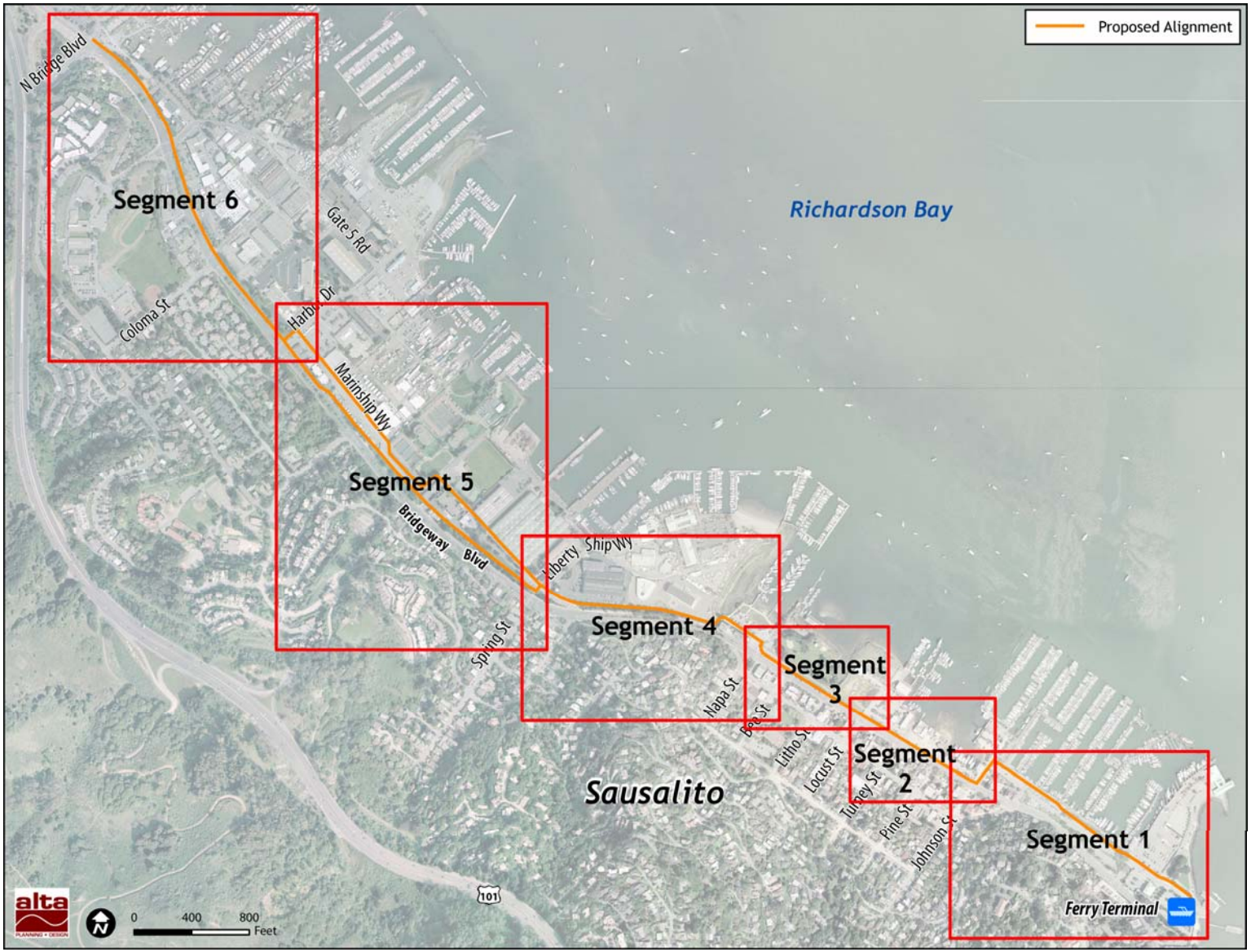

Figure 7-1 Study Area Segments

7.2. Cost Estimates

Each segment of the Study Area includes a planning level cost estimate table. These estimates include construction, landscaping and lighting, design and permitting, contingency costs, and right of way costs (where necessary) based on July 2010 dollars. These costs may need adjusting in the future with inflation and changes to design and construction management costs. Appendix B includes more detailed cost estimates for the path construction including the quantity and unit costs. For the purposes of this chapter, the construction subtotal consolidates all of these elements. It includes all path elements such as management controls during construction, demolition utility and utility box relocation where necessary, development of a concrete path, signing, striping, and curb ramps. The landscaping and lighting estimates include all planting and irrigation in the planting strips adjacent to the proposed path. It also includes site amenities such as recommended benches, trash cans, and pedestrian scale lighting. The design and permitting cost (15 percent of the subtotal) is an industry standard for hard and soft improvements in planning level cost estimates. Finally, the 20 percent contingency is also an industry standard for planning level cost estimates.

7.2.1. Unit Costs

Table 7-1 presents frequently recurring unit costs used in the preparation of the planning level cost estimates. Unit costs were developed based on recently built projects in the San Francisco Bay Area.

Table 7-1: Unit Costs

Item Description	Unit of Measure	Unit Cost
ADA Ramp	EA	$1,000
Bike Path	SF	$8
Concrete Islands & Curb	EA	$2,500
Curb and Gutter and AC Conforms	LF	$50
Drainage	LS	$2,500
Drainage Modification	LS	$3,000
Earthwork	CY	$30
Excavation	SF	$20
Import Fill	CY	$40
Landscaping, Irrigation	SF	$5
Lighting	EA	$4,000
Minor Concrete (Sidewalk, Ramp)	SF	$10
Pavement Markings	SF	$3
Pavement Stripes	LF	$1
Planter Island	SF	$8
Rail/Fence	LF	$40

Item Description	Unit of Measure	Unit Cost
Railing/Fence	LF	$40
Raised Crosswalk	SF	$40
Reinforcing Fabric	SY	$2
Remove Concrete, AC & other surfacing	SF	$4
Retaining Structure	SF	$75
Retaining Wall	SF	$75
Rock Slope Protection	CY	$100
Signal Modifications	LS	$60,000
Slurry Seal Parking Lot Pavement	SF	$1
Storm Drain Inlet (New & Modified)	EA	$4,000
Unsuitable Material	CY	$300
Wall Foundation	LF	$150
Wayfinding Signs	EA	$500
Note: Additional costs are identified as lump sum items that vary by segment. For SWPPP and erosion control; utility relocation/allocation; removal of traffic striping and marking; resetting of parking bumpers, meters and signs; and path and roadway signs, the lump sum estimate is based on recent bid costs from projects of a similar type and size. Mobilization and traffic control is estimated at approximately 10 percent of the construction improvement cost. Clearing and grubbing, tree removal is estimated based on recent bid costs from projects of a similar type, size and amount of trees to be removed. Unsuitable material is estimated by taking five to six percent of the volume of bike path excavation.		

For two of the segments the proposed alignment travels through private right of way. This property could be acquired by the City during redevelopment, through an easement, or could negotiate it for purchase. For the purposes of this Study, approximate right of way cost estimates are provided based on the approximate square footage needed per parcel. The right of way unit cost is $150 to $200 per square foot. This amount is based on a survey of recent sales in the area as well as input from a commercial real estate professional in Sausalito.

7.3. Segment 1 – Ferry Terminal to Johnson Street

Segment 1 traverses the existing city-owned parking lots. Figure 7-2, Figure 7-3, and Figure 7-4 show the Segment 1 plan view, including modifications to the parking lots 1, 3, and 4. A cost estimate for Segment 1 improvements is at the conclusion of section 7.3.

7.3.1. Parking Lot Layout

The City of Sausalito is removing the existing parking lot fare collection stations and replacing the parking collection system with automated machines. Removal of these stations will open up some space in the parking lots. This Study assumes that the space currently occupied by these structures will be removed by the time the

path is developed, providing an opportunity to install additional parking spaces.

In order to achieve a parking lot design with the addition of a bicycle path but without significantly impacting the number of parking spaces in lots 1, 3 and 4, various parking stall standards and expansion of the parking lots were considered for the reconfiguration including the City of Portland (OR), City of Emeryville, both standard and compact, the Town of Corte Madera and County of Marin. The City of Sausalito's zoning standards require longer stalls than those of the other jurisdictions. However, based on field measurements many of the existing spaces are smaller than the City of Sausalito's standard dimensions.

If the City's standard parking stall and aisle width dimensions are used in the parking lots, there is not adequate space for a path on the east side of parking lot 3. Use of the County of Marin standard parking dimensions is recommended to create space for the path. Marin County and Sausalito standard stall dimension are in **Table 7-2**.

Table 7-2 Recommended County of Marin Parking Stall Demensions Compared to the City of Sausalito Parking Stall Dimensions

Jurisdiction	Angle	Width (ft)	1-Way Aisle Width (ft)	2-Way Aisle Width (ft)	Stall Depth (ft)
County of Marin	45° (Lot 1)	8.5	12.0	-	17.0
City of Sausalito	45°	9.0	15.0	-	19.8
County of Marin	90° (Lot 3 & 4)	8.5		24.0	18.0
City of Sausalito	90°	9.0	-	24.0	19.0

Use of Marin County parking standards in conjunction with fill between the existing edge of parking lot 3 and the existing pedestrian boardwalk provides for the pathway. This reconfiguration, as shown in Figure 7-2, Figure 7-3, and Figure 7-4, would result in a loss of 14 spaces in lot 1 and 11 spaces in parking lots 3 and 4. This is approximately a nine percent loss of parking which would require City of Sausalito voter approval. The existing and proposed parking space counts are in **Table 7-3**.

Table 7-3 Parking Space Gains and Losses with New Dimensions and Bay Fill

Parking Lot	Existing	Proposed	Gain/(Loss)
Parking Lot 1	190	176	(14)
Parking Lots 3 and 4	289	279	(11)
Total	481	460	(25)
Note: Implementation of the path proposed northeast of Parking Lot 2 would result in the loss of an additional 17 parking spaces on private property.			

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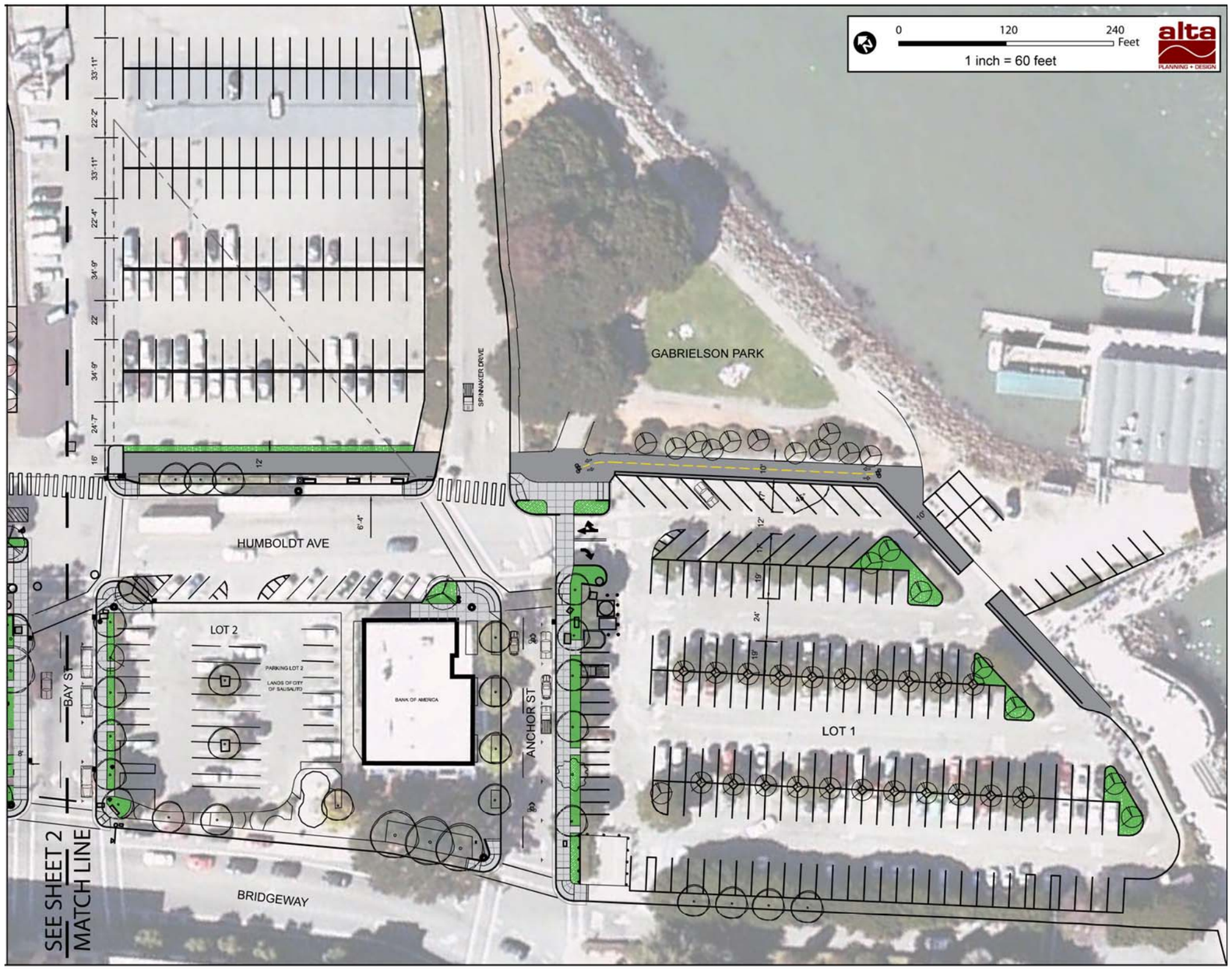
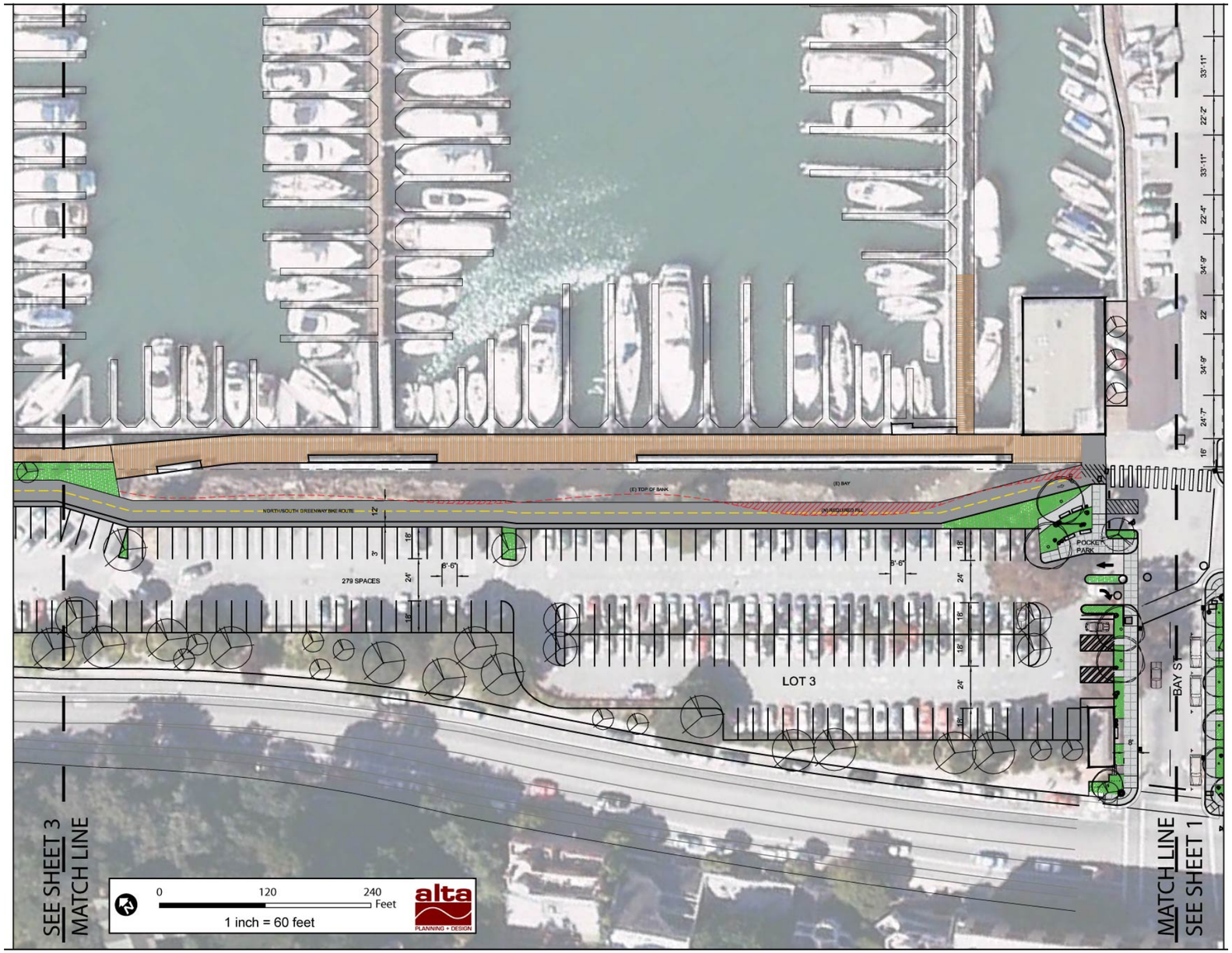
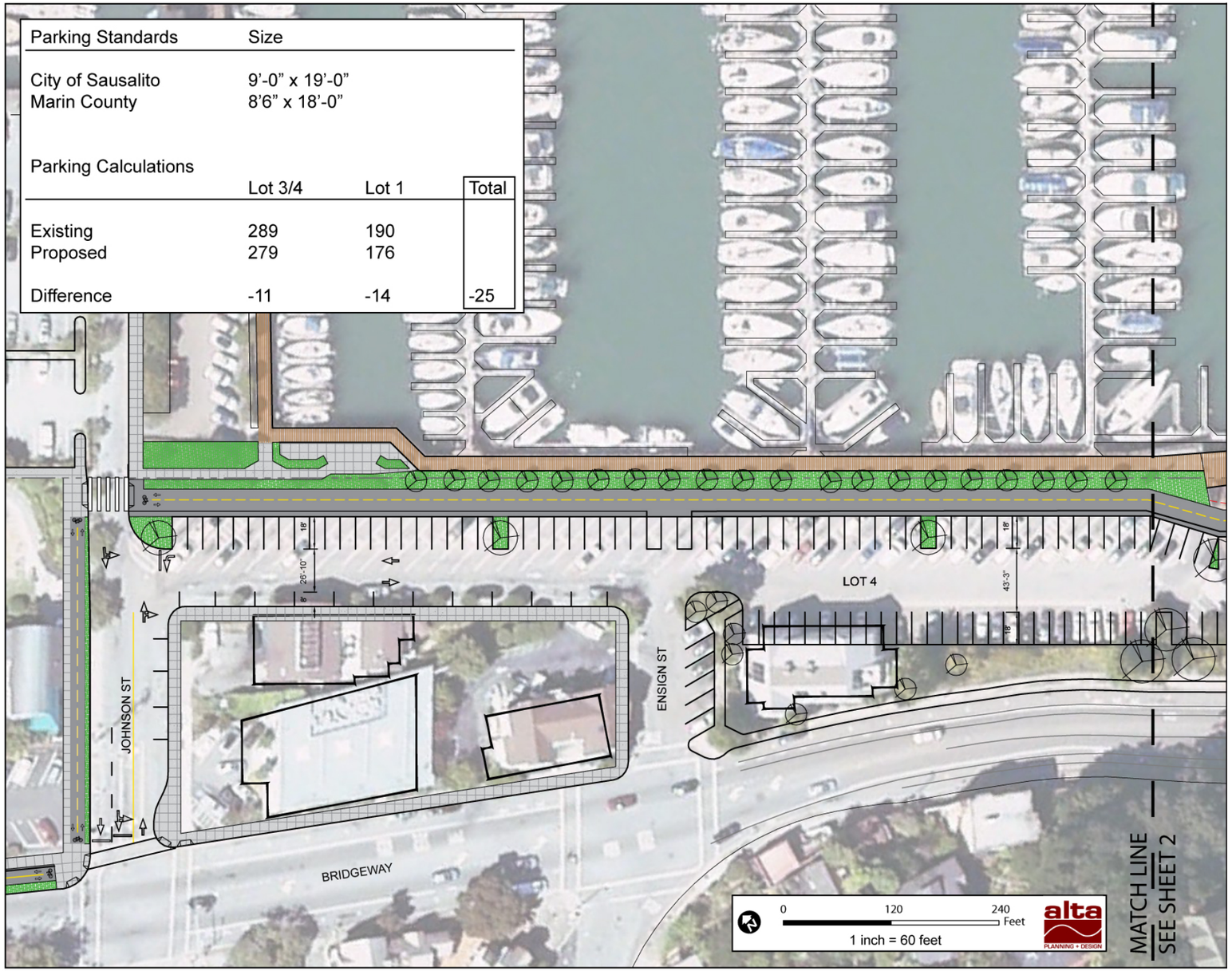


Figure 7-2 Segment 1 Parking Lot 1 Reconfiguration to Allow Space for a Path



PARKING LOTS 1 THROUGH 4: SHEET 2

Figure 7-3 Segment 1 Parking Lot 3 Reconfiguration to Allow Space for a Path



Sausalito Ferry Landing to Gate 6, PARKING LOTS 1 THROUGH 4: SHEET 3

Figure 7-4 Segment 1 Parking Lot 4 Reconfiguration to Allow Space for a Path

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7.3.2. Segment 1A Parking Lot 1

From	To	Proposed Facility	Width	Needed Improvements
Sausalito Ferry Terminal	Eastern Parking Row in Lot 1	Multi-Use Path	12' 0"	Widening sidewalk Shifting two parking row islands

From the Sausalito Ferry Terminal, the proposed path extends east on the south end of parking lot 1. There is an existing sidewalk approximately six feet wide connecting the Ferry Terminal with Gabrielson Park. This sidewalk can be widened to accommodate both bicyclists and pedestrians before entering the Park. **Figure 7-5** shows existing roadway dimension and **Figure 7-6** shows the proposed improvements. Construction of the proposed pathway requires shifting the exit drive aisle six feet north, resulting in elimination of three parking spaces.

Figure 7-5 Segment 1A Parking Lot 1 Existing Conditions

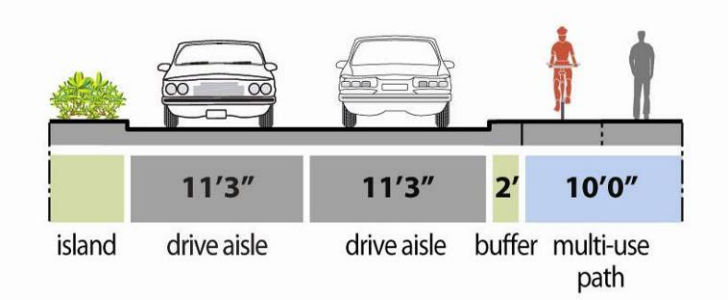

Figure 7-6 Segment 1A Parking Lot 1 Proposed Improvements

7.3.3. Segment 1B Parking Lot 1

From	To	Proposed Facility	Width	Needed Improvements
Eastern Parking Row in Lot 1	Bay Street	Multi-Use Path	12' 0"	Shifting parking row and restriping Path Installation

Continuing north through parking lot 1 to parking 3, a new bicycle path is proposed on the east side of lot 1 where there is an existing parking row and landscaped boundary from Gabrielson Park. Pedestrians would continue east from Segment 1A to the existing path in Gabrielson Park. As **Figure 7-7** shows, the existing east aisle of the parking lot 1 has 90-degree parking spaces. To accommodate the bicycle path, two-feet of space within the landscaped area at the eastern edge of the parking lot is required as is shifting vehicle parking spaces in the eastern parking aisle from 90 to 45-degrees. **Figure 7-8** shows the proposed cross-section for parking lot 1.

Figure 7-7 Segment 1B Parking Lot 1 Existing Condition

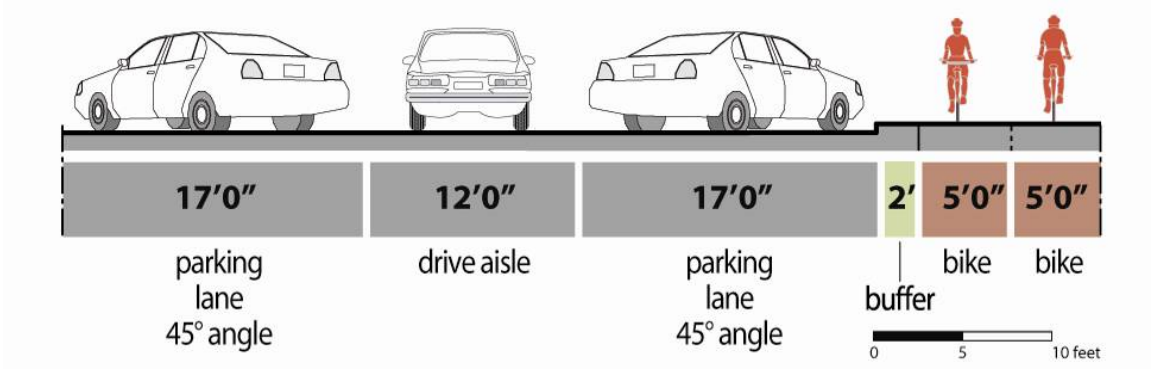

Figure 7-8 Segment 1B Parking Lot 1 Proposed Improvements

The Sausalito City Council approved a Ferry Terminal bicycle parking and circulation plan for the summer of 2010. **Figure 7-9** shows this plan for how passengers should alight from the ferry and queue when waiting to board. People queuing to board with bicycles wait in a separate line from passengers without bicycles. If this bicycle parking and queuing plan is successful in 2010 and is still in operation when the proposed path is developed, an additional queuing area is necessary. Since the proposed path connects to the Ferry Terminal from the east (or north in Figure **7-9**), path users will wait along the proposed path on the south (east side in the Figure) of parking lot 1. Bicyclists in this line will merge with the line shown in the Council approved plan at the base of the Ferry Terminal entrance/exit.

Golden Gate Transit District is developing plans for ferry landing improvements that it still needs to negotiate with the City. For that process, these recommendations can assist the City in describing pedestrian and bicycle needs at the landing location. These recommendations may also need review and modifications depending on the ferry landing improvements that are ultimately built.

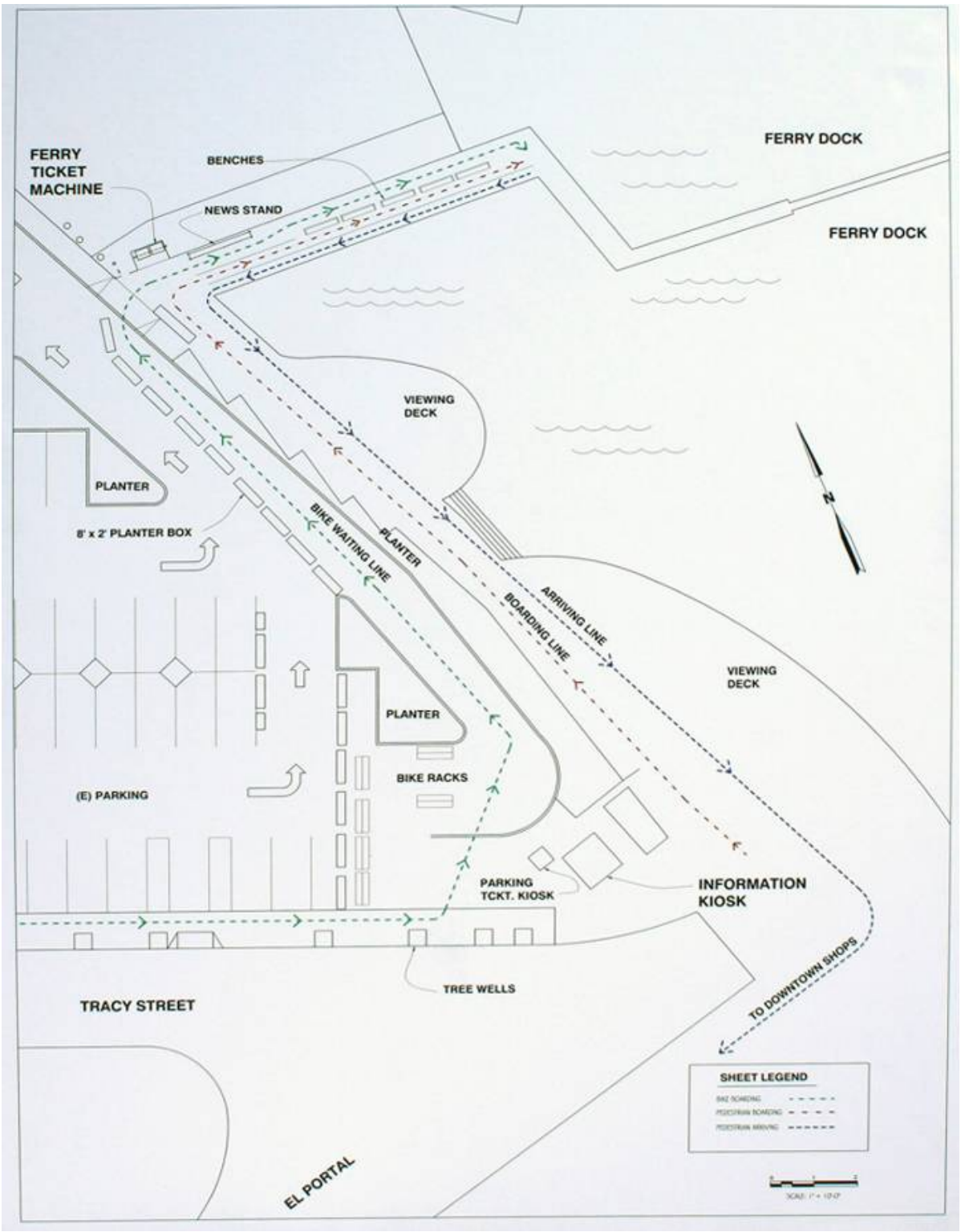

Figure 7-9 Summer 2010 Bike and Pedestrian Route at the Sausalito Ferry Terminal

The intersection improvements at Humboldt Avenue and Anchor Street and at Humboldt Avenue and Bay Street are part of the City's Sausalito Ferry Landing to Downtown project. Like the Ferry Terminal to Gate 6 Road Path Study, the County of Marin Nonmotorized Transportation Pilot Program funded the Ferry Landing project. This project has a design and the City is working to develop the project improvements. The approved design is shown in Figure 7-2 and includes a sidewalk on the north side of Humboldt Avenue. Costs for completing the design for this block are not included in this Study.

7.3.4. Segment 1C Humboldt Avenue – Anchor Street to Bay Street

From	To	Proposed Facility	Width	Needed Improvements
Anchor Street	Bay Street	Multi-Use Path	12' 0"'	Path Installation

The path extends from Parking Lot 1 to Parking Lot 3 along Humboldt Avenue. There is an existing sidewalk that is approximately six feet wide connecting these two points between Anchor Street and Bay Street. The proposed path will join south of Anchor Street and then cross on Humboldt east of the site of the Bridgeway to Ferry Landing Improvement Project. For the path, the sidewalk can be widened either by narrowing the roadway or acquiring right of way from the adjacent private parcel. Implementation of the path on the adjacent private parcel would result in the loss of 17 parking spaces. This is an important connection since this block serves as the transit center for Sausalito. **Figure 7-10** shows existing roadway dimension and **Figure 7-11** shows the proposed improvements.

Figure 7-10: Segment 1C Humboldt Avenue - Anchor Street to Bay Street Existing Conditions

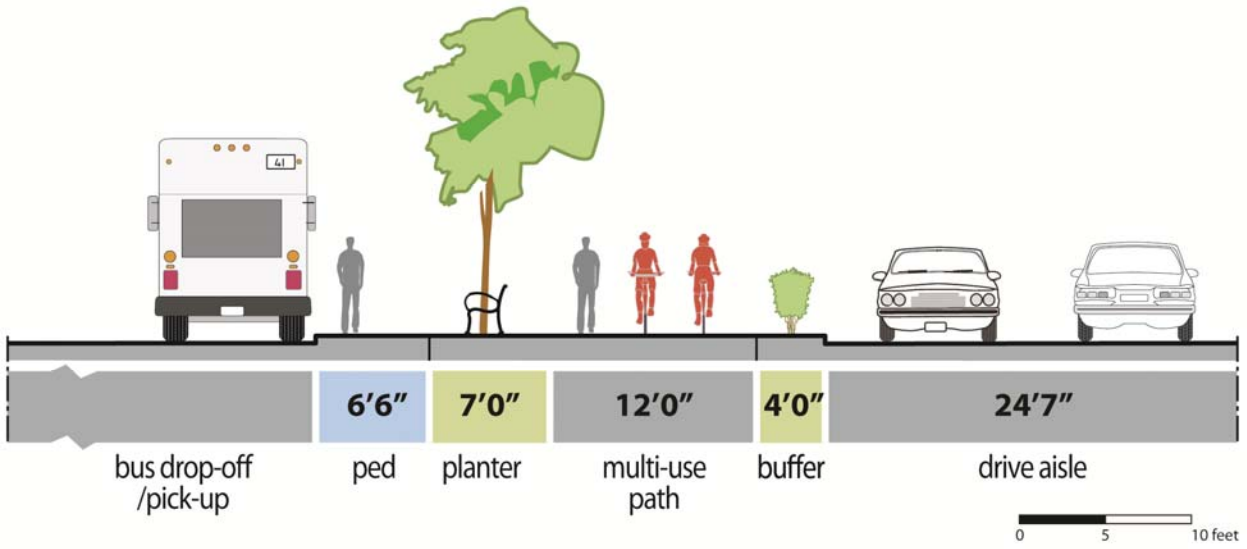

Figure 7-11: Segment 1C Humbold Avenue - Anchor Street to Bay Street Proposed Improvements

7.3.5. Segment 1D Parking Lot 3 South

From	To	Proposed Facility	Width	Needed Improvements
Bay Street	Parking Lot 3 North	Bicycle Path	12' 0"'	Shifting parking rows and restriping Path Installation

North of Bay Street, the path splits into two separate facilities for pedestrians and bicyclists. The pedestrian path follows the existing boardwalk to the east and the proposed bicycle path splits to the west along the east boundary of parking lot 3. **Figure 7-12** shows the existing conditions for this lot -two circulation aisles and four rows of 90-degree parking. On the east edge of the lot there is a grass buffer between the edge of asphalt and Richardson's Bay ranging from approximately 4 to 20 feet wide.

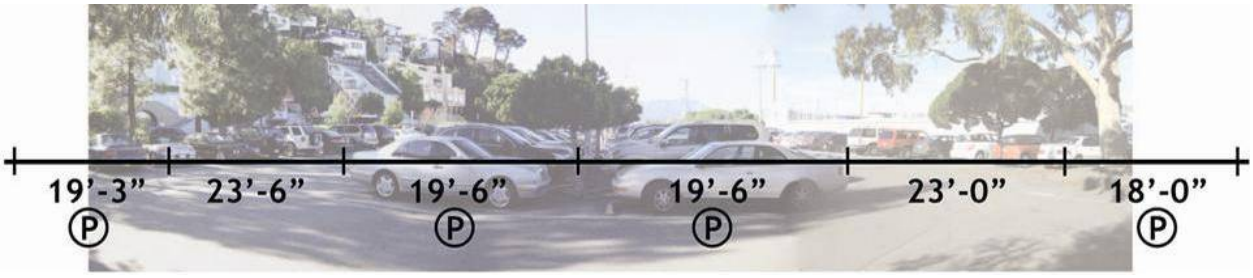

Figure 7-12 Segment 1D Parking Lot 3 South Existing Conditions

The two-way 10 foot bicycle path is recommended for the eastern edge of parking lot 3. To accommodate the path, fill and a new seawall are required along the eastern border of the parking lot, east of the existing parking stalls and west of the boardwalk. **Figure 7-13** shows the proposed cross-section for parking lot 3

south. As Figure 7-3 shows, the parking lot circulation would remain the same with 90-degree parking spaces. However, for the recommended design, County of Marin parking stall dimensions will need to be used.

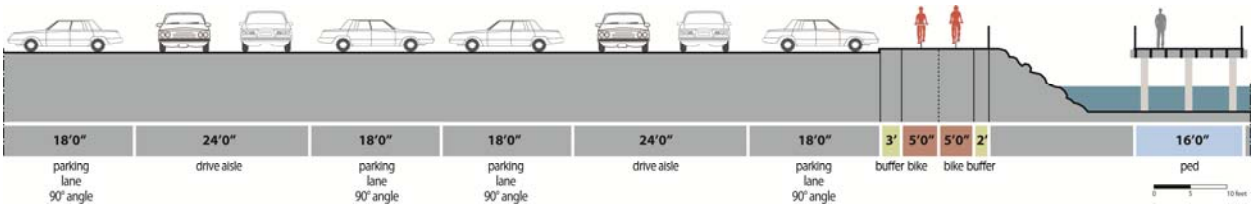

Figure 7-13 Segment 1C Parking Lot 3 South Proposed Improvements

7.3.6. Segment 1E Parking Lot 3 North

From	To	Proposed Facility	Width	Needed Improvements
Parking Lot 3 South	Parking Lot 4 South	Bicycle Path	14' 0"	Shifting parking row and restriping Path Installation

In parking lot 3 north, the recommended bicycle path alignment continues on the east side of the lot between the parking aisle and Richardson's Bay and the pedestrian path continues along the existing boardwalk. **Figure 7-14** shows the existing conditions for this lot, one circulation aisle and two rows of 90-degree parking. On the east edge of the lot there is a grass buffer between the edge of asphalt and Richardson's Bay ranging from approximately 4 to 20 feet wide.

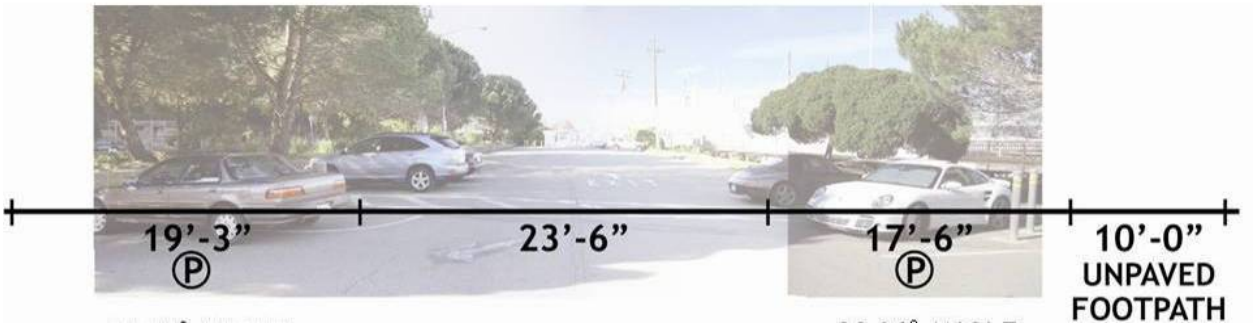

Figure 7-14 Segment 1D Parking Lot 3 North Existing Conditions

As **Figure 7-15** shows, the recommended bike path is 10 feet wide with buffers on both sides. Parking lot 3 north requires fill and a new seawall to create space for the path. As Figure 7-3 shows, the parking lot circulation would remain the same with 90-degree parking spaces. However, for the recommended design County of Marin parking stall dimensions will need to be used.

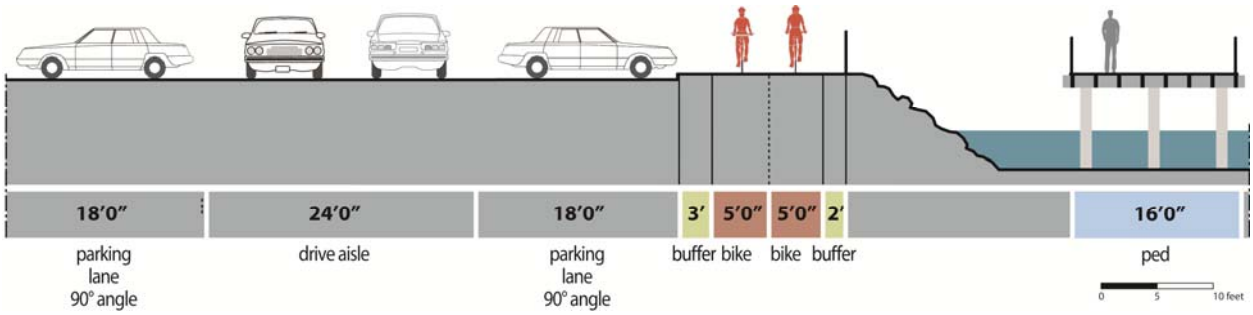

Figure 7-15 Segment 1D Parking Lot 3 North Proposed Improvements

7.3.7. Segment 1F Parking Lot 4 South

From	To	Proposed Facility	Width	Needed Improvements
Parking Lot 3 North	Parking Lot 4 North	Bicycle Path Pedestrian Boardwalk	26' 4"	Widening Boardwalk Parking Lot Restriping

In parking lot 4, the existing pedestrian boardwalk and the proposed bicycle path rejoin and continue north as adjacent parallel facilities. As **Figure 7-16** shows, Parking lot 4 south currently consists of one row of 90-degree parking, two rows of 45-degree angled parking and two drive aisles. On the east side is the existing pedestrian boardwalk.

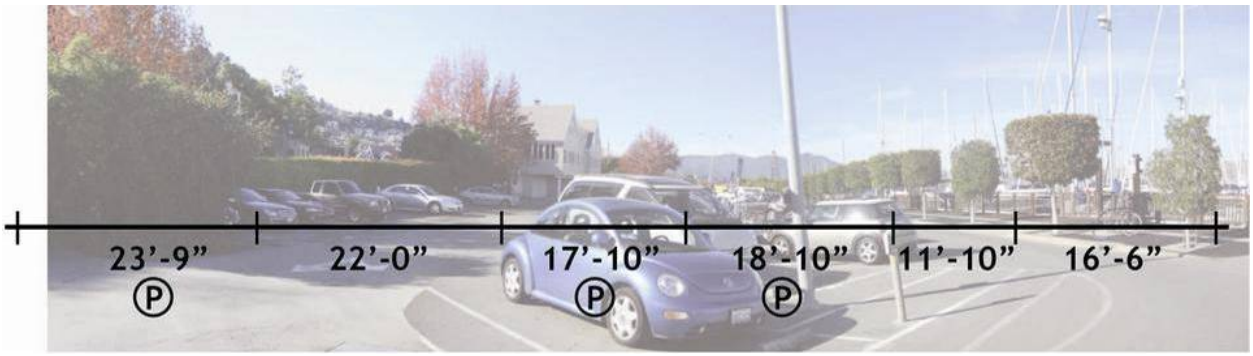

Figure 7-16 Segment 1E Parking Lot 4 South Existing Conditions

As **Figure 7-17** shows, the recommended bicycle and pedestrian paths are on the east side of the parking lot. The existing boardwalk is widened to accommodate an adjacent bicycle path. The recommended bicycle path is 10 feet wide with buffers on both sides. The existing trees and tree wells remain.

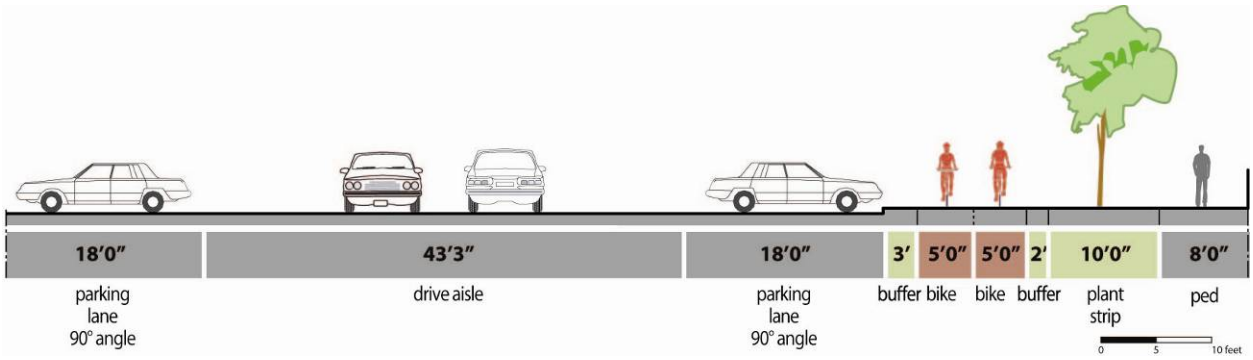

Figure 7-17 Segment 1E Parking Lot 4 South Proposed Improvements

To provide right-of-way for the path, the parking lot will be reconfigured as Figure 7-4 shows, consisting of two 90-degree parking aisles, one drive aisle and the bicycle and pedestrian paths. The bicycle path travels along the existing easterly drive aisle. For the recommended design, County of Marin parking stall dimensions will need to be used.

7.3.8. Segment 1G Parking Lot 4 North

From	To	Proposed Facility	Width	Needed Improvements
Parking Lot 4 South	Johnson Street	Bicycle Path Pedestrian Boardwalk	26' 4"	Widening Boardwalk Parking Lot Restriping

In parking lot 4 north, the existing pedestrian boardwalk and the proposed bicycle path continue north as adjacent parallel facilities. As **Figure 7-18** shows, Parking lot 4 north currently has one row of parallel parking, two rows of 45-degree angled parking and two drive aisles. On the east side is the existing pedestrian boardwalk.

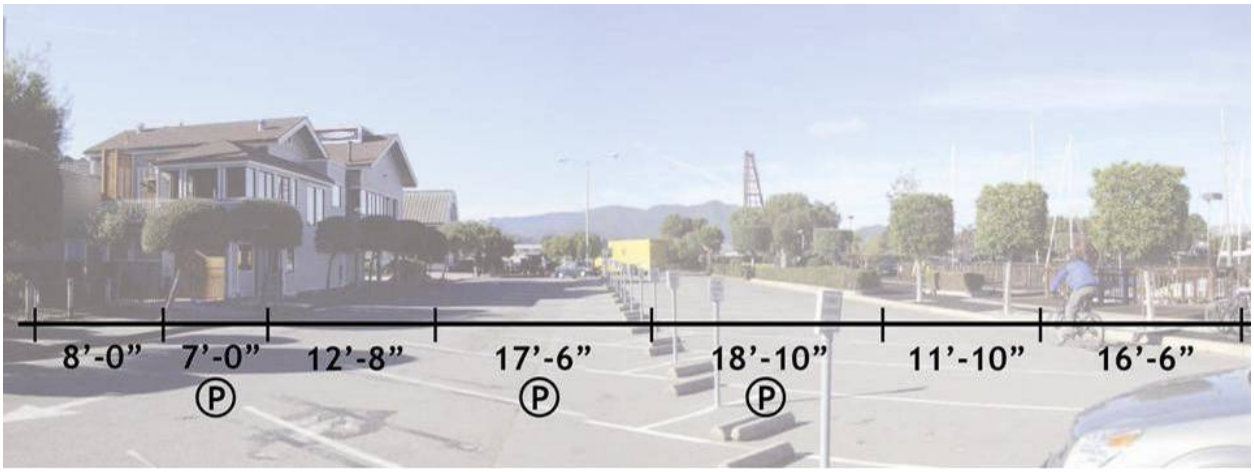

Figure 7-18 Segment 1F Parking Lot 4 North Existing Conditions

As **Figure 7-19** shows, the recommended bicycle and pedestrian paths are on the east side of the parking lot. The existing boardwalk is widened to accommodate an adjacent bicycle path. The recommended bicycle path is 10 feet wide with buffers on both sides. The existing trees and tree wells remain as existing.

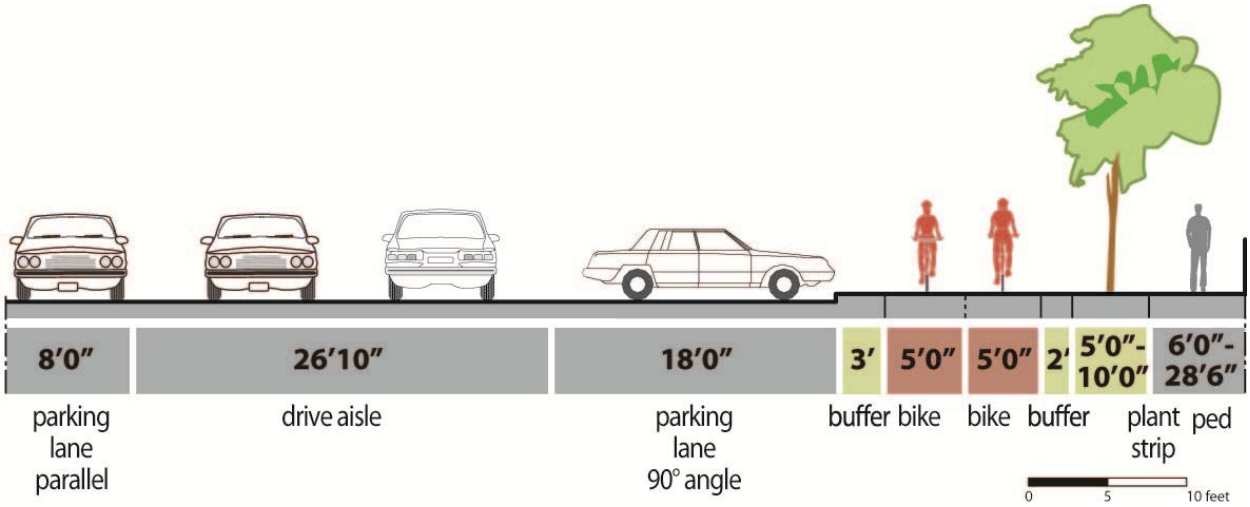

Figure 7-19 Segment 1F Parking Lot 4 North Proposed Improvements

To provide right-of-way for the path, the parking lot will be reconfigured as Figure 7-4 shows, consisting of two 90-degree parking stalls, one drive aisle and the bicycle and pedestrian paths. The bicycle path travels along the existing easterly drive aisle. For the recommended design, County of Marin parking stall dimensions are required.

7.3.9. Segment 1H Johnson Street

From	To	Proposed Facility	Width	Needed Improvements
Parking Lot 4 South/Johnson Street	Bridgeway/Johnson Street	Bicycle Path Pedestrian Boardwalk	15'0"	Raised Crosswalks Path Installation High Visibility Crosswalks

The pedestrian boardwalk and bicycle path transition at Johnson Street where pedestrians cross to the sidewalk on the opposite side of the street and bicyclists ride on the street connecting to Bridgeway. As **Figure 7-20** shows, Johnson Street has two-travel lanes and sidewalks on both sides of the street. The south side of Johnson Street has parallel parking and the north side has 90 degree head-in parking at an adjacent private property.

Figure 7-20 Segment 1G Johnson Street Existing Conditions

Figure 7-4 shows the recommended transition for pedestrians at Johnson Street, crossing a raised crosswalk to the sidewalk on the north side of the street. A multi-use path can be provided on the north side of Johnson Street with some dedication of private property. The existing utility poles limit the feasibility of relocating the existing north curb line. In addition, modification to the existing parking at Sausalito Yacht Harbor building would be required to gain width outside of the existing sidewalk. **Figure 7-21** shows the recommend cross-section of Johnson Street.

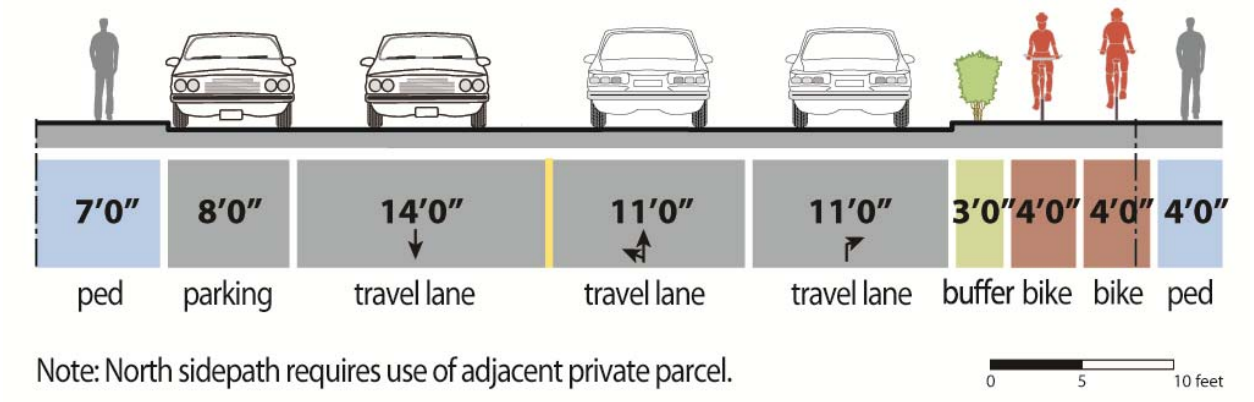

Figure 7-21 Segment 1G Johnson Street Proposed Improvements

7.3.10. Segment 1 Cost Estimate

Table 7-4 presents a cost estimates for the completion of Segment 1 through parking lots 1, 3, and 4. The cost estimate includes all construction, landscaping, and lighting improvements as well as design and permitting.

Table 7-4 Segment 1 Cost Estimate with Intersection A

Item	Cost
Construction Subtotal	$1,040,164
Landscaping & Lighting Subtotal	$124,930
Design and Permitting (15%)	$218,234
Contingency (20%)	$233,019
ROW Acquisition	$422,850 - $563,800
Total Cost	$2,039,200 - $2,180,100

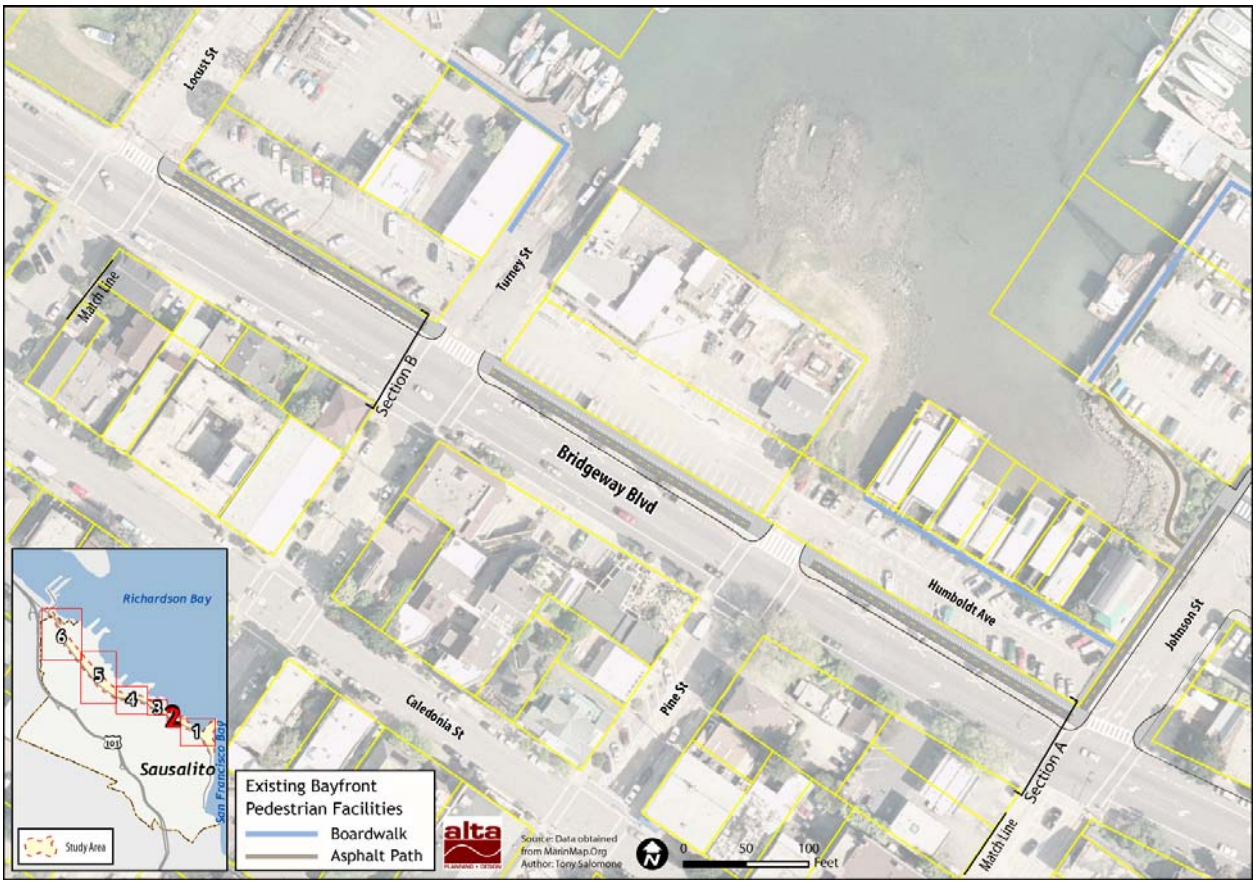

Figure 7-22 Segment 2 Johnson Street to Locust Street

7.4. Segment 2 – Johnson Street to Locust Street

From	To	Proposed Facility	Width	Needed Improvements
Bridgeway/Johnson Street	Bridgeway/Locust Street	Bicycle Path Pedestrian Path	15' 0" – 20'0"	Path Installation High Visibility Crosswalks

Segment 2 extends from the Bridgeway and Johnson Street intersection north to Locust Street. On the east side of Bridgeway the existing right-of-way between the curb line and the property boundaries varies from approximately 15 to 20 feet. This area has an existing sidewalk and parallel substandard bicycle path. West of the existing curb there are parallel parking spaces between the existing sidewalk and the northbound travel lane. **Figure 7-23** shows the existing typical cross-section for this segment.

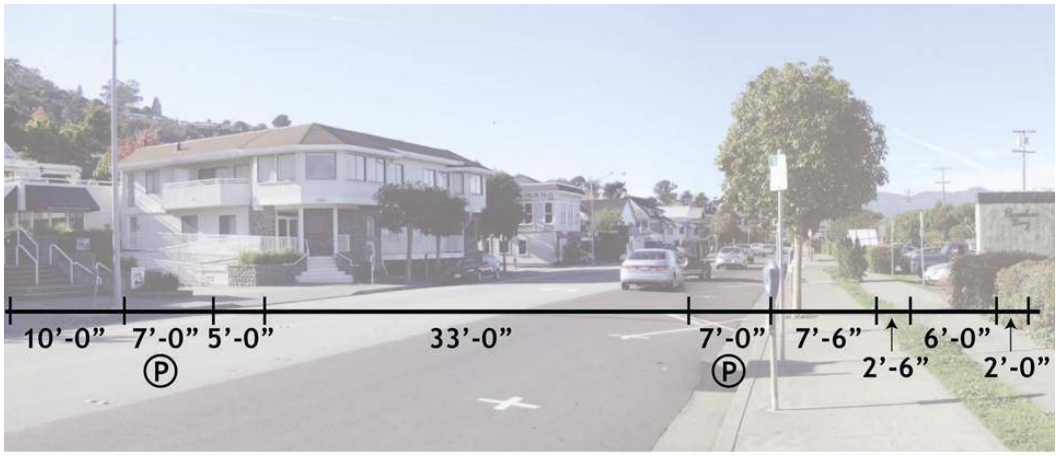

Figure 7-23 Section A Existing Conditions

The proposed path improvement is a separated bicycle and pedestrian path that utilizes all of the right-of-way between the curb line and the property boundaries. The exact cross-section measurements depend on the right-of-way area. Based on parcel data, there is 20 feet of right-of-way width between Johnson Street and Turney Street.[7] As **Figure 7-24** shows, this cross-section includes street trees and a buffer between the bicycle and pedestrian paths. For the remainder of Segment 2, from Turney Street to Locust Street, there is 15 feet of right-of-way and allows a three foot buffer from Bridgeway with the bicycle and pedestrians paths adjacent to one another. This proposed cross-section is in **Figure 7-25**.

[7] Parcel and property line information collected from Marin Map: http://mmgis.marinmap.org/dnn4/

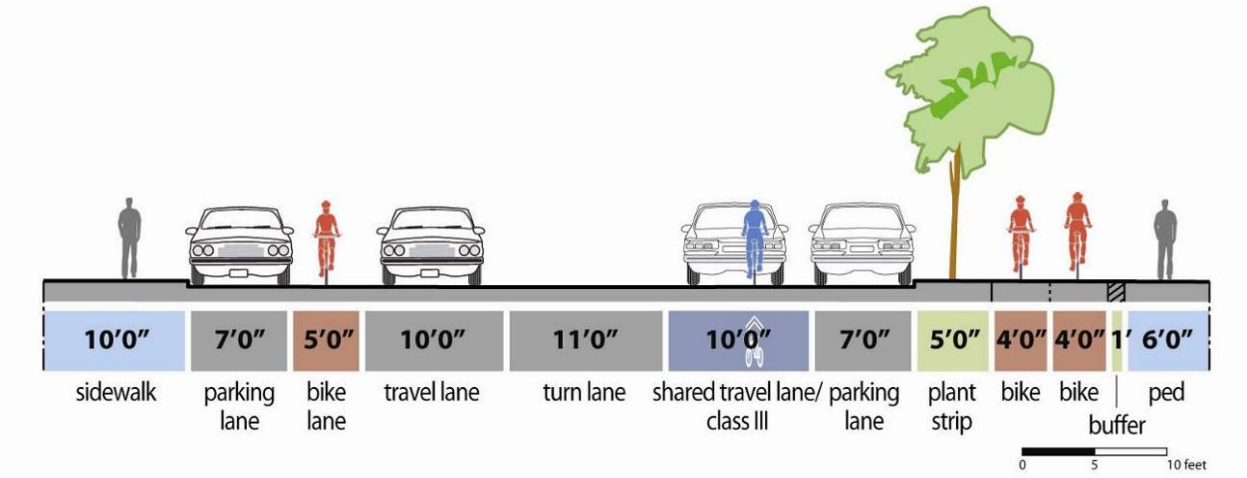

Figure 7-24 Section A Proposed Improvements

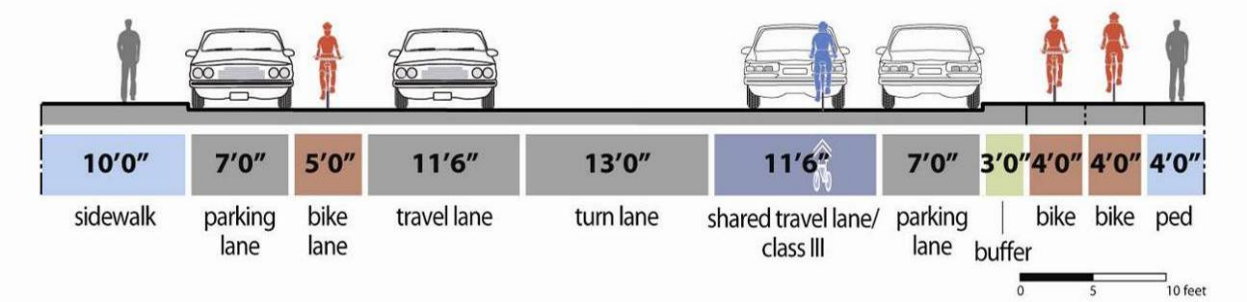

Figure 7-25 Section B Proposed Improvements

Between Johnson Street and Locust Street there is a gap in the existing northbound Bridgeway Class II bicycle lane. There is not adequate width for the lane given the existing parking lane and travel lane dimensions. Adding shared lane markings to the northbound travel lane is recommended, making this gap a Class III bicycle route. This would allow the parking to stay in place and alert motorists of bicyclists' presence in the shared lane. Figure 7-24 and Figure 7-25 show these improvements.

7.4.1. Segment 2 Cost Estimate

Table 7-5 presents the cost estimate for Segment 2, from Johnson Street to Locust Street. The cost estimate includes all construction, landscaping, and lighting improvements as well as design and permitting. Construction costs include the shared lane markings on Bridgeway.

Table 7-5 Segment 2 Cost Estimate

Item	Cost
Construction Subtotal	$227,356
Landscaping & Lighting Subtotal	$53,065
Design and Permitting (15%)	$42,063
Contingency (20%)	$56,084
Total Cost	$378,600

Figure 7-26 Segment 3 Locust Street to Napa Street

7.5. Segment 3 – Locust Street to Napa Street

From	To	Proposed Facility	Width	Needed Improvements
Bridgeway/Locust Street	Existing Path/ Napa Street	Bicycle Path Pedestrian Path	20'0"	Path Installation High Visibility Crosswalks

Segment 3 extends from the Bridgeway and Locust Street intersection north to Napa Street. On the east side of Bridgeway the existing right-of-way between the curb line and the property boundaries is approximately 15 feet between Locust Street and Litho Street. Like Segment 2, this portion of Segment 3 has on-street parallel parking on the east side of Bridgeway without northbound bicycle lanes, but an existing wide sidewalk.

Design of the pathway cross section at Dunphy Park will ultimately depend on how automobile parking is configured for this park. The former railroad right-of-way was purchased by the City of Sausalito to serve as a parking area for Dunphy Park and could be designed so as to buffer the proposed path from Bridgeway.

On Bridgeway north of Litho Street, there are Class II bicycle lanes in both travel directions and no on-street parking in the northbound direction. North of Locust Street and adjacent to Bridgeway is an undeveloped private parcel and an undeveloped public parcel. Dunphy Park is north of Litho Street and east of the existing sidewalk. The width of available publicly-owned right-of-way between the Bridgeway curb and Dunphy Park is approximately 20 feet and more in some areas. **Figure 7-27** shows the existing conditions on Bridgeway adjacent to Dunphy Park.

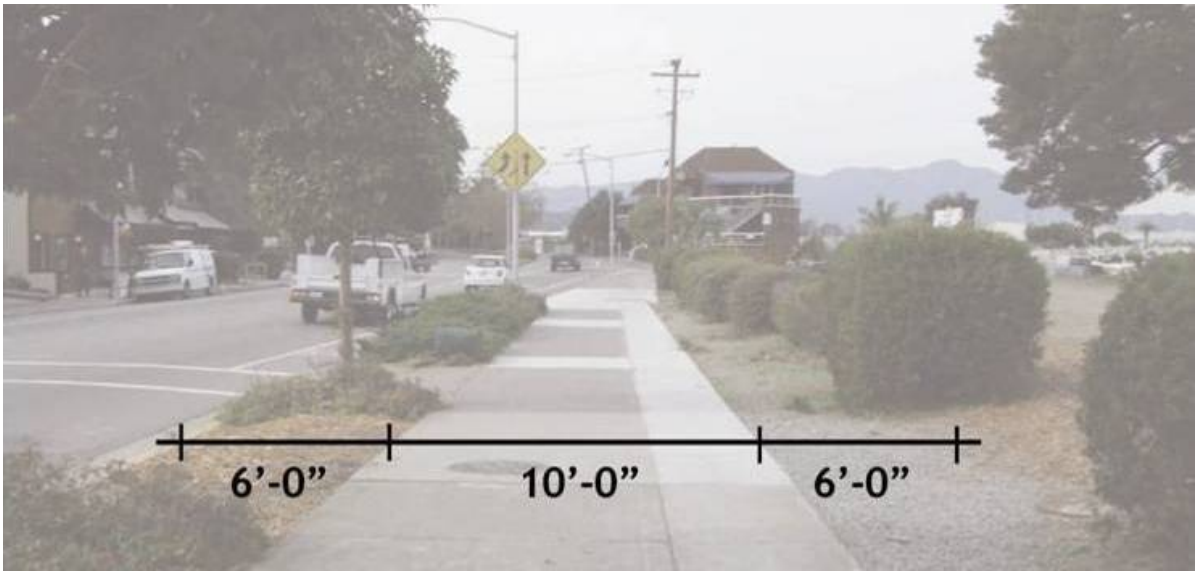

Figure 7-27 Section C Existing Conditions

The proposed path improvement is a separated bicycle and pedestrian path that utilizes all of the right-of-way between the curb line and the property boundaries. The exact cross-section measurements depend on the

right-of-way area. Based on parcel data, there is 15 to 20 feet of width between Locust Street and Litho Street.[8] Where the available right-of-way is less than 20 feet, required width to develop the path would come from city property at Dunphy Park and from condition of development at the undeveloped private parcel. This cross-section includes a five foot buffer from Bridgeway with the bicycle and pedestrians paths adjacent to one another.

Like Segment 2, a shared lane is recommended to improve the bicycle lane gap on this block. The shared lane markings are proposed for the northbound travel lane, making this gap a Class III bicycle route as **Figure 7-28** shows. This would allow the parking to stay in place and alert motorists of bicyclists' presence in the shared lane.

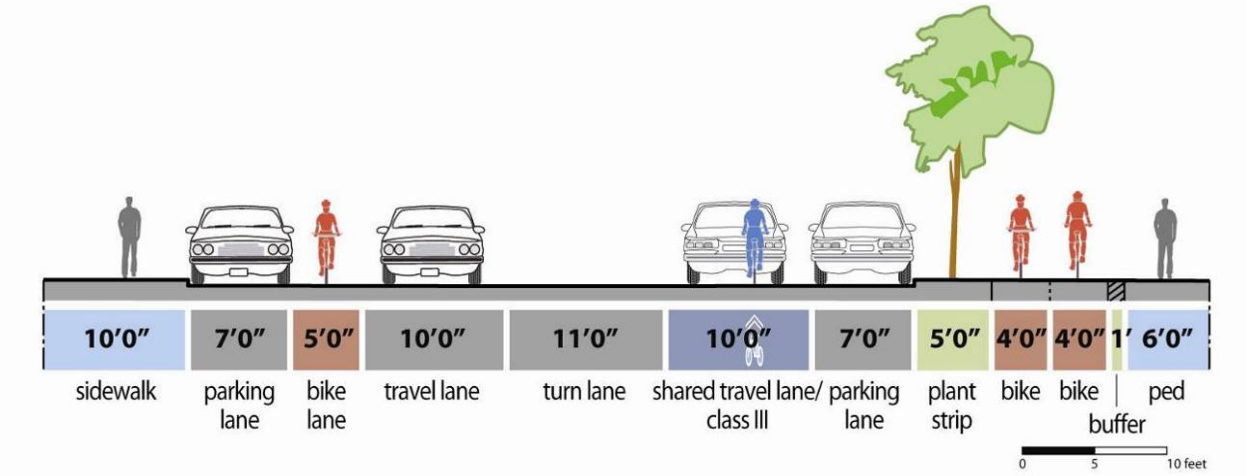

Figure 7-28 Section A Proposed Improvements

North of Litho Street there is 20 feet of right-of-way available between the existing curb line and Dunphy Park. This cross-section includes street trees and a buffer between the bicycle and pedestrian paths. **Figure 7-30** shows this cross-section. The path then transitions to the existing path north of Napa Street. **Figure 7-31** shows improvements for this path crossing. The easterly dogleg allows for a pedestrian connection from the west side of Bridgeway. The path shift at Napa Street meets the parking lot layout needs of the Dunphy Park site plan.[9]

[8] Parcel and property line information collected from Marin Map: http://mmgis.marinmap.org/dnn4/

[9] The Dunphy Park site plan is not approved by Sausalito City Council

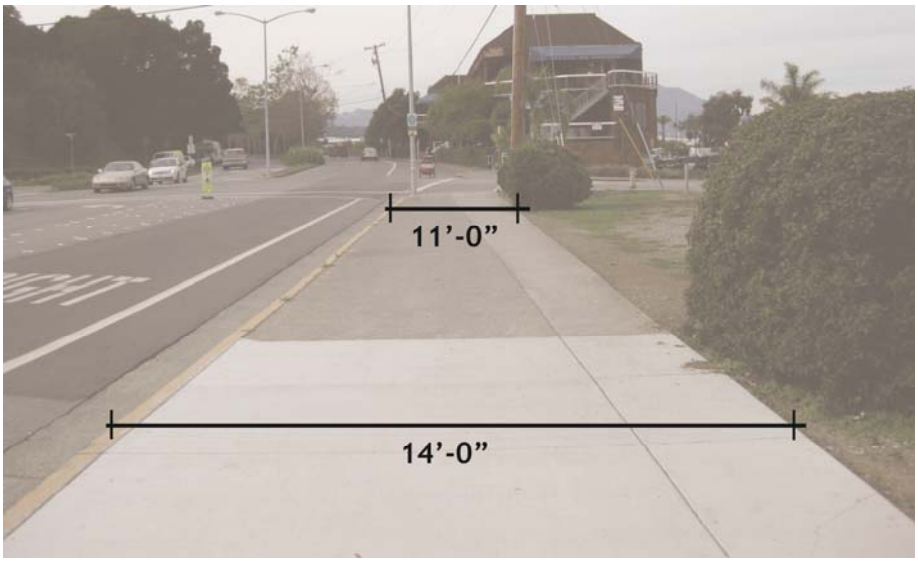

Figure 7-29: Section C Existing Conditions

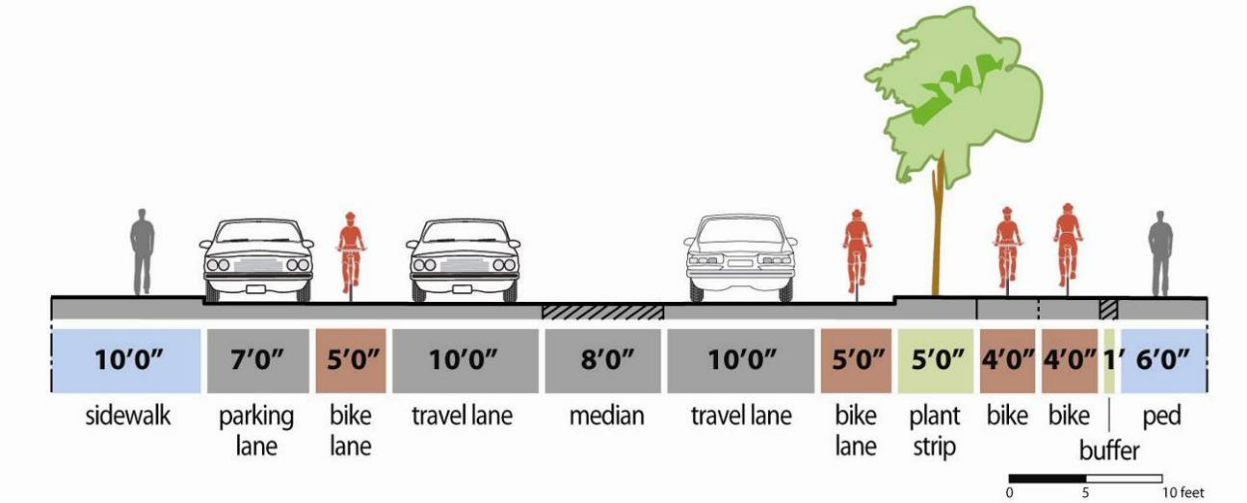

Figure 7-30 Section C Proposed Improvements

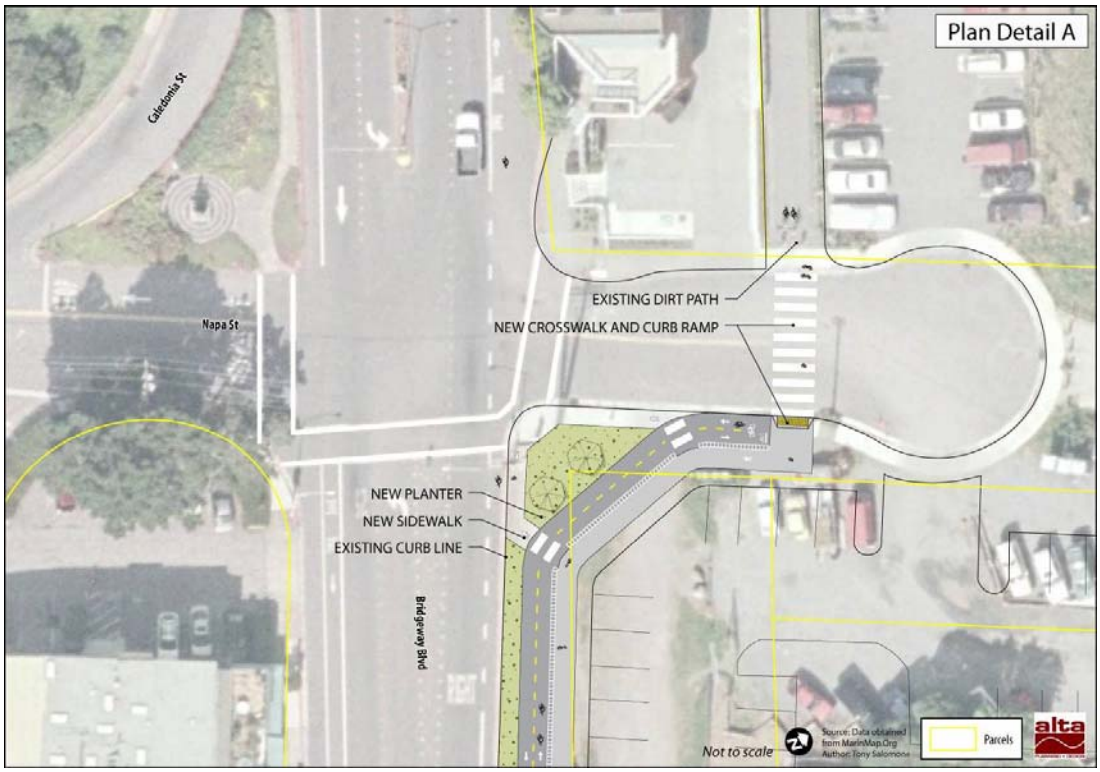

Figure 7-31 Napa Street Intersection

7.5.1. Segment 3 Cost Estimate

Table 7-6 presents the cost estimate for the completion of Segment 3, from Locust Street to Napa Street. The cost estimate includes all construction, landscaping, and lighting improvements as well as design and permitting. Construction costs include modifications to the Dunphy Park parking lot.

Table 7-6 Segment 3 Cost Estimate

Item	Cost
Construction Subtotal	$239,184
Landscaping & Lighting Subtotal	$69,870
Design and Permitting (15%)	$46,358
Contingency (20%)	$61,811
Total Cost	$417,200

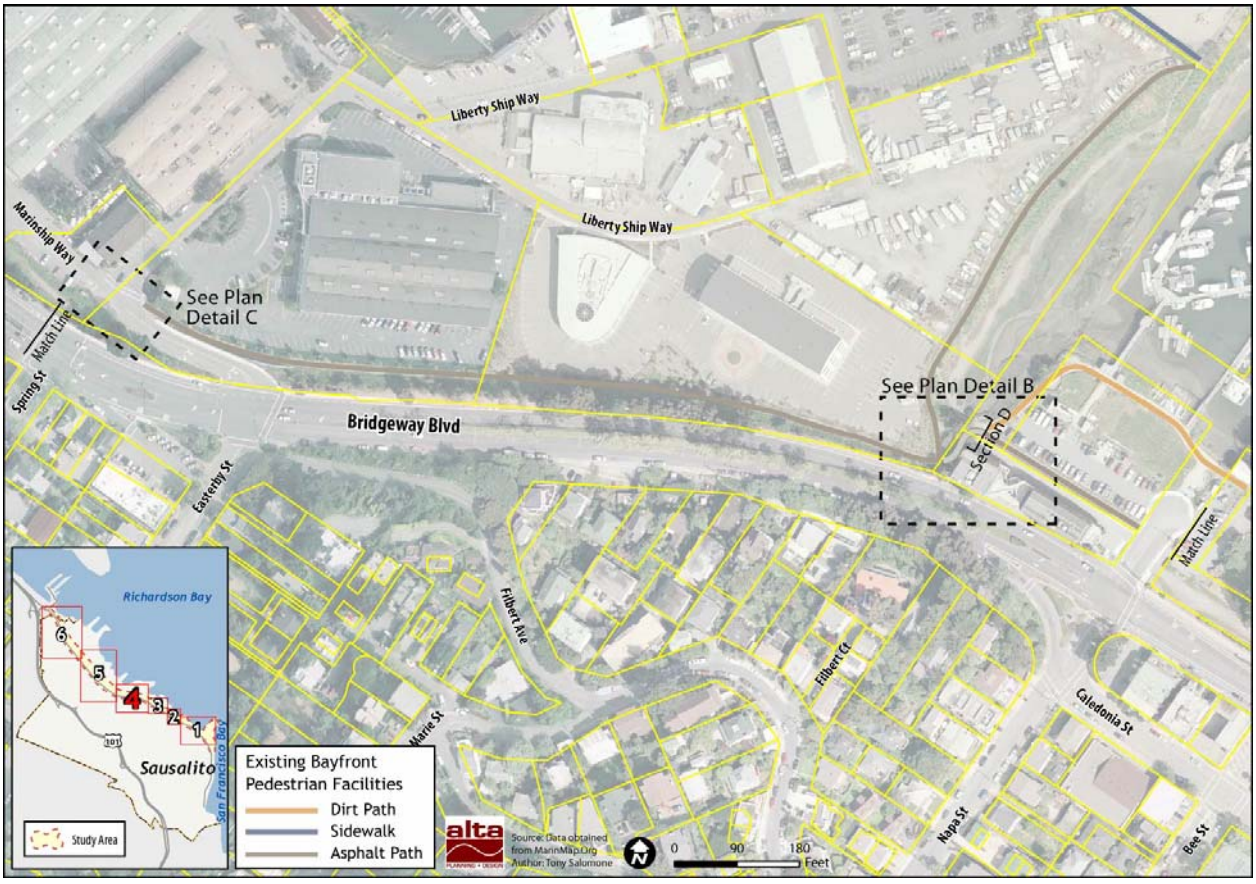

Figure 7-32 Segment 4 Napa Street to Marinship Way

7.6. Segment 4 – Napa Street to Liberty Ship Way

From	To	Proposed Facility	Width	Needed Improvements
Existing Path/ Napa Street	Marinship Way/Liberty Ship Way Intersection	Multi-Use Path	10'0"	Path Installation

Segment 4 extends from Napa Street to the Marinship Way and Liberty Ship Way intersection. There is an existing paved bike path 8 feet 6 inches to 10 feet wide. The only required path improvement along this section is to pave the existing decomposed granite segment at Mono Street. **Figure 7-33** shows the existing conditions, **Figure 7-34** shows the proposed cross-section for improvement, and **Figure 7-35** shows a plan view of the location. When this connection is developed, the project should include elements to facilitate pedestrian connections to the Shoreline Trail.

Figure 7-33 Section D Existing Conditions

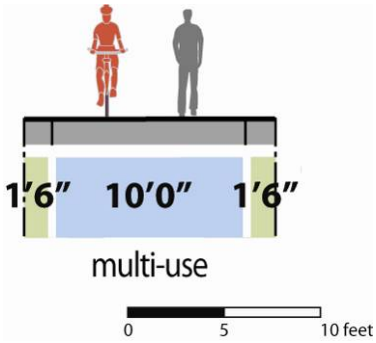

Figure 7-34 Section D Proposed Improvements

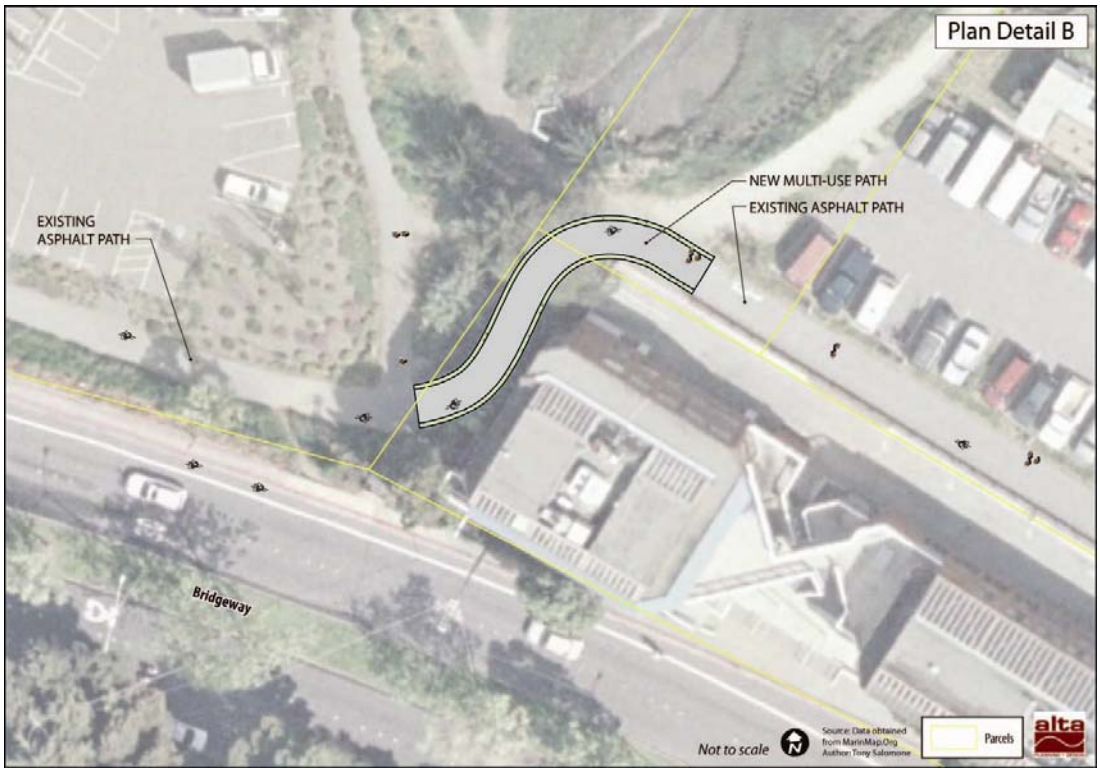

Figure 7-35 Mono Street improvement

Segment 4 also has a bike lane gap on Bridgeway in the southbound direction. The gap is between Easterby Street and Napa Street where there are two vehicle travel lanes in each direction, a median, and a parking lane on the southbound side of the street. Bridgeway is bound by a hill on both sides, constricting the available right-of-way. There is not adequate right-of-way in this segment for bicycle lanes due to the topographic constraints. Shared lane markings are recommended for this southbound section of Segment 4.

The existing Marinship Way and Liberty Ship Way intersection is complicated for bicyclists and pedestrians wishing to cross either street from the existing path. The ramp portion of Marinship Way allows motorists to travel at high speeds from Bridgeway to the intersection. **Figure 7-36** shows the improvements for this intersection. A small pork chop island is recommended to slow and channelize vehicle traffic making the right-turn movement from Marinship Way to Liberty Ship Way as well as to provide a refuge for path users. High visibility crosswalks are recommended at the intersection to alert motorists of bicyclists and pedestrians using the path.

Figure 7-36 Marinship Way and Liberty Ship Way Intersection

7.6.1. Segment 4 Cost Estimate

Table 7-7 presents the cost estimate for the completion of Segment 4, from Napa Street to Liberty Ship Way. The cost estimate includes all construction, landscaping, and lighting improvements as well as design and permitting.

Table 7-7 Segment 4 Cost Estimate

Item	Cost
Construction Subtotal	$17,329
Landscaping & Lighting Subtotal	$9,275
Design and Permitting (15%)	$3,991
Contingency (20%)	$5,321
ROW Acquisition	$111,750 - $149,000
Total Cost	$147,700- $184,900

Figure 7-37 Segment 5 Liberty Ship Way to Harbor Drive

7.7. Segment 5 – Liberty Ship Way to Harbor Drive

From	To	Proposed Facility	Width	Needed Improvements
Marinship Way/Liberty Ship Way Intersection	Harbor Drive	Bicycle Path Pedestrian Path	13'0" 5'0"	Path Installation High Visibility Crosswalks

Segment 5 extends from the Marinship Way and Liberty Ship Way intersection north to Harbor Drive. This segment is in the Marinship District of Sausalito where Marinship Way and the parcels are privately owned. On the south end of this segment, west of Marinship Way and east of Bridgeway, there is an informal dirt path along the former railroad right-of-way. **Figure 7-38** shows this parcel as well as the Marinship Way road dimensions on the south end of the segment. To the north of this segment, there are parking lots serving private properties abutting the hillside. There are also storage parcels and privately owned buildings. Through Segment 5, Marinship Way is two lanes with two sidewalk segments on the east side - north of Testa Street and west of Molly Stone's Grocery Store.

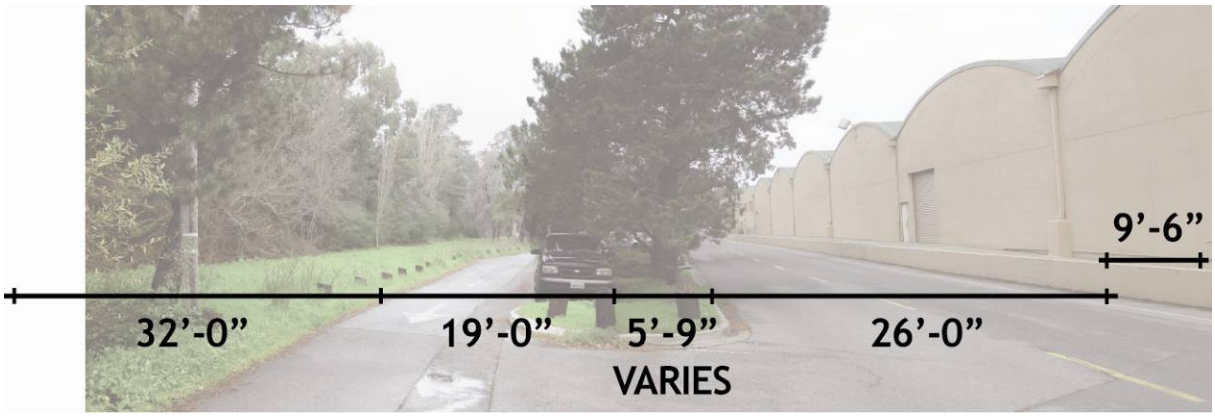

Figure 7-38 Section E Existing Conditions

The recommended alignment for the path is at the base of the slope immediately adjacent to and east of Bridgeway. The recommend path alignment impacts twelve private parcels and one public parcel. As **Figure 7-39** shows, bicycle improvements are recommended on the west side of Marinship Way with a dedicated path and pedestrian improvements are recommended for the east side of Marinship Way with a new continuous sidewalk. As **Figure 7-40** shows, the bicycle path reconnects with Bridgeway and the sidewalk south of 2400 Bridgeway. Due to narrow right-of-way and two utility poles at this transition point, the pedestrian path is on the inside, adjacent to Bridgeway, before transitioning to the outside of the path north of Harbor Drive. **Figure 7-41** shows the proposed cross-section for this section and as **Figure 7-42** shows, for accommodating bicyclists and pedestrians across the Harbor Drive intersection, a high-visibility crosswalk is recommended.

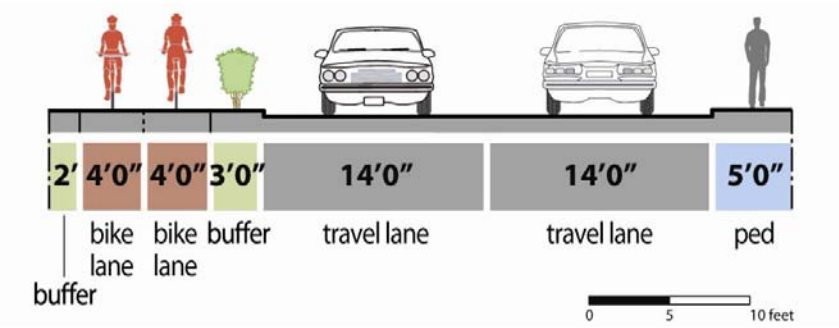

Figure 7-39 Section E Proposed Improvements

Figure 7-40 Marinship – Bridgeway Path Connection

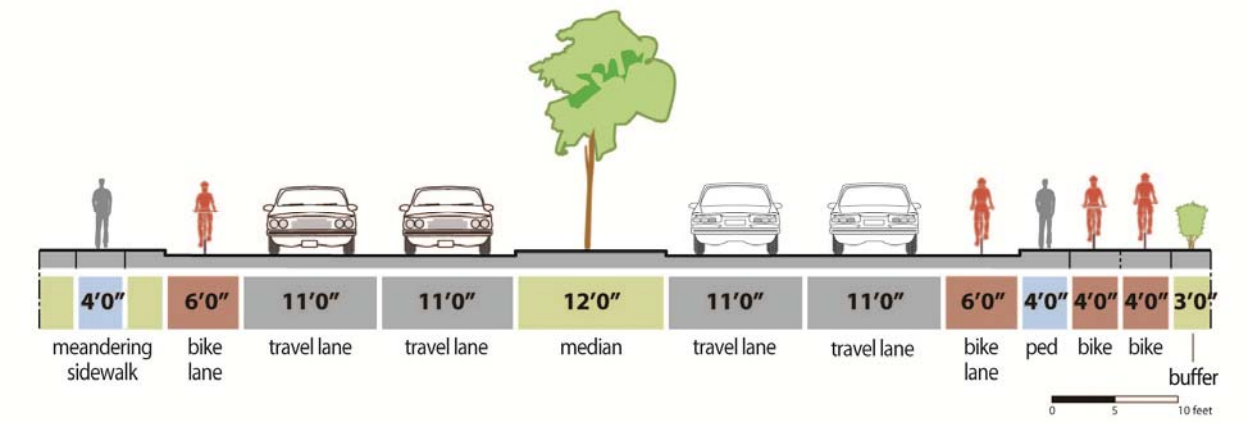

Figure 7-41 Section F Proposed Improvements

Figure 7-42 Harbor Drive Intersection

The recommended path alignment in Segment 5 impacts 12 private properties in the Marinship District. As **Table 7-8** shows, a total of approximately 0.5 acres total is needed from these parcels for the development of the path. The path alignment may also impact the existing parking lot at 2400 Bridgeway, the location where the path transitions back to Bridgeway. For the south section of Segment 5, the bicycle path is on the slope adjacent to Bridgeway. To accommodate the bicycle path, a retaining wall is needed. The path has to be elevated to not impact the hillside building supports of 2200 Bridgeway.

Table 7-8 Approximate Property Requirements for Path through the Marinship District

Parcel Number*	Path Width (ft)	Area (sf)	Area (ac)
063-100-01	12	1,787	0.04
063-100-10	12	2,518	0.06
063-100-11	12	2,494	0.06
063-110-01	12	2,229	0.05
063-110-12	12	1,491	0.03
Public Parcel	12	555	0.01
063-110-09	12	1,127	0.03
063-110-31	12	2,284	0.05
063-110-27	12	2,083	0.05
063-110-28	12	337	0.01
063-120-01	12	4,852	0.11
063-120-02	12 to 14	1,202	0.03
063-130-01	9	797	0.02
Total		23,756	0.55

*Parcel Maps are in Appendix A of this Study

7.7.1. Segment 5 Cost Estimate

Table 7-9 presents the cost estimate for the completion of Segment 5, from Liberty Ship Way Street to Harbor Drive. The cost estimate includes all construction, landscaping, and lighting improvements as well as design and permitting. This cost estimate includes the hillside path and the transition to and continuation along Bridgeway.

Table 7-9 Segment 5 Cost Estimate

Item	Cost
Construction Subtotal	$1,189,330
Landscaping & Lighting Subtotal	$182,740
Design and Permitting (15%)	$205,811
Contingency (20%)	$274,414
ROW Acquisition	$2,415,300 - $3,220,400
Total Cost	$6,437,700 - $7,966,100

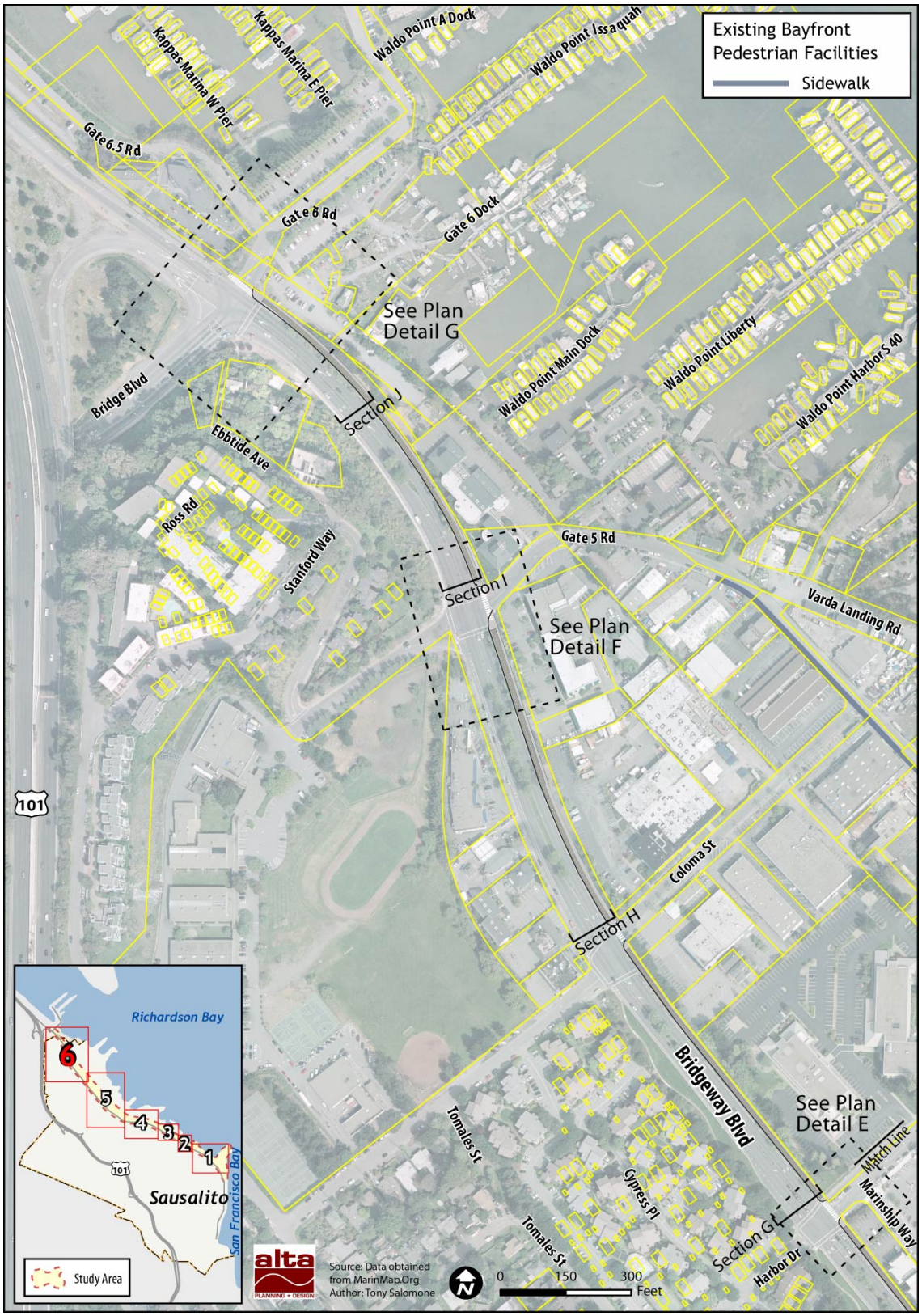

Figure 7-43 Segment 6 Harbor Drive to Gate 6 Road

7.8. Segment 6 – Harbor Drive to Gate 6 Road

From	To	Proposed Facility	Width	Needed Improvements
Harbor Drive	Gate 6 Road	Bicycle Path Pedestrian Path	15'0" 20' 0"	Path Installation High Visibility Crosswalks Bike Signal

Segment 6 extends from Harbor Drive to Gate 6 Road and the Mill-Valley Sausalito Path on Bridgeway. On the east side of Bridgeway, the existing right-of-way between the curb line and the property boundaries range from 15 feet to more than 20 feet. **Figure 7-44**, **Figure 7-45, and Figure 7-46** show the existing sidewalk/path and the available public right-of-way. This segment of Bridgeway has four travel lanes, a center median and bicycle lanes. The existing sidewalk/path has trees adjacent to or in the middle of the path.

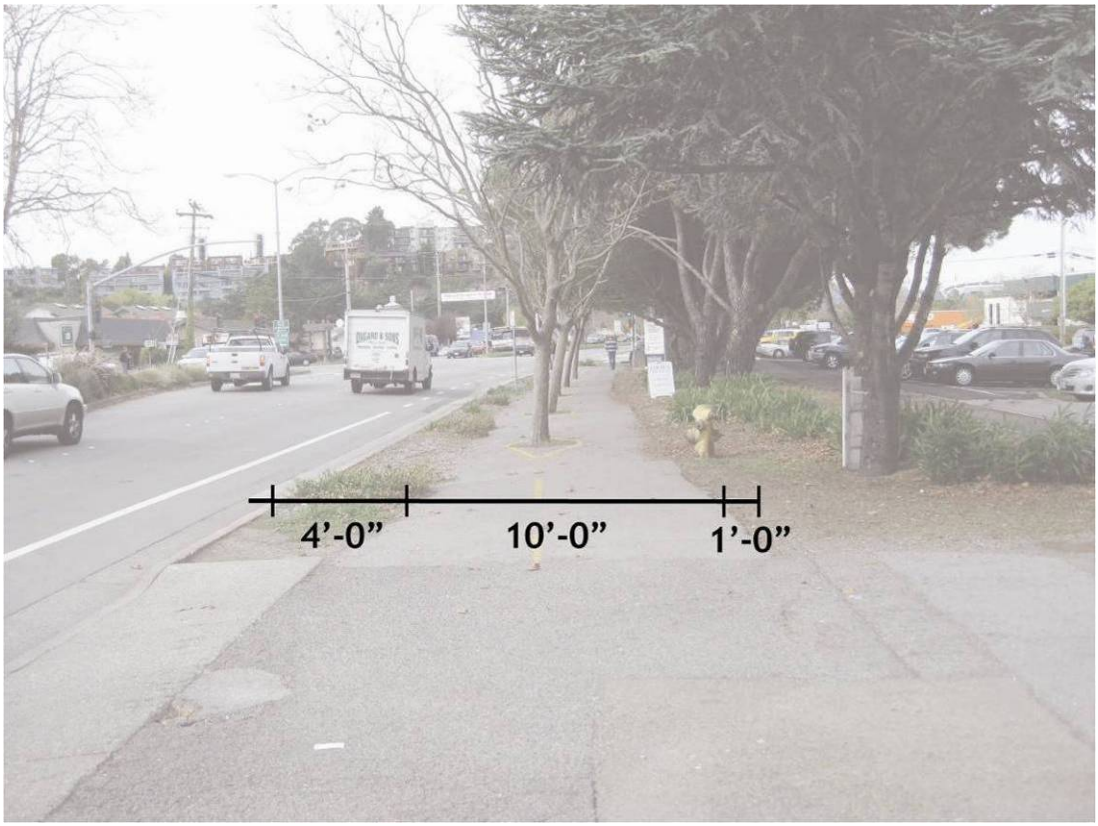

Figure 7-44 Section G Existing Conditions

Figure 7-45 Section H Existing Conditions

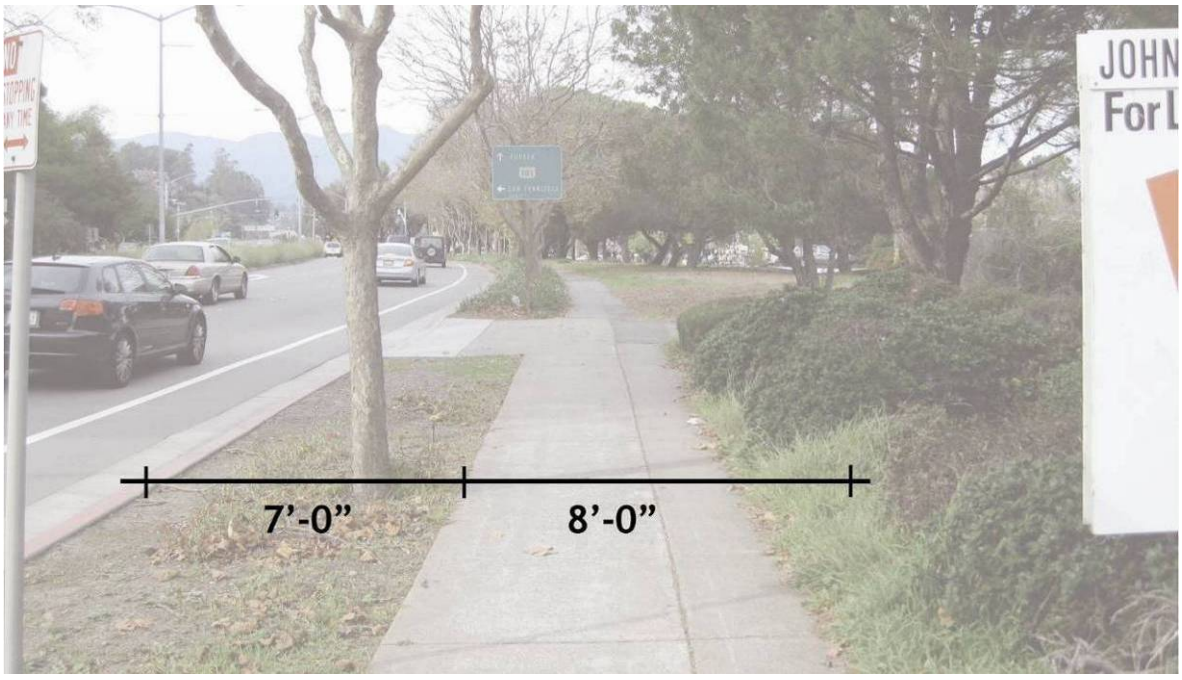

Figure 7-46 Section I and J Existing Conditions

The recommended path is located on the east side of Bridgeway following the alignment of the existing sidewalk. As **Figure 7-47**, **Figure 7-48**, **Figure 7-49** and **Figure 7-50** show, the proposed path improvement is a separated bicycle and pedestrian path that utilizes all of the right-of-way between the curb line and the property boundaries if there is less than 20 feet. If there is more than 20 feet of right-of-way available, a 20 foot cross-section is proposed.

As illustrated in the proposed cross sections, removal of approximately 40 to 60 existing trees along the east side of Bridgeway is required to accommodate the proposed pathway between Harbor Drive and Gate 6 Road. The three foot wide landscape buffer proposed in Section G **(Figure 7-47)** and Section I **(Figure 7-49)** is not wide enough to support healthy street trees, thus tree removal would have to be mitigated offsite. In the proposed design, approximately 24 trees can be planted at 25-feet on-center along Section H between Coloma Street and Gate 5 Road, shown in **Figure 7-48.** Approximately 18 trees can be planted 25-feet on-center in Section J, shown in **Figure 7-50**. This on-site replacement will provide for restoration of approximately 50 trees in the landscape strip between the proposed pathway and Bridgeway.

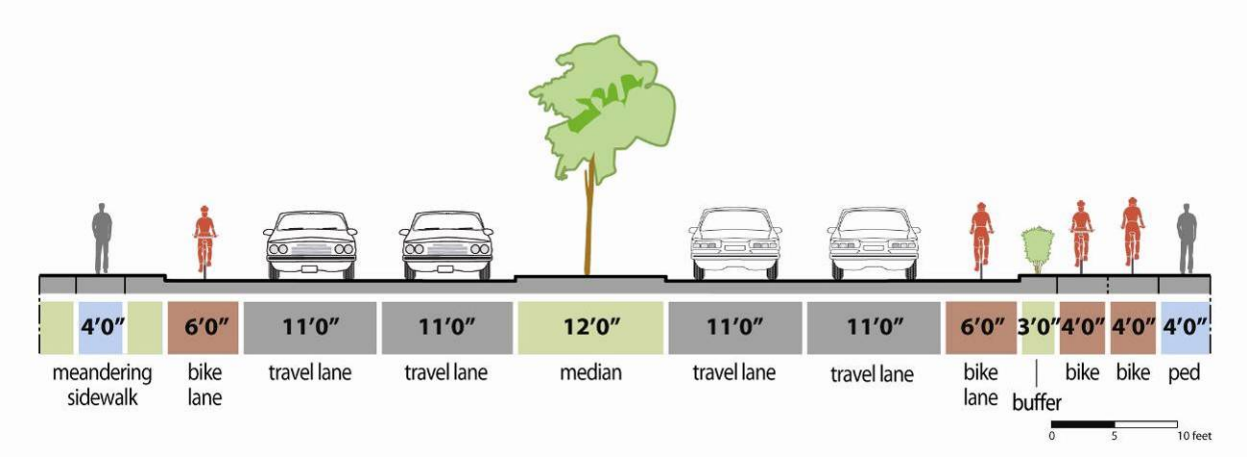

Figure 7-47 Section G Proposed Improvement

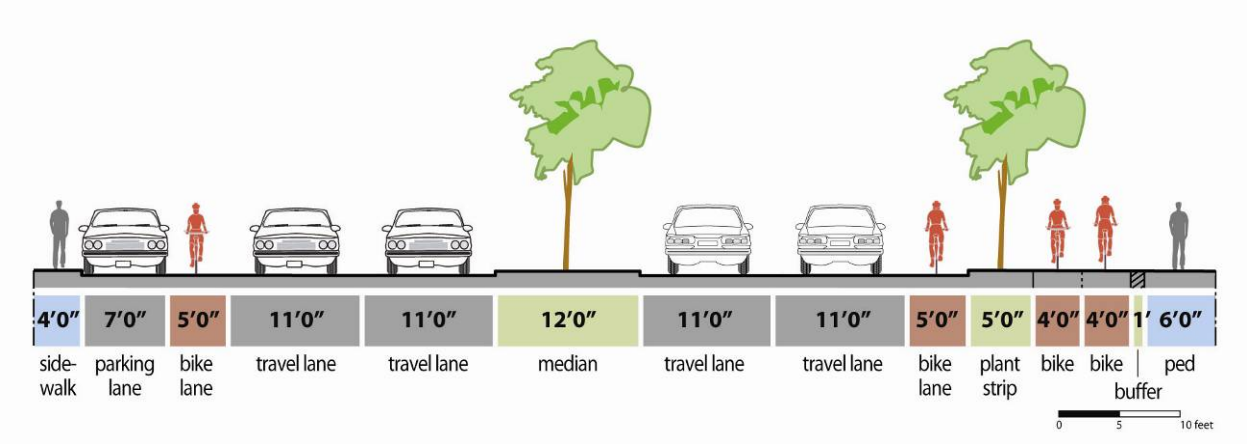

Figure 7-48 Section H Proposed Improvements

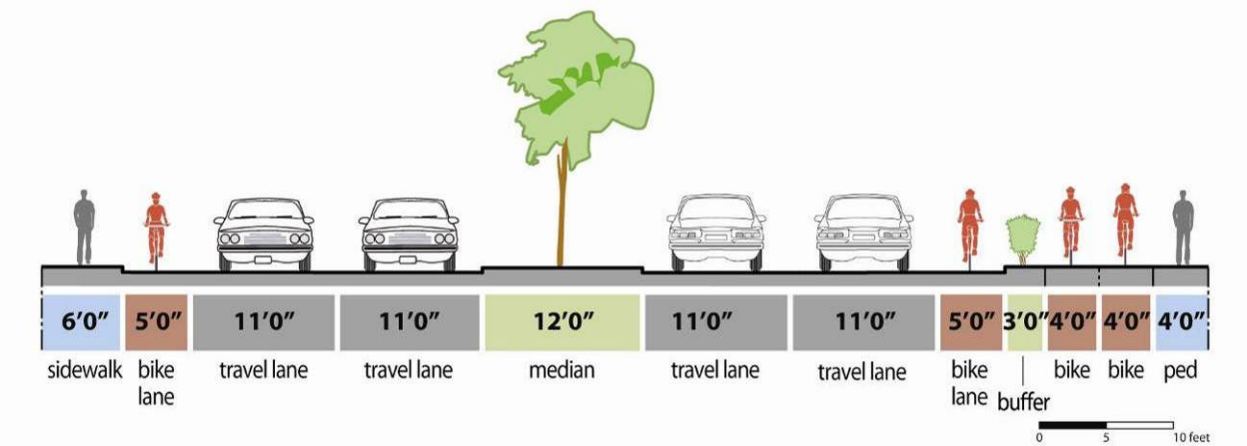

Figure 7-49 Section I Proposed Improvements

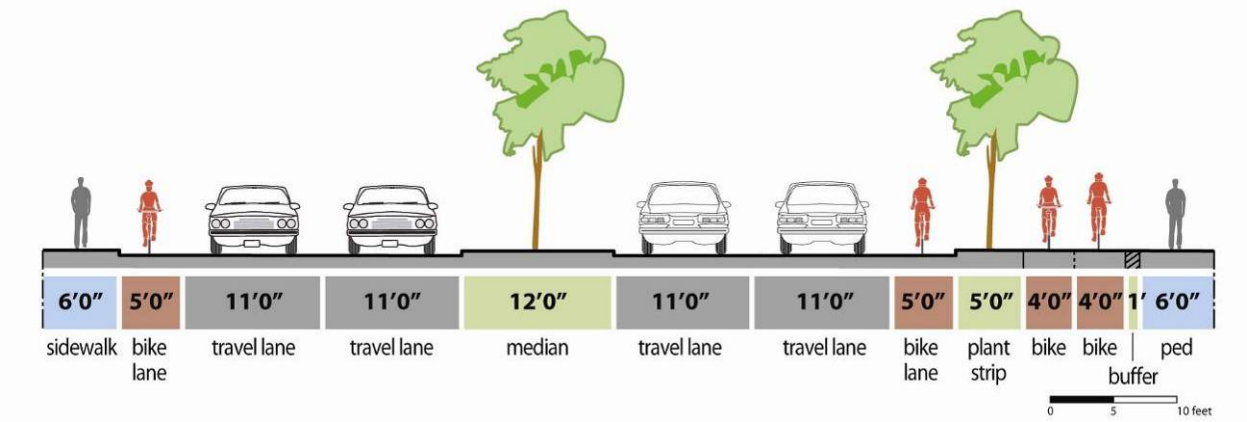

Figure 7-50 Section J Proposed Improvements

7.8.1. Gate 5 Road

The Bridgeway and Gate 5 Road intersection has an existing traffic signal and a pork-chop island on Gate 5 Road separating right turning vehicles from the left-through lane. Improvements are recommended for this intersection to provide a crossing point for bicyclists using the path in the southbound direction and connecting to the southbound Bridgeway bicycle lanes. **Figure 7-51** presents these improvements- stop controlling the right turning vehicles, not permitting right on red traffic movements, a high-visibility crosswalk, and a dedicated bicycle signal. These are all recommended if improvements described in the following section for Gate 6 Road are not achievable by the City, County, and Caltrans. To install the bicycle signal at Gate 5 Road, the City must determine if there is adequate signal time available for a dedicated bicycle and pedestrian phase. With a bicycle signal at Gate 5 Road, the existing bicycle lanes on Bridgeway would remain in both directions.

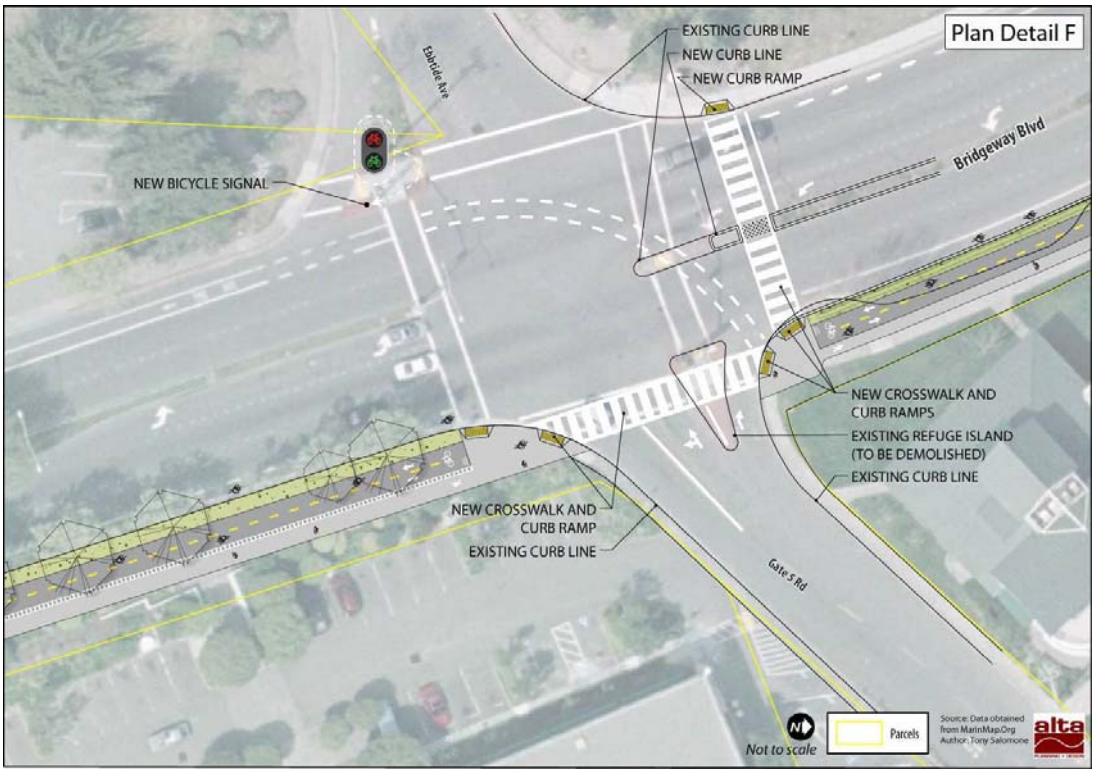

Figure 7-51 Gate 5 Road Intersection Improvement Option - Bike Signal

7.8.2. Gate 6 Road

The Bridgeway and Gate 6 Road intersection is a complex intersection and an important link for the overall success of the proposed path. This is the point of entry into Sausalito for bicyclists and pedestrians travelling south from the Mill Valley-Sausalito Path. Caltrans, the County of Marin and the City of Sausalito operate the Bridgeway and Gate 6 Road intersection. There are a series of different options in **Figure 7-52**, **Figure 7-53**, **Figure 7-54**, and **Figure 7-55** that could improve this intersection for bicyclists and pedestrians. The differences between these four options are in **Table 7-10**. With all of these options, right turns on red signals would not be permitted.

Table 7-10 Gate 6 Road Intersection Improvement Options

Option	Name	Improvements
A	Gate 6 ½ Road Connection	• Mill Valley-Sausalito Path Connection to Gate 6 ½ Road north of Shopping Plaza • Gate 6 ½ Road Shared Lane Markings
B	Bike Signal	• Dedicated Bicycle and Pedestrian Signal Phase • Bicycle Signal for southbound bicyclists exiting the path and entering Bridgeway bicycle lanes
C	Gate 6 Road Path Improvement	• Improve Gate 6 Road Path • Stop lines and stop bars on path and Gate 6 ½ Road intersection
D	Bike Box	• Bike box on east leg in advance of vehicle travel lanes

This Study recommends the installation of a bicycle signal. This device is approved by the CA MUTCD and based on a qualitative review of the intersection it would provide the most benefit for bicyclists in comparison to the other options. The three jurisdictions must determine if there is adequate time in the signal phasing to allow a dedicated bicycle and pedestrian phase.

For the Gate 6 Road improvements to occur, the City, County of Marin, and Caltrans must work together in developing the solution. However, if improvements are not possible at the Bridgeway and Gate 6 Road intersection, a bicycle signal is recommended for the Gate 5 Road intersection as shown in Figure 7-51. The Gate 6 Road intersection is preferable because bicyclists wishing to use the southbound bicycle lanes will either ride on the recommended path where there will be a slower design speed than the Bridgeway bicycle lanes or cross as they do under the existing conditions at Gate 6 Road.

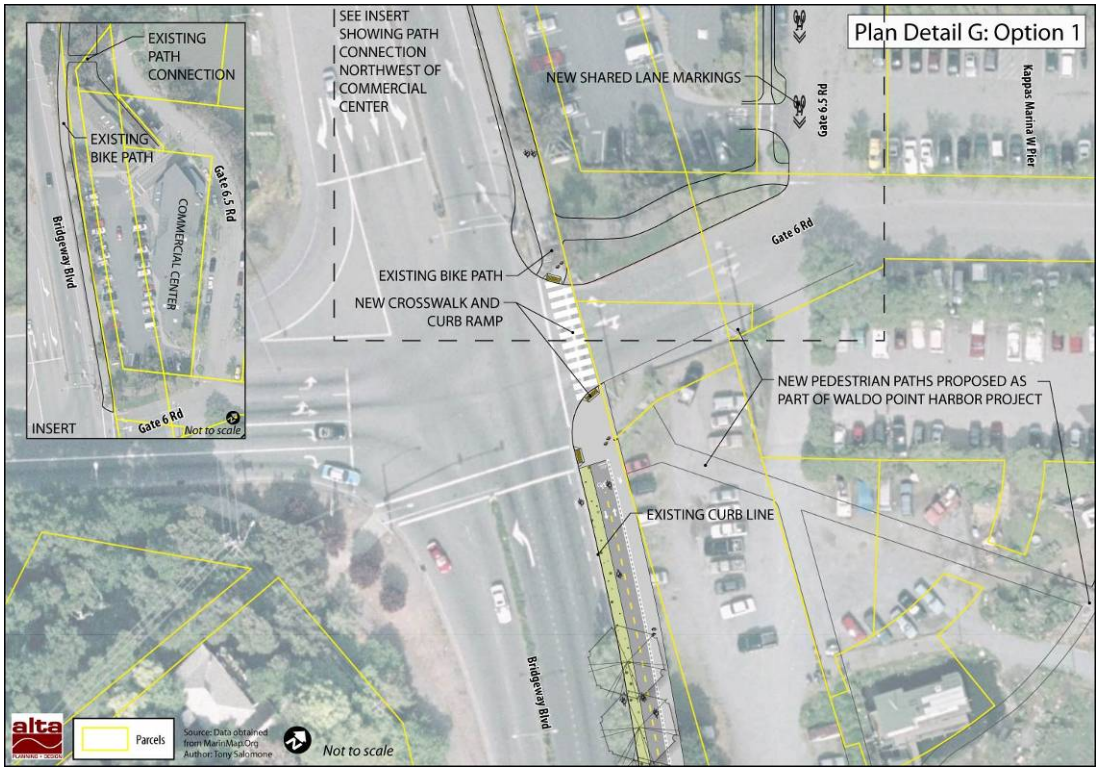

Figure 7-52 Gate 6 Road Intersection Improvement Option A
Gate 6½ Road Connection

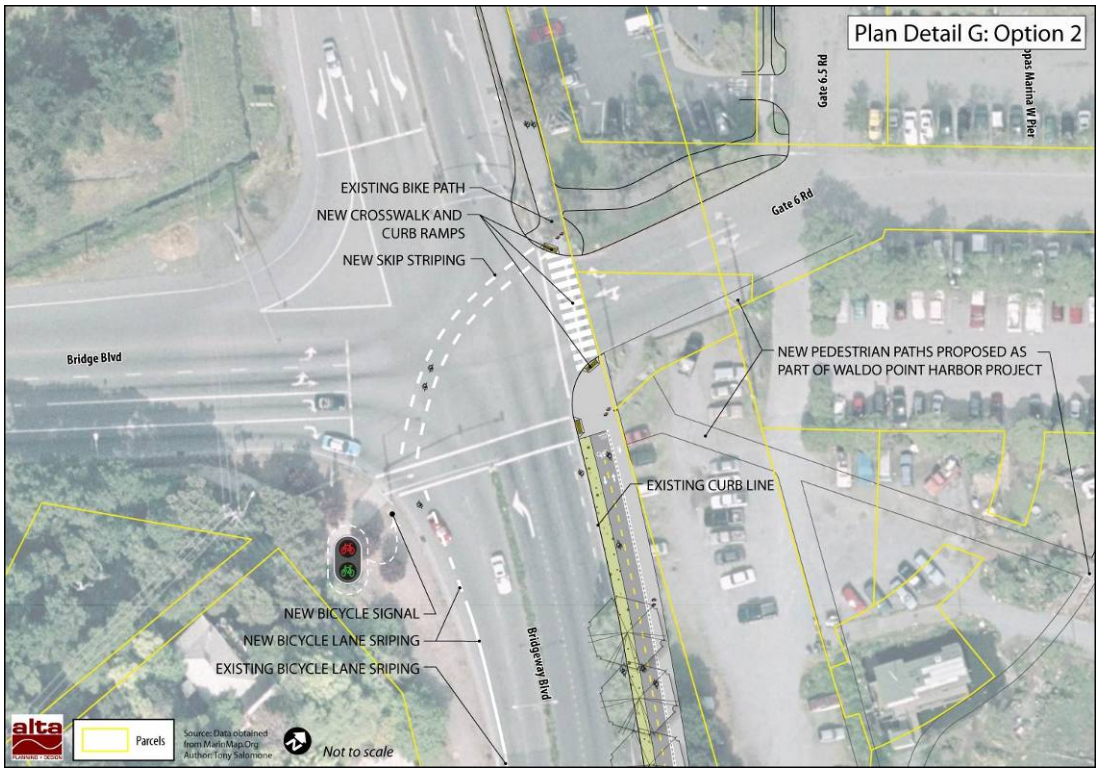

Figure 7-53 Gate 6 Road Intersection Improvement Option B Bike Signal

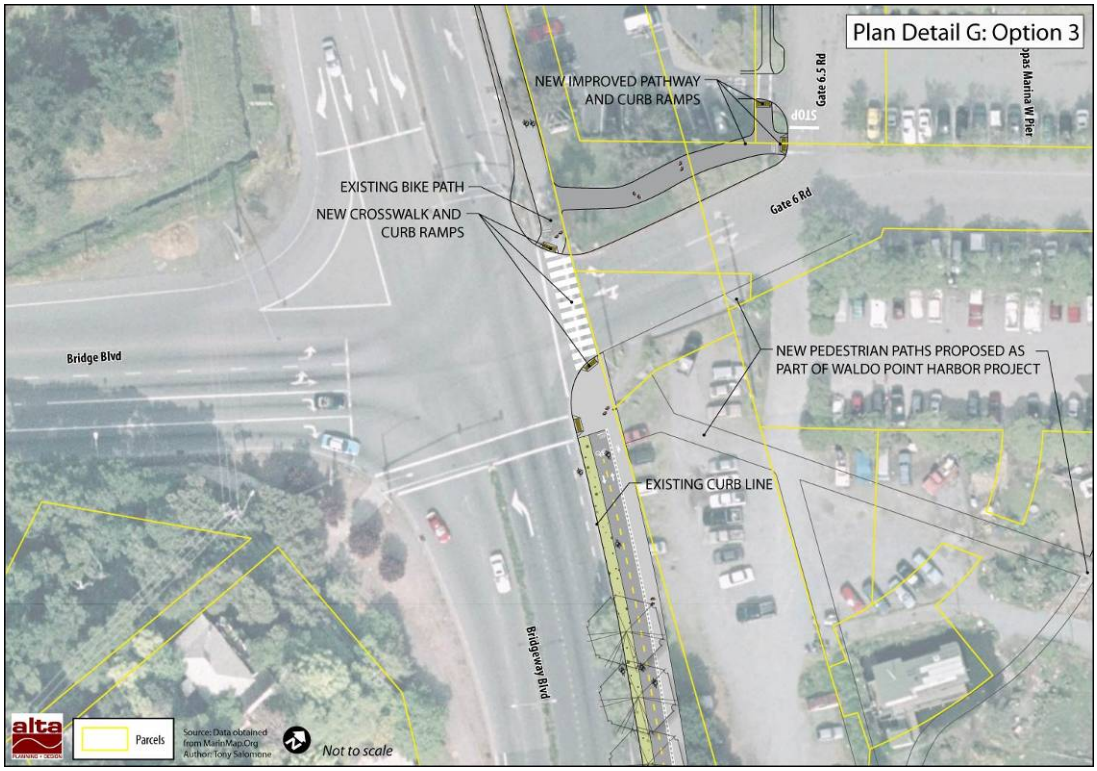

Figure 7-54 Gate 6 Road Intersection Improvement Option C Gate 6 Road Path Improvement

Figure 7-55 Gate 6 Road Intersection Improvement Option D Bike Box

7.8.3. Segment 6 Cost Estimate

Table 7-11 presents the cost estimate for the completion of Segment 6, from Harbor Drive to Gate 6 Road. The cost estimate includes all construction, landscaping, and lighting improvements as well as design and permitting. For the north section of this segment, the estimate assumes a bike signal as Figure 7-53 shows, at the Gate 6 Road intersection and not at the Gate 5 Road intersection.

Table 7-11 Segment 6 Cost Estimate

Item	Cost
Construction Subtotal	$758,436
Landscaping & Lighting Subtotal	$175,645
Design and Permitting (15%)	$140,112
Contingency (20%)	$186,816
Total Cost	$1,261,000

7.9. Project Cost Estimate

The Sausalito Ferry Terminal to Gate 6 Road Path will cost approximately $4.9 million. **Table 7-12** presents the subtotal for the six project segments and the total cost of the project. Chapter 8 presents an implementation strategy for developing the path over a 15 year period.

Table 7-12 Sausalito Path Cost Estimate

Segment	Total Cost
Segment 1	$2,039,200 - $2,180,100
Segment 2	$378,600
Segment 3	$417,200
Segment 4	$147,700- $184,900
Segment 5	$6,437,700 - $7,966,100
Segment 6	$1,261,000
Project Total	$10,681,400 - $12,387,900

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8. Implementation Strategy

8.1. Introduction

This chapter presents recommended phasing for the Sausalito Ferry Landing to Gate 6 Road Path corridor improvements. A key project goal is to secure major funding to implement significant path connectivity improvements in as short a timeframe as feasible. To assist with implementation, the corridor improvements have been divided between twelve projects. The projects are identified as either a short-, medium-, or long-term potential project. Definitions for these three categories are:

Short-Term Phase (0 to 5 Years): includes projects that can be completed within five years including any additional required study, engineering design development and construction. Projects in this phase include projects that the City is already working on in some capacity.

Mid-Term Phase (5 to 10 Years): includes projects that can be completed in 5 to 10 years. The projects in this phase may require more study including redevelopment, civil engineering, environmental clearance, and focused neighborhood public outreach.

Long-Term Phase (5 to 15 Years): includes projects that can be completed in 5 to 15 years. The projects in this phase require additional detailed study including master planning, major redevelopment, civil engineering, environmental clearance, and focused neighborhood public outreach. Additionally, this phase includes extensive coordination among various private and public stakeholders and requires City easements or acquisition of private property.

Phasing delineation is based on the project team's assessment. In determining phasing priorities, the project team considered:

- *Availability of the right-of-way needed.* Projects proposed within public property scored higher than projects for which private right-of-way would be required.
- *Relative level of support for each project.* Projects that received the most support during public meetings received the highest score in this category.
- *Whether the project would result in a new facility or improvements to an existing facility.* The Ferry Terminal to Gate 6 corridor includes sidewalks, bike lanes, a boardwalk and paved and unpaved paths that currently serve bicyclists and/or pedestrians. Projects that would result in a new facility in an area not currently served by a bicycle or pedestrian facility received the highest score.

Symbols were used to score the projects with the criteria ranging a low benefit or a negative impact to a high benefit or low negative impact. **Table 8-1** presents how each alternative scored according to the evaluation criteria.

Table 8-1 Project Weighing

Project Name		Segment	Availability of Right-of-Way	Community Support	Results in a New Connection
1	Parking Lot 1	1	●	◗	○
2	Parking Lot 2	1	○	◗	●
3	Parking Lots 3 and 4	1	◗	◗	◗
4	Johnson Street	1	●	◗	◗
5	Johnson Street to Napa Street	2 and 3	●	◗	○
6	Gap Closure: Johnson Street to Litho Street	2 and 3	●	●	◗
7	Napa Street to Liberty Ship Way	4	◗	●	◗
8	Gap Closure: Napa Street to Easterby Street	4	●	●	◗
9	Liberty Ship Way to Testa Street	5	○	○	●
10	Testa Street to Harbor Drive	5	○	○	●
11	Harbor Drive to Gate 6 Road	6	●	●	◗
12	Bridgeway/Gate 6 Road Intersection	6	●	●	●

○ Low ◗ Medium ● High

8.2. Phases

For project success, the twelve projects are split into the three phase categories. **Table 8-2** shows the segments and the associated phase: short-, mid-, or long-term. This Study assumes that the City of Sausalito cannot undertake construction of multiple projects at one time but can construction a project while carrying out additional planning for specific segments as needed and project design.

Table 8-2 Project Phasing

Phase	Segment	Project Name
Short-term	Segments 2 and 3	6. Gap Closure: Johnson Street to Litho Street
	Segment 4	8. Gap Closure: Napa Street to Easterby Street
	Segment 6	11. Harbor Drive to Gate 6 Road
	Segment 6	12. Bridgeway/Gate 6 Road Intersection
Mid-Term	Segment 1	2. Parking Lot 2
	Segment 1	4. Johnson Street
	Segments 2 and 3	5. Johnson Street to Napa Street
	Segment 4	7. Napa Street to Liberty Ship Way
Long-Term	Segment 1	1. Parking Lot 1
	Segment 1	3. Parking Lots 3 and 4
	Segment 5	9. Liberty Ship Way to Testa Street
	Segment 5	10. Testa Street to Harbor Drive

8.2.1. Project Descriptions by Phase

This section presents brief descriptions and planning-level cost estimates for the twelve proposed projects. Full descriptions and plan and section illustrations of the projects are provided by alignment segment in Chapter 7 of this report. Costs are rounded to the nearest $100.

Short-Term Phase

Gap Closure: Johnson Street to Litho Street (Segments 2 and 3)

The segment of Bridgeway between Johnson Street and Litho Street includes a southbound bicycle lane and no bicycle lane in the northbound direction. This gap closure project would install shared lane pavement markings along Bridgeway for bicyclists and motorists traveling northbound. **Table 8-3** shows the project cost estimate of $400.

Table 8-3 Gap Closure: Johnson Street to Litho Street Cost Estimate

No.	Item Description	Estimated Quantity	Unit of Measure	Unit Cost	Item Total
1	Pavement Markings	96	SF	$3	$300
			Subtotal Construction Cost		$300
			Contingency (20%)		$57
			Design, Permitting (15%)		$43
			Total Construction Cost		$400

Gap Closure: Napa Street to Easterby Street (Segment 4)

Bridgeway between Napa Street and Easterby Street has a northbound bicycle lane but no southbound bicycle lane. This gap closure project would install shared lane pavement markings along Bridgeway for bicyclists and motorists traveling southbound. As **Table 8-4** Gap Closure: Napa Street to Easterby Street Cost Estimates presents, the project cost estimated is approximately $200.

Table 8-4 Gap Closure: Napa Street to Easterby Street Cost Estimate

No.	Item Description	Estimated Quantity	Unit of Measure	Unit Cost	Item Total
1	Pavement Markings	48	SF	$3	$150
			Subtotal Construction Cost		$150
			Contingency (20%)		$29
			Design, Permitting (15%)		$21
			Total Construction Cost		$200

Harbor Drive to Gate 6 Road (Segment 6)

Proposed improvements between Harbor Drive and Gate 6 Road include an eight foot wide bicycle path and an attached sidewalk along Bridgeway. The sidewalk varies between four and six feet in width. The project cost is an estimated $1,156,400, as presented in **Table 8-5**.

Table 8-5 Harbor Drive to Gate 6 Road Cost Estimate6 Road Cost Estimate

No.	Item Description	Estimated Quantity	Unit of Measure	Unit Cost	Item Total
1	Mobilization and Traffic Control	1	LS	$77,900	$77,900
2	Clearing and Grubbing, Tree Removal	1	LS	$45,000	$45,000
3	SWPPP & Erosion Control	1	LS	$4,500	$4,500
4	Remove Concrete, AC & other surfacing	41,456	SF	$4	$165,824
5	Utility Relocation/Allocation	1	LS	$10,000	$10,000
6	Remove Traffic Striping and Marking	1	LS	$1,500	$1,500
7	Bike Path	18,093	SF	$8	$144,744
8	ADA Ramp	11	EA	$1,000	$11,000
9	Curb and Gutter and AC Conforms	338	LF	$50	$16,900
10	Concrete Islands & Curb	1	EA	$2,500	$2,500
11	Minor Concrete (Sidewalk, Ramp)	17,944	SF	$10	$179,440
12	Pavement Stripes	2,724	LF	$1	$2,724
13	Pavement Markings	2,343	SF	$3	$7,029
14	Path & Roadside Signs	1	LS	$3,500	$3,500
15	Wayfinding Signs	3	EA	$500	$1,500
16	Unsuitable Material	23	CY	$300	$6,900
17	Landscaping, Irrigation	8,729	SF	$5	$43,645
18	Lighting	33	EA	$4,000	$132,000
			Subtotal Construction Cost		$856,606
			Contingency (20%)		$171,321
			Design, Permitting (15%)		$128,491
			Total Construction Cost		$1,156,400

Bridgeway/Gate 6 Road Intersection (Segment 6)

Proposed improvements at the Bridgeway/Gate 6 Road intersection include installation of a bicycle signal and widening of the sidewalk northeast of the intersection. As **Table 8-6** presents, the projects will cost an estimated $104,600.

Table 8-6 Bridgeway/Gate 6 Road Intersection Cost Estimate

No.	Item Description	Estimated Quantity	Unit of Measure	Unit Cost	Item Total
1	Mobilization and Traffic Control	1	LS	$7,000	$7,000
2	Clearing and Grubbing	1	LS	$5,000	$5,000
3	SWPPP and Erosion Constrol	1	LS	$500	$500
4	Remove Concrete, AC & other surfacing	330	SF	$4	$1,320
5	Signal Modifications	1	LS	$60,000	$60,000
6	Pavement Stripes	355	LF	$1	$355
7	Minor Concrete (sidewalk)	330	SF	$10	$3,300
			Subtotal Construction Cost		$77,475
			Contingency (20%)		$15,495
			Design, Permitting (15%)		$11,621
			Total Construction Cost		$104,600

Mid-Term Phase

Parking Lot 2 (Segment 1)

A 12 foot wide multi-use path is proposed along the east side of Parking Lot 2. Implementation of this multi-use path requires the acquisition of private property and conversion of 17 parking stalls. The cost estimate for the path is presented in **Table 8-7** and estimated at $511,900 to $652,800.

Table 8-7 Parking Lot 2 Cost Estimate

No.	Item Description	Estimated Quantity	Unit of Measure	Unit Cost	Item Total
1	Mobilization and Traffic Control	1	LS	$10,590	$10,590
2	Clearing and Grubbing, Tree Removal	1	LS	$2,000	$2,000
3	SWPPP & Erosion Control	1	LS	$750	$750
4	Remove Concrete, AC & other surfacing	3,408	SF	$4	$13,634
5	Utility Relocation/Allocation	1	LS	$1,500	$1,500
6	Import Fill	77	CY	$40	$3,080
7	Bike Path	2,135	SF	$8	$17,080
8	ADA Ramp	2	EA	$1,000	$2,000
9	Curb and Gutter and AC Conforms	187	LF	$50	$9,350
10	Minor Concrete (Sidewalk, Ramp)	164	SF	$10	$1,644
11	Path & Roadside Signs	1	LS	$500	$500
12	Unsuitable Material	2	CY	$300	$570
13	Landscaping, Irrigation	650	SF	$5	$3,250
				Subtotal Construction Cost	$65,948
				Contingency (20%)	$13,190
				Design, Permitting (15%)	$9,892
				Total Construction Cost	$89,000
14	ROW Acquisition	2,819	SF	$150 - $200	$422,850 - $563,800
				Total Parking Lot 2 Cost	$511,900 - $652,800

Johnson Street (Segment 1)

Proposed improvements to Johnson Street include installation of shared land road markings along Johnson Street and a bulb-out at the southeast corner of the Johnson Street/Bridgeway intersection. A raised crosswalk is proposed across Johnson Street in line with the existing boardwalk. With this design, pedestrians are routed to existing sidewalks and bicyclists are routed to Johnson Street. **Table 8-8** presents the cost estimate for improvements to Johnson Street.

Table 8-8 Johnson Street Cost Estimate

No.	Item Description	Estimated Quantity	Unit of Measure	Unit Cost	Item Total
1	Mobilization and Traffic Control	1	LS	$7,413	$7,413
2	Clearing and Grubbing, Tree Removal	1	LS	$1,400	$1,400
3	SWPPP & Erosion Control	1	LS	$525	$525
4	Remove Concrete, AC & other surfacing	2,386	SF	$4	$9,544
5	Utility Relocation/Allocation	1	LS	$1,050	$1,050
6	Evacuation	528	SF	$20	$10,560
7	Raised Crosswalk	528	SF	$40	$21,120
8	ADA Ramp	2	EA	$1,000	$2,000
9	Curb and Gutter and AC Conforms	131	LF	$50	$6,545
10	Minor Concrete (Sidewalk, Ramp)	280	SF	$10	$2,800
11	Path & Roadside Signs	1	LS	$350	$350
12	Planter Island	300	SF	$8	$2,400
13	Pavement Markings	1	LS	$1,000	$1,000
14	Drainage	1	LS	$2,500	$2,500
15	Wayfinding Signs	2	EA	$500	$1,000
16	Unsuitable Material	1	CY	$300	$399
			Subtotal Construction Cost		$70,606
			Contingency (20%)		$14,121
			Design, Permitting (15%)		$10,591
			Total Construction Cost		$95,300

Johnson Street to Napa Street (Segments 2 and 3)

An eight foot wide bicycle path and six foot wide sidewalk are proposed along Bridgeway from Johnson Street to Turnery Street and from Locust Street and Napa Street. An eight foot wide bicycle path and four foot wide sidewalk are proposed along Bridgeway from Turney Street to Locust Street. **Table 8-9** presents the $795,400 cost estimate for this project.

Table 8-9 Johnson Street to Napa Street Cost Estimate

No.	Item Description	Estimated Quantity	Unit of Measure	Unit Cost	Item Total
1	Mobilization and Traffic Control	1	LS	$53,600	$53,600
2	Clearing and Grubbing, Tree Removal	1	LS	$10,000	$10,000
3	SWPPP & Erosion Control	1	LS	$6,000	$6,000
4	Remove Concrete, AC & other surfacing	31,870	SF	$4	$127,480
5	Utility Relocation/Allocation	1	LS	$15,000	$15,000
6	Remove Traffic Striping and Marking	1	LS	$750	$750
7	Reset Parking Bumpers, Meters & Signs	1	LS	$5,000	$5,000
8	Bike Path	13,431	SF	$8	$107,448
9	ADA Ramp	8	EA	$1,000	$8,000
10	Curb and Gutter and AC Conforms	212	LF	$50	$10,600
11	Minor Concrete (Sidewalk, Ramp)	10,392	SF	$10	$103,920
12	Pavement Stripes	1,519	LF	$1	$1,519
13	Pavement Markings	2,445	SF	$3	$7,335
14	Path & Roadside Signs	1	LS	$3,000	$3,000
15	Wayfinding Signs	3	EA	$500	$1,500
16	Unsuitable Material	17	CY	$300	$5,100
17	Landscaping, Irrigation	6,987	SF	$5	$34,935
18	Lighting	22	EA	$4,000	$88,000
			Subtotal Construction Cost		$589,187
			Contingency (20%)		$117,800
			Design, Permitting (15%)		$88,400
			Total Construction Cost		$795,400

Napa Street to Liberty Ship Way (Segment 4)

Proposed improvements between Napa Street and Liberty Ship Way include construction of an approximate 85 foot long, 10 foot wide Class I bicycle path that would connect two existing paths. Project implementation would require acquisition of private property for the path right-of-way. As **Table 8-10** presents, the project is estimated to costs between $147,500 and $184,700.

Table 8-10 Napa Street to Libery Ship Way Cost Estimate

No.	Item Description	Estimated Quantity	Unit of Measure	Unit Cost	Item Total
1	Mobilization and Traffic Control	1	LS	$2,400	$2,400
2	Clearing and Grubbing, Tree Removal	1	LS	$500	$500
3	SWPPP & Erosion Control	1	LS	$500	$500
4	Remove Concrete, AC & other surfacing	850	SF	$4	$3,400
5	Bike Path	850	SF	$8	$6,800
6	Pavement Stripes	85	LF	$1	$85
7	Pavement Markings	1	LS	$1,000	$1,000
8	Path & Roadside Signs	1	LS	$500	$500
9	Wayfinding Signs	4	EA	$500	$2,000
10	Landscaping, Irrigation	255	SF	$5	$1,275
11	Lighting	2	EA	$4,000	$8,000
		Subtotal Construction Cost			$26,460
		Contingency (20%)			$5,292
		Design, Permitting (15%)			$3,969
		Total Construction Cost			$35,700
12	ROW Acquisition	745	SF	$150 - $200	$111,750 - $149,000
		Total Napa St. to Liberty Ship Wy. Cost			$147,500- $184,700

Long-Term Phase

Parking Lot 1 (Segment 1)

Proposed improvements to Parking Lot 1 include construction of a ten foot wide Class I bicycle path from the sidewalk east of Parking Lot 1 north then northwest along the border of the parking lot to Spinnaker Drive. Pedestrians would continue to use the existing path through Gabrielson Park. Implementation of the bicycle path would require restriping of the northernmost parking aisles from 90-degree to 45-degree parking stalls and reconstruction of two planter islands. The bicycle path would not encroach into Gabrielson Park. **Table 8-11** presents the project cost estimate of $214,800.

Table 8-11 Parking Lot 1 Cost Estimate

No.	Item Description	Estimated Quantity	Unit of Measure	Unit Cost	Item Total
1	Mobilization and Traffic Control	1	LS	$22,239	$22,239
2	Clearing and Grubbing, Tree Removal	1	LS	$4,200	$4,200
3	SWPPP & Erosion Control	1	LS	$1,575	$1,575
4	Remove Concrete, AC & other surfacing	7,158	SF	$4	$28,631
5	Utility Relocation/Allocation	1	LS	$3,150	$3,150
6	Remove Traffic Striping and Marking	1	LS	$1,250	$1,250
7	Bike Path	4,534	SF	$8	$36,272
8	ADA Ramp	1	EA	$1,000	$1,000
9	Curb and Gutter and AC Conforms	393	LF	$50	$19,635
10	Concrete Islands & Curb	2	EA	$2,500	$5,000
11	Minor Concrete (Sidewalk, Ramp)	549	SF	$10	$5,489
12	Slurry Seal Parking Lot Pavement	6,938	SF	$1	$6,938
13	Pavement Stripes	210	LF	$1	$210
14	Pavement Markings	497	SF	$3	$1,491
15	Path & Roadside Signs	1	LS	$1,050	$1,050
16	Wayfinding Signs	5	EA	$500	$2,500
17	Unsuitable Material	4	CY	$300	$1,197
18	Landscaping, Irrigation	1,063	SF	$5	$5,315
19	Lighting	3	EA	$4,000	$12,000
		Subtotal Construction Cost			$159,142
		Contingency (20%)			$31,828
		Design, Permitting (15%)			$23,871
		Total Construction Cost			$214,800

Parking Lots 3 and 4 (Segment 1)

Improvements to Parking Lots 3 and 4 include a 12 foot wide Class I bicycle path from Bay Street to Johnson Street. Pedestrians would be routed to the existing boardwalk northeast of the proposed Class I path. Project implementation would require filling in a portion of the San Francisco Bay located immediately northeast of Parking Lot 3 and restriping of Parking Lot 4. **Table 8-12** presents the cost estimate for improvements to Parking Lots 3 and 4, estimated at $1,217,200.

Table 8-12 Parking Lots 3 and 4 Cost Estimate

No.	Item Description	Estimated Quantity	Unit of Measure	Unit Cost	Item Total
1	Mobilization and Traffic Control	1	LS	$65,658	$65,658
2	Clearing and Grubbing, Tree Removal	1	LS	$12,400	$12,400
3	SWPPP & Erosion Control	1	LS	$4,650	$4,650
4	Remove Concrete, AC & other surfacing	21,132	SF	$4	$84,528
5	Utility Relocation/Allocation	1	LS	$9,300	$9,300
6	Remove Traffic Striping and Marking	1	LS	$3,750	$3,750
7	Reset Parking Bumpers, Meters & Signs	1	LS	$7,500	$7,500
8	Earthwork	150	CY	$30	$4,500
9	Import Fill	473	CY	$40	$18,920
10	Rock Slope Protection	120	CY	$100	$12,000
11	Reinforcing Fabric	270	SY	$2	$540
12	Retaining Wall	1,920	SF	$75	$144,000
13	Wall Foundation	320	LF	$150	$48,000
14	Rail/Fence	520	LF	$40	$20,800
15	Bike Path	13,679	SF	$8	$109,432
16	ADA Ramp	2	EA	$1,000	$2,000
17	Curb and Gutter and AC Conforms	1,159	LF	$50	$57,970
18	Concrete Islands & Curb	4	EA	$2,500	$10,000
19	Minor Concrete (Sidewalk, Ramp)	1,621	SF	$10	$16,207
20	Storm Drain Inlet (New & Modified)	8	EA	$4,000	$32,000
21	Slurry Seal Parking Lot Pavement	82,453	SF	$1	$82,453
22	Pavement Stripes	8,180	LF	$1	$8,180
23	Pavement Markings	704	SF	$3	$2,112
24	Path & Roadside Signs	1	LS	$3,100	$3,100
25	Wayfinding Signs	3	EA	$500	$1,500
26	Unsuitable Material	12	CY	$300	$3,534
27	Landscaping, Irrigation	6,473	SF	$5	$32,365
28	Lighting	18	EA	$4,000	$72,000
			Subtotal Construction Cost		$869,399
			Contingency (20%)		$173,880
			Design, Permitting (20%)*		$173,880
			Total Construction Cost		$1,217,200

* Lots 3 and 4 have a 20% design and permitting cost due to the permitting requirements associated with implementing fill in San Francisco Bay.

Liberty Ship Way to Testa Street (Segment 5)

Proposed improvements between Liberty Ship Way and Testa Street include construction of a Class I bicycle path between Marinship Way and Bridgeway and completion of the sidewalk north of Marinship Way. Project implementation would require private right-of-way acquisition. As **Table 8-13** presents, the project is estimated to cost between $3,659,000 and $4,464,700.

Table 8-13 Liberty Ship Way to Testa Street Cost Estimate

No.	Item Description	Estimated Quantity	Unit of Measure	Unit Cost	Item Total
1	Mobilization and Traffic Control	1	LS	$71,900	$71,900
2	Clearing and Grubbing, Tree Removal	1	LS	$4,350	$4,350
3	SWPPP & Erosion Control	1	LS	$5,000	$5,000
4	Remove Concrete, AC & other surfacing	22,155	SF	$4	$88,620
5	Utility Relocation/Allocation	1	LS	$2,175	$2,175
6	Remove Traffic Striping and Marking	1	LS	$435	$435
7	Import Fill	300	CY	$40	$12,000
8	Bike Path	8,615	SF	$8	$68,920
9	ADA Ramp	14	EA	$1,000	$14,000
10	Curb and Gutter and AC Conforms	973	LF	$50	$48,650
11	Concrete Islands & Curb	1	EA	$2,500	$2,500
12	Minor Concrete (Sidewalk, Ramp)	5,157	SF	$10	$51,570
13	Retaining Structure	4,241	SF	$75	$318,075
14	Railing/Fence	320	LF	$40	$12,800
15	Pavement Stripes	1,000	LF	$1	$1,000
16	Pavement Markings	2,047	SF	$3	$6,140
17	Path & Roadside Signs	1	LS	$1,088	$1,088
18	Wayfinding Signs	1	EA	$500	$500
19	Unsuitable Material	12	CY	$300	$3,600
20	Landscaping, Irrigation	1,940	SF	$5	$9,700
21	Lighting	17	EA	$4,000	$67,860
		Subtotal Construction Cost			$790,883
		Contingency (20%)			$158,177
		Design, Permitting (15%)			$118,632
		Total Construction Cost			$1,067,700
22	ROW Acquisition	16,102	SF	$150 - $200	$2,415,300 - $3,220,400
		Total Libertyship Wy. To Testa St. Cost			$3,659,000 - $4,464,700

Testa Street to Harbor Drive (Segment 5)

Proposed improvements between Testa Street and Harbor Drive include construction of a Class I bicycle path between Marinship Way and Bridgeway and completion of the sidewalk north of Marinship Way. Project implementation would require private right-of-way acquisition. As **Table 8-14** presents, the project is estimated to cost between $2,954,700 and $3,678,000.

Table 8-14 Testa Street to Harbor Drive

No.	Item Description	Estimated Quantity	Unit of Measure	Unit Cost	Item Total
1	Mobilization and Traffic Control	1	LS	$52,800	$52,800
2	Clearing and Grubbing, Tree Removal	1	LS	$5,650	$5,650
3	SWPPP & Erosion Control	1	LS	$5,000	$5,000
4	Remove Concrete, AC & other surfacing	22,222	SF	$4	$88,888
5	Utility Relocation/Allocation	1	LS	$2,825	$2,825
6	Remove Traffic Striping and Marking	1	LS	$565	$565
7	Earthwork	100	CY	$30	$3,000
8	Import Fill	150	CY	$40	$6,000
9	Bike Path	14,867	SF	$8	$118,936
10	ADA Ramp	10	EA	$1,000	$10,000
11	Curb and Gutter and AC Conforms	530	LF	$50	$26,500
12	Minor Concrete (Sidewalk, Ramp)	4,705	SF	$10	$47,050
13	Retaining Structure	1,160	SF	$75	$87,000
14	Railing/Fence	100	LF	$40	$4,000
15	Pavement Stripes	1,306	LF	$1	$1,306
16	Pavement Markings	2,658	SF	$3	$7,975
17	Path & Roadside Signs	1	LS	$1,413	$1,413
18	Wayfinding Signs	1	EA	$500	$500
19	Drainage Modification	1	LS	$3,000	$3,000
20	Unsuitable Material	12	CY	$300	$3,600
21	Landscaping, Irrigation	3,408	SF	$5	$17,040
22	Lighting	22	EA	$4,000	$88,140
		Subtotal Construction Cost			$581,187
		Contingency (20%)			$116,237
		Design, Permitting (15%)			$87,178
		Total Construction Cost			$784,600
23	ROW Acquisition	14,467	SF	$150 - $200	$2,170,050 - $2,893,400
		Total Testa St. to Harbor Dr. Cost			$2,954,700 - $3,678,000

8.3. Cost Estimates by Phase

Table 8-15 presents the cost for each phase, itemized by segment. The Long-Term phase is the most expensive followed by the Short-Term Phase and the then the Mid-Term Phase.

Table 8-15 Cost Estimates by Phase

Phase	Segment	Project Name	Estimated Cost	Subtotal
Short-term	Segments 2 and 3	6. Gap Closure: Johnson Street to Litho Street	$400	$1,261,600
	Segment 4	8. Gap Closure: Napa Street to Easterby Street	$200	
	Segment 6	11. Harbor Drive to Gate 6 Road	$1,156,400	
	Segment 6	12. Bridgeway/Gate 6 Road Intersection	$104,600	
Mid-Term	Segment 1	2. Parking Lot 2	$511,900 - $652,800	$1,550,000 - $1,728,200
	Segment 1	4. Johnson Street	$95,300	
	Segments 2 and 3	5. Johnson Street to Napa Street	$795,400	
	Segment 4	7. Napa Street to Liberty Ship Way	$147,500- $184,700	
Long-Term	Segment 1	1. Parking Lot 1	$214,800	$7,869,700 - $9,398,100
	Segment 1	3. Parking Lots 3 and 4	$217,200	
	Segment 5	9. Liberty Ship Way to Testa Street	$3,659,000 - $4,464,700	
	Segment 5	10. Testa Street to Harbor Drive	$2,954,700 - $3,678,000	
			Total	$10,681,300 - $12,387,900

8.4. Environmental Regulatory and Permitting Guidance

This section summarizes and provides preliminary guidance on environmental regulatory and permitting requirements for implementation of the Ferry Landing to Gate 6 Pathway project.

A California Environmental Quality Act (CEQA) Checklist document will provide a summary explanation of the environmental concerns identified during the conceptual design phase of this project. No detailed environmental studies have been completed for this project at the time this feasibility and preliminary design study was published. Some detailed environmental studies may be necessary to fulfill the requirements of various regulatory agencies including the San Francisco Bay Conservation and Development Commission (BCDC), the San Francisco Bay Area Regional Water Quality Control Board (RWQCB) and the United States Army Corp of Engineers (USACE). Where the requirement is anticipated, these specific studies are identified. Any technical studies prepared for required permits may also be used for documentation of potentially significant impacts under CEQA.

8.4.1. Categorical Exemptions

The Project Study Area is characterized by existing urbanized areas of commercial and office development and associated parking, circulation and access streets. Much of the proposed construction recommended in this Study is Categorically Exempt under CEQA and would require no special permits or technical environmental studies. Modification of existing sidewalks and other areas of the City of Sausalito owned public right-of-way is generally exempt under CEQA and NEPA.

8.4.2. Summary of Environmental Constraints

As identified in the environmental checklist, there are three items that necessitate environmental regulatory permitting and environmental review including:

- Parking loss and requirement to legislatively approve modifications to the City of Sausalito parking

layout and quantity of parking provided in Lots 1, 2, 3 and 4.

- Requirement for minor filling of the Bay at the Sausalito Yacht Harbor boardwalk and City of Sausalito Parking Lot 3
- Requirement to acquire property for the proposed pathway or require construction and dedication of the proposed pathway as a condition of development through the privately owned areas of the Marinship Specific Plan area
- Potential impacts to traffic operations and level of service at the intersection of Bridgeway, Gate 6 Road and Highway 101; as well as other changes to intersection operations along the proposed project corridor.

The recommended CEQA documentation and required permits to address these specific areas of environmental constraint are outlined below.

8.4.3. CEQA Document

Based on these summary impacts and pending findings of the required permits outlined below, a CEQA Mitigated Negative Declaration is the likely appropriate environmental document for the overall project. The cost for this level of environmental documentation, including supporting technical studies (some already incorporated in the permit requirements laid out below), is reflected in the implementation costs presented in this Study.

8.4.4. Regulatory Permits

Required regulatory permits for this Project are outlined below and organized by the responsible agency. Permits from BCDC, USACE and the RWQCB would be required. The discussion below provides a summary of the recommended approach for each agency.

8.4.5. BCDC

The City of Sausalito is required to obtain permit clearance for minor fill of San Francisco Bay from BCDC in order to implement the proposed pathway segment adjacent to the Sausalito Yacht Harbor and City Parking Lot 3. The minimum fill requirements are illustrated in this Plan in Figure 7-3 in Chapter 7. This fill is required in order to maintain the maximum amount possible of the existing City required commuter and commercial parking stalls while providing sufficient width for the proposed Class I bikeway. Pedestrians would use the existing pile supported boardwalk that is designated shoreline public access associated with the Sausalito Yacht Harbor.

The City of Sausalito and Sausalito Yacht Harbor each possess multiple BCDC permits. The most efficient and expeditious approach to obtaining approval for the additional minor fill required is to obtain an amendment to one of the existing permits held by the City of Sausalito. **Table 8-16** below summarizes the existing Bay fill permits issued to the City of Sausalito.

Table 8-16 Existing City of Sausalito BCDC Permits for Minor Fill

Permit Number	Permitted Activity	Year Issued	Geographic Proximity
M-6846	30,000 SF of fill for parking area and street connection	1968	Permit for adjacent parking area (Lot 3)
M-0135	Bulkhead repair and replacement	2001	Permit for adjacent bulkhead repair
M-7725, M-7466, M-8100	N/A	N/A	Adjacent but at further locations than above referenced permits

An Amendment of an existing BCDC permit does not legally require completion of the BCDC Abbreviated Regionwide Permit Application Form,[10] however, this approach is recommended in order to assemble all of the required project documentation into a format that BCDC staff is familiar with. In summary, an amendment to one of the City's existing permits must demonstrate the following:

- project description and site plan presenting detailed information on required fill type and dimensions
- discussion of why no upland alternative to the proposed project is feasible
- discussion of resources impacts, if any (water quality, aquatic habitats, historic resources, etc.)
- discussion of any activities or impacts within the shoreline band (100 feet zone parallel to existing shoreline)
- documentation of any local discretionary approvals required to implement the project
- property documents demonstrating City ownership of all required area including land and water
- documentation of RWQCB and USACE permits

8.4.6. U.S. Army Corp of Engineers

The USACE has jurisdiction over the project site under Section 10 and Section 404 of the Clean Water Act governing jurisdictional waters including all declared navigable water or areas reached by the ebb and flow of the tide. Section 10 covers all dredging, marinas, piers, wharves, floats, intake/outtake pipes, pilings, bulkheads, ramps, fills, and overhead transmission lines. The submittal requirements for this project would follow the less restrictive National Permit (NWP) requirements under the category of Linear Transportation Projects, defined as activities required for the construction, expansion, modification, or improvement of linear transportation projects (e.g., roads, highways, railways, trails, airport runways, and taxiways) in waters of the United States. This NWP also authorizes temporary structures, fills, and work necessary to construct the linear transportation project (Sections 10 and 404).

8.4.7. Regional Water Quality Control Board

City consultation with the San Francisco Regional Water Quality Control Board (RWQCB) is required to determine the required construction phase and stormwater permits based on the area of linear facility to be constructed. Stormwater Pollution Prevention (SWPP) is included in the project cost estimates by segment.

[10] http://www.bcdc.ca.gov/media/forms/abbform.pdf

8.5. Funding

There are a variety of potential funding sources including local, state, regional and federal funding programs as well as private sector funding that can be used to construct the proposed improvements. Most of the federal, state and regional programs are competitive and involve the completion of extensive applications with clear documentation of the project need, costs and benefits. The following resources are provided to assist the City of Sausalito staff in identifying appropriate sources of funding for the projects recommended in this plan. The following should be noted:

- Funding sources are highly competitive, with many agencies competing for the same "pots" of money.
- Funding is limited; capital funding needs far outstrip available funding every year.
- Applying for funding is a time-consuming and staff-intensive process.

8.5.1. Federally-Administered Funding

The primary federal source of surface transportation funding—a portion of which can be used to fund bicycle and pedestrian facilities—is SAFETEA-LU, the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users. SAFETEA-LU is the fourth iteration of the transportation vision established by Congress in 1991 with the Intermodal Surface Transportation Efficiency Act. Also known as the federal transportation bill, the $286.5 billion SAFETEA-LU bill was passed in 2005 and authorizes Federal surface transportation programs until 2009. Congress approved a continuing appropriations resolution to extend funds through 2010.

Marin County bicycle advocates are actively lobbying for $50 million in funding through the reauthorization of the Federal Transportation Bill, expected in 2010. If this funding becomes available, a portion of it could be used to fund the Sausalito path project.

SAFETEA-LU funding is administered through the state (Caltrans and the State Resources Agency) and regional planning agencies. Most, but not all, of these funding programs are oriented toward transportation versus recreation, with an emphasis on reducing auto trips and providing inter-modal connections. SAFETEA programs require a local match of between 0 percent and 20 percent. SAFETEA funding is intended for capital improvements and safety and education programs and projects must relate to the surface transportation system.

Specific funding programs under SAFETEA-LU include, but are not limited to:

Federally-Administered Funding

- Federal Lands Highway Funds – $4.5 billion nationwide from FY 2005 through FY 2009.
- Transportation, Community and System Preservation Program (TCSP) – $270 million nationwide from FY 2005 through FY 2009.
- National Scenic Byways Program – $175 million nationwide from FY 2005 through FY 2009.
- California generally receives between $800,000 and $1 million annually.

State-Administered Funding

- Safe Routes to School Program – $48.5 million statewide in FY 2009.
- Recreational Trails Program – $4.6 million statewide in FY 2009.

Regionally-Administered Funding

- Transportation Enhancements (TE) – $60 million annually statewide.
- Regional Surface Transportation Program (RSTP) – $407 million statewide in FY 2008, $76 million to the Bay Area in FY 2009
- Congestion Mitigation and Air Quality Improvement (CMAQ) Program – $8.6 billion nationwide from FY 2005 through FY 2009, $69 million to the Bay Area in FY 2009.

To be eligible for Federal transportation funds, States are required to develop a State Transportation Improvement Program (STIP) and update it at least every four years. A STIP is a multi-year capital improvement program of transportation projects, and serves to coordinate transportation-related capital improvements of the metropolitan planning organizations and the state.

In California, the STIP includes projects on and off the State Highway System and is funded with revenues from the Transportation Investment Fund and other funding sources. The California STIP is typically updated every two years. To be included in the STIP, projects must be included in the Interregional Transportation Improvement Plan (ITIP), prepared by Caltrans or the Regional Transportation Improvement Plans (RTIPs), prepared by regional agencies. Bicycle and pedestrian projects are eligible for inclusion.

The following programs are administered by the Federal government.

Transportation, Community and System Preservation (TCSP) Program

The Transportation, Community and System Preservation (TCSP) Program provides federal funding for transit oriented development, traffic calming and other projects that improve the efficiency of the transportation system, reduce the impact on the environment, and provide efficient access to jobs, services and trade centers. The program provides communities with the resources to explore the integration of their transportation system with community preservation and environmental activities. TCSP Program funds require a 20 percent match. Congress appropriated $204 million to this program in Fiscal Year 2009. Funding has been extended under a continuing resolution for FY 2010.

Online resource: http://www.fhwa.dot.gov/tcsp/

Rivers, Trails and Conservation Assistance Program

The Rivers, Trails and Conservation Assistance Program (RTCA) is a National Parks Service program which provides technical assistance via direct staff involvement, to establish and restore greenways, rivers, trails, watersheds and open space. The RTCA program provides only for planning assistance—there are no implementation monies available. Projects are prioritized for assistance based upon criteria which include conserving significant community resources, fostering cooperation between agencies, serving a large number of users, encouraging public involvement in planning and implementation and focusing on lasting

accomplishments.

Online resource: http://www.nps.gov/ncrc/programs/rtca/contactus/cu_apply.html

8.5.2. State-Administered Funding

The State of California uses both federal sources and its own budget to fund the following bicycle and pedestrian projects and programs.

Bicycle Transportation Account

The Bicycle Transportation Account (BTA) provides state funding for local projects that improve the safety and convenience of bicycling for transportation. Because of its focus on transportation, BTA projects, including trails, must provide a transportation link. Funds are available for both planning and construction. Caltrans administers BTA funds, requiring eligible cities and counties to have adopted a Bicycle Transportation Plan. City Bicycle Transportation Plans must be approved by the local MPO prior to Caltrans approval. Out of $5 million available statewide, the maximum amount available for individual projects is $1.2 million.

Online resource: www.dot.ca.gov/hq/LocalPrograms/bta/btawebPage.htm

Federal Safe Routes to School (SRTS) and California Safe Routes to School (SR2S

Caltrans administers funding for Safe Routes to School projects through two separate and distinct programs: the state-legislated Program (SR2S) and the federally-legislated Program (SRTS). Both programs competitively award reimbursement grants with the goal of increasing the number of children who walk or bicycle to school.

California Safe Routes to School Program expires December 21, 2012, requires a 10 percent local match, is eligible to cities and counties and targets children in grades K-12. The fund is primarily for construction, but up to 10 percent of the program funds can be used for education, encouragement, enforcement and evaluation activities. Cycle 8 provides $48 million for FY 08/09 and 09/10.

The Federal Safe Routes to School Program expired September 30, 2009 and subsequently extended through December 31, 2010. Cities, counties, school districts, non-profits, and tribal organizations are eligible for the 100 percent reimbursable funds that target children in grades K-8. Program funds can be used for construction or for education, encouragement, enforcement and evaluation activities. Construction must be within two miles of a grade school or middle school. Cycle 2 provides $46 million for FY 08/09 and 09/10.

Online resource: http://www.dot.ca.gov/hq/LocalPrograms/saferoutes/saferoutes.htm

Congestion Mitigation and Air Quality Improvement Program

Congestion Mitigation and Air Quality Improvement Program (CMAQ) funds are directed to transportation projects and programs that contribute to the attainment or maintenance of National Ambient Air Quality

Standards in non-attainment or air quality maintenance areas for ozone, carbon monoxide, or particulate matter under provision in the Federal Clean Air Act. Caltrans administers CMAQ funds, which may be used for bicycle and pedestrian projects and programs. About $1.7 B are available nationwide per year. The Metropolitan Transportation Commission (MTC) administers the program for the Bay Area region, which received $69 million in project funding for FY 2009.

Online resource: http://www.mtc.ca.gov/funding/STPCMAQ/

Recreational Trails Program

The Recreational Trails Program(RTP) of SAFETEA-LU allocates funds to states to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. Examples of trail uses include hiking, bicycling, in-line skating, equestrian use, and other non-motorized as well as motorized uses. The Department of Parks and Recreation administers RTP funds in California. A minimum 12 percent of local match is required. California received a $1.3 million apportionment for FY 2010. RTP projects must be ADA compliant and applicants must submit project applications by October 1, 2010. RTP funds may be used for:

- Maintenance and restoration of existing trails;
- Purchase and lease of trail construction and maintenance equipment;
- Construction of new trails; including unpaved trails;
- Acquisition of easements or property for trails;
- State administrative costs related to this program (limited to seven percent of a State's funds); and
- Operation of educational programs to promote safety and environmental protection related to trails (limited to five percent of a State's funds).

Online resource: http://www.fhwa.dot.gov/environmnet/rectrails/index.htm.

California Conservation Corps

The California Conservation Corps (CCC) is a public service program that occasionally provides assistance on construction projects. The CCC may be written into grant applications as a project partner. In order to utilize CCC labor, project sites must be public land or publicly accessible. CCC labor will not perform regular maintenance but will perform annual maintenance, such as the opening of trails in the spring.

Online resource: http://www.ccc.ca.gov/

Transportation Planning Grant Program

The Transportation Planning Grant Program, administered by Caltrans, provides two grants that can be used to construct and plan bicycle and pedestrian facilities.

The **Community-Based Transportation Planning Grant** funds projects that exemplify livable community concepts, including bicycle and pedestrian improvement projects. Eligible applicants include local

governments, MPOs and RPTAs. A 20 percent local match is required and projects must demonstrate a transportation component or objective. There are $3 million available annually statewide. Maximum grant award is $300,000.

The **Environmental Justice: Context Sensitive Planning Grants** promote context sensitive planning in diverse communities and funds planning activities that assist low-income, minority and Native American communities to become active participants in transportation planning and project development. Grants are available to transit districts, cities, counties and tribal governments. This grant is funded by the State Highway Account at $1.5 million annually state-wide. Maximum grant award is $300,000.

Online resource: www.dot.ca.gov/hq/tpp/grants.html

Petroleum Violation Escrow Account (PVEA)

In the late 1970s, a series of Federal court decisions against selected United States oil companies ordered refunds to the States for price overcharges on crude oil and refined petroleum products during a period of price control regulations. To qualify for PVEA funding, a project must save or reduce energy and provide a direct public benefit within a reasonable time frame. In the past, the PVEA has been used to fund programs based on public transportation, computerized bus routing and ride sharing, home weatherization, energy assistance and building energy audits, highway and bridge maintenance, and reducing airport user fees. In California, transportation related PVEA projects are administered by Caltrans. PVEA funds do not require a match and can be used as match for additional Federal funds.

Online resource: http://www.dot.ca.gov/hq/LocalPrograms/lam/prog_g/g22state.pdf

8.5.3. Regional Agency-Administered Funding

Regional bicycle and pedestrian grant programs come from a variety of sources, including SAFETEA-LU, the State budget and vehicle registration fees. The following programs are administered by regional agencies.

Regional Surface Transportation Program

The Regional Surface Transportation Program (RSTP) is a block grant program that provides funding for bicycle and pedestrian projects, among many other transportation projects. Under the RSTP, Metropolitan planning organizations, such as the Metropolitan Transportation Commission's (MTC), prioritize and approve projects that will receive RSTP funds. Metropolitan planning organizations can transfer funding from other federal transportation sources to the RSTP program in order to gain more flexibility in the way the monies are allocated. In California, 76 percent of RSTP funds are allocated to urban areas with populations of at least 200,000. The remaining funds are available statewide.

Online resource: http://www.mtc.ca.gov/funding/STPCMAQ/

Transportation for Livable Communities Program

The Transportation for Livable Communities Program (TLC) provides grant monies to public agencies to

encourage land use decisions that support compact, pedestrian and bicycle friendly development near transit hubs. MTC administers the TLC program with funds from the Regional Surface Transportation Project. TLC grants are capped at $400,000. Funds may be used for capital projects or planning.

Online resource: www.mtc.ca.gov/planning/smart_growth/tlc_grants.htm

Transportation Fund for Clean Air

The Transportation Fund for Clean Air (TFCA) is a grant program funded by a $4 surcharge on motor vehicles registered in the Bay Area. This generates approximately $22 million per year in revenue. TFCA's goal is to implement the most cost-effective projects in the Bay Area that will decrease motor vehicle emissions, and therefore improve air quality. Projects must be consistent with the 1988 California Clean Air Act and the Bay Area Ozone Strategy. TFCA funds covers a wide range of project types, including bicycle facility improvements such as bike lanes, bicycle racks, and lockers; arterial management improvements to speed traffic flow on major arterials; and smart growth. TAM releases calls for projects to town, city and county public works departments and provides an application.

Online resource: http://www.baaqmd.gov/Divisions/Strategic-Incentives/Funding-Sources/TFCA.aspx

Bicycle Facilities Program

The Bay Area Air Quality Management District's (BAAMQD) Bicycle Facility Program (BFP) provides grant funding to reduce motor vehicle emissions through the implementation of new bikeways and bicycle parking facilities in the Bay Area. The BFP is funded through the Transportation Fund for Clean Air (TFCA) program. Projects must cost between $10,000 and $120,000 and the applicant must have secured 50 percent in matching funds. The BAAMQD typically releases a call for projects in June or July, requiring an application submittal in September and announcing project awards in November.

Online resource: http://www.baaqmd.gov/Divisions/Strategic-Incentives/Bicycle-Facility-Program.aspx

Regional Bicycle and Pedestrian Program

The Regional Bicycle and Pedestrian Grant Program is administered by the Metropolitan Transportation Commission (MTC) to assist in funding construction of the Regional Bicycle Network, regionally significant pedestrian projects as well as bicycle/pedestrian projects serving schools or transit. Projects are funded every three years for up to six years. Minimum grants of $250,000 are available to populations of less than 1 million and $500,000 to populations of more than one million. Local governments, transit operators, and other public agencies within the nine Bay Area counties are eligible. Projects must be part of the Regional Bicycle Network and identified in the regional transportation plan. MTC has committed $200 million in the Transportation 2030 Plan to support the regional program over a 25-year period.

Online resource: www.mtc.ca.gov/planning/bicyclespedestrians/regional.htm

Safe Routes to Transit (SR2T)

Regional Measure 2 (RM2), approved in March 2004, raised the toll on seven state-owned Bay Area bridges by one dollar for 20 years. This fee increase funds various operational improvements and capital projects which reduce congestion or improve travel in the toll bridge corridors.

Twenty million dollars of RM2 funding is allocated to the Safe Routes to Transit Program, which provides competitive grant funding for capital and planning projects that improve bicycle and pedestrian access to transit facilities. Eligible projects must be shown to reduce congestion on one or more of the Bay Area's toll bridges. The competitive grant process is administered by the Transportation and Land Use Coalition and the East Bay Bicycle Coalition. Funding is awarded in five $4 million grant cycles. The first round of funding was awarded in December 2005. Future funding cycles will be in 2009, 2011 and 2013.

Online resource: http://www.transcoalition.org/c/bikeped/bikeped_saferoutes.html

8.5.4. Local Agency-Administered Funding

TDA Article 3

Transportation Development Act (TDA) Article 3 funds are state block grants awarded annually to local jurisdictions for transit, bicycle and pedestrian projects in California. Funds for pedestrian projects originate from the Local Transportation Fund (LTF), which is derived from a ¼ cent of the general state sales tax. LTF funds are returned to each county based on sales tax revenues. Eligible pedestrian and bicycle projects include: construction and engineering for capital projects; maintenance of bikeways; bicycle safety education programs (up to five percent of funds); and development of comprehensive bicycle or pedestrian facilities plans. A city or county is allowed to apply for funding for bicycle plans not more than once every five years. These funds may be used to meet local match requirements for federal funding sources. Two percent of the total TDA apportionment is available for bicycle and pedestrian funding.

Online resource: http://www.mtc.ca.gov/funding/STA-TDA/

Measure A – Local Roads

In 2004 Marin County voters passed Measure A, which placed a half-cent increase on county sales tax. The money generated from this tax funds transportation improvements including bicycle and pedestrian facilities. The Marin Board of Supervisors created the Transportation Authority of Main (TAM) to administer Measure A funds. A Technical Advisory Committee, comprised of public works staff, local government staff and representatives with diverse interests recommend and prioritize projects to be funded. TAM distributes the funds (an estimated $332 million) on an annual basis to each city, town and to the County based on a combination of lane miles of roads and population.

TAM developed an expenditure plan, comprised of four strategies and updated every two years, to strategically administer Measure A funds. Strategy 3, Local Transportation Infrastructure, receives a 26.5 percent allocation of total funds, approximately $88 million. Strategy 3 funds roads, bikeways and pathways

of local and regional significance, with half of the funds allocated to major roads. For FY 2008-09, TAM did not allocate local transportation infrastructure funds to Sausalito, which has received $141,271 since 2004. The Expenditure Plan Update 2009 identifies the 2.97 miles of the Bridgeway Corridor, which includes Bridgeway, Richardson, 2nd, South, Alexander, as a "major road candidate" but does not identify specific improvements needed.

Online resource: http://www.tam.ca.gov/index.aspx?page=101

8.5.5. Non-Traditional Funding Sources

Community Development Block Grants

The CDBG program provides money for streetscape revitalization. Federal Community Development Block Grant Grantees may "use CDBG funds for activities that include (but are not limited to): acquiring real property; reconstructing or rehabilitating housing and other property; building public facilities and improvements, such as streets, sidewalks, community and senior citizen centers and recreational facilities, paying for planning and administrative expenses, such as costs related to developing a consolidated Plan and managing CDBG funds; provide public services for youths, seniors, or the disabled; and initiatives such as neighborhood watch programs." California received a $42.8 million allocation for all CDBG programs in FY 10. The maximum grant amount is $800,000 for up to two eligible projects or $400,000 for a public service program.

Online resource: http://www.hud.gov/offices/cpd/communitydevelopment/programs/index.cfm

Assessment Districts

Local government entities can form an assessment district to fund the construction and maintenance of public facilities, including sidewalks and paths. The process begins with property owners who want an improvement signing a petition. The proposed district includes all property owners who will benefit from the proposed improvement. A public hearing is held, and if a majority of property owners approve, the assessment district is established. Once the assessment district is approved, property owners within the assessment district are levied a special assessment in proportion to the share of the benefit they receive from the improvement. In 2009, the City of Sausalito investigated the application of assessment districts to fund utility undergrounding.

Business Improvement Districts

Business improvement districts (BIDs) are public/private partnerships used to promote individual business districts through a variety of means, including the construction and maintenance of streetscape improvements, paths, and bicycle facilities. A city, county or joint powers authority can establish a BID and levy annual assessments on businesses within its boundaries. To establish a BID, a public hearing must be held, and a majority of businesses must agree to the BID. In forming a BID, the boundaries and the improvements and activities to be financed are established. These cannot be changed once the BID is formed.

Developer Fees, Exactions and Impact Fees

With the increasing support for "routine accommodation" and "complete streets," requirements for new development, road widening and new commercial development provide opportunities to efficiently construct pedestrian facilities. If a significant nexus to justify the improvements exists, local governments can require such improvements as a condition of project approval.

One potential local source of funding is developer impact fees, typically tied to trip generation rates and traffic impacts produced by a proposed project. A developer may attempt to reduce the number of trips (and hence impacts and cost) by paying for on- and off-site pedestrian improvements designed to encourage residents, employees and visitors to the new development to walk rather than drive. Establishing a clear nexus or connection between the impact fee and the project's impacts is critical to ensure legal soundness.

Mello-Roos Community Facilities Act

The Mello-Roos Community Facilities Act was passed by the Legislature in 1982 in response to reduced funding opportunities brought about by the passage of Proposition 13. The Mello-Roos Act allows any county, city, special district, school district or joint powers of authority to establish a Community Facility Districts (CFD) for the purpose of selling tax-exempt bonds to fund public improvements within that district. CFDs must be approved by a two-thirds margin of qualified voters in the district. Property owners within the district are responsible for paying back the bonds. Pedestrian and bicycle facilities, construction and maintenance are eligible for funding under CFD bonds.

Online resource: http://mello-roos.com/pdf/mrpdf.pdf

Volunteer and Public-Private Partnerships

Local schools or community groups may use the bikeway projects as a project for the year, possibly working with a local designer or engineer. Work parties may be formed to help clear the right-of-way where needed. A local construction company may donate or discount services. A challenge grant program with local businesses may be a good source of local funding, where corporations 'adopt' a bikeway and help construct and maintain the facility.

Table 8-17 Funding Sources

Acronyms: AQMD - Air Quality Management District Caltrans - California Department of Transportation CMAQ - Congestion Mitigation and Air Quality CTC - California Transportation Commission FHWA - Federal Highway Administration RTPA - Regional Transportation Planning Agency State DPR - California Department of Parks and Recreation (under the State Resources Agency) SAFETEA – Safe Accountable Flexible, Efficient Transportation Equity Act: A Legacy for Users TAM – Transportation Authority of Marin Jurisdictions for Sausalito, California: Caltrans - Caltrans District 4 TAM – Transportation Authority of Marin Congressional District 6 Assembly District 6 Senate District 3 County District 1 and 2	Resources: Caltrans TEA-21 website - http://www.dot.ca.gov FHWA – SAFETEA-LU – website - http://www.fhwa.dot.gov/reauthorization http://www.dot.ca.gov/hq/LocalPrograms/ http://www.fhwa.dot.gov/environmnet/rectrails/index.htm http://www.ccc.ca.gov/ http://www.mtc.ca.gov/planning/smart_growth/hip.htm http://www.mtc.ca.gov/funding/STA-TDA/ http://www.baaqmd.gov/pln/grants_and_incentives/bfp/index.htm http://www.transcoalition.org/c/bikeped/bikeped_saferoutes.html http://www.tam.ca.gov/index.aspx http://www.hud.gov/offices/cpd/communitydevelopment/programs/index.cfm http://mello-roos.com/pdf/mrpdf.pdf

Grant Source	Due Date	Agency	Annual Total	Matching Requirement	Eligible Applicants	Eligible Bikeway Projects			Comments
						Commute	Recreation	Safety/Ed	
Federally-Administered Funding									
Transportation, Community and System Preservation Program	--	FHWA	$204 m nationwide	20%	state, local, MPOs	--	--	--	Projects that improve system efficiency reduce environmental impacts of transportation, etc. Contact K. Sue Kiser, Regional FHWA office, (916) 498-5009
Rivers, Trails and Conservation Assistance Program	--	NPS	--	--	Governments, communities	X	X	--	RTCA staff provide technical assistance to communities so they can conserve rivers, preserve open space, and develop trails and greenways. Contact NPS at (202) 354-6900.
State-Administered Funding									

Grant Source	Due Date	Agency	Annual Total	Matching Requirement	Eligible Applicants	Eligible Bikeway Projects			Comments
						Commute	Recreation	Safety/Ed	
Bicycle Transportation Account	December 1	Caltrans	$5 m	min. 10% local match on construction	city, county	X	--	X	State-funded. Projects that improve safety and convenience of bicycle commuters. Contact Ken McGuire, Caltrans, (916) 653-2750
Federal Safe Routes to School (SRTS)	Early 2011	Caltrans	$46 m	none	state, city, county, MPOs, RTPAs and other organizations that partner with one of the above	X	--	X	Construction, education, encouragement and enforcement program to encourage walking and bicycling to school. Contact Caltrans District 4 Transportation Planning and Local Assistance office at (510) 286-5226.
California Safe Routes to School (SR2S)	July 15	Caltrans	$48.5 m	10%	city, county	X	X	X	Primarily construction program to enhance safety of pedestrian and bicycle facilities. Contact Caltrans District 4, (510) 286-5598
Congestion Mitigation and Air Quality Program (CMAQ)	Dec. 1 yearly	RTPAs, Caltrans	$69 m for Bay region	None	Local and state governments within federally certified jurisdictions	X	--	--	Only air quality nonattainment and maintenance areas for ozone, carbon monoxide and certain PM-10 projects are eligible.
Recreational Trails Program (RTP)	Oct. 1	State DPR	$1.3 m	12% match	jurisdictions, special districts, non profits with management responsibilities over the land	--	X	--	For recreational trails to benefit bicyclists, pedestrians, and other users; contact State Dept. of Parks & Rec. , Statewide Trails Coordinator, (916) 653-8803
California Conservation Corps	On-going	California Conservation Corps	Labor	None	Federal and state agencies, city, county, school district, NPO, private industry	X	X	--	Contact the Corps at (916) 341-3100.
Community Based Transportation Planning Grant Program	Nov.	Caltrans	$4.5 m	20% local	MPO, RPTA, city, county	X	--	--	Projects that exemplify livable community concepts. Contact Leigh Levine, Caltrans, (916) 651-6012
Petroleum Violation Escrow Account (PVEA)	On-going	Caltrans	$0.5 m	--	city, county, transit operators	--	--	--	Bicycle and trail facilities have been funded with this program. Contact Caltrans Federal Resource Office, (916) 654-7287
Funding Administered by Regional Agencies									

Grant Source	Due Date	Agency	Annual Total	Matching Requirement	Eligible Applicants	Eligible Bikeway Projects			Comments
						Commute	Recreation	Safety/Ed	
Regional Surface Transportation Program (RSTP)	varies by RPTA	RTPAs, Caltrans	$320 m	11.47% non-federal match	cities, counties, transit operators, Caltrans, and MPOs	X	X	--	RSTP funds may be exchanged for local funds for non-federally certified local agencies; no match may be required if project improves safety. Contact Cathy Gomes, Caltrans, (916) 654-3271.
Transportation for Livable Communities Program	Jun. 23	MTC	$16 m	None	City, neighborhood, transit agency, NPO	X	X	--	Program provides technical assistance and capital grants. TLC grants are capped at $400,000. Contact MTC at (510) 817-5700.
Transportation Fund for Clean Air	--	TAM/BAAMQD	$22 m	None	Public agencies within TAM jurisdiction	X	--	--	Projects must provide a nexus to improving air quality. Contact TAM (Dave Chan) at 415-226-0821
Bicycle Facilities Program	Sept.	BAAMQD	--	50%	Public agencies within BAAQMD	X	--	--	Projects must cost between $10,000 and $120,000. Applicants must have secured 50% in matching funds. Contact BAAMQD (Avra Goldman) at (415) 749-5093.
Regional Bicycle Network Program (replaces the Regional Bicycle and Pedestrian Program)	--	MTC, TAM	--	--	Local governments, transit operators, other public agencies	X	X	--	Determination of the fund amount, application due date and any matching requirement is scheduled for Nov. 2009. Funding anticipated to become available in early 2010. Contact MTC at (510) 817-5733.
Safe Routes to Transit	2011	MTC	$4 m	None	Public agencies	X	X	--	Eligible projects must have a bridge nexus (i.e., reduce congestion on one or more state toll bridges). Program is run by Transform (510-740-3150) and the East Bay Bicycle Coalition (510-533-7433).
Funding Administered by Local Agencies									
Transportation Development Act (TDA) Article 3 (2% of total TDA)	Jan.	RPTA (MTC)	$746K for Marin County	None	City, county, joint powers agency	X	X	--	Projects must be included in either a detailed circulation element or plan included in a general plan or an adopted comprehensive bikeway plan and must be ready to implement within the next fiscal year. Contact MTC at (510) 817-5733.

Grant Source	Due Date	Agency	Annual Total	Matching Requirement	Eligible Applicants	Eligible Bikeway Projects			Comments
						Commute	Recreation	Safety/Ed	
Measure A – Local Roads		TAM	$43.9 m		City, town and Marin County	X	--	--	Road projects using this funding source are required to consider bicyclists and pedestrians. Contact TAM at (415) 226-0815.
Non-Traditional Funding Sources									
Community Development Block Grants	--	U.S. Dept. of Housing and Urban Development (HUD)	--	--	City, county	X	X	--	Funds local community development activities such as affordable housing, anti-poverty programs, and infrastructure development.
Assessment Districts	--	City, county, joint powers authority	--	--	Neighborhoods, communities	X	X	X	Only those who benefit from the improvement may be taxed. Taxes should be tied to the amount of benefit received.
Business Improvement Districts	--	City, county, joint powers authority	--	--	City, county, joint powers authority, private industry	X	X	--	A public-private partnership in which businesses in a defined area pay an additional tax or fee in order to fund improvements within the district's boundaries.
Developer Fees or Exactions (developer fee for street improvements - DFSI); Impact Fees	--	City, county	--	--	--	X	X	--	Mitigation required during land use approval process
Mello-Roos Community Facilities Act	--	City, county, special district, school district, joint powers authority	--	--	city, county, special district, school district, joint powers of authority	X	X	X	Property owners within the district are responsible for paying back the bonds.
Volunteer and Public-Private Partnerships	--	--	--	--	Public agency, private industry, schools, community groups	X	X	X	Community-based initiative to implement improvements.