	Min	Min
Walk Time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0
90th %ile Green (s)	13.0	23.2	19.7	29.9	29.9	14.0	30.5	30.5	23.1	39.6	39.6
90th %ile Term Code	Max	Hold	Gap	Gap	Gap	Max	Hold	Hold	Gap	Gap	Gap
70th %ile Green (s)	11.5	19.4	15.2	23.1	23.1	11.5	24.6	24.6	17.7	30.8	30.8
70th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Gap	Hold	Hold	Gap	Gap	Gap
50th %ile Green (s)	9.8	16.4	12.3	18.9	18.9	9.5	20.2	20.2	14.4	25.1	25.1
50th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Gap	Hold	Hold	Gap	Gap	Gap
30th %ile Green (s)	8.5	14.5	10.2	16.2	16.2	8.0	17.3	17.3	11.8	21.1	21.1
30th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Gap	Hold	Hold	Gap	Gap	Gap
10th %ile Green (s)	6.9	11.4	7.5	12.0	12.0	0.0	11.2	11.2	8.6	23.8	23.8
10th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Skip	Gap	Gap	Gap	Hold	Hold

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 81.8
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 112.5
70th %ile Actuated Cycle: 92.9
50th %ile Actuated Cycle: 79.3
30th %ile Actuated Cycle: 69.8
10th %ile Actuated Cycle: 54.7

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	211	1518	266	1389	515	27	156	160	412	158	184
Future Volume (vph)	211	1518	266	1389	515	27	156	160	412	158	184
Turn Type	Prot	NA	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2	1	6		4	4		8	8	
Permitted Phases					6			4			8
Detector Phase	5	2	1	6	6	4	4	4	8	8	8
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	42.0	96.0	28.0	82.0	82.0	32.0	32.0	32.0	44.0	44.0	44.0
Total Split (%)	21.0%	48.0%	14.0%	41.0%	41.0%	16.0%	16.0%	16.0%	22.0%	22.0%	22.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	Max	None	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	29.4	92.0	20.7	83.2	83.2	28.0	28.0	28.0	40.0	40.0	40.0
Actuated g/C Ratio	0.15	0.47	0.11	0.42	0.42	0.14	0.14	0.14	0.20	0.20	0.20
v/c Ratio	0.83	0.69	0.77	0.68	0.66	0.12	0.63	0.35	0.70	0.46	0.42
Control Delay	106.5	43.2	101.0	48.6	26.3	76.4	91.7	29.9	80.5	74.5	10.4
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	106.5	43.2	101.0	48.6	26.3	76.4	91.7	29.9	80.5	74.5	10.4
LOS	F	D	F	D	C	E	F	C	F	E	B
Approach Delay		50.7		49.7			61.7			62.1	
Approach LOS		D		D			E			E	

Intersection Summary	
Cycle Length: 200	
Actuated Cycle Length: 196.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.83	
Intersection Signal Delay: 52.7	Intersection LOS: D
Intersection Capacity Utilization 71.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 12: Highway 9 & Highway 1



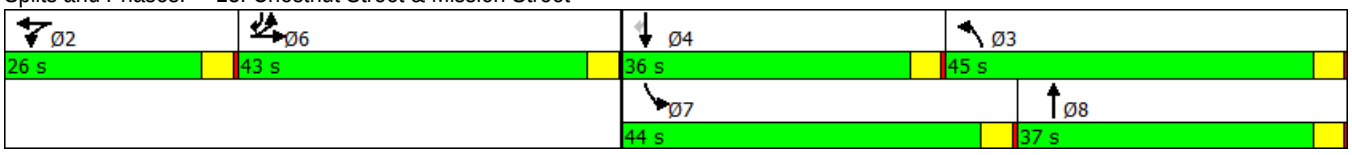
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	1	6		4	4		8	8	
Permitted Phases					6			4			8
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	42.0	96.0	28.0	82.0	82.0	32.0	32.0	32.0	44.0	44.0	44.0
Total Split (%)	21.0%	48.0%	14.0%	41.0%	41.0%	16.0%	16.0%	16.0%	22.0%	22.0%	22.0%
Maximum Green (s)	38.0	92.0	24.0	78.0	78.0	28.0	28.0	28.0	40.0	40.0	40.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Max	None	Max	Max	Max	Max	Max	Max	Max	Max
Walk Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0	0	0	0	0	0	0
90th %ile Green (s)	38.0	92.0	24.0	78.0	78.0	28.0	28.0	28.0	40.0	40.0	40.0
90th %ile Term Code	Max	MaxR	Max	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	33.7	92.0	23.6	81.9	81.9	28.0	28.0	28.0	40.0	40.0	40.0
70th %ile Term Code	Gap	MaxR	Gap	Hold	Hold	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	29.8	92.0	21.3	83.5	83.5	28.0	28.0	28.0	40.0	40.0	40.0
50th %ile Term Code	Gap	MaxR	Gap	Hold	Hold	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	25.8	92.0	19.0	85.2	85.2	28.0	28.0	28.0	40.0	40.0	40.0
30th %ile Term Code	Gap	MaxR	Gap	Hold	Hold	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	20.4	92.0	15.8	87.4	87.4	28.0	28.0	28.0	40.0	40.0	40.0
10th %ile Term Code	Gap	MaxR	Gap	Hold	Hold	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR

Intersection Summary
Cycle Length: 200
Actuated Cycle Length: 196.7
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 200
70th %ile Actuated Cycle: 199.6
50th %ile Actuated Cycle: 197.3
30th %ile Actuated Cycle: 195
10th %ile Actuated Cycle: 191.8

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	1428	392	367	95	280	58	204	1471
Future Volume (vph)	1428	392	367	95	280	58	204	1471
Turn Type	Split	NA	NA	Prot	NA	Prot	NA	pm+ov
Protected Phases	6	6	2	3	8	7	4	6
Permitted Phases								4
Detector Phase	6	6	2	3	8	7	4	4 6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	43.0	43.0	26.0	45.0	37.0	44.0	36.0	43.0
Total Split (%)	28.7%	28.7%	17.3%	30.0%	24.7%	29.3%	24.0%	28.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag				Lag	Lag	Lead	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	39.2	39.2	19.7	12.3	35.3	9.6	30.3	73.5
Actuated g/C Ratio	0.33	0.33	0.17	0.10	0.30	0.08	0.26	0.62
v/c Ratio	1.49	1.43dl	0.76	0.57	0.32	0.44	0.25	0.82
Control Delay	262.4	132.8	56.2	63.1	33.6	62.5	36.3	13.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	262.4	132.8	56.2	63.1	33.6	62.5	36.3	13.3
LOS	F	F	E	E	C	E	D	B
Approach Delay		182.2	56.2		40.6		17.7	
Approach LOS		F	E		D		B	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 117.6	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.49	
Intersection Signal Delay: 93.2	Intersection LOS: F
Intersection Capacity Utilization 77.9%	ICU Level of Service D
Analysis Period (min) 15	
dl Defacto Left Lane. Recode with 1 though lane as a left lane.	

Splits and Phases: 13: Chestnut Street & Mission Street



Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Protected Phases	6	6	2	3	8	7	4	6
Permitted Phases								4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	43.0	43.0	26.0	45.0	37.0	44.0	36.0	43.0
Total Split (%)	28.7%	28.7%	17.3%	30.0%	24.7%	29.3%	24.0%	28.7%
Maximum Green (s)	39.0	39.0	22.0	41.0	33.0	40.0	32.0	39.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag				Lag	Lag	Lead	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	None
Walk Time (s)	5.0	5.0			5.0		5.0	5.0
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0			0		0	0
90th %ile Green (s)	39.0	39.0	22.0	17.2	35.9	13.3	32.0	39.0
90th %ile Term Code	Max	Max	Max	Gap	Hold	Gap	Max	Max
70th %ile Green (s)	39.0	39.0	22.0	14.3	35.1	11.2	32.0	39.0
70th %ile Term Code	Max	Max	Max	Gap	Hold	Gap	Max	Max
50th %ile Green (s)	39.0	39.0	21.2	12.5	34.8	9.7	32.0	39.0
50th %ile Term Code	Max	Max	Gap	Gap	Hold	Gap	Max	Max
30th %ile Green (s)	39.0	39.0	18.9	10.7	33.4	8.3	31.0	39.0
30th %ile Term Code	Max	Max	Gap	Gap	Hold	Gap	Gap	Max
10th %ile Green (s)	39.0	39.0	15.0	7.8	36.4	0.0	24.6	39.0
10th %ile Term Code	Max	Max	Gap	Gap	Hold	Skip	Gap	Max

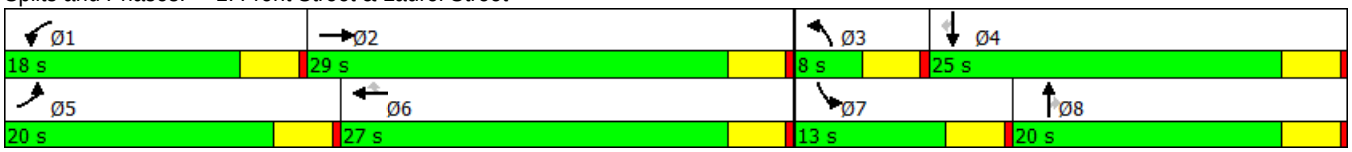
Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 117.6
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 126.2
70th %ile Actuated Cycle: 123.3
50th %ile Actuated Cycle: 120.7
30th %ile Actuated Cycle: 115.6
10th %ile Actuated Cycle: 102.4

Santa Cruz DRP Study
1: Front Street & Laurel Street

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	84	638	228	378	110	8	165	229	118	322	156
Future Volume (vph)	84	638	228	378	110	8	165	229	118	322	156
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases					6			8			4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	20.0	29.0	18.0	27.0	27.0	8.0	20.0	20.0	13.0	25.0	25.0
Total Split (%)	25.0%	36.3%	22.5%	33.8%	33.8%	10.0%	25.0%	25.0%	16.3%	31.3%	31.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	16.1	26.2	13.1	23.2	23.2	4.0	13.0	13.0	8.6	21.5	21.5
Actuated g/C Ratio	0.22	0.35	0.18	0.31	0.31	0.05	0.17	0.17	0.12	0.29	0.29
v/c Ratio	0.23	0.56	0.77	0.69	0.19	0.09	0.54	0.51	0.63	0.62	0.28
Control Delay	28.1	23.0	48.1	31.4	1.9	38.1	35.4	8.1	48.8	28.9	5.4
Queue Delay	0.0	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	28.1	24.1	48.1	31.4	1.9	38.1	35.4	8.1	48.8	28.9	5.4
LOS	C	C	D	C	A	D	D	A	D	C	A
Approach Delay		24.6		32.2			20.0			26.7	
Approach LOS		C		C			B			C	

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 74.4	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.77	
Intersection Signal Delay: 26.5	Intersection LOS: C
Intersection Capacity Utilization 64.8%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Front Street & Laurel Street



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases					6			8			4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	20.0	29.0	18.0	27.0	27.0	8.0	20.0	20.0	13.0	25.0	25.0
Total Split (%)	25.0%	36.3%	22.5%	33.8%	33.8%	10.0%	25.0%	25.0%	16.3%	31.3%	31.3%
Maximum Green (s)	16.0	25.0	14.0	23.0	23.0	4.0	16.0	16.0	9.0	21.0	21.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0
90th %ile Green (s)	16.0	25.0	14.0	23.0	23.0	4.0	16.0	16.0	9.0	21.0	21.0
90th %ile Term Code	MaxR	MaxR	Max	MaxR	MaxR	Max	Max	Max	Max	Max	Max
70th %ile Green (s)	16.0	25.0	14.0	23.0	23.0	0.0	15.4	15.4	9.0	28.4	28.4
70th %ile Term Code	MaxR	MaxR	Max	MaxR	MaxR	Skip	Gap	Gap	Max	Hold	Hold
50th %ile Green (s)	16.0	25.0	14.0	23.0	23.0	0.0	12.3	12.3	9.0	25.3	25.3
50th %ile Term Code	MaxR	MaxR	Max	MaxR	MaxR	Skip	Gap	Gap	Max	Hold	Hold
30th %ile Green (s)	16.0	25.5	13.5	23.0	23.0	0.0	10.3	10.3	9.0	23.3	23.3
30th %ile Term Code	MaxR	Hold	Gap	MaxR	MaxR	Skip	Gap	Gap	Max	Hold	Hold
10th %ile Green (s)	16.0	28.9	10.1	23.0	23.0	0.0	11.2	11.2	0.0	11.2	11.2
10th %ile Term Code	MaxR	Hold	Gap	MaxR	MaxR	Skip	Hold	Hold	Skip	Gap	Gap

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 74.4
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 80
70th %ile Actuated Cycle: 79.4
50th %ile Actuated Cycle: 76.3
30th %ile Actuated Cycle: 74.3
10th %ile Actuated Cycle: 62.2

Santa Cruz DRP Study
2: Pacific Avenue & Laurel Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	48	640	37	456	41	77	56	58
Future Volume (vph)	48	640	37	456	41	77	56	58
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	5	2	1	6		8		4
Permitted Phases					8		4	
Detector Phase	5	2	1	6	8	8	4	4
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	20.0	40.0	20.0	40.0	20.0	20.0	20.0	20.0
Total Split (%)	25.0%	50.0%	25.0%	50.0%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	None	Max	Max	Max	Max	Max
Act Effct Green (s)	7.6	36.8	7.0	36.3	16.1	16.1		16.1
Actuated g/C Ratio	0.11	0.54	0.10	0.54	0.24	0.24		0.24
v/c Ratio	0.28	0.69	0.21	0.58	0.16	0.30		0.44
Control Delay	32.8	17.0	32.2	14.6	24.6	19.8		25.6
Queue Delay	0.0	0.0	0.0	4.5	0.0	0.0		0.0
Total Delay	32.8	17.0	32.2	19.2	24.6	19.8		25.6
LOS	C	B	C	B	C	B		C
Approach Delay		18.0		20.0		21.0		25.6
Approach LOS		B		B		C		C

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 67.7	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.69	
Intersection Signal Delay: 19.8	Intersection LOS: B
Intersection Capacity Utilization 65.3%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 2: Pacific Avenue & Laurel Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6		8		4
Permitted Phases					8		4	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	20.0	40.0	20.0	40.0	20.0	20.0	20.0	20.0
Total Split (%)	25.0%	50.0%	25.0%	50.0%	25.0%	25.0%	25.0%	25.0%
Maximum Green (s)	16.0	36.0	16.0	36.0	16.0	16.0	16.0	16.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Max	None	Max	Max	Max	Max	Max
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
90th %ile Green (s)	10.3	37.2	9.1	36.0	16.0	16.0	16.0	16.0
90th %ile Term Code	Gap	Hold	Gap	MaxR	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	8.7	36.9	7.8	36.0	16.0	16.0	16.0	16.0
70th %ile Term Code	Gap	Hold	Gap	MaxR	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	7.6	36.7	6.9	36.0	16.0	16.0	16.0	16.0
50th %ile Term Code	Gap	Hold	Gap	MaxR	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	0.0	36.0	0.0	36.0	16.0	16.0	16.0	16.0
30th %ile Term Code	Skip	MaxR	Skip	MaxR	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	0.0	36.0	0.0	36.0	16.0	16.0	16.0	16.0
10th %ile Term Code	Skip	MaxR	Skip	MaxR	MaxR	MaxR	MaxR	MaxR

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 67.7
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 74.3
70th %ile Actuated Cycle: 72.7
50th %ile Actuated Cycle: 71.6
30th %ile Actuated Cycle: 60
10th %ile Actuated Cycle: 60

Santa Cruz DRP Study
3: Front Street & Cathcart Street

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	109	60	52	380	570
Future Volume (vph)	109	60	52	380	570
Turn Type	Prot	Perm	Prot	NA	NA
Protected Phases	5		3	8	4
Permitted Phases		5			
Detector Phase	5	5	3	8	4
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0
Total Split (s)	26.0	26.0	22.0	59.0	37.0
Total Split (%)	30.6%	30.6%	25.9%	69.4%	43.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	Max	Max	Max	None	Max
Act Effct Green (s)	22.0	22.0	18.0	55.0	33.0
Actuated g/C Ratio	0.26	0.26	0.21	0.65	0.39
v/c Ratio	0.25	0.14	0.15	0.34	0.54
Control Delay	26.7	7.7	28.6	7.7	20.8
Queue Delay	0.0	0.0	0.0	2.3	0.0
Total Delay	26.7	7.7	28.6	10.0	20.8
LOS	C	A	C	B	C
Approach Delay	19.9			12.2	20.8
Approach LOS	B			B	C

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 85	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.54	
Intersection Signal Delay: 17.8	Intersection LOS: B
Intersection Capacity Utilization 39.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: Front Street & Cathcart Street



Lane Group	EBL	EBR	NBL	NBT	SBT
Protected Phases	5		3	8	4
Permitted Phases		5			
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0
Total Split (s)	26.0	26.0	22.0	59.0	37.0
Total Split (%)	30.6%	30.6%	25.9%	69.4%	43.5%
Maximum Green (s)	22.0	22.0	18.0	55.0	33.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0
Recall Mode	Max	Max	Max	None	Max
Walk Time (s)	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0
90th %ile Green (s)	22.0	22.0	18.0	55.0	33.0
90th %ile Term Code	MaxR	MaxR	MaxR	Hold	MaxR
70th %ile Green (s)	22.0	22.0	18.0	55.0	33.0
70th %ile Term Code	MaxR	MaxR	MaxR	Hold	MaxR
50th %ile Green (s)	22.0	22.0	18.0	55.0	33.0
50th %ile Term Code	MaxR	MaxR	MaxR	Hold	MaxR
30th %ile Green (s)	22.0	22.0	18.0	55.0	33.0
30th %ile Term Code	MaxR	MaxR	MaxR	Hold	MaxR
10th %ile Green (s)	22.0	22.0	18.0	55.0	33.0
10th %ile Term Code	MaxR	MaxR	MaxR	Hold	MaxR

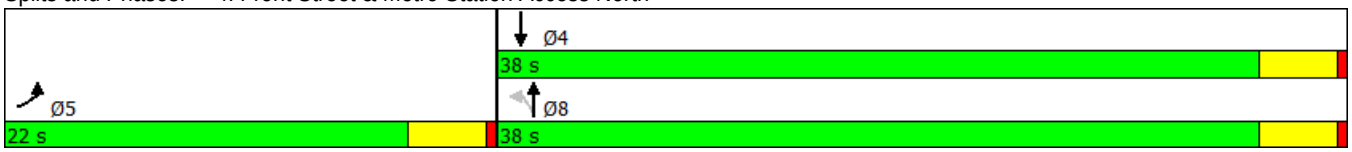
Intersection Summary
Cycle Length: 85
Actuated Cycle Length: 85
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 85
70th %ile Actuated Cycle: 85
50th %ile Actuated Cycle: 85
30th %ile Actuated Cycle: 85
10th %ile Actuated Cycle: 85

Santa Cruz DRP Study
4: Front Street & Metro Station Access North

Lane Group	EBL	NBL	NBT	SBT
Lane Configurations				
Traffic Volume (vph)	16	5	403	605
Future Volume (vph)	16	5	403	605
Turn Type	Prot	Perm	NA	NA
Protected Phases	5		8	4
Permitted Phases		8		
Detector Phase	5	8	8	4
Switch Phase				
Minimum Initial (s)	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0
Total Split (s)	22.0	38.0	38.0	38.0
Total Split (%)	36.7%	63.3%	63.3%	63.3%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	Max	Max	Max
Act Effct Green (s)	6.8	52.8	52.8	52.8
Actuated g/C Ratio	0.12	0.95	0.95	0.95
v/c Ratio	0.17	0.01	0.23	0.37
Control Delay	25.3	1.4	1.3	1.9
Queue Delay	0.0	0.0	0.0	0.1
Total Delay	25.3	1.4	1.3	1.9
LOS	C	A	A	A
Approach Delay	25.3		1.3	1.9
Approach LOS	C		A	A

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 55.7	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.37	
Intersection Signal Delay: 2.1	Intersection LOS: A
Intersection Capacity Utilization 42.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 4: Front Street & Metro Station Access North



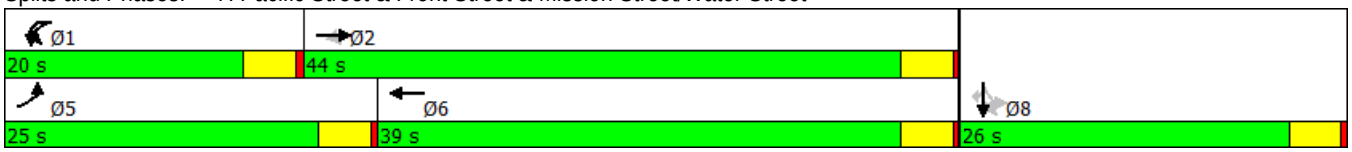
Lane Group	EBL	NBL	NBT	SBT
Protected Phases	5		8	4
Permitted Phases		8		
Minimum Initial (s)	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0
Total Split (s)	22.0	38.0	38.0	38.0
Total Split (%)	36.7%	63.3%	63.3%	63.3%
Maximum Green (s)	18.0	34.0	34.0	34.0
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	Max	Max	Max
Walk Time (s)	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0
90th %ile Green (s)	9.6	49.0	49.0	49.0
90th %ile Term Code	Gap	Dwell	Dwell	Dwell
70th %ile Green (s)	0.0	49.0	49.0	49.0
70th %ile Term Code	Skip	Dwell	Dwell	Dwell
50th %ile Green (s)	0.0	49.0	49.0	49.0
50th %ile Term Code	Skip	Dwell	Dwell	Dwell
30th %ile Green (s)	0.0	49.0	49.0	49.0
30th %ile Term Code	Skip	Dwell	Dwell	Dwell
10th %ile Green (s)	0.0	49.0	49.0	49.0
10th %ile Term Code	Skip	Dwell	Dwell	Dwell

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 55.7
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 66.6
70th %ile Actuated Cycle: 53
50th %ile Actuated Cycle: 53
30th %ile Actuated Cycle: 53
10th %ile Actuated Cycle: 53

Lane Group	EBL	EBT	EBR	WBL2	WBL	WBT	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	152	629	110	108	49	630	33	174
Future Volume (vph)	152	629	110	108	49	630	33	174
Turn Type	Prot	NA	Perm	Prot	Prot	NA	NA	Perm
Protected Phases	5	2		1	1	6	8	
Permitted Phases			2					8
Detector Phase	5	2	2	1	1	6	8	8
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	8.0	20.0	20.0	20.0
Total Split (s)	25.0	44.0	44.0	20.0	20.0	39.0	26.0	26.0
Total Split (%)	27.8%	48.9%	48.9%	22.2%	22.2%	43.3%	28.9%	28.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	Max	Max	Max
Act Effct Green (s)	12.6	39.4	39.4	10.6	10.6	35.1	22.0	22.0
Actuated g/C Ratio	0.15	0.48	0.48	0.13	0.13	0.43	0.27	0.27
v/c Ratio	0.59	0.39	0.17	0.50	0.23	0.44	0.36	0.33
Control Delay	41.1	15.5	8.9	41.0	34.2	18.1	27.7	6.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.1	15.5	8.9	41.0	34.2	18.1	27.7	6.9
LOS	D	B	A	D	C	B	C	A
Approach Delay		18.9				22.2	16.8	
Approach LOS		B				C	B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 81.8	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 19.8	Intersection LOS: B
Intersection Capacity Utilization 44.6%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Pacific Street & Front Street & Mission Street/Water Street



Lane Group	EBL	EBT	EBR	WBL2	WBL	WBT	SBT	SBR
Protected Phases	5	2		1	1	6	8	
Permitted Phases			2					8
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	8.0	20.0	20.0	20.0
Total Split (s)	25.0	44.0	44.0	20.0	20.0	39.0	26.0	26.0
Total Split (%)	27.8%	48.9%	48.9%	22.2%	22.2%	43.3%	28.9%	28.9%
Maximum Green (s)	21.0	40.0	40.0	16.0	16.0	35.0	22.0	22.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag	Lag	Lead	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	Max	Max	Max
Walk Time (s)		5.0	5.0			5.0	5.0	5.0
Flash Dont Walk (s)		11.0	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0			0	0	0
90th %ile Green (s)	18.0	38.0	38.0	15.0	15.0	35.0	22.0	22.0
90th %ile Term Code	Gap	Hold	Hold	Gap	Gap	MaxR	MaxR	MaxR
70th %ile Green (s)	14.7	37.4	37.4	12.3	12.3	35.0	22.0	22.0
70th %ile Term Code	Gap	Hold	Hold	Gap	Gap	MaxR	MaxR	MaxR
50th %ile Green (s)	12.6	37.1	37.1	10.5	10.5	35.0	22.0	22.0
50th %ile Term Code	Gap	Hold	Hold	Gap	Gap	MaxR	MaxR	MaxR
30th %ile Green (s)	10.6	36.7	36.7	8.9	8.9	35.0	22.0	22.0
30th %ile Term Code	Gap	Hold	Hold	Gap	Gap	MaxR	MaxR	MaxR
10th %ile Green (s)	7.9	46.9	46.9	0.0	0.0	35.0	22.0	22.0
10th %ile Term Code	Gap	Hold	Hold	Skip	Skip	MaxR	MaxR	MaxR

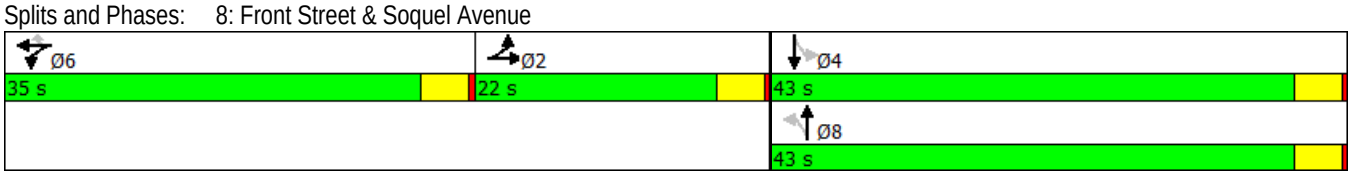
Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 81.8
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 87
70th %ile Actuated Cycle: 83.7
50th %ile Actuated Cycle: 81.6
30th %ile Actuated Cycle: 79.6
10th %ile Actuated Cycle: 76.9

Santa Cruz DRP Study
8: Front Street & Soquel Avenue

Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	109	360	93	36	10	298	79	339
Future Volume (vph)	109	360	93	36	10	298	79	339
Turn Type	NA	Split	NA	Perm	Perm	NA	Perm	NA
Protected Phases	2	6	6			8		4
Permitted Phases				6	8		4	
Detector Phase	2	6	6	6	8	8	4	4
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	22.0	35.0	35.0	35.0	43.0	43.0	43.0	43.0
Total Split (%)	22.0%	35.0%	35.0%	35.0%	43.0%	43.0%	43.0%	43.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lag	Lead	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	Max	Max	None	None	None	None
Act Effct Green (s)	9.6	31.4	31.4	31.4		21.9	21.9	21.9
Actuated g/C Ratio	0.13	0.42	0.42	0.42		0.29	0.29	0.29
v/c Ratio	0.46	0.33	0.33	0.05		0.51	0.43	0.75
Control Delay	31.4	18.7	18.8	3.7		17.5	29.1	33.2
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	31.4	18.7	18.8	3.7		17.5	29.1	33.2
LOS	C	B	B	A		B	C	C
Approach Delay	31.4		17.6			17.5		32.5
Approach LOS	C		B			B		C

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 75.1	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.75	
Intersection Signal Delay: 23.4	Intersection LOS: C
Intersection Capacity Utilization 65.7%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 8: Front Street & Soquel Avenue



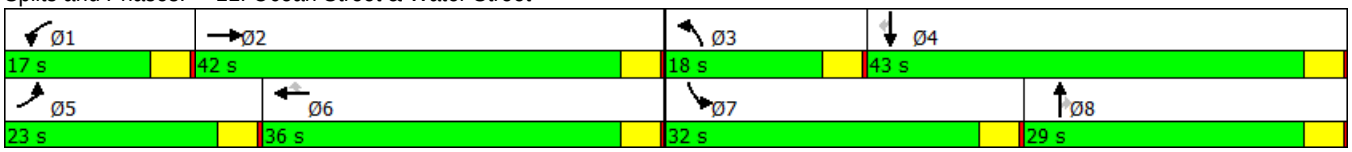
Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	2	6	6			8		4
Permitted Phases				6	8		4	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	22.0	35.0	35.0	35.0	43.0	43.0	43.0	43.0
Total Split (%)	22.0%	35.0%	35.0%	35.0%	43.0%	43.0%	43.0%	43.0%
Maximum Green (s)	18.0	31.0	31.0	31.0	39.0	39.0	39.0	39.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lag	Lead	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Max	Max	Max	None	None	None	None
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
90th %ile Green (s)	13.2	31.0	31.0	31.0	33.2	33.2	33.2	33.2
90th %ile Term Code	Gap	MaxR	MaxR	MaxR	Hold	Hold	Gap	Gap
70th %ile Green (s)	10.8	31.0	31.0	31.0	25.8	25.8	25.8	25.8
70th %ile Term Code	Gap	MaxR	MaxR	MaxR	Hold	Hold	Gap	Gap
50th %ile Green (s)	9.5	31.0	31.0	31.0	22.0	22.0	22.0	22.0
50th %ile Term Code	Gap	MaxR	MaxR	MaxR	Hold	Hold	Gap	Gap
30th %ile Green (s)	8.2	31.0	31.0	31.0	17.6	17.6	17.6	17.6
30th %ile Term Code	Gap	MaxR	MaxR	MaxR	Hold	Hold	Gap	Gap
10th %ile Green (s)	6.8	31.0	31.0	31.0	13.5	13.5	13.5	13.5
10th %ile Term Code	Gap	MaxR	MaxR	MaxR	Hold	Hold	Gap	Gap

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 75.1
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 89.4
70th %ile Actuated Cycle: 79.6
50th %ile Actuated Cycle: 74.5
30th %ile Actuated Cycle: 68.8
10th %ile Actuated Cycle: 63.3

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	343	731	112	553	227	120	553	98	290	856	344
Future Volume (vph)	343	731	112	553	227	120	553	98	290	856	344
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases					6			8			4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	23.0	42.0	17.0	36.0	36.0	18.0	29.0	29.0	32.0	43.0	43.0
Total Split (%)	19.2%	35.0%	14.2%	30.0%	30.0%	15.0%	24.2%	24.2%	26.7%	35.8%	35.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	Min	None	Min	Min	None	Min	Min
Act Effct Green (s)	16.1	32.7	11.3	27.9	27.9	11.9	23.7	23.7	22.7	34.6	34.6
Actuated g/C Ratio	0.15	0.31	0.11	0.26	0.26	0.11	0.22	0.22	0.21	0.32	0.32
v/c Ratio	0.69	0.81	0.62	0.62	0.40	0.62	0.73	0.21	0.80	0.76	0.50
Control Delay	52.5	41.3	63.9	39.1	6.5	63.1	46.4	2.4	57.8	38.5	8.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	52.5	41.3	63.9	39.1	6.5	63.1	46.4	2.4	57.8	38.5	8.5
LOS	D	D	E	D	A	E	D	A	E	D	A
Approach Delay		44.5		33.9			43.4			35.3	
Approach LOS		D		C			D			D	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 106.9	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 39.0	Intersection LOS: D
Intersection Capacity Utilization 74.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 11: Ocean Street & Water Street



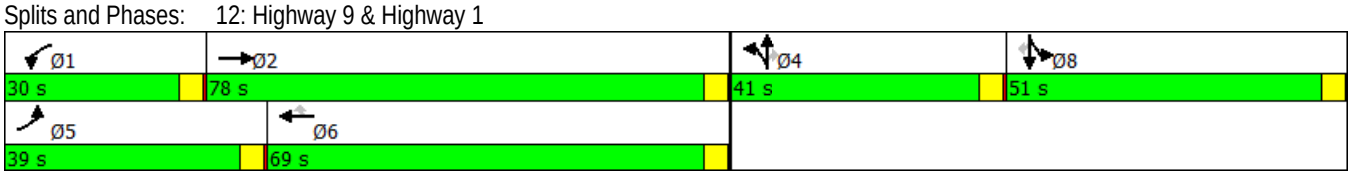
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases					6			8			4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	23.0	42.0	17.0	36.0	36.0	18.0	29.0	29.0	32.0	43.0	43.0
Total Split (%)	19.2%	35.0%	14.2%	30.0%	30.0%	15.0%	24.2%	24.2%	26.7%	35.8%	35.8%
Maximum Green (s)	19.0	38.0	13.0	32.0	32.0	14.0	25.0	25.0	28.0	39.0	39.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	Min	None	Min	Min	None	Min	Min
Walk Time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0
90th %ile Green (s)	19.0	38.0	13.0	32.0	32.0	14.0	25.0	25.0	28.0	39.0	39.0
90th %ile Term Code	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
70th %ile Green (s)	19.0	38.0	13.0	32.0	32.0	14.0	25.0	25.0	28.0	39.0	39.0
70th %ile Term Code	Max	Max	Max	Hold	Hold	Max	Max	Max	Max	Max	Max
50th %ile Green (s)	17.4	36.0	12.9	31.5	31.5	13.4	27.4	27.4	25.0	39.0	39.0
50th %ile Term Code	Gap	Gap	Gap	Hold	Hold	Gap	Hold	Hold	Gap	Max	Max
30th %ile Green (s)	14.5	30.3	10.4	26.2	26.2	10.8	23.3	23.3	20.0	32.5	32.5
30th %ile Term Code	Gap	Gap	Gap	Hold	Hold	Gap	Hold	Hold	Gap	Gap	Gap
10th %ile Green (s)	10.9	22.2	7.4	18.7	18.7	7.6	17.5	17.5	13.9	23.8	23.8
10th %ile Term Code	Gap	Gap	Gap	Hold	Hold	Gap	Hold	Hold	Gap	Gap	Gap

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 106.9
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 120
70th %ile Actuated Cycle: 120
50th %ile Actuated Cycle: 117.3
30th %ile Actuated Cycle: 100
10th %ile Actuated Cycle: 77

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	227	1320	293	1262	472	102	246	423	648	309	247
Future Volume (vph)	227	1320	293	1262	472	102	246	423	648	309	247
Turn Type	Prot	NA	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2	1	6		4	4		8	8	
Permitted Phases					6			4			8
Detector Phase	5	2	1	6	6	4	4	4	8	8	8
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	39.0	78.0	30.0	69.0	69.0	41.0	41.0	41.0	51.0	51.0	51.0
Total Split (%)	19.5%	39.0%	15.0%	34.5%	34.5%	20.5%	20.5%	20.5%	25.5%	25.5%	25.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	Max	None	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	30.4	74.1	22.6	66.3	66.3	37.0	37.0	37.0	47.0	47.0	47.0
Actuated g/C Ratio	0.15	0.38	0.11	0.34	0.34	0.19	0.19	0.19	0.24	0.24	0.24
v/c Ratio	0.87	0.79	0.80	0.78	0.74	0.32	0.76	0.66	0.84	0.75	0.50
Control Delay	110.7	58.2	100.4	63.2	36.2	72.8	90.7	47.2	81.9	81.5	19.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	110.7	58.2	100.4	63.2	36.2	72.8	90.7	47.2	81.9	81.5	19.8
LOS	F	E	F	E	D	E	F	D	F	F	B
Approach Delay		65.5		62.3			64.5			69.0	
Approach LOS		E		E			E			E	

Intersection Summary	
Cycle Length: 200	
Actuated Cycle Length: 196.7	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 65.0	Intersection LOS: E
Intersection Capacity Utilization 81.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 12: Highway 9 & Highway 1



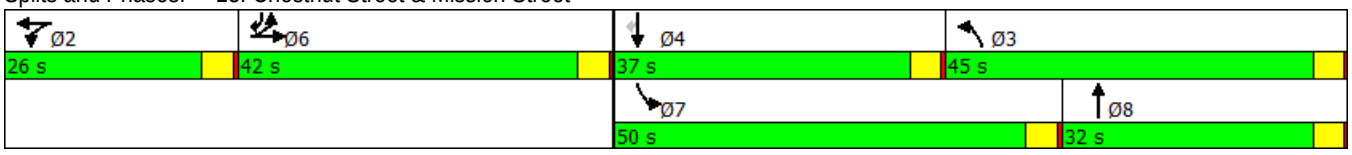
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	1	6		4	4		8	8	
Permitted Phases					6			4			8
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	39.0	78.0	30.0	69.0	69.0	41.0	41.0	41.0	51.0	51.0	51.0
Total Split (%)	19.5%	39.0%	15.0%	34.5%	34.5%	20.5%	20.5%	20.5%	25.5%	25.5%	25.5%
Maximum Green (s)	35.0	74.0	26.0	65.0	65.0	37.0	37.0	37.0	47.0	47.0	47.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Max	None	Max	Max	Max	Max	Max	Max	Max	Max
Walk Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0	0	0	0	0	0	0
90th %ile Green (s)	35.0	74.0	26.0	65.0	65.0	37.0	37.0	37.0	47.0	47.0	47.0
90th %ile Term Code	Max	MaxR	Max	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	35.0	74.2	25.8	65.0	65.0	37.0	37.0	37.0	47.0	47.0	47.0
70th %ile Term Code	Max	Hold	Gap	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	32.0	74.0	23.3	65.3	65.3	37.0	37.0	37.0	47.0	47.0	47.0
50th %ile Term Code	Gap	MaxR	Gap	Hold	Hold	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	28.0	74.0	20.9	66.9	66.9	37.0	37.0	37.0	47.0	47.0	47.0
30th %ile Term Code	Gap	MaxR	Gap	Hold	Hold	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	22.4	74.0	17.4	69.0	69.0	37.0	37.0	37.0	47.0	47.0	47.0
10th %ile Term Code	Gap	MaxR	Gap	Hold	Hold	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR

Intersection Summary
Cycle Length: 200
Actuated Cycle Length: 196.7
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 200
70th %ile Actuated Cycle: 200
50th %ile Actuated Cycle: 197.3
30th %ile Actuated Cycle: 194.9
10th %ile Actuated Cycle: 191.4

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	1312	486	412	74	276	42	258	1380
Future Volume (vph)	1312	486	412	74	276	42	258	1380
Turn Type	Split	NA	NA	Prot	NA	Prot	NA	pm+ov
Protected Phases	6	6	2	3	8	7	4	6
Permitted Phases								4
Detector Phase	6	6	2	3	8	7	4	4 6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	42.0	42.0	26.0	45.0	32.0	50.0	37.0	42.0
Total Split (%)	28.0%	28.0%	17.3%	30.0%	21.3%	33.3%	24.7%	28.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag				Lag	Lag	Lead	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	38.8	38.8	20.0	10.2	29.0	8.1	27.2	70.2
Actuated g/C Ratio	0.35	0.35	0.18	0.09	0.26	0.07	0.25	0.64
v/c Ratio	1.18	1.12dl	0.74	0.46	0.32	0.32	0.30	0.68
Control Delay	131.0	80.9	51.3	59.7	33.4	58.6	35.3	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	131.0	80.9	51.3	59.7	33.4	58.6	35.3	6.7
LOS	F	F	D	E	C	E	D	A
Approach Delay		98.5	51.3		38.7		12.4	
Approach LOS		F	D		D		B	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 109.8	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.18	
Intersection Signal Delay: 55.4	Intersection LOS: E
Intersection Capacity Utilization 75.0%	ICU Level of Service D
Analysis Period (min) 15	
dl Defacto Left Lane. Recode with 1 though lane as a left lane.	

Splits and Phases: 13: Chestnut Street & Mission Street



Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Protected Phases	6	6	2	3	8	7	4	6
Permitted Phases								4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	42.0	42.0	26.0	45.0	32.0	50.0	37.0	42.0
Total Split (%)	28.0%	28.0%	17.3%	30.0%	21.3%	33.3%	24.7%	28.0%
Maximum Green (s)	38.0	38.0	22.0	41.0	28.0	46.0	33.0	38.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag				Lag	Lag	Lead	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	None
Walk Time (s)	5.0	5.0			5.0		5.0	5.0
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0			0		0	0
90th %ile Green (s)	38.0	38.0	22.0	14.3	36.2	11.1	33.0	38.0
90th %ile Term Code	Max	Max	Max	Gap	Hold	Gap	Max	Max
70th %ile Green (s)	38.0	38.0	22.0	11.9	35.5	9.4	33.0	38.0
70th %ile Term Code	Max	Max	Max	Gap	Hold	Gap	Max	Max
50th %ile Green (s)	38.0	38.0	22.0	10.4	31.7	8.2	29.5	38.0
50th %ile Term Code	Max	Max	Max	Gap	Hold	Gap	Gap	Max
30th %ile Green (s)	38.0	38.0	19.3	8.7	25.9	7.0	24.2	38.0
30th %ile Term Code	Max	Max	Gap	Gap	Hold	Gap	Gap	Max
10th %ile Green (s)	38.0	38.0	14.6	0.0	17.9	0.0	17.9	38.0
10th %ile Term Code	Max	Max	Gap	Skip	Hold	Skip	Gap	Max

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 109.8
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 123.3
70th %ile Actuated Cycle: 120.9
50th %ile Actuated Cycle: 115.9
30th %ile Actuated Cycle: 106.2
10th %ile Actuated Cycle: 82.5

Santa Cruz DRP Study
1: Front Street & Laurel Street

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	48	337	246	448	89	5	145	168	44	156	90
Future Volume (vph)	48	337	246	448	89	5	145	168	44	156	90
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases					6			8			4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	20.0	27.0	25.0	32.0	32.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (%)	25.0%	33.8%	31.3%	40.0%	40.0%	10.0%	25.0%	25.0%	10.0%	25.0%	25.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	16.1	28.7	15.7	28.2	28.2	4.0	11.5	11.5	4.0	14.6	14.6
Actuated g/C Ratio	0.22	0.40	0.22	0.39	0.39	0.06	0.16	0.16	0.06	0.20	0.20
v/c Ratio	0.14	0.27	0.71	0.67	0.14	0.06	0.54	0.45	0.52	0.46	0.22
Control Delay	26.3	18.1	37.4	25.7	2.9	37.2	36.1	8.6	58.3	30.1	1.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	26.3	18.1	37.4	25.7	2.9	37.2	36.1	8.6	58.3	30.1	1.5
LOS	C	B	D	C	A	D	D	A	E	C	A
Approach Delay		19.1		26.8			21.6			25.5	
Approach LOS		B		C			C			C	

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 72.5	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 23.9	Intersection LOS: C
Intersection Capacity Utilization 51.8%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 1: Front Street & Laurel Street



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases					6			8			4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	20.0	27.0	25.0	32.0	32.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (%)	25.0%	33.8%	31.3%	40.0%	40.0%	10.0%	25.0%	25.0%	10.0%	25.0%	25.0%
Maximum Green (s)	16.0	23.0	21.0	28.0	28.0	4.0	16.0	16.0	4.0	16.0	16.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0
90th %ile Green (s)	16.0	23.0	21.0	28.0	28.0	4.0	16.0	16.0	4.0	16.0	16.0
90th %ile Term Code	MaxR	MaxR	Max	MaxR	MaxR	Max	Max	Max	Max	Max	Max
70th %ile Green (s)	16.0	24.7	19.3	28.0	28.0	0.0	13.7	13.7	4.0	21.7	21.7
70th %ile Term Code	MaxR	Hold	Gap	MaxR	MaxR	Skip	Gap	Gap	Max	Hold	Hold
50th %ile Green (s)	16.0	27.5	16.5	28.0	28.0	0.0	11.7	11.7	4.0	19.7	19.7
50th %ile Term Code	MaxR	Hold	Gap	MaxR	MaxR	Skip	Gap	Gap	Max	Hold	Hold
30th %ile Green (s)	16.0	31.1	12.9	28.0	28.0	0.0	9.7	9.7	0.0	9.7	9.7
30th %ile Term Code	MaxR	Hold	Gap	MaxR	MaxR	Skip	Hold	Hold	Skip	Gap	Gap
10th %ile Green (s)	16.0	34.2	9.8	28.0	28.0	0.0	7.4	7.4	0.0	7.4	7.4
10th %ile Term Code	MaxR	Hold	Gap	MaxR	MaxR	Skip	Hold	Hold	Skip	Gap	Gap

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 72.5
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 80
70th %ile Actuated Cycle: 77.7
50th %ile Actuated Cycle: 75.7
30th %ile Actuated Cycle: 65.7
10th %ile Actuated Cycle: 63.4

Santa Cruz DRP Study
2: Pacific Avenue & Laurel Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	22	345	34	476	33	31	20	17
Future Volume (vph)	22	345	34	476	33	31	20	17
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	5	2	1	6		8		4
Permitted Phases					8		4	
Detector Phase	5	2	1	6	8	8	4	4
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	20.0	40.0	20.0	40.0	20.0	20.0	20.0	20.0
Total Split (%)	25.0%	50.0%	25.0%	50.0%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	None	Max	Max	Max	Max	Max
Act Effct Green (s)	6.9	36.3	7.1	38.5	16.1	16.1		16.1
Actuated g/C Ratio	0.10	0.54	0.11	0.57	0.24	0.24		0.24
v/c Ratio	0.18	0.41	0.22	0.55	0.11	0.19		0.21
Control Delay	32.1	11.9	31.9	12.8	23.2	15.6		17.0
Queue Delay	0.0	0.0	0.0	18.5	0.0	0.0		0.0
Total Delay	32.1	11.9	31.9	31.3	23.2	15.6		17.0
LOS	C	B	C	C	C	B		B
Approach Delay		13.1		31.3		18.3		17.0
Approach LOS		B		C		B		B

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 67.2	
Natural Cycle: 65	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.55	
Intersection Signal Delay: 22.9	Intersection LOS: C
Intersection Capacity Utilization 45.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 2: Pacific Avenue & Laurel Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6		8		4
Permitted Phases					8		4	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	20.0	40.0	20.0	40.0	20.0	20.0	20.0	20.0
Total Split (%)	25.0%	50.0%	25.0%	50.0%	25.0%	25.0%	25.0%	25.0%
Maximum Green (s)	16.0	36.0	16.0	36.0	16.0	16.0	16.0	16.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Max	None	Max	Max	Max	Max	Max
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
90th %ile Green (s)	8.9	36.0	9.2	36.3	16.0	16.0	16.0	16.0
90th %ile Term Code	Gap	MaxR	Gap	Hold	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	7.6	36.0	7.9	36.3	16.0	16.0	16.0	16.0
70th %ile Term Code	Gap	MaxR	Gap	Hold	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	0.0	36.0	7.0	47.0	16.0	16.0	16.0	16.0
50th %ile Term Code	Skip	MaxR	Gap	Hold	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	0.0	36.0	0.0	36.0	16.0	16.0	16.0	16.0
30th %ile Term Code	Skip	MaxR	Skip	MaxR	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	0.0	36.0	0.0	36.0	16.0	16.0	16.0	16.0
10th %ile Term Code	Skip	MaxR	Skip	MaxR	MaxR	MaxR	MaxR	MaxR

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 67.2
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 73.2
70th %ile Actuated Cycle: 71.9
50th %ile Actuated Cycle: 71
30th %ile Actuated Cycle: 60
10th %ile Actuated Cycle: 60

Santa Cruz DRP Study
3: Front Street & Cathcart Street

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	48	21	22	316	308
Future Volume (vph)	48	21	22	316	308
Turn Type	Prot	Perm	Prot	NA	NA
Protected Phases	5		3	8	4
Permitted Phases		5			
Detector Phase	5	5	3	8	4
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0
Total Split (s)	27.0	27.0	23.0	58.0	35.0
Total Split (%)	31.8%	31.8%	27.1%	68.2%	41.2%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	Max	Max	Max	None	Max
Act Effct Green (s)	23.0	23.0	19.0	54.0	31.0
Actuated g/C Ratio	0.27	0.27	0.22	0.64	0.36
v/c Ratio	0.13	0.06	0.07	0.33	0.37
Control Delay	24.6	10.0	26.8	8.1	19.1
Queue Delay	0.0	0.0	0.0	2.1	0.0
Total Delay	24.6	10.0	26.8	10.2	19.1
LOS	C	B	C	B	B
Approach Delay	20.2			11.3	19.1
Approach LOS	C			B	B

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 85	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.37	
Intersection Signal Delay: 15.9	Intersection LOS: B
Intersection Capacity Utilization 27.5%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: Front Street & Cathcart Street



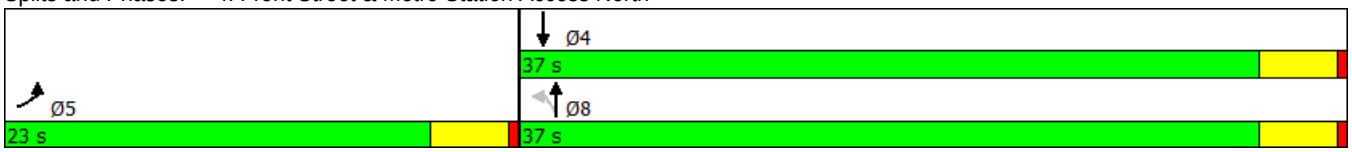
Lane Group	EBL	EBR	NBL	NBT	SBT
Protected Phases	5		3	8	4
Permitted Phases		5			
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0
Total Split (s)	27.0	27.0	23.0	58.0	35.0
Total Split (%)	31.8%	31.8%	27.1%	68.2%	41.2%
Maximum Green (s)	23.0	23.0	19.0	54.0	31.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0
Recall Mode	Max	Max	Max	None	Max
Walk Time (s)	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0
90th %ile Green (s)	23.0	23.0	19.0	54.0	31.0
90th %ile Term Code	MaxR	MaxR	MaxR	Hold	MaxR
70th %ile Green (s)	23.0	23.0	19.0	54.0	31.0
70th %ile Term Code	MaxR	MaxR	MaxR	Hold	MaxR
50th %ile Green (s)	23.0	23.0	19.0	54.0	31.0
50th %ile Term Code	MaxR	MaxR	MaxR	Hold	MaxR
30th %ile Green (s)	23.0	23.0	19.0	54.0	31.0
30th %ile Term Code	MaxR	MaxR	MaxR	Hold	MaxR
10th %ile Green (s)	23.0	23.0	19.0	54.0	31.0
10th %ile Term Code	MaxR	MaxR	MaxR	Hold	MaxR

Intersection Summary
Cycle Length: 85
Actuated Cycle Length: 85
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 85
70th %ile Actuated Cycle: 85
50th %ile Actuated Cycle: 85
30th %ile Actuated Cycle: 85
10th %ile Actuated Cycle: 85

Lane Group	EBL	NBL	NBT	SBT
Lane Configurations				
Traffic Volume (vph)	12	2	300	291
Future Volume (vph)	12	2	300	291
Turn Type	Prot	Perm	NA	NA
Protected Phases	5		8	4
Permitted Phases		8		
Detector Phase	5	8	8	4
Switch Phase				
Minimum Initial (s)	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0
Total Split (s)	23.0	37.0	37.0	37.0
Total Split (%)	38.3%	61.7%	61.7%	61.7%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	Max	Max	Max
Act Effct Green (s)	6.7	51.8	51.8	51.8
Actuated g/C Ratio	0.12	0.95	0.95	0.95
v/c Ratio	0.16	0.00	0.21	0.25
Control Delay	23.7	1.5	1.3	1.4
Queue Delay	0.0	0.0	0.0	0.0
Total Delay	23.7	1.5	1.3	1.4
LOS	C	A	A	A
Approach Delay	23.7		1.3	1.4
Approach LOS	C		A	A

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 54.7	
Natural Cycle: 40	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.25	
Intersection Signal Delay: 1.9	Intersection LOS: A
Intersection Capacity Utilization 27.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 4: Front Street & Metro Station Access North



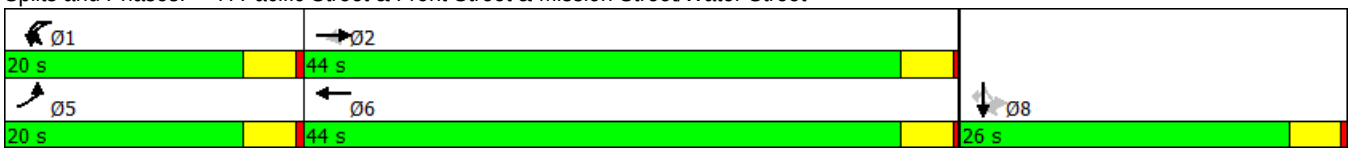
Lane Group	EBL	NBL	NBT	SBT
Protected Phases	5		8	4
Permitted Phases		8		
Minimum Initial (s)	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0
Total Split (s)	23.0	37.0	37.0	37.0
Total Split (%)	38.3%	61.7%	61.7%	61.7%
Maximum Green (s)	19.0	33.0	33.0	33.0
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	Max	Max	Max
Walk Time (s)	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0
90th %ile Green (s)	9.4	48.0	48.0	48.0
90th %ile Term Code	Gap	Dwell	Dwell	Dwell
70th %ile Green (s)	0.0	48.0	48.0	48.0
70th %ile Term Code	Skip	Dwell	Dwell	Dwell
50th %ile Green (s)	0.0	48.0	48.0	48.0
50th %ile Term Code	Skip	Dwell	Dwell	Dwell
30th %ile Green (s)	0.0	48.0	48.0	48.0
30th %ile Term Code	Skip	Dwell	Dwell	Dwell
10th %ile Green (s)	0.0	48.0	48.0	48.0
10th %ile Term Code	Skip	Dwell	Dwell	Dwell

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 54.7
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 65.4
70th %ile Actuated Cycle: 52
50th %ile Actuated Cycle: 52
30th %ile Actuated Cycle: 52
10th %ile Actuated Cycle: 52

Lane Group	EBL	EBT	EBR	WBL2	WBL	WBT	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	81	380	75	61	48	637	18	107
Future Volume (vph)	81	380	75	61	48	637	18	107
Turn Type	Prot	NA	Perm	Prot	Prot	NA	NA	Perm
Protected Phases	5	2		1	1	6	8	
Permitted Phases			2					8
Detector Phase	5	2	2	1	1	6	8	8
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	8.0	20.0	20.0	20.0
Total Split (s)	20.0	44.0	44.0	20.0	20.0	44.0	26.0	26.0
Total Split (%)	22.2%	48.9%	48.9%	22.2%	22.2%	48.9%	28.9%	28.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	Max	Max	Max
Act Effct Green (s)	9.6	40.8	40.8	8.9	8.9	40.2	22.1	22.1
Actuated g/C Ratio	0.12	0.50	0.50	0.11	0.11	0.49	0.27	0.27
v/c Ratio	0.45	0.25	0.13	0.40	0.28	0.41	0.21	0.23
Control Delay	41.5	13.0	6.8	41.6	37.9	15.0	26.7	6.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.5	13.0	6.8	41.6	37.9	15.0	26.7	6.6
LOS	D	B	A	D	D	B	C	A
Approach Delay		16.1				18.7	15.3	
Approach LOS		B				B	B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 81.7	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.45	
Intersection Signal Delay: 17.3	Intersection LOS: B
Intersection Capacity Utilization 36.7%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Pacific Street & Front Street & Mission Street/Water Street



Lane Group	EBL	EBT	EBR	WBL2	WBL	WBT	SBT	SBR
Protected Phases	5	2		1	1	6	8	
Permitted Phases			2					8
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	8.0	20.0	20.0	20.0
Total Split (s)	20.0	44.0	44.0	20.0	20.0	44.0	26.0	26.0
Total Split (%)	22.2%	48.9%	48.9%	22.2%	22.2%	48.9%	28.9%	28.9%
Maximum Green (s)	16.0	40.0	40.0	16.0	16.0	40.0	22.0	22.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag	Lag	Lead	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	Max	Max	Max
Walk Time (s)		5.0	5.0			5.0	5.0	5.0
Flash Dont Walk (s)		11.0	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0			0	0	0
90th %ile Green (s)	13.6	40.9	40.9	12.7	12.7	40.0	22.0	22.0
90th %ile Term Code	Gap	Hold	Hold	Gap	Gap	MaxR	MaxR	MaxR
70th %ile Green (s)	11.3	40.8	40.8	10.5	10.5	40.0	22.0	22.0
70th %ile Term Code	Gap	Hold	Hold	Gap	Gap	MaxR	MaxR	MaxR
50th %ile Green (s)	9.7	40.8	40.8	8.9	8.9	40.0	22.0	22.0
50th %ile Term Code	Gap	Hold	Hold	Gap	Gap	MaxR	MaxR	MaxR
30th %ile Green (s)	8.1	40.6	40.6	7.5	7.5	40.0	22.0	22.0
30th %ile Term Code	Gap	Hold	Hold	Gap	Gap	MaxR	MaxR	MaxR
10th %ile Green (s)	0.0	40.0	40.0	0.0	0.0	40.0	22.0	22.0
10th %ile Term Code	Skip	Hold	Hold	Skip	Skip	MaxR	MaxR	MaxR

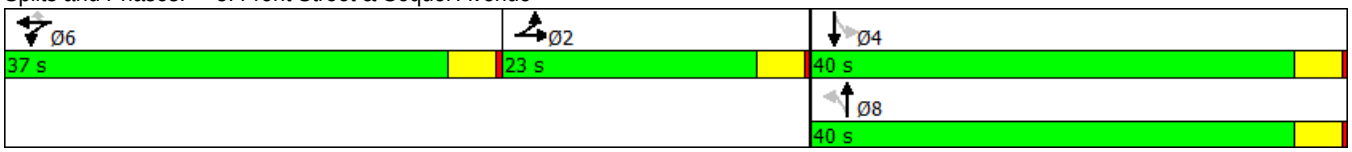
Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 81.7
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 87.6
70th %ile Actuated Cycle: 85.3
50th %ile Actuated Cycle: 83.7
30th %ile Actuated Cycle: 82.1
10th %ile Actuated Cycle: 70

Santa Cruz DRP Study
8: Front Street & Soquel Avenue

Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	52	223	104	42	10	229	24	172
Future Volume (vph)	52	223	104	42	10	229	24	172
Turn Type	NA	Split	NA	Perm	Perm	NA	Perm	NA
Protected Phases	2	6	6			8		4
Permitted Phases				6	8		4	
Detector Phase	2	6	6	6	8	8	4	4
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	23.0	37.0	37.0	37.0	40.0	40.0	40.0	40.0
Total Split (%)	23.0%	37.0%	37.0%	37.0%	40.0%	40.0%	40.0%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lag	Lead	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	Max	Max	None	None	None	None
Act Effct Green (s)	7.4	33.7	33.7	33.7		14.3	14.3	14.3
Actuated g/C Ratio	0.11	0.52	0.52	0.52		0.22	0.22	0.22
v/c Ratio	0.27	0.22	0.22	0.06		0.60	0.22	0.64
Control Delay	27.8	11.9	11.8	3.6		18.9	25.8	32.0
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	27.8	11.9	11.8	3.6		18.9	25.8	32.0
LOS	C	B	B	A		B	C	C
Approach Delay	27.8		10.9			18.9		31.3
Approach LOS	C		B			B		C

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 65	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.64	
Intersection Signal Delay: 19.4	Intersection LOS: B
Intersection Capacity Utilization 42.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 8: Front Street & Soquel Avenue



Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	2	6	6			8		4
Permitted Phases				6	8		4	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	23.0	37.0	37.0	37.0	40.0	40.0	40.0	40.0
Total Split (%)	23.0%	37.0%	37.0%	37.0%	40.0%	40.0%	40.0%	40.0%
Maximum Green (s)	19.0	33.0	33.0	33.0	36.0	36.0	36.0	36.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lag	Lead	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Max	Max	Max	None	None	None	None
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
90th %ile Green (s)	9.3	33.0	33.0	33.0	21.0	21.0	21.0	21.0
90th %ile Term Code	Gap	MaxR	MaxR	MaxR	Hold	Hold	Gap	Gap
70th %ile Green (s)	8.0	33.0	33.0	33.0	16.9	16.9	16.9	16.9
70th %ile Term Code	Gap	MaxR	MaxR	MaxR	Hold	Hold	Gap	Gap
50th %ile Green (s)	7.3	33.0	33.0	33.0	14.4	14.4	14.4	14.4
50th %ile Term Code	Gap	MaxR	MaxR	MaxR	Hold	Hold	Gap	Gap
30th %ile Green (s)	6.6	33.0	33.0	33.0	12.1	12.1	12.1	12.1
30th %ile Term Code	Gap	MaxR	MaxR	MaxR	Hold	Hold	Gap	Gap
10th %ile Green (s)	0.0	33.0	33.0	33.0	8.5	8.5	8.5	8.5
10th %ile Term Code	Skip	MaxR	MaxR	MaxR	Hold	Hold	Gap	Gap

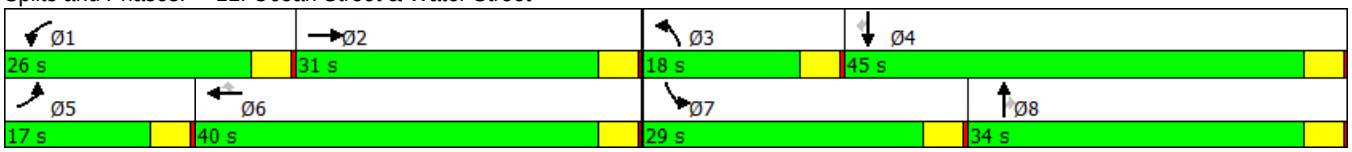
Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 65
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 75.3
70th %ile Actuated Cycle: 69.9
50th %ile Actuated Cycle: 66.7
30th %ile Actuated Cycle: 63.7
10th %ile Actuated Cycle: 49.5

Santa Cruz DRP Study
11: Ocean Street & Water Street

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	167	303	136	459	255	78	466	40	175	620	391
Future Volume (vph)	167	303	136	459	255	78	466	40	175	620	391
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases					6			8			4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	17.0	31.0	26.0	40.0	40.0	18.0	34.0	34.0	29.0	45.0	45.0
Total Split (%)	14.2%	25.8%	21.7%	33.3%	33.3%	15.0%	28.3%	28.3%	24.2%	37.5%	37.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	Min	None	Min	Min	None	Min	Min
Act Effct Green (s)	10.2	17.4	12.8	20.1	20.1	9.8	20.5	20.5	14.8	28.6	28.6
Actuated g/C Ratio	0.12	0.21	0.16	0.24	0.24	0.12	0.25	0.25	0.18	0.35	0.35
v/c Ratio	0.43	0.52	0.53	0.59	0.46	0.41	0.58	0.08	0.59	0.55	0.52
Control Delay	41.2	33.0	43.2	32.2	6.8	45.1	31.5	0.3	42.3	25.9	5.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.2	33.0	43.2	32.2	6.8	45.1	31.5	0.3	42.3	25.9	5.5
LOS	D	C	D	C	A	D	C	A	D	C	A
Approach Delay		35.7		26.3			31.2			21.6	
Approach LOS		D		C			C			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 82.5	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 27.0	Intersection LOS: C
Intersection Capacity Utilization 53.4%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 11: Ocean Street & Water Street



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases					6			8			4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	17.0	31.0	26.0	40.0	40.0	18.0	34.0	34.0	29.0	45.0	45.0
Total Split (%)	14.2%	25.8%	21.7%	33.3%	33.3%	15.0%	28.3%	28.3%	24.2%	37.5%	37.5%
Maximum Green (s)	13.0	27.0	22.0	36.0	36.0	14.0	30.0	30.0	25.0	41.0	41.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	Min	None	Min	Min	None	Min	Min
Walk Time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0
90th %ile Green (s)	13.0	23.6	19.8	30.4	30.4	14.0	30.5	30.5	23.2	39.7	39.7
90th %ile Term Code	Max	Hold	Gap	Gap	Gap	Max	Hold	Hold	Gap	Gap	Gap
70th %ile Green (s)	11.7	20.0	15.2	23.5	23.5	11.5	24.7	24.7	17.8	31.0	31.0
70th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Gap	Hold	Hold	Gap	Gap	Gap
50th %ile Green (s)	10.0	16.8	12.4	19.2	19.2	9.6	20.4	20.4	14.4	25.2	25.2
50th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Gap	Hold	Hold	Gap	Gap	Gap
30th %ile Green (s)	8.7	15.0	10.2	16.5	16.5	8.0	17.4	17.4	11.8	21.2	21.2
30th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Gap	Hold	Hold	Gap	Gap	Gap
10th %ile Green (s)	7.0	11.6	7.6	12.2	12.2	0.0	11.3	11.3	8.6	23.9	23.9
10th %ile Term Code	Gap	Hold	Gap	Gap	Gap	Skip	Gap	Gap	Gap	Hold	Hold

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 82.5
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 113.1
70th %ile Actuated Cycle: 93.7
50th %ile Actuated Cycle: 80
30th %ile Actuated Cycle: 70.4
10th %ile Actuated Cycle: 55.1

Santa Cruz DRP Study
12: Highway 9 & Highway 1

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	213	1529	278	1394	515	27	166	203	412	161	185
Future Volume (vph)	213	1529	278	1394	515	27	166	203	412	161	185
Turn Type	Prot	NA	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2	1	6		4	4		8	8	
Permitted Phases					6			4			8
Detector Phase	5	2	1	6	6	4	4	4	8	8	8
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	41.0	94.0	29.0	82.0	82.0	34.0	34.0	34.0	43.0	43.0	43.0
Total Split (%)	20.5%	47.0%	14.5%	41.0%	41.0%	17.0%	17.0%	17.0%	21.5%	21.5%	21.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	Max	None	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	29.4	90.0	21.4	82.1	82.1	30.0	30.0	30.0	39.0	39.0	39.0
Actuated g/C Ratio	0.15	0.46	0.11	0.42	0.42	0.15	0.15	0.15	0.20	0.20	0.20
v/c Ratio	0.84	0.71	0.78	0.69	0.67	0.11	0.62	0.40	0.72	0.49	0.43
Control Delay	107.6	45.0	100.5	49.6	26.9	74.4	89.2	30.9	82.0	75.9	10.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	107.6	45.0	100.5	49.6	26.9	74.4	89.2	30.9	82.0	75.9	10.5
LOS	F	D	F	D	C	E	F	C	F	E	B
Approach Delay		52.4		50.7			58.3			63.2	
Approach LOS		D		D			E			E	

Intersection Summary	
Cycle Length: 200	
Actuated Cycle Length: 196.5	
Natural Cycle: 80	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 53.7	Intersection LOS: D
Intersection Capacity Utilization 72.6%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 12: Highway 9 & Highway 1



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	1	6		4	4		8	8	
Permitted Phases					6			4			8
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	41.0	94.0	29.0	82.0	82.0	34.0	34.0	34.0	43.0	43.0	43.0
Total Split (%)	20.5%	47.0%	14.5%	41.0%	41.0%	17.0%	17.0%	17.0%	21.5%	21.5%	21.5%
Maximum Green (s)	37.0	90.0	25.0	78.0	78.0	30.0	30.0	30.0	39.0	39.0	39.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Max	None	Max	Max	Max	Max	Max	Max	Max	Max
Walk Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0	0	0	0	0	0	0
90th %ile Green (s)	37.0	90.0	25.0	78.0	78.0	30.0	30.0	30.0	39.0	39.0	39.0
90th %ile Term Code	Max	MaxR	Max	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	33.9	90.0	24.4	80.5	80.5	30.0	30.0	30.0	39.0	39.0	39.0
70th %ile Term Code	Gap	MaxR	Gap	Hold	Hold	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	29.9	90.0	22.0	82.1	82.1	30.0	30.0	30.0	39.0	39.0	39.0
50th %ile Term Code	Gap	MaxR	Gap	Hold	Hold	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	26.0	90.0	19.6	83.6	83.6	30.0	30.0	30.0	39.0	39.0	39.0
30th %ile Term Code	Gap	MaxR	Gap	Hold	Hold	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	20.5	90.0	16.4	85.9	85.9	30.0	30.0	30.0	39.0	39.0	39.0
10th %ile Term Code	Gap	MaxR	Gap	Hold	Hold	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR

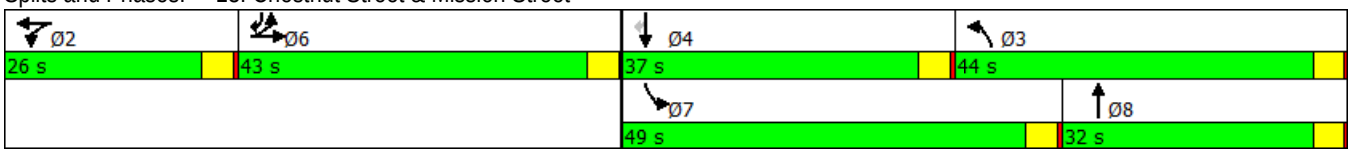
Intersection Summary
Cycle Length: 200
Actuated Cycle Length: 196.5
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 200
70th %ile Actuated Cycle: 199.4
50th %ile Actuated Cycle: 197
30th %ile Actuated Cycle: 194.6
10th %ile Actuated Cycle: 191.4

Santa Cruz DRP Study
13: Chestnut Street & Mission Street

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	1428	392	367	95	294	58	209	1471
Future Volume (vph)	1428	392	367	95	294	58	209	1471
Turn Type	Split	NA	NA	Prot	NA	Prot	NA	pm+ov
Protected Phases	6	6	2	3	8	7	4	6
Permitted Phases								4
Detector Phase	6	6	2	3	8	7	4	4 6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	43.0	43.0	26.0	44.0	32.0	49.0	37.0	43.0
Total Split (%)	28.7%	28.7%	17.3%	29.3%	21.3%	32.7%	24.7%	28.7%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag				Lag	Lag	Lead	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	39.2	39.2	19.8	12.4	36.0	9.6	30.9	74.2
Actuated g/C Ratio	0.33	0.33	0.17	0.10	0.30	0.08	0.26	0.63
v/c Ratio	1.50	1.44dl	0.77	0.57	0.33	0.44	0.25	0.82
Control Delay	266.2	136.1	56.8	63.7	33.7	63.2	36.2	13.6
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	266.2	136.1	56.8	63.7	33.7	63.2	36.2	13.6
LOS	F	F	E	E	C	E	D	B
Approach Delay		185.7	56.8		40.6		17.9	
Approach LOS		F	E		D		B	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 118.4	
Natural Cycle: 120	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.50	
Intersection Signal Delay: 94.6	Intersection LOS: F
Intersection Capacity Utilization 77.9%	ICU Level of Service D
Analysis Period (min) 15	
dl Defacto Left Lane. Recode with 1 though lane as a left lane.	

Splits and Phases: 13: Chestnut Street & Mission Street



Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Protected Phases	6	6	2	3	8	7	4	6
Permitted Phases								4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	43.0	43.0	26.0	44.0	32.0	49.0	37.0	43.0
Total Split (%)	28.7%	28.7%	17.3%	29.3%	21.3%	32.7%	24.7%	28.7%
Maximum Green (s)	39.0	39.0	22.0	40.0	28.0	45.0	33.0	39.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag				Lag	Lag	Lead	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	None
Walk Time (s)	5.0	5.0			5.0		5.0	5.0
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0			0		0	0
90th %ile Green (s)	39.0	39.0	22.0	17.4	37.0	13.4	33.0	39.0
90th %ile Term Code	Max	Max	Max	Gap	Hold	Gap	Max	Max
70th %ile Green (s)	39.0	39.0	22.0	14.4	36.2	11.2	33.0	39.0
70th %ile Term Code	Max	Max	Max	Gap	Hold	Gap	Max	Max
50th %ile Green (s)	39.0	39.0	21.4	12.5	35.8	9.7	33.0	39.0
50th %ile Term Code	Max	Max	Gap	Gap	Hold	Gap	Max	Max
30th %ile Green (s)	39.0	39.0	19.0	10.7	34.1	8.3	31.7	39.0
30th %ile Term Code	Max	Max	Gap	Gap	Hold	Gap	Gap	Max
10th %ile Green (s)	39.0	39.0	14.9	7.8	36.1	0.0	24.3	39.0
10th %ile Term Code	Max	Max	Gap	Gap	Hold	Skip	Gap	Max

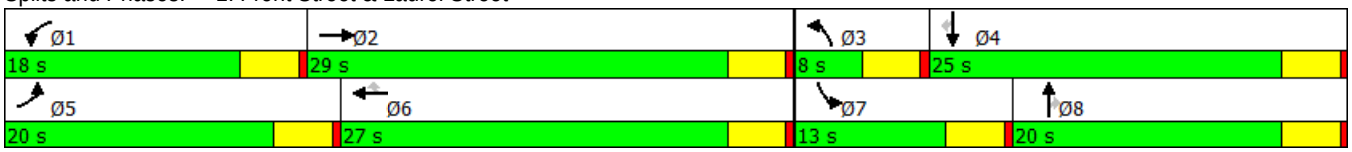
Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 118.4
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 127.4
70th %ile Actuated Cycle: 124.4
50th %ile Actuated Cycle: 121.9
30th %ile Actuated Cycle: 116.4
10th %ile Actuated Cycle: 102

Santa Cruz DRP Study
1: Front Street & Laurel Street

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	108	638	228	379	119	8	170	229	126	327	174
Future Volume (vph)	108	638	228	379	119	8	170	229	126	327	174
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases					6			8			4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	20.0	29.0	18.0	27.0	27.0	8.0	20.0	20.0	13.0	25.0	25.0
Total Split (%)	25.0%	36.3%	22.5%	33.8%	33.8%	10.0%	25.0%	25.0%	16.3%	31.3%	31.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	16.0	26.0	13.1	23.0	23.0	4.0	12.4	12.4	8.6	23.5	23.5
Actuated g/C Ratio	0.21	0.34	0.17	0.30	0.30	0.05	0.16	0.16	0.11	0.31	0.31
v/c Ratio	0.31	0.58	0.78	0.71	0.21	0.09	0.59	0.52	0.68	0.59	0.30
Control Delay	29.2	23.7	49.8	32.7	2.3	38.2	37.9	8.5	52.6	27.8	5.1
Queue Delay	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	29.2	25.3	49.8	32.7	2.3	38.2	37.9	8.5	52.6	27.8	5.1
LOS	C	C	D	C	A	D	D	A	D	C	A
Approach Delay		25.8		33.1			21.4			26.5	
Approach LOS		C		C			C			C	

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 76.1	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.78	
Intersection Signal Delay: 27.4	Intersection LOS: C
Intersection Capacity Utilization 65.1%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 1: Front Street & Laurel Street



Santa Cruz DRP Study
1: Front Street & Laurel Street

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases					6			8			4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	20.0	29.0	18.0	27.0	27.0	8.0	20.0	20.0	13.0	25.0	25.0
Total Split (%)	25.0%	36.3%	22.5%	33.8%	33.8%	10.0%	25.0%	25.0%	16.3%	31.3%	31.3%
Maximum Green (s)	16.0	25.0	14.0	23.0	23.0	4.0	16.0	16.0	9.0	21.0	21.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0
90th %ile Green (s)	16.0	25.0	14.0	23.0	23.0	4.0	16.0	16.0	9.0	21.0	21.0
90th %ile Term Code	MaxR	MaxR	Max	MaxR	MaxR	Max	Max	Max	Max	Max	Max
70th %ile Green (s)	16.0	25.0	14.0	23.0	23.0	0.0	15.6	15.6	9.0	28.6	28.6
70th %ile Term Code	MaxR	MaxR	Max	MaxR	MaxR	Skip	Gap	Gap	Max	Hold	Hold
50th %ile Green (s)	16.0	25.0	14.0	23.0	23.0	0.0	12.5	12.5	9.0	25.5	25.5
50th %ile Term Code	MaxR	MaxR	Max	MaxR	MaxR	Skip	Gap	Gap	Max	Hold	Hold
30th %ile Green (s)	16.0	25.4	13.6	23.0	23.0	0.0	10.6	10.6	9.0	23.6	23.6
30th %ile Term Code	MaxR	Hold	Gap	MaxR	MaxR	Skip	Gap	Gap	Max	Hold	Hold
10th %ile Green (s)	16.0	28.8	10.2	23.0	23.0	0.0	7.8	7.8	7.2	19.0	19.0
10th %ile Term Code	MaxR	Hold	Gap	MaxR	MaxR	Skip	Gap	Gap	Gap	Hold	Hold

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 76.1
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 80
70th %ile Actuated Cycle: 79.6
50th %ile Actuated Cycle: 76.5
30th %ile Actuated Cycle: 74.6
10th %ile Actuated Cycle: 70

Santa Cruz DRP Study
2: Pacific Avenue & Laurel Street

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	55	660	41	470	41	79	57	59
Future Volume (vph)	55	660	41	470	41	79	57	59
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	5	2	1	6		8		4
Permitted Phases					8		4	
Detector Phase	5	2	1	6	8	8	4	4
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	20.0	40.0	20.0	40.0	20.0	20.0	20.0	20.0
Total Split (%)	25.0%	50.0%	25.0%	50.0%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	None	Max	Max	Max	Max	Max
Act Effct Green (s)	7.9	37.0	7.2	36.4	16.2	16.2		16.2
Actuated g/C Ratio	0.12	0.54	0.11	0.54	0.24	0.24		0.24
v/c Ratio	0.31	0.71	0.23	0.60	0.16	0.32		0.46
Control Delay	33.3	17.9	32.5	15.2	24.9	19.9		26.0
Queue Delay	0.0	0.0	0.0	5.4	0.0	0.0		0.0
Total Delay	33.3	17.9	32.5	20.6	24.9	19.9		26.0
LOS	C	B	C	C	C	B		C
Approach Delay		19.0		21.4		21.1		26.0
Approach LOS		B		C		C		C

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 68	
Natural Cycle: 75	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.71	
Intersection Signal Delay: 20.8	Intersection LOS: C
Intersection Capacity Utilization 69.0%	ICU Level of Service C
Analysis Period (min) 15	

Splits and Phases: 2: Pacific Avenue & Laurel Street



Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6		8		4
Permitted Phases					8		4	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	20.0	40.0	20.0	40.0	20.0	20.0	20.0	20.0
Total Split (%)	25.0%	50.0%	25.0%	50.0%	25.0%	25.0%	25.0%	25.0%
Maximum Green (s)	16.0	36.0	16.0	36.0	16.0	16.0	16.0	16.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Max	None	Max	Max	Max	Max	Max
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
90th %ile Green (s)	10.9	37.4	9.5	36.0	16.0	16.0	16.0	16.0
90th %ile Term Code	Gap	Hold	Gap	MaxR	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	9.1	37.0	8.1	36.0	16.0	16.0	16.0	16.0
70th %ile Term Code	Gap	Hold	Gap	MaxR	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	7.9	36.8	7.1	36.0	16.0	16.0	16.0	16.0
50th %ile Term Code	Gap	Hold	Gap	MaxR	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	0.0	36.0	0.0	36.0	16.0	16.0	16.0	16.0
30th %ile Term Code	Skip	MaxR	Skip	MaxR	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	0.0	36.0	0.0	36.0	16.0	16.0	16.0	16.0
10th %ile Term Code	Skip	MaxR	Skip	MaxR	MaxR	MaxR	MaxR	MaxR

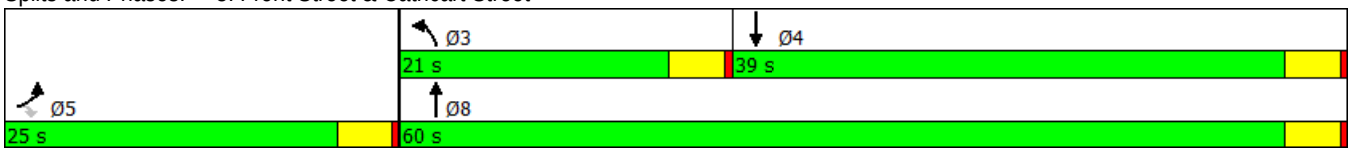
Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 68
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 74.9
70th %ile Actuated Cycle: 73.1
50th %ile Actuated Cycle: 71.9
30th %ile Actuated Cycle: 60
10th %ile Actuated Cycle: 60

Santa Cruz DRP Study
3: Front Street & Cathcart Street

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	116	61	56	425	657
Future Volume (vph)	116	61	56	425	657
Turn Type	Prot	Perm	Prot	NA	NA
Protected Phases	5		3	8	4
Permitted Phases		5			
Detector Phase	5	5	3	8	4
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0
Total Split (s)	25.0	25.0	21.0	60.0	39.0
Total Split (%)	29.4%	29.4%	24.7%	70.6%	45.9%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	Max	Max	Max	None	Max
Act Effct Green (s)	21.0	21.0	17.0	56.0	35.0
Actuated g/C Ratio	0.25	0.25	0.20	0.66	0.41
v/c Ratio	0.27	0.15	0.17	0.37	0.59
Control Delay	27.9	8.0	29.7	7.6	20.4
Queue Delay	0.0	0.0	0.0	2.8	0.0
Total Delay	27.9	8.0	29.7	10.4	20.4
LOS	C	A	C	B	C
Approach Delay	21.0			12.6	20.4
Approach LOS	C			B	C

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 85	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 18.0	Intersection LOS: B
Intersection Capacity Utilization 42.9%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 3: Front Street & Cathcart Street



Lane Group	EBL	EBR	NBL	NBT	SBT
Protected Phases	5		3	8	4
Permitted Phases		5			
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0
Total Split (s)	25.0	25.0	21.0	60.0	39.0
Total Split (%)	29.4%	29.4%	24.7%	70.6%	45.9%
Maximum Green (s)	21.0	21.0	17.0	56.0	35.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0
Recall Mode	Max	Max	Max	None	Max
Walk Time (s)	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0
90th %ile Green (s)	21.0	21.0	17.0	56.0	35.0
90th %ile Term Code	MaxR	MaxR	MaxR	Hold	MaxR
70th %ile Green (s)	21.0	21.0	17.0	56.0	35.0
70th %ile Term Code	MaxR	MaxR	MaxR	Hold	MaxR
50th %ile Green (s)	21.0	21.0	17.0	56.0	35.0
50th %ile Term Code	MaxR	MaxR	MaxR	Hold	MaxR
30th %ile Green (s)	21.0	21.0	17.0	56.0	35.0
30th %ile Term Code	MaxR	MaxR	MaxR	Hold	MaxR
10th %ile Green (s)	21.0	21.0	17.0	56.0	35.0
10th %ile Term Code	MaxR	MaxR	MaxR	Hold	MaxR

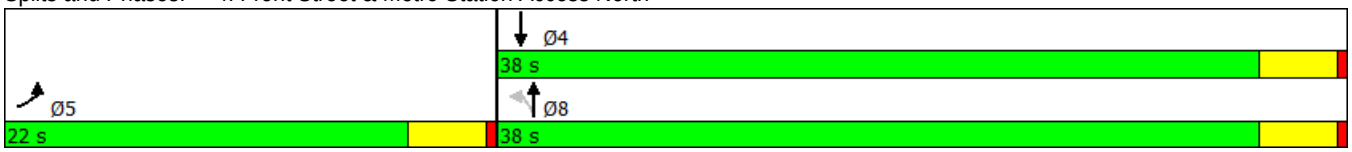
Intersection Summary
Cycle Length: 85
Actuated Cycle Length: 85
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 85
70th %ile Actuated Cycle: 85
50th %ile Actuated Cycle: 85
30th %ile Actuated Cycle: 85
10th %ile Actuated Cycle: 85

Santa Cruz DRP Study
4: Front Street & Metro Station Access North

Lane Group	EBL	NBL	NBT	SBT
Lane Configurations				
Traffic Volume (vph)	17	5	442	664
Future Volume (vph)	17	5	442	664
Turn Type	Prot	Perm	NA	NA
Protected Phases	5		8	4
Permitted Phases		8		
Detector Phase	5	8	8	4
Switch Phase				
Minimum Initial (s)	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0
Total Split (s)	22.0	38.0	38.0	38.0
Total Split (%)	36.7%	63.3%	63.3%	63.3%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	Max	Max	Max
Act Effct Green (s)	6.9	52.8	52.8	52.8
Actuated g/C Ratio	0.12	0.95	0.95	0.95
v/c Ratio	0.18	0.01	0.26	0.41
Control Delay	24.9	1.4	1.4	2.1
Queue Delay	0.0	0.0	0.0	0.1
Total Delay	24.9	1.4	1.4	2.1
LOS	C	A	A	A
Approach Delay	24.9		1.4	2.1
Approach LOS	C		A	A

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 55.8	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.41	
Intersection Signal Delay: 2.3	Intersection LOS: A
Intersection Capacity Utilization 46.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 4: Front Street & Metro Station Access North



Lane Group	EBL	NBL	NBT	SBT
Protected Phases	5		8	4
Permitted Phases		8		
Minimum Initial (s)	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0
Total Split (s)	22.0	38.0	38.0	38.0
Total Split (%)	36.7%	63.3%	63.3%	63.3%
Maximum Green (s)	18.0	34.0	34.0	34.0
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	Max	Max	Max
Walk Time (s)	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0
90th %ile Green (s)	9.9	49.0	49.0	49.0
90th %ile Term Code	Gap	Dwell	Dwell	Dwell
70th %ile Green (s)	0.0	49.0	49.0	49.0
70th %ile Term Code	Skip	Dwell	Dwell	Dwell
50th %ile Green (s)	0.0	49.0	49.0	49.0
50th %ile Term Code	Skip	Dwell	Dwell	Dwell
30th %ile Green (s)	0.0	49.0	49.0	49.0
30th %ile Term Code	Skip	Dwell	Dwell	Dwell
10th %ile Green (s)	0.0	49.0	49.0	49.0
10th %ile Term Code	Skip	Dwell	Dwell	Dwell

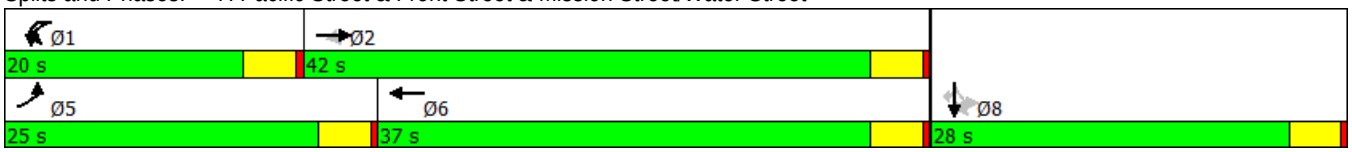
Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 55.8
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 66.9
70th %ile Actuated Cycle: 53
50th %ile Actuated Cycle: 53
30th %ile Actuated Cycle: 53
10th %ile Actuated Cycle: 53

Santa Cruz DRP Study
7: Pacific Street & Front Street & Mission Street/Water Street

Lane Group	EBL	EBT	EBR	WBL2	WBL	WBT	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	152	629	110	108	49	630	33	174
Future Volume (vph)	152	629	110	108	49	630	33	174
Turn Type	Prot	NA	Perm	Prot	Prot	NA	NA	Perm
Protected Phases	5	2		1	1	6	8	
Permitted Phases			2					8
Detector Phase	5	2	2	1	1	6	8	8
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	8.0	20.0	20.0	20.0
Total Split (s)	25.0	42.0	42.0	20.0	20.0	37.0	28.0	28.0
Total Split (%)	27.8%	46.7%	46.7%	22.2%	22.2%	41.1%	31.1%	31.1%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	None	Max	Max	Max
Act Effct Green (s)	12.6	37.4	37.4	10.6	10.6	33.1	24.1	24.1
Actuated g/C Ratio	0.15	0.46	0.46	0.13	0.13	0.40	0.29	0.29
v/c Ratio	0.59	0.41	0.18	0.50	0.23	0.47	0.38	0.32
Control Delay	41.1	17.0	9.7	41.0	34.2	19.8	26.5	8.0
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	41.1	17.0	9.7	41.0	34.2	19.8	26.5	8.0
LOS	D	B	A	D	C	B	C	A
Approach Delay		20.0				23.6	17.5	
Approach LOS		B				C	B	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 81.8	
Natural Cycle: 50	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.59	
Intersection Signal Delay: 20.9	Intersection LOS: C
Intersection Capacity Utilization 46.0%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 7: Pacific Street & Front Street & Mission Street/Water Street



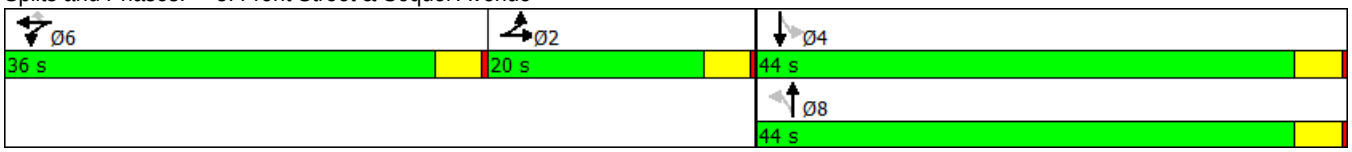
Lane Group	EBL	EBT	EBR	WBL2	WBL	WBT	SBT	SBR
Protected Phases	5	2		1	1	6	8	
Permitted Phases			2					8
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	8.0	20.0	20.0	20.0
Total Split (s)	25.0	42.0	42.0	20.0	20.0	37.0	28.0	28.0
Total Split (%)	27.8%	46.7%	46.7%	22.2%	22.2%	41.1%	31.1%	31.1%
Maximum Green (s)	21.0	38.0	38.0	16.0	16.0	33.0	24.0	24.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag	Lag	Lead	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	Max	Max	Max
Walk Time (s)		5.0	5.0			5.0	5.0	5.0
Flash Dont Walk (s)		11.0	11.0			11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0			0	0	0
90th %ile Green (s)	18.0	36.0	36.0	15.0	15.0	33.0	24.0	24.0
90th %ile Term Code	Gap	Hold	Hold	Gap	Gap	MaxR	MaxR	MaxR
70th %ile Green (s)	14.7	35.4	35.4	12.3	12.3	33.0	24.0	24.0
70th %ile Term Code	Gap	Hold	Hold	Gap	Gap	MaxR	MaxR	MaxR
50th %ile Green (s)	12.6	35.1	35.1	10.5	10.5	33.0	24.0	24.0
50th %ile Term Code	Gap	Hold	Hold	Gap	Gap	MaxR	MaxR	MaxR
30th %ile Green (s)	10.6	34.7	34.7	8.9	8.9	33.0	24.0	24.0
30th %ile Term Code	Gap	Hold	Hold	Gap	Gap	MaxR	MaxR	MaxR
10th %ile Green (s)	7.9	44.9	44.9	0.0	0.0	33.0	24.0	24.0
10th %ile Term Code	Gap	Hold	Hold	Skip	Skip	MaxR	MaxR	MaxR

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 81.8
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 87
70th %ile Actuated Cycle: 83.7
50th %ile Actuated Cycle: 81.6
30th %ile Actuated Cycle: 79.6
10th %ile Actuated Cycle: 76.9

Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	111	427	94	36	10	318	79	406
Future Volume (vph)	111	427	94	36	10	318	79	406
Turn Type	NA	Split	NA	Perm	Perm	NA	Perm	NA
Protected Phases	2	6	6			8		4
Permitted Phases				6	8		4	
Detector Phase	2	6	6	6	8	8	4	4
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	20.0	36.0	36.0	36.0	44.0	44.0	44.0	44.0
Total Split (%)	20.0%	36.0%	36.0%	36.0%	44.0%	44.0%	44.0%	44.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lag	Lead	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	Max	Max	None	None	None	None
Act Effct Green (s)	10.0	32.6	32.6	32.6		26.4	26.4	26.4
Actuated g/C Ratio	0.12	0.40	0.40	0.40		0.33	0.33	0.33
v/c Ratio	0.49	0.39	0.40	0.06		0.51	0.43	0.79
Control Delay	34.3	22.2	22.3	4.1		15.5	28.8	35.0
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	34.3	22.2	22.3	4.1		15.5	28.8	35.0
LOS	C	C	C	A		B	C	C
Approach Delay	34.3		21.1			15.5		34.0
Approach LOS	C		C			B		C

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 81.2	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 24.5	Intersection LOS: C
Intersection Capacity Utilization 73.2%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 8: Front Street & Soquel Avenue



Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	2	6	6			8		4
Permitted Phases				6	8		4	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	20.0	36.0	36.0	36.0	44.0	44.0	44.0	44.0
Total Split (%)	20.0%	36.0%	36.0%	36.0%	44.0%	44.0%	44.0%	44.0%
Maximum Green (s)	16.0	32.0	32.0	32.0	40.0	40.0	40.0	40.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lag	Lead	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Max	Max	Max	None	None	None	None
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
90th %ile Green (s)	13.9	32.0	32.0	32.0	40.0	40.0	40.0	40.0
90th %ile Term Code	Gap	MaxR	MaxR	MaxR	Hold	Hold	Max	Max
70th %ile Green (s)	11.4	32.0	32.0	32.0	31.9	31.9	31.9	31.9
70th %ile Term Code	Gap	MaxR	MaxR	MaxR	Hold	Hold	Gap	Gap
50th %ile Green (s)	9.9	32.0	32.0	32.0	26.2	26.2	26.2	26.2
50th %ile Term Code	Gap	MaxR	MaxR	MaxR	Hold	Hold	Gap	Gap
30th %ile Green (s)	8.5	32.0	32.0	32.0	21.1	21.1	21.1	21.1
30th %ile Term Code	Gap	MaxR	MaxR	MaxR	Hold	Hold	Gap	Gap
10th %ile Green (s)	6.9	32.0	32.0	32.0	16.0	16.0	16.0	16.0
10th %ile Term Code	Gap	MaxR	MaxR	MaxR	Hold	Hold	Gap	Gap

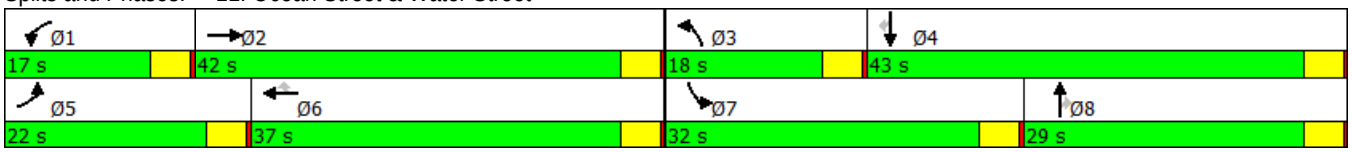
Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 81.2
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 97.9
70th %ile Actuated Cycle: 87.3
50th %ile Actuated Cycle: 80.1
30th %ile Actuated Cycle: 73.6
10th %ile Actuated Cycle: 66.9

Santa Cruz DRP Study
11: Ocean Street & Water Street

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	346	734	112	586	227	120	553	98	290	856	387
Future Volume (vph)	346	734	112	586	227	120	553	98	290	856	387
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases					6			8			4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	22.0	42.0	17.0	37.0	37.0	18.0	29.0	29.0	32.0	43.0	43.0
Total Split (%)	18.3%	35.0%	14.2%	30.8%	30.8%	15.0%	24.2%	24.2%	26.7%	35.8%	35.8%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	Min	None	Min	Min	None	Min	Min
Act Effct Green (s)	15.8	32.8	11.3	28.3	28.3	11.8	23.7	23.7	22.7	34.6	34.6
Actuated g/C Ratio	0.15	0.31	0.11	0.26	0.26	0.11	0.22	0.22	0.21	0.32	0.32
v/c Ratio	0.71	0.81	0.62	0.65	0.39	0.63	0.73	0.21	0.80	0.76	0.54
Control Delay	53.9	41.4	63.9	39.4	6.4	63.2	46.5	2.4	57.8	38.5	8.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	53.9	41.4	63.9	39.4	6.4	63.2	46.5	2.4	57.8	38.5	8.8
LOS	D	D	E	D	A	E	D	A	E	D	A
Approach Delay		45.0		34.3			43.5			34.7	
Approach LOS		D		C			D			C	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 107	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.81	
Intersection Signal Delay: 38.9	Intersection LOS: D
Intersection Capacity Utilization 74.7%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 11: Ocean Street & Water Street



Santa Cruz DRP Study
11: Ocean Street & Water Street

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases					6			8			4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	22.0	42.0	17.0	37.0	37.0	18.0	29.0	29.0	32.0	43.0	43.0
Total Split (%)	18.3%	35.0%	14.2%	30.8%	30.8%	15.0%	24.2%	24.2%	26.7%	35.8%	35.8%
Maximum Green (s)	18.0	38.0	13.0	33.0	33.0	14.0	25.0	25.0	28.0	39.0	39.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	Min	None	Min	Min	None	Min	Min
Walk Time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0
90th %ile Green (s)	18.0	38.0	13.0	33.0	33.0	14.0	25.0	25.0	28.0	39.0	39.0
90th %ile Term Code	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
70th %ile Green (s)	18.0	38.0	13.0	33.0	33.0	14.0	25.0	25.0	28.0	39.0	39.0
70th %ile Term Code	Max	Max	Max	Hold	Hold	Max	Max	Max	Max	Max	Max
50th %ile Green (s)	17.5	36.2	12.9	31.6	31.6	13.4	27.3	27.3	25.1	39.0	39.0
50th %ile Term Code	Gap	Gap	Gap	Hold	Hold	Gap	Hold	Hold	Gap	Max	Max
30th %ile Green (s)	14.6	30.4	10.4	26.2	26.2	10.8	23.4	23.4	20.0	32.6	32.6
30th %ile Term Code	Gap	Gap	Gap	Hold	Hold	Gap	Hold	Hold	Gap	Gap	Gap
10th %ile Green (s)	11.0	22.3	7.4	18.7	18.7	7.6	17.5	17.5	14.0	23.9	23.9
10th %ile Term Code	Gap	Gap	Gap	Hold	Hold	Gap	Hold	Hold	Gap	Gap	Gap

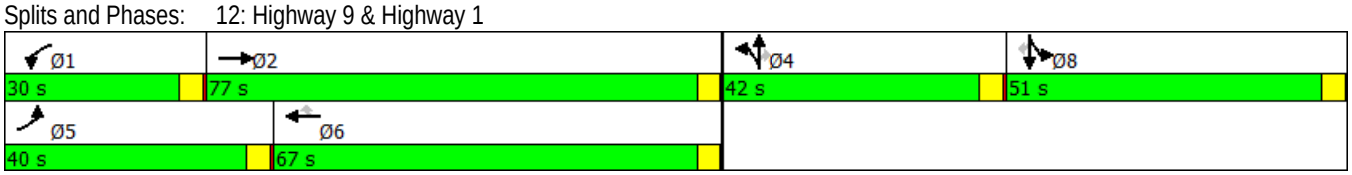
Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 107
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 120
70th %ile Actuated Cycle: 120
50th %ile Actuated Cycle: 117.5
30th %ile Actuated Cycle: 100.2
10th %ile Actuated Cycle: 77.2

Santa Cruz DRP Study
12: Highway 9 & Highway 1

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	228	1327	328	1277	472	102	253	447	648	316	249
Future Volume (vph)	228	1327	328	1277	472	102	253	447	648	316	249
Turn Type	Prot	NA	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2	1	6		4	4		8	8	
Permitted Phases					6			4			8
Detector Phase	5	2	1	6	6	4	4	4	8	8	8
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	40.0	77.0	30.0	67.0	67.0	42.0	42.0	42.0	51.0	51.0	51.0
Total Split (%)	20.0%	38.5%	15.0%	33.5%	33.5%	21.0%	21.0%	21.0%	25.5%	25.5%	25.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	Max	None	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	31.0	73.0	24.0	66.0	66.0	38.0	38.0	38.0	47.0	47.0	47.0
Actuated g/C Ratio	0.16	0.37	0.12	0.33	0.33	0.19	0.19	0.19	0.24	0.24	0.24
v/c Ratio	0.87	0.81	0.85	0.80	0.75	0.32	0.76	0.68	0.85	0.77	0.50
Control Delay	110.1	60.5	104.1	65.0	38.2	72.3	90.9	48.4	83.0	83.7	20.8
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	110.1	60.5	104.1	65.0	38.2	72.3	90.9	48.4	83.0	83.7	20.8
LOS	F	E	F	E	D	E	F	D	F	F	C
Approach Delay		67.4		65.1			64.9			70.4	
Approach LOS		E		E			E			E	

Intersection Summary	
Cycle Length: 200	
Actuated Cycle Length: 198.1	
Natural Cycle: 90	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.87	
Intersection Signal Delay: 66.9	Intersection LOS: E
Intersection Capacity Utilization 82.4%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 12: Highway 9 & Highway 1



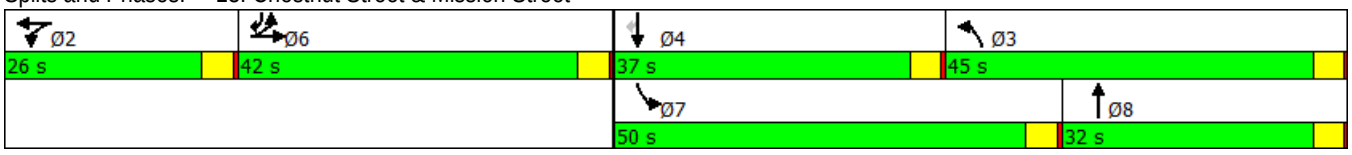
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	1	6		4	4		8	8	
Permitted Phases					6			4			8
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	40.0	77.0	30.0	67.0	67.0	42.0	42.0	42.0	51.0	51.0	51.0
Total Split (%)	20.0%	38.5%	15.0%	33.5%	33.5%	21.0%	21.0%	21.0%	25.5%	25.5%	25.5%
Maximum Green (s)	36.0	73.0	26.0	63.0	63.0	38.0	38.0	38.0	47.0	47.0	47.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Max	None	Max	Max	Max	Max	Max	Max	Max	Max
Walk Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0	0	0	0	0	0	0
90th %ile Green (s)	36.0	73.0	26.0	63.0	63.0	38.0	38.0	38.0	47.0	47.0	47.0
90th %ile Term Code	Max	MaxR	Max	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	36.0	73.0	26.0	63.0	63.0	38.0	38.0	38.0	47.0	47.0	47.0
70th %ile Term Code	Max	MaxR	Max	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	32.5	73.0	25.8	66.3	66.3	38.0	38.0	38.0	47.0	47.0	47.0
50th %ile Term Code	Gap	MaxR	Gap	Hold	Hold	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	28.3	73.0	23.1	67.8	67.8	38.0	38.0	38.0	47.0	47.0	47.0
30th %ile Term Code	Gap	MaxR	Gap	Hold	Hold	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	22.6	73.0	19.4	69.8	69.8	38.0	38.0	38.0	47.0	47.0	47.0
10th %ile Term Code	Gap	MaxR	Gap	Hold	Hold	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR

Intersection Summary
Cycle Length: 200
Actuated Cycle Length: 198.1
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 200
70th %ile Actuated Cycle: 200
50th %ile Actuated Cycle: 199.8
30th %ile Actuated Cycle: 197.1
10th %ile Actuated Cycle: 193.4

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	1312	486	412	74	284	42	275	1380
Future Volume (vph)	1312	486	412	74	284	42	275	1380
Turn Type	Split	NA	NA	Prot	NA	Prot	NA	pm+ov
Protected Phases	6	6	2	3	8	7	4	6
Permitted Phases								4
Detector Phase	6	6	2	3	8	7	4	4 6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	42.0	42.0	26.0	45.0	32.0	50.0	37.0	42.0
Total Split (%)	28.0%	28.0%	17.3%	30.0%	21.3%	33.3%	24.7%	28.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag				Lag	Lag	Lead	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	38.8	38.8	20.0	10.2	29.3	8.1	27.5	70.4
Actuated g/C Ratio	0.35	0.35	0.18	0.09	0.27	0.07	0.25	0.64
v/c Ratio	1.18	1.13dl	0.74	0.46	0.33	0.32	0.31	0.68
Control Delay	132.4	81.9	51.4	59.8	33.5	58.7	35.4	6.7
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	132.4	81.9	51.4	59.8	33.5	58.7	35.4	6.7
LOS	F	F	D	E	C	E	D	A
Approach Delay		99.7	51.4		38.6		12.7	
Approach LOS		F	D		D		B	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 110	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.18	
Intersection Signal Delay: 55.8	Intersection LOS: E
Intersection Capacity Utilization 75.0%	ICU Level of Service D
Analysis Period (min) 15	
dl Defacto Left Lane. Recode with 1 though lane as a left lane.	

Splits and Phases: 13: Chestnut Street & Mission Street



Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Protected Phases	6	6	2	3	8	7	4	6
Permitted Phases								4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	42.0	42.0	26.0	45.0	32.0	50.0	37.0	42.0
Total Split (%)	28.0%	28.0%	17.3%	30.0%	21.3%	33.3%	24.7%	28.0%
Maximum Green (s)	38.0	38.0	22.0	41.0	28.0	46.0	33.0	38.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag				Lag	Lag	Lead	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	None
Walk Time (s)	5.0	5.0			5.0		5.0	5.0
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0			0		0	0
90th %ile Green (s)	38.0	38.0	22.0	14.3	36.2	11.1	33.0	38.0
90th %ile Term Code	Max	Max	Max	Gap	Hold	Gap	Max	Max
70th %ile Green (s)	38.0	38.0	22.0	11.9	35.5	9.4	33.0	38.0
70th %ile Term Code	Max	Max	Max	Gap	Hold	Gap	Max	Max
50th %ile Green (s)	38.0	38.0	22.0	10.4	32.2	8.2	30.0	38.0
50th %ile Term Code	Max	Max	Max	Gap	Hold	Gap	Gap	Max
30th %ile Green (s)	38.0	38.0	19.4	8.7	26.4	7.0	24.7	38.0
30th %ile Term Code	Max	Max	Gap	Gap	Hold	Gap	Gap	Max
10th %ile Green (s)	38.0	38.0	14.6	0.0	18.2	0.0	18.2	38.0
10th %ile Term Code	Max	Max	Gap	Skip	Hold	Skip	Gap	Max

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 110
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 123.3
70th %ile Actuated Cycle: 120.9
50th %ile Actuated Cycle: 116.4
30th %ile Actuated Cycle: 106.8
10th %ile Actuated Cycle: 82.8

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	165	996	227	830	195	4	228	254	202	366	262
Future Volume (vph)	165	996	227	830	195	4	228	254	202	366	262
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases					6			8			4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	20.0	33.0	17.0	30.0	30.0	8.0	20.0	20.0	10.0	22.0	22.0
Total Split (%)	25.0%	41.3%	21.3%	37.5%	37.5%	10.0%	25.0%	25.0%	12.5%	27.5%	27.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	Max	Max	None	Max	Max	None	None	None	None	None	None
Act Effct Green (s)	16.0	29.4	12.7	26.0	26.0	4.0	14.1	14.1	6.0	22.6	22.6
Actuated g/C Ratio	0.20	0.38	0.16	0.33	0.33	0.05	0.18	0.18	0.08	0.29	0.29
v/c Ratio	0.49	0.82	0.85	1.44	0.33	0.04	0.73	0.56	1.65	0.73	0.44
Control Delay	33.5	29.1	59.3	232.9	6.9	37.2	43.7	10.2	352.4	35.7	6.6
Queue Delay	0.0	48.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	33.5	77.7	59.3	232.9	6.9	37.2	43.7	10.2	352.4	35.7	6.6
LOS	C	E	E	F	A	D	D	B	F	D	A
Approach Delay		71.6		166.2			26.1			103.7	
Approach LOS		E		F			C			F	

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 78.2	
Natural Cycle: 110	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.65	
Intersection Signal Delay: 104.3	Intersection LOS: F
Intersection Capacity Utilization 89.3%	ICU Level of Service E
Analysis Period (min) 15	

Splits and Phases: 1: Front Street & Laurel Street



Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases					6			8			4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	20.0	33.0	17.0	30.0	30.0	8.0	20.0	20.0	10.0	22.0	22.0
Total Split (%)	25.0%	41.3%	21.3%	37.5%	37.5%	10.0%	25.0%	25.0%	12.5%	27.5%	27.5%
Maximum Green (s)	16.0	29.0	13.0	26.0	26.0	4.0	16.0	16.0	6.0	18.0	18.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	Max	Max	None	Max	Max	None	None	None	None	None	None
Walk Time (s)	5.0	5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)	11.0	11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0		0	0		0	0		0	0
90th %ile Green (s)	16.0	29.0	13.0	26.0	26.0	4.0	16.0	16.0	6.0	18.0	18.0
90th %ile Term Code	MaxR	MaxR	Max	MaxR	MaxR	Max	Max	Max	Max	Max	Max
70th %ile Green (s)	16.0	29.0	13.0	26.0	26.0	0.0	16.0	16.0	6.0	26.0	26.0
70th %ile Term Code	MaxR	MaxR	Max	MaxR	MaxR	Skip	Max	Max	Max	Hold	Hold
50th %ile Green (s)	16.0	29.0	13.0	26.0	26.0	0.0	16.0	16.0	6.0	26.0	26.0
50th %ile Term Code	MaxR	MaxR	Max	MaxR	MaxR	Skip	Max	Max	Max	Hold	Hold
30th %ile Green (s)	16.0	29.0	13.0	26.0	26.0	0.0	13.1	13.1	6.0	23.1	23.1
30th %ile Term Code	MaxR	MaxR	Max	MaxR	MaxR	Skip	Gap	Gap	Max	Hold	Hold
10th %ile Green (s)	16.0	30.7	11.3	26.0	26.0	0.0	9.8	9.8	6.0	19.8	19.8
10th %ile Term Code	MaxR	Hold	Gap	MaxR	MaxR	Skip	Gap	Gap	Max	Hold	Hold

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 78.2
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 80
70th %ile Actuated Cycle: 80
50th %ile Actuated Cycle: 80
30th %ile Actuated Cycle: 77.1
10th %ile Actuated Cycle: 73.8

Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	162	1075	64	982	59	96	97	59
Future Volume (vph)	162	1075	64	982	59	96	97	59
Turn Type	Prot	NA	Prot	NA	Perm	NA	Perm	NA
Protected Phases	5	2	1	6		8		4
Permitted Phases					8		4	
Detector Phase	5	2	1	6	8	8	4	4
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	20.0	40.0	20.0	40.0	20.0	20.0	20.0	20.0
Total Split (%)	25.0%	50.0%	25.0%	50.0%	25.0%	25.0%	25.0%	25.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0		0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0		4.0
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	None	Max	Max	Max	Max	Max
Act Effct Green (s)	12.8	42.5	8.4	36.1	16.0	16.0		16.0
Actuated g/C Ratio	0.17	0.55	0.11	0.47	0.21	0.21		0.21
v/c Ratio	0.64	1.16	0.36	1.32	0.31	0.39		0.87
Control Delay	41.3	105.6	37.1	176.2	31.6	25.9		59.8
Queue Delay	0.0	0.0	0.0	1.2	0.0	0.0		0.0
Total Delay	41.3	105.6	37.1	177.3	31.6	25.9		59.8
LOS	D	F	D	F	C	C		E
Approach Delay		97.5		169.4		27.6		59.8
Approach LOS		F		F		C		E

Intersection Summary	
Cycle Length: 80	
Actuated Cycle Length: 76.9	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.32	
Intersection Signal Delay: 118.5	Intersection LOS: F
Intersection Capacity Utilization 99.6%	ICU Level of Service F
Analysis Period (min) 15	

Splits and Phases: 2: Pacific Avenue & Laurel Street



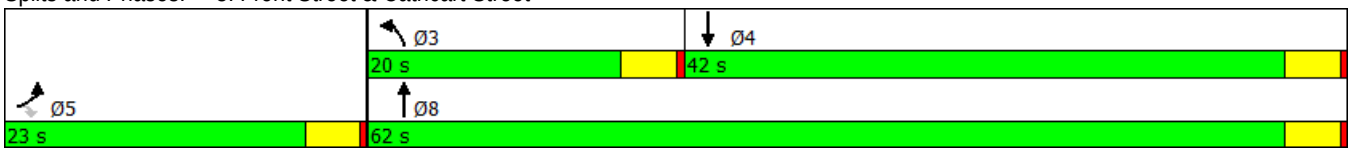
Lane Group	EBL	EBT	WBL	WBT	NBL	NBT	SBL	SBT
Protected Phases	5	2	1	6		8		4
Permitted Phases					8		4	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	20.0	40.0	20.0	40.0	20.0	20.0	20.0	20.0
Total Split (%)	25.0%	50.0%	25.0%	50.0%	25.0%	25.0%	25.0%	25.0%
Maximum Green (s)	16.0	36.0	16.0	36.0	16.0	16.0	16.0	16.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag	Lead	Lag				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Max	None	Max	Max	Max	Max	Max
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
90th %ile Green (s)	16.0	40.5	11.5	36.0	16.0	16.0	16.0	16.0
90th %ile Term Code	Max	Hold	Gap	MaxR	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	15.9	42.2	9.7	36.0	16.0	16.0	16.0	16.0
70th %ile Term Code	Gap	Hold	Gap	MaxR	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	13.4	41.1	8.3	36.0	16.0	16.0	16.0	16.0
50th %ile Term Code	Gap	Hold	Gap	MaxR	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	11.1	40.0	7.1	36.0	16.0	16.0	16.0	16.0
30th %ile Term Code	Gap	Hold	Gap	MaxR	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	8.1	48.1	0.0	36.0	16.0	16.0	16.0	16.0
10th %ile Term Code	Gap	Hold	Skip	MaxR	MaxR	MaxR	MaxR	MaxR

Intersection Summary
Cycle Length: 80
Actuated Cycle Length: 76.9
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 80
70th %ile Actuated Cycle: 79.9
50th %ile Actuated Cycle: 77.4
30th %ile Actuated Cycle: 75.1
10th %ile Actuated Cycle: 72.1

Lane Group	EBL	EBR	NBL	NBT	SBT
Lane Configurations					
Traffic Volume (vph)	193	111	116	569	805
Future Volume (vph)	193	111	116	569	805
Turn Type	Prot	Perm	Prot	NA	NA
Protected Phases	5		3	8	4
Permitted Phases		5			
Detector Phase	5	5	3	8	4
Switch Phase					
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0
Total Split (s)	23.0	23.0	20.0	62.0	42.0
Total Split (%)	27.1%	27.1%	23.5%	72.9%	49.4%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Recall Mode	Max	Max	Max	None	Max
Act Effct Green (s)	19.0	19.0	16.0	58.0	38.0
Actuated g/C Ratio	0.22	0.22	0.19	0.68	0.45
v/c Ratio	0.53	0.29	0.39	0.50	0.79
Control Delay	34.6	11.2	34.4	8.2	22.9
Queue Delay	0.0	0.0	0.0	6.4	0.2
Total Delay	34.6	11.2	34.4	14.5	23.1
LOS	C	B	C	B	C
Approach Delay	26.1			17.9	23.1
Approach LOS	C			B	C

Intersection Summary	
Cycle Length: 85	
Actuated Cycle Length: 85	
Natural Cycle: 70	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.79	
Intersection Signal Delay: 21.8	Intersection LOS: C
Intersection Capacity Utilization 59.5%	ICU Level of Service B
Analysis Period (min) 15	

Splits and Phases: 3: Front Street & Cathcart Street



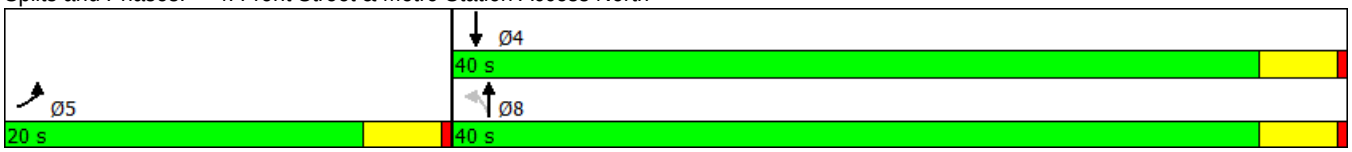
Lane Group	EBL	EBR	NBL	NBT	SBT
Protected Phases	5		3	8	4
Permitted Phases		5			
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0
Total Split (s)	23.0	23.0	20.0	62.0	42.0
Total Split (%)	27.1%	27.1%	23.5%	72.9%	49.4%
Maximum Green (s)	19.0	19.0	16.0	58.0	38.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5
Lead/Lag			Lead		Lag
Lead-Lag Optimize?			Yes		Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0
Recall Mode	Max	Max	Max	None	Max
Walk Time (s)	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0
90th %ile Green (s)	19.0	19.0	16.0	58.0	38.0
90th %ile Term Code	MaxR	MaxR	MaxR	Hold	MaxR
70th %ile Green (s)	19.0	19.0	16.0	58.0	38.0
70th %ile Term Code	MaxR	MaxR	MaxR	Hold	MaxR
50th %ile Green (s)	19.0	19.0	16.0	58.0	38.0
50th %ile Term Code	MaxR	MaxR	MaxR	Hold	MaxR
30th %ile Green (s)	19.0	19.0	16.0	58.0	38.0
30th %ile Term Code	MaxR	MaxR	MaxR	Hold	MaxR
10th %ile Green (s)	19.0	19.0	16.0	58.0	38.0
10th %ile Term Code	MaxR	MaxR	MaxR	Hold	MaxR

Intersection Summary
Cycle Length: 85
Actuated Cycle Length: 85
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 85
70th %ile Actuated Cycle: 85
50th %ile Actuated Cycle: 85
30th %ile Actuated Cycle: 85
10th %ile Actuated Cycle: 85

Lane Group	EBL	NBL	NBT	SBT
Lane Configurations				
Traffic Volume (vph)	14	14	661	783
Future Volume (vph)	14	14	661	783
Turn Type	Prot	Perm	NA	NA
Protected Phases	5		8	4
Permitted Phases		8		
Detector Phase	5	8	8	4
Switch Phase				
Minimum Initial (s)	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0
Total Split (s)	20.0	40.0	40.0	40.0
Total Split (%)	33.3%	66.7%	66.7%	66.7%
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0
Lead/Lag				
Lead-Lag Optimize?				
Recall Mode	None	Max	Max	Max
Act Effct Green (s)	7.0	54.2	54.2	54.2
Actuated g/C Ratio	0.12	0.90	0.90	0.90
v/c Ratio	0.27	0.05	0.42	0.52
Control Delay	21.2	2.6	2.9	3.8
Queue Delay	0.0	0.0	0.0	0.1
Total Delay	21.2	2.6	2.9	3.9
LOS	C	A	A	A
Approach Delay	21.2		2.9	3.9
Approach LOS	C		A	A

Intersection Summary	
Cycle Length: 60	
Actuated Cycle Length: 60.3	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.52	
Intersection Signal Delay: 3.8	Intersection LOS: A
Intersection Capacity Utilization 52.2%	ICU Level of Service A
Analysis Period (min) 15	

Splits and Phases: 4: Front Street & Metro Station Access North



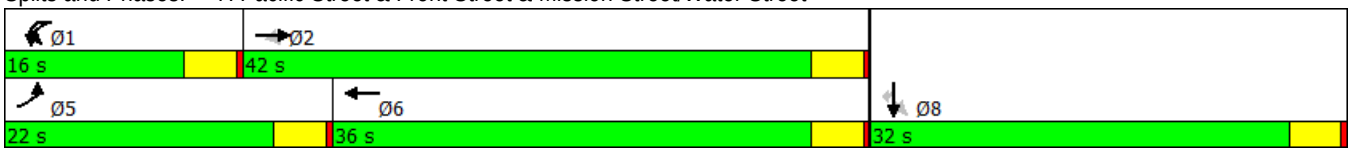
Lane Group	EBL	NBL	NBT	SBT
Protected Phases	5		8	4
Permitted Phases		8		
Minimum Initial (s)	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0
Total Split (s)	20.0	40.0	40.0	40.0
Total Split (%)	33.3%	66.7%	66.7%	66.7%
Maximum Green (s)	16.0	36.0	36.0	36.0
Yellow Time (s)	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5
Lead/Lag				
Lead-Lag Optimize?				
Vehicle Extension (s)	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0
Recall Mode	None	Max	Max	Max
Walk Time (s)	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0
90th %ile Green (s)	10.5	51.0	51.0	51.0
90th %ile Term Code	Gap	Dwell	Dwell	Dwell
70th %ile Green (s)	8.0	51.0	51.0	51.0
70th %ile Term Code	Gap	Dwell	Dwell	Dwell
50th %ile Green (s)	0.0	51.0	51.0	51.0
50th %ile Term Code	Skip	Dwell	Dwell	Dwell
30th %ile Green (s)	0.0	51.0	51.0	51.0
30th %ile Term Code	Skip	Dwell	Dwell	Dwell
10th %ile Green (s)	0.0	51.0	51.0	51.0
10th %ile Term Code	Skip	Dwell	Dwell	Dwell

Intersection Summary
Cycle Length: 60
Actuated Cycle Length: 60.3
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 69.5
70th %ile Actuated Cycle: 67
50th %ile Actuated Cycle: 55
30th %ile Actuated Cycle: 55
10th %ile Actuated Cycle: 55

Lane Group	EBL	EBT	EBR	WBL	WBT	SBT	SBR
Lane Configurations							
Traffic Volume (vph)	263	1133	165	166	893	371	221
Future Volume (vph)	263	1133	165	166	893	371	221
Turn Type	Prot	NA	Perm	Prot	NA	NA	Perm
Protected Phases	5	2		1	6	8	
Permitted Phases			2				8
Detector Phase	5	2	2	1	6	8	8
Switch Phase							
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0	20.0	20.0
Total Split (s)	22.0	42.0	42.0	16.0	36.0	32.0	32.0
Total Split (%)	24.4%	46.7%	46.7%	17.8%	40.0%	35.6%	35.6%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lag	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		
Recall Mode	None	None	None	None	Max	Max	Max
Act Effct Green (s)	16.9	37.5	37.5	11.5	32.1	28.0	28.0
Actuated g/C Ratio	0.19	0.42	0.42	0.13	0.36	0.31	0.31
v/c Ratio	0.84	0.82	0.27	0.79	0.79	0.82	0.42
Control Delay	57.9	28.3	18.2	62.8	30.9	42.4	15.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	57.9	28.3	18.2	62.8	30.9	42.4	15.5
LOS	E	C	B	E	C	D	B
Approach Delay		32.2			35.7	33.4	
Approach LOS		C			D	C	

Intersection Summary	
Cycle Length: 90	
Actuated Cycle Length: 89	
Natural Cycle: 60	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 0.84	
Intersection Signal Delay: 33.6	Intersection LOS: C
Intersection Capacity Utilization 73.6%	ICU Level of Service D
Analysis Period (min) 15	

Splits and Phases: 7: Pacific Street & Front Street & Mission Street/Water Street



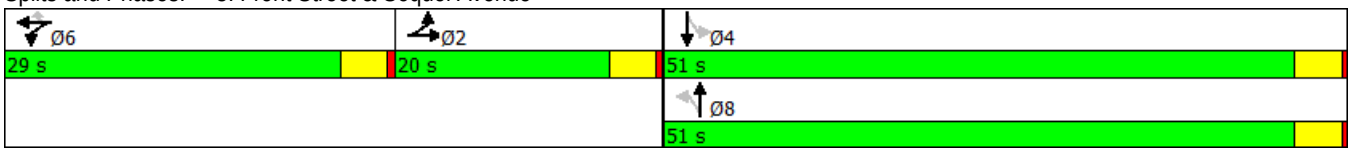
Lane Group	EBL	EBT	EBR	WBL	WBT	SBT	SBR
Protected Phases	5	2		1	6	8	
Permitted Phases			2				8
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	20.0	8.0	20.0	20.0	20.0
Total Split (s)	22.0	42.0	42.0	16.0	36.0	32.0	32.0
Total Split (%)	24.4%	46.7%	46.7%	17.8%	40.0%	35.6%	35.6%
Maximum Green (s)	18.0	38.0	38.0	12.0	32.0	28.0	28.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag	Lag	Lead	Lag		
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes		
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	Max	Max	Max
Walk Time (s)		5.0	5.0		5.0	5.0	5.0
Flash Dont Walk (s)		11.0	11.0		11.0	11.0	11.0
Pedestrian Calls (#/hr)		0	0		0	0	0
90th %ile Green (s)	18.0	38.0	38.0	12.0	32.0	28.0	28.0
90th %ile Term Code	Max	Max	Max	Max	MaxR	MaxR	MaxR
70th %ile Green (s)	18.0	38.0	38.0	12.0	32.0	28.0	28.0
70th %ile Term Code	Max	Max	Max	Max	MaxR	MaxR	MaxR
50th %ile Green (s)	18.0	38.0	38.0	12.0	32.0	28.0	28.0
50th %ile Term Code	Max	Max	Max	Max	MaxR	MaxR	MaxR
30th %ile Green (s)	17.5	38.0	38.0	12.0	32.5	28.0	28.0
30th %ile Term Code	Gap	Max	Max	Max	Hold	MaxR	MaxR
10th %ile Green (s)	13.2	35.7	35.7	9.5	32.0	28.0	28.0
10th %ile Term Code	Gap	Hold	Hold	Gap	MaxR	MaxR	MaxR

Intersection Summary
Cycle Length: 90
Actuated Cycle Length: 89
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 90
70th %ile Actuated Cycle: 90
50th %ile Actuated Cycle: 90
30th %ile Actuated Cycle: 90
10th %ile Actuated Cycle: 85.2

Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Lane Configurations								
Traffic Volume (vph)	262	498	314	79	46	523	193	649
Future Volume (vph)	262	498	314	79	46	523	193	649
Turn Type	NA	Split	NA	Perm	Perm	NA	Perm	NA
Protected Phases	2	6	6			8		4
Permitted Phases				6	8		4	
Detector Phase	2	6	6	6	8	8	4	4
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	20.0	29.0	29.0	29.0	51.0	51.0	51.0	51.0
Total Split (%)	20.0%	29.0%	29.0%	29.0%	51.0%	51.0%	51.0%	51.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0		4.0	4.0	4.0
Lead/Lag	Lag	Lead	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Recall Mode	None	Max	Max	Max	None	None	None	None
Act Effct Green (s)	15.0	25.0	25.0	25.0		47.0	47.0	47.0
Actuated g/C Ratio	0.15	0.25	0.25	0.25		0.47	0.47	0.47
v/c Ratio	0.78	1.00	1.02	0.19		0.81	1.04	0.92
Control Delay	50.2	82.3	86.3	12.3		27.5	105.3	42.4
Queue Delay	0.0	0.0	0.0	0.0		0.0	0.0	0.0
Total Delay	50.2	82.3	86.3	12.3		27.5	105.3	42.4
LOS	D	F	F	B		C	F	D
Approach Delay	50.2		77.9			27.5		55.7
Approach LOS	D		E			C		E

Intersection Summary	
Cycle Length: 100	
Actuated Cycle Length: 99	
Natural Cycle: 100	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.04	
Intersection Signal Delay: 54.0	Intersection LOS: D
Intersection Capacity Utilization 108.3%	ICU Level of Service G
Analysis Period (min) 15	

Splits and Phases: 8: Front Street & Soquel Avenue



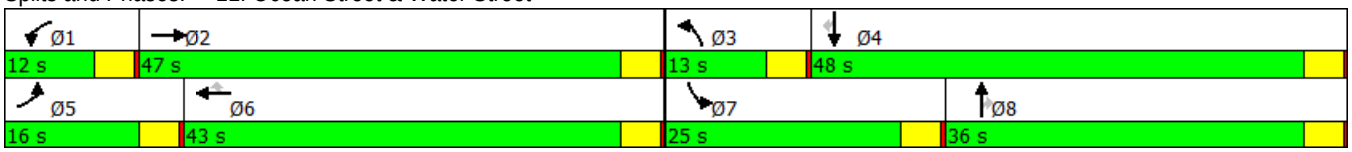
Lane Group	EBT	WBL	WBT	WBR	NBL	NBT	SBL	SBT
Protected Phases	2	6	6			8		4
Permitted Phases				6	8		4	
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	20.0	29.0	29.0	29.0	51.0	51.0	51.0	51.0
Total Split (%)	20.0%	29.0%	29.0%	29.0%	51.0%	51.0%	51.0%	51.0%
Maximum Green (s)	16.0	25.0	25.0	25.0	47.0	47.0	47.0	47.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lag	Lead	Lead	Lead				
Lead-Lag Optimize?	Yes	Yes	Yes	Yes				
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Max	Max	Max	None	None	None	None
Walk Time (s)	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)	0	0	0	0	0	0	0	0
90th %ile Green (s)	16.0	25.0	25.0	25.0	47.0	47.0	47.0	47.0
90th %ile Term Code	Max	MaxR	MaxR	MaxR	Max	Max	Max	Max
70th %ile Green (s)	16.0	25.0	25.0	25.0	47.0	47.0	47.0	47.0
70th %ile Term Code	Max	MaxR	MaxR	MaxR	Max	Max	Max	Max
50th %ile Green (s)	16.0	25.0	25.0	25.0	47.0	47.0	47.0	47.0
50th %ile Term Code	Max	MaxR	MaxR	MaxR	Hold	Hold	Max	Max
30th %ile Green (s)	14.9	25.0	25.0	25.0	47.0	47.0	47.0	47.0
30th %ile Term Code	Gap	MaxR	MaxR	MaxR	Hold	Hold	Max	Max
10th %ile Green (s)	12.1	25.0	25.0	25.0	47.0	47.0	47.0	47.0
10th %ile Term Code	Gap	MaxR	MaxR	MaxR	Hold	Hold	Max	Max

Intersection Summary
Cycle Length: 100
Actuated Cycle Length: 99
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 100
70th %ile Actuated Cycle: 100
50th %ile Actuated Cycle: 100
30th %ile Actuated Cycle: 98.9
10th %ile Actuated Cycle: 96.1

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	495	1578	168	1008	339	203	1359	96	522	1448	399
Future Volume (vph)	495	1578	168	1008	339	203	1359	96	522	1448	399
Turn Type	Prot	NA	Prot	NA	Perm	Prot	NA	Perm	Prot	NA	Perm
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases					6			8			4
Detector Phase	5	2	1	6	6	3	8	8	7	4	4
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	16.0	47.0	12.0	43.0	43.0	13.0	36.0	36.0	25.0	48.0	48.0
Total Split (%)	13.3%	39.2%	10.0%	35.8%	35.8%	10.8%	30.0%	30.0%	20.8%	40.0%	40.0%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Recall Mode	None	Min	None	Min	Min	None	Min	Min	None	Min	Min
Act Effct Green (s)	12.0	43.0	8.0	39.0	39.0	9.0	32.0	32.0	21.0	44.0	44.0
Actuated g/C Ratio	0.10	0.36	0.07	0.32	0.32	0.08	0.27	0.27	0.18	0.37	0.37
v/c Ratio	1.57	1.49	1.52	0.94	0.53	1.64	1.55	0.20	1.82	1.19	0.63
Control Delay	305.4	255.2	311.5	55.8	12.9	352.6	284.7	5.6	410.0	128.1	23.5
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	305.4	255.2	311.5	55.8	12.9	352.6	284.7	5.6	410.0	128.1	23.5
LOS	F	F	F	E	B	F	F	A	F	F	C
Approach Delay		266.3		74.6			276.9			172.5	
Approach LOS		F		E			F			F	

Intersection Summary	
Cycle Length: 120	
Actuated Cycle Length: 120	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.82	
Intersection Signal Delay: 202.7	Intersection LOS: F
Intersection Capacity Utilization 137.9%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 11: Ocean Street & Water Street



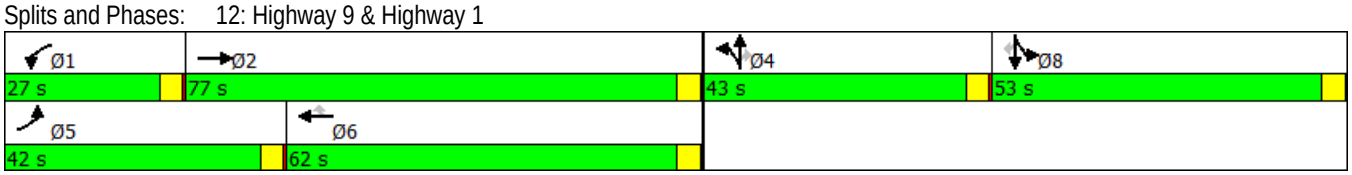
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	1	6		3	8		7	4	
Permitted Phases					6			8			4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0	8.0	20.0	20.0
Total Split (s)	16.0	47.0	12.0	43.0	43.0	13.0	36.0	36.0	25.0	48.0	48.0
Total Split (%)	13.3%	39.2%	10.0%	35.8%	35.8%	10.8%	30.0%	30.0%	20.8%	40.0%	40.0%
Maximum Green (s)	12.0	43.0	8.0	39.0	39.0	9.0	32.0	32.0	21.0	44.0	44.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag	Lead	Lag	Lag	Lead	Lag	Lag
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Min	None	Min	Min	None	Min	Min	None	Min	Min
Walk Time (s)		5.0		5.0	5.0		5.0	5.0		5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0		11.0	11.0		11.0	11.0
Pedestrian Calls (#/hr)		0		0	0		0	0		0	0
90th %ile Green (s)	12.0	43.0	8.0	39.0	39.0	9.0	32.0	32.0	21.0	44.0	44.0
90th %ile Term Code	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
70th %ile Green (s)	12.0	43.0	8.0	39.0	39.0	9.0	32.0	32.0	21.0	44.0	44.0
70th %ile Term Code	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
50th %ile Green (s)	12.0	43.0	8.0	39.0	39.0	9.0	32.0	32.0	21.0	44.0	44.0
50th %ile Term Code	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
30th %ile Green (s)	12.0	43.0	8.0	39.0	39.0	9.0	32.0	32.0	21.0	44.0	44.0
30th %ile Term Code	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max
10th %ile Green (s)	12.0	43.0	8.0	39.0	39.0	9.0	32.0	32.0	21.0	44.0	44.0
10th %ile Term Code	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max	Max

Intersection Summary
Cycle Length: 120
Actuated Cycle Length: 120
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 120
70th %ile Actuated Cycle: 120
50th %ile Actuated Cycle: 120
30th %ile Actuated Cycle: 120
10th %ile Actuated Cycle: 120

Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Lane Configurations											
Traffic Volume (vph)	490	2350	561	1862	693	99	454	726	1109	545	571
Future Volume (vph)	490	2350	561	1862	693	99	454	726	1109	545	571
Turn Type	Prot	NA	Prot	NA	Perm	Split	NA	Perm	Split	NA	Perm
Protected Phases	5	2	1	6		4	4		8	8	
Permitted Phases					6			4			8
Detector Phase	5	2	1	6	6	4	4	4	8	8	8
Switch Phase											
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	42.0	77.0	27.0	62.0	62.0	43.0	43.0	43.0	53.0	53.0	53.0
Total Split (%)	21.0%	38.5%	13.5%	31.0%	31.0%	21.5%	21.5%	21.5%	26.5%	26.5%	26.5%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag	Lead	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Recall Mode	None	Max	None	Max	Max	Max	Max	Max	Max	Max	Max
Act Effct Green (s)	38.0	73.0	23.0	58.0	58.0	39.0	39.0	39.0	49.0	49.0	49.0
Actuated g/C Ratio	0.19	0.36	0.12	0.29	0.29	0.20	0.20	0.20	0.24	0.24	0.24
v/c Ratio	1.57	1.44	1.56	1.37	1.23	0.31	1.37	1.14	1.43	1.31	1.06
Control Delay	318.0	246.5	314.4	221.8	157.3	71.9	239.3	131.7	251.0	209.4	92.3
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	318.0	246.5	314.4	221.8	157.3	71.9	239.3	131.7	251.0	209.4	92.3
LOS	F	F	F	F	F	E	F	F	F	F	F
Approach Delay		258.5		224.1			165.2			200.1	
Approach LOS		F		F			F			F	

Intersection Summary	
Cycle Length: 200	
Actuated Cycle Length: 200	
Natural Cycle: 140	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 1.57	
Intersection Signal Delay: 221.1	Intersection LOS: F
Intersection Capacity Utilization 132.2%	ICU Level of Service H
Analysis Period (min) 15	

Splits and Phases: 12: Highway 9 & Highway 1



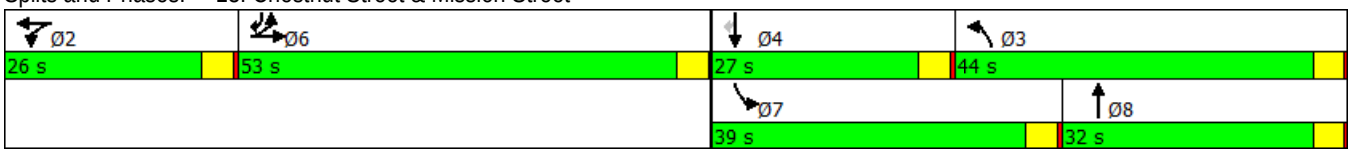
Lane Group	EBL	EBT	WBL	WBT	WBR	NBL	NBT	NBR	SBL	SBT	SBR
Protected Phases	5	2	1	6		4	4		8	8	
Permitted Phases					6			4			8
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	8.0	20.0	8.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	42.0	77.0	27.0	62.0	62.0	43.0	43.0	43.0	53.0	53.0	53.0
Total Split (%)	21.0%	38.5%	13.5%	31.0%	31.0%	21.5%	21.5%	21.5%	26.5%	26.5%	26.5%
Maximum Green (s)	38.0	73.0	23.0	58.0	58.0	39.0	39.0	39.0	49.0	49.0	49.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag	Lead	Lag	Lead	Lag	Lag						
Lead-Lag Optimize?	Yes	Yes	Yes	Yes	Yes						
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	Max	None	Max	Max	Max	Max	Max	Max	Max	Max
Walk Time (s)		5.0		5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Flash Dont Walk (s)		11.0		11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0
Pedestrian Calls (#/hr)		0		0	0	0	0	0	0	0	0
90th %ile Green (s)	38.0	73.0	23.0	58.0	58.0	39.0	39.0	39.0	49.0	49.0	49.0
90th %ile Term Code	Max	MaxR	Max	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR
70th %ile Green (s)	38.0	73.0	23.0	58.0	58.0	39.0	39.0	39.0	49.0	49.0	49.0
70th %ile Term Code	Max	MaxR	Max	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR
50th %ile Green (s)	38.0	73.0	23.0	58.0	58.0	39.0	39.0	39.0	49.0	49.0	49.0
50th %ile Term Code	Max	MaxR	Max	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR
30th %ile Green (s)	38.0	73.0	23.0	58.0	58.0	39.0	39.0	39.0	49.0	49.0	49.0
30th %ile Term Code	Max	MaxR	Max	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR
10th %ile Green (s)	38.0	73.0	23.0	58.0	58.0	39.0	39.0	39.0	49.0	49.0	49.0
10th %ile Term Code	Max	MaxR	Max	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR	MaxR

Intersection Summary
Cycle Length: 200
Actuated Cycle Length: 200
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 200
70th %ile Actuated Cycle: 200
50th %ile Actuated Cycle: 200
30th %ile Actuated Cycle: 200
10th %ile Actuated Cycle: 200

Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Lane Configurations								
Traffic Volume (vph)	2436	1060	849	138	332	71	497	1822
Future Volume (vph)	2436	1060	849	138	332	71	497	1822
Turn Type	Split	NA	NA	Prot	NA	Prot	NA	pm+ov
Protected Phases	6	6	2	3	8	7	4	6
Permitted Phases								4
Detector Phase	6	6	2	3	8	7	4	4 6
Switch Phase								
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	53.0	53.0	26.0	44.0	32.0	39.0	27.0	53.0
Total Split (%)	35.3%	35.3%	17.3%	29.3%	21.3%	26.0%	18.0%	35.3%
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lost Time Adjust (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Lost Time (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Lead/Lag				Lag	Lag	Lead	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	Yes	
Recall Mode	None	None	None	None	None	None	None	None
Act Effct Green (s)	49.1	49.1	22.0	15.8	28.1	10.7	23.0	76.1
Actuated g/C Ratio	0.39	0.39	0.17	0.13	0.22	0.08	0.18	0.60
v/c Ratio	2.09	2.00dl	1.74	0.67	0.52	0.50	0.82	1.04
Control Delay	520.3	453.9	370.4	67.5	44.9	66.6	61.0	48.9
Queue Delay	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Total Delay	520.3	453.9	370.4	67.5	44.9	66.6	61.0	48.9
LOS	F	F	F	E	D	E	E	D
Approach Delay		476.8	370.4		50.9		51.9	
Approach LOS		F	F		D		D	

Intersection Summary	
Cycle Length: 150	
Actuated Cycle Length: 125.9	
Natural Cycle: 150	
Control Type: Actuated-Uncoordinated	
Maximum v/c Ratio: 2.09	
Intersection Signal Delay: 296.3	Intersection LOS: F
Intersection Capacity Utilization 129.8%	ICU Level of Service H
Analysis Period (min) 15	
dl Defacto Left Lane. Recode with 1 though lane as a left lane.	

Splits and Phases: 13: Chestnut Street & Mission Street



Lane Group	EBL	EBT	WBT	NBL	NBT	SBL	SBT	SBR
Protected Phases	6	6	2	3	8	7	4	6
Permitted Phases								4
Minimum Initial (s)	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0
Minimum Split (s)	20.0	20.0	20.0	20.0	20.0	20.0	20.0	20.0
Total Split (s)	53.0	53.0	26.0	44.0	32.0	39.0	27.0	53.0
Total Split (%)	35.3%	35.3%	17.3%	29.3%	21.3%	26.0%	18.0%	35.3%
Maximum Green (s)	49.0	49.0	22.0	40.0	28.0	35.0	23.0	49.0
Yellow Time (s)	3.5	3.5	3.5	3.5	3.5	3.5	3.5	3.5
All-Red Time (s)	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Lead/Lag				Lag	Lag	Lead	Lead	
Lead-Lag Optimize?				Yes	Yes	Yes	Yes	
Vehicle Extension (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Minimum Gap (s)	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
Time Before Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Time To Reduce (s)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Recall Mode	None	None	None	None	None	None	None	None
Walk Time (s)	5.0	5.0			5.0		5.0	5.0
Flash Dont Walk (s)	11.0	11.0			11.0		11.0	11.0
Pedestrian Calls (#/hr)	0	0			0		0	0
90th %ile Green (s)	49.0	49.0	22.0	21.8	29.9	14.9	23.0	49.0
90th %ile Term Code	Max	Max	Max	Gap	Hold	Gap	Max	Max
70th %ile Green (s)	49.0	49.0	22.0	18.1	28.7	12.4	23.0	49.0
70th %ile Term Code	Max	Max	Max	Gap	Hold	Gap	Max	Max
50th %ile Green (s)	49.0	49.0	22.0	15.8	28.1	10.7	23.0	49.0
50th %ile Term Code	Max	Max	Max	Gap	Hold	Gap	Max	Max
30th %ile Green (s)	49.0	49.0	22.0	13.5	27.4	9.1	23.0	49.0
30th %ile Term Code	Max	Max	Max	Gap	Hold	Gap	Max	Max
10th %ile Green (s)	49.0	49.0	22.0	10.2	26.3	6.9	23.0	49.0
10th %ile Term Code	Max	Max	Max	Gap	Hold	Gap	Max	Max

Intersection Summary
Cycle Length: 150
Actuated Cycle Length: 125.9
Control Type: Actuated-Uncoordinated
90th %ile Actuated Cycle: 131.8
70th %ile Actuated Cycle: 128.1
50th %ile Actuated Cycle: 125.8
30th %ile Actuated Cycle: 123.5
10th %ile Actuated Cycle: 120.2

FINAL ENVIRONMENTAL IMPACT REPORT

Downtown Plan Amendments



City of Santa Cruz

SCH NO: 2017022050

October 2017

FINAL

ENVIRONMENTAL IMPACT REPORT

DOWNTOWN PLAN AMENDMENTS

SCH NO. 2017022050

PREPARED FOR

CITY OF SANTA CRUZ

Planning and Community Development Department

PREPARED BY

DUDEK

Santa Cruz, California

October 2017

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A. Mitigation Monitoring and Reporting Program
B. Review of Project Consistency with California Coastal Act Policies

TABLES

4.9-1 REVISED – Potential Conflicts with City Of Santa Cruz Policies 3-8

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CHAPTER 1
INTRODUCTION

1.1 PURPOSE OF THE EIR

This EIR has been prepared for the City of Santa Cruz (City), which is the lead agency for the project. This document, together with the Draft EIR dated July 2017, constitutes the Final EIR for the proposed Downtown Plan Amendments project. This EIR has been prepared in accordance with the California Environmental Quality Act (CEQA), which is found in the California Public Resources Code, Division 13, and with the State CEQA Guidelines, which are found in Title 14 of the California Code of Regulations, commencing with section 15000.

As stated in the CEQA Guidelines section 15002, the basic purposes of CEQA are to:

- ❒ Inform governmental decision-makers and the public about the potential, significant environmental effects of proposed activities.
- ❒ Identify the ways that environmental damage can be avoided or significantly reduced.
- ❒ Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible.
- ❒ Disclose to the public the reasons a governmental agency approved the project in the manner the agency chose if significant environmental effects are involved.

Pursuant to State CEQA Guidelines section 15121, an EIR is an informational document which will inform public agency decision-makers and the public generally of the significant environmental effects of a project, identify possible ways to minimize the significant effects, and describe reasonable alternatives to the project. The public agency shall consider the information in the EIR along with other information which may be presented to the agency. While the information in the EIR does not control the ultimate decision about the project, the agency must consider the information in the EIR and respond to each significant effect identified in the EIR by making findings pursuant to Public Resources Code section 21081.

This EIR is being prepared as a "Program EIR" pursuant to section 15168 of the State CEQA Guidelines. A program EIR is an EIR which may be prepared on a series of actions that can be characterized as one large project and are related geographically, by similar environmental effects, as logical parts in the chain of contemplated actions, or in connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program. A program EIR can provide a more exhaustive consideration of effects and alternatives than would be practical in an EIR on an individual action and can ensure consideration of cumulative impacts. A program EIR can be used as part of the environmental review for later individual projects to be carried out pursuant to the project previously analyzed in the program EIR, where impacts have been adequately addressed in the program EIR. This is referred to as "tiering" as

set forth in section 15152 of the State CEQA Guidelines. "Tiering" uses the analysis of general matters contained in a broader EIR (such as one prepared for a general plan) with later EIRs and negative declarations on narrower projects, incorporating by reference the general discussions from the broader EIR and concentrating the later EIR or negative declaration solely on the issues specific to the later project. The State CEQA Guidelines encourage agencies to tier the environmental analyses which they prepare for separate but related projects, including general plans, zoning changes, and development projects.

For later individual projects proposed in the areas covered by the plans and amendments covered in this EIR, the City will determine whether the individual project or subsequent activity is within the scope of this Program EIR, meaning it is an activity within the same project as analyzed in the program EIR or within the same geographic area encompassed by the program EIR. Depending on the City's determination, including whether new effects could occur or new mitigation measures would be required, the analysis for later projects could range from no new CEQA document to a new EIR. The City potentially could apply one or more CEQA "streamlining" tools when it considers later projects, including, but not limited to the focused analytical routes offered under Public Resources Code sections 21155.2, 21083.3, and 21099, and CEQA Guidelines sections 15152, 15182, 15183, and 15183.3. If appropriate and applicable to a proposed project, the City may also consider one or more statutory or categorical exemptions.

Pursuant to CEQA (Public Resources Code section 21002), public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures which would substantially lessen the significant environmental effects of such projects. Pursuant to section 15021 of the State CEQA Guidelines, CEQA establishes a duty for public agencies to avoid or minimize environmental damage where feasible. In deciding whether changes in a project are feasible, an agency may consider specific economic, environmental, legal, social, and technological factors. According to the State CEQA Guidelines, "feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors. This section further indicates that CEQA recognizes that in determining whether and how a project should be approved, a public agency has an obligation to balance a variety of public objectives, including economic, environmental, and social factors, and an agency shall prepare a "statement of overriding considerations" as to reflect the ultimate balancing of competing public objectives when the agency decides to approve a project that will cause one or more significant effects on the environment. The environmental review process is further explained below in subsection 1.4.

1.2 PROJECT OVERVIEW

This Environmental Impact Report (EIR) addresses the potential environmental effects of a series of proposed amendments to the following adopted plans and regulations; a full description of all project components is provided in the Chapter 3.0, Project Description, of the Draft EIR.

- ❒ Downtown Recovery Plan: Amendment to extend and modify the Additional Height Zone A, modify allowed heights in the Additional Height Zone B, modify development standards set forth in Chapter 4, and other minor revisions;
- ❒ General Plan 2030: Amendment to modify Floor Area Ratio for the Regional Visitor Commercial land use designation in the downtown area;
- ❒ Local Coastal Program (LCP): Amendment to Land Use Plan text to modify San Lorenzo Urban River Plan land use development policies and modification of development standards incorporated by reference in the Central Business Zone District that is part of the Implementation Plan;
- ❒ Zoning Code sections: Amendment to Municipal Code Section 24.10, Part 24, Central Business District (CBD) of the Zoning Code, an implementation ordinance of the City's LCP, to modify extension area regulations and add standards for outdoor curb extension areas.

1.3 SCOPE OF THE EIR

An Initial Study and Notice of Preparation were prepared for the project, which identify potentially significant impacts and discuss issues that were found to result in no impacts or less-than-significant impacts. (See Appendix A in the Draft EIR document.) Based on the analyses in the Initial Study and responses to the Notice of Preparation (as discussed below), the EIR evaluates potentially significant impacts for the topics listed below. The EIR also evaluates topics required by CEQA and CEQA Guidelines, including growth inducement, project alternatives, and cumulative impacts. The environmental analysis for this EIR includes:

- ❒ Aesthetics
- ❒ Air Quality and Greenhouse Gas Emissions
- ❒ Biological Resources
- ❒ Cultural and Tribal Cultural Resources
- ❒ Hydrology and Water Quality
- ❒ Public Services (Fire and Police Protection Services, Parks and Recreation, Schools, Solid Waste, Electrical and Natural Gas Utilities)
- ❒ Transportation and Traffic
- ❒ Water and Wastewater Utilities
- ❒ Land Use – Plan and Policy Review

The focus of the environmental review process is upon significant environmental effects. As defined in section 15382 of the CEQA Guidelines, a "significant effect on the environment" is:

> ... a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project, including land, air, water,

> minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment. A social or economic change related to a physical change may be considered in determining whether a physical change is significant.

In evaluating the significance of the environmental effect of a project, the State CEQA Guidelines require the lead agency to consider direct physical changes in the environment and reasonably foreseeable indirect physical changes in the environment which may be caused by the project (CEQA Guidelines section 15064[d]). A direct physical change in the environment is a physical change in the environment which is caused by and immediately related to the project. An indirect physical change in the environment is a physical change in the environment which is not immediately related to the project, but which is caused indirectly by the project. An indirect physical change is to be considered only if that change is a reasonably foreseeable impact which may be caused by the project.

CEQA Guidelines section 15064(e) further indicates that economic and social changes resulting from a project shall not be treated as significant effects on the environment, although they may be used to determine that a physical change shall be regarded as a significant effect on the environment. In addition, where a reasonably foreseeable physical change is caused by economic or social effects of a project, the physical change may be regarded as a significant effect in the same manner as any other physical change resulting from the project.

1.4 ENVIRONMENTAL REVIEW AND APPROVAL PROCESS

1.4.1 Scoping

Under CEQA, the lead agency for a project is the public agency with primary responsibility for carrying out or approving the project, and for implementing the requirements of CEQA. CEQA Guidelines section 15083 authorizes and encourages an early consultation or scoping process to help identify the range of actions, alternatives, mitigation measures, and significant effects to be analyzed and considered in an EIR, and to help resolve the concerns of affected regulatory agencies, organizations, and the public. Scoping is designed to explore issues for environmental evaluation, ensuring that important considerations are not overlooked and uncovering concerns that might otherwise go unrecognized.

A Notice of Preparation (NOP) for this EIR was circulated for a 30-day comment period on February 14, 2017. The NOP, with an Initial Study as an attachment, was circulated to the State Clearinghouse and to local, regional, and federal agencies in accordance with State CEQA Guidelines. The NOP also was sent to organizations and interested citizens that have requested notification in the past for the proposal project or any project. A public scoping meeting also was held at a Planning Commission meeting on June 15, 2017.

Written comments were received from three public agencies (California Coastal Commission, Caltrans and FEMA), two organizations (Friends of San Lorenzo River Wildlife and Sierra Club), and five individuals (Candace Brown, Gillian Greensite, Debbie Hencke, Jane Mio, and Jack Nelson). These letters are included in Appendix B in the Draft EIR volume. Both the written comments and oral comments received at the scoping meeting have been taken into consideration in the preparation of this EIR for comments that address environmental issues. Comments received during the scoping period regarding environmental issues generally include the following concerns:

- ❒ Aesthetics and impacts to the visual character of the surrounding area;
- ❒ Biological impacts to San Lorenzo River habitat, including potential impacts to birds;
- ❒ Flood hazards and effects of climate change and sea level rise;
- ❒ Drainage and water quality impacts;
- ❒ Traffic and parking impacts; and
- ❒ Provision of public access and recreation along the river.

1.4.2 Public Review of Draft EIR

The Draft EIR was published and circulated for review and comment by the public and other interested parties, agencies, and organizations for a 45-day public review period from July 26, 2017 through September 8, 2017. Nineteen letters of comment were received; agencies, organizations and individuals that submitted written comments on the draft EIR are outlined below.

State & Local Agencies

1. California Coastal Commission
2. California State Clearinghouse
3. Monterey Bay Air Resources District

Organizations

4. Campaign for Sensible Transportation
5. Coastal Watershed Council
6. Santa Cruz Bird Club
7. Sierra Club, Santa Cruz Group

Individuals

8. Shawn Arnold
9. Candace Brown
10. Ted Burke
11. Will Cassilly

12. Tyler Derheim
13. Eric McGrew
14. Jane Mio
15. Salina Nevarez
16. Gary A. Patton
17. Reed Searle
18. Veronica Tonay
19. Russell Weisz

This Final EIR volume includes written responses to significant environmental issues raised in comments received during the public review period in accordance with CEQA Guidelines section 15088. The Final EIR also includes Draft EIR text changes and additions that became necessary after consideration of public comments. (See CEQA Guidelines, § 15088, subd. (c)).) The Final EIR, which includes the July 2017 Draft EIR, will be presented to the City the City Planning Commission and City Council. Before it can approve the project or any of the alternatives described in the Final EIR, the City Council must first certify that it has reviewed and considered the information in the EIR, that the EIR has been completed in conformity with the requirements of CEQA, and that the document reflects the City's independent judgment. (See CEQA Guidelines, § 15090, subd. (a).)

1.4.3 Final EIR / Project Approval

The Final EIR document, which includes both the Draft EIR and Final EIR documents, will be presented to the City Planning Commission for consideration of the proposed actions and recommendation to the City Council. The City Council will make the final decision on the proposed Downtown Plan amendments. The Planning Commission and the City Council must ultimately certify that it has reviewed and considered the information in the EIR, that the EIR has been completed in conformity with the requirements of CEQA, and that the document reflects the City's independent judgment.

Pursuant to sections 21002, 21002.1 and 21081 of CEQA and sections 15091 and 15093 of the CEQA Guidelines, no public agency shall approve or carry out a project for which an EIR has been certified which identifies one or more significant effects unless both of the following occur:

(a) The public agency makes one or more of the following findings with respect to each significant effect:
    1. Changes or alterations have been required in, or incorporated into, the project which avoid or substantially lessen the significant environmental effects on the environment.
    2. Those changes or alterations are within the responsibility and jurisdiction of another public agency and have been, or can and should be, adopted by such other agency.

3. Specific economic, legal, social, technological, or other considerations, including considerations for the provision of employment opportunities for highly trained workers, make infeasible the mitigation measures or alternatives identified in the environmental impact report.

(b) With respect to significant effects which were subject to a finding under paragraph (3) of subdivision (a), the public agency finds that specific overriding economic, legal, social, technological, or other benefits of the project outweigh the significant effects on the environment.

Although these determinations (especially regarding feasibility) are made by the public agency's final decision-making body based on the entirety of the agency's administrative record as it exists after completion of a final EIR, the draft EIR must provide information regarding the significant effects of the proposed project and must identify the potentially feasible mitigation measures and alternatives to be considered by that decision-making body.

1.4.4 Adoption of Mitigation Monitoring & Reporting Program

CEQA requires that a program to monitor and report on mitigation measures be adopted by a lead agency as part of the project approval process. CEQA requires that such a program be adopted at the time the agency approves a project or determines to carry out a project for which an EIR has been prepared to ensure that mitigation measures identified in the EIR are implemented. The Mitigation Monitoring and Reporting Program is included in Appendix A of this document.

1.5 ORGANIZATION OF EIR

This document, together with the Draft EIR dated July 2017, constitutes the Final EIR for the project. This document contains responses to comments received on the Draft EIR. The Final EIR is organized with the following sections.

- **Chapter 1, Introduction**, explains the CEQA process; describes the scope and purpose of this EIR; provides information on the environmental review and approval process; and outlines the organization of this Final EIR document.

- **Chapter 2, Summary**, presents an overview of the project; provides a summary of the impacts of the project and mitigation measures; provides a summary of the alternatives being considered; includes a discussion of known areas of controversy; and lists the topics not carried forward for further analysis.

- **Chapter 3, Changes to Draft EIR**, outlines revisions to the Draft EIR text as a result of review of comments and responses as may be needed. Additional clarification provided by City staff also is included.

- **Chapter 4, Public Comments and Responses**, includes each comment letter with responses to comments immediately following the comment letter.

- **Appendices.** A Mitigation Monitoring and Reporting Program is included in Appendix A. Appendix B includes a review of project consistency with Coastal Act policies since the project will require approval of a Local Coastal Plan (LCP) amendment by the California Coastal Commission,

CHAPTER 2
SUMMARY

2.1 INTRODUCTION

This chapter provides a brief description of the proposed project, known areas of controversy or concern, project alternatives, all potentially significant impacts identified during the course of this environmental analysis, and issues to be resolved. This summary is intended as an overview and should be used in conjunction with a thorough reading of the EIR. The text of this report, including figures, tables and appendices, serves as the basis for this summary.

2.2 PROJECT OVERVIEW

This Environmental Impact Report (EIR) addresses the potential environmental effects of construction of This Environmental Impact Report (EIR) addresses the potential environmental effects of a series of proposed amendments to the following adopted plans and regulations; a full description of all project components is provided in the Chapter 3.0, Project Description, of this EIR.

- ❒ Downtown Recovery Plan: Amendment to extend and modify Additional Height Zone A, the Additional Height Zone B, ~~and~~ modify development standards set forth in Chapter 4, and other minor revisions;
- ❒ General Plan 2030: Amendment to modify Floor Area Ratio for the Regional Visitor Commercial land use designation in the downtown area;
- ❒ Local Coastal Plan (LCP): Amendment to Land Use Plan text to modify San Lorenzo Urban River Plan land use development policies and modification of development standards incorporated by reference in the Central Business Zone District that is part of the Implementation Plan;
- ❒ Zoning Code sections: Amendment to Municipal Code Section 24.10, Part 24, Central Business District (CBD) of the Zoning Code, an implementation ordinance of the City's LCP, to modify extension area regulations and add standards for outdoor curb extension areas ~~Parklet standards~~.

2.3 AREAS OF CONTROVERSY OR CONCERN

The City of Santa Cruz, as the Lead Agency, has identified areas of concern based on the Initial Study and Notice of Preparation (NOP), which are included in Appendix A. In response to the NOP, letters of comment were received from three agencies (California Coastal Commission, Caltrans and FEMA), two organizations (Friends of San Lorenzo River Wildlife and Sierra Club), and five individuals (Candace Brown, Gillian Greensite, Debbie Hencke, Jane Mio, and Jack

Nelson). An agency and public scoping also was held at the Planning Commission meeting on June 15, 2017 to receive public comments on the scope of the EIR's analyses and project alternatives. Both the written comments and oral comments received at the scoping meeting have been taken into consideration in the preparation of this EIR for comments that address environmental issues.

Written comments on the NOP, oral comments received at the scoping meeting, and comments on the Draft EIR raised the following environmental concerns, some of which may be areas of controversy:

- ❒ Concerns regarding future building heights and aesthetics and impacts to the visual character of the surrounding area;
- ❒ Biological impacts to San Lorenzo River habitat, including potential impacts to birds;
- ❒ Flood hazards and effects of climate change and sea level rise;
- ❒ Drainage and water quality impacts;
- ❒ Traffic and parking impacts;
- ❒ Impacts to parks;
- ❒ Consistency with City policies and regulations; and
- ❒ Provision of public access and recreation along the river.

2.4 SUMMARY OF ALTERNATIVES

CEQA Guidelines require that an EIR describe and evaluate alternatives to the project that could eliminate significant adverse project impacts or reduce them to a less-than-significant level. The following alternatives are evaluated in Section 5.5 of the Draft EIR.

- ❒ No Project – Required by CEQA
- ❒ Alternative 1 – Reduced Height for Expanded Additional Height Zone A to 75 feet and Elimination of Additional Height Zone B
- ❒ Alternative 2 – Reduced Height for Additional Height Zone A to 75 feet along Pacific/Front and Reduced Height for Additional Height Zone B to 60 feet along the San Lorenzo River with Development Standard Modifications: eliminate encroachment over property line and require 10-foot setback above 50 feet

Table 5-5 in Section 5 of this EIR presents a comparison of project impacts between the proposed project and each alternative. None of the alternatives, including the No Project Alternative would eliminate reduce significant project impacts and cumulative impacts related to traffic to a less-than-significant level, although all alternatives would reduce the level of impact somewhat. Table 5-5 (on page 5-29 of the Draft EIR) presents a comparison of project impacts between the proposed project and the alternatives. Excluding the No Project Alternative,

Alternative 1 – Reduced Height for Additional Height Zone A and Elimination of Additional Height Zone B – is considered the environmentally superior alternative of the alternatives considered. Although it would not reduce significant impacts to less-than-significant levels, it could result in the greatest reduction of traffic and water demand impacts and reduce some of the other identified significant impacts. However, it would not fully meet project objectives.

2.5 SUMMARY OF IMPACTS AND MITIGATION MEASURES

All impacts identified in the subsequent environmental analyses are summarized in this section. This summary groups impacts of similar ranking together, beginning with significant unavoidable impacts, followed by significant impacts that can be mitigated to a less-than-significant level, followed by impacts not found to be significant. The discussions in the Initial Study of impacts that are not being addressed in detail in the text of the Draft EIR are intended to satisfy the requirement of CEQA Guidelines section 15128 that an EIR "shall contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and therefore were not discussed in detail in the EIR." The Initial Study is included in Appendix A of this EIR. A summary of less-than-significant and no impacts identified in the Initial study is presented at the end of this section.

2.5.1 Significant Unavoidable Impacts

The following impacts were found to be potentially significant, and while mitigation measures have been identified in some cases, the impact cannot be reduced to a less-than-significant level. Section 5.5, Project Alternatives, examines alternatives to eliminate or reduce the level of significance of these impacts.

Cumulative Impacts

The proposed project will contribute to significant cumulative traffic impacts at six locations in the project vicinity and along state highways. Future development projects within the area of the proposed plan amendments will be required to pay the City's traffic impact fee. However, payment of the traffic impact fee and the associated improvements would not mitigate impacts to a less-than-significant level at three intersections: Ocean Street/Water Street, Highway 1/ Highway 9, and Chestnut Street/Mission Street. Improvements could be made to the other intersections to achieve an acceptable LOS of D.

MITIGATION 5-1: Require future development projects within the downtown area to contribute fair-share payments for improvements at the following intersections: Front/Soquel (signal timing and lane modifications); Front/Laurel (westbound lane addition and north and south right-turn overlap); and Pacific/Laurel (southbound left-turn lane addition).

With implementation of Mitigation 5-1, significant cumulative impacts at three intersections would be mitigated, and the project's contribution would not be cumulatively considerable. Future development projects in the downtown area would be required to pay the City's traffic impact fees for improvements at the other three intersections, but planned improvements would not result in acceptable levels of service, and no other feasible improvements have been identified. Therefore, cumulative traffic impacts remain significant at three City intersections and along state highways. This is a significant unavoidable cumulative impact, and the project's contribution to cumulative traffic impacts would be cumulatively considerable at these locations.

2.5.2 Significant Impacts

The following impacts were found to be potentially significant, but could be reduced to a less-than-significant level with implementation of identified mitigation measures should the City's decision-makers impose the measures on the project at the time of final action on the project.

Impacts Evaluated in EIR

Biological Resources

Impact 4.3-2: **Indirect Impacts to Sensitive Riparian Habitat.** Future development of taller buildings as a result of the proposed Downtown Plan amendments could result in indirect impacts to birds in the area that could lead to bird mortalities.

MITIGATION 4.3-2: Revise Downtown Plan to include standard for design guidance for bird-safe structures along the San Lorenzo River, including:

- Minimize the overall amount of glass on building exteriors facing the San Lorenzo River.
- Avoid mirrors and large areas of reflective glass.
- Avoid transparent glass skyways, walkways, or entryways, free-standing glass walls, and transparent building corners.
- Utilize glass/window treatments that create a visual signal or barrier to help alert birds to presence of glass. Avoid funneling open space to a building façade.
- Strategically place landscaping to reduce reflection and views of foliage inside or through glass.
- Avoid ~~or minimize~~ up-lighting and spotlights.
- Turn non-emergency lighting off (such as by automatic shutoff), or shield it, at night to minimize light from buildings that is visible to birds, especially during bird

migration season (February-May and August-November).

Impact 4.3-3: **Indirect Impacts to Nesting Birds.** Future development as a result of the proposed Downtown Plan amendments could result in disturbance to nesting birds if any are present in the vicinity of construction sites along the San Lorenzo River.

MITIGATION 4.3-3: Require that a pre-construction nesting survey be conducted by a qualified wildlife biologist if construction, including tree removal, adjacent to the San Lorenzo River is scheduled to begin between March and late July to determine if nesting birds are in the vicinity of the construction sites. If nesting raptors or other nesting species protected under the MBTA are found, construction may need to be delayed until late-August or after the wildlife biologist has determined the nest is no longer in use or unless a suitable construction buffer zone can be identified by the biologist. (Citywide Creeks and Wetlands Management Plan Standard 12).

Public Services

Impact 4.6-1c: **Schools.** Adoption of the proposed plan amendments could indirectly result in increased population associated with potential development that would generate elementary school student enrollments that could exceed capacity of existing schools.

MITIGATION: ~~No mitigation measures are required beyond~~ Payment of school impact fees pursuant to Government Code section 65996 will be collected at the time of issuance of a building permit. Section 65996, subdivision (d) specifies that payment of school impact fees "are hereby deemed to provide full and complete school facilities mitigation" under CEQA. Therefore, impacts of the plan amendments on school capacity are considered to be mitigated to a less-than-significant level through the payment of required impact fees.

Impact 4.6-2: **Parks and Recreation.** Adoption of the proposed plan amendments could indirectly result in increased population associated with potential development that could be accommodated by the Plan, which ~~that~~ would result in increased demand for parks and recreational facilities that could result in some deterioration of existing parks and recreational facilities.

MITIGATION: With implementation of the proposed General Plan 2030 goals, policies and actions that set forth measures to avoid and minimize adverse

impacts on parks and recreational facilities as summarized on Table 4.6-2 and required payment of park fees, the proposed project's indirect impact on parks and recreational facilities would be considered less-than-significant.

Impacts Evaluated in Initial Study (Appendix A)

Noise

Noise-1: **Exposure to Noise.** Future development in the project area would be exposed to exterior and / or interior noise levels that exceed local and state requirements. However, the project area is not within locations that would expose people to noise in excess of established standards.

MITIGATION NOISE-1: Require preparation and implementation of acoustical studies for future residential development along Front Street to specify building design features that meet state interior sound levels.

2.5.3 Less-Than-Significant Impacts

The following impacts were found to be less-than-significant. Mitigation measures are not required.

Impact 4.1-1: **Scenic Views.** Future development accommodated by the proposed plan amendments would not eliminate or substantially adversely affect, modify, or obstruct a visually prominent or significant public scenic vista.

Impact 4.1-3: **Visual Character of the Surrounding Area.** The proposed project would result in amendments to the DRP and General Plan that would allow increased heights of 20 to 35 feet over existing allowable standards, and future development could result in taller and more massive buildings. With implementation of required development standards for massing, required percentage variation of heights, and upper-level skyline variation, future buildings would be of similar height and scale as the other taller buildings in the downtown area, which already contains several multi-story buildings of varied height, and would not substantially degrade the visual character of the surrounding area.

Impact 4.1-4: **Introduction of Light and Glare.** The proposed project would result in amendments to the DRP and General Plan that would allow increased heights and building coverage, and future development would include exterior and interior lighting typical of residential developments, but would not result in introduction of a major new source of light or glare.

Impact 4.2-1: **Criteria Pollutant Emissions.** Future development and growth accommodated by the proposed project would result in emissions of criteria pollutants, but would not exceed adopted thresholds of significance, violate any air quality standard or contribute substantially to an existing or projected air quality violation.

Impact 4.2-2: **Greenhouse Gas (GHG) Emissions.** Future development and growth accommodated by the proposed project would result in in GHG emissions, which are not considered significant.

Impact 4.3-1: **Indirect Impacts to Special Status Species and Aquatic Habitat.** Future development of taller buildings as a result of the proposed Downtown Plan amendments could result in indirect to impacts to riparian and aquatic special status species due to increased shading due to increased building heights, but would not substantially affect habitats.

Impact 4.4-1: **Archaeological and Tribal Cultural Resources.** Future development accommodated by the proposed plan amendments could result to impacts to archaeological, historical archaeological, human remains, and/or tribal cultural resources. However, City requirements for cultural resource investigations would ensure that future development projects assess and mitigate potential impacts.

Impact 4.4-2: **Historic Resources.** Future development accommodated by the proposed plan amendments could result in impacts to historical resources, however, site-specific redevelopment could occur under existing conditions without the proposed plan amendments.

Impact 4.4-3: **Paleontological Resources.** Future development accommodated by the proposed plan amendments could result to impacts to unknown paleontological resources discovered during construction. However, adherence to City procedures would not result in significant impacts.

Impact 4.5-1: **Stormwater Drainage.** Future development accommodated by the proposed plan amendments could result in stormwater runoff, but would not substantially alter the existing drainage pattern of the area, substantially increase the rate or amount of surface runoff, exceed the capacity of existing or planned storm drain facilities, cause downstream or off-site drainage problems, or increase the risk or severity of flooding in downstream areas.

Impact 4.5-2: **Water Quality.** Future development accommodated by the proposed plan amendments could result in water quality degradation to San Lorenzo River

from automobile oils and greases carried in stormwater runoff. Project grading could also result in erosion and potential downstream sedimentation if not properly managed.

Impact 4.5-3: **Flood Hazards.** Future development accommodated by the proposed plan amendments could result in exposure to flood hazards, including watercourse flooding, sea level rise or tsunami. (5d-g). However, with compliance with federal flood requirements and implementation of City plans and programs, the proposed project would not lead to indirect impacts related to exposure to flood hazards.

Impact 4.6-1a: **Fire Protection.** Adoption of the proposed plan amendments could indirectly result in increased population density associated with potential new development accommodated by the Plan that would result in increased fire protection and emergency service demands. Existing and future development and growth within the City would result in the need to construct new or expanded fire stations, however, the impacts of fire station construction or expansion are not expected to be significant.

Impact 4.6-1b: **Police Protection.** Adoption of the proposed plan amendments could indirectly result in increased population associated with potential development that could be accommodated by the Plan that would result in increased police protection service demands. However, future development and growth would not result in the need to construct new or expanded police facilities.

Impact 4.6-3: **Solid Waste.** Adoption of the proposed plan amendments could indirectly result in increased population associated with potential development that could be accommodated by the Plan, which could result in indirect generation of solid waste that could be accommodated within the remaining landfill capacity.

Impact 4.6-4: **Energy Use.** Adoption of the proposed plan amendments could indirectly result in increased population associated with potential development that could be accommodated by the Plan, which could result in indirect increased energy demands, which would not be wasteful or an inefficient use of resources.

Impact 4.7-1: **Circulation System Impacts.** The project will result in an increase in daily and peak hour trips, but would not cause existing or planned intersections to operate at an unacceptable Level of Service (LOS) or further degrade intersections that already operate at an unacceptable LOS.

Impact 4.7-2: **Highway Segment Impacts.** The project will result in an increase in daily and peak hour trips, but would not result in a change to an unacceptable LOS along state highway segments.

Impact 4.8-1: **Water Supply.** Adoption of the proposed plan amendments could indirectly result in intensified development with a demand for potable water in a system that, under existing conditions, has adequate supplies during average and normal years, but is subject to potential supply shortfalls during dry and critically dry years. The additional project demand would not result in a substantial increase during dry years and would not be of a magnitude to affect the level of curtailment that might be in effect.

Impact 4.8-2: **Wastewater Treatment.** Adoption and implementation of the proposed plan amendments could indirectly result in increased development and population growth that would result in indirect generation of wastewater that could be accommodated by the existing wastewater treatment plant.

2.5.4 No Impacts

CEQA Guidelines section 15128 require that an EIR contain a statement briefly indicating the reasons that various possible significant effects of a project were determined not to be significant and were therefore not discussed in detail in the EIR. Through the Initial Study, NOP scoping process, and EIR, the City of Santa Cruz determined that the proposed project would have no impact on the environmental issues outlined below, and thus, are not further analyzed in the EIR. See the Initial Study in Appendix A for further discussion.

Impacts Evaluated in EIR

Impact 4.1-2: **Scenic Resources.** Future development accommodated by the proposed plan amendments would not result in elimination or a substantial adverse effect to scenic resources.

Impact 4.7-3: **Project Access.** The project will not result in creation of hazards due to design of the project circulation system or introduction of incompatible uses.

Impact 4,7-4: **Emergency Access.** The project will not result in inadequate emergency access.

Impact 4.7-5: **Transit, Pedestrian and Bicycle Travel.** The project will not conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities.

Impact 4.9-1: **Conflicts with Policies and Regulations.** The proposed project will not conflict with policies or regulations adopted for the purpose of avoiding or mitigating an environmental effect, and therefore, will result in *no impact* related to consistency with local plans and policies.

Impacts Evaluated in Initial Study (Appendix A)

- Agricultural and Forest Resources
- Hazards and Hazardous Materials, except Wildland Fire Risk
- Mineral Resources
- Noise: Generation of Vibration, Location Within Airport Land Use Plan

2.6 ISSUES TO BE RESOLVED

CEQA Guidelines section 15123 requires the Summary to identify "issues to be resolved including the choice among alternatives and whether or how to mitigate the significant effects." This EIR has presented mitigation measures and project alternatives, and the City Planning Commission and City Council will consider the Final EIR when considering the proposed project. In considering whether to approve the project, the Planning Commission and City Council will take into consideration the environmental consequences of the project with mitigation measures and project alternatives, as well as other factors related to feasibility. "Feasible" means capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors (CEQA Guidelines, § 15364). Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control, or otherwise have access to the alternative site (or already owns the alternative site). No one of these factors establishes a fixed limit on the scope of reasonable alternatives. The concept of feasibility also encompasses the question of whether a particular alternative or mitigation measure promotes the underlying goals and objectives of a project. Moreover, feasibility under CEQA encompasses "desirability" to the extent that desirability is based on a reasonable balancing of the relevant economic, environmental, social, legal, and technological factors.

CHAPTER 3
CHANGES TO DRAFT EIR

3.1 INTRODUCTION

This chapter provides a brief description of the proposed project, known areas of controversy or concern, project alternatives, all potentially significant impacts identified during the course of this environmental analysis, and issues to be resolved. This summary is intended as an overview and should be used in conjunction with a thorough reading of the EIR. The text of this report, including figures, tables and appendices, serves as the basis for this summary.

3.2 CHANGES TO ALL SECTIONS

Revise text throughout the document to:

- ❒ Change all references to the San Lorenzo Riverwalk to Santa Cruz Riverwalk, which was formally renamed by the Santa Cruz City Council; and
- ❒ Change other references to LCP from Local Coastal Plan to Local Coastal Program.

3.3 CHANGES TO SECTIONS 1 and 2 – INTRODUCTION and SUMMARY

Page 16 Correct the second sentence of the second paragraph under subsection 1.4.3 as follows:

The City Council will make the final decision on the proposed ~~General Plan amendment, rezoning and permit applications~~ Downtown Plan amendments.

Page 2-1 Revise Summary as shown in Chapter 2 of this document.

3.4 CHANGES TO SECTION 3 - PROJECT DESCRIPTION

Page 3-4 Revise the overview of project components as follows:

The proposed project consists of a series of amendments to the following adopted City plans and regulations:

- ❒ Downtown Recovery Plan: Amendment to extend and modify Additional Height Zone A, the Additional Height Zone B, ~~and~~ modify development standards set forth in Chapter 4, and other minor revisions;

- ❒ General Plan 2030: Amendment to modify Floor Area Ratio for the Regional Visitor Commercial land use designation in the downtown area;
- ❒ Local Coastal Plan (LCP): Amendment to Land Use Plan text to modify San Lorenzo Urban River Plan land use development policies and modification of development standards incorporated by reference in the Central Business Zone District that is part of the Implementation Plan;
- ❒ Zoning Code sections: Amendment to Municipal Code Section 24.10, Part 24, Central Business District (CBD) of the Zoning Code, an implementation ordinance of the City's LCP, to modify extension area regulations and add standards for outdoor curb extension areas ~~Parklet standards~~.

Page 3-4 Revise the fifth sentence of the last paragraph as follows:

Increasing densities in the downtown is consistent with the overarching objectives of the City to maintain ~~a compact downtown with~~ a dense urban core ~~in exchange for retaining~~ with a greenbelt around the City.

Page 3-12 Revise the second paragraph under the Local Coastal Program subsection to read:

Chapter 4 of the Downtown Recovery Plan is incorporated by reference in the CBD zone district, and the district is part of the implementation section of the LCP. Thus, revisions to the DRP Chapter 4 and CBD zone district require review and approval by the California Coastal Commission as part of an LCP amendment.

Page 3-13 In the Zoning Code Amendments subsection and subsequent sections, change reference to "parklets" to "outdoor curb extension areas".

3.5 CHANGES TO SECTION 4.3 – BIOLOGICAL RESOURCES

Page 4.3-21 Revise Mitigation Measure 4.3-2 as shown in Chapter 2, Summary, of this document.

3.6 CHANGES TO SECTION 4.5 – HYDROLOGY AND WATER QUALITY

Page 4.5-3 Add the following new text after the Stormwater Management Program section.

Integrated Pest Management Program. The City of Santa Cruz initiated its Integrated Pest Management (IPM) Program in November of 1998 after the City Council adopted Resolution No. NS-24,067, the Integrated Pest Management

Policy. This policy sets forth the following goals for all City Departments: Eliminate or reduce pesticide applications on City property to the maximum extent feasible; eliminate the application of all U.S. Environmental Protection Agency (EPA) Toxicity Category I and II pesticide products by 20001; and establish a Citywide IPM Program focusing on coordinated administration and public outreach and education. Any development of publicly owned land adjacent to the Riverwalk is required to follow the guidelines established by the City's IMP.

Page 4.5-9 Revise the last two paragraphs as follows

Portions of downtown and beach areas have been mapped as being within areas of sea level rise. As sea level continues to rise, seawater could extend farther upstream in the San Lorenzo River flood control channel more frequently, and rising gradually to higher elevations. This would lead to a rise in the water table beneath downtown. This area of the city has always been vulnerable to an elevated water table but this will become a more significant issue in the future as the water table rises, likely resulting in the need for more pumping and implementation of other adaptation strategies (Griggs, Haddad, January 2011). The Climate Change Vulnerability Study includes the following recommendation:

> **Recommendation 2.** Install a series of ground water monitoring wells (piezometers) in the downtown area to continuously monitor the level of the water table, recording changes seasonally and over time in relation to the river levels.

The City's Climate Change Vulnerability Study indicates that flood risks will increase with sea level rise, and recommends that the City continue to work with the U.S. Army Corps of Engineers (USACE) regarding the ability/capacity of the levees to contain a 100-year flood. The study also provides a risk assessment that uses three different levels of "*Magnitude":* Low, Moderate and High, and four different levels of *"Probability"* or "*Likelihood of Occurrence"*: Low, Moderate, High and Very High. This assessment ranks downtown flooding as a high magnitude/moderate probability occurrence to the year 2050 and a high magnitude/high probability occurrence between the years 2050 and 2100.

The City has continued working with the USACE regarding levee performance and capacity issues. In 2014, the USACE conducted a performance analysis for the San Lorenzo River levees, taking into account the existing and likely-future channel geometry, the latest flood-frequency data, river profile, sediment load, future flows and sea level rise (USACE, 2014). This assessment evaluated the existing and future safety of the levee system, and determined that the levees could safely pass the 1% flood (100-year flood). However, the evaluation concluded that sediment deposition near the upstream end of the levee project (between Water Street and Highway 1) may continue to decrease the capacity of the

channel, to the point that the 1% flood cannot be safely passed. The City has been working with the USACE to develop potential options for increasing flood capacity in this section of the river.

3.7 CHANGES TO SECTION 4.6 - PUBLIC SERVICES

Page 4.6-4 Expand Setting section for Parks and Recreation at the end of the fourth paragraph:

Additionally, the existing Downtown Recovery Plan identifies opportunities to improve connections to existing parkland. The plan envisions a riverfront park along the levee promenade between Soquel and Laurel Streets. The plan also calls for strengthening the linkage between the river and downtown along Cooper Street through the Galleria to the existing pedestrian bridge leading to San Lorenzo Park. It also recommends establishing stronger pedestrian linkages to the river at the northeast corner of Soquel Avenue and Front Street, at or near the extensions of Cathcart, Elm, and Maple streets, and leading to a significantly expanded pedestrian/bicycle bridge with retailing uses alongside, as well as a more active linkage to San Lorenzo Park.

Page 4.6-13 Add the following text before the last paragraph:

New development that may occur under the Downtown Plan will be located within a half-mile (the service radius for neighborhood-serving parks) to several existing neighborhood and community parks which will provide a variety of recreational opportunities to new residents. Some of the larger parks include San Lorenzo Park, Riverside Gardens Park, Mike Fox Park, Laurel Park, and Depot Park. Mimi De Marta Park is limited to off-leash dog use; however, it is located within close proximity to Mike Fox Park and Riverside Gardens Park and serves a specific role in a broader mix of available uses. Similarly, some of the parks are located along the Santa Cruz Riverwalk, including a multi-use trail along the San Lorenzo River, which, when considered together, form a larger park corridor that provides access to a wide range of natural and developed recreational areas.

Page 4.6-15 Add the following new text before the first paragraph:

Additionally, the existing Downtown Recovery Plan identifies opportunities to improve connections to existing parkland as described in section 4.6-1. The City's General Plan established a long-term goal to "strive" for 4.5 acres of neighborhood and community parkland per 1,000 residents. To help meet the goal, the General Plan includes an action to require park land dedications of suitable recreational land at a ratio or 4.5 acres/1,000 population generated by a development project, or payment of a corresponding in-lieu fees. The City's

Municipal Code requires new residential subdivisions to dedicate land, or pay an in-lieu fee, for parks and open space as authorized by the Quimby Act. Additionally, the City has adopted a Park and Recreation Facilities Tax on residential construction and fees are collected on various forms of residential development.

Page 4.6-15 Add the following new text after the first paragraph:

Park-In Lieu fees and Park and Recreation Facilities Tax revenues are placed into separate accounts from the General Fund and mitigate for the impact of growth. The fees are collected incrementally as development occurs which can help the Parks and Recreation Department pool a larger sum of money to be used for park improvements. The funds can be used to purchase parkland and/or rehabilitate existing facilities that will receive more use as a result of new development. Acquiring new parkland can be challenging but does occur. For example, Riverside Gardens Park was constructed in 2014 and is near downtown.

3.8 CHANGES TO SECTION 4.9 - LAND USE

Page 4.9-4 Add the following new section at the top of the page.

San Lorenzo Urban River Plan

The San Lorenzo Urban River Plan (SLURP) is the City's guide for restoring, managing, and maintaining natural resources, riverfront development, as well as recreation and public access improvements for the lower San Lorenzo River, Jessie Street Marsh and Branciforte Creek. (Branciforte Creek is not located within the coastal zone.) The SLURP is the outcome of a planning process initiated by City Council in 1999 to update previous plans for the San Lorenzo River, Jessie Street Marsh, and Branciforte Creek. The *San Lorenzo Urban River Plan* provides an update to the 1987 *San Lorenzo River Design Concept Plan* and the 1989 *San Lorenzo River Enhancement Plan*.

The SLURP articulates a community vision for the corridor encompassing the lower Lorenzo River, Branciforte Creek and Jessie Street Marsh, as both a wildlife area and ~~as~~ a community recreational and public open space amenity. It contains recommendations for habitat enhancement, public access and trail improvements, public art, and community programs to guide river-oriented development. It seeks to guide the City of Santa Cruz in re-establishing and improving its management of and relationship to this major, recently expanded landscape feature over the next 20 years.

The SLURP includes conceptual plans for areas adjacent to the River. These conceptual plans are provided only to stimulate potential design ideas and are not required for particular properties in development applications. In general, the SLURP promotes river-oriented development to promote the river as an amenity. It contains conceptual ideas, as well as site-specific recommendations, for accomplishing the goals that guided the Plan's development.

The project area is located within the "Transitional Reach" of the San Lorenzo River in the SLURP. This reach includes the area from Laurel Street Bridge to the Water Street Bridge. Recommended improvements in the study area include:

- Front Street Plaza at Cathcart or Maple Lane: Construction river view plaza; add riverway makers, directional and interpretive and public art opportunities
- Mimi de Marta Park
- Urban Interface Connections – the goal of the urban interface connections in the Transitional Reach is to provide features that connect downtown areas with the river via "green corridors" of trees and landscaping via Cathcart St and Maple Lane to the River.

The project area also is located along the "Front Street Riverfront Area" identified in the SLURP as a significant riverfront area that is a prime opportunity site to engage the community with the river with improved public access being a primary goal of the SLURP. Twelve existing specific recommendations for this area are included in the SLURP.

Page 4.9-4 Add the following new section after the *Zoning Code* subsection.

California Coastal Act

The proposed project includes amendments to the City's certified Local Coastal Plan (LCP) that will require California Coastal Commission approval. Chapter 4 of the Downtown Recovery Plan is incorporated by reference in the CBD zone district, and the district is part of the implementation section of the LCP. Thus, revisions to the DRP Chapter 4 require review and approval by the California Coastal Commission as part of an LCP amendment. In addition, several LCP policies related to the SLURP are proposed to be modified. In accordance with the comments from the California Coastal Commission staff, a review of project consistency with Coastal Act policies has been added, and is included in Appendix B of this document.

The review does not reveal any conflicts with Coastal Act policies. The proposed amendments would provide for new public access connections to the San

Lorenzo River. The proposed amendment does not change existing certified LCP land uses within the downtown area and do not affect oceanfront lands or marine waters. Future development resulting from the proposed amendments would not result in adverse impacts to biological, cultural or scenic resources and would be located within developed areas with adequate public services.

Page 4.9-9 Change table number to 4.9-1 and revise policy review as shown on the revised table at the end of this section.

3.9 CHANGES TO SECTION 6 - REFERENCES

Page 6-1 Add the following to the References section.

Borden, W.C., O.M. Lockhart, A.W. Jones, and M.S. Lyonn, 2010. "Seasonal, Taxonomic and Local Habitat Components of Bird-Window Collisions on an Urban Campus in Cleveland, OH." *Ohio Journal of Science* 110 (3):44-52.

Cusa, M., D.A. Jackson, and M. Mesure, 2015. "Window Collisions by Migratory Bird Species: Urban Geographical Patterns and Habitat Associations." *Urban Ecosystems*. doi:10.1007/s11252-015-0459-3) Abstract.

Hager S.B., B.J. Cosentino, K.J. McKay, C. Monso, W. Zuurdee, and B. Blevins. 2013. "Window Area and Development Drive Spatial Variation in Bird-Window Collisions in an Urban Landscape." *PLoS ONE* 8(1). Available online at: http://people.hws.edu/cosentino/publications_files/PLoS%20ONE%202013%20Hager.pdf.

Hager S.B., M.E. Craig. 2014. Bird-Window Collisions in the Summer Breeding Season. *PeerJ* 2:e460. https://dx.doi.org/10.7717/peerj.460.

Håstad, O., and A. Ödeen. 2014. "A Vision Physiological Estimation of Ultraviolet Window Marking Visibility to Birds." *PeerJ* 2:e621. DOI10.7717/peerj.621.

Kahle L.Q., M.E. Flannery, J.P Dumbacher. 2016 "Bird-Window Collisions at a West-Coast Urban Park Museum: Analyses of Bird Biology and Window Attributes from Golden Gate Park, San Francisco." *PLoS ONE* 11(1): e0144600. doi:10.1371/journal.pone.0144600 .

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http://www.muhlenberg.edu/main/academics/biology/faculty/klem/aco/Bird-window.html.

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Pelley, J., 2014. "Campus Windows Save Birds, Energy." *Frontiers in Ecology and the Environment* 12: 372–375. http://dx.doi.org/10.1890/1540-9295-12.7.372.

Sabo, A.M., N.D.G. Hagemayer, A.S. Lahey, and E.L. Walters. 2016. "Local Avian Density Influences Risk of Mortality from Window Strikes." *PeerJ* 4:e2170. DOI 10.7717/peerj.2170.

Switala Elmhurst, K., and K. Grady, 2017. "Fauna Protection in a Sustainable University Campus: Bird-Window Collision Mitigation Strategies at Temple University." Pp. 69–82 in *Handbook of Theory and Practice of Sustainable Development in Higher Education*, Vol 1. Ed. W.L. Filho, L. Brandli, P. Castro, and J. Newman. Springer International Publishing. Available online at: https://sustainability.temple.edu/sites/sustainability/files/uploads/documents/428356_1_En_5_Chapter_OnlinePDF.pdf.

U.S. Army Corps of Engineers, San Francisco District. May 2014. "San Lorenzo River Project Performance Evaluation FINAL."

Wittig, Thomas, 2016. "New Perspectives on Bird-Window Collision: The Effects of Species Traits and Local Abundance on Collision Susceptibility." Duke University Master's Thesis. Available online at: http://dukespace.lib.duke.edu/dspace/handle/10161/11898.

Zink, R.M., and J. Eckles. 2010. "Twin Cities Bird-Building Collisions: A Status Update on 'Project Birdsafe'." *The Loon* 82(1):34–37.

TABLE 4.9-1: Potential Project Conflicts with City of Santa Cruz ~~General Plan~~ Policies

[POLICIES RELATED TO MITIGATING ENVIRONMENTAL IMPACTS]

Element	Policy Number	Policy	Potential Conflict
General Plan 2030			
COMMUNITY DESIGN	**CD1.2**	Ensure that the scale, bulk and setbacks of new development preserve important public scenic views and vistas.	NO CONFLICT: Future development would not impact public scenic views.
	CD3.2	Ensure that the scale, bulk and setbacks of new development preserve public views of city landmarks where possible.	NO CONFLICT: Future development would not affect public views or City landmarks as none exist in the vicinity of the project.
LAND USE	**LU1.3**	Ensure that facilities and services required by a development are available, proportionate, and appropriate to development densities and use intensities.	NO CONFLICT: Public services are available.
MOBILITY	**M3.1.3**	Strive to maintain the established "level of service" D or better at signalized intersections.	NO CONFLICT: Project traffic would not result in a decrease in level of service below D at any signalized intersection.
	M3.3.4	Mitigate safety, noise, and air quality impacts from roadways on adjacent land uses through setbacks, landscaping, and other measures.	NO CONFLICT WITH MITIGATION: No significant air emission impacts were identified. Inclusion of structural design features to attenuate exterior noise levels is a requirement in the Zoning Code ~~required mitigation measure~~ for future development.
CIVIC AND COMMUNITY FACILITIES	**CC5.1.8**	Require new development to maintain predevelopment runoff levels.	NO CONFLICT: Future development accommodated by the proposed Plan amendments will be required to comply with the City's stormwater requirements and regulations.
	CC5.1.9	Reduce stormwater pollution.	NO CONFLICT: Future development would be in compliance with City requirements.
HAZARDS, SAFETY AND NOISE	**HZ2.2.1**	Require future development projects to implement applicable Monterey Bay Unified Air Pollution Control District (MBUAPCD) control measure and/ or air quality mitigations in the design of new projects as set forth in the District's "CEQA Guidelines."	NO CONFLICT: No significant air emission impacts were identified, and no mitigation is required.

TABLE 4.9-1: Potential Project Conflicts with City of Santa Cruz ~~General Plan~~ Policies

[POLICIES RELATED TO MITIGATING ENVIRONMENTAL IMPACTS]

Element	Policy Number	Policy	Potential Conflict
	HZ3.1.1	Require land uses to operate at noise levels that do not significantly increase surrounding ambient noise.	NO CONFLICT: No significant impacts were identified related to project increases in ambient noise levels.
	HZ3.1.6	Require evaluation of noise mitigation measures for projects that would substantially increase noise.	NO CONFLICT WITH MITIGATION: Inclusion of structural design features in future development to attenuate exterior noise levels is a required mitigation measure.
PARKS, RECREATION, AND OPEN SPACE	**PR1.3.1**	Ensure that adequate park land is provided in conjunction with new development.	NO CONFLICT: Future projects will be required to pay park dedication fee.
	PR4.2.3	Require development projects located along planned trail routes to dedicate trails or trail easements.	NO CONFLICT: Proposed Downtown Plan amendments require dedication of land adjacent to the Maple Street alley between Pacific and Front, and the proposed plan amendments require development and maintenance of the publicly accessible open space connections ~~access~~ along Cathcart, Maple and Elm Street extensions to the Riverwalk. The intent of the policy is achieved in a superior manner than a direct dedication with required private maintenance and private liability for these accessways to the Riverwalk.
NATURAL RESOURCES AND CONSERVATION	**NRC1.2.1**	Evaluate new uses for potential impacts to watershed, riverine, stream, and riparian environments.	NO CONFLICT WITH MITIGATION: Potential indirect significant impacts to birds as a result of future construction of taller buildings can be mitigated to a less-than-significant level by ….
	NRC2.1.3	Evaluate development for impacts to special-status plant and animal species.	NO CONFLICT: No potentially significant impacts to special status plant or wildlife species were identified.
LCP Land Use Plan			
ENVIRONMENTAL QUALITY	**4.2.2.1**	Require that all development within 100 feet of these areas be consistent with the applicable management plan provisions under EQ 4.2.1 and L 3.4, if one has been established.	NO CONFLICT: Future development would be consistent with the applicable management plans for San Lorenzo River-the City-wide Creeks and Wetlands Management Plan and the San Lorenzo Urban River Plan.

TABLE 4.9-1: Potential Project Conflicts with City of Santa Cruz ~~General Plan~~ Policies

[POLICIES RELATED TO MITIGATING ENVIRONMENTAL IMPACTS]

Element	Policy Number	Policy	Potential Conflict
	4.2.5	Protect and minimize the impact of development on bird, fish and wildlife habitat in and adjacent to waterways.	NO CONFLICT WITH MITIGATION: The proposed project with implementation of mitigation would prevent and minimize potential impacts to birds along the San Lorenzo River.
	4.5	Continue the protection of rare, endangered, sensitive and limited species and the habitats supporting them as shown in Map EQ-9 or as identified through the planning process or as designated as part of the environmental review process. (See Map EQ-9)	NO CONFLICT WITH MITIGATION: Potential impacts are evaluated in the EIR.
COMMUNITY DESIGN	**2.2**	Preserve important public views and viewsheds by ensuring that the scale, bulk and setback of new development does not impede or disrupt them.	NO CONFLICT: Future development would not impact public scenic views.

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CHAPTER 4
COMMENTS AND RESPONSES

4.1 INTRODUCTION

This chapter provides responses to individual comments that were submitted by agencies, organizations, and individuals as summarized below in subsection 4.2. Each letter of comment is included in subsection 4.3; a response to each comment is provided immediately following each letter. Appropriate changes that have been made to the Draft EIR text based on these comments and responses are provided in Chapter 3, Changes to Draft EIR.

State CEQA Guidelines section 15088(a) requires a lead agency to evaluate comments on environmental issues and provide written responses. Section 15204(a) provides guidance on the focus of review of EIRs as follows:

> In reviewing draft EIRs, persons and public agencies should focus on the sufficiency of the document in identifying and analyzing the possible impacts on the environment and ways in which the significant effects of the project might be avoided or mitigated. Comments are most helpful when they suggest additional specific alternatives or mitigation measures that would provide better ways to avoid or mitigate the significant environmental effects. At the same time, reviewers should be aware that the adequacy of an EIR is determined in terms of what is reasonably feasible, in light of factors such as the magnitude of the project at issue, the severity of its likely environmental impacts, and the geographic scope of the project. CEQA does not require a lead agency to conduct every test or perform all research, study, and experimentation recommended or demanded by commenters. When responding to comments, lead agencies need only respond to significant environmental issues and do not need to provide all information requested by reviewers, as long as a good faith effort at full disclosure is made in the EIR.

In reviewing comments and providing responses on the following pages, this section of the CEQA Guidelines will be considered. The focus will be on providing responses to significant environmental issues.

4.2 LIST OF COMMENT LETTERS RECEIVED

The Draft EIR was published and circulated for review and comment by the public and other interested parties, agencies, and organizations for a 45-day public review period from July 26, 2017 through September 8, 2017. Nineteen comment letters were received; agencies, organizations and individuals that submitted written comments on the draft EIR are listed below.

State & Local Agencies

1. California Coastal Commission
2. California State Clearinghouse
3. Monterey Bay Air Resources District

Organizations

4. Campaign for Sensible Transportation
5. Coastal Watershed Council
6. Santa Cruz Bird Club
7. Sierra Club, Santa Cruz Group

Individuals

8. Shawn Arnold
9. Candace Brown
10. Ted Burke
11. Will Cassilly
12. Tyler Derheim
13. Eric McGraw
14. Jane Mio
15. Salina Nevarez
16. Gary A. Patton
17. Reed Searle
18. Veronica Tonay
19. Russell Weisz

4.3 COMMENT LETTERS AND RESPONSES

Agencies, organizations, and individuals that submitted written comments on the Draft EIR are outlined above in section 4.2. Each comment letter is included in this section. As indicated above, CEQA Guidelines section 15088(a) requires a lead agency to evaluate comments on environmental issues and provide a written response to all substantive comments. A response to each comment is provided immediately following each letter. As indicated in subsection 4.1 above, the emphasis of the responses will be on significant environmental issues raised by the commenters. (CEQA Guidelines, § 15204, subd. (a).) Appropriate changes that have been made to the Draft EIR (DEIR) text based on these comments and responses are provided in the Chapter 3, Changes to Draft EIR.

STATE OF CALIFORNIA—NATURAL RESOURCES AGENCY
EDMUND G. BROWN JR., *GOVERNOR*

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August 28, 2017

Ron Powers
City of Santa Cruz Planning and Community Development Department
809 Center Street, Room 206
Santa Cruz, CA 95060

Subject: Draft Environmental Impact Report: Downtown Recovery Plan, General Plan and Local Coastal Program Amendments

Dear Ron:

1 Thank you for the opportunity to provide written comments on the Draft Environmental Impact Report (DEIR) for the Downtown Recovery Plan (DRP), General Plan and Local Coastal Program (LCP) amendments project. We would like to take this opportunity to again reiterate our shared goal with the City to provide better pedestrian access connections between the City's downtown area and the San Lorenzo Riverwalk, and to improve the Riverwalk as a public access and recreation focal point for the City's downtown and Beach areas. We continue to believe that the Riverwalk is an extremely under-utilized public access and recreation feature of the City, and strongly support an improved user experience for the Riverwalk. We also appreciate the City's effort to incorporate our prior comments on the Notice of Preparation (which are attached hereto and hereby incorporated by reference), including with respect to the DEIR's project objectives. The purpose of this letter is to provide more focused comments on the project in order to facilitate the Commission's review of the proposed changes to the certified LCP.

Local Coastal Program Amendment

2 The DEIR correctly identifies that several of the proposed amendments include changes to the City's certified LCP, and will therefore require Commission approval of an LCP amendment. In fact, the proposed amendments include both Land Use Plan (LUP) Policy changes, including to the San Lorenzo Urban River Plan (SLURP), as well as Implementation Plan (IP) standards, including the Central Business District Zone standards. The standard of review for LUP amendments is that they must be consistent with and adequate to carry out the Chapter 3 policies of the Coastal Act; and the standard of review for IP amendments is that they must be consistent with and adequate to carry out the policies of the certified LUP. As a practical matter, this means that these proposed changes will require review and approval by the Coastal Commission. Under, *Banning Ranch Conservancy v. City of Newport Beach* (2017) 2 Cal.5th 918, the EIR is therefore required to expressly disclose, consider and analyze the jurisdictional claims and regulatory opinions of the Commission.

Heights and Land Use/Zoning Designations along the Riverwalk

3 As our previous comments have indicated, our main area of concern for this project/LCP Amendment relates to the public access and recreational user experience along the San Lorenzo

Riverwalk, particularly between Elm Street and Laurel Street. We continue to have concerns regarding how the proposed new height standards and land use/zoning designations will affect the public access and recreation user experience along this stretch of the Riverwalk.

With regard to the proposed height standards, we appreciate that the DEIR included visual simulations. We believe that these simulations show that the proposed maximum new building heights would very much tower over the Riverwalk and potentially negatively impact the user experience in terms of public views and aesthetics. We would therefore continue to encourage the City to consider a reasonable range of lower height alternatives, including the alternative of retaining the existing height standards along this specific stretch of the Riverwalk.

4 Another one of our central concerns is the fact that the land use designation and zoning appear to authorize residential use in the first stories of the buildings adjacent to the Riverwalk. This is reflected both in the proposed changes to the Downtown Recovery Plan (see, e.g. DRP amendments, Table 4-2; DEIR Figure 3-5.) As we stated in our comments on the NOP, the Coastal Act and LCP prioritize visitor serving and coastal recreational uses over residential uses. The CEQA document should therefore evaluate designating the ground floor adjacent to the Riverwalk with visitor serving and coastal recreational uses (e.g. restaurants with outdoor seating, bike/kayak rental, etc.) Moreover, to the extent that such uses may be seen as infeasible along the entire stretch, the DEIR should include an analysis of the broadest array of incentives (e.g. reduced parking requirements, density bonuses for residential use on upper floors, etc.) to encourage these types of uses.

5 Finally, with respect to Figure 3-5, we continue to have concerns regarding the use of the public right-of-way along the Riverwalk (and the associated fill area) for private residential use. Figure 3-5 depicts that this area may be used for private residential use if the property owner "obtain[s] [an] extension license from the City." We would again reiterate that for the portion of the property located in the Coastal Zone, we believe that the entire public space between the Riverwalk and the proposed buildings along Front Street should be fully utilized for public purposes, including maximization of public access and recreation, and that the first floors of these buildings should be reserved for visitor-serving commercial uses, including outdoor restaurant seating or other similar uses.

Thank you for your consideration of these comments.

Ryan Moroney
District Supervisor
Central Coast District Office

Enclosure: NOP Letter

STATE OF CALIFORNIA—NATURAL RESOURCES AGENCY EDMUND G. BROWN JR., GOVERNOR

CALIFORNIA COASTAL COMMISSION
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March 2, 2017

Ron Powers
City of Santa Cruz Planning and Community Development Department
809 Center Street, Room 206
Santa Cruz, CA 95060

Subject: Notice of Preparation of EIR: Downtown Recovery Plan, General Plan and Local Coastal Plan Amendments

Dear Ron:

Thank you for the opportunity to provide written comments on the Notice of Preparation (NOP) for the Downtown Recovery Plan (DRP), General Plan and Local Coastal Program (LCP) amendments project. As a preliminary matter, we would like to acknowledge our shared goal with the City to provide better pedestrian access connections between the City's downtown area and the San Lorenzo Riverwalk, and to improve the Riverwalk as a public access and recreation focal point for the City's downtown area. We believe that the Riverwalk is an extremely under-utilized public access and recreation feature of the City, and strongly support improved user experience for this area. The purpose of this letter is to help the City realize these goals by facilitating the Commission's review of the proposed changes to the certified LCP.

Local Coastal Program Amendment

6 The NOP correctly notes that several of the proposed amendments include changes to the City's certified LCP, and will therefore require Commission approval of an LCP amendment. In fact, the proposed amendments include both Land Use Plan (LUP) Policy changes, including to the San Lorenzo Urban River Plan (SLURP), as well as Implementation Plan (IP) standards, including the Central Business District Zone standards. The standard of review for LUP amendments is that they must be consistent with and adequate to carry out the Chapter 3 policies of the Coastal Act; and the standard of review for IP amendments is that they must be consistent with and adequate to carry out the policies of the certified LUP.

Project Description/Goals

7 The September 15, 2016 Staff Report to the Planning Commission stated that the project was intended to be consistent with the following Coastal Act policies related to access and recreation, protection of sensitive biologic resources, and protection of visual resources:

- Encourage and incentivize maximum public access to the San Lorenzo River in accordance with Section 30210 of the Coastal Act.

- Achieve superior connections to the San Lorenzo River above the existing DRP and existing SLURP policies, consistent with Section 30211 of the Coastal Act.

- Ensure that development adjacent to the Riverwalk will be designed to prevent impacts to the adjacent sensitive San Lorenzo River and will incentivize clean-up of degraded areas along the levee, consistent with Section 30240 of the Coastal Act. The DRP will continue to be sensitive to the pedestrian experience along the Riverwalk with design guidelines and upper floor step backs and open river pedestrian connections that will provide light, air and open space between buildings.

- Enhance opportunities to view and interact with the San Lorenzo River as a coastal resource consistent with Section 30251 of the Coastal Act. The DRP standards ensure that development will be sited and designed to be visually compatible with the surrounding downtown, while promoting new open space pedestrian plazas and passageways to the Riverwalk.

We would recommend that the CEQA document include these project goals as key objectives of the project.

Impact Analysis - *Aesthetics*

8 We have some concerns regarding the proposed new height standards along Front Street, which have the potential to impact public views along the Riverwalk and adjacent public recreational facilities. We would therefore request that the CEQA analysis include a visual resource analysis that includes extensive visual simulations from all appropriate public vantage points, including from along both sides of the Riverwalk, from the Soquel Avenue and Laurel Street bridges, from San Lorenzo Park, etc. The simulations should include a comparison between existing development and as proposed under the new height standards so that potential impacts to public views can be evaluated. The City should also consider installing story poles to show the limits of the proposed new height standards. In addition, the CEQA document should evaluate alternatives to the proposed new height standards that meet most of the project objectives but also reduce potential aesthetic impacts.

Biological Resources

9 The Coastal Act and LCP require that new development avoid impacts to environmentally sensitive habitat. The CEQA document should include an analysis of how the project may impact the San Lorenzo River, including: 1) establishing the appropriate setback of new development, and 2) potential impacts from shading resulting from the proposed building heights.

Hazards

10 The Coastal Act and LCP require that new development be sited and designed to avoid hazards. The CEQA document should analyze the project's location with respect to potential impacts from flooding. This analysis should account for the effects of sea level rise.

Land Use

11 The Coastal Act and LCP prioritize visitor serving and coastal recreational uses over residential uses. The CEQA document should evaluate appropriate land use and zoning designations for the locations adjacent to and near the Riverwalk along Front Street. Specifically, the CEQA document should evaluate requiring a mixed use zoning for this area, especially along the Riverwalk, with visitor serving and coastal recreational uses (e.g. restaurants with outdoor seating, bike/kayak rental, etc.) on the ground floor, and residential uses on higher floors.

Recreation

12 We understand that some initial conceptual renderings of the project suggested transferring public right-of-way along the Riverwalk (and associated fill area) to the project developer. However, for the portion of the property located in the Coastal Zone, we believe that the entire public space between the Riverwalk and the proposed buildings along Front Street should be fully utilized for public purposes, including maximization of public access and recreation. Moreover, any such transfer of property would require a Coastal Development Permit that would be appealable to the Commission.

Water Quality

13 Finally, the Coastal Act and LCP require that erosion control measures be implemented to prevent siltation of streams and coastal lagoons, that discharge of polluted runoff be minimized, and that on-site detention and other appropriate storm water best management practices be used to reduce pollution from urban runoff. The CEQA document should evaluate implementation of Low Impact Development Best Management Practice standards such as bioretention/bioswales, permeable pavers/concrete, roof runoff catchment system and parking lot runoff catchment system for storage; and reuse on site and underground retention/detention units that include additional pre-filtration to remove hydrocarbons, metals, and other potential pollutants generated in the automobile use areas, including for new development along Front Street as well as proposed improvements to the levy system (i.e. the filling of the sloped levy) with the goal of reducing or eliminating runoff and pollution discharges into the River.

Thank you for your consideration of these comments. We look forward to working with the City through the local process.

Ryan Moroney
District Supervisor
Central Coast District Office

LETTER A1 – California Coastal Commission

A1-1 Improved Pedestrian Access Connections. The comment reiterates California Coastal Commission's (CCC) shared goal with the City to provide better pedestrian access connections between the City's downtown area and the San Lorenzo Riverwalk[1], and to improve the Riverwalk as a public access and recreation focal point for the City's downtown and Beach areas. CCC staff believes that the Riverwalk is an extremely under-utilized public access and recreation feature of the City, and strongly supports an improved user experience for the Riverwalk. CCC staff also appreciates the City's effort to incorporate prior CCC comments on the Notice of Preparation. The introductory comment is acknowledged, but does not address analyses in the DEIR, and no response is necessary.

A1-2 Local Coastal Plan Amendment and Review of Consistency with Coastal Act Policies. The comment indicates that the DEIR correctly identifies that several of the proposed amendments include changes to the City's certified Local Coastal Plan (LCP) and will therefore require Commission approval of an LCP amendment. The comment indicates that the standard of review for LUP amendments is consistency with and adequately carrying out the Chapter 3 policies of the California Coastal Act. The comment notes that pursuant to a recent California Supreme Court case, *Banning Ranch Conservancy v. City of Newport Beach* (2017) 2 Cal.5th 918, the EIR is required to expressly disclose, consider and analyze the jurisdictional claims and regulatory opinions of the Commission. In response to this comment, a review of project consistency with Coastal Act policies has been added; see section 3.8 of Chapter 3, Changes to Draft DEIR. The review does not reveal any conflicts with Coastal Act policies. The proposed amendments would provide for new public access connections to the San Lorenzo River. The proposed amendments do not change existing certified LCP land uses within the downtown area and do not affect oceanfront lands or marine waters. Future development resulting from the proposed amendments would not result in adverse impacts to biological, cultural or scenic resources and would be located within developed areas with adequate public services.

A1-3 Heights Along Riverwalk. The comment indicates that the main area of concern for this project/LCP amendment relates to the public access and recreational user experience along the Riverwalk, particularly between Elm Street and Laurel Street. CCC staff have concerns regarding how the proposed new height standards and land use/zoning designations will affect the public access and recreational user experience along this stretch of the Riverwalk. The commenter further believes that the visual simulations in the DEIR show that the proposed new maximum building heights would tower over the Riverwalk and potentially negatively impact the user experience in terms of public views and aesthetics. CCC staff encourages the City to consider a reasonable range of lower height alternatives, including the alternative of retaining the existing height standards along this specific stretch of the Riverwalk.

The DEIR does evaluate potential impacts on aesthetics within the CEQA significance thresholds that relate to effects on scenic views, scenic resources, degradation of the visual quality of the

[1] NOTE: Per subsequent comments (see Comment B2-3), the official name is now Santa Cruz Riverwalk.

surrounding area, and lighting. However, effects on a person's subjective "experience" is not a an impact on the environment with one "correct" characterization under CEQA. Under CEQA, only the adverse environmental impacts are to be identified and considered. The City has concluded, based on substantial evidence in this EIR and the whole of the administrative record, that the plan will result in positive impacts relating to the Riverwalk experience through improvements resulting in more eyes on the river that will reduce negative social behavior and non-visible areas adjacent to the levee, which will be required to be filled-in adjacent to new development. Changing the grade to eliminate these side slopes of the levee will create a safer environment and improve the experience of persons using the Riverwalk. As the commenter suggests, the DEIR does include analysis of an alternative that maintains the existing 50-foot building height limits along the river; see DEIR discussion on pages 5-22 to 5-24 for Alternative 1. Retaining the existing height limit for this area, which is also analyzed in the No Project Alternative, will not achieve the desired project objectives to improve public access and connections to the Riverwalk or provide additional housing opportunities.

A1-4 Land Uses. The comment indicates that the Coastal Act and City's LCP prioritize visitor-serving and coastal recreational uses over residential uses and that the EIR should evaluate designating the ground floor adjacent to the Riverwalk with visitor serving and coastal recreational uses (e.g. restaurants with outdoor seating, bike/kayak rental, etc.). Chapter 4 of the Downtown Recovery Plan, certified by the California Coastal Commission as an implementing part of the City's Local Coastal Program, currently allows both residential and non-residential uses above the Front Street (ground level) for properties between Front Street and the Riverwalk (between Soquel Avenue and Laurel Street). The upper floors, including the Riverwalk level, would continue to allow both residential and non-residential (visitor-serving) uses under the proposed Downtown Plan amendments. Therefore, the proposed Downtown Plan does not weaken or lessen the degree of visitor-serving uses that could be developed on the Riverwalk level. The allowable uses are the same as the existing Downtown Recovery Plan, which were previously found to be fully consistent with the Coastal Act. In response to Comment A1-2, a review of project consistency with Coastal Act policies has been added as Appendix B to this FEIR; see Response to Comment A1-2.

There is no mandate to require visitor-serving uses along the Riverwalk level or to prohibit residential uses at this same level. The proposed Downtown Plan amendments do not change allowed uses in the study; see page 3-5 in the DEIR. Hotels, motels and other visitor-serving uses are currently allowed on ground and upper floors, and the proposed amendments do change these uses. These permitted uses are already part of the City's certified LCP. The proposed Downtown Plan amendments increase the potential allowable visitor-serving uses in the area east of Front Street, between Soquel Avenue and Laurel Street, by increasing the allowable width of potential hotel/motel uses at the northern and southern ends of this area. The existing Downtown Recovery Plan limits the potential of hotel/motel area to 75 feet from Soquel Avenue or 75 feet from Laurel Street. The proposed Downtown Plan would allow hotels/motels to be up to 200 feet from either end of this Riverwalk area, thereby potentially

increasing allowable visitor-serving uses with the revised plan. (See Draft Downtown Plan pages 38 and 43.)

The DEIR has evaluated the mix of potential allowable uses for the entire project area and has made reasonable assumptions for development as detailed in Appendix D of the DEIR. The DEIR cannot speculate about the site-specific uses that may be proposed as part of any particular future development project, and the future decisions on such projects will be made on an individual basis.

The City shares the Commission's strong goal and vision to improve pedestrian connections between the downtown and to increase activity along the Riverwalk. The proposed Plan is an attempt to balance the three key objectives of providing more opportunities for housing, improving and enhancing visitor experiences to the coast, and maintaining strong environmental protections for the river. Some of the expressed concerns are not solely CEQA-related issues, including the comments relating to specific type and composition of Riverwalk uses, but remain important items for Planning Commission and City Council consideration. Under the proposed Plan, individual projects that include heights taller than 50 feet are not considered a by-right allowance and will be subject to discretionary approval by the City Council. The taller projects will be assessed for consistency with the "Additional Height Criteria for Project Approval" for Additional Height Zone B, as detailed on page 81 of the Draft Downtown Plan. Unlike the existing Downtown Recovery Plan, the list of criteria includes many of the incentive topics identified in the Coastal Commission comment letter. To encourage and promote the public improvements and amenities, the additional height is the incentive built into the draft Plan. This is a fundamental premise that the Plan embraces – the desired improvements noted by the City and the Coastal Commission staff, are directly connected to the additional height. The enhancements of public use of the area will not occur without the added height, which will also coincide with providing more opportunities for desperately needed housing. The improved connections between Front Street and the Riverwalk have been identified as desirable improvements since at least November 1978 (Pacific Avenue Design Plan), yet these improvements have not materialized. There has never been the combination of market and regulatory conditions for these improvements to be privately developed, but the Plan amendments are intended to provide further incentive for property owners to propose those kinds of improvements on their properties.

A1-5 Public Right-of-way Along the Riverwalk. Regarding the use of the public right-of-way along the Riverwalk (and the associated fill area) for private residential use, CCC staff believes that the entire public space between the Riverwalk and the proposed buildings along Front Street should be fully utilized for public purposes, including maximization of public access and recreation, and that the first floors of these buildings should be reserved for visitor-serving commercial uses, including outdoor restaurant seating or other similar uses. See Response to Comment A1-4 regarding first floor uses. With regards to use of the public right-of-way along the Riverwalk, an earlier version of Figure 3-5 used the phrase "private residential use" as an option for leasing of this area. This language has been corrected to accurately reflect that this

area may be leased to the adjacent developer, but that the area must be "publicly accessible" as shown on Figure 3-5 in the DEIR.

Comments on EIR Notice of Preparation (NOP)

A1-6 Local Coastal Plan Amendment and Review of Consistency with Coastal Act Policies. The comment indicates that the DEIR correctly identifies that several of the proposed amendments include changes to the City's certified LCP that will therefore require Commission approval of an LCP amendment. The comment indicates that the standard of review for LUP amendments is consistency with and adequately carry out the Chapter 3 policies of the California Coastal Act. As indicated in Response to Comment A1-2, a review of project consistency with Coastal Act policies has been added; see section 3.8 of Chapter 3, Changes to Draft DEIR.

A1-7 Project Objectives. The comment recommends project objectives, which were incorporated as part of the project objectives; see pages 3-3 and 3-4 of the DEIR.

A1-8 Aesthetics. The comment is part of the CCC's letter in response to the EIR NOP, which asks that the EIR analysis include a visual resource analysis and visual simulations, consider installation of story poles to show the limits of the proposed new height standards, and evaluate alternatives to reduce potential aesthetic impacts. The DEIR does include an assessment of potential aesthetics impacts; see DEIR pages 4.1-8 through 4.1-23, which includes photo simulations. The use of story poles was not considered viable as explained on page 4.1-13 of the DEIR. Although, the analyses did not identify a significant impact related to aesthetics, the EIR Alternatives sections does evaluate alternatives with reduced height limits.

A1-9 Biological Impacts. The comment is part of the CCC's letter in response to the EIR NOP, which asks that the EIR include an analysis of how the project may impact the San Lorenzo River, including: 1) establishing the appropriate setback of new development, and 2) potential impacts from shading resulting from the proposed building heights. Both these issues are addressed in the DEIR; see page 4.3-19 regarding riparian habitat and setbacks and pages 4.3-17 and 4.3-18 regarding potential effects of shading. The project is in compliance with the LCP regarding riparian setbacks as set forth in the City-wide Creeks and Wetlands Management Plan and San Lorenzo Urban River Plan LCP policies.

A1-10 Hazards-Sea Level Rise. The comment indicates that the Coastal Act and City LCP require that new development be sited and designed to avoid hazards, and that the EIR should analyze the project's location with respect to potential impacts from flooding that accounts for the effects of sea level rise. Both these issues are addressed in the DEIR; see pages 4.5-9 and 4.5-13.

A1-11 Land Use. The comment indicates that the Coastal Act and LCP prioritize visitor serving and coastal recreational uses over residential uses. The CEQA document should evaluate appropriate land use and zoning designations for the locations adjacent to and near the

Riverwalk along Front Street. Specifically, the CEQA document should evaluate requiring a mixed use zoning for this area, especially along the Riverwalk, with visitor serving and coastal recreational uses (e.g. restaurants with outdoor seating, bike/kayak rental, etc.) on the ground floor, and residential uses on higher floors. See Response to Comment A1-4.

A1-12 Recreation. The comment indicates that the initial conceptual renderings of the project suggested transferring public right-of-way along the Riverwalk (and associated fill area) to the project developer. CCC staff believes this space should be fully utilized for public purposes, including maximization of public access and recreation. See Response to Comment A1-5. CCC staff also indicates that any such transfer of property would require a Coastal Development Permit that would be appealable to the Commission. The City acknowledges that Extension Area Permits within the Coastal Zone adjacent to the Riverwalk will require a Coastal Permit, which are appealable to the California Coastal Commission.

A1-13 Water Quality. The comment indicates that the Coastal Act and LCP require that erosion control measures be implemented to prevent siltation of streams, minimize discharge of polluted runoff, and to provide on-site detention and other appropriate storm water best management practices to reduce pollution from urban runoff. The CEQA document should evaluate implementation of Low Impact Development Best Management Practice standards such as bioretention/bioswales, permeable pavers/concrete, roof runoff catchment system and parking lot runoff catchment system for storage; and reuse on site and underground retention/detention units that include additional pre-filtration to remove hydrocarbons, metals, and other potential pollutants generated in the automobile use areas. As indicated in the DEIR (pages 4.5-2, 4.5-3, 4.5-6), the City has a comprehensive stormwater management program developed and implemented in compliance with federal and state requirements. Future development would be subject to these requirements that would prevent water quality degradation as discussed on page 4.5-12 of the DEIR.

LETTER A2

STATE OF CALIFORNIA

Governor's Office of Planning and Research

State Clearinghouse and Planning Unit

Edmund G. Brown Jr.
Governor

Ken Alex
Director

RECEIVED
SEP 14 2017
CITY OF SANTA CRUZ PLANNING DEPT

September 11, 2017

Ron Powers
City of Santa Cruz
809 Center St, Rm 206
Santa Cruz, CA 95060

Subject: Downtown Recovery Plan Amendments
SCH#: 2017022050

Dear Ron Powers:

1 The State Clearinghouse submitted the above named Draft EIR to selected state agencies for review. The review period closed on September 8, 2017, and no state agencies submitted comments by that date. This letter acknowledges that you have complied with the State Clearinghouse review requirements for draft environmental documents, pursuant to the California Environmental Quality Act.

Please call the State Clearinghouse at (916) 445-0613 if you have any questions regarding the environmental review process. If you have a question about the above-named project, please refer to the ten-digit State Clearinghouse number when contacting this office.

Sincerely,

Scott Morgan
Director, State Clearinghouse

1400 TENTH STREET P.O. BOX 3044 SACRAMENTO, CALIFORNIA 95812-3044
TEL (916) 445-0613 FAX (916) 323-3018 www.opr.ca.gov

LETTER A2

Document Details Report
State Clearinghouse Data Base

SCH# 2017022050
Project Title Downtown Recovery Plan Amendments
Lead Agency Santa Cruz, City of

Type EIR Draft EIR

Description The project application consists of a series of amendments to the city's DRP, the GP 2030, and the LCP that include revisions to plan text, modifications to guidelines and standards, and changes to coastal policies. The proposed DRP amendment would expand the location in which the Additional Height Zones are applied and revisions to the chapter 4 development standards of the DRP. The primary proposed modification would increase allowable building heights in the lower Pacific Ave and lower Front St areas and along the San Lorenzo River, between Cathcart and Laurel St, that could lead to increased upper floor residential development.

Lead Agency Contact

Name Ron Powers
Agency City of Santa Cruz
Phone (831) 420-5216 **Fax**
email
Address 809 Center St, Rm 206
City Santa Cruz **State** CA **Zip** 95060

Project Location

County Santa Cruz
City Santa Cruz
Region
Lat / Long
Cross Streets Downtown between Pacific Ave and Front St south of Cathcart, north of Laurel
Parcel No.
Township **Range** **Section** **Base**

Proximity to:

Highways 1, 17
Airports
Railways
Waterways San Lorenzo River
Schools
Land Use Developed/central business district and public facilities/regional visitor commercial and community facilities

Project Issues Air Quality; Archaeologic-Historic; Biological Resources; Coastal Zone; Drainage/Absorption; Flood Plain/Flooding; Growth Inducing; Landuse; Noise; Public Services; Recreation/Parks; Schools/Universities; Traffic/Circulation; Water Quality; Wetland/Riparian; Septic System; Sewer Capacity; Vegetation; Water Supply; Cumulative Effects

Reviewing Agencies Resources Agency; California Coastal Commission; Department of Fish and Wildlife, Region 3; Cal Fire; Department of Parks and Recreation; Department of Water Resources; California Highway Patrol; Caltrans, District 5; Office of Emergency Services, California; Department of Housing and Community Development; Native American Heritage Commission; Regional Water Quality Control Board, Region 3; Department of Fish and Wildlife, Marine Region

Date Received 07/26/2017 **Start of Review** 07/26/2017 **End of Review** 09/08/2017

Note: Blanks in data fields result from insufficient information provided by lead agency.

LETTER A2 – California Governor's Office of Planning & Research State Clearinghouse

A2-1 Compliance with State Clearinghouse Review. The letter acknowledges that the City of Santa Cruz complied with the State Clearinghouse review requirements for review of draft environmental documents pursuant to the California Environmental Quality Act and that no state agencies submitted comments through the Clearinghouse. The comment is acknowledged; and no response is necessary.

Monterey Bay Air Resources District
Serving Monterey, San Benito, and Santa Cruz Counties

24580 Silver Cloud Court
Monterey, CA 93940
PHONE: (831) 647-9411 • FAX: (831) 647-8501

September 8, 2017

Ron Powers
City of Santa Cruz –
Department of Planning & Community Development
809 Center Street, Room 107
Santa Cruz, CA 95060 Email: rpowers@cityofsantacruz.com

Subject: Comments on Downtown Plan Amendments Draft EIR

Dear Mr. Powers,

Thank you for providing the Monterey Bay Air Resources District (Air District) the opportunity to comment on the Downtown Plan Amendments Draft EIR. The Air District has reviewed the document and has provided the following:

1 • The Air District has no comments.

Please let me know if you have any questions. I can be reached at (831) 718-8027 or cduymich@mbard.org.

Best Regards,

Christine Duymich
Air Quality Planner

cc: David Frisbey

LETTER A3 – Monterey Bay Air Resources District

A3-1 No Comment. The letter indicates that the District reviewed the Draft EIR, and has no comments. The comment is acknowledged; no response is necessary.

Ron Powers

From: Rick Longinotti <longinotti@baymoon.com>
Sent: Thursday, September 07, 2017 8:49 AM
To: Ron Powers
Subject: comments on draft EIR
Attachments: CFST Comments on traffic congestion impacts.pdf

Hi Ron,

Here are the Campaign for Sensible Transportation comments on the draft EIR for the Downtown Plan. Would you please write me back that you received this?

Thanks,

Rick Longinotti, Co-Chair
Campaign for Sensible Transportation

Comments on the Draft EIR for the Downtown Plan

1 The Campaign for Sensible Transportation considers the Downtown Plan to be an opportunity to move towards a more walk-able, less auto-centric Downtown. This would contribute to increased vibrancy as well as public health and environmental sustainability. We intend these comments as a contribution to that goal.

2 The significant growth that the Downtown Plan allows will exacerbate traffic congestion. However, the Draft EIR concludes that there will be no significant traffic delay impacts. That conclusion misses an opportunity to formulate mitigation measures that shift City policy towards less auto-centric development. In our comments below we explain our reasoning that the Draft EIR's conclusion of no significant traffic impacts is based on a methodology that is inconsistent with the analysis in the General Plan EIR. We suggest that a revision of the methodology may result in a conclusion that the new vehicle trips generated by the build-out of the Downtown Plan will significantly impact traffic delay.

3 We urge the City to include in the Downtown Plan a policy of *no net increase in vehicle trips.* This letter lists measures that could achieve this goal, followed by five comments on the Draft EIR methodology.

Measures to achieve zero net increase in vehicle trips:

1. **Require that developers unbundle the cost of parking from the cost of renting or purchasing a unit.**
When the consumer has a choice on whether to purchase parking, the demand for parking drops (and so does the price of housing).

2. **Require that parking providers charge the real cost of providing the parking. (No subsidies).**

3. **Require businesses that provide parking to their employees charge for parking.**

4. **Phase out the subsidy of the City's monthly parking permits.** Currently the cost of monthly permits is significantly below the cost to provide the parking. Residents of new development will not purchase unbundled parking in their buildings so long as the City offers residential parking permits at below cost.

5. **Offer all employees within the Downtown Parking District incentives to commute using alternatives to single occupant auto**: free bus passes; discount carpool parking; vanpools; emergency rides home; cash rewards; credit for Zipcar, Uber; credit at bike stores, etc. These measures will be paid through parking revenue.

6. **Offer deep discounts to businesses paying the parking deficiency fee based on employee participation in alternative commutes.**

7. **Require new development to offer free bus passes to all tenants.**

8. **Reduce or eliminate parking requirements for new development, while protecting adjacent neighborhoods from spillover parking through neighborhood permit parking.**

9. **Commute Impact Criteria: Amend the City's criteria for offering density bonuses for residential housing to require that developers offer preference for the local workforce.**

Comments on Draft EIR Methodology

Comment 1

4 **Vehicle trip calculation appears at odds with the General Plan EIR**

The Draft reports, "Trip generation calculations include a 40 percent trip reduction due to proximity to the downtown transit center, mixed use development, bicycle use and walking trips." We don't understand the basis for this trip reduction allowance. It seems at odds with the General Plan EIR that applied a maximum trip reduction of 17.3% for Soquel Ave. According to the General Plan EIR, apartments Downtown generate more trips than Soquel Ave. (Offices and commercial trip generation was the same for both.)

Comment 2

5 **The Draft EIR needs to be congruent with the General Plan EIR regarding existing traffic delay (Level of Service)**

The Draft's report of existing Level of Service for several intersections is different from the Level of Service report of the EIR for the 2030 General Plan. For example, the General Plan EIR reports that existing conditions at Ocean St. /Water St is E, rather than the D reported by the Draft. Highway 1 and 9 is rated F by the General Plan EIR and E by the Downtown Plan Draft EIR.

This is an important difference, since it could affect the finding of significant impact. The City's threshold for considering the traffic congestion impacts of the project to be significant:

> A significant impact would result if LOS dropped below a "D" level of service or where a project would contribute traffic increases of more than three percent at intersections currently operating at unacceptable levels (E or F)

The Draft concludes that there would be no significant impacts due to traffic:

> The project will result in an increase in daily and peak hour trips, but would not cause existing or planned intersections to operate at an unacceptable Level of Service (LOS) or further degrade intersections that already operate at an unacceptable LOS. Therefore, the impact is less than significant.

Comment 3

6 **The Draft EIR needs to be congruent with the General Plan EIR regarding traffic delay at buildout.** The following table lists key differences between the documents.

Level of Service at key intersections

	General Plan Buildout	Downtown Plan Draft EIR
Ocean/Water	**F**	**D**
Hwy 1/9	**F**	**E**
Chestnut/Mission	**F**	**E**
Pacific/Laurel	**D**	**B**

Comment 4

7 **The Draft needs to publish the assumptions that it makes on the distribution of traffic exiting Downtown.** Does the Draft assume that the additional trips will follow the pattern of existing traffic? If so, there may need to be an adjustment, since a significant portion of the newly allowed development would take place near the Soquel and Laurel exit routes from Downtown. Commute traffic exiting along those routes could further congest the Ocean/Broadway and Branciforte/Soquel intersections. The General Plan EIR projects that these intersections will have unacceptable Levels of Service at buildout.

Comment 5

The Draft EIR needs to include impacted intersections in LOS analysis.
The Draft needs to consider the impact of downtown growth on some additional intersections affected by commute trips to downtown. According to the General Plan EIR, the LOS at the following intersections at buildout will be greater than the

acceptable standard. Increased congestion at these intersections could significantly delay bus transit.

Intersection	Existing LOS	LOS at GP buildout
N Branciforte/Water	D	E
Branciforte/Soquel	C	E
Ocean/Broadway	C	F
Seabright/Water	F	F with further delays

LETTER B1 – Campaign for Sensible Transportation

B1-1 Downtown Plan. The commenter considers the Downtown Plan to be "an opportunity to move towards a more walkable, less auto-centric Downtown". The comment is acknowledged, but does not address analyses in the DEIR, and no response is necessary.

B1-2 Traffic Impact Methodology. The commenter believes that the DEIR's conclusion of no significant traffic impacts is based on a methodology that is inconsistent with the General Plan EIR analyses, and revisions to the methodologies are suggested. See Response to Comments B1-4, B1-5, B1-6, and B1-7.

B1-3 No Net Increase in Vehicle Trips. The comment urges the City to include a policy of "no net increase in vehicle trips" in the Downtown Plan, and offers suggestions to achieve a zero net increase in vehicle trips. The comment is acknowledged, but does not address analyses in the DEIR. City staff notes that the Downtown Recovery Plan and the proposed Downtown Plan contain no parking standards, other than locational and design criteria and the allowance of off-site parking for projects. The parking standards are set forth by Resolution by the City Council as established by the Downtown Commission, which oversees the management of Parking District #1. All of the nine items noted in the comment letter are options for consideration on a project-specific basis, and are not relevant to the programmatic level DEIR for the Downtown Plan.

B1-4 Vehicle Trip Generation. The comment questions the basis for a 40% trip reduction in the downtown area, which seems at odds with the General Plan EIR that applied a maximum trip reduction of 17.3% for Soquel Avenue. The calculations for mixed use reductions are based a number of factors including square footage of commercial development, number of employees, number of housing units, transit accessibility, pedestrian environment and bicycle facilities in the area. The combination of these factors in the downtown area results in a significantly higher potential reduction, which was developed by City staff for the Traffic Impact program. In particular, the large number of employees already in the downtown area will make walking trips to shop and eat in the area.

B1-5 Intersection Levels of Service. The comment indicates that the DEIR reports a different level of service (LOS) under existing conditions than reported in the General Plan EIR at the Ocean Street/Water Street intersection (D compared to E in the General Plan EIR) and at the Highway 9/Highway 1 intersection (E compared to F in the General Plan EIR). The level of service calculation for existing conditions are based on traffic counts made at the time analyses are conducted. Traffic counts fluctuate daily, and therefore, can result in different level of service calculations day to day.

B1-6 Levels of Service with General Plan Buildout. The comment states that the DEIR needs to be "congruent" with the General Plan EIR at buildout and suggests that the DEIR LOS is less than the General Plan EIR at buildout. The alleged discrepancies compare General

Plan buildout (Existing with General Plan buildout) existing conditions in the Downtown Plan DEIR, which is not an accurate comparison. General Plan buildout is part of the cumulative scenario analyzed in the Downtown Plan Amendments DEIR, and when cumulative conditions of the two EIRs are compared, the cumulative LOS is the same and slightly worse in the Downtown Plan Amendments DEIR than in the General Plan EIR as summarized below. See Response to Comment B1-5 regarding differences in reported existing levels of service in the two documents.

Level of Service Comparisons

	General Plan EIR Cumulative LOS / Delay [in seconds]	**Downtown Plan EIR Cumulative LOS / Delay [in seconds]**
Ocean St./Water St.	F / 172.7	F /228.1
Highways 1/9	F / 244.5	F / 269.2
Chestnut St./Mission St.	F / 164.8	F / 344
Pacific Avenue/Laurel St	D	F /105.9

B1-7 Trip Distribution Assumptions and Impacted Intersections. The comment states that the trip distribution assumptions should be identified and asks whether additional trips follow the pattern of existing traffic. The existing distribution of traffic is generally reflected in the traffic study. Intersection-by-intersection distribution is normally disaggregated per the existing ratios. The City's Traffic Impact Study Guidelines require that all intersections with 25 or more new trips be evaluated. The intersections noted in the comment as having unacceptable LOS at General Plan buildout (Ocean/Broadway, Branciforte/Soquel, Branciforte/Water, Seabright/Water) would indeed receive additional trips but in numbers (less than 25 trips during the peak hour) that would not result in a major change to their level of service. Mitigation measures for these intersections are included in the City's traffic impact program. This means that all development in the City contributes to the modifications needed to improve intersection levels of service.

LETTER B2

COASTAL WATERSHED COUNCIL

COASTAL-WATERSHED.ORG

Preserving and protecting our coastal watersheds

Ron Powers
Principal Planner
City of Santa Cruz
809 Center Street, Room 206
Santa Cruz, CA 95060

Re: Draft EIR for Downtown Recovery Plan Amendments

Dear Mr. Powers,

1 Thank you for the opportunity to provide written comment on the City's Draft Environmental Impact Report (EIR) and the efforts to update and amend the Downtown Recovery Plan (DRP). The Coastal Watershed Council's (CWC) mission is to preserve and protect coastal watersheds through community stewardship, monitoring and education. CWC's goals align with many of the City's stated goals in this project and with the City's overall goal of protecting natural resources.

CWC respectfully requests that City staff and consultants consider the following comments to improve the EIR process and eventual Downtown Plan.

2 Having reviewed the EIR itself, comments shared in the Notice of Preparation process and related documents, CWC appreciates that care is being given to ensure that future projects guided by the DRP will consider bird-safe design guidelines, the impacts of lighting on riparian species and established best practices and permit requirements for water quality protection and stormwater management. I will not restate the importance of those considerations since they are already part of the EIR process, other than to offer a suggestion with regard to Low Impact Development (LID) best management practices: since the projects along the Santa Cruz Riverwalk will be located next to public open space, perhaps a demonstration site could improve the public's awareness of runoff reduction and stormwater pollution elimination measures taken as part of the project. For example, if a stormwater retention basin, permeable pavers, bioswale or other unique LID measures are included in a given project, showcasing it for the public could add to the community's awareness of how those measures protect the environment and specifically, the river people can see and enjoy right behind them.

3 On another note, two items are offered here as suggested corrections:

1) The EIR includes references to the San Lorenzo Riverwalk (in Appendix C and I believe in other sections as well). The Santa Cruz City Council formally renamed this City park the Santa Cruz Riverwalk a few years ago and making all City document consistent so that every opportunity is made towards branding the park with the right name makes sense.
2) Section 4.5.1 states that the San Lorenzo River is on the 303(d) list (impaired water bodies) for sediment, nutrients and pathogens. The river is also listed (with a corresponding TMDL) for pesticides (chlorpyrifos). Accordingly, reference to the City's Integrated Pest Management policies may be appropriate for projects governed by the DRP.

4

5 More generally, the current DRP already allows for development along Front Street, which could harm or help the river. CWC's hope is that development along Front Street could improve the public's experience at the Santa Cruz Riverwalk and create a vibrant and thriving public space where people connect to nature and learn how they can take individual stewardship actions to improve the health of the river. That sequence of events leading to a healthier river is all based on *how* the development is shaped, what is included in each project and whether projects proceed in isolation to the City's existing management of the river and Riverwalk or are integrated into it.

For example, in Section 3.4 - Project Components, the EIR project description lists four City plans and regulations, but fails to include the San Lorenzo Urban River Plan (SLURP), which is the key guiding document for how the City manages the Riverwalk and river ecosystem inside of the levees. A plan that deals with what happens on the *outside* of the levee would ideally mesh with the plan governing what happens on the *inside* of the levee. The City can be most successful at meeting the seven stated objectives (listed in Section 3.3) of this project (particularly objectives 3 through 7) by having a clearly articulated approach for how to integrate what is happening on each side of the Riverwalk pedestrian/bike path, since separating them is impractical.

The 2003 SLURP is only partially implemented at this time. When projects governed by the amended DRP are built, they *could* improve the health of the river ecosystem, provided their implementation drives additional actions in the SLURP for improving the Riverwalk and river ecosystem. While the SLURP is referenced in Section 4.3.1 under local plans, including it in Section 3.3 would serve to elevate its importance, integrate efforts on either side of the Riverwalk path and ensure that the projects improve rather than damage the lower river. Beyond the inclusion of the SLURP in Section 3.3, an effort by the City to map out how the
6 SLURP actions will be integrated into projects governed by the DRP would serve both the river and the new development's owners, tenants, customers and the overall community. If not appropriate for inclusion in this EIR, such an implementation (or integration) plan would aid both sides of the Riverwalk path and our overall community.

Thank you for your leadership of this important process to shape the future of this community. Take care.

Respectfully,



Greg Pepping
Executive Director
Coastal Watershed Council

LETTER B2 – Coastal Watershed Council

B2-1 Coastal Watershed Council Mission and Goals. The letter indicates that the Coastal Watershed Council's (CWC) mission is to preserve and protect coastal watersheds through community stewardship, monitoring and education and that CWC's goals align with many of the City's stated goals in this project and with the City's overall goal of protecting natural resources. The comment is acknowledged, but does not address analyses in the DEIR, and no response is necessary.

B2-2 Low Impact Development. The comment suggests that the City consider a demonstration site along the river to showcase stormwater retention, permeable pavers, bioswale or other unique LID measures in a given project to improve the public's awareness of runoff reduction and stormwater pollution elimination measures. The comment is acknowledged, but does not address analyses in the DEIR. Low Impact Development (LID) best management practices (BMPs) are incorporated into all development project reviews by the Department of Public Works and included in all discretionary project reviews for land use permits issued by the Department of Planning and Community Development. Runoff associated with development adjacent to the river will not be directed to the river, but instead collected at the back of the levee in a large pipe, part of a storm drainage system that will connect to the City's downtown stormwater system. The amendments to the Downtown Recovery Plan are programmatic in nature and there are no proposed City sponsored projects planned at this time. In the event that a privately funded development occurs adjacent to the Riverwalk, the storm drain system will be required to be engineered to incorporate stormwater pollution elimination measures and use BMPs for water quality protection.

B2-3 Santa Cruz Riverwalk. The letter indicates that the Santa Cruz City Council formally renamed City's San Lorenzo Riverwalk park to the Santa Cruz Riverwalk. References to the Riverwalk have been corrected; see Chapter 3, Changes to Draft DEIR.

B2-4 San Lorenzo River Impaired Waters. Regarding San Lorenzo River's inclusion on the 303(d) list (impaired water bodies) for sediment, nutrients and pathogens, the comment indicates that reference to the City's Integrated Pest Management policies may be appropriate for projects governed by the DRP. The comment is acknowledged, but does not address analyses in the DEIR, and no response is necessary. However, the Downtown Plan is a planning document that includes some specific development standards and guidelines, but it is not a compendium of all regulations that would be required for new development projects. Parking requirements, drainage requirements, including BMPs, and Water Department requirements are just some of the additional regulations that must be followed for any development projects. Therefore, the Downtown Plan is not the appropriate location for referencing the City's Integrated Pest Management Program. However, a reference to the City's Integrated Pest Management Program is appropriate under Local Regulations on page 4.5-3 and has been added to the text; see Chapter 3, Changes to Draft EIR, of this document.

B2-5 San Lorenzo Urban River Plan (SLURP). The letter indicates that Section 3.4 (Project Components) in the DEIR Project Description fails to include the San Lorenzo Urban River Plan (SLURP), which is a key document guiding how the City manages the River Walk and river ecosystem inside the levees and a plan for outside of the levee should mesh with the SLURP. The comment indicates that the SLURP should be referenced in section 3.3. It is agreed that the SLURP is an important guiding document, and some of its provisions related to biological resources are summarized on page 4.3-6 of the DEIR. Section 3.3 of the DEIR identifies project objectives, and section 3.4 identifies proposed amendments to existing City plans and regulations as part of the project. The San Lorenzo Urban River Plan (SLURP) is not referenced in this section because it is not proposed to be amended and is not a regulatory document for land use. The project is not proposing any changes for lands located between the levees. Several recommendations of the SLURP were subsequently adopted as Local Coastal Program (LCP) policies, some of which are proposed to be amended as part of the project, and therefore, the LCP is listed as one of the adopted City plans that is proposed to be amended. The remaining recommendations of the SLURP are resource protection and enhancement guidelines addressing lands located between the levees, which lie within the public realm under City control. However, further description of the SLURP has been added to the DEIR; see the "Land Use" section of Chapter 3 of this document.

B2-6 SLURP and Downtown Plan. The letter recommends that an effort by the City to map out how the SLURP actions will be integrated into projects governed by the DRP would serve both the river and the new development's owners, tenants, customers and the overall community. If not appropriate for inclusion in this EIR, the commenter suggests such an implementation (or integration) plan would aid both sides of the Riverwalk path and the overall community. The comment is acknowledged, but does not address analyses in the DEIR. Project objective #4 includes reference to the SLURP to achieve superior connections to the San Lorenzo River beyond the existing Downtown Recovery Plan and SLURP recommendations. Referencing the remainder of the SLURP river enhancements is not part of the project study area. The proposed amendments included in the Downtown Plan are not related to a plan for physical improvements between the levees.

Ron Powers

From: Lisa Sheridan <trotrider@aol.com>
Sent: Thursday, September 07, 2017 4:05 PM
To: Ron Powers
Subject: CAUTION: Verify Sender Before Opening! Comments on DEIR for Downtown Recovery Amendments
Attachments: Ron Powers DEIR final.doc

Dear Mr. Powers,
Please confirm you have received our response letter to the Downtown Recovery Proposed Amendments/Biological Resources.

Thank you,
Lisa Sheridan
Santa Cruz Bird Club President

Santa Cruz Bird Club
P.O. Box 1304
Santa Cruz, CA 95061
santacruzbirdclub.org

September 7, 2017

From: Santa Cruz Bird Club
To: Ron Powers, City of Santa Cruz Planning Department, Santa Cruz City Council

Re: Comments on DEIR for Downtown Recovery proposed amendments/Biological Resources

Dear Mr. Powers and Santa Cruz City Council:

1 The Santa Cruz Bird Club (SCBC) appreciates the opportunity to comment on the Draft Environmental Impact Report (DEIR) for the City of Santa Cruz Downtown Plan Amendments.

The proposal for building height allowances-along the San Lorenzo River (SLR) riparian corridor would alter the current allowable building height up to seventy feet from a current maximum of fifty feet.

The SLR is one of the city's significant natural resources and is in the Pacific Flyway. Migrating birds, protected under the Migratory Bird Treaty Act, are known to breed, nest, raise young, rest, feed, take refuge from storms and refuel for their remaining migratory journey. The SLR corridor/open space is considered one of the more populated bird species corridors in the entire Santa Cruz County. (The citizen science ebird data lists the SLR as number thirteen of one hundred sites with most number of bird species.)

The SCBC recommends the following considerations based on the San Lorenzo's DEIR findings:

2 1). The SCBC believes that the mitigations **understate the potential negative impacts** of the proposed height increases, which are outlined in the body of the DEIR. We recommend a **"no height increase"** for any buildings above fifty feet along the SLR corridor. Evidence suggests this policy change would interfere substantially with the movement of native and migratory species of birds as well as impact the migratory corridors they use.

3 2).The SCBC encourages the strongest language possible to be added to the DEIR language as it relates to building design mitigations for any new construction at any height near the SLR. We recommend replacing wording in 4.3 mitigation from **"minimize" and "consider" to "required."**

4 3). Because of the lack of data on year-round use of the SLR habitat, the DEIR findings are insufficient to adequately determine the impact of the proposed amendments on bird wildlife.

5 **Section 4.3.2:** There are more extensive and up-dated studies on bird collision with glass available and should be included in the analysis of impacts. Refer to **Bird Collisions with Windows - American Bird Conservancy,** as well as the (Klem, March 2009, Hager et al., September 2008). https://abcbirds.org/wp_content/uploads/2017/02/Window_Collision_Bibliography-February-2017.pdf"

Thank you for your consideration,

Lisa Sheridan

President, Santa Cruz Bird club 2016-2017

LETTER B3 – Santa Cruz Bird Club

B3-1 San Lorenzo River. The letter indicates that the San Lorenzo River is one of the City's significant natural resources and is in the Pacific Flyway. The comment is acknowledged, but does not address analyses in the DEIR, and no further response is necessary.

B3-2 Proposed Heights Along San Lorenzo River. The commenter recommends no height increase for any buildings above fifty feet along the San Lorenzo River corridor. The comment is acknowledged, and referred to City staff and decision makers for further consideration. The comment also states that evidence suggests that this policy change would interfere substantially with the movement of native and migratory species of birds and impact the migratory corridors they use. The analysis in the DEIR acknowledges that increased building height would potentially result in an increase in bird collisions. This impact could specifically affect migratory birds. Although the precise impacts are not known, the analysis assumes the increased building height would result in a potentially significant impact. As noted in the DEIR, it is generally accepted that an increase in the amount of window space results in a higher mortality from building strikes and that an increase in night-time lighting could degrade the quality of the surrounding habitat. The mitigation for this impact offers standard measures for reducing these impacts consistent with guidelines established by the American Bird Conservancy (2015).

B3-3 Mitigation Measure 4.3-2. The comment indicates that the mitigation wording be changed from "minimize" and "consider" to "require". However, the word "consider" is not included in this measure or Mitigation Measure 4.3-3. The word choice of "minimize" is appropriate in mitigation measure 4.3-2 as the City consider it feasible or desirable to prohibit the use of glass. The proposed language reflects common CEQA convention for the phrasing of mitigation measures. Subsequent development projects would be evaluated on a case-by-case basis. The measure has been revised to require avoidance of up-lighting and spotlights. See Chapter 2, Summary of Impacts, in this document.

B3-4 Bird Studies. The comment states that because of the lack of data on year-round use of the San Lorenzo River habitat, the DEIR findings are insufficient to adequately determine the impact of the proposed amendments on bird wildlife. As noted in the Response to Comment B3-2, the DEIR does not deny that the increase in building height, without guidelines for building design, could result in an increase in bird mortality from collisions with buildings. The proposed mitigation for this impact is inclusion of a new development standard in the Downtown Plan for design guidance for bird-safe structures along the San Lorenzo River. It should be acknowledged, as implied by the comment, that factors other than building design are presumed to influence bird mortality from building collisions. These include the surrounding habitat,

the time of year, and bird density in the surrounding area (e.g., Borden et al. 2010, Cusa et al. 2015, Hager and Craig 2014, Zink and Eckles 2010, Sabo et al. 2016, Wittig 2016), as well as bird physiology (Håstad and Ödeen 2014, Kahle et al. 2016, Martin 2011, 2012). However, studies consistently emphasize that exactly how these factors influence bird collisions with buildings is poorly understood. And factors influencing mortality in one location may be different from those influencing mortality in another. For this reason, there are no standards for predicting the level of bird mortality from buildings. Therefore, a study intended to do this would be of limited value.

In addition, a year-round study is not needed to identify and analyze impacts and would exceed the standard for impact evaluation under the California Environmental Quality Act as outlined in the thresholds of significance on page 4.3-16 of the DEIR.

B3-5 San Lorenzo Urban River Plan. The comment indicates that there are more extensive and updated studies on bird collision with glass available and should be included in the analysis of impacts. The comment cites the following: 1) Bird Collisions with Windows – American Bird Conservancy; 2) Klem (March 2009); and 3) Hager et al. (September 2008). The studies noted are Daniel Klem Jr., Christopher J. Farmer, Nicole Delacretaz, Yigal Gelb, and Peter G. Saenger, "Architectural Landscape Risk Factors Associated with Bird-Glass Collisions in an Urban Environment," *Wilson Ornithological Society* (2009) 121(1): 126–134, and Stephen B. Hager, Heidi Trudell, Kelly J. McKay, Stephanie M. Crandall, and Lance Mayer, "Bird Density and Mortality at Windows, *Wilson Journal of Ornithology* (2008) 120 (3): 550–564. Both studies mentioned in the comment were consulted during preparation of the analysis of the potential for bird collisions with windows, and both are cited in the DEIR analysis. In addition, the DEIR analysis cites findings in Y. Gelb and N. Delacretaz, "Windows and Vegetation: Primary Factors in Manhattan Bird Collisions," *Northeastern Naturalist* (2009) 16(3): 455–470, and cites information summarized in the American Bird Conservancy, *Bird-Friendly Building Design* (2015) (https://abcbirds.org/wp-content/uploads/2015/05/Bird-friendly-Building-Guide_2015.pdf).

The DEIR analysis of the effects of building height on birds relies on the above studies to emphasize the long-established hazard that buildings, especially glass windows, pose to birds. As the comment notes, extensive research has been conducted since 2009, including much that is described in C.L. Seewagen and C. Sheppard, *Bird Collisions with Windows: An Annotated Biobliography* (2017), which is also mentioned in the comment as "Birds Collisions with Windows – American Bird Conservancy." These studies have focused on a variety of factors influencing bird collisions with buildings, such as bird physiology (Håstad and Ödeen 2014, Kahle et al. 2016, Martin 2011, 2012), habitat (Borden et al. 2010, Cusa et al. 2015, Hager and Craig 2014), abundance (Sabo et al. 2016, Wittig 2016), and seasonality (Borden et al. 2010, Zink and Eckles 2010).

The DEIR analysis also relies on Klem et al. (2009) and American Bird Conservancy (2015) to summarize building design factors that influence bird mortality. Additional recent literature included in Seewagen and Sheppard (2017) focuses on how building and window design can reduce collisions (Hager et al. 2013, Klem and Saenger 2013, Pelley 2014, Switala Elmhurst and Grady 2017). Some of these provide evidence that building design can influence and reduce bird collisions mortality (Pelley 2014, Switala Elmhurst and Grady 2017). The American Bird Conservancy (2015) incorporates several of these studies in their guidelines. More recent literature (Kahle et al. 2016, Switala Elmhurst and Grady 2017) has mostly confirmed what was learned from previous studies. Therefore, the DEIR approach in relying on American Bird Conservancy guidelines is up to date with current thinking on reducing bird collisions with buildings.

To: Ron Powers
From: The Sierra Club
Re: DEIR Downtown Recovery Plan
Date: September 8, 2017

Dear Mr. Powers:

Please find below the Sierra Club's comments on the Draft Environmental Impact Report (DEIR) sections for the Downtown Recovery Plan (DRP). We look forward to your responses to these comments.

Sincerely,

Greg McPheeters
Chair, Sierra Club
Santa Cruz Group

4.1 AESTHETICS

1 The DEIR does not address these codes in the California Public Resources Code section 21099, 21099(4), (2)(A), (2)(e) Codes Display Text

Since January 2014 the SB 743 has received various guidelines revisions with the potential of raising legal difficulties. Jan. 2016 CEQA guideline on evaluating Transportation impacts in CEQA states: "The determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data."

SB 743 doesn't address/include developments areas that are adjacent to City's Open Spaces area, watershed, riparian corridors with a detailed aesthetic definition. Consequently local public lead agencies have responsibility to fulfill the City's Plans such as "future physical development in Santa Cruz will protect and sustain precious natural resources, honor and enhance the city's unique natural setting, and maintain and appropriately use the open space that encompasses and penetrates the city." (City's 2030 General Plan Park & Rec. Open Spaces)

Codes 21099 (4), (2)(A) & (2)(e) codes validate the City's local Plans. The codes demonstrates that the aesthetic assessment of the SB 743/21099 codes is

defined by public lead agencies, other agencies & local Plans for which the San Lorenzo River qualifies.

The DEIR Aesthetics SB 743 findings are incomplete and unsubstantiated, because not all CPRC codes pertaining to proposed amendments were addressed nor were all current CEQA guidelines considered. The omission of the San Lorenzo River as an Open Space, riparian corridor in the Regional Setting section (pg. 4.1-5) affected the DEIR analysis for SB 743 in regard to City plans.

Scenic Resources: 4.1-7

2 To quote from the DEIR, *"The DRP indicates that the river offers potential as an open space, habitat and a recreational amenity and provides opportunities for creation of linkages to the downtown."* The DEIR fails to adequately address the habitat value of the San Lorenzo River (SLR) and therefore inadequately assesses the environmental impacts of the project on the SLR. The SLR is not a "potential" habitat: it is a recognized, documented habitat in the city's General Plan.

3 According to the DEIR, no significant impacts have been identified. This finding is possible only because of the above deficiencies noted.

4 Impact 4.1-3 The DEIR states that, "future buildings would be of similar height and scale as the other tall buildings in the downtown area". One major area of height increase is along the San Lorenzo River levee. The DEIR fails to allow for the difference between increased heights downtown and increased heights along the river, which is a habitat. Downtown is not a habitat. The impact of increased human activity on the SLR habitat generated by the project is inadequately addressed in the DEIR. The volumetric approach is not an adequate response to the increased heights and massing allowed under the amendments. The claim in the DEIR that full build-out is unlikely is unsubstantiated. The fact that buildings along Front St. have not been built to the current maximum is not a yardstick for future building of zoned mixed use with increased heights and massing.

5 With respect to the proposed new widened alleys connecting to the river, currently the SLR is accessible from various river paths. The reasoning that 3 pathways through high building mass areas will create superior connections to the San Lorenzo River lacks proof. There is no evaluation of the human impact to the river habitat via such corridors nor impact to bird life from such corridors that will have night lights and windows.

6 The DEIR states that the project will, "Enhance opportunities to view and interact with the San Lorenzo River as a coastal resource." This statement is

invalidated as demonstrated by Figure 4.1-3a-3c, which show according to Figure 4.1-3a-3c that views are not enhanced by high buildings & building mass. The impact on views is not fully explored in the DEIR

7 The Visual Character of the Project Area DEIR statement (*6) is acknowledging the value of the SLR's existing visual character to which the CEQA Thresholds of Significance guidelines 1a-1d apply. The proposed amendments would impact 1a-1d when evaluated w/existing City guiding Plans & Figure 4.1-3a-3c, consequently Codes 21099 (e) & (b) (4) would apply.

The DEIR analysis here is unsubstantiated.

Scenic Views: The conclusion for Impact 4.1.1: Mitigation Measures is not substantiated by incorporating/addressing 4.1.2 CEQA thresholds of significance adequately w/valid proof. (Analytical Method 4.1-8, 1st paragraph) The City's 2030 General Plan Chapters (9-11) are not mentioned nor incorporated for this MM conclusion.

The DEIR MM reasoning is not substantiated with the SLR environmental policies/recommendations from adopted City's Plans and is incomplete.

4.3 BIOLOGICAL RESOURCES

4.3.1 Environmental Setting

8 Throughout this section the DEIR is addressing the Transitional Stretch as an isolated part of the diverse SLR riparian corridor ecosystem. Each stretch of the SLR has its own microclimate ecosystem, which interacts with each other.

The DEIR analysis is incomplete, because it fails to integrate its Transitional Stretch findings to the entire SLR riparian corridor.

9 The DEIR 'San Lorenzo River Habitats' findings were not derived from an up-to-date, year long scientific data base of a comprehensive San Lorenzo River wildlife & plant inventory that includes nesting inventory of local and migratory birds and specifies bird species that depend in various ways on SLR corridor habitat as a food source.

The DEIR's findings are therefore unsubstantiated due to lack sufficient data to analyze the impact of proposed amendments on the San Lorenzo River Habitat.

A seasonal bird survey is insufficient to adequately assess the SLR bird population. A minimal year -long scientific survey is needed for an in-depth

analysis of the SLR habitat. Not all species are included in the analysis, for example bats are not included nor the impacts on all species from the project assessed.

The DEIR's analysis is incomplete, because findings are not substantiated by adequate data.

10 pg. 18 These statements require further data to gauge additional effects on ecosystems:

1. The Solar Heat Gain from windows (diffuse radiation is the solar radiation that is absorbed, stored and scattered in the atmosphere.)

2. The winter shade cooling long-range effect on vegetation & water temperature

3. Increased wind flow impact on birds & vegetation.

The DEIR's findings are incomplete and require further information.

11 4.3.2 Up-dated studies on bird collision with glass is available and should be included in the analysis of impacts**]Bird Collisions with Windows - American Bird Conservancy** than (Klem, March 2009, Hager et al., September 2008).

12 Note the quote that: "The most dangerous building in this study was not a high-rise, but instead was a 6- story office building adjacent to densely vegetated open space. ", which is above 50'.

This statement substantiates the SLURP recommendation of 50' height maximum adjacent to densely vegetated open space.

The SLURP recommendation of 50' height is also supported with these findings:

1. The San Lorenzo River is an important riparian habitat, which is in the Pacific Flyway of winter & summer migrating birds, protected under Migratory Bird Treaty Act.

2. Migrating birds are known to rest, fed, take refuge from storms in water bodies & natural spaces, either to recuperate, refuel for the remaining migratory journey or stay for a season.

3. Neo-tropical migrants & local birds are known to nest in riparian & open-space ecosystems.

4. Riparian corridors are receiving increased Fed.& State agencies conservation efforts due to steep bird habitat loss caused by development.

5. The City's 2030 General Plan Natural Resources Goals, policies, actions reinforces the 50' height limit with NRC1.2.1–NRC1.3.

13 The DEIR fails to substantiate its findings for proposed height increase.

4.5 HYDROLOGY AND WATER QUALITY

14 The Draft EIR notes that a project impact would be considered significant if the project would

> "Result in construction of habitable structures within a 100-year floodplain … which would expose people or structures to a significant risk of loss, injury or death due to flooding;"

The Draft EIR acknowledges that the construction allowed by the Downtown Plan Amendments would take place within the San Lorenzo River 100-year floodplain. However, the Draft EIR concludes regarding flood risk, "No mitigation measures are required as a significant impact has not been identified." This contradiction could be resolved by a conclusion that the Project would have a significant impact due to flood risk.

the City's Vulnerability Study by Gary Griggs and Brent Haddad articulated a new understanding of the flood risk downtown. The Draft summarizes the flood risk due to rising groundwater, "As sea level continues to rise, seawater could extend farther upstream in the San Lorenzo River flood control channel more frequently, and rising gradually to higher elevations. This would lead to a rise in the water table beneath downtown. This area of the City has always been vulnerable to an elevated water table but this will become a more significant issue in the future, likely resulting in the need for more pumping and implementation of other adaptation strategies."

The Draft apparently expresses a belief that adaptation strategies can prevent significant loss to structures downtown due to an elevated water table. However, Gary Griggs, the author of the Vulnerability Study reports that adaptation measures are only temporary. In correspondence with Gary Griggs, the question was posed, "Does that mean a sea level rise of more than two to four feet will result in ground water at grade level downtown during peak tides?"

Here is an excerpt from his response: (correspondence between Gary Griggs and Rick Longinotti):

> *You read that correctly….When you stop and think or consider what is under or beneath downtown, from electrical and phone lines, to water and sewer lines, and the extent of the downtown floodplain sand and gravels and their connectivity to the river and the ocean, the enormity of the problem*

becomes apparent. We are not alone, look at New Orleans, but I'm not sure that's any consolation. We have some time but I don't see any adaptation measure short of eventually relocating downtown.

The City's Climate Adaptation Plan cites estimates for sea level rise that envision a 2-4 foot rise occurring between 2070 and 2100.
We conclude that the Environmental Impact Report needs to clearly represent the significant risk of locating buildings in the downtown floodplain.

15 The City's Climate Adaptation Plan notes that after increasing the height of the river levy in 2002, "New buildings and improvements are no longer mandated to meet FEMA flood construction requirements." We urge that a mitigation for the Project include restoration of flood construction requirements.

Consistency with City Plans

16 The Project needs to be made consistent with the adopted plans of the City of Santa Cruz. We note that the General Plan requires the City to make land use decisions that reduce impacts of sea level rise.

GENERAL PLAN GOALS RELATED TO CLIMATE ADAPTATION
NRC 4.3 Support initiatives, legislation and actions for reducing and responding to climate change.
NRC 4.5Minimize impacts of future sea level rise.
NRC 4.6Take early action on significant and probable global warming, land use and development issues, including those that arise after 2025.

We note that the City's Climate Adaptation Plan considers the following to be a "very high priority action":
Protect downtown and beach area from San Lorenzo River flooding

And the following is a "high priority action":
Restrict development in flood plains

4.6 PUBLIC SERVICES

17 According to the DEIR "The City is currently underserved for neighborhood and community parks and requires a total of 57 acres to meet these goals (City of Santa Cruz, February 2017). Yet the DEIR finds no significant impact from the project on parks and recreation. That the Park User fee will be a sufficient mitigation is not substantiated since there is little land left to acquire and city has a budget shortfall. The Mimi de Mata dog park, listed as a nearby park for the project population is tiny, for dog use and inadequate to be used to justify as mitigation. The upcoming Parks Master Plan does not include specifics for acquiring new park space. Given the current inadequate park space for current

residents, the project is more likely to have a significant and negative impact due to the lack of additional designated park space for the project.

4.7 TRAFFIC AND TRANSPORTATION

18 The DEIR underestimates the impact on the listed intersections as compared with the EIR for the 2030 General Plan. The DEIR should be amended to be consistent with the General Plan with the addition of the impacts of the project.

LETTER B4 – Sierra Club

B4-1 Aesthetics and SB 743. The comment indicates that the DEIR does not address California Public Resources Code sections 21099, 21099(4), (2)(A), (2)(e), and that the "Aesthetics SB 743 findings are incomplete and unsubstantiated". The comment suggests that omission of the San Lorenzo River as an open space, riparian corridor affected the DEIR analysis pursuant to SB 743 regarding City plans. Section 21099 was enacted by California Senate Bill (SB) 743 in 2013. It addresses how traffic impacts be analyzed and requires that the Office of Planning and Research and the Natural Resources Agency develop and adopt new CEQA Guidelines with criteria for traffic impact analysis that does not use level of service as a measure of impact significance. The State has not yet taken any final action on new transportation thresholds as discussed in section 4.7, Traffic & Transportation, of the DEIR. The Aesthetics section further notes on pages 4.1-8 to 4.1-9 that provisions of Section 21099 with regards to determination of significant aesthetic impacts may be applicable to future developments within the study area that are within one-half mile of the Santa Cruz Metro Transit Center. The provisions of SB 743 are not applicable to the adoption of the Downtown Plan amendments, and there is no legal requirement for the City to make any findings pursuant to SB 743. See Response to Comment B4-2 regarding the San Lorenzo River.

B4-2 Scenic Resources-San Lorenzo River. Regarding a statement in the Downtown Plan about the San Lorenzo River, the comment states that the DEIR fails to adequately address the habitat value of the San Lorenzo River and therefore inadequately assesses the environmental impacts of the project on the San Lorenzo River. The DEIR recognizes the San Lorenzo River as a prominent natural and open space feature in the downtown area as part of the review of existing scenic resources (see DEIR page 4.1-7). Impacts to scenic resources, including the San Lorenzo River are addressed on DEIR pages 4.1-9 to 4.1-11 with regards to scenic views and scenic resources. The proposed plan amendments and subsequent future development would not block views along the river or vegetation or natural features within the river's riparian corridor. Effects of increased heights on the visual character of the area, including the San Lorenzo River, are discussed on pages 4.1-11 to 4.1-16. The habitat value and biological resources of the San Lorenzo River are discussed in section 4.3, Biological Resources, in the DEIR; see pages 4.3-7 to 4.3-9 for a description. The section also identifies the riparian area along the river as a sensitive habitat, special status species utilizing the river habitats, and wildlife movement and breeding. Impacts to special status species, aquatic habitat, sensitive riparian habitat and nesting birds are evaluated on pages 4.3-17 through 4.3-23.

B4-3 Aesthetics Impact Significance. The comment claims that the DEIR finding of no significant aesthetics impact is possible only because of the deficiencies noted in the above comment(s). The DEIR analyses are based on the thresholds of significance

identified on page 4.1-8 and as explained in the impact analyses. See also Response to Comments B4-1 and B4-2.

B4-4 Impact 4.1-3-Building Heights. The comment states that the DEIR fails to allow for the difference between increased heights downtown and along the San Lorenzo River, which is a habitat, and downtown is not. The comment also states that a volumetric approach is not an adequate response to the increased heights and massing allowed under the amendments, and that the claim in the DEIR that full buildout is unlikely is unsubstantiated.

The Downtown Plan amendments propose a lower increased height (50 feet up to 70 feet) adjacent to the river than other areas downtown (55 feet up to 85 feet) as reported and analyzed in the DEIR. See Response to Comment B4-2 regarding impact of increased height on the river. The DEIR reports on other plan amendments, including required upper floor setbacks/stepbacks to break up building mass and changes in the stepback standard that would allow a certain percentage of a site to have heights over a specified limit. The DEIR reports that this "volumetric approach" is intended to ensure both vertical and horizontal building variation to avoid monolithic structures as considered by City staff and Planning Commission in proposing new standards.

The DEIR does not claim that "full build-out is unlikely", but indicates that the photosimulations were developed to inform the public and City decision makers about the hypothetical "worst-case" appearance of full buildout under the DRP amendments, and it is not known whether properties will be assembled to achieve the size needed for the additional height allowance. See Response to Comment C9-1 for further discussion. Buildout assumptions for the EIR analyses are described on pages 3-13 and 3-14 in the DEIR.

The Comment states that the impact of increased human activity on the San Lorenzo habitat generated by the project is inadequately addressed in the DEIR. See Response to Comment B4-5.

B4-5 Access Connections to the San Lorenzo River. The comment states that the reasoning that three pathway connections to the San Lorenzo River will "create superior connections" to the river "lacks proof," and that there is no evaluation of the human impact to the river via such corridors. The comment regarding public access connections to the river is in reference to the Downtown Plan and does not address analyses in the DEIR; no response is required.

With regards to potential impacts to wildlife as a result of access along the river, the public currently has access to the Riverwalk on the west side of the San Lorenzo River, including from both Laurel Street and Soquel Avenue. The proposed amendment

introduces no new development, so would not result in the removal of any habitat or vegetation along the river. Because the area is already publicly accessible, any species, such as nesting or migratory birds, using this area are adapted to human presence. In addition, increased access to the river is already promoted in the San Lorenzo Urban River Plan (SLURP). As noted in Section 4.3 of the DEIR, the SLURP "contains recommendations for habitat enhancement, as well as public access and ideas to promote river-oriented development. One of the key goals of the plan is to enhance and restore biotic values of the river, creek and marsh fish and wildlife habitat." Therefore, any increase in access under this proposed amendment would only reinforce a priority of the SLURP, which also includes enhancing the river's biotic values. The DEIR analyzes and acknowledges potential impacts to birds from increased building heights because of the increase in window space and increased night-time lighting. See the discussion in Biological Resources, Section 4.3.2, Impact 4.3-2: Indirect Impacts to Sensitive Riparian Habitat, which focuses on this issue.

B4-6 Impacts on Views. The comment says that the DEIR states that the project will "Enhance opportunities to view and interact with the San Lorenzo River as a coastal resource," which is invalid as demonstrated by Figure 4.1-3a-3c, which show that views are not enhanced by high buildings & building mass. The comment claims that the impact on views is not fully explored in the DEIR. The referenced statement is one of the project objectives identified on pages 3-3 and 3-4 of the DEIR. According to City staff, there are only four areas that provide access to the Riverwalk from Front Street in the project area: 2 asphalt ramps and access points near Soquel Avenue and Laurel Street. All of these access points for viewing and experiencing the river can be improved and enhanced by requiring new adjacent development to improve these connections. The river itself cannot be seen from Front Street. Only the levee can be seen from the pedestrian eye level west of the river, therefore, no new buildings will obstruct the views to the river. In addition to the opportunities to improve the four existing access points, the plan includes requirement to improve a fifth connection (near the streets of Soquel, Cathcart, Elm, Maple and Laurel). The enhanced access opportunities could be provided and improved under the plan requirements as indicated in Chapter 4, E. Front Street/Riverfront Corridor Development Standards and Guidelines, paragraph 5, "Access to the Riverwalk". See also Response to Comments B4-2 and B4-3 regarding impacts to views.

B4-7 Impacts to Visual Character and Scenic Views. The comment claims that the DEIR analysis regarding visual character of the project area is unsubstantiated when evaluated with existing City plans and Figure 4.1-3a-3c to which Public Resource Codes apply, and the proposed amendments would impact the value of the San Lorenzo River's existing visual character to which the CEQA Thresholds of Significance guidelines 1a-1d apply. See Response to Comments B4-1, B4-2, B4-3, B4-4, and B4-5 regarding visual impacts related to the river.

The comment also states that the conclusion that no mitigation measures are required for Impact 4.1.1 is not substantiated and the City's General Plan 2030 chapters 9-11 are not mentioned or incorporated into the conclusion. Existing City General Plan and LCP consideration of scenic views are described on pages 4.1-6 and 4.1-7 in the DEIR. As discussed in the impact analysis of scenic views on pages 4.1-9 to 4.1-10, the proposed plan amendments and resulting potential buildings with increased heights would not block or substantially affect scenic views, which City plans consider to be views that are oriented toward the Monterey Bay and Pacific Ocean or toward the Santa Cruz Mountains that frame the northern boundary of the City. The analysis also indicates that future development would not block views of the river. Future development would be in the same location as existing buildings and would not block existing views of the river along the river levees. See also Response to Comment B4-6.

B4-8 San Lorenzo River Habitat. The comment claims that the DEIR analysis is incomplete because it fails to integrate the Transitional Reach in which the project is located to the entire San Lorenzo River habitat. The DEIR does note that the project area is within the "Transitional Reach" of the river as defined and described in City adopted San Lorenzo Urban River Plan (SLURP), but the DEIR addresses biological resources to the extent that such resources would be affected by the project. As discussed in the DEIR, the project and future development would not result in removal of or direct impacts to riparian habitat. Except for one small area, the project area is located outside of the riparian management area of the river as identified in the adopted City-wide Creeks and Wetlands Management Plan, which is also part of the City's Local Coastal Program (LCP). Future development accommodated by the proposed plan amendments would meet required riparian setbacks as discussed on page 4.3-15 of the DEIR. The DEIR goes on to evaluate potential indirect impacts to habitat and wildlife using the river corridor due to shading effects, windows and lighting associated with taller buildings that could be developed as a result of the proposed plan amendments. Thus, the DEIR is not incomplete in its analyses.

B4-9 Biological Studies. The comment indicates that the DEIR findings are unsubstantiated due to lack of sufficient data to analyze the impact of the proposed amendments on San Lorenzo River habitat because findings were not derived from an up-to-date, year-long, scientific, comprehensive data base, including nesting survey, and that a seasonal bird survey is insufficient to adequately assess the San Lorenzo River bird population. See Response to Comment B3-4.

B4-10 Solar Heat, Shading and Wind. The comment states that the DEIR is incomplete and requires further information regarding: 1) solar heat gain from windows (diffuse radiation is the solar radiation that is absorbed, stored and scattered in the atmosphere); winter shade cooling long-range effect on vegetation & water temperature; and 3) increased wind flow impact on birds & vegetation. See DEIR pages 4.2-18-19 regarding discussion of urban heat effect (no impact) and DEIR pages 4.3-17-

18 regarding effects of shading on San Lorenzo River riparian and aquatic habitats (less-than-significant impact). Future development would be of heights similar to other buildings that exist in the downtown area and would have no effect on weather or wind patterns.

B4-11 Bird Studies. The comment indicates that there are more extensive and up-dated studies on bird collision with glass available and should be included in the analysis of impacts. The comment cites the following: 1) to Birds Collisions with Windows – American Bird Conservancy; 2) Klem (March 2009); and 3) Hager et al. (September 2008). See Response to Comment B3-5.

B4-12 Bird Studies. The comment references a statement from a bird study cited in the comment letter, which states that "The most dangerous building in this study was not a high-rise, but instead was a 6-story office building adjacent to densely vegetated open space," which substantiates the SLURP recommendation of a maximum 50-foot building height adjacent to densely vegetated open space. The comment also states other reasons to support the SLURP 50-foot height recommendation. The comment is acknowledged, but does not address analyses in the DEIR. No response is necessary, but the comment is referred to City staff and decision makers for further consideration. It is noted that the claim that the City's General Plan goals, policies and actions (NRC1.2.1 – NRC1.3) reinforces the 50-foot height limit refers to policies that call for evaluation of potential impacts near riparian areas, working with agencies to mitigate impacts, and encouraging restoration of riparian corridors. The EIR has fully evaluated the potential impacts of the proposed project.

B4-13 Height Increase. The comment states that the DEIR fails to substantiate its findings for proposed height increase. Findings for the proposed height increase are not required as part of CEQA review. However, City staff will provide a review of the proposed amendments with all legally required findings as part of the staff report for the project that will be presented to the City Planning Commission and City Council.

B4-14 Impacts Related to Exposure to Floods and Sea Level Rise. The comment states that construction allowed by the plan amendments would locate development in the San Lorenzo River 100-year floodplain, which is a significant impact with consideration of sea level rise, and claims that the DEIR expresses a belief that adaptation strategies can prevent significant loss. The comment quotes correspondence with local geologist, Gary Griggs and co-author of the City's Climate Change Vulnerability Study, but does not provide the cited correspondence. The DEIR summarizes the conclusions of The Griggs study, including the following:

> As sea level continues to rise, and as summer river discharge declines, the result will be seawater extending farther upstream in the flood control channel more frequently, and rising gradually to higher elevations. This

> would lead to a rise in the water table beneath downtown. This area of the city has always been vulnerable to an elevated water table but this will become a more significant issue in the future. The higher the water table rises, the greater will be the impact, and the more pumping and other adaptation that will be required.

The Vulnerability Study also indicates that there are significant flood risks that will increase with a rising sea level and that the city needs to continue to work with state and federal agencies to regarding the ability of the river levees to contain a 100-year flood event. The City's Climate Adaptation Plan identifies the priorities and actions to address risks and hazards associated with climate change, including sea level rise.

The DEIR does acknowledge that flood hazards in the downtown area could be more significant in the future. Expanded text has been added to this discussion; see Chapter 3, Changes to Draft EIR, of this document. The proposed project is a "program" under CEQA, and no specific development is proposed as part of the project. At a program level, the DEIR discloses the other studies, plans and actions that the City has and continues to undertake to address issues of climate change and sea level rise.

B4-15 Flood Construction Requirements. The comment urges that a mitigation for the project include restoration of flood construction requirements that are no longer mandated by FEMA as a result of increasing the height of the river levy in 2002. FEMA establishes flood construction requirements. The comment is acknowledged, but does not address analyses in the DEIR, and no further response is necessary.

B4-16 Consistency with City Plans. The comment states that the project needs to be consistent with adopted City plans, and identifies General Plan goals and policies related to climate change. The referenced goals (NRC 4.3, 4.5, and 4.6) are directives to the City, and are not applicable to proposed project. The comment also notes two priority actions identified in the City's Climate Adaptation Plan, one of which is identified in the DEIR – "protect downtown and the beach area from San Lorenzo River flooding," which is a very high priority. The comment also identifies a high priority action (B-13) that states "Restrict development in flood plains." As discussed in the DEIR (pages 4.5-6 to 4.5-7), the levee improvements completed in 2002 removed certain development restrictions for structures located in the 100-year floodplain. Such restrictions typically have included raised elevations and/or prohibiting residential development on ground floors.

B4-17 Public Services - Parks. The comment states that the DEIR indicates that the City is currently underserved for neighborhood and community parks, yet finds no significant impact from the project on parks and recreation. The comment further asserts that the EIR's conclusion that the Park User fee will be a sufficient mitigation is not substantiated, since there is little land left to acquire and city has a budget shortfall.

The comment states that given the current inadequate park space for current residents, the project is more likely to have a significant and negative impact due to the lack of additional designated park space for the project.

New development that may occur under the Downtown Plan will be located within a half-mile (the service radius for neighborhood-serving parks) to several existing neighborhood and community parks, which will provide a variety of recreational opportunities to new residents. Some of the larger parks include San Lorenzo Park, Riverside Gardens Park, Mike Fox Park, Laurel Park, and Depot Park. Mimi De Marta Park is limited to off-leash dog use; however, it is located within close proximity to Mike Fox Park and Riverside Gardens Park and serves a specific role in a broader mix of available uses. Similarly, some of the parks are located along the Santa Cruz Riverwalk, including a multi-use trail along the San Lorenzo River, which, when considered together, form a larger park corridor that provides access to a wide range of natural and developed recreational areas.

Additionally, the existing Downtown Recovery Plan identifies opportunities to improve connections to existing parkland. The plan envisions a riverfront park along the levee promenade between Soquel and Laurel Streets. The plan also calls for strengthening the linkage between the river and downtown along Cooper Street through the Galleria to the existing pedestrian bridge leading to San Lorenzo Park. It also recommends establishing stronger pedestrian linkages to the river at the northeast corner of Soquel Avenue and Front Street, at or near the extensions of Cathcart, Elm, and Maple streets, and leading to a significantly expanded pedestrian/bicycle bridge with retailing uses alongside, as well as a more active linkage to San Lorenzo Park.

The City's General Plan established a long-term goal to "strive" for 4.5 acres of neighborhood and community parkland per 1,000 residents. To help meet the goal, the General Plan includes an action to require park land dedications of suitable recreational land at a ratio or 4.5 acres/1,000 population generated by a development project, or payment of a corresponding in-lieu fees. The City's Municipal Code requires new residential subdivisions to dedicate land, or pay an in-lieu fee, for parks and open space as authorized by the Quimby Act. Additionally, the City has adopted a Park and Recreation Facilities Tax on residential construction, and fees are collected on various forms of residential development. Park-In Lieu fees and Park and Recreation Facilities Tax (see DEIR page 4.6-5) revenues are placed into separate accounts from the General Fund and mitigate for the impact of growth. The fees are collected incrementally as development occurs, which can help the Parks and Recreation Department pool a larger sum of money to be used for park improvements. The funds can be used to purchase parkland and/or to rehabilitate existing facilities that will receive more use as a result of new development. Acquiring new parkland can be challenging but does occur. For example, Riverside Gardens Park was constructed in 2014 and is near downtown.

Therefore, the existing and planned facilities would serve the downtown area and future residents, and the impact on parks and recreational facilities is not considered significant. Additional text has been added to the DEIR discussion; see Chapter 3, Changes to Draft EIR, of this document.

B4-18 Traffic and Transportation. The comment states that the DEIR underestimates the impact on the listed intersections as compared with the EIR for the 2030 General Plan, and the DEIR should be amended to be consistent with the General Plan with the addition of the impacts of the project. The traffic analysis was based on updated traffic counts taken in 2014 and 2015 and updated traffic analyses to assess project and cumulative traffic impacts. Daily fluctuations in traffic can account for some differences in existing conditions for intersections evaluated in both the DEIR and General Plan EIR. See Responses to Comments B1-2, B1-5 and B1-6 regarding traffic analysis methods and comparisons to the General Plan EIR. As discussed in Response to Comment B1-6, project traffic estimates are not underestimated compared to General Plan EIR findings.

Ron Powers

From: Shawn Arnold <shawn_arnold@apple.com>
Sent: Monday, August 07, 2017 4:24 PM
To: Ron Powers; Martin Bernal; Alex Khoury
Subject: Supporter of proposed riverfront development

Hi Ron, Martin and Alex,

1 Contrary to a few noisy neighbors, many of us are firmly in agreement with the high density growth proposed downtown. There is no doubt that the city needs additional reasonably priced housing (subjective I know) and this location serves two main purposes; students and downtown businesses.

These noisy neighbors offer no solutions and persist in zero growth (the way it used to be) and not in my back yard mentalities. These noisy neighbors do not speak for the bulk of us homeowners that understand that measured growth is the best way to move Santa Cruz forward over the next decade and beyond.

A mix of students and young couples and families directly in downtown would offer the sense of community that is missing when compared to other college towns. If you travel around the country, you see vibrant college downtown communities serving both of these demographics. The younger crowd prefers the close camaraderie of this living situation and I feel it benefits all parties. The current challenge with downtown is that it basically rolls up the carpets at 8-9PM each night with the only action towards the Catalyst. Businesses could take further advantage of this influx with later hours and it's obvious employee fiscal benefits.

As currently envisaged by these noisy neighbors, the downtown area remains stagnant. Please rise above the few and elevate the downtown area to an energetic neighborhood.

Regards,
Shawn Arnold

LETTER C1 – Shawn Arnold

C1-1 Support of Proposed Project. The letter indicates support of growth proposed downtown. Comment is acknowledged and referred to City staff decision makers; no response is necessary.

September 8, 2017

Ron Powers, Principle Planner
City of Santa Cruz Planning and Community Development Department
809 Center Street, Room 107
Santa Cruz, CA 95060
Email: Ron Powers - rpowers@cityofsantacruz.com
RE: Comments on Draft EIR - Downtown Plan Amendments

Dear Mr. Powers.

Here are some considerations that may not have been covered by others:

1 1. **Figure 4.1-3A and Figure 4.1-3B - The pencilled in dotted lines show the sky, trees and granularity of the existing Downtown area and so does not reflect the proposed Zoning adequately.**

Shouldn't this picture be in the EIR instead?



Proposed building massing and public access requirements along Front Street and the riverfront.

2 2. **Zoning - LInear Feet Frontage versus Granularity and impact on Community vibrancy?** Here is a picture of two scenarios and as you can see, a picture is important to show the significance of the mass of a building. The one on the left also has granularity that attracts the Community and on the right it does not:





The rezoning will allow massive buildings of 250 feet. The imposing nature of those buildings so close to the RiverWalk could make that area less inviting and therefore encourage more issues along the River.
Image source: Older Smaller Better - May 2014 report
http://forum.savingplaces.org/act/pgl/older-smaller-better?_ga=2.31398591.1638040152.1504919371-266602711.1504919371

3 **3. Housing Formula - Market Rate vs. Affordable Housing:**
Please consider the Affordable Housing Inclusionary Formula per the San Francisco study:

Originally the Residential Nexus study was referenced in Gillian's article - Challenging Housing Assumptions
http://brattononline.com/january-10-16-2017/

Article about why market rate housing makes the affordable housing crisis worse..!
http://48hills.org/2015/06/14/why-market-rate-housing-makes-the-crisis-worse/

Actual study...
http://sf-planning.org/sites/default/files/FileCenter/Documents/8380-FINAL%20Resid%20Nexus_04-4-07.pdf

From the 48hills.org article:

So according to the study, by Keyser Marston Associates, every time the city allows 100 new high-end housing units, it needs to build between 20 and 43 new affordable units – *just to keep the housing balance the way it is now.* Put the affordable units in the main complex and the impact is lower (because fewer millionaires move in). Built them, as is common, somewhere else and the impact is greater.

> *In summary, for every 100 market rate condominium units there are 25.0 lower income households generated through the direct impact of the consumption of the condominium buyers and a total of 43.31 households if total direct, indirect, and induced impacts are counted in the analysis.*

If the city demands 15 percent affordable set-asides, then every market-rate building adds more demand for affordable housing than it supplies. That means every new building makes the housing crisis worse.

4 **4. Section 6 - References - Gary Griggs Climate Change Vulnerability Study Considerations?**

I am very surprised to find no reference to Gary Grigg's Vulnerability Study in reference to Downtown. To what extent is the EIR considering these Downtown Vulnerability risks and the impact on the Downtown Update Zoning changes?
https://seymourcenter.ucsc.edu/OOB/SCClimateChangeVulnerabilityAssessment.pdf

Magnitude of Consequence	Probability / Likelihood of Occurrence			
	Low	Moderate	High	Very High
Low			Heat Wave	
Moderate	Shoreline Inundation		Coastal Cliff Erosion	
High	Wildfires	Downtown Flooding	Water Table Rise Downtown	Water Shortages

Risk = Probability x Consequence

Figure 30a. Short to Intermediate Term Risk Ranking 2010 – 2050

Magnitude of Consequence	Probability / Likelihood of Occurrence			
	Low	Moderate	High	Very High
Low				Heat Wave
Moderate		Shoreline Inundation		Coastal Cliff Erosion
High		Wildfires	Downtown Flooding	Water Shortages Water Table Rise Downtown

Risk = Probability x Consequence

Figure 30b. Intermediate to Long-Term Risk Ranking 2050 – 2100

5 **5. Traffic impacts - Level of Service "F" at key intersections along Laurel:** While the General Plan allows for LOS of F at some regional intersections, these are the main exit routes for the Downtown Metro System. What would be the impact of LOS F for the Santa Cruz Metro Bus System? I don't see that the Metro Agency was referenced as contacted in Chapter 6.1 - Agencies and Persons Contacted. There is no mention of the Metro personnel as being contacted.

TABLE 5-2: Intersection Weekday Cumulative PM Peak Hour Levels of Service with Project

#	Intersection	Control Type	LOS Threshold[1]	Cumulative Plus Project Conditions[2] PM Peak Hour		
				Movement	Delay[3]	LOS
1	Front Street / Laurel Street	Signal	D	**Overall**	**100.2**	**F**
2	Pacific Avenue / Laurel Street	Signal	D	**Overall**	**105.9**	**F**
3	Front Street / Cathcart Street	Signal	D	Overall	23.5	C
4	Front Street / Metro Station Driveway	Signal	D	Overall	6.4	A
5	Pacific Avenue / Metro Station Driveway	SSSC	D	Overall	1.7	A
		Worst Approach	D	WB	10.5	B
6	Pacific Avenue / Maple Street	AWSC	D	Overall	7.7	A
7	Pacific Avenue / Front Street / Mission-Water Street	Signal	D	Overall	32.3	C
8	Front Street / Soquel Avenue	Signal	D	**Overall**	**59.9**	**E**
9	Pacific Avenue / Cathcart Street	AWSC	D	Overall	8.3	A
10	Soquel Avenue / Pacific Avenue	SSSC	D	Overall	4.3	A
		Worst Approach	D	WB	9.5	A
11	Ocean Street / Water Street	Signal	D	**Overall**	**228.1**	**F**
12	Highway 1 / Highway 9	Signal	C-D	**Overall**	**269.2**	**F**
13	Chestnut Street / Mission Street / Highway 1	Signal	C-D	**Overall**	**344.0**	**F**

Source: Kimley-Horn, May 2017.

Notes:

1. The City of Santa Cruz has established LOS D as the minimum acceptable LOS for overall intersection operations during the AM and PM peak hours. However, under the existing General Plan, the City accepts a lower LOS (F) at some major regional intersections per existing Circulation Policy 5.1.2.
2. Analysis performed using HCM 2010 methodologies, except for Intersection 7 where HCM 2000 methodology was applied as explained above.
3. Delay is shown in seconds/vehicle.
4. Intersections that fall below the LOS threshold are shown in **bold**.

Sincerely, Candace Brown - Santa Cruz, CA

LETTER C2 – Candace Brown

C2-1 DEIR Figures 4.1-3A and 3B. The comment questions whether Figure E-2 from the proposed Downtown Plan should be included to adequately depict the proposed project. During the NOP process for this EIR, public comments were received by the City that requested that the EIR include visual simulations that would illustrate eye-level perspectives to represent the true perspective of any potential visual impacts. All of the photographic simulations were prepared using eye-level actual photographs as the basis for realistic analysis and more accurate representation of potential building heights. Figure E-2 is from an oblique, birds-eye view, which does not accurately reflect eye-level visual impacts.

C2-2 Building Mass. The comment presents photos of buildings from other locations to show building mass and states that the rezoning will allow massive buildings of 250 feet that due to their imposing nature could make the area less inviting and result in more issues along the river. The comment is acknowledged, but does not address analyses in the DEIR. City staff notes that the existing downtown is composed of both 'granular' architecture and less granular architecture. The lot pattern and development pattern contribute to variation of architectural details. The proposed Downtown Plan standards recognize that development in the future will likely occur on both small lots, as well as larger aggregated parcels. The draft Downtown Plan development standards include a requirement for both vertical and horizontal variation in order to create opportunities for more granular design. People experience the street from a pedestrian, ground-level perspective and therefore, the attention to storefronts is a very critical component of the regulations – which are not proposed to be modified from the successful existing Downtown Recovery Plan language.

C2-3 Affordable Housing. The comment asks that the San Francisco Affordable Inclusionary Formula be considered. The comment is acknowledged but does not address analyses in the DEIR. Affordable housing and the Inclusionary housing ordinance are not part of the Downtown Plan, but are adopted as separate City ordinances. Development in the downtown area must comply with State and City-adopted affordable housing standards. No further response is necessary, but the comment is referred to City staff and decision makers for further consideration.

C2-4 Climate Change Vulnerability Study. The commenter is surprised to find no reference to Gary Grigg's Vulnerability Study and asks whether the DEIR considers risks and impacts of the project. The referenced study was utilized in the DEIR analyses and is included in the DEIR's cited references; see DEIR pages 4.5-9, 4.5-10, 4.5-13, and 6-5. The DEIR text has also been expanded; see Chapter 3, Changes to Draft EIR, of this document.

C2-5 Traffic Impacts to Santa Cruz Metro Bus System. The comment asks what the impact of LOS F along Laurel Street would be to the Santa Cruz Metro bus system, and states there is no reference to contacting Metro (Santa Cruz Metropolitan Transit District) staff. The level of service calculated along transit corridors is a measure of delay to all vehicles using the corridor. The average delay identified for vehicles at each of the study intersections would also be applicable to the delay to transit vehicles.

Ron Powers

From: Ted Burke <tedburke@shadowbrook-capitola.com>
Sent: Friday, August 04, 2017 11:10 AM
To: Alex Khoury
Subject: Support the Santa Cruz Downtown Recovery Plan

Dear Assistant Director Khoury,

1 As a city resident and an employer of 135 local residents and a business owner for nearly 40-years who has contributed significant amounts of property, Admission and sales tax to Santa Cruz city government I have come to understand that the Santa Cruz downtown is vitally important to our community. It is also very important to my 135 employees and their families. Thus, the updated Downtown Recovery Plan (DRP) represents a major opportunity for achieving a mix of housing options in the planning area with a walkable and thriving downtown experience.

I agree with the DRP's revisions as part of an overall effort to reconfirm the City objective to maintain a compact and efficient urban form with public greenbelt to limit suburban-type sprawl, and to provide some appropriate development incentives to activate the river connections, a longstanding objective of the City's vision. The Downtown Recovery Plan should be adopted as soon as possible.

The City should actively pursue the following elements that are already included in the DRP:

1) Create significant new housing opportunities targeted throughout the downtown, including Pacific Avenue, the San Lorenzo riverfront and south of Laurel. Housing should be comprised of a mix of apartments and condominiums.
2) Encourage residential development as a second-floor use throughout the downtown area.
3) Develop a comprehensive housing implementation strategy and establish a feasible program for the creation of market-rate and affordable housing, including developer incentives, public participation in financing, parking reductions, etc.

I further support the City's efforts to update its Inclusionary Housing Ordinance as one of many tools to meet the needs of our residents. As recently as 2014, the Santa Cruz area was named the least affordable metropolitan area in the country factoring in the cost of housing. As of February 2017, the average rent for a two bedroom unit was $2,569 and the median home price was $795,500.

Please take action on the DRP and Inclusionary Housing as soon as possible.

Sincerely,

Ted Burke
PO Box 65
Capitola, CA 95010
tedburke@shadowbrook-capitola.com

LETTER C3 – Ted Burke

C3-1 Support of Proposed Project. The letter indicates support of the proposed Downtown Plan amendments and City's efforts to update its Inclusionary Housing Ordinance with suggestion of actively pursuing elements that are already in the Downtown Recovery Plan regarding new residential development. Comment is acknowledged and referred to City staff decision makers; no response is necessary.

Ron Powers

From: will cassilly <willcassilly1@comcast.net>
Sent: Tuesday, August 01, 2017 10:47 AM
To: Ron Powers
Subject: EIR downtown santa cruz

1 Please do not raise the height limits on buildings downtown or in the corridors of Santa Cruz. They are already hight enough. Any higher building heights and you lose the feel of small town Santa Cruz.

And the traffic situation is already bad, so larger buildings would only mean an increase in traffic.

Thank you, Will Cassilly

LETTER C4 – Will Cassily

C4-1 Building Heights. The commenter asks that downtown building heights not be raised, and there would be an increase in traffic. The comment is acknowledged, but does not address specific analyses in the DEIR. No response is necessary, but the comment is referred to City staff and decision makers for further consideration.

Ron Powers

From: Tyler Derheim <tyler@derheim.org>
Sent: Friday, August 04, 2017 1:35 PM
To: Ron Powers
Subject: Resident comment on Downtown Plan Amendments Draft EIR

Hello Mr. Powers,

My name is Tyler Derheim. I reside at 118 Cayuga St in Seabright.

1 I would like to express my ardent opposition to the code and zoning changes illustrated in this EIR. As evidenced by the PAMF monstrosity on Mission St, allowing modern tall buildings on our corridors results in profound, irreversible, damaging loss to city identity and aesthetics. Let suburbia be suburbia and keep Santa Cruz weird. I must insist.

Thank you for your time,
Tyler Derheim

LETTER C5 – Tyler Derheim

C5-1 Oppose Project. The commenter states opposition to the proposed plan changes. The comment is acknowledged, but does not address analyses in the DEIR. No response is necessary, but the comment is referred to City staff and decision makers for further consideration.

Ron Powers

From: Eric McGrew <eric@envisionhousing.us>
Sent: Friday, August 04, 2017 11:11 AM
To: Alex Khoury
Subject: Support the Santa Cruz Downtown Recovery Plan

Dear Assistant Director Khoury,

1 The Santa Cruz downtown is vitally important to our community. The updated Downtown Recovery Plan (DRP) represents a major opportunity for achieving a mix of housing options in the planning area with a walkable and thriving downtown experience.

I agree with the DRP's revisions as part of an overall effort to reconfirm the City objective to maintain a compact and efficient urban form with public greenbelt to limit suburban-type sprawl, and to provide some appropriate development incentives to activate the river connections, a longstanding objective of the City's vision. The Downtown Recovery Plan should be adopted as soon as possible.

The City should actively pursue the following elements that are already included in the DRP:

1) Create significant new housing opportunities targeted throughout the downtown, including Pacific Avenue, the San Lorenzo riverfront and south of Laurel. Housing should be comprised of a mix of apartments and condominiums.
2) Encourage residential development as a second-floor use throughout the downtown area.
3) Develop a comprehensive housing implementation strategy and establish a feasible program for the creation of market-rate and affordable housing, including developer incentives, public participation in financing, parking reductions, etc.

I further support the City's efforts to update its Inclusionary Housing Ordinance as one of many tools to meet the needs of our residents. As recently as 2014, the Santa Cruz area was named the least affordable metropolitan area in the country factoring in the cost of housing. As of February 2017, the average rent for a two bedroom unit was $2,569 and the median home price was $795,500.

Please take action on the DRP and Inclusionary Housing as soon as possible.

Sincerely,

Eric McGrew
4705 Jewel St
Capitola, CA 95010
eric@envisionhousing.us

LETTER C6 – Eric McGrew

C6-1 Support of Proposed Project. The letter indicates support of the proposed Downtown Plan amendments, encourages the City to create strong housing opportunities throughout downtown, and supports the City's efforts to update its Inclusionary Housing Ordinance with suggestion of actively pursuing elements that are already in the Downtown Recovery Plan regarding new residential development. Comment is acknowledged and referred to City staff decision makers for consideration; no response is necessary.

Ron Powers

From: Jane Mio <jmio@earthlink.net>
Sent: Thursday, September 07, 2017 8:11 PM
To: Ron Powers
Cc: City Council
Subject: CAUTION: Verify Sender Before Opening! Submitting DEIR comments for DRP
Attachments: A DEIR comments for DRP 9-7-2017.doc; B DEIR comments for DRP 9-7-2017.doc

Hi Ron,

I am sending you my documents w/the DEIR comments for the Downtown Recovery Plan.
Thank you so much for confirmation that they arrived on your screen.
Kind regards, jane mio

Comments for the DPR DEIR
4.1 AESTHETICS

1 The DEIR does not address these codes in the California Public Resources Code section 21099, 21099(4), (2)(A), (2)(e)
https://leginfo.legislature.ca.gov/faces/codes_displayText.xhtml?lawCode=PRC&division=13.&title=&part=&chapter=2.7.&article= Codes Display Text

Since January 2014 the SB 743 has received various guidelines revisions with the potential of raising legal difficulties. Jan. 2016 CEQA guideline on evaluating Transportation impacts in CEQA states: "The determination of whether a project may have a significant effect on the environment calls for careful judgment on the part of the public agency involved, based to the extent possible on scientific and factual data."

SB 743 doesn't address/include developments areas that are adjacent to City's Open Spaces area, watershed, riparian corridors with a detailed aesthetic definition. Consequently local public lead agencies have responsibility to fulfill the City's Plans such as "future physical development in Santa Cruz will protect and sustain precious natural resources, honor and enhance the city's unique natural setting, and maintain and appropriately use the open space that encompasses and penetrates the city." (City's 2030 General Plan Park & Rec. Open Spaces)

Codes 21099 (4), (2)(A) & (2)(e) codes validate the City's local Plans. The codes demonstrates that the aesthetic assessment of the SB 743/21099 codes is defined by public lead agencies, other agencies & local Plans for which the San Lorenzo River qualifies.

The DEIR Aesthetics SB 743 findings are incomplete and unsubstantiated, because not all CPRC codes pertaining to proposed amendments were addressed nor were all current CEQA guidelines considered. The omission of the San Lorenzo River as an Open Space, riparian corridor in the Regional Setting section (pg. 4.1-5) affected the DEIR analysis for SB 743 in regard to City plans.

Scenic Resources: 4.1-7

2 With respect to the proposed new widened alleys connecting to the river, currently the SLR is accessible from various river paths. The reasoning that 3 pathways through high building mass areas will create superior connections to the San Lorenzo River lacks proof. The DEIR states that the project will, "Enhance opportunities to view and interact with the San Lorenzo River as a coastal resource." This statement is invalidated as demonstrated by Figure 4.1-3a-3c, which show that views are not enhanced by high buildings & building mass. The impact on views is not fully explored in the DEIR.

The Visual Character of the Project Area DEIR statement (*6) is acknowledging the value of the SLR's existing visual character to which the CEQA Thresholds of Significance guidelines 1a-1d apply. The proposed amendments would impact 1a-1d when evaluated with existing City guiding Plans & Figure

4.1-3a-3c, consequently Codes 21099 (e) & (b) (4) would apply, consequently not substantiating DEIR analysis.

3 Scenic Views: The conclusion for Impact 4.1.1: Mitigation Measures(MM) is not substantiated by incorporating/addressing 4.1.2 CEQA thresholds of significance adequately with valid proof. (Analytical Method 4.1-8, 1st paragraph) The City's 2030 General Plan Chapters (9-11) are not mentioned nor incorporated for this MM conclusion. The DEIR MM reasoning is not substantiated with the SLR environmental policies/recommendations from adopted City's Plans and is incomplete.

The DEIR does not address if the lead agency presented alternative plans for the project site for public input.

4 The DEIR does not mention that lead agency conducted a Santa Cruz Community survey/poll to gauge the public's opinion of the proposed height impact impeding a community vista from the riparian corridor/watershed to mountain sky line for decades to come.

4.3 BIOLOGICAL RESOURCES

5 4.3.1 Environmental Setting
The DEIR is required to examine in depth the relationship/impacts of proposed amendments on the environment features of the San Lorenzo River, a riparian corridor, an Open Space, a watershed, a Natural Resource(Chapter 10: 'This chapter corresponds to the State-mandated Open Space and Conservation elements. Its purpose is to identify the valuable natural assets that make Santa Cruz unique and to preserve and protect them in perpetuity.' This requires that the DEIR findings rely on/include the environment policies/recommendations/directions/actions/goals of the various City's adopted, guiding plans such as SLURP, which resulted from a grounded assessment on a scientific, meticulously detailed study/report. Lower San Lorenzo River & Lagoon Management Plan.
The DEIR is incomplete due to insufficient references/inclusion of City Plans environmental policies/recommendations/directions/actions/goals.

6 Throughout this section the DEIR is addressing the Transitional Stretch as an isolated part of the diverse SLR riparian corridor ecosystem. Each stretch of the SLR has its own microclimate ecosystem, which interacts with each other. (3c,3d)

The DEIR analysis is incomplete, because it fails to integrate its Transitional Stretch findings to the entire SLR riparian corridor and City plans environment sections.

7 The DEIR 'San Lorenzo River Habitats' findings were not derived from an up-to-date, year long scientific data base of a comprehensive San Lorenzo River wildlife & plant inventory that includes nesting inventory of local and migratory birds, specifies bird species and wildlife that depend in various ways on SLR corridor habitat as a food source.

The DEIR needs to base its Tidewater goby MM on a thorough goby survey.

8 The DEIR fails to address the environmental value of the SLR mature trees, which create an ecosystem to provide habitat/food/shelter for birds and wildlife. Loss of mature trees creates habitat loss for birds, causing increase for an already steep decline of the bird population. One large **tree** can supply a day's supply of oxygen for four people.

DEIR is incomplete, because bird habitat loss, due to mature tree removal, was omitted for MM assessment.

9 The DEIR statement is missing supporting data for this assessment:
'The proposed LCP and Zoning Code amendments would not result in changes that could indirectly lead to intensified development.'

The sentence 'or alter sensitive habitat (3b, 3g)' is omitting study/data to support that statement.

10 pg 15 The DEIR incorrectly states that SLURP's primary goal is improved access to the SLR. SLURP's priority is ' the Restoration of the River.' & 'recognize that the River is first a habitat area for fish and wildlife and second a passive recreational area for enjoyment by the community.'
The DEIR finding is invalid due to mis-representating SLURP's priority.

11 pg. 18 These statements require further data to gauge additional effects on ecosystems:

1. The Solar Heat Gain from windows (diffuse radiation is the solar radiation that is absorbed, stored and scattered in the atmosphere.)

2. The winter shade cooling long-range effect on vegetation & water temperature

3. Increased wind flow impact on birds & vegetation.

The DEIR's findings are incomplete and require further information.

12 4.3.2 Up-dated studies on bird collision with glass is available and should be included in the analysis of impacts] **Bird Collisions | American Bird Conservancy**

Bird Collisions with Windows - American Bird Conservancy

13 Note the quote that: "The most dangerous building in this study was not a high-rise, but instead was a 6-story office building adjacent to densely vegetated open space, which is above 50'.

This statement substantiates the SLURP recommendation of 50' height maximum adjacent to densely vegetated open space.

The SLURP recommendation of 50' height is also supported with these findings:

1. The San Lorenzo River is an important riparian habitat, which is in the Pacific Flyway of winter & summer migrating birds, protected under Migratory Bird Treaty Act.

2. Migrating birds are known to rest, fed, take refuge from storms in water bodies & natural spaces, either to recuperate, refuel for the remaining migratory journey or stay for a season.

3. Neo-tropical migrants & local birds are known to nest in riparian & open-space ecosystems.

4. Riparian corridors are receiving increased Fed.& State agencies conservation efforts due to steep bird habitat loss caused by development.

14 5. The City's 2030 General Plan Natural Resources Goals, policies, actions reinforces the 50' height limit with NRC1.2.1-NRC1.3.

The DEIR fails to substantiate its findings for proposed height increase.

The DEIR findings do not reference/include SLURP's 50' height development/environment findings(pg. 63). This omission eliminates a discussion of why Area X, adjacent to a riparian corridor, is slated from 0 to 321 residential units and a 29,467 sf commercial & office space increase on 3.35 acres while Area Y receives a 113 residential units increase and a 43,969 sf commercial & office space reduction on 5.10 acres. The omission eliminates exploration of alternative plans for proposed amendments and curtails any discussion how to appropriate integrate environment and City's housing/economic needs.

The 50' height is supported by the City 2007-2014 RHNA statement: 'Given the dissolution of redevelopment during this period as well as the recession, which strongly affected housing constructions the later years of this planning period, the City did very well toward meeting its RHNA.' & 'is almost 20% ahead of total RHNA allocation.' This data does not include 2015-2017 data.

The DEIR findings are incomplete due to excluded information.

Jane Mio, Santa Cruz, Calif. Sept 7th, 2017

Comments submitted for the DRP DEIR

Land Use:
Zoning Code:

15 The DEIR fails to acknowledge/recognize that the City's 2030 General Plan and SLURP aim to enhance, protect, restore Open Spaces, Natural Resources, riparian corridor with their clear directions. Neither Plan states anywhere that development takes priority over environmental concerns/considerations. Unless the proposed amendment site and the riparian corridor are addressed of equal importance as the other directions the DEIR loses the opportunity to "reconcile" or "harmonize" seemingly disparate general plan policies to the extent reasonably possible (No Oil, supra, 196 Cal.App.3d at p. 244).

The DEIR is incomplete, because it does not give sufficient City Plans environment information to 'reconcile' and 'harmonize' project site with SLR.

Impacts of the to- be -revised LCP and soon-to-be- published Habitat Conservation Plan on proposed amendments qualify for further information.

16 Further details are required to rectify NPDES ratio of proposed amendments with regard to Santa Cruz low land inventory.

17 The table does not include NRC1.2.1-NRC1.3-NRC1.2.2, which apply to San Lorenzo River & have to be addressed.

18 The DEIR doesn't address the issues of the proposed fill-in of the levee ditch such as: the importance of open slope for levee structure inspections/repairs, the loss of land toe availability for levee/property measurements nor the flooding risks for coastal cities due to heavy coastal storms.
How Houston's unregulated growth contributed to Harvey's flooding disaster - Washington Post

https://www.washingtonpost.com/news/energy-environment/wp/2017/08/29/hurricane-harvey-shows-how-we-underestimate-flooding-risks-in-coastal-cities-scientists-say/?hpid=hp_hp-top-table-main_flood-risk540am%3Ahomepage%2Fstory&utm_term=.c845ea354931

19 SRFA – 10 and SRFA – 11 are not substantiated according to Aesthetic figures 3a-3c

20 The DEIR does not mention that the project site qualifies for the new Fed. mandated boring standards.http://www.geoengineers.com/blog/new-usace-permitting-standards-boring-near-federally-regulated-levees

21 The DEIR is not addressing section 4. **0 Watercourse Development Permit Procedures** of the Creek & Wetland plan adequately to gain an in-depth analysis for its findings.

Hydrology:

22 The DEIR fails to mention: the 3 current pump stations, operating at full capacity in heavy storms or during lagoon conditions, are unable to prevent street and neighborhood flooding adjacent to the river. The DEIR omits to detail how well the current City's equipment is able to protect proposed project in view of increased storm water discharge and more severe coastal winter storms, causing the river water level to rise, Downtown ground water intrusion and a levee bank fill-in.

Public Services:

23 It is questionable that the proposed project wouldn't qualify as a new development. The demolished existing buildings will be replaced by new much higher density buildings, which will require City to supply updated water, sewage, electricity, storm drainage service.

'The proposed LCP and Zoning Code amendments would not result in changes that could indirectly lead to intensified development.' This sentence needs clarification since it implies that proposed amendments would not achieve the desired outcome.

24 The DEIR fails to acknowledge statistically that a 14,000 square feet decrease of commercial use cause less traffic then proposed residential units.

Air Quality & Green House Emission

25 The DEIR isn't including information and data how the proposed building heights and increased traffic effect the CO level.

Climate Change:

26 The DEIR fails to address the data that states recent California's Greenhouse Gas(GHG) emission has fallen less than 1%.

Further current data is needed to prove that the proposed project is not obstructing GHG emission attainment.

27 The DEIR states that proposed project housing units were below AMBAG 2030 forecast, and concludes that with proposed project it would fulfill AMBAG forecasts for 2030 and 2035. This conclusion needs clarification. The AMBAG forecasts are a general housing outline and do not address any directions for where development should occur. To use the AMBAG forecast as a reason to put proposed project adjacent to riparian corridor is not valid.

Urban Heat Island Effect:

28 DEIR bases its findings on the adjacent current buildings to riparian corridor, which are mainly 1 story high and are not subject to Urban Heat Island Effect. DEIR fails to address the Urban Heat Island Effect of 70' to 85' building mass. The DEIR does not include the Urban Heat Island Effect on the riparian corridor ecosystem.

29 E. Front St. in Area X receives an increase of 321 (from 0) residential units and a 29,467 sf commercial & office space increase. DEIR is not including any quantifying data for traffic ratio from commercial & office space versus residential units. These items need more information to sustain DEIR finding.

30 DEIR fails to state that the project's estimated GHG emissions, exceeding the significance threshold (about 4,053 MT/ CO_2E year), would not effect the adjacent riparian corridor. The DEIR is not addressing how building height increase and building mass traps GHG emissions and its acculmative effect on the riparian corridor.

31 Cities, that are in the vicinity of where a river joins the ocean, are more subject to flooding due to Climate Change. The DEIR is not including this Climate Change impact information. new study https://www.washingtonpost.com/news/energy-environment/wp/2017/08/29/hurricane-harvey-shows-how-we-underestimate-flooding-risks-in-coastal-cities-scientists-say/?utm_term=.dddcb4698bbd

Jane Mio, Santa Cruz, Calif. Sept 7th, 2017

LETTER C7 – Jane Mio

C7-1 Aesthetics and SB 743. The comment indicates the "Aesthetics SB 743 findings are incomplete and unsubstantiated". The comment suggests that omission of the San Lorenzo River as an open space, riparian corridor affected the DEIR analysis for SB 743 regarding City plans. The provisions of SB 743 are not applicable to the adoption of the Downtown Plan amendments, and there is no requirement for the City to make any findings pursuant to SB 743. See Response to Comment B4-1 for further discussion.

C7-2 Impacts on Views. The comment says that the DEIR states that the project will "Enhance opportunities to view and interact with the San Lorenzo River as a coastal resource," which, according to the commenter, is invalid as demonstrated by Figure 4.1-3a-3c, which the commenter believes shows that views are not enhanced by high buildings & building mass. The comment asserts that the impact on views is not fully explored in the DEIR, and that the statement acknowledges the San Lorenzo River's existing visual character to which CEQA thresholds of significance apply. See Response to Comment B4-6 and Response to Comments B4-2 and B4-3 regarding visual impacts associated with the San Lorenzo River and thresholds of significance.

C7-3 Impacts to Visual Character and Scenic Views. The comment states that the DEIR's conclusion that no mitigation measures are required for Impact 4.1.1 is not substantiated and the City's General Plan 2030 chapters 9-11 are not mentioned or incorporated into the conclusion. See Response to Comment B4-7. The comment also states that the DEIR does not address if the lead agency presented alternative plans for the project site for public input. The proposed project does not include specific development or site plans for a particular site. See DEIR pages 3-13 and 3-14 regarding buildout assumptions used for the EIR analyses, and see DEIR pages 5-14 to 5-29 for a discussion of project alternatives. It is also noted that the proposed plan amendments were developed through series of meetings with the City's Planning Commission, which were open to the public.

C7-4 Community Survey. The comment says that the DEIR does not mention that the lead agency conducted a Santa Cruz Community survey/poll to gauge the public's opinion of the proposed height impact impeding a community vista from the riparian corridor/watershed to mountain sky line for decades to come. The comment is acknowledged, but does not address analyses in the DEIR. City staff is not aware of the community survey/poll identified in the comment. The DEIR analysis addresses impacts to distant mountain views and along the river; see pages 4.1-9 and 4.1-10.

C7-5 Riparian Impacts. The comment indicates that the DEIR is required to examine the impacts of the proposed amendments on the environmental features of the San Lorenzo River and references the City's General Plan Chapter 10. Potential conflicts with General Plan policies are addressed on pages 4.9-5 to .9-4.9-8 of the DEIR and on

the table on pages 4.9-9 and 4.9-10. This table has been revised; see Chapter 3, Changes to Draft EIR, of this document. Other relevant plans were reviewed and summarized where relevant, including the SLURP and Lower San Lorenzo River and Lagoon Management Plan that are cited in the comment. The Lower San Lorenzo River and Lagoon Management Plan is an appendix in the SLURP. Additional discussion on the SLURP has been added; see Chapter 3, Changes to Draft EIR, of this document.

C7-6 San Lorenzo River Habitat. The comment claims that the DEIR analysis is incomplete because it fails to integrate the Transitional Reach in which the project is located to the entire San Lorenzo River habitat. See Response to Comment B4-8.

C7-7 Biological Studies. The comment states that the DEIR findings regarding San Lorenzo River habitats were not derived from an up-to-date, year-long, scientific, comprehensive data base, including nesting surveys, and that the DEIR needs to base its tidewater goby MM on a thorough goby survey. See Response to Comment B4-9 regarding biological studies. The project would not result in direct or indirect adverse impacts to San Lorenzo River aquatic habitat or fish species as discussed in the DEIR.

C7-8 Tree Removal. The comment states that the DEIR fails to address the environmental value of the San Lorenzo River mature trees, which create an ecosystem to provide habitat/food/shelter for birds and wildlife, and loss of mature trees creates habitat loss for birds that was omitted in the DEIR. San Lorenzo habitats and vegetation near the project area are described on pages 4.3-8 and 4.3-9 of the DEIR. Riparian vegetation in this area consists of riparian and other low-growing vegetation on the channel side of the river, and planted trees on the land side of the levee. Future development accommodated by the Plan amendments would occur on the landward side of the river levee and would not include removal of riparian vegetation, and thus, there would be no impact to mature trees along the river. The Aesthetics section indicates that the proposed project would not affect adjacent natural features of the San Lorenzo River (DEIR page 4.1-11).

C7-9 LCP and Zoning Code Amendments. With regards to the Biological Resources section, the comment claims two sentences are missing supporting data or are unsubstantiated. The comment's first reference is to the statement on page 4.3-17 that reads: "The proposed LCP and Zoning Code amendments would not result in changes that could indirectly lead to intensified development." The proposed LCP amendment is described in Chapter 3, Project Description, of the DEIR; see pages 3-12 and 3-13. The amendments delete some policies that are outdated or have been completed and which address structural design guidelines, views and public access. The new and modified policies also primarily address design guidelines. None of the new, amended or deleted policies have language that would indirectly facilitate intensified development. One deleted policy calls for maintaining building heights at 50 feet, and effects of increased building heights are addressed in the EIR, including

biological resources. The code amendments, also described in the DEIR Project Description, consist of minor text revisions regarding public use of outdoor areas along the river and creation of parklets, which already are allowed. See DEIR Appendix C for explanation of the City's proposed LCP amendment.

The comment indicates that the DEIR statement on page 4.13-17 that the project would not remove or alter sensitive habitat omits supporting data. All areas of potential future development are located within developed areas in downtown, none of which contain sensitive habitat as discussed on DEIR pages 4.3-9 and 4.3-10. The project area is located adjacent to sensitive riparian habitat; impacts are addressed in the DEIR.

C7-10 SLURP Goals. The comment states that reference to the SLURP's primary goal as improved access is incorrect and that SLURP's priority is restoration of the river. The referenced DEIR statement is taken from the SLURP, section 6.1 for the Front Street Riverfront Avenue. The SLURP states that the Plan's purpose is to articulate a community vision for the river corridor as both a wildlife area and community recreation and public open space amenity. It contains recommendations for habitat enhancement, public access and trail improvements, public art and community programs. Additional text on the SLURP has been added; see section 3.8 of Chapter 3, Changes to Draft EIR, of this document.

C7-11 Solar Heat, Shading and Wind. The comment states that the DEIR is incomplete and requires further information regarding: 1) solar heat gain from windows (diffuse radiation is the solar radiation that is absorbed, stored and scattered in the atmosphere); winter shade cooling long-range effect on vegetation & water temperature; and 3) increased wind flow impact on birds & vegetation. See Response to Comment B4-10.

C7-12 Bird Studies. The comment indicates that there are more extensive and up-dated studies on bird collision with glass available and should be included in the analysis of impacts. The comment cites the following: 1) to Birds Collisions with Windows – American Bird Conservancy; 2) Klem (March 2009); and 3) Hager et al. (September 2008). See Response to Comment B3-5.

C7-13 Bird Studies. The comment references a bird study cited in the letter, which states that "The most dangerous building in this study was not a high-rise, but instead was a 6-story office building adjacent to densely vegetated open space," which the commenter asserts substantiates the SLURP recommendation of a maximum 50-foot building height adjacent to densely vegetated open space. The comment also states other reasons to support the SLURP 50-foot height recommendation. See Response to Comment B4-12.

C7-14 Height Increase. The comment states that the DEIR fails to substantiate its findings for proposed height increase and does not reference/include the SLURP'S 50-foot height development findings, and asks questions regarding buildout assumptions. Findings for the proposed height increase are not required as part of CEQA review. However, City staff will provide a review of the proposed amendments with all legally required findings as part of the staff report for the project that will be presented to the City Planning Commission and City Council. Regarding the buildout assumptions, the subareas contain uses that are considered reasonable worst-case scenarios. Subarea X assumptions reflect the fact that this area contains properties that are not deep enough to support a public parking facility, while Subarea Y is large enough to potentially support a public parking garage, as well as the existing Santa Cruz Metropolitan Transit District downtown transit center, Pacific Station. This results in lower development potential of residential use for Subarea Y. The Draft EIR appropriately includes alternatives with varying heights and assumptions. The RHNA allocation numbers for housing as set by the Association of Monterey Bay Area Governments merely indicate a minimum amount of land 'suggested' to be zoned to accommodate housing. The City has the ability to zone more land to accommodate housing than the minimum allocated through the RHNA process.

C7-15 General Plan and SLURP. The comment states that the DEIR is incomplete because "it does not give sufficient City Plans environment information to 'reconcile' and 'harmonize' project site with SLR." The comment is not clear; however, impacts to biological resources are addressed. Section 4.9 reviews City plans and policies. See DEIR pages 4.9-5 through 4.9-10. The comment also states that impacts of the "to-be-revised LCP" and HCP on the proposed amendments qualify for further information. These referenced documents are not complete nor is there a public review version to review. Release dates for both documents are not known, and thus, there is nothing with which to compare the proposed project with regards to these plans.

C7-16 NPDES. The comment states that "Further details are required to rectify NPDES ratio of proposed amendment with regard to Santa Cruz low land inventory." The comment is not clear, and the City is unable to provide a response. However, the comment does not address analyses in the DEIR, and a response is not necessary. The proposed amendments do not conflict with the need for larger development projects to comply with NPDDES requirements, which would be analyzed at the time of development application.

C7-17 Land Use Policy Table. The comment states that the table does not include NRC1.2.1, NRC1.3, NRC1.2.2, which apply to the San Lorenzo River and have to be addressed. The cited actions fall under General Plan Policy NRC1.2 that encourages low impact uses and practices in watershed lands upstream of the City' riverine, stream and riparian environment, and thus are addressing areas outside of the downtown area. NRC1.2.1

calls for evaluation of new uses for potential impacts to watershed, riverine, stream and riparian environments. The proposed amendments do not propose a change in land uses, and this policy is not directly applicable to the proposed project. Nonetheless, river, biological and riparian impacts are addressed in the DEIR. NC1.3 encourages restoration of existing riparian habitats and is not directly applicable to the proposed project. Furthermore, the SLURP and City-wide Creeks and Wetlands Management Plan address habitat management and restoration, which continue to serve as resource management documents for the City, and the proposed amendments are not in conflict with these documents.

C7-18 River Levee. The comment states that the DEIR doesn't address issue of proposed filling in of the levee ditch, such as the importance of open slope for the levee structure inspections and the flood risks due to heavy storms. Filling adjacent to the levee and any associated drainage improvements require approval from the Army Corps of Engineers (USACE) and proposed modifications are reviewed on a case-by-case basis. The filling and drainage improvements adjacent to the levee have been approved in the past and any specific development plans will need to be fully engineered to comply with any USACE requirements. The proposed amendments do not alter this requirement.

C7-19 Coastal Policies. The comment states that "SRFA–10 and SRFA–11 are not substantiated according to Aesthetic figures 3a-3c." The reference appears to be to LCP policies proposed for deletion (see Appendix C in DEIR for policy language). As identified in Appendix C, Policy SRFA-10 calls for maintaining views to the river from taller downtown buildings and from the river trail to the distant mountains and walls. The DEIR does address potential impacts to distant mountain views as seen along the river, and indicates some views would be obscured with the proposed project and would also be obscured under existing allowed heights; see DEIR page 4.1-10. Policy SRFA-11 calls for preservation of views along Front Street to and from Beach Hill, which is recommended for deletion as it is vague and not a resource-related policy. Views along Front Street are urban and do not include coastal scenic views or substantial distant mountain views.

C7-20 Soils Work Near Levee. The comment states that the DEIR does not mention that the project site qualifies for the "new Fed. mandated boring standards" and provides a website link to a private engineering company that reports new USACE requirements for drilling near levees. The site indicates that the USACE clarified that soil borings within their defined 1:1 "depth distance" from the levee toe require their review and approval. The proposed project does not include any site-specific development. However, any future development would be required to comply with all applicable local, state and federal permit and regulatory requirements.

C7-21 Watercourse Development Permit Procedures. The comment states that the DEIR did not adequately address section 4.0, Watercourse Development Permit Procedures, of the City-wide Creeks and Wetlands Management Plan to gain an in-depth analysis for its findings. A Watercourse Development Permit is required for specified projects and activities within the management area of creeks as defined in the City-wide Creeks and Wetlands Management Plan. As indicated on page 4.3-15, the eastern edges of some properties on the east side of Front Street are within the defined management area of the San Lorenzo River; however, all future development would be required to meet setbacks established in the Management Plan and SLURP.

C7-22 San Lorenzo River Pump Stations. The comment states that the DEIR fails to mention that existing pump stations are operating at full capacity in heavy storms and are unable to prevent street and neighborhood flooding adjacent to the river and omits to detail how well the City's current equipment is able to protect the proposed project in view of increased storm water discharge and more severe coastal winter storms. The City's pump station #1 is located in the vicinity of Laurel Street and Front Street and is the closest public pump station to the project area. The pump station provides for some flood protection during storm events, but may operate at full capacity during high tides in combination with significant rainfall. A private pump system is also located in the study area north of Laurel Street near Front Street, which was installed in response to downtown flooding in 1955 and operates continuously during storm events. The City performs regular maintenance to the public pump station #1, which likely will need replacement in the future as more sea level rise information becomes available. The City will continue to monitor the latest projections of sea level rise and when there is a more specific projection at a specific decade level, designs will be prepared for the increasing the capacity of the levee pump system. Funding for the construction of the future improvements is unknown at this point in time. It is not known if system upgrades will be locally funded either on a Citywide or floodplain specific basis. There are no federal or state Funds available for anticipated improvements based for responding to sea level rise. However, the City's Capital Improvement Program (CIP) includes "Downtown SLR Drainage System Assessment" to assess drainage system tributary to Pump Station No. 1, which is locate at the southeast end of the Laurel Street Bridge. The assessment will include a detailed analysis of Pump Station No. 1's capacity to handle large storm events. A preliminary design of any recommended improvements will be included in the assessment. The budget of $80,000 is carried over from FY17.

C7-23 Public Services. The comment states that the demolished existing buildings will be replaced with new higher density buildings, which will require public services. The comment also states that the DEIR statement that "The proposed LCP and Zoning Code amendments would not result in changes that could indirectly lead to intensified development" needs clarification. The comment regarding public services is acknowledged, but does not address analyses in the DEIR. No response is necessary,

but it is noted that water, wastewater, electricity and storm drainage services are evaluated in the DEIR. See Response to Comment C7-9 regarding the statement for which the commenter requests clarification.

C7-24 Decreased Commercial Use. The comment states that the DEIR fails to acknowledge that the decrease in commercial use causes less traffic than proposed residential uses. The traffic analysis does compare traffic with potential buildout under the proposed plan amendments with existing traffic and reports the estimated worst-case net increase in traffic-vehicle trips as a result of adoption and implementation of the proposed project.

C7-25 Air Emissions. The comment states that the DEIR does not include information and data on how the proposed building heights and increased traffic affect the CO level. The DEIR includes an air quality analysis and modeling that accounts for increased traffic; see DEIR pages 4.2-15 through 4.2-24. As shown on Table 4.2-2, CO emissions would be substantially below Monterey Bay Air Resources District thresholds. See DEIR page 4.2-20 for further discussion of CO emissions.

C7-26 Climate Change. The comment states that the DEIR fails to address data that California's GHG emissions have fallen less than 1%, and further data is needed to prove that the proposed project is not obstructing GHG emission attainment. California regulations and plans pertaining to GHG emissions are described on DEIR pages 4.2-11 through 4.2-14 based on the most current available plans and studies. The GHG emission analysis identifies project emissions, which would be less than accepted significance thresholds, and potential project conflicts with adopted climate plans are addressed on DEIR pages 4.2-17 and 4.2-18.

C7-27 Housing Projections. With regards to the Air Quality Management Plan discussion, the comment claims that the project would fulfill AMBAG housing forecasts and expresses an opinion that using the AMBAG forecast as a reason to put the proposed project adjacent to a riparian corridor is not valid. The referenced discussion on DEIR page 4.2-17 addresses whether the project would conflict with the Air Quality Management Plan (AQMP). As explained in the text, the method to make this determination is provided by the Air District, and as explained in the DEIR, uses housing unit forecasts. Based on this methodology, it was found that the project is within adopted forecasts, and therefore, will not conflict with the AQMP. The DEIR does not use the AMBAG forecast to justify the project as suggested in the comment.

C7-28 Urban Heat Island Effect. The comment states that the DEIR fails to address the Urban Heat Island Effect of building mass on the riparian corridor. The DEIR addresses this on pages 4.2-18 and 4.2-19.

C7-29 Buildout Assumptions. The comment states that the DEIR did not include data for traffic from commercial and office uses. The traffic analysis prepared for the EIR does account for traffic from different uses both under existing and future conditions. See Table 4.7-4 on page 4.7-18 in the DEIR.

C7-30 GHG Emissions. The comment claims that the DEIR fails to state that the project's estimated GHG emissions exceed significance thresholds and how the building height increases and GHG emissions affect the riparian corridor. Project GHG emissions do not exceed significance thresholds as discussed on pages 4.2-21 to 4.2-24. GHG emissions are an issue with regards to global climate change. The project's potential effects on and relationship to the riparian corridor, including hydrology and sea level rise, are addressed in the EIR at pages 4.3-17 to 4.3-23 and 4.5-11 to 4.5-13.

C7-31 Climate Change. The comment states that the DEIR fails to address include new climate change impact information. See Response to Comment C7-26.

Ron Powers

From: Salina Nevarez <snevare1@ucsc.edu>
Sent: Friday, August 04, 2017 11:11 AM
To: Alex Khoury
Subject: Support the Santa Cruz Downtown Recovery Plan

Dear Assistant Director Khoury,

1 The Santa Cruz downtown is vitally important to our community. The updated Downtown Recovery Plan (DRP) represents a major opportunity for achieving a mix of housing options in the planning area with a walkable and thriving downtown experience.

I agree with the DRP's revisions as part of an overall effort to reconfirm the City objective to maintain a compact and efficient urban form with public greenbelt to limit suburban-type sprawl, and to provide some appropriate development incentives to activate the river connections, a longstanding objective of the City's vision. The Downtown Recovery Plan should be adopted as soon as possible.

The City should actively pursue the following elements that are already included in the DRP:

1) Create significant new housing opportunities targeted throughout the downtown, including Pacific Avenue, the San Lorenzo riverfront and south of Laurel. Housing should be comprised of a mix of apartments and condominiums.
2) Encourage residential development as a second-floor use throughout the downtown area.
3) Develop a comprehensive housing implementation strategy and establish a feasible program for the creation of market-rate and affordable housing, including developer incentives, public participation in financing, parking reductions, etc.

I further support the City's efforts to update its Inclusionary Housing Ordinance as one of many tools to meet the needs of our residents. As recently as 2014, the Santa Cruz area was named the least affordable metropolitan area in the country factoring in the cost of housing. As of February 2017, the average rent for a two bedroom unit was $2,569 and the median home price was $795,500.

Please take action on the DRP and Inclusionary Housing as soon as possible.

Sincerely,

Salina Nevarez
657 24th Ave
Santa Cruz, CA 95062
snevare1@ucsc.edu

LETTER C8 – Salina Nevarez

C8-1 Support of Proposed Project. The letter indicates support of the proposed Downtown Plan amendments, encourages the City to create strong housing opportunities throughout downtown, and supports the City's efforts to update its Inclusionary Housing Ordinance with suggestion of actively pursuing elements that are already in the Downtown Recovery Plan regarding new residential development. Comment is acknowledged and referred to City staff decision makers for consideration; no response is necessary.

Gary A. Patton, Attorney At Law
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Telephone: 831-332-8546 / Email: gapatton@mac.com

September 8, 2017

Ron Powers, Principal Planner
City of Santa Cruz Planning and Community Development Department
809 Center Street, Room 107
Santa Cruz, CA 95060

RE: Comments on Draft EIR – Downtown Plan Amendments
Sent By Email to: rpowers@cityofsantacruz.com

Dear Mr. Powers:

This letter is to submit comments on the Draft Environmental Impact Report (EIR) identified above. My comments are as follows:

1 1. On Page 2-6, the Draft EIR is in error in stating that the impacts on the visual character of the surrounding area (i.e., the City downtown area, including the Front Street/Riverfront Corridor) would be less than significant. Buildout of the Downtown Plan, as proposed to be amended, would result in a complete transformation of downtown Santa Cruz, which would be extremely significant in terms of the visual impacts associated with the proposed buildout under the plan. Thus, the proposed project would completely change the character of the Downtown area, Front Street, and the Riverfront area. In order for the public and decision makers to be fully informed about these potential impacts, the Final EIR must provide much more information, including graphic representations of potential developments that would be allowed for under the plan as proposed, compared to the developments possible under the current plan. Only when such information is provided can the public and members of the City Council fully understand and judge the radical changes that would occur if the plan amendments were adopted as proposed, and the amended plan then implemented.

2 2. On Page 2-6, the Draft EIR is deficient in stating that the impact from Greenhouse Gas Emissions are less than significant. The global warming crisis facing us (and including those who live in Santa Cruz, California) requires us to admit that EVERY new release of greenhouse gases puts our world at peril, and that therefore EVERY project that would add to greenhouse gas emissions must be mitigated to eliminate every possible source of such emissions. The Final EIR must evaluate all "state of the art" energy-reduction technologies that could reduce energy consumption in the new buildings that would be permitted by the plan as proposed in

the contemplated amendments. This means requirements for full solar power for all such new buildings, to the greatest extent possible, and the use of techniques like a requirement that all electric lighting in the buildings to be governed by motion-sensitive switches, etc., to eliminate, to the greatest degree possible, unneeded energy use, and thus to help reduce to the greatest degree possible, an impact that everyone knows is highly significant.

3 3. On Page 2-7, the Draft EIR appears to be deficient in its statement that there is a less than significant impact associated with stormwater drainage. In view of the impacts of inevitable sea-level rise, in connection with the proposed development, very significant adverse impacts can be expected from ANY increase in stormwater drainage. Thus, the Final EIR must propose methodologies that will eliminate ANY addition to stormwater runoff, since any new stormwater runoff will certainly cause significant impacts in downtown Santa Cruz.

4 4. On Page 2-7, it is unclear why the Draft EIR says that water quality degradation in the San Lorenzo River that will admittedly be associated with implementation of the Downtown Plan Amendments is "less-than-significant." Mitigation measures to eliminate any of the impacts identified on Page 2-7 must be included in the Final EIR.

5 5. On Page 2-8, with reference to the paragraph relating to "Energy Use," please see my Comment #2. Mitigations to reduce, to the greatest degree feasible, all energy use in the new building must be included in the Final EIR.

6 6. On Page 3-4, the Draft EIR says that it is an "overarching objective" of the City to "maintain a compact downtown with a dense urban core **in exchange for** retaining a greenbelt around the City (emphasis added)." I question the accuracy of this statement. I know of no official City policy that says that there is an "either/or" choice between maintaining a greenbelt around the City and maintaining a dense urban core. The Final EIR should either provide a citation to such a statement of policy, or should eliminate this statement. If no such policy statement exists, and to the degree that the proposed downtown amendments are based on or justified by this alleged policy, the Final EIR must evaluate the project without reliance on this statement.

7 7. On Page 3-14, the Draft EIR says that there are "no development applications currently pending before the City." This statement is disingenuous. The mixed-use transit, parking and residential project on the downtown Metro Station site that is mentioned in the Draft EIR has been extensively discussed with the City Planning and Community Development Department, and with other City officials, including members of the City Council. These discussions have taken place over the

last several years, and rather specific design concepts have been utilized in these discussions. The Final EIR must fully disclose this proposal, in its latest iteration, in order fully to inform the public and decision makers of the possible impacts of the proposed project. The fact that such a project is not "currently pending" is being used in this Draft EIR as an excuse for hiding the ball. In fact, as soon as Downtown Plan Amendments are adopted, the City anticipates an application for a development in the specific location referenced. It is not sufficient to say that, if that happens, there will then be a "project level" CEQA review. While that is true, CEQA requires relevant information to be presented for evaluation as early in the development process as is possible. Providing information about the proposal mentioned, information about which is not disclosed in this Draft EIR, will help inform decision makers about the possible impacts of the program level decision they are now being asked to make. Thus, that information must be revealed now. This is a clear requirement of CEQA. Furthermore, probably the new information required to be disclosed about potential project plans on the identified site will be so significant that it will be necessary to recirculate an amended EIR as a Draft, to allow the public an adequate opportunity to comment on the impacts that might occur from the proposed Downtown Plan Amendments project.

8 8. Figure 3-3 is not as informative as it should be, and the Final EIR should provide a direct comparison between what is proposed (as illustrated in Figure 3-3) and what currently exists, and what is permitted under current planning regulations. The purpose of an EIR, as this Draft recognizes, is fully to inform the public and decision makers about the possible impacts of the proposed project. Without the Draft EIR providing an easy comparison between the current situation, possible development under the current Downtown Plan regulations, and what would be permitted with the proposed amendments, this kind of "full" information is lacking. This is a "general" comment, relating to the entire Draft EIR, as well as to Figure 3-3 specifically.

9. Please see Comment #8 as to the other Figures provided within the Draft EIR. In every place possible, the Final EIR must provide a "comparison," not merely a description of what the proposed amendments would do. If such a comparison is not provided, then the EIR will not "fully inform" the public and decision makers, as CEQA requires.

9 10. On page 4.1-8, in its discussion of "Thresholds of Significance," the Draft EIR notes in paragraph 1c that a project impact would be considered significant if the project would "substantially degrade the existing visual character or quality of the surrounding area – i.e., be incompatible with the scale of the surrounding area or substantially detract from the aesthetic character of the neighborhood." Please see my Comment #1. While the term "degrade" is subjective, the proposed Downtown Plan

Amendments would result in new construction that is "incompatible with the scale of the surrounding area." Thus, a full analysis of the impacts of the proposed project is required. Please note, as well, that CEQA requires an evaluation of proposed changes to be measured against a baseline of "existing conditions." Thus, in order fully to inform the public and the City Council of what the impacts of the proposed Downtown Plan Amendments would be, a graphic comparison of every change proposed is needed. The current Draft does not provide this kind of comparison, and thus is inadequate under CEQA. Please also note, as mentioned earlier, that once the current Draft EIR has been revised, to provide the required information, the new information provided will probably be significant enough to require the recirculation of the Draft EIR for further public review and comment.

10 11. On Pages 4.1-9 and 4.1-10, in the section of "Impacts and Mitigation Measures," the Draft EIR also fails to meet the requirements of CEQA, in that it fails fully to inform the public and decision makers about visual and scenic impacts that the Draft EIR indicate will result if the proposed amendments are adopted.

11 12. On Page 4.1-13, the purpose of Figures 4.1-3A through 4.1-3C is stated as being to illustrate a "reasonable worst-case scenario...." The mentioned Figures, found on subsequent pages, are somewhat helpful in achieving this objective; however, they are, in fact, misleading. The mass of the buildings that would be allowed with the proposed Plan Amendments is not shown, only an outline of the possible new construction, which is presented by dotted lines. This means that the existing views along the River, and along Front Street, and along Pacific Avenue can continue to be seen "through" these dotted lines; this means that the actual impact of what is being proposed is not presented. Keeping the illustrations with the dotted lines is fine, but the current illustrations are not adequate, and must be supplemented. What is needed to comply with CEQA is to accompany the existing illustrations with a set of comparison photos. The current situation should be shown, and then immediately above or next to it the possible future construction should be shown, but "filled in," so that it becomes clear how radically the views along the River, and along Front Street, and along Pacific Avenue would be changed. Incidentally, the comment in the Draft EIR that suggests that the impacts of the project will not actually be experienced to the full extent of what the proposed amended plan would allow should be stricken in the Final EIR. The EIR must analyze and inform the public about the impacts that "might" be caused by the proposed project. Speculation that such impacts will not actually come to pass is out of place in an EIR.

12 13. On Page 4.8-15, commenting on the project's impacts on the City's water supply, the Draft EIR says "the additional project demand would not result in a substantial increase during dry years and would not be of a

magnitude to affect the level of curtailment that might be in effect." The Draft EIR thus concludes that water supply impacts are less than significant. This analysis is flawed, because the City already is in a water supply crisis during dry and extremely dry years, and data from the City's earlier analysis of the need for a proposed desalination plan should be revealed and used to determine whether the water supply impacts of the new development that would be allowed by enactment of the Downtown Plan Amendments will, in fact, be a cumulative impact of considerable impact. The Final EIR must also identify mitigation measures that will guarantee that the proposed development will not generate any new water demand (at least until the City's system is no longer unable to provide adequate water for existing residents).

13 In conclusion, I believe that the current Draft EIR is inadequate, and that to make sure that the Council and the public fully understand the impacts of the measures being proposed, the current Draft EIR must be significantly augmented, and then (I believe) recirculated for further public review and comment. Fully informing the public and decision makers about possible impacts of proposed projects is the objective of the California Environmental Quality Act. I urge the City fully to comply with its requirements in this case.

14 Let me also note, on the substance of what is being proposed, that the current City plan governing the Downtown is called the "Downtown *Recovery* Plan." This title reflects the fact that our current plans for the downtown area were adopted, after very significant public debate and involvement, after the 1989 Loma Prieta earthquake.

After the earthquake, some landowners and the development community were urging the City to adopt exactly the kind of planning for the downtown that the currently proposed Downtown Plan Amendments would accomplish. City decision makers rejected, at that time, an appeal for this kind of the transformation of our downtown into a "dense urban core," and there was a reason for that. Downtown Santa Cruz is known, nationally, for its appeal. The kind of massive developments that would be allowed if the proposed Downtown Plan Amendments were adopted would undermine that appeal. I hope, ultimately, that the City Council will reject the current development-generated clamor for overbuilding downtown, just as the former, post-earthquake Council did.

Very truly yours,



Gary A. Patton

LETTER C9 – Gary A. Patton

C9-1 Impacts on Visual Character of Area. The commenter disagrees with the DEIR's conclusion that impacts on visual character of the downtown area will be less than significant. The commenter asserts that additional graphic simulations or representations must be provided in order to demonstrate the extent of visual change that could result from the project. Figures 4.1-3A, 4.1-3B, 4.1-3C from the Chapter 4.1-Aesthetics of the DEIR already provide visual representations/simulations enabling a comparison of the existing environment to that which could result from the changes proposed with the project. While such simulations are not expressly required by CEQA, the City agrees they are helpful to informing the public and the City's decision makers about the potential magnitude of change. By providing the simulations, the DEIR presents the hypothetical "worst-case" scenario that could result; although, as explained in the DEIR (see p. 4.1-13), for a variety of reasons, including the City's historic buildout patterns, it is unrealistic to assume that *all* of the eligible buildings in the plan area or along corridors of interest to the commenter would be redeveloped or replaced with maximum-height buildings under the amended plan. In practice, compliance with CEQA must often strike a balance between disclosing the "worst-case" scenario and explaining what actions or results the lead agency considers more realistic, based on substantial evidence. CEQA does not encourage or require entirely hypothetical analysis be provided to decision makers and the public. The DEIR has addressed that tension in CEQA by disclosing the potential "worst-case" buildout scenario via the visual simulations while also explaining, with substantial evidence, why City staff consider that worst-case scenario to likely overstate the visual effect that will result from the plan amendments.

C9-2 Greenhouse Gas Emissions (GHG). The commenter asserts that every new release of GHGs and every new project results in a significant impact that must be mitigated to a net-zero level. The City disagrees with this assertion, both on policy and legal grounds. As a matter of policy, the City's Climate Action Plan is not premised on the assumption that any new GHG emissions are necessarily significant and must be mitigated to a net-zero level. The CAP's goals are to reduce community-wide greenhouse gas emissions 30% by 2020 and 80% by 2050 (compared to 1990 levels), based on General Plan 2030 Policy NRC4.1, which establishes this requirement. As a legal matter, CEQA does not mandate that the City find any certain amount of new emissions to be significant. CEQA Guidelines section 15064.4(b) suggests agencies should consider: the extent to which the project may increase or reduce GHG emissions compared to the existing environmental setting; whether the project emissions exceed a threshold of significance that the agency determines applies to the project; and the extent to which the project complies with regulations or requirements adopted to implement a statewide or local plan (such as the City's CAP) for the reduction or mitigation of GHG emissions. Section 4.2 of the DEIR complies with CEQA in this regard.

The comment also states that the Final EIR must evaluate all "state of the art" energy-reduction technologies that could reduce energy consumption in the new buildings. This is not a requirement of CEQA. As discussed on DEIR pages 4.6-7 to 4.6-9, California's per capita electrical use has been the lowest or near lowest of any state in the nation, and additional local efforts toward energy reduction also are described in this section. Future development would be required to comply with all applicable state and local building energy standards and requirements.

C9-3 Stormwater Drainage. The comment references the DEIR Summary and conclusion on stormwater drainage and asserts that any addition to stormwater runoff will cause significant impacts. Commenter's opinion is acknowledged. Existing stormwater and hydrological conditions and impact analysis are fully addressed in section 4.5 of the DEIR. The project area is currently developed or paved, and as a result, impervious surfaces and resulting runoff are not expected to substantially change. Future development would be required to comply with City policies and regulations, including General Plan Policy CC5.1.8 that requires new development to maintain pre-development runoff levels and compliance with the City's stormwater management regulations. See DEIR pages 4.5-11 to 4.5-12.

C9-4 Water Quality Degradation. The comment references the DEIR Summary and questions the EIR impact conclusion that water quality degradation in the San Lorenzo River will be less than significant and asks that mitigation measures be included in the Final EIR. The basis for the impact analysis and conclusion is provided on pages 4.5-12 and 4.5-13 in the DEIR and is based on the City's comprehensive stormwater management requirements that will be imposed on new development, and which have been required pursuant to federal and state regulations and reviewed and accepted by these agencies. The commenter provides no substantial evidence supporting a different significance conclusion for the EIR, so the conclusion is not changed in the FEIR.

C9-5 Energy Use. Regarding energy use impacts cited on page 2.8 of the DEIR, the commenter refers to his previous Comment #2 and asks that additional mitigations that reduce energy use in new buildings be included in the Final EIR. See Response to Comment C9-2. The project involves amendments to existing City plans, and no specific buildings are proposed at this time. As the State continually adopts new efficiency requirements, future building proposals will be subject to the efficiency standards applicable to new buildings at that time.

C9-6 Project Objectives. The commenter questions a statement on page 3-4 of the DEIR regarding project objectives. This comment is related to City policy and is not related to CEQA review. However, City staff notes that the City's General Plan includes numerous

policies relating to maintaining a compact form and promoting higher densities in certain areas as well as preserving the greenbelt:

- GOAL LU2 A compact community with boundaries defined by the city's greenbelt and Monterey Bay.
- LU3.7 Encourage higher-intensity residential uses and maximum densities in accordance with the General Plan Land Use designations.
- LU3.7.1 Allow and encourage development that meets the high end of the General Plan Land use designation density unless constraints associated with site characteristics and zoning development standards require lower density.
- LU4.1 Encourage a transition to higher densities along the city's transit and commercial corridors.
- LU4.1.1 Support compact mixed-use development Downtown, along primary transportation corridors, and in employment centers.

While not explicitly stated in one policy phrased as an exchange between retaining greenbelt lands and promoting higher densities, the practical result for land use planning principles is that as long as the greenbelt is maintained, the remainder of available land in the city will need to support more housing. By default, the physical constraints of the city with the greenbelt will result in a need for higher densities in developed areas than without the greenbelt. It is not an exaggeration to connect preserving greenbelt lands with the need for higher densities elsewhere in the city. The General Plan policies promote both and there remains a clear cause and effect relationship and trade-off in supporting the greenbelt preservation. However, the commenter correctly notes that there is no single policy in the General Plan that uses the term exchange, so the Final EIR can be modified with the following language: "Increasing densities in the downtown is consistent with the overarching objectives of the City to maintain a dense urban core with a greenbelt around the City." See Chapter 3, Changes to Draft EIR, of this document.

C9-7 Future Development. The comment questions the statement in the DEIR on page 3-14 that "no development applications are currently pending before the City" and indicates that a mixed-use project on the Metro Station site has been discussed with City staff and officials, which must be fully disclosed. The comment also suggests that with addition of this information, recirculation of the EIR will be necessary. There are no development applications currently pending before the City for this site. According to City staff, there have been numerous development proposals discussed for a variety of projects within the study area over the past several years, including various versions of a project for the METRO property and adjacent properties. A preliminary application of a conceptual plan for a mixed use was reviewed by the City earlier in 2017 for areas north of Laurel Street between Pacific Avenue and Front Street, but a formal and complete application has yet to be submitted. For CEQA purposes, the City has included all reasonably foreseeable development within the study area and has included assumptions for these various concept plans in the Buildout Assumptions

found in Appendix D. The DEIR fully evaluated the potential impacts associated with these potential projects and assumed reasonable worst case scenarios for the entire study area.

No new information or new impacts have been identified in response to this comment that would require recirculation of the DEIR. See Response to Comment C9-13.

C9-8 Figure 3-3. The comment suggests that the Final EIR provide a direct comparison between what is proposed as illustrated in Figure 3-3 and what currently exists, and indicates that this is a "general" comment relating to the entire Draft EIR as well as Figure 3-3 specifically, but does not specify other DEIR figures. Figure 3-3 is included in the Project Description and is a graphic from the proposed Downtown Plan amendments. The photosimulations in section 4.1 of the DEIR show existing heights, existing height limits, and proposed additional height limits. See Response to Comment C9-1 for further discussion on graphic representation of building heights and requirements under CEQA.

C9-9 Thresholds of Significance for Aesthetics. The commenter refers to his Comment #1 and states his belief that the proposed amendments will result in new construction that is incompatible with the scale of the surrounding area. The comment states that a full analysis of the impacts of the project is required and should be measured against baseline existing conditions, and that graphics should be provided to compare every change. The commenter further opines that provision of the requested new information would require recirculation of the Draft EIR. The analysis requested by the comment is already provided on pages 4.1-11 to 4.1-16, which evaluates changes to existing conditions based on potential building height, mass and scale, including implementation of design provisions contained in the existing and proposed Downtown Plan. With implementation of required development standards for massing, required percentage variation of heights, and upper-level skyline variation, future buildings would be of similar height and scale as the other taller buildings in the downtown area, which already contains several multi-story buildings of varied height. Therefore, the DEIR concluded that the proposed amendments would not result in development that would "substantially degrade" the visual character of the surrounding area. See Response to Comments C9-1 and C9-8 regarding EIR graphics.

No new information or new impacts have been identified in response to this comment that would require recirculation of the DEIR. See Response to Comment C9-13.

C9-10 Aesthetics Impacts. The comment states that the impact discussion on DEIR pages 4.1-9 and 4.1-10 fails to meet the requirements of CEQA, in that it fails fully to inform the public and decision makers about visual and scenic impacts that the Draft EIR indicate will result if the proposed amendments are adopted. However, the comment does not

specifically explain how the analyses fail to meet CEQA requirements, and thus, a specific response cannot be provided.

C9-11 Figures 4.1-3A Through 4.1-3C. The comment claims that the photosimulations in the DEIR are not adequate and must be supplemented to show building mass. The comment states that the DEIR statement that suggests impacts may not be actually experienced should be stricken in the Final EIR. The photosimulations depict a building outline superimposed on a photo of existing development and are intended to show the potential massing of a future building, while also seeing existing building heights for comparison. CEQA does not specify or require any particular graphic representations. Both the photosimulations and impact analysis text provided evaluate potential impacts resulting from the proposed amendments with existing conditions adequately to inform the public and the city decision makers of the potential aesthetic changes that could result from the plan amendments. See also Response to Comment C9-1 and C9-8.

C9-12 Water Supply. The comment states that the water supply analysis in the DEIR is flawed because the City already is in a water supply crisis during dry and extremely dry years. The comments states that data from the City's earlier analysis of the need for a proposed desalination plan should be revealed and used to determine whether the water supply impacts of the new development would be a cumulative impact of considerable impact. The comment asserts that the Final EIR must identify mitigation measures that will guarantee that the proposed development will not generate any new water demand until the City's system is no longer unable to provide adequate water for existing residents.

The DEIR water supply analysis is based on the City's current Urban Water Management Plan and current plans. Review with the Water Department indicates that the water demand resulting from the proposed amendments represents less than one-hundredth of one percent of the total estimated future water demand within the City's service area, as reported in the DEIR, and the demand is within the amount of new multi-family dwellings considered in demand forecasts for the 2015 UWMP. Existing supplies are adequate to serve future development resulting from the proposed project, and the small additional demand over the service area would not lead to further water curtailments than would be otherwise be needed during dry periods. See DEIR pages 4.8-15 to 4.8-16 regarding project impacts and pages 5-10 to 5-11 regarding cumulative water supply impacts.

The City does not have a policy or requirement that a development not generate any new water demand. However, as indicated in the DEIR and the City's Urban Water Management Plan, the City has seen a trend of declining water demand since the year 2000 as a result of many factors, and total water demand within the City's water

service area is projected to decline over the 20-year UWMP period due to continued implementation of conservation programs and other efficiency measures.

C9-13 EIR Recirculation. The comment states that the Draft EIR is inadequate and must be significantly augmented and recirculated for public review. The City disagrees with the claim that the Draft EIR is inadequate as explained in the preceding responses. CEQA Guidelines section 15088.5 requires a lead agency to recirculate an EIR when "significant new information" is added to an EIR after public review but before certification. New information is not significant unless the "EIR is changed in a way that deprives the public of a meaningful opportunity to comment upon a substantial adverse environmental effect of the project or a feasible way to mitigate or avoid such an effect." "Significant new information" that would require circulation according to this section of the CEQA Guidelines include:

- A new significant environmental effect resulting from the project or from a new mitigation measures.
- A substantial increase in the severity of an environmental impact unless mitigation measures are adopted to reduce the impact to a level of insignificance.
- A feasible project alternative or mitigation measure considerably different from others previously analyzed would clearly lessen the environmental impact of the project, but the project proponents decline to adopt it.
- The DEIR was so fundamentally inadequate that meaningful public review and comment were precluded.

The responses and clarifications provided in this document do not result in any of the above conditions that would warrant recirculation. None of the DEIR text revisions result in or indicate a new significant impact or a substantial increase in the severity of an impact associated with the proposed project.

C9-14 Project Opposition. The commenter states opposition to the proposed plan amendments. The comment is acknowledged, but does not address specific analyses in the DEIR. No response is necessary, but the comment is referred to City staff and decision makers for further consideration.

Ron Powers

From: Henry Searle <hrsearle@sbcglobal.net>
Sent: Thursday, September 07, 2017 2:28 PM
To: Ron Powers
Subject: comment on draft EIR, downtown recovery plan amendments

1 The area affected by the proposed amendments is, i believe, entirely within a flood plain. The amendments would increase density in the planning area and hence quite probably increase the risk of flood damage. I believe the EIR should discuss this issue and describe what steps can or should be taken to minimize the increased risk. For example, I understand that the existing levees are not capable of holding major river surges resulting from increased rainfall.

Thanks for considering this issue.

Reed Searle
114 Swift St
Santa Cruz, Ca. 95060
831-278-0626
hrsearle@sbcglobal.net

LETTER C10 – Reed Searle

C10-1 Flood Risks. The commenter believes that the EIR should discuss this issue of increased risk of flooding due to increased density and describe what steps can or should be taken to minimize the increased risk. The commenter also believes that the existing levees are not capable of holding major river surges resulting from increased rainfall. Potential impacts related to flooding are addressed in the DEIR; see pages 4.5-6 and 4.5-7. The levee improvements have been designed to accommodate a 100-year flood. The draft Downtown Plan does not allow residential uses as a principally permitted use on the ground floor within the project area. Development within the project area is governed by the City's existing standards in Section 24.14.500 of the Municipal Code, Standards for A-99 Flood Zone Area.

> "The A-99 flood hazard area has been designated by a Federal Emergency Management Agency Letter Map Revision dated June 26, 2002. These areas have received additional flood protection due to the construction of the new San Lorenzo River levee improvements by the U.S. Army Corps of Engineers. No base flood elevation has been designated for the A-99 flood hazard area. Standards for construction in the A-99 flood hazard area are set forth in this section." The ordinance section also includes the following statement. "The degree of flood protection required by this section is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger floods can and will occur on rare occasions. Flood heights may be increased by man-made or natural causes. This section does not imply that land in the A-99 special flood hazard area will be free from flooding or flood damages. This section shall not create liability on the part of the city, any officer or employee thereof, or the Federal Insurance Administration, for any flood damages that result from reliance on this section or any administrative decision lawfully made thereunder."

Ron Powers

From:	Veronica Tonay <vktonay@ucsc.edu>
Sent:	Thursday, September 07, 2017 7:52 PM
To:	City Council
Subject:	concern re Downtown Development Plan Enviro. Impact Report

1 Having read the downtown development plan's EIR, although I appreciate attention being paid to what could be a jewel—our river--I am greatly concerned about (1) the height of buildings to be allowed along the river, and (2) the adverse impact on birds on and around the river in a city which helps host the birding festival at Elkhorn Slough, the Audubon bird count, and thousands of birders. Birds are having a very tough time in our city (and the world…) as it is.

The height of the buildings leave the area looking like a culvert in an urban environment, rather than a wild, environmentally protected space within our city.

This puts me in mind of someone I spoke with last week from India. He recently had a relative visiting here, and took him for a walk along the river. "There is nothing like this in India, unless you travel far, to the mountains," he said. "There are just buildings." Having hailed from Southern California, and having watched the over-urbanization of those coastal areas across decades, I've seen the importance of very careful planning from an early stage.

Buildings, sure—shorter, with spaces between for community meeting places, courtyards, and porches (proven to increase a sense of community and neighborhood), and sight lines from the rest of the city, particularly around bridges, which residents will feel unsafe crossing if they can't see to both sides ahead when embarking.

Please forward my email to the appropriate party (or parties). Thank you.

Best,

Veronica Tonay, PhD
Licensed Clinical Psychologist PSY15379
550 Water St. Ste F4 Santa Cruz, CA 95060
Lecturer in Psychology
Psychology Faculty Services
University of California, Santa Cruz
1156 High Street
Santa Cruz, CA 95064

Veronica Tonay, PhD
Lic. Psychologist PSY 15379

LETTER C11 – Veronica Tonay

C11-1 Building Heights. The commenter is concerned about the proposed building heights and adverse impact on birds. The comment is acknowledged, but does not address specific analyses in the DEIR. No response is necessary, but the comment is referred to City staff and decision makers for further consideration.

Ron Powers

From: Alex Khoury
Sent: Tuesday, August 08, 2017 9:25 AM
To: Ron Powers; Lee Butler; Eric Marlatt
Subject: FW: Comments on the Downtown Recovery Plan Update EIR

From: Bren Lehr **On Behalf Of** City Council
Sent: Wednesday, August 02, 2017 11:57 AM
To: Chris Krohn; Chris Krohn; Cynthia Chase; Cynthia Mathews; David Terrazas; Martine Watkins; Richelle Noroyan; Sandra Brown; Sandy Brown
Cc: Tina Shull; Martin Bernal; Scott Collins; Rosemary Balsley; Andrew Mills; Alex Khoury
Subject: FW: Comments on the Downtown Recovery Plan Update EIR

From: Russell Weisz [mailto:russweisz1@gmail.com]
Sent: Tuesday, August 01, 2017 7:59 PM
To: City Council
Subject: Comments on the Downtown Recovery Plan Update EIR

Dear Council,

1 I request that the city not allow increased building heights on the river side of Front St. I object to allowing taller buildings because of the following concerns:
- negative impacts to birds and other wildlife along the river and riparian corridor
- negative visual impacts due to river view obstruction and view interference
- negative noise impacts on the river due sound echo from the taller buildings.

I think increased building heights along the river is exactly the wrong approach. The San Lorenzo river is a key city resource and the city is enhanced by maximal incorporation of the river into the city. The city should maximize the river view, river access and river awareness from the rest of downtown. It's really not all about getting more money or jamming more people into taller buildings. Let's not try to become another San Jose.

Sincerely,
Russell Weisz
319 Laguna St.
Santa Cruz 95060
831-246-1770

LETTER C12 – Russell Weisz

C12-1 Building Heights. The commenter requests that the City not allow increased building heights on the river side of Front Street and objects to allowing taller buildings because of negative impacts to birds and other wildlife along the river and riparian corridor; negative visual impacts due to river view obstruction and view interference; and negative noise impacts on the river due sound echo from the taller buildings. The comment is acknowledged, but does not address specific analyses in the DEIR. No response is necessary, but the DEIR did not conclude there would be any significant impacts related to scenic views, and potential impacts to birds can be mitigated to a less-than-significant level. There is no evidence that taller buildings along the river would create an echo.

APPENDIX A
Mitigation Monitoring and Reporting Program

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Mitigation Measure	Implementation Actions	Monitoring / Reporting Responsibility	Timing Requirements	Reporting Requirements & Verification of Compliance
Biological Resources				
MITIGATION 4.3-2: Revise Downtown Plan to include standard for design guidance for bird-safe structures along the San Lorenzo River, including: ▪ Minimize the overall amount of glass on building exteriors facing the San Lorenzo River. ▪ Avoid mirrors and large areas of reflective glass. ▪ Avoid transparent glass skyways, walkways, or entryways, free-standing glass walls, and transparent building corners. ▪ Utilize glass/window treatments that create a visual signal or barrier to help alert birds to presence of glass. Avoid funneling open space to a building façade. ▪ Strategically place landscaping to reduce reflection and views of foliage inside or through glass. ▪ Avoid up-lighting and spotlights. ▪ Turn non-emergency lighting off (such as by automatic shutoff), or shield it, at night to minimize light from buildings that is visible to birds, especially during bird migration season (February-May and August-November).	▪ Implementation actions are specified in measure.	▪ City Planning and Community Development Department staff is responsible for drafting a new design standard for inclusion in the Downtown Plan.	▪ Prior to Planning Commission action on the Downtown Plan Amendments.	

Mitigation Measure	Implementation Actions	Monitoring / Reporting Responsibility	Timing Requirements	Reporting Requirements & Verification of Compliance
MITIGATION 4.3-3: Require that a pre-construction nesting survey be conducted by a qualified wildlife biologist if construction, including tree removal, adjacent to the San Lorenzo River is scheduled to begin between March and late July to determine if nesting birds are in the vicinity of the construction sites. If nesting raptors or other nesting species protected under the MBTA are found, construction may need to be delayed until late-August or after the wildlife biologist has determined the nest is no longer in use or unless a suitable construction buffer zone can be identified by the biologist. (Citywide Creeks and Wetlands Management Plan Standard 12).	▪ Implementation actions are outlined in the mitigation measure.	▪ City Planning and Community Development Department staff is responsible for drafting a new development guideline for developments along the San Lorenzo River portion of the project area.	▪ Prior to Planning Commission action on the Downtown Plan Amendments.	
Noise				
MITIGATION NOISE-1: Require preparation and implementation of acoustical studies for future residential development along Front Street to specify building design features that meet state interior sound levels.	▪ Implementation actions are outlined in the mitigation measure.	▪ City Planning and Community Development Department staff is responsible for requiring acoustical studies as part of future development applications and consistent with California Building Code and City Zoning Code requirements.	▪ As part of future environmental and project review for submitted development applications.	

Mitigation Measure	Implementation Actions	Monitoring / Reporting Responsibility	Timing Requirements	Reporting Requirements & Verification of Compliance
Cumulative Traffic Impacts				
MITIGATION 5-1: Require future development projects within the downtown area to contribute fair-share payments for improvements at the following intersections: Front/Soquel (signal timing and lane modifications); Front/Laurel (westbound lane addition and north and south right-turn overlap); and Pacific/Laurel (southbound left-turn lane addition).	▪ Implementation actions are specified in measure.	▪ The City Public Works Department is responsible for establishing and/or updating fair-share program as needed to include the affected intersections within 12 months of this project approval to include total improvement costs and fee per residential and commercial trips generated by future individual projects.	Prior to approval of development within the area shown on Figure 2-1 in the EIR (DEIR volume).	

APPENDIX B
Review of Project Consistency with California Coastal Act Policies

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APPENDIX B

REVIEW OF PROJECT CONSISTENCY WITH COASTAL ACT POLICIES

The proposed project includes amendments to the City's certified Local Coastal Plan (LCP) that will require California Coastal Commission approval. Chapter 4 of the Downtown Recovery Plan is incorporated by reference in the CBD zone district, and the district is part of the implementation section of the LCP. Thus, revisions to the DRP Chapter 4 require review and approval by the California Coastal Commission as part of an LCP amendment. In addition, several LCP policies related to the SLURP are proposed to be modified.

In accordance with the comments received from the California Coastal Commission staff, a review of project consistency with Coastal Act policies is provided below. The review does not reveal any conflicts with Coastal Act policies. The proposed amendments do not affect oceanfront lands or marine waters, and provide new public access connections to the San Lorenzo River as encouraged in the Coastal Act. The proposed amendment does not change existing certified LCP land uses within the downtown area.

Public Access

Section 30210 Access-Recreational Opportunities – This policy states that maximum access, which shall be conspicuously posted, and recreational opportunities shall be provided for all the people consistent with public safety needs and the need to protect public rights, rights of private property owners, and natural resource areas from overuse.

Consistent: The proposed amendments call for expansion of access to the San Lorenzo River.

Section 30211 Development Not to Interfere with Access - Development shall not interfere with the public's right of access to the sea where acquired through use or legislative authorization, including, but not limited to, the use of dry sand and rocky coastal beaches to the first line of terrestrial vegetation.

Not Applicable: The proposed amendments are for portions of the coastal zone not located near the shoreline or sea and will not interfere with or have any effect on public access to the sea.

Section 30212 Public Access as Part of New Development – This policy requires that new development projects provide public access from the nearest public roadway to the shoreline and along the coast except where: (1) it is inconsistent with public safety, military security needs, or the protection of fragile coastal resources, (2) adequate access exists nearby, or, (3) agriculture would be adversely affected.

Not Applicable: None of the proposed amendments to LCP policies affect requirements for new development to provide public access from the nearest public roadway to the coast. No development is proposed as part of the proposed LCP amendment

Section 30212.5 Public facilities and Distribution – This policy indicates that wherever appropriate and feasible, public facilities, including parking areas, shall be distributed throughout an area so as to mitigate against the impacts, social and otherwise, of overcrowding or overuse by the public of any single area.

Not Applicable: The proposed project does not include amendments that change land uses or the location of public facilities.

Section 30213 Lower Cost Visitor and Recreational Facilities - Lower cost visitor and recreational facilities shall be protected, encouraged, and, where feasible, provided. Developments providing public recreational opportunities are preferred. The commission shall not: (1) require that overnight room rentals be fixed at an amount certain for any privately owned and operated hotel, motel, or other similar visitor-serving facility located on either public or private lands; or (2) establish or approve any method for the identification of low or moderate income persons for the purpose of determining eligibility for overnight room rentals in any such facilities.

Not Applicable: The proposed project does not include amendments that change allowed uses in the downtown area of the coastal zone, other than to prohibit retail cannabis facilities within the Central Business District.

Section 30214 Implementation of Public Access Policies - The public access policies of this article shall be implemented in a manner that takes into account the need to regulate the time, place, and manner of public access depending on the facts and circumstances in each case including, but not limited to, the following: (1) Topographic and geologic site characteristics. (2) The capacity of the site to sustain use and at what level of intensity. (3) The appropriateness of limiting public access to the right to pass and repass depending on such factors as the fragility of the natural resources in the area and the proximity of the access area to adjacent residential uses. (4) The need to provide for the management of access areas so as to protect the privacy of adjacent property owners and to protect the aesthetic values of the area by providing for the collection of litter.

Consistent: The proposed amendments call for expansion of access to the San Lorenzo River. The proposed amendments will allow for license agreements to be approved by the City in conjunction with a Coastal Permit, which will include conditions to define management of the publicly accessible areas adjacent to the Riverwalk in a manner consistent with any adjacent proposed development and the protection of nearby natural resources.

Recreation

Section 30220 Protection of Certain Water-Oriented Activities - Coastal areas suited for water-oriented recreational activities that cannot readily be provided at inland water areas shall be protected for such uses.

Not Applicable: The proposed amendments are for areas that are not located adjacent to or near the coast and is an area not considered to be a coastal area.

Section 30221 Oceanfront Land-Protection for Recreational Use - Oceanfront land suitable for recreational use shall be protected for recreational use and development unless present and

foreseeable future demand for public or commercial recreational activities that could be accommodated on the property is already adequately provided for in the area.

Not Applicable: The proposed amendments are for areas that are not located adjacent to or near the coast and is an area not considered to be oceanfront land.

Section 30222 Private lands-Priority of Development - The use of private lands suitable for visitor-serving commercial recreational facilities designed to enhance public opportunities for coastal recreation shall have priority over private residential, general industrial, or general commercial development, but not over agriculture or coastal-dependent industry.

Consistent: The proposed amendments do not change allowed or permitted uses (other than to prohibit retail cannabis facilities), which currently allow for visitor-serving uses, including motels and hotels. These permitted uses are already part of the City's certified LCP.

Section 30222.5 Oceanfront lands-Aquaculture Facilities - Oceanfront land that is suitable for coastal dependent aquaculture shall be protected for that use, and proposals for aquaculture facilities located on those sites shall be given priority, except over other coastal dependent developments or uses.

Not Applicable: The proposed amendments do not cover oceanfront lands.

Section 30223 Upland areas - Upland areas necessary to support coastal recreational uses shall be reserved for such uses, where feasible.

Not Applicable: The proposed amendments do not cover upland lands.

Section 30224 Recreational Boating Use - Increased recreational boating use of coastal waters shall be encouraged, in accordance with this division, by developing dry storage areas, increasing public launching facilities, providing additional berthing space in existing harbors, limiting non-water-dependent land uses that congest access corridors and preclude boating support facilities, providing harbors of refuge, and by providing for new boating facilities in natural harbors, new protected water areas, and in areas dredged from dry land.

Not Applicable: The part of the downtown area covered by the proposed amendments is not adjacent to areas of recreational boating use.

Marine Resources

Section 30230 Marine Resources - Marine resources shall be maintained, enhanced, and where feasible, restored. Special protection shall be given to areas and species of special biological or economic significance. Uses of the marine environment shall be carried out in a manner that will sustain the biological productivity of coastal waters and that will maintain healthy populations of all species of marine organisms adequate for long-term commercial, recreational, scientific, and educational purposes.

Not Applicable: The proposed amendments cover the downtown area, which is not adjacent to or within marine waters and would have no effect on marine resources.

Section 30231 Biological productivity-Water Quality - The biological productivity and the quality of coastal waters, streams, wetlands, estuaries, and lakes appropriate to maintain optimum populations of

marine organisms and for the protection of human health shall be maintained and, where feasible, restored through, among other means, minimizing adverse effects of waste water discharges and entrainment, controlling runoff, preventing depletion of ground water supplies and substantial interference with surface water flow, encouraging waste water reclamation, maintaining natural vegetation buffer areas that protect riparian habitats, and minimizing alteration of natural streams.

Consistent: The proposed amendments do not result in changes to existing policies and the City-wide Creeks and Wetlands Management Plan (part of the City's certified LCP) that require protection of habitat, resources and water quality along the San Lorenzo River.

Section 30232 Oil and Hazardous Substance Spills - Protection against the spillage of crude oil, gas, petroleum products, or hazardous substances shall be provided in relation to any development or transportation of such materials. Effective containment and cleanup facilities and procedures shall be provided for accidental spills that do occur

Not Applicable: The proposed amendments cover the downtown area, which is not adjacent to or within marine waters and would have no effect on marine resources.

Section 30233 Diking, Filling or Dredging - The diking, filling, or dredging of open coastal waters, wetlands, estuaries, and lakes shall be permitted in accordance with other applicable provisions of this division, where there is no feasible less environmentally damaging alternative, and where feasible mitigation measures have been provided to minimize adverse environmental effects.

Not Applicable: The proposed amendments cover the downtown area and would not result in diking, filling or dredging.

Section 30234 Commercial Fishing and Recreational Boating Facilities - Facilities serving the commercial fishing and recreational boating industries shall be protected and, where feasible, upgraded.

Not Applicable: The part of the downtown area covered by the proposed amendments is not adjacent to areas of commercial or recreational boating use.

Section 30235 Construction Altering Natural Shoreline - Revetments, breakwaters, groins, harbor channels, seawalls, cliff retaining walls, and other such construction that alters natural shoreline processes shall be permitted when required to serve coastal dependent uses or to protect existing structures or public beaches in danger from erosion, and when designed to eliminate or mitigate adverse impacts on local shoreline sand supply. Existing marine structures causing water stagnation contributing to pollution problems and fish kills should be phased out or upgraded where feasible.

Not Applicable: The proposed amendments cover a portion of the downtown area that is not adjacent to the shoreline and do not include policies regarding construction of devices that would alter the natural shoreline.

Section 30236 Water supply and Flood Control - Channelizations, dams, or other substantial alterations of rivers and streams shall incorporate the best mitigation measures feasible, and be limited to (l) necessary water supply projects, (2) flood control projects where no other method for protecting existing structures in the flood plain is feasible and where such protection is necessary for public safety or to protect existing development, or (3) developments where the primary function is the improvement of fish and wildlife habitat.

Not Applicable: The proposed amendments do not include water supply or flood control projects.

Land Development

Section 30240 Environmentally Sensitive Habitat Areas- (a) Environmentally sensitive habitat areas shall be protected against any significant disruption of habitat values, and only uses dependent on those resources shall be allowed within those areas. (b) Development in areas adjacent to environmentally sensitive habitat areas and parks and recreation areas shall be sited and designed to prevent impacts which would significantly degrade those areas, and shall be compatible with the continuance of those habitat and recreation areas.

Consistent: The proposed amendments do not result in changes to existing LCP policies or the City-wide Creeks and Wetlands Management Plan (part of the City's certified LCP) that require protection of habitat along the San Lorenzo River. Development resulting from the proposed amendments, as mitigated, would not result in significant impacts to adjacent San Lorenzo River riparian and aquatic habitats.

Section 30241 Prime Agricultural Land – The maximum amount of prime agricultural land shall be maintained in agricultural production to assure the protection of the areas' agricultural economy, and conflicts shall be minimized between agricultural and urban land uses through all of the following:

Not Applicable: The proposed amendments do not include prime or other agricultural lands.

Section 30241.5 Agricultural Land - If the viability of existing agricultural uses is an issue pursuant to subdivision (b) of Section 30241 as to any local coastal program or amendment to any certified local coastal program submitted for review and approval under this division, the determination of "viability" shall include, but not be limited to, consideration of an economic feasibility evaluation.

Not Applicable: The proposed amendments do not include prime or other agricultural lands.

Section 30242 Lands Suitable for Agricultural Use - All other lands suitable for agricultural use shall not be converted to nonagricultural uses unless (l) continued or renewed agricultural use is not feasible, or (2) such conversion would preserve prime agricultural land or concentrate development consistent with Section 30250. Any such permitted conversion shall be compatible with continued agricultural use on surrounding lands.

Not Applicable: The proposed amendments do not include prime or other agricultural lands.

Section 30243 Productivity of Soils and Timberlands - The long-term productivity of soils and timberlands shall be protected, and conversions of coastal commercial timberlands in units of commercial size to other uses or their division into units of noncommercial size shall be limited to providing for necessary timber processing and related facilities.

Not Applicable: The proposed amendments do not include timberlands.

Section 30244 Archaeological or Paleontological Resources - Where development would adversely impact archaeological or paleontological resources as identified by the State Historic Preservation Officer, reasonable mitigation measures shall be required.

Consistent: The proposed amendments do not change existing requirements for review archaeological or paleontological resources at the time of site-specific development proposals, which require mitigation should resources be impacted.

Section 30250 Location-Existing Developed Area - (a) New residential, commercial, or industrial development, except as otherwise provided in this division, shall be located within, contiguous with, or in close proximity to, existing developed areas able to accommodate it or, where such areas are not able to accommodate it, in other areas with adequate public services and where it will not have significant adverse effects, either individually or cumulatively, on coastal resources. In addition, land divisions, other than leases for agricultural uses, outside existing developed areas shall be permitted only where 50 percent of the usable parcels in the area have been developed and the created parcels would be no smaller than the average size of surrounding parcels. (b) Where feasible, new hazardous industrial development shall be located away from existing developed areas. (c) Visitor-serving facilities that cannot feasibly be located in existing developed areas shall be located in existing isolated developments or at selected points of attraction for visitors.

Consistent: Future development allowed by the proposed amendments would be located within the developed downtown area with available public services.

Section 30251 Scenic and Visual Qualities The scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance. Permitted development shall be sited and designed to protect views to and along the ocean and scenic coastal areas, to minimize the alteration of natural land forms, to be visually compatible with the character of surrounding areas, and, where feasible, to restore and enhance visual quality in visually degraded areas. New development in highly scenic areas such as those designated in the California Coastline Preservation and Recreation Plan prepared by the Department of Parks and Recreation and by local government shall be subordinate to the character of its setting.

Consistent: Future development allowed by the proposed amendments would not affect views along the ocean or in scenic coastal areas and was found to be visually compatible with the character of surrounding downtown areas.

Section 30252 Maintenance and Enhancement of Public Access - The location and amount of new development should maintain and enhance public access to the coast by (1) facilitating the provision or extension of transit service, (2) providing commercial facilities within or adjoining residential development or in other areas that will minimize the use of coastal access roads, (3) providing non-automobile circulation within the development, (4) providing adequate parking facilities or providing substitute means of serving the development with public transportation, (5) assuring the potential for public transit for high intensity uses such as high-rise office buildings, and by (6) assuring that the recreational needs of new residents will not overload nearby coastal recreation areas by correlating the amount of development with local park acquisition and development plans with the provision of onsite recreational facilities to serve the new development.

Consistent: The proposed amendments do not include site-specific development or change certified land uses in the project area.

Section 30253 Minimization of Adverse Impacts - New development shall do all of the following: (a) Minimize risks to life and property in areas of high geologic, flood, and fire hazard. (b) Assure stability

and structural integrity, and neither create nor contribute significantly to erosion, geologic instability, or destruction of the site or surrounding area or in any way require the construction of protective devices that would substantially alter natural landforms along bluffs and cliffs. (c) Be consistent with requirements imposed by an air pollution control district or the State Air Resources Board as to each particular development. (d) Minimize energy consumption and vehicle miles traveled. (e) Where appropriate, protect special communities and neighborhoods that, because of their unique characteristics, are popular visitor destination points for recreational uses.

Consistent: Future development allowed by the proposed amendments would be located within the developed downtown area and would not result in alteration of natural landforms. Location in proximity to the transit center and walking and bicycling facilities would minimize energy consumption and vehicle miles traveled.

Section 30254 Public Works Facilities - New or expanded public works facilities shall be designed and limited to accommodate needs generated by development or uses permitted consistent with the provisions of this division; Where existing or planned public works facilities can accommodate only a limited amount of new development, services to coastal dependent land use, essential public services and basic industries vital to the economic health of the region, state, or nation, public recreation, commercial recreation, and visitor-serving land uses shall not be precluded by other development.

Not Applicable: The proposed amendments do not include public works facilities.

Section 30254.5 Terms on Sewage Treatment Plant Development - Notwithstanding any other provision of law, the commission may not impose any term or condition on the development of any sewage treatment plant which is applicable to any future development that the commission finds can be accommodated by that plant consistent with this division.

Not Applicable: The proposed amendments do not include a sewage treatment plant.

Section 30255 Priority of Coastal-Dependent Developments - Coastal-dependent developments shall have priority over other developments on or near the shoreline. Except as provided elsewhere in this division, coastal-dependent developments shall not be sited in a wetland. When appropriate, coastal-related developments should be accommodated within reasonable proximity to the coastal-dependent uses they support.

Not Applicable: The area covered by the proposed amendments is not located on or near the shoreline.

Industrial Development

Section 30260 Location or Expansion - Coastal-dependent industrial facilities shall be encouraged to locate or expand within existing sites and shall be permitted reasonable long-term growth where consistent with this division.

Not Applicable: The area covered by the proposed amendments is not located on or near the shoreline.

30261 Tanker Facilities - Use of existing and new tanker facilities shall be encouraged to the maximum extent feasible and legally permissible, except where to do so would result in increased tanker

operations and associated onshore development incompatible with the land use and environmental goals for the area.

Not Applicable: The area covered by the proposed amendments is not located on or near the shoreline or in marine waters and no tanker facilities exist or are proposed in the project area.

Section 30262 Oil and Gas Development - Oil and gas development shall be permitted in accordance with Section 30260 if specified conditions are met.

Not Applicable: The proposed amendments do not include oil and gas development.

Section 30263 Refineries or Petrochemical Facilities – This policy provides standards for new or expanded refineries or petrochemical facilities.

Not Applicable: The area covered by the proposed amendments is located within a developed urban area; no refineries or petrochemical facilities exist or are proposed in the project area.

Section 30264 Thermal Electric Generating Plants - Notwithstanding any other provision of this division, except subdivisions (b) and (c) of Section 30413, new or expanded thermal electric generating plants may be constructed in the coastal zone if the proposed coastal site has been determined by the State Energy Resources Conservation and Development.

Not Applicable: The area covered by the proposed amendments is located within a developed urban area; no thermal electric generating plants exist or are proposed in the project area.