

Santa Cruz Wharf Improvement Project



Briefing Paper

**Prepared by
City of Santa Cruz**

for

**U.S. Army Corps of Engineers
Interagency Meeting
12 November 2014**

Santa Cruz Wharf Improvement Project



Constructed on a base of over 4,400 Douglas-fir piles, the Santa Cruz Wharf is the longest timber-supported structure in the United States.

The Santa Cruz Wharf Improvement Project encompasses a 2.5 acre expansion for public access, recreation, and interaction with the Monterey Bay National Marine Sanctuary.

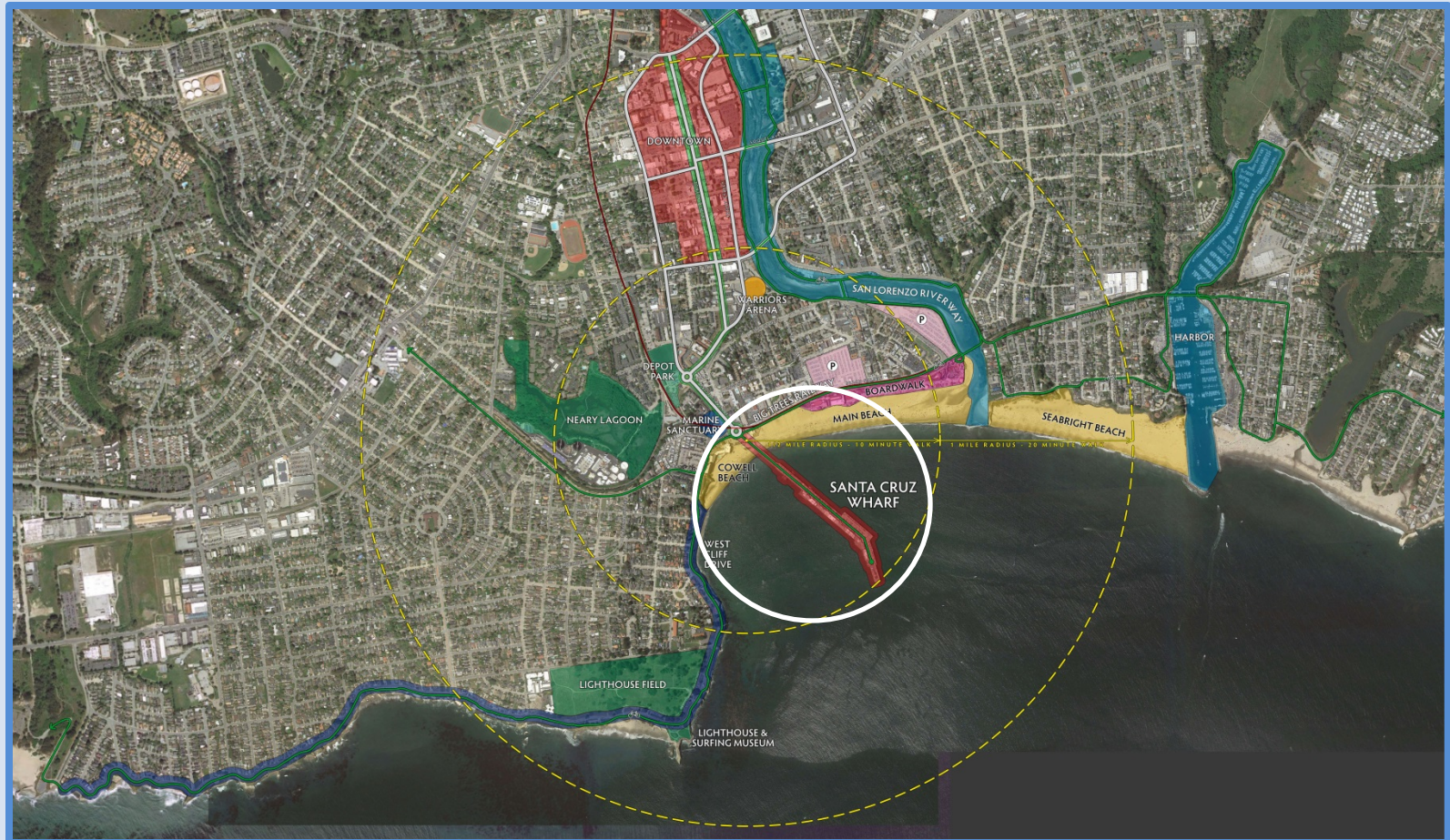
Santa Cruz Wharf Master Plan and Engineering Report



Funded by a grant from the
U.S. Department of Commerce
Economic Development Administration
and administered by the
Seattle Regional Office

Santa Cruz Wharf Improvement Project

Location Map



Wharf Master Plan

- **Economic Development**
- **Design and Development Standards**
- **Public Access and Recreational Uses**
- **Educational and Scientific Nexus**

Engineering Report

- **Pilings, Supports, and Deck**
- **Roadways, Pedestrian Walkways, Parking Areas**
- **Reduction of Environmental Impacts**
- **Sewer, Lighting, and Fire Suppression Systems**

Santa Cruz Wharf Improvement Project

Project Summary

Existing Wharf (300,100 sq.ft. and 4,440 piles)

- | | |
|-------------------------------------|----------------|
| • Parking and vehicular circulation | 178,400 sq.ft. |
| • Commercial and retail uses | 54,600 sq.ft. |
| • Wharf Operations | 11,100 sq.ft. |
| • Public Access | 56,000 sq.ft. |

Proposed (108,000 sq.ft. and 900 piles)

- | | |
|-------------------------------------|----------------|
| • Parking and vehicular circulation | 0 sq.ft. |
| • Commercial and retail uses | 0 sq.ft. |
| • Wharf Operations | 0 sq.ft. |
| • Public Access | 108,000 sq.ft. |

Santa Cruz Wharf Improvement Project

Interagency Meeting Focus and Feedback

- Confirmation of lead agency
- General permitting requirements
- Issues/concerns of specific agencies
- Critical path steps/process



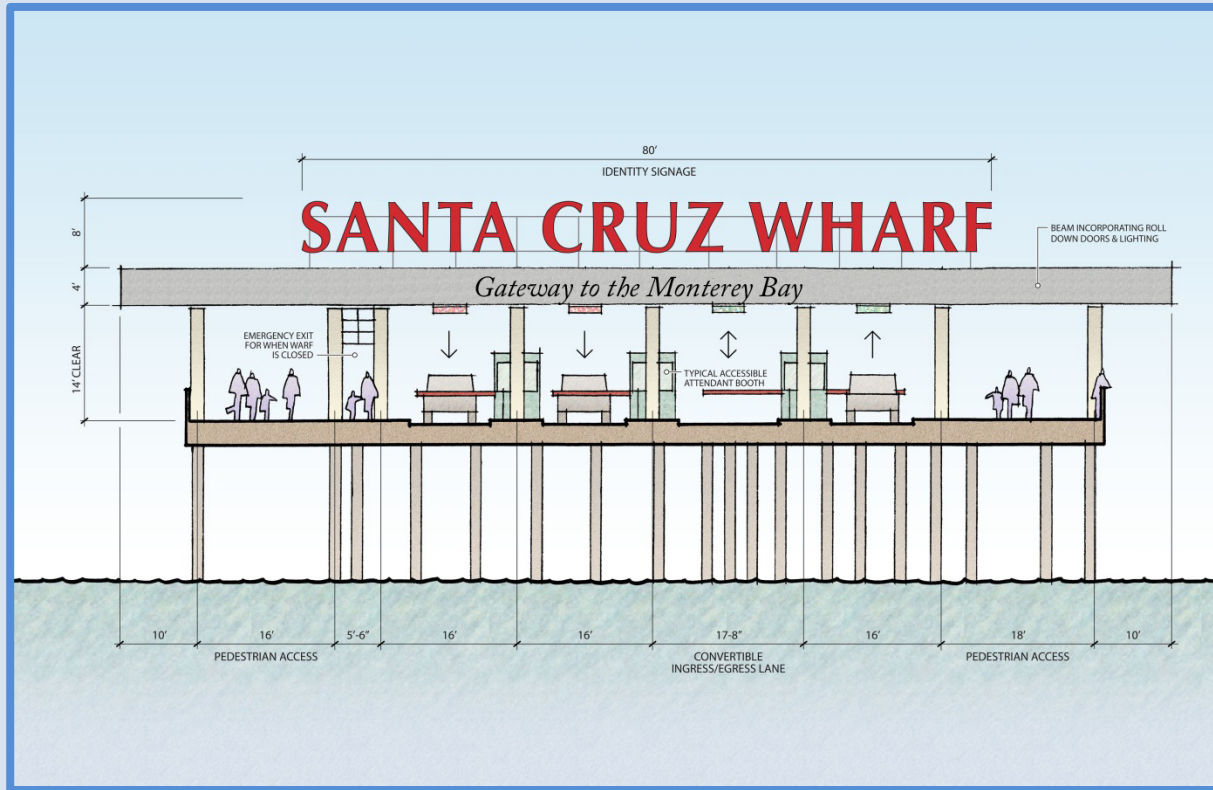
Santa Cruz Wharf Master Plan

Concepts, Proposals, and Recommendations

The Gateway Entrance



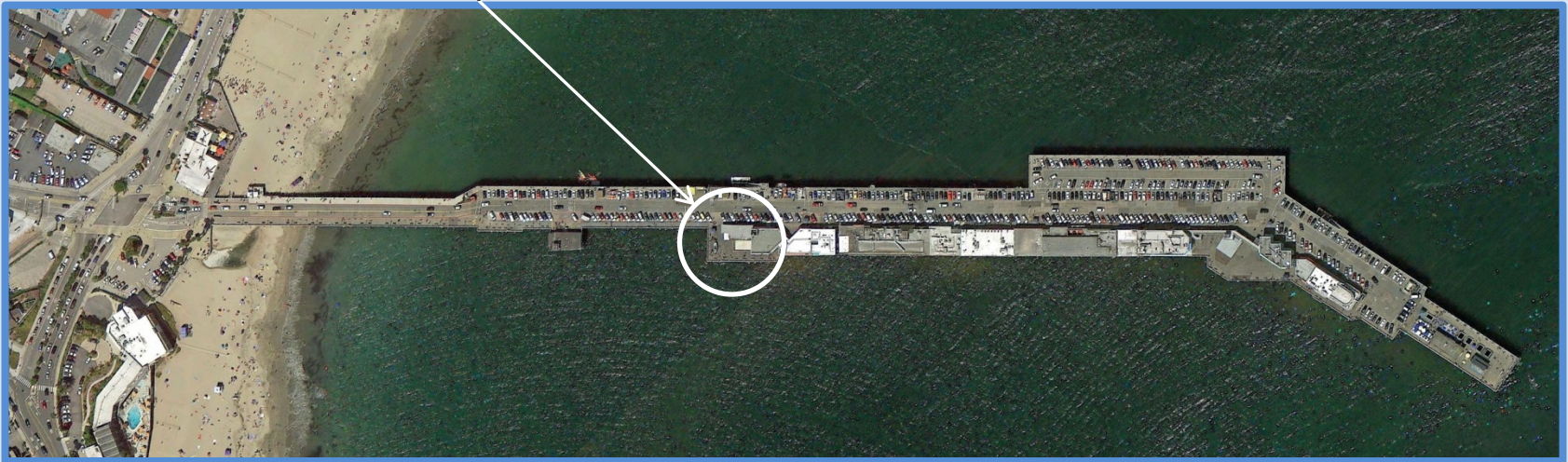
The Gateway Entrance



Create a new and more attractive gateway to the Wharf to be more visible, create a more positive transition from the land to the Monterey Bay, and provide a better sense of arrival.

Santa Cruz Wharf Master Plan Concepts, Proposals, and Recommendations

The Welcome Center



The Welcome Center



Construct a Welcome Center at the beginning of the line of buildings on the west side of the Wharf, facing the shore and greeting visitors to the commercial and recreational experiences that follow. Include an open water swim facility.

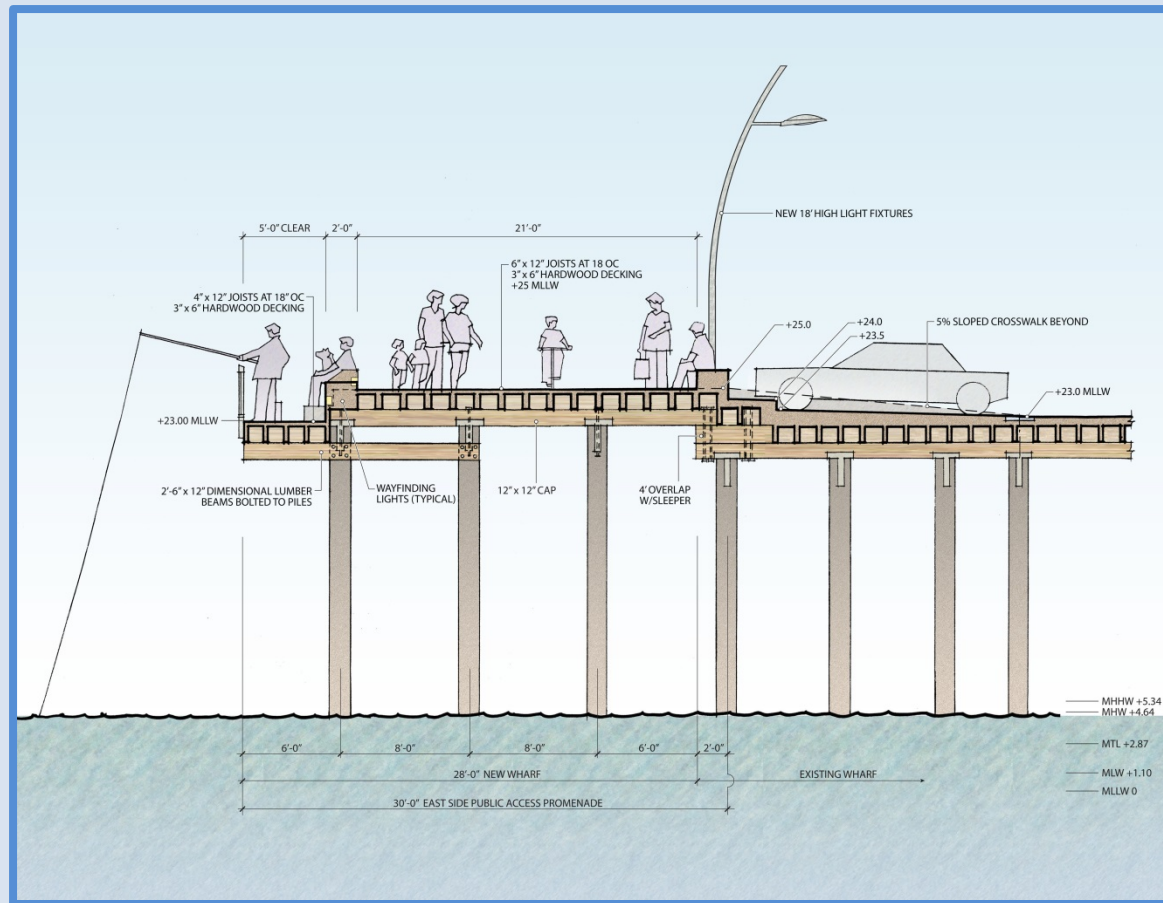
Santa Cruz Wharf Master Plan

Concepts, Proposals, and Recommendations

The East Promenade



The East Promenade



Construct a 24' wide promenade along the Wharf's eastern edge to create uninterrupted opportunities for recreation, to reduce pedestrian/vehicular conflicts, and to provide for an alternate emergency access route.

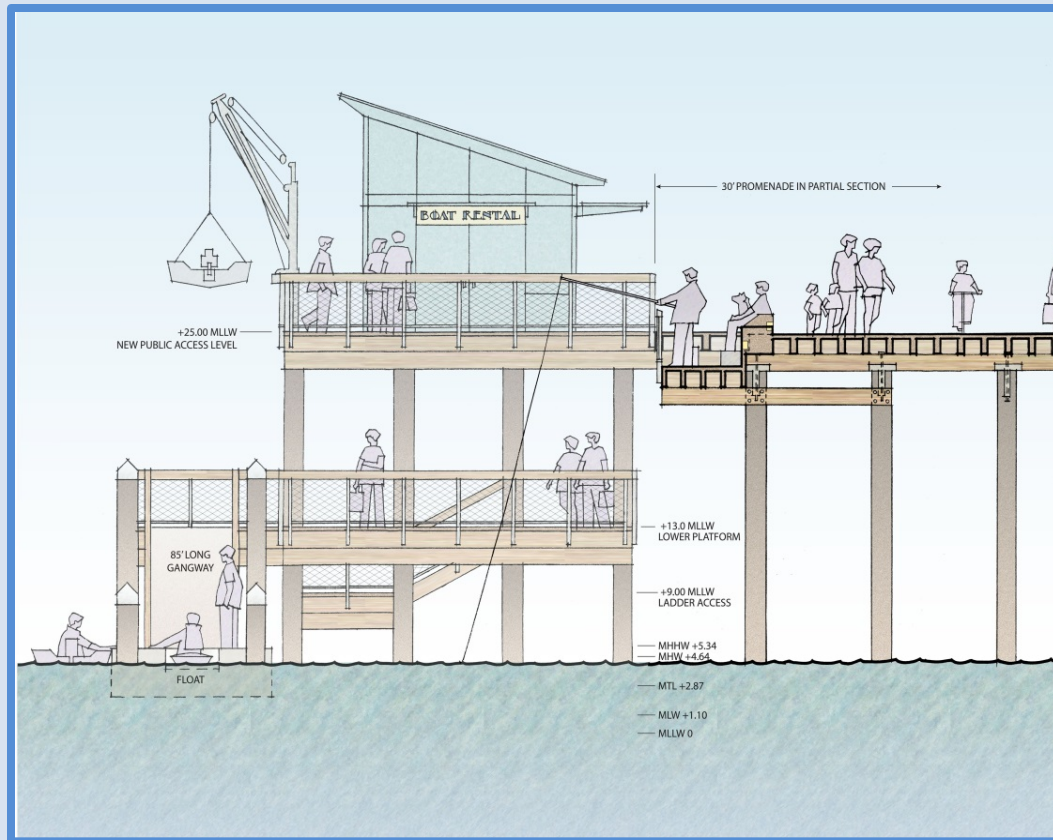
Santa Cruz Wharf Master Plan

Concepts, Proposals, and Recommendations

The Small Boat Landing



The Small Boat Landing



Construct a small boat landing facility on the east side of the Wharf adjacent to the new East Promenade for kayak, paddleboard, and fishing boat rentals as well as for Wharf Operations.

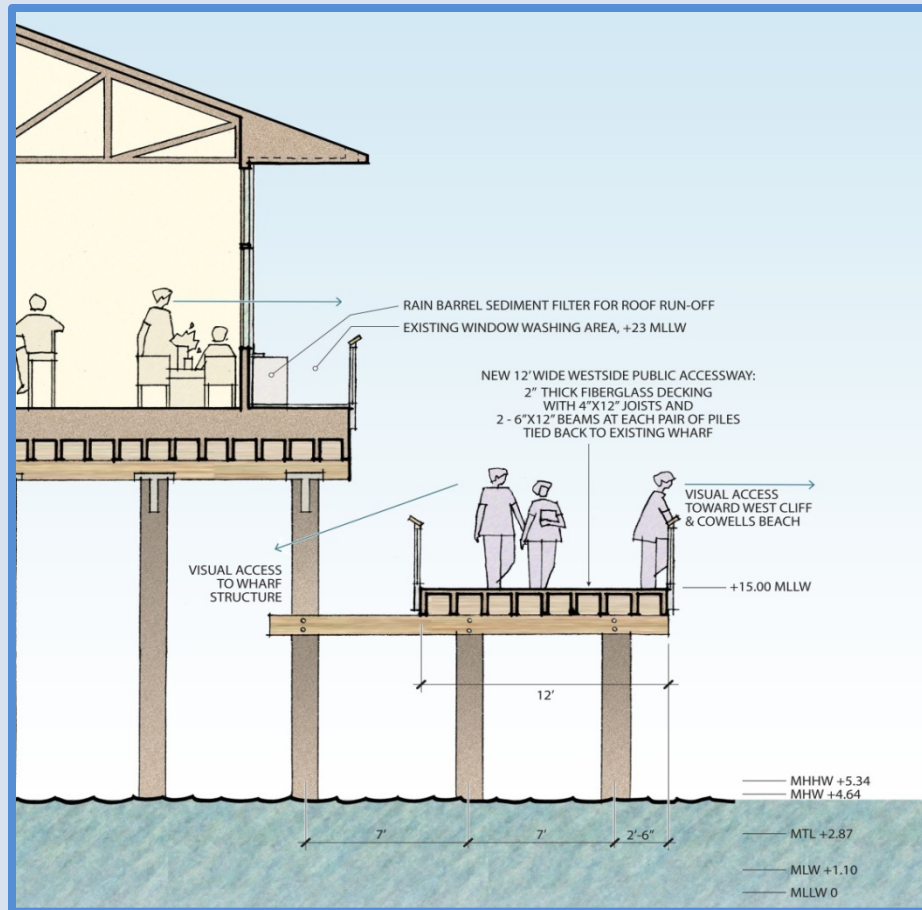
Santa Cruz Wharf Master Plan

Concepts, Proposals, and Recommendations

The Western Walkway



The Western Walkway



Construct a 12' wide walkway on the western side of the Wharf that provides for continuity of access in a manner that does not conflict with visual access from adjacent commercial uses.

Santa Cruz Wharf Master Plan

Concepts, Proposals, and Recommendations

The Events Pavilion



The Events Pavilion



Construct a multi-sided Events Pavilion that creates a continuity of the commercial uses where the Wharf bends to the southwest and provides a large, weather-protected space.

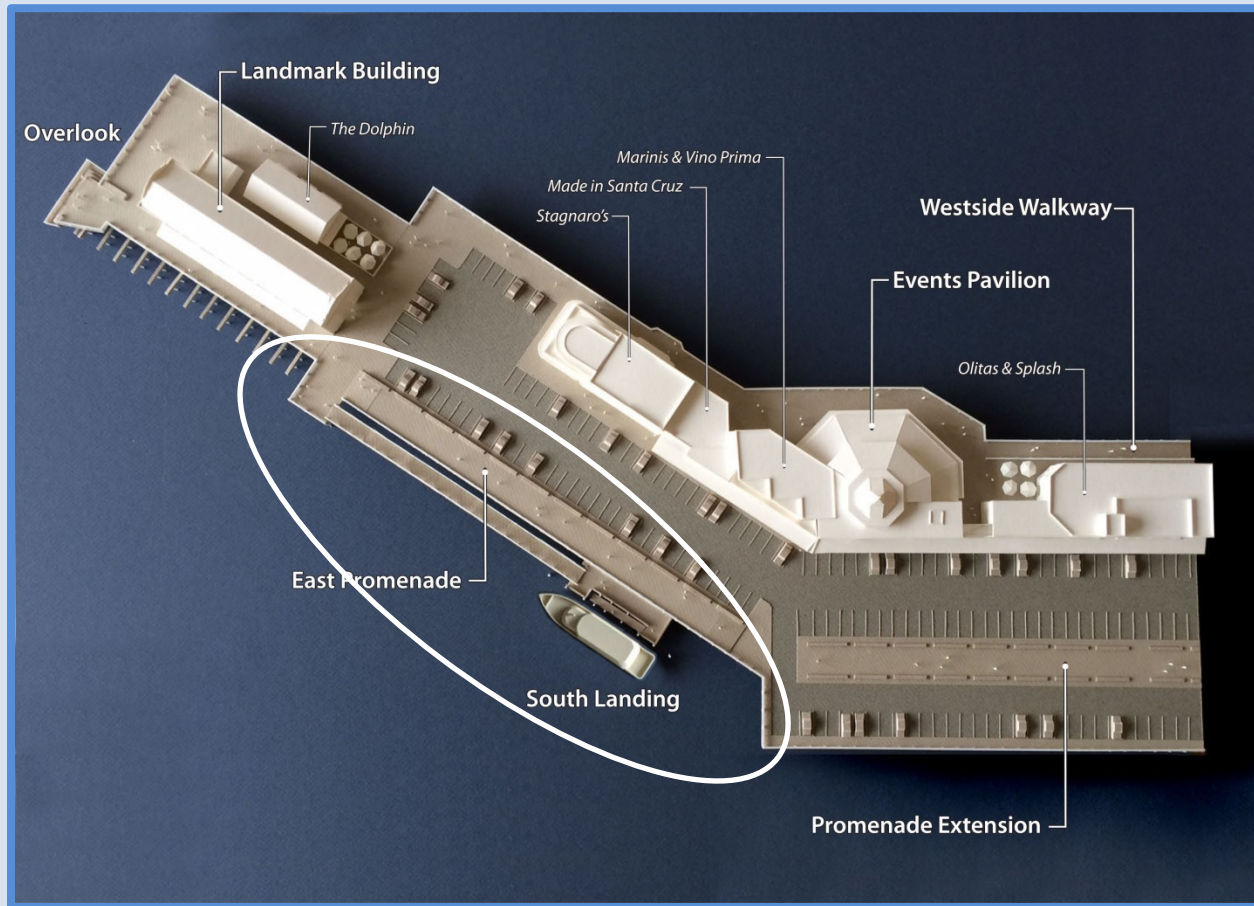
Santa Cruz Wharf Master Plan

Concepts, Proposals, and Recommendations

The South Landing



The South Landing



Construct a landing facility for the docking of larger vessels at the end of the Wharf for science, education, research, sports fishing and whale watching.

Santa Cruz Wharf Master Plan

Concepts, Proposals, and Recommendations

The Landmark Building



The Landmark Building



Construct a new Landmark Building reminiscent in scale and form of the structure once located at the end of the Wharf. Provide a visual focus and destination attraction which entices visitors to venture out to the end of the Wharf.

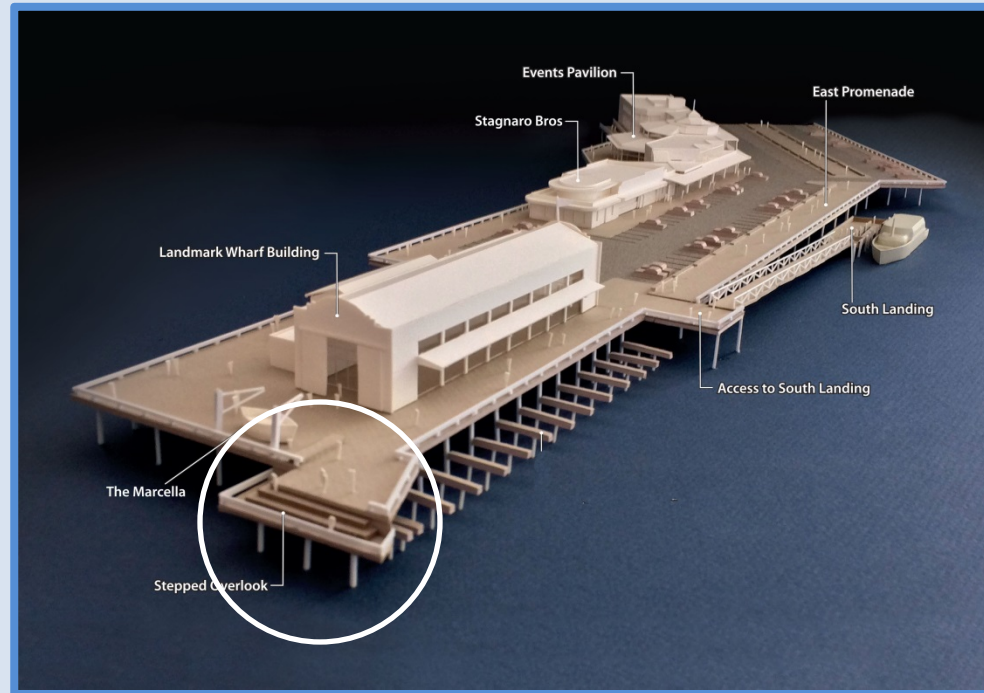
Santa Cruz Wharf Master Plan

Concepts, Proposals, and Recommendations

The Stepped Overlook



The Stepped Overlook



Heighten the experience of the dynamic qualities of water, the variability of waves and tides, and the exhilaration of being out over water by creating a Stepped Overlook that extends out into the Monterey Bay.

Santa Cruz Wharf Master Plan

Concepts, Proposals, and Recommendations

On-Demand Vacuum Assisted Refuse and Recycling Collection System



Santa Cruz Wharf Engineering Report

Findings and Recommendations

- 1. Piling Survey**
 - **4,400 piles inspected; 5% need replacement.**
 - **Add additional piles for lateral stability.**

- 2. Structural Evaluation**
 - **Wharf in serviceable shape for a 100 yr. old structure.**
 - **Add additional connectors at unsupported splices.**
 - **Increase load capacity at roadway turnarounds.**

- 3. Roadways/Parking**
 - **Install rubberized AC throughout.**
 - **Install plywood/waterproofing layer between AC and deck boards to minimize cracking.**
 - **Install drain inlets in vehicle area to treat runoff with media filtration to address water quality.**

Santa Cruz Wharf Engineering Report

Findings and Recommendations

- 4. Walkways/Commons**
 - Fair to good condition.
 - Address reflective cracking with plywood/waterproofing underlayment.
 - Relocate/remediate impediments to pedestrian movement.

- 5. Sanitary Sewer**
 - Existing gravity mains are well within their capacity carrying about 50% of total possible flow rate.
 - Given the present age and condition of the existing gravity mains, it is estimated they have at least 25 years of serviceable life remaining.

- 6. Fire Systems**
 - Extend coverage of the under deck fire suppression system at the public access dock and boat rental dock.
 - Limit boat anchorage to outside 200 feet of the west side.

Santa Cruz Wharf Engineering Report

Findings and Recommendations

7. Building Supports

- **Adequate structural capacity to support one- and two-story buildings, including those identified in the Wharf Master Plan.**
- **Provides structural requirements for new construction.**

8. New Landing

- **Preliminary berthing analysis was performed in order to determine the berthing energy demand for the design of the landing structure. The design vessel was a 200 LT Coast Guard Marine Protector Class vessel, with a 110 ft. length overall.**
- **Fixed landing system is the most feasible for all year access at the Wharf.**

9. Weather Impacts

- **Widen the Wharf with vertical timber piles to increase its resistance to lateral wave and tsunami forces.**

Santa Cruz Wharf Master Plan

Capital Improvements Budget Estimate

Gateway Entrance and Pay Stations	\$1,200,000	to	\$1,400,000
Welcome Center	\$810,000	to	\$972,000
Open Water Swim Facility	\$245,000	to	\$294,000
East Promenade:	\$11,900,000	to	\$14,300,000
West Walkway/Access:	\$2,500,000	to	\$3,000,000
Small Boat Landing:	\$2,900,000	to	\$3,500,000
Events Pavilion:	\$1,240,000	to	\$1,488,000
South Landing:	\$1,000,000	to	\$1,200,000
Landmark Building:	\$2,100,000	to	\$2,520,000
Total:	\$24,000,000	to	\$29,000,000

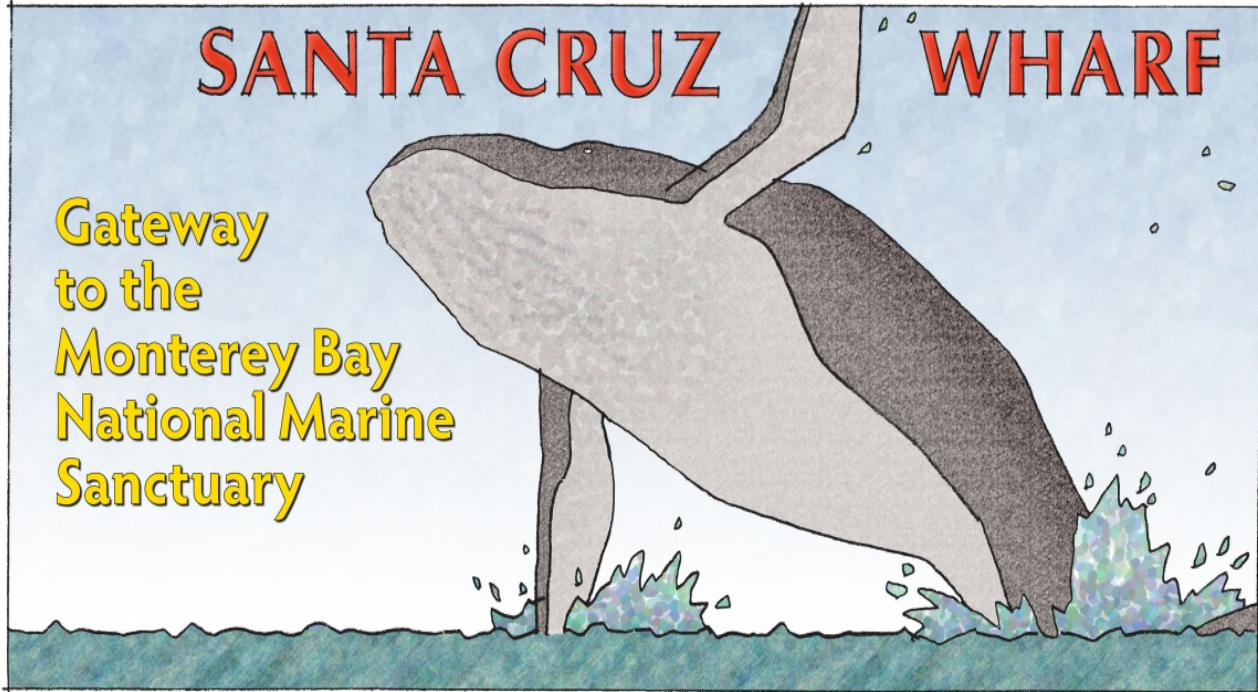
Santa Cruz Wharf Master Plan Repairs/Maintenance Budget Estimate

Piles	\$1,000,000	to	\$1,500,000
Deck Substructures	\$750,000	to	\$1,100,000
Miscellaneous (sewer, fire protection, landings)	\$200,000	to	\$300,000
Paving	\$7,200,000	to	\$8,600,000

Total:	\$9,150,000	to	\$11,500,000
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SANTA CRUZ WHARF

Gateway
to the
Monterey Bay
National Marine
Sanctuary



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