CERRITO CREEK BAY TRAIL CONNECTOR

FEASIBILITY STUDY




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PREPARED BY: ALTA PLANNING + DESIGN

PREPARED FOR:
CITY OF ALBANY, CA
CITY OF EL CERRITO, CA
CITY OF RICHMOND, CA

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Grant support from the Association of Bay Area Governments (ABAG) Bay Trail Program made this project possible.

The following local agency staff people and individuals provided this project with direct leadership:

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Carli Paine Planning Department, City of El Cerrito
Morty Prisament, Planning Department, City of Richmond
Susan Schwartz, Friends of Five Creeks
Christopher Kent, Friends of Five Creeks

The Cerrito Creek Bay Trail Connector Feasibility Study also benefited from the expertise of a Technical Advisory Committee consisting of staff from public agencies with the cities of Albany, El Cerrito and Albany with a potential interest in the project design and implementation. The staff listed below provided the project consultant and project managers with valuable input. Staff representatives to the Technical Advisory Committee included:

Anne Chaney, Community Development Director, City of Albany
Dave Dowswell, Planning Manager, City of Albany
Jill Keimach, Planning Director, City of El Cerrito
Heather Koch, Planning Department, City of El Cerrito
David Lipsetz, Alameda/Contra Costa Bay Trail Planner, ABAG
Wendy Belvedere City of Albany Community Development
Paul Elwood, Public Works, City of Richmond
Mike McQuiston. Police Department, City of Albany
Peter Statton, Police Department, City of El Cerrito
Bruce King, Public Works, City of El Cerrito
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Finally, many project neighbors and interested organizations provided the project consultant and cities with valuable background information, dedicated their personal and professional time to project meetings, and reviewed draft documents. These organizations include:

Friends of Five Creeks
Friends of Albany Hill
State of California Orientation Center for the Blind
Pacific East Mall
Bayside Commons Homeowners Association
East Bay Bicycle Coalition

Project consultants included:

George Hudson, Alta Planning + Design, Principal-in-Charge
Ian S. Moore, Alta Planning + Design, Project Manager
Lev Anderson, Alta Planning + Design, Planner

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EXECUTIVE SUMMARY

The Cerrito Creek Bay Trail Connector is an opportunity to provide greater local and neighborhood access to the San Francisco Bay Trail. The cities of Albany, El Cerrito and Richmond are all substantially cut off from the East Bay Shoreline by the Interstate 80 and Interstate 580 roadways as well as by a high-use, high-speed passenger and freight railroad corridor. A century and half of industrial development has further separated residents of the East Bay from this urban shoreline. Despite these obstacles, the East Bay Shoreline remains a wonderful, and potentially accessible, open space resource. Current projects including the San Francisco Bay Trail and the Eastshore State Park are taking advantage of and rapidly improving this resource making accessibility all the more important. The Cerrito Creek Bay Trail Connector can make the vision of a pedestrian and bicycle connection between regional recreational and non-motorized transportation corridors a reality. Access to the Bay Trail from existing neighborhoods and nearby transit (El Cerrito station is the closest BART to the Bay Trail in the entire system) is a great opportunity.

This plan presents both proposed and interim routes for the Bay Trail Connector project. The proposed route is the most direct, safest and provides the trail user with the most pleasurable experience. This route is also expensive and presents several currently unresolved property issues. The interim route is provided in order to begin implementing the trail project and provides alternative solutions to the primary unresolved issues. The primary differences between the proposed and interim routes are that the interim route requires longer on-street segments for all trail users.

The City of Albany, City of El Cerrito, and City of Richmond have teamed to lead this project and will use the remaining grant money from this project to resolve these outstanding issues, identified here in the Executive Summary and in Chapter 2 of this document.

PREFERRED ROUTE

The following summaries describe each Cerrito Creek Bay Trail Connector segment from east to west and as designated in the body and illustrations of this study. Descriptions of the proposed and interim route segments below include the costs associated with each segment, and unresolved issues and required next steps. Preliminary planning level cost estimates are provided, but final cost estimates would be required as detailed design plans are finalized.

SEGMENT 1

Segment 1 begins at the project corridor's eastern most point at the BART right-of-way and roughly follows Cerrito Creek to the west side of San Pablo Avenue. Segment 1 takes advantage of the recently constructed City of El Cerrito Cerrito Creek restoration and the design and grading for a pedestrian path along a three-block stretch of El Cerrito Plaza. The proposed Segment 1 alignment will provide bicycle improvements along the Plaza, along with a signal protected, mid-block, bicycle and pedestrian crossing of San Pablo Avenue. The estimated cost of Segment 1 up to the Cerrito Plaza ingress/egress is **$24,000**. The remainder of the segment, including the San Pablo Avenue mid-block crossing would cost approximately **$280,000**.

REQUIRED STEPS AND UNRESOLVED ISSUES

The Feasibility Study identifies the following design options, remaining planning needs, and required analysis.

- Bicycle-specific signage and stencil locations must be established by the City of El Cerrito through negotiations and agreements with the Cerrito Plaza property owners, and should be completed as a part of any future circulation improvements to this area.
- The pedestrian path must be constructed in the six- to eight-foot wide area set aside in the Cerrito Creek Restoration project for this purpose. Final design and construction documents must show details for constructing a sub-base, installing trail edging, and installing a surface that will minimize impact to the creek.
- City of El Cerrito negotiation with property owners of El Cerrito Plaza regarding sidewalk expansion and lane narrowing.
- Determination of truck turning radius constraints to ensure proper design for both delivery vehicles and pedestrian/bicycle access and separation from vehicle traffic.
- Preliminary engineering and design of segment and San Pablo Avenue crossing.

Each of these items must be addressed in preparation for the final design.

SEGMENT 2

Segment 2 extends from the Orientation Center for the Blind property just west of San Pablo Avenue to the Pacific East Mall. Segment 2 includes the majority of the off-street trail development for this project. This segment includes locations for two prefabricated bridges, one at Middle Creek and one over Cerrito Creek at the western end of Creekside Park. The estimated cost of the proposed Segment 2 is approximately **$410,000**.

REQUIRED STEPS AND UNRESOLVED ISSUES

The Feasibility Study identifies the following design options, remaining planning needs, and required analysis.

- City of Albany negotiations with State of California to establish maintenance access to Orientation Center for the Blind (OCB).
- City of Albany negotiations with State of California to establish public trail access to OCB.
- Preliminary engineering and design.
- Preliminary engineering for Middle Creek bridge and trail approach.

Each of these items must be addressed in preparation for the final design.

SEGMENT 3

Segment 3 extends from the Pacific East Mall, turning south onto Pierce Street. On Pierce Street, pedestrians will use the existing sidewalk and bicyclists will use a bike path running in between the sound wall and modified on-street parking, or, alternatively, a Class II facility could be developed requiring reorientation of existing angle parking. The Pierce Street segment cannot proceed to preliminary engineering and design prior to further traffic study and neighborhood workshops. The estimated cost for a Class I separated bike path along Pierce Street is approximately **$300,000**.

REQUIRED STEPS AND UNRESOLVED ISSUES

The Feasibility Study identifies the following design options, remaining planning needs, and required analysis.

- City of Albany negotiation with Pacific East Mall property owner and Bayside Commons to establish change of ownership/lot line adjustment for establishment of trail location.
- Negotiation with Pacific East Mall regarding required modification to the existing informal trail and utilities.
- City of Richmond construction permitting.
- Pierce Street parking and traffic studies to determine options for parking replacement for proposed alternative.
- Detailed design for neighborhood preferred alternative.
- Preliminary engineering and design.

Each of these items must be addressed in preparation for the final design.

SEGMENT 4

Segment 4 consists of the southern-most section of Pierce Street and includes the parking and bus stop reconfiguration, as well as options for a separated trail connection to Pierce Street Park. The estimated cost for Segment 4 is approximately **$180,000**.

REQUIRED STEPS AND UNRESOLVED ISSUES

The Feasibility Study identifies the following design options, remaining planning needs, and required analysis.

- Pierce Street parking and traffic studies to determine options for parking replacement for proposed alternative (Required Task repeated from previous cross-section).
- Determine design requirements and timeline for bus stop improvements, and ensure that trail needs are addressed in design if project precedes design for trail.
- Completion of Pierce Street Park negotiations between Caltrans and City of Albany and preliminary design (to include provisions for the Cerrito Creek Bay Trail Connector).
- Additional engineering analysis is required to determine the design details for this proposed segment.
- Consultation with Caltrans is required to determine how this segment can be developed along with the property transfer of the Pierce Street Park parcel from Caltrans to the City of Albany.
- Preliminary engineering and design.

Each of these items must be addressed in preparation for the final design.

SEGMENT 5

Segment 5 constitutes the Pierce Street Park segment of the project. The multi-use trail would extend through the proposed park, and up to the proposed Cleveland Street/RailroadROW pedestrian, bicycle and maintenance vehicle overcrossing. The estimated cost for Segment 5 is **$260,000**. In the event that Pierce Street Park is not negotiated and developed, trail negotiators

can proceed separately. Development of a multi-use trail is a transportation facility that may be located within the Caltrans ROW.

REQUIRED STEPS AND UNRESOLVED ISSUES

The Feasibility Study identifies the following design options, remaining planning needs, and required analysis.

- Incorporate proposed Cerrito Creek Bay Trail Connector alignment into Pierce Street Park proposals.
- Identify a Segment 5 Interim Route in the event Pierce Street Park proposals are delayed, such as stenciling and signage for an on-road bike route running one block south of Pierce Street and one block west on Washington Avenue.
- Incorporate trail management into proposed park management plan.
- Incorporate proposed Cerrito Creek Bay Trail Connector alignment into Pierce Street Park proposals (Repeated task from previous segment).
- Request inclusion of bridge proposal in regional pedestrian and bicycle planning documents to make eligible for broadest possible range of funding sources.
- Conceptual engineering design for bridge structure.
- Preliminary engineering and design for trail segments.

Each of these items must be addressed in preparation for the final design.

SEGMENT 6

Segment 6 includes the proposed overcrossing from the proposed Pierce Street Park to the future City of Albany Maintenance Yard on the west side of the railroad right-of-way, adjacent to the I-80/I-580 ramps. A connection to the existing San Francisco Bay Trail would be made via the existing 12 foot-wide sidewalk beneath I-580 and I-80 overpasses. The estimated cost for Segment 6 is approximately **$2.3 million**.

REQUIRED STEPS AND UNRESOLVED ISSUES

The Feasibility Study identifies the following design options, remaining planning needs, and required analysis.

- Complete City of Albany and Caltrans negotiations to establish City ownership of parcel.
- Provide for the Cerrito Creek Bay Trail Connector in the conceptual and detailed plans for the City of Albany maintenance yard.

Each of these items must be addressed in preparation for the final design.

The total estimated cost for the proposed route is approximately $4.4 million.

INTERIM ROUTES

The interim route options are described below and include a listing of the required steps, unresolved issues, and rough cost estimates. The interim routes outlined here are provided for segments where issues such as the granting of easements on state owned or privately owned property are unresolved or the proposed route presents high cost components including a new mid-block crossing of San Pablo Avenue and the proposed Cleveland Street/Railroad ROW overcrossing.

INTERIM SEGMENT 1

The Interim Segment 1 route begins at the BART right-of-way and terminates on the west side of San Pablo. The interim route would direct trail users to cross San Pablo Avenue at the intersection of San Pablo Avenue and Carlson Boulevard, as an alternative to the proposed but more expensive option of a mid-block crossing. This would require widening the sidewalk along San Pablo Avenue and improving the crosswalk at the intersection. The estimated cost for Interim Segment 1 is approximately **$50,000**.

REQUIRED STEPS AND UNRESOLVED ISSUES

The Feasibility Study identifies the following design options, remaining planning needs, and required analysis.

- Completion of Caltrans permitting requirements for sidewalk extension and parking removal.
- Traffic study to determine if removal of parking will result in queuing impacts at the San Pablo Avenue and Carlson Boulevard intersection. Currently, frequently unoccupied curbside parking acts as a de facto dedicated right turn lane.
- Preliminary engineering of sidewalk and crosswalk improvements.
- Traffic study to determine impacts associated with changes in lane configuration at intersection of Carlson Boulevard and San Pablo Avenue.
- Preliminary striping design for the San Pablo Avenue and Carlson Boulevard intersection.
- City of El Cerrito to coordinate with the Contra Costa Transportation Authority regarding the status of this project.
- City of El Cerrito workshop with local commercial and residential property owners and tenants to determine specific access needs.
- Preliminary engineering and design.

Each of these items must be addressed in preparation for the final design.

INTERIM SEGMENT 2

Interim Segment 2 provides an alternative to the proposed Segment 2, due to the unresolved issue of access and easement expansion along the Orientation Center for the Blind. The existing footpath would provide for pedestrians while an on-street route for bicyclists would be created with bike lanes on Carlson Boulevard, and a Class III bike route on Lassen Street and Belmont Street. Bicyclists would return to the trail parallel to Cerrito Creek via Belmont Street, where a multi-use trail would extend from the western end of Creekside Park. The estimated cost for Interim Segment 2 is **$40,000**.

REQUIRED STEPS AND UNRESOLVED ISSUES

The Feasibility Study identifies the following design options, remaining planning needs, and required analysis.

- Engineering inspection and preliminary engineering design for proposed improvements.
- Determine permitting needs and obtain necessary permits.
- Scheduling for improvements.
- City of El Cerrito notification of neighborhood regarding installation of Class III bicycle signage.

Each of these items must be addressed in preparation for the final design.

INTERIM SEGMENT 3

Interim Segment 3 provides an alternative to the proposed Pierce Street segment that would not result in the reduction of available on-street parking. The existing head in angle parking spaces would be converted to back in angle parking and install Class II bike lanes, providing separation of bicyclists and pedestrians. The estimated cost for Interim Segment 3 is approximately **$160,000**.

REQUIRED STEPS AND UNRESOLVED ISSUES

The Feasibility Study identifies the following design options, remaining planning needs, and required analysis.

- Pierce Street traffic study to determine speeds and volumes (background studies completed for City of Albany Bicycle Plan).
- Investigation of City of Albany parking code and proposal for modification to include back-in angle parking.
- Preliminary engineering and design.

Each of these items must be addressed in preparation for the final design.

INTERIM SEGMENT 6

Interim Segment 6 provides an alternative to the proposed but expensive overcrossing connecting the Pierce Street segment to the other side of Cleveland Street and the railroad right-of-way. Interim Segment 6 would instead exit the proposed Pierce Street Park on the east side of Pierce Street at Washington Avenue and extend south to Buchanan Street along a widened sidewalk (requiring auto lane width reduction) that would accommodate both pedestrians and bicyclists. This sidewalk could be widened to up to 12 feet wide without removing on-street parking. The route would turn east onto Buchanan Street and then cross at the existing crosswalk and onto the Buchanan Street overpass pedestrian/bicycle ramp. At the pedestrian/bicycle ramp touchdown, wayfinding signage would direct users to the existing San Francisco Bay Trail. The estimated cost for Interim Segment 6 is **$120,000**.

REQUIRED STEPS AND UNRESOLVED ISSUES

The Feasibility Study identifies the following design options, remaining planning needs, and required analysis.

- City of Albany prioritization of the improvement in conjunction with development of Pierce Street Park to provide improved access.
- Preliminary engineering and design.
- City of Albany sponsored neighborhood traffic study to determine feasibility of options.
- City of Albany sponsored neighborhood workshop to determine preference for options presented.
- Selection of preferred alternative.
- Preliminary engineering and design.

Each of these items must be addressed in preparation for the final design.

CENTRAL AVENUE CONNECTION

The Central Avenue Connection was initially a part of this study but it has been determined that there are several significant issues involved in planning for the connection and it is recommended that a separate planning process be initiated with Caltrans as a major partner in developing the options for the Central Avenue Connection.

RECOMMENDED STEPS AND UNRESOLVED ISSUES

The Feasibility Study identifies the following design options, remaining planning needs, and required analysis.

- Upgrade Pierce Street Sidewalk to ADA standards.
- Work with Caltrans to improve bicycle and pedestrian safety and on-off ramps through signage, striping, and other warning devices.
- Work with Caltrans to shorten crosswalks and distance that ped/bikes exposed to entering/exiting freeway traffic.

Each of these items must be addressed in preparation for the final design.

1. INTRODUCTION

PROJECT PARTNERSHIP

The Cerrito Creek Bay Trail Connector project feasibility study was funded by a grant from the Association of Bay Area Governments Bay Trail Program to the City of Albany. The cities of El Cerrito and Richmond were partners to the City of Albany in completing the analysis and conceptual design presented in this report.

THE BAY TRAIL CONNECTOR CONCEPT

The proposed Cerrito Creek Bay Trail Connector is a part of a growing trend in trail planning for the Bay Area, focused on connecting regional trails to residential neighborhoods, employment centers, and transit. Planners at the Association of Bay Area Governments (ABAG), East Bay Regional Parks, and at nonprofit organizations such as the Bay Area Ridge Trail Council are increasingly focused on providing safe and direct bicycle and pedestrian connection to regional trails via creek corridors, utility corridors, existing city sidewalk networks and on-street bicycle facilities.

According the ABAG Bay Trail Plan, the San Francisco Bay Trail is to be comprised of three components when completed, including: (1) the main alignment, or **spine** trail, (2) **spur** trails that provide access from the spine to points of natural, historic and cultural interest along the waterfront, and, (3) **connector** trails that link the Bay Trail to inland recreation sites, residential neighborhoods and employment centers, or provide restricted access to environmentally sensitive areas.

The Cerrito Creek Bay Trail Connector will serve as a **connector**, linking residential areas and shopping districts in Albany, El Cerrito and Richmond to the Bay Trail spine in the vicinity of Golden Gate Fields. The Cerrito Creek connector trail will also provide a link between the Ohlone Greenway and the Bay Trail, as well as a valuable transit/trail link at the El Cerrito Plaza BART station. The Cerrito Creek Bay Trail Connector will also provide a pedestrian and bicycle connection between many existing neighborhoods and the future Eastshore State Park.

PROJECT AREA

The Project Area for the Cerrito Creek Bay Trail Connector Master Plan is shown in Figure 1, on page five of this plan. The project area generally extends from the Ohlone Greenway in the east to the San Francisco Bay Trail in the west, and from Buchanan Street in the south to Central Avenue in the north. This project area encompasses parts of three cities in two counties, including: Albany in Alameda County and El Cerrito and Richmond in Contra Costa County. “Interim” and “Proposed” route options are shown in Figure 1.

CERRITO CREEK ENVIRONMENT

The Project Area encompasses several unique environmental and open space resources, including Cerrito Creek itself, Albany Hill Open Space, and Creekside Park. Resource protection efforts and ecological restoration are ongoing along the Cerrito Creek corridor.

Access to Albany Hill and management of the proposed Cerrito Creek Bay Trail Connector is an important issue addressed in this Master Plan. Management of trail users is important due to the fact that Albany Hill and adjacent Cerrito Creek harbor a surprisingly diverse remnant of wild California that used to cover the fertile lands where the cities of the East Bay now exist. At least 100 different kinds of native trees, shrubs, herbs and grasses can be found, including two diminutive orchids and six ferns. None of these plants are currently listed as rare or endangered species but many are considered locally unusual or significant by the California Native Plant Society. Two species, the Nootka rose and the stinging phacelia, are known from no other sites in the East Bay and several other plants are nearly as uncommon. Wild buckwheat, while not unusual itself, is required by a rare butterfly.

Cerrito Creek is an equally important resource, with potential for further restoration within the Project Area. From San Pablo west to San Francisco Bay, the creek is "daylighted," but partly encased in concrete channels and badly overgrown with invasive non-native plants such as Cape Ivy (*Senecio mikanoides*), Himalayan Blackberry (*Rubus discolor*) and Pampas and Jubata Grass (*Cortaderia* spp.). Areas of the creek that would be impacted by implementation of the proposed trail are identified under “Environmental Documentation and Permitting Approach.”

Many people use the creek corridor for walking and bicycling for both transportation and recreation. Current users of the creek corridor include elderly residents on shopping errands, children and adults en route to adjacent neighborhoods and the Bay Trail, adults with children traveling between home and school, adults traveling to work, and adults pursuing a variety of recreational activities. The Cerrito Creek Bay Trail Connector, like many trails proposed in well-loved and sensitive resource areas, will seek to establish formal pathways and guidelines that will formalize existing informal uses of the creek corridor, creating a more accessible and better managed environment that more residents can safely use and appreciate.

BACKGROUND PLANNING

Cerrito Creek has long been identified as an area for creek improvements and restoration and as a route to provide a pedestrian and bicycle connection between a variety of land uses in Albany, El Cerrito, and Richmond. Local nonprofit organizations and government agencies have sponsored projects over the past decade to enhance access and improve resource management along Cerrito Creek.

Friends of Five Creeks and Friends of Albany Hill are the most active organizations focused on improvements in the Cerrito Creek area. A local nonprofit organization affiliated with the California Urban Creeks Council, Friends of Five Creeks has completed extensive invasive vegetation removal and native plant restoration projects along Cerrito Creek from the Ohlone Greenway to Pierce Street. In addition to this vegetation management work, Friends of Five Creeks works closely with local agencies to craft a vision for further enhancement of the creek

corridor, including: vegetation restoration, pedestrian access improvements, and bicycle access improvement where appropriate. This work is ongoing and provides much of the framework for this current Master Plan effort. The Friends of Albany Hill have also worked extensively to manage vegetation on Albany Hill, working to remove invasive species and to protect and enhance habitat for native species.

In 2000, following the completion of the City of Berkeley Sewer Rehabilitation project, the City of Albany convened the "Cerrito Creek Working Group" in order to investigate possible route options and design challenges associated with location of bicycle and pedestrian pathways along Cerrito Creek from San Pablo Avenue to Pierce Street. The Working Group involved representatives of the City of Albany, California Orientation Center for the Blind, Pacific East Mall and Friends of Five Creeks, as well as Friends of Albany Hill and the Bayside Homeowners Association. The Working Group consulted with adjacent property owners, neighborhood residents and developed a Conceptual Master Plan for Lower Cerrito Creek included in a Final Report in April of 2000. This Conceptual Master Plan served as the starting point for the current Cerrito Creek Bay Trail Connector Master Plan.

A portion of the eastern-most segment of the Cerrito Creek Bay Trail Connector, adjacent to El Cerrito Plaza, has been designed as part of the Cerrito Creek Restoration project. The project, completed in December 2003, has graded and left open a six- to eight-foot wide corridor for the future pedestrian-only pathway at the top of the re-engineered creek bank. This project is located within a thirty-foot wide property dedication negotiated with the owners of Cerrito Plaza. The pathway is a key feature of the pedestrian access through the Plaza, and will parallel the on-road bike route through the Plaza as designated in this Feasibility Study.

PROJECT GOALS

The Cerrito Creek Bay Trail Connector will serve as an important connecting trail between the Ohlone Greenway and the San Francisco Bay Trail, linking neighborhoods, schools, and parks along the corridor, providing transportation and recreational opportunities. The proposed trail has the potential to focus interest and awareness on a unique community resource.

The major project goals include:

Goal 1: Identify safe and functional circulation trails for both pedestrians and bicyclists from the Ohlone Greenway to the San Francisco Bay Trail.

Goal 2: Identify physical, biological and social opportunities and constraints in the Cerrito Creek project area related to the development of a multi-use trail(s)

Goal 3: Involve stakeholders and neighboring property owners in the design of the proposed pedestrian and bicycle pathways and key features

Goal 4: Develop design solutions that preserve existing biological and cultural features of the Cerrito Creek corridor, enhance existing opportunities, and solve identified problems.

Goal 5: Develop design solutions founded on the principles of "crime prevention through environmental design," to provide a trail environment that promotes community monitoring and ownership while discouraging unlawful activities

Goal 6: Design roadway crossings and on-road trail segments according to current best practices that meet or exceed existing local, state and federal standards for pedestrian and bicycle facilities.

Goal 7: Design trail engineering features in a manner that provides for future creek restoration opportunities and does not interfere with flood management of the existing creek bed.

Goal 8: Address the unique needs of the California Orientation Center for the Blind

Goal 9: Design enhanced community gateway features consistent with adopted streetscape plans at San Pablo Avenue that highlight the presence of the creek, and the city and county borders

Goal 10: Identify interpretive, educational and way finding signage locations and appropriate content for signage types along the proposed trail

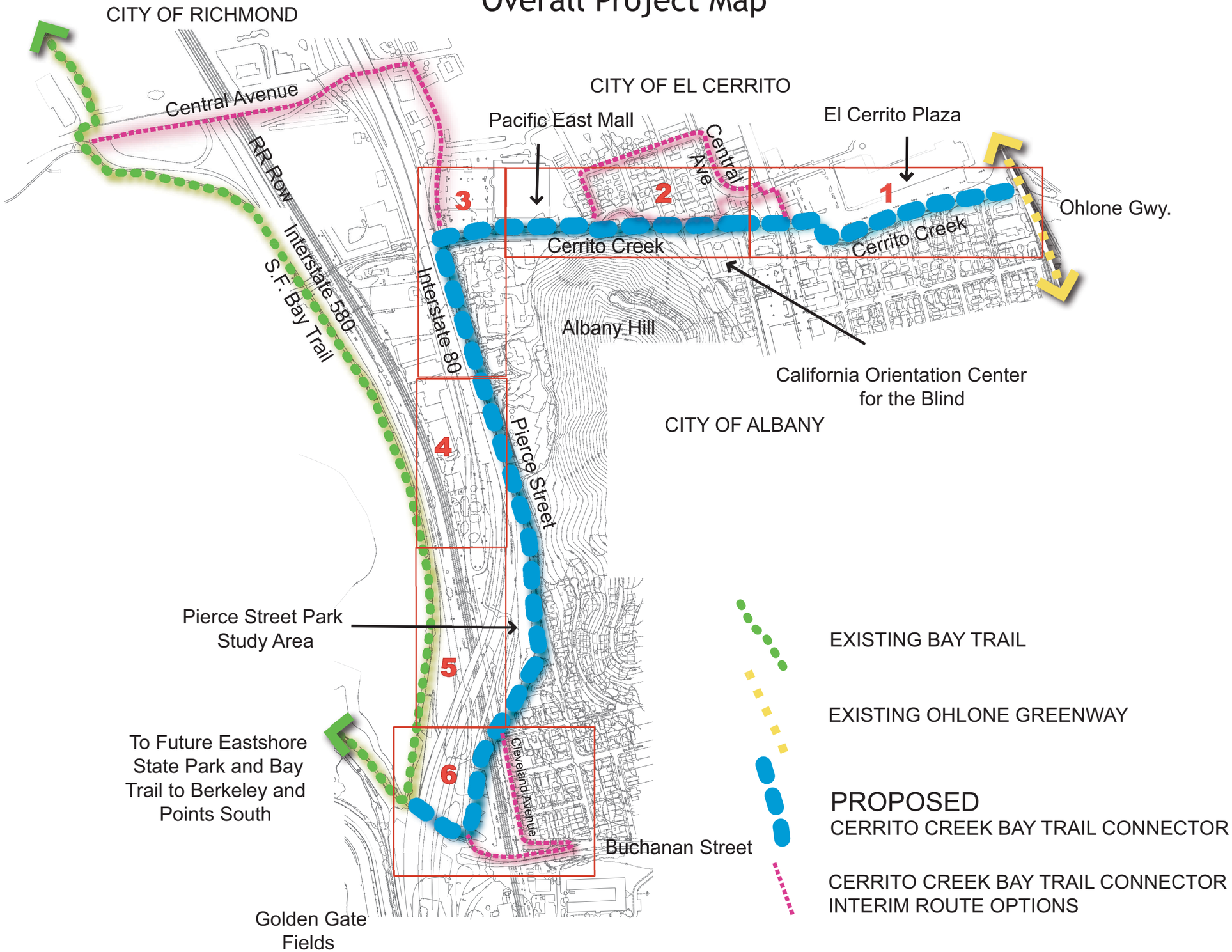
Goal 11: Design a trail with low maintenance requirements and identify management and maintenance responsibilities for participating jurisdictions in the form of a detailed management plan

Goal 12: Develop a trail plan, design, and cost estimates that will enable all participating agencies to successfully obtain competitive grant funding for the proposed project

GOALS BACKGROUND

The "Goals Background" is included as Appendix 1. This background lists supporting goals and policies from the City of Albany, City of El Cerrito and City of Richmond and serves as the policy background for the Cerrito Creek Pedestrian/Bicycle Pathway Master Plan. Supporting goals and policies from relevant county and regional plans are included as well. The project team has reviewed each relevant plan for goals that directly or indirectly refer to issues encompassed by the proposed project.

Overall Project Map



2. CONCEPT DESIGN PLAN

This chapter provides general design standards and guidelines for the Cerrito Creek Bay Trail Connector project and provides a detailed, site specific presentation of both the recommended and alternative route options for the concept design plan.

RECOMMENDED PLANNING AND DESIGN STANDARDS

This section provides specific design and implementation guidelines and standards to ensure that the preferred Cerrito Creek Bay Trail project is constructed to a consistent set of the highest and best standards currently available in the United States. Planning, design, and implementation standards are derived from the following sources:

- Caltrans: Highway Design Manual (Chapter 1000: Bikeway Planning and Design)
- Americans with Disabilities Act (ADA)
- AASHTO: A Policy on Geometric Design of Highways and Streets
- Manual of Uniform Traffic Control Devices
- USDOT/FHWA: Conflicts on Multiple-Use Paths
- ITE: Design and Safety of Pedestrian Facilities

Specific manuals, guidelines, and other publications drawn from in this study are referenced in the endnotes to this section of the document.

TRAIL USERS

The San Francisco Bay Trail and Ohlone Greenway attract a wide variety of trail users and the needs of Albany, El Cerrito and Richmond are quite diverse. In order to provide for the broad range of anticipated trail users, the Cerrito Creek Bay Trail Connector must be built to state-of-the-art trail design standards with respect to trail cross section, signage, and trail amenities. This section outlines some of the many trail user needs that this trail must meet.

PEDESTRIAN USE

Traditional pedestrian use poses the least demanding requirements for construction of the Cerrito Creek Trail. Existing Americans with Disabilities Act (ADA) Accessibility Guidelines (ADAAG) for trails, outdoor recreational access routes, beach access routes, and picnic and camping facilities will more than provide for pedestrian needs. These standards are addressed in greater detail below under “Special Needs Groups.”

SPECIAL NEEDS GROUPS

The Cerrito Creek Bay Trail Connector, by virtue of its location, should provide access to a range of special needs groups, including: persons using wheel chairs, blind citizens, as well as elderly residents.

Wheel Chair Accessibility

Proposed ADA Accessibility Guidelines (ADAAG) for trails, outdoor recreational access routes, beach access routes, and picnic and camping facilities provide the following guidance.

Paving is not required, as long as the surface is "firm and stable." While handrails and edge protection are not required, they may be provided and should meet appropriate standards. More specifically, the ADAAG provides the following criteria for an “accessible” trail:

- Clear tread width: 36" minimum
- Vertical changes in level on shared use paths should not exceed 6mm (0.25 inches). A bevel should be applied to changes in level between 6 mm (0.25 inches) and 13 mm (0.5 inches)
- Cross Slope: 5% max.
- Running slope (trail grade) meets one or more of the following:
    - 5 % or less for any distance.
    - Up to 8.33 % for 200' max. Resting intervals no more than 200' apart.
    - Up to10 % for 30' max. Resting intervals 30'
    - Up to 12.5 % for 10' max. Resting intervals 10'.
- No more than 30% of the total trail length may exceed a running slope of 8.33%.
- Passing Space: provided at least every 1000' where trail width is less than 60"
- Signs: shall be provided indicating the length of the accessible trail segment.

Designing Sidewalks and Trails for Access Part II of II: Best Practices Design Guide[i] provides extensive guidance on trail design to ensure maximum accessibility for a variety of people with disabilities. This manual and other ADA standards should be consulted during the final design phase for the Cerrito Creek Bay Trail Connector in order to ensure that that accessibility and safety for all pedestrians is maximized along all trail segments.

CALTRANS BIKE FACILITIES

Caltrans has developed specific design guidelines in the Highway Design Manual for Class I, II and III facilities. Off-road portions of the Cerrito Creek Bay Trail path will be designed to meet or exceed the minimum Class I standards wherever possible. These standards are intended to be a guide to engineers in their exercise of sound judgment in the design of projects. Lower

standards may be used "when such use best satisfies the concerns of a given situation." Mandatory design standards "are those considered most essential to achievement of overall design objectives. Many pertain to requirements of law or regulations such as those embodied in the FHWA's controlling criteria." Mandatory standards are identified in Chapter 1000 of the Highway Design Manual with the use of bold text and the word "shall".

Advisory standards are important but allow for greater flexibility and are both underlined and identified by the word "should." Permissive standards are identified by the words "should" or "may" and can be applied at the discretion of the project engineer. Controlling Criteria, as defined by the FHWA, consists of 13 specific criteria to be used in the selection of design standards. These criteria are: (1) design speed, (2) lane width, (3) shoulder width, (4) bridge width, (5) horizontal alignment, (6) vertical alignment, (7) grade, (8) stopping sight distance, (9) cross slope, (10) super elevation, (11) horizontal clearance, (12) vertical clearance, and (13) bridge structural capacity.

With the exception of the Caltrans guidelines, all design guidelines should be considered as simply design resources for the Cerrito Creek Bay Trail project, to be supplemented by the reasonable judgment of professional planners and engineers. The following sections establish the basic design parameters as developed by Caltrans. Mandatory standards are shown in bold face.

CALTRANS CLASS I

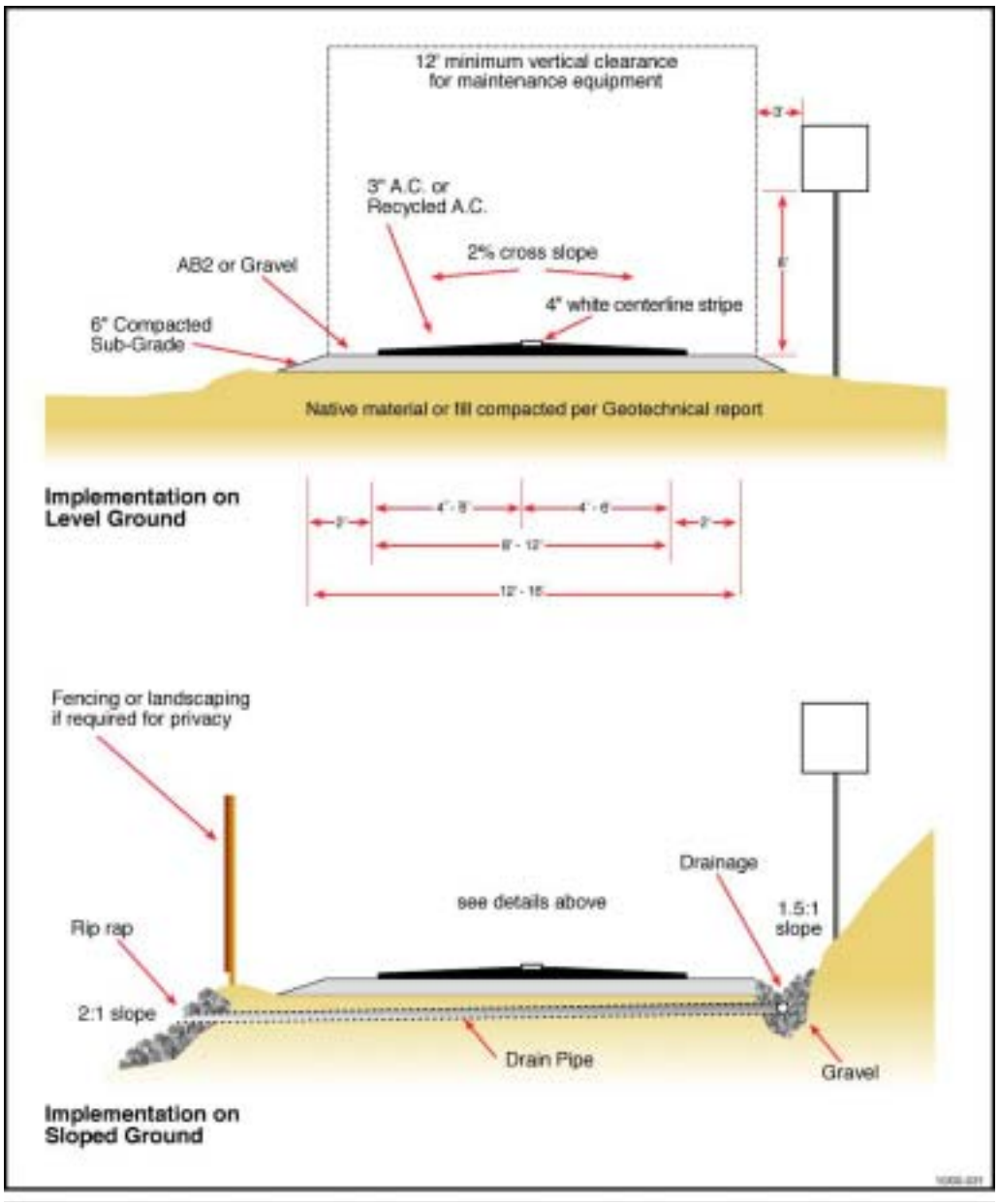
Caltrans Class I bicycle facilities are paved multi-use paths that are off-road and designed for users of any age and experience level for both commuters and recreational users.

Path Width

The recommended minimum width for high-use paved multi-use paths, according to the California Highway Design Manual, is ten feet, with two feet of lateral clearance (grade gravel shoulder) on each side of the trail and eight feet of vertical clearance (see Figure 2). The Cerrito Creek Bay Trail Connector is recommended to be 10 feet wide with two-foot wide unpaved shoulders made of a compacted surface (often decomposed granite) wherever possible. The shoulders on each side of the paved surface are to accommodate joggers and others who prefer a softer surface. Portions of the alignment, such as along Cerrito Plaza, will only be ten feet wide (with no shoulders) due to the configuration of the adjacent access drive and available right-of-way.

Intersections and Crossings

In general, crossings should occur at established pedestrian crossings wherever possible, or at locations completely out of the influence of intersections. Trail approaches at intersections should always have STOP or YIELD signs to minimize conflicts with autos. Crossing signs may be placed in advance of trail crossings to alert motorists. Ramps should be placed on sidewalk curbs for bicyclists and to meet ADA requirements. Class I signage placement, ramp design and access control for trail intersections and crossing are discussed in greater detail below, under Concept Design.



Design Speed

According to the California Highway Design Manual, the minimum design speed for multi-use paths is 20 miles per hour, except on sections where there are long downgrades (steeper than four percent, and longer than 500-feet). **Speed bumps or other surface irregularities should never be used to slow bicycles.**

Horizontal Alignment

Recommended curve radii and super elevations should conform to Caltrans HDM chapter 1000 specifications, along with recommended stopping distances.

Structural Section – Path Construction and Overcrossings

Multi-use path construction should be conducted in a similar manner as roadway construction, with sub-base thickness to be determined by soils condition and expansive soil types requiring special structural sections. Minimum asphalt thickness should be two inches of Type A or Type B, as described by Caltrans Standard Specifications, with a six-inch thick Class 2 aggregate base. In areas on the trail where there is expected to be regular use by patrol or maintenance vehicles, the preferred pathway material for the trail is a four-inch reinforced concrete material with sub-base or six-inches of reinforced concrete on compacted native material (if suitable). In other areas where these conditions do not exist, three-inch thick asphalt concrete may be suitable.

The "Proposed" alignment of the Cerrito Creek Bay Trail Connector will require, at minimum, prefabricated bridge sections over Cerrito Creek, and potentially a longer metal or concrete bridge structure over Cleveland Street and the railroad right-of-way from the proposed Pierce Street Park to the proposed City of Albany maintenance yard. These bridge sections must be designed to meet all Class I bikeway and ADA standards discussed above in this document. The short 40 to 70 foot prefabricated bridge segments many be engineering as a part of the overall trail engineering for any phase of this project. The Cleveland Street/railroad overcrossing, however, will require special engineering study as and independent project due to the cost and engineering magnitude of this trail component. This is further discussed later in this feasibility study.

CALTRANS CLASS II

Caltrans Class II bicycle facilities are designed as a striped one-way bicycle lane on a street of highway.

Lane Width

The recommended minimum width for a Class II bike lane, according to the California Highway Design Manual, is four feet, five feet with a gutter or along marked parking stalls. 11 to 12 feet should be the minimum width of a lane to the curb where unmarked parking is allowed.

Intersections and Crossings

In general, crossings should occur at established pedestrian crossings wherever possible, or at locations completely out of the influence of intersections. Trail approaches at intersections should always have STOP or YIELD signs to minimize conflicts with autos. Crossing signs may be placed in advance of trail crossings to alert motorists. Ramps should be placed on sidewalk curbs for bicyclists and to meet ADA requirements.

Back-In Angled Parking

Head-angle parking along Class II bicycle facilities (designated bicycles lanes) is not recommended due to the lack of bicyclist visibility to motorists when the motorist is exiting a parking slot in reverse.

Vehicular movements in and out of diagonal parking present hazards to bicyclists due to the lack of visibility for drivers in the arrangement. For this reason, it is recommended to avoid diagonal parking configurations adjacent to bike routes. At locations where diagonal parking is absolutely necessary, back-in parking should be used. This requires drivers to pull in front of a vacant space and reverse into the parking space. This forces the drivers to look behind them before crossing the path of oncoming bicyclists, and improves motorists' sightlines of oncoming bicycle and motor traffic while exiting.

Potential application of back-in angle parking is discussed below under "Concept Design Plan" in the Pierce Street discussion. Figure 4 provides a diagram for the design of a back – in angle parking facility.

CALTRANS CLASS III

Caltrans Class III bicycle facilities are designated routes that are established along through routes not served by Class I or Class II bikeways, or connect to discontinuous segments of a bikeway. Class III routes either share roadways or sidewalks with motor vehicles or pedestrians on the sidewalk. Class III routes are established by installing Bike Route signs along the roadways.

Design and Criteria

Criteria for the placement of an on-street Class III route should include through and direct travel, connect discontinuous bike lane segments, an attempt to provide greater priority to bicyclists by adjusting traffic control devices when possible, removal or restriction of street-parking in areas of critical width to provide safety, correction and maintenance of the surface conditions.

Shared – Use Pavement Arrow

The Shared-Use Pavement Arrow is used increasingly to increase the visibility and functionality of Class III bicycle facilities. The primary purpose of the shared-lane arrow is to provide positional guidance to bicyclists on roadways that are too narrow to be striped with bike lanes. Stencils may be placed on the street to inform motorists of the presence of cyclists, and to inform cyclists of how to position themselves with respect to parked cars and the travel lane. The design, placement and effectiveness of this marking is currently being studied by the City of San Francisco. Figure 3 provides a visual rendering of shared – use pavement arrows.

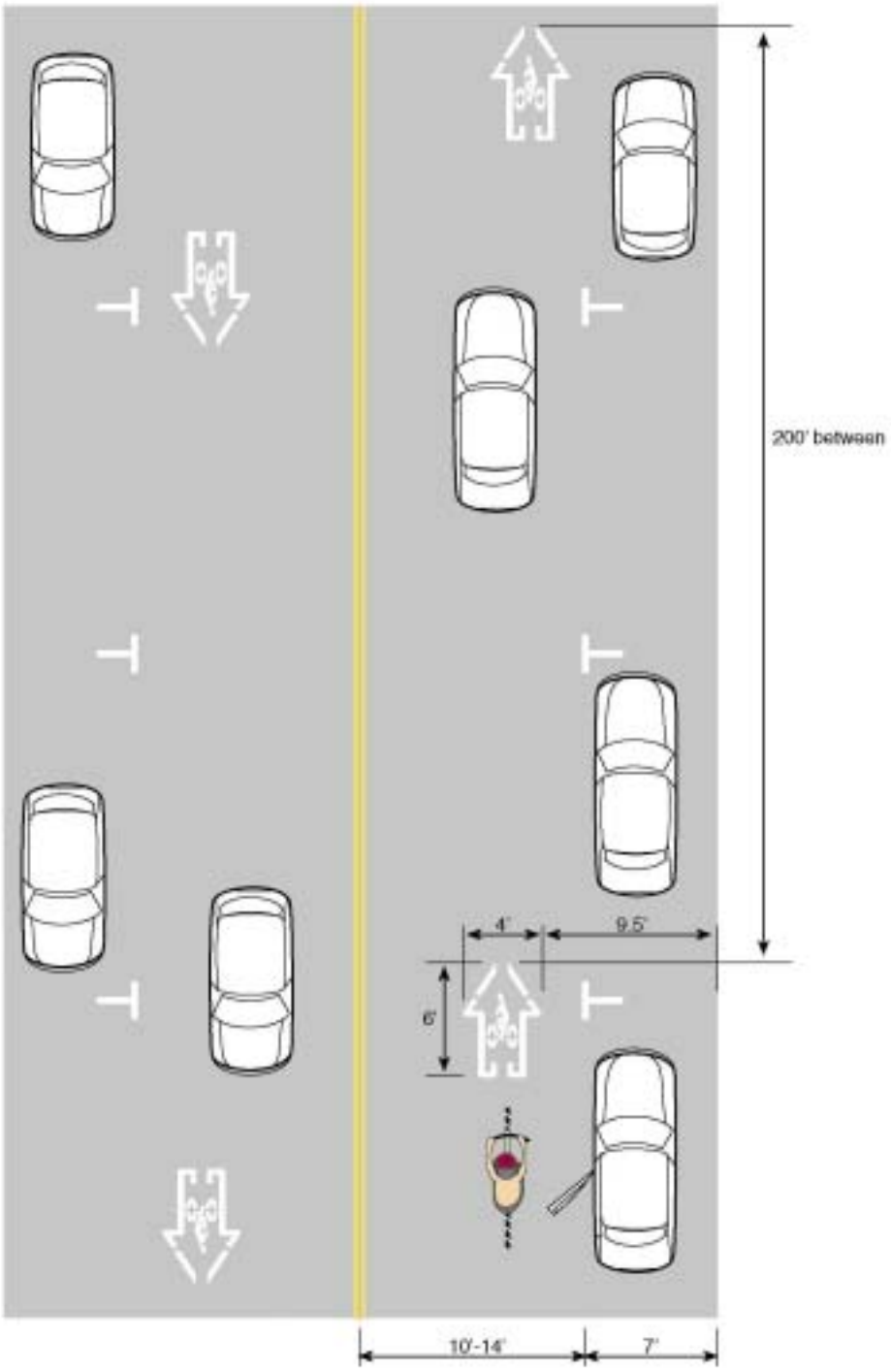


FIGURE 3 – SHARED – USE PAVEMENT ARROW

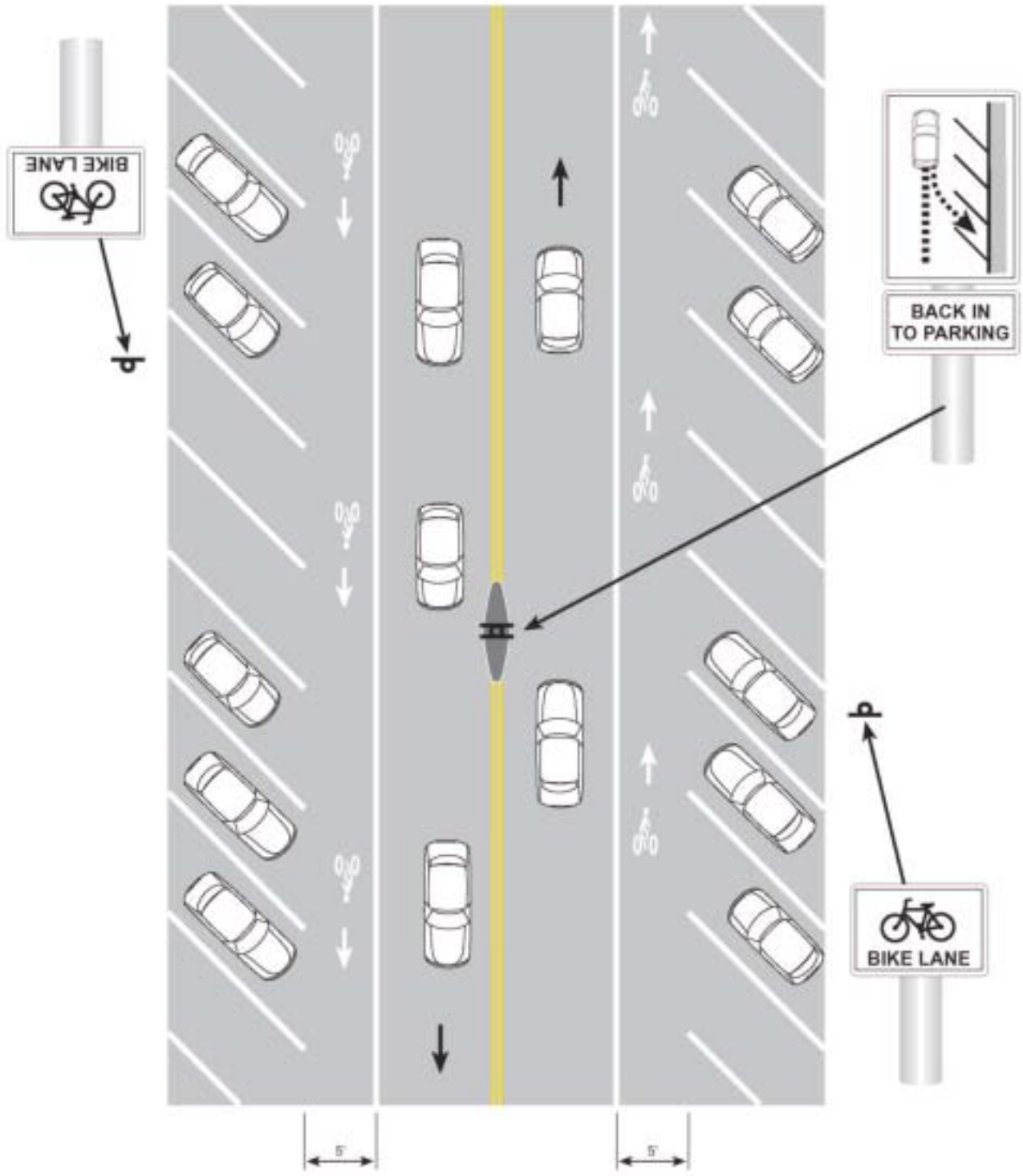


FIGURE 4 – BACK-IN ANGLE PARKING

SIGNING, MARKINGS, AND TRAFFIC CONTROL DEVICES

Signage increases safety and comfort on trails. The inclusion of signage on trails is an important amenity not to be overlooked. Signs may assist in the navigation of a trail or trail system, warn of approaching roadway crossings, regulate trail use, or interpret natural features.

There are five basic types of signs.

- Regulatory signs tell the "rules of the trail" by prohibiting certain uses or controlling direction of travel.
- Warning signs inform trail users of upcoming roadway crossings, steep grades, blind curves, and other potential trail hazards.
- Wayfinding signage gives street names, trail names, direction arrows, mileage to points of interest, and other navigational information.
- Interpretive signs offer educational information on the trail environment
- Objective signs provide information about the actual trail conditions, including grade, cross slope, surface, clear trail width and obstacle height. This allows users to make more informed decisions about which trails best meet their trail needs and abilities. For example, a wheelchair user may be able to travel over very steep grades provided the trail is at least 36 inches wide. Learning this information at the trailhead will help this user avoid the potential frustration of having to turn back if the trail becomes too narrow.

REGULATORY AND WARNING SIGNAGE

Uniform signs, markings, and traffic control devices shall be used per section 2376 of the Streets and Highways Code. **The Manual of Uniform Traffic Control Devices[ii] (MUTCD) should also be consulted to ensure proper signage for proposed trails.**

In general, all signs should be located two to four feet from the edge of the paved surface, have a minimum vertical clearance of 8.5 feet when located above the path surface and be a minimum of four feet above the trail surface when located on the side of the trail. All signs should be oriented so as not to confuse motorists. The designs (though not the size) of signs and markings should be the same as used for motor vehicles.

Multi-use trail signing and markings should follow the guidelines as developed by Caltrans and the MUTCD. This includes advisory, warning, directional, and informational signs for bicyclists, pedestrians, and motorists. In addition, standard San Francisco Bay Trail signage should be installed where appropriate. The final striping, marking, and signing plan for the Cerrito Creek Bay Trail should be reviewed and approved by a licensed traffic engineer or civil engineer.

Designs which deviate from the mandatory Caltrans design standards **shall** be approved by the Chief, Office of Project Planning and Design, or to a delegated Project Development Coordinator at Caltrans. These standards represent the basic guidelines set forth by Caltrans. There are many conditions that are not explicitly covered in the Caltrans or AASHTO guidelines.

Generally, warning and regulatory signage should be placed according to the above guidelines at each of the following locations:

- Trail crossings of major and minor roadways
- Approximately 100 feet from trail crossings and intersections along intersecting roadway (motorist warning signage alterting motorists to presence of bicyclists and pedestrians crossing roadway); and,
- At all trail obstacles or other design exceptions from Class I standard or ADA.

WAYFINDING SIGNAGE

The Cerrito Creek Bay Trail Connector is proposed for a complex, developed urban environment where extensive roadway and commercial signage exists. There are numerous visual distractions from the trail itself, numerous intersections, and changes in trail character and environment that may make it difficult for trail users to follow the intended pathway, particularly along the required on-street segments or where existing sidewalks are incorporated into the trail. The trail design will do as much as possible to ensure that the trail is easy to follow; through material selection, design detailing and other identity element. Wayfinding signage will be a key component of trail navigability and safety.

Bay Trail wayfinding signage should be installed along the proposed trail according to the following guidelines:

- High visibility placement at all major and minor roadway crossing directing trail users to the appropriate crossing location and direction of the trail (name of cross street should be provided)
- Placement at intersection of all on-street segments of the proposed route(s) and all off-street segments of the proposed route(s)
- Clear indication of bicycle segments, shared-use segments, and pedestrian-only segments
- Placement of signage each 500 feet along extended trail segments; and, along both bicycle and pedestrian segments where the are separate, parallel facilities along the same roadway; and,
- Placement along trail at all major changes in character to ensure understanding of trail direction at such locations.

INTERPRETIVE SIGNAGE

The Cerrito Creek Bay Trail Connector provides several opportunities for site specific interpretive and educational signage, including:

- Site of historic Rancho San Antonio land grant plaque
- Intersection of Cerrito Creek and San Pablo Avenue
- Cerrito Creek natural areas including locations of mature riparian trees, ongoing riparian vegetation restoration areas, and locations of historic cultural resources.

Interpretive signage can have the dual benefit of educating trail users about their local environment and protecting sensitive resources.

SIGNAGE PROGRAM GUIDELINES

Development and implementation of the signage program for the Cerrito Creek Bay Trail Connector should follow these guidelines:

- A Comprehensive Signage Program for the Cerrito Creek Bay Trail Connector shall be prepared by a capable graphic design professional and submitted to the lead city agencies and Association of Bay Area Governments Bay Trail staff for review. At a minimum, the Signage Program shall be consistent with the guidelines that follow.

- The Signage Program shall contribute to a coordinated, coherent image of the Cerrito Creek Bay Trail Connector. This includes limiting signage quantity and size to that which is necessary for information and safety purposes in order to avoid visual clutter and confusion.

- The Signage Program shall be comprised of the fewest signs and be located in the most appropriate places. Messages shall be positive in wording and tone, yet firm and direct.

- Whenever feasible, the signs specified in the Signage Program shall be ADA certified. Raised characters and Braille for the visually impaired should be used where possible on logos, maps, and other graphic information.

- The signage program shall require creativity, quality of craftsmanship, simple design, and an economy of words.

FENCING AND BARRIERS

Fencing and other barriers are typically used to separate a trail from adjacent private property and land uses. However, the only segment of the Cerrito Creek Bay Trail that may require fencing barriers of some sort would be the trail segment that starts on the westside of San Pablo Avenue and follows the creek to Pierce Street. On this segment fencing may be required to address private property concerns, protect restoration activities on Albany Hill and at the creek banks, and to protect trail user safety at the steep bank and retaining wall locations. Specifically, there may be a need to provide for separation between the trail and activities associated with the land uses along both sides of Cerrito Creek. Fencing at these locations is included in the cost estimates for this project.

BOLLARDS

Bollards at trail intersections and entrances (such as the San Pablo entry) will be necessary to keep motor vehicles from entering. The bollards should be designed to be visible to bicyclists and others, especially at night, with reflective materials and appropriate striping. Bollards should

be designed to be easily moveable by emergency vehicles. Design schematics for collapsible and fixed bollards are shown in Figures 5.

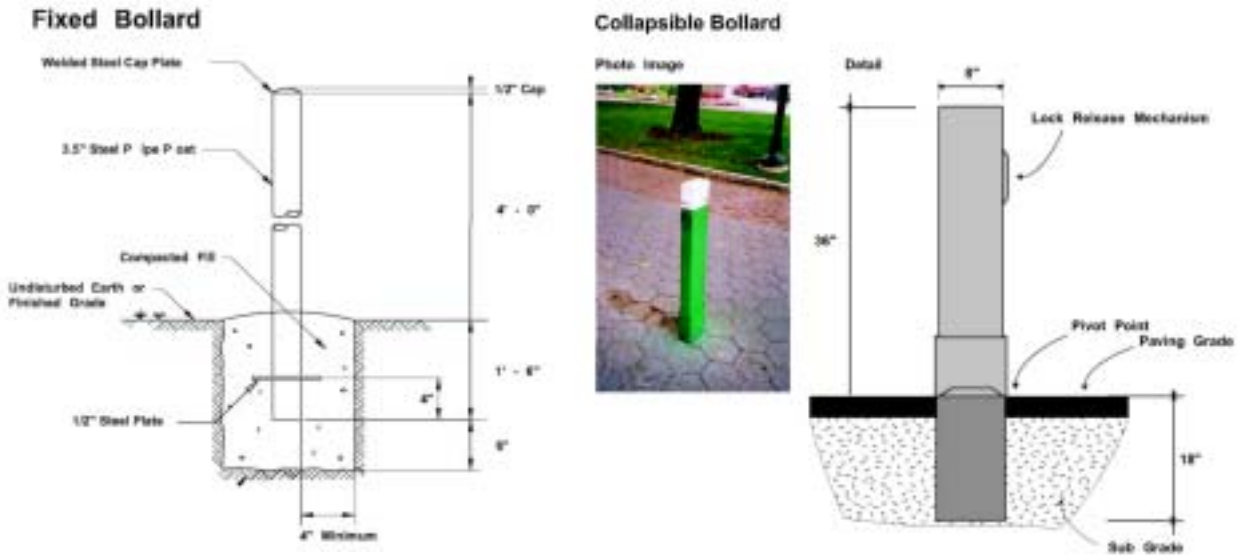


FIGURE 5 – BOLLARD TYPES

CROSSINGS

Road crossings from separated segments require two critical considerations: (1) path users will be enjoying an auto-free experience and may enter into an intersection unexpectedly, and (2) motorists will not expect to see bicycles or pedestrians shooting out from an unmarked location into the roadway. In most cases, path crossings at-grade at can be properly designed to a reasonable degree of safety and to meet existing traffic and safety standards.

Standard Crossing Features

This section summarizes some of the key attributes of all trail crossings.

Signing

Crossing features for all roadways include warning signs both for vehicles and trail users. The type, location, and other criteria are identified in the *Manual for Uniform Traffic Control Devices* (MUTCD) and the Caltrans *Highway Design Manual*. Consideration must be given for adequate warning distance based on vehicle speeds and line of sight, with visibility of any signage absolutely critical. Catching the attention of motorists jaded to roadway signs may require additional alerting devices such as a flashing light, roadway striping, or changes in pavement texture. Signage for trail users must include a standard STOP or YIELD sign and pavement

marking, sometimes combined with other features such as bollards to slow bicyclists. Care must be taken not to place too many signs at crossings lest they begin to lose their impact.

Directional signage may be useful for trail users and motorists alike. For motorists, a sign reading "Trail Xing" along with a path emblem or logo helps both warn and promote use of the trail itself. For trail users, directional signs and street names at crossings help direct people to their destinations. Care should be taken to keep vegetation and other obstacles out of the view line for motorists and trail users.

Striping

A number of striping patterns have emerged over the years to delineate trail crossings. A median stripe on the trail approach will help to organize and warn trail users. The actual crosswalk striping is a matter of local and state preference, and may be accompanied by pavement treatments to help warn and slow motorists. The effectiveness of crosswalk striping is often relative to local customs and regulations. In communities where motorists do not typically defer to pedestrians in crosswalks, additional measures may be required.

GRADES

The Cerrito Creek Bay Trail alignment has been designed to a maximum gradient of 8.3 percent with appropriate landings to reflect Americans with Disabilities Act (ADA) recommendations. While both Caltrans "Chapter 1000 (Planning and Design of Bikeways)"[iii] and AASHTO's *Guide for the Development of Bicycle Facilities*[iv] states that grades up to 10 percent are allowable for shorter distances on bike paths, the application of ADA standards on multi-use paths is less clear. The State has started requiring that all multi-use paths meet ADA standards under the expectation that both bicyclists and pedestrians will use the path. Steeper grades, up to 8.3 percent, can be used with intermittent landings, although these are generally inappropriate for pathways with bicycle use because they can cause a bicyclist to lose control. The 8.3 percent grade has been recommended as a maximum for use only on individual ramps between path segments.

DRAINAGE

Drainage is an important design consideration for some trail segments, specifically where the alignment parallels Cerrito Creek. The Cerrito Creek segment should be designed with consideration of sensitive wildlife and plant species that may be present. The project design should ensure that adequate drainage is provided and the impacts of any flooding minimized. Drainage inlet grates must have openings narrow enough and short enough to insure that bicycle tires will not drop into the grates. A minimum two percent cross slope is recommended for adequate drainage of the trail on all sections.

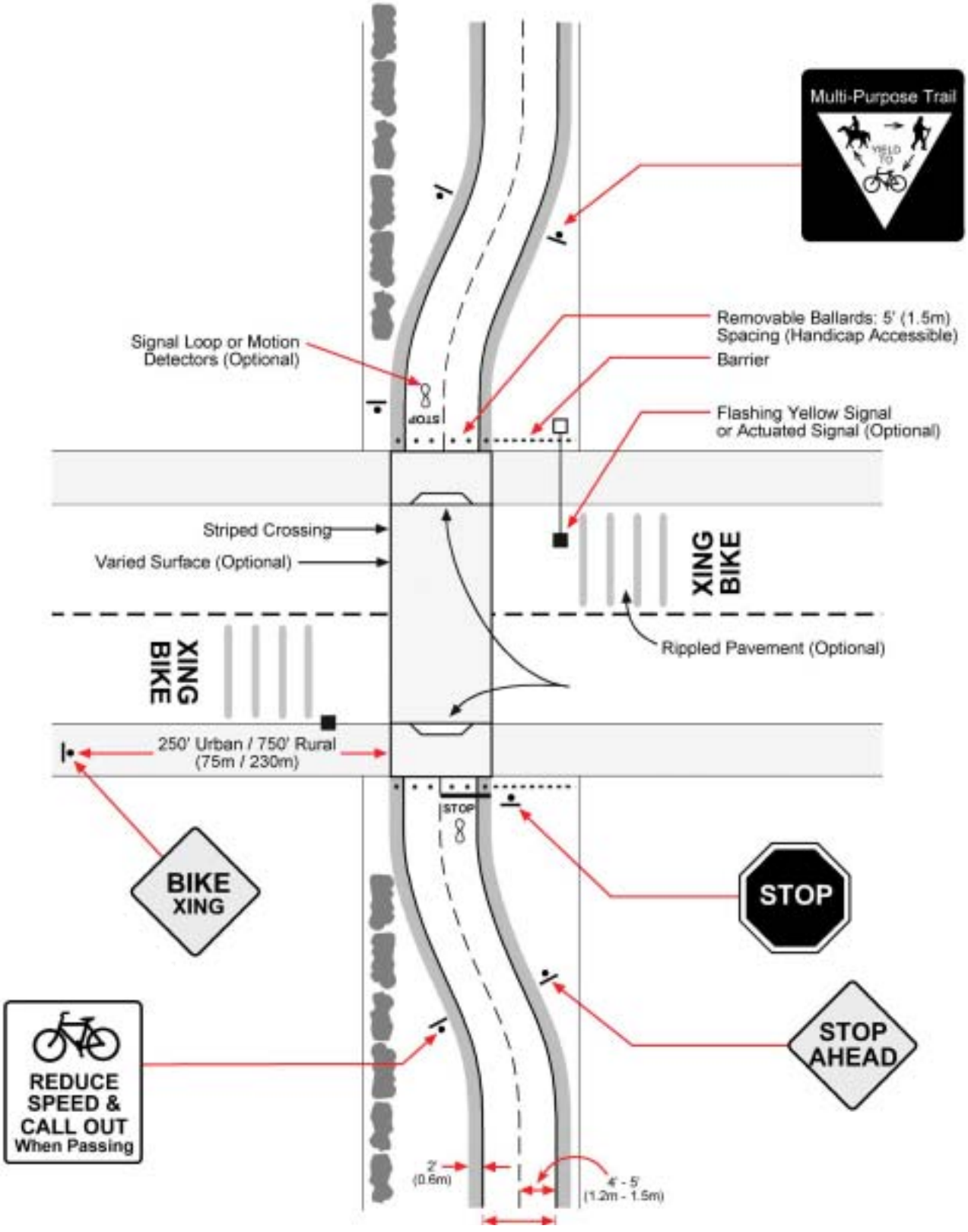


FIGURE 6 - UNPROTECTED ROAD CROSSING

LANDSCAPING

Landscaping is not specifically planned along the Cerrito Creek Bay Trail Connector, except as part of the necessary mitigation efforts and at specific entry points where planting would provide an aesthetic amenity to the trail. Such landscaping should follow these general principles:

- Native plants
- Drought tolerant (not requiring irrigation after initial establishment period of six mos. to one year)
- Safety (maintain required sight lines to meet trail operation standards and visual access for law enforcement agencies)
- Wildlife benefits
- Complementary to existing creek side plantings (where adjacent to creek corridor)
- Slope stabilization
- Privacy and screening for adjacent neighbors.

The other trail segments are intended to benefit from the existing natural vegetation, and native plants may be planted to replace items lost during construction, to help stabilize slopes, or to help protect the privacy of adjacent parcels.

Much of the Cerrito Creek Bay Trail Connector (both "Interim" and "Proposed" routes) follows on-street alignments with few opportunities for landscape planting. Where opportunities exist for planting along these segments, they should be taken advantage of to provide a stronger identity for the trail and a more pleasant trail user experience.

UTILITIES AND LIGHTING

Surface and sub-surface utilities may be located within the Cerrito Creek Bay Trail corridor, impacting the location and construction of the trail. Utilities can include active and abandoned railroad communication cables, signal and communication boxes, fiber optic cables, water and sewer lines, gas and petroleum lines, and telephone lines. The right-of-way trail section will be designed to avoid having to move most active surface utilities. The trail may be located directly over existing sub-surface utilities assuming (a) adequate depth exists between the path surface and utility to prevent damage, and (b) agreements can be reached with the utility owner regarding access for repairs and impact to the trail.

For environmental purposes, lighting on the Cerrito Creek Bay Trail Connector is limited. Downshield lighting is included in Proposed and Interim Segment 2 between San Pablo Avenue and Creekside Park. The trail sections on Pierce Street and elsewhere will receive lighting from the existing streetlights on those roads. The City of Albany may choose to light portions of the path on other segments of the trail, especially where there is considerable evening pedestrian and bicycle commuter traffic. Adjacent private property owner concerns must be considered when locating lights on the trail.

ENTRANCE FEATURES

The Cerrito Creek Bay Trail entrance features apply to the interface of on-street and off-street segments of the project.

1. **Bollards.** A single bollard should be placed on the centerline of the path at all entrances to prevent motor vehicles from entering the path. The bollard should be designed with high reflective surfaces and be brightly painted. The bollard should be collapsible or locked to a ground plate and be easily removed by emergency vehicles.

2. **Entrance characteristics.** Entrance signs should include regulations, hours of operation (if any), and trail speed limit. Entrance signs may also include sponsorships by local agencies, organizations, and/or corporations. Signs may be placed at the entrances or at appropriate locations along the trail that provide brief descriptions of historic events or natural features.

3. **Wayfinding Signage.** As discussed above under "Signage" each trail entry area should be appropriately signed to minimize visual clutter and confusion and to provide all of the most relevant information that will help guide trail users and make them feel secure and comfortable when using the trail.

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[i] *Designing Sidewalks and Trails for Access Part II of II: Best Practices Design Guide.* McMillen, Barbara et. al. U.S. Department of Transportation, Federal Highway Administration. September, 2001.

[ii] *Manual of Uniform Traffic Control Devices: Part 9 Traffic Controls for Bicycle Facilities.* U.S. Department of Transportation, Federal Highway Administration. Millenium Edition, December 2000.Including Errata No. 1 dated June 14, 2001

[iii] Caltrans *Highway Design Manual. Chapter 1000: Bikeway Planning and Design*. State of California Department of Transportation. February 1, 2001.

[iv] *Guide for the Development of Bicycle Facilities.* American Association of State Highway and Transportation Officials. AASHTO Task Force on Geometric Design. 1999.

CONCEPT DESIGN PLAN

The Concept Design Plan presents the trail route from east to west, beginning at Cerrito Plaza and continuing west to the San Francisco Bay Trail. The design presentation follows the "Proposed Route" with "Interim Route" options presented where required. The intent of this distinction is described immediately below.

PROPOSED ROUTE

The proposed route presented in this feasibility study is the route that the sponsoring cities, project consultant, and staff working group (lead staff from each city), and ABAG Bay Trail staff recommend for the Cerrito Creek Bay Trail Connector. This recommendation comes with the recognition that additional work and negotiations are required to complete this vision. The proposed route requires additional preliminary engineering analysis to determine the best site-specific design for several key features of the trail. In addition, passage of the trail across State of California and private land holdings will require negotiation by the sponsoring cities in order to develop the necessary easements and agreements to allow for the trail. Finally, the cost of the proposed route is substantially greater than the interim options presented in this plan. These caveats aside, the proposed route is the most direct, safest, and provides for the most pleasurable trail user experience of any of the many route options investigated in this study.

The proposed route is presented on pages 2-19 through 2-51.

INTERIM ROUTES

The interim routes presented in this feasibility study provide lower cost, more easily implemented alternatives to some of the more complex and costly segments outlined under the proposed route. While these interim routes may be more easily implemented with lower cost, they do not meet the project goals as fully as does the proposed route. Depending on the preferences and abilities of the lead agencies, the interim route will provide safety and experiential improvements for trail users over the existing condition. The interim route will not compromise trail user safety but is less direct, does not provide access to Cerrito Creek, and requires longer on-street segments for all trail users.

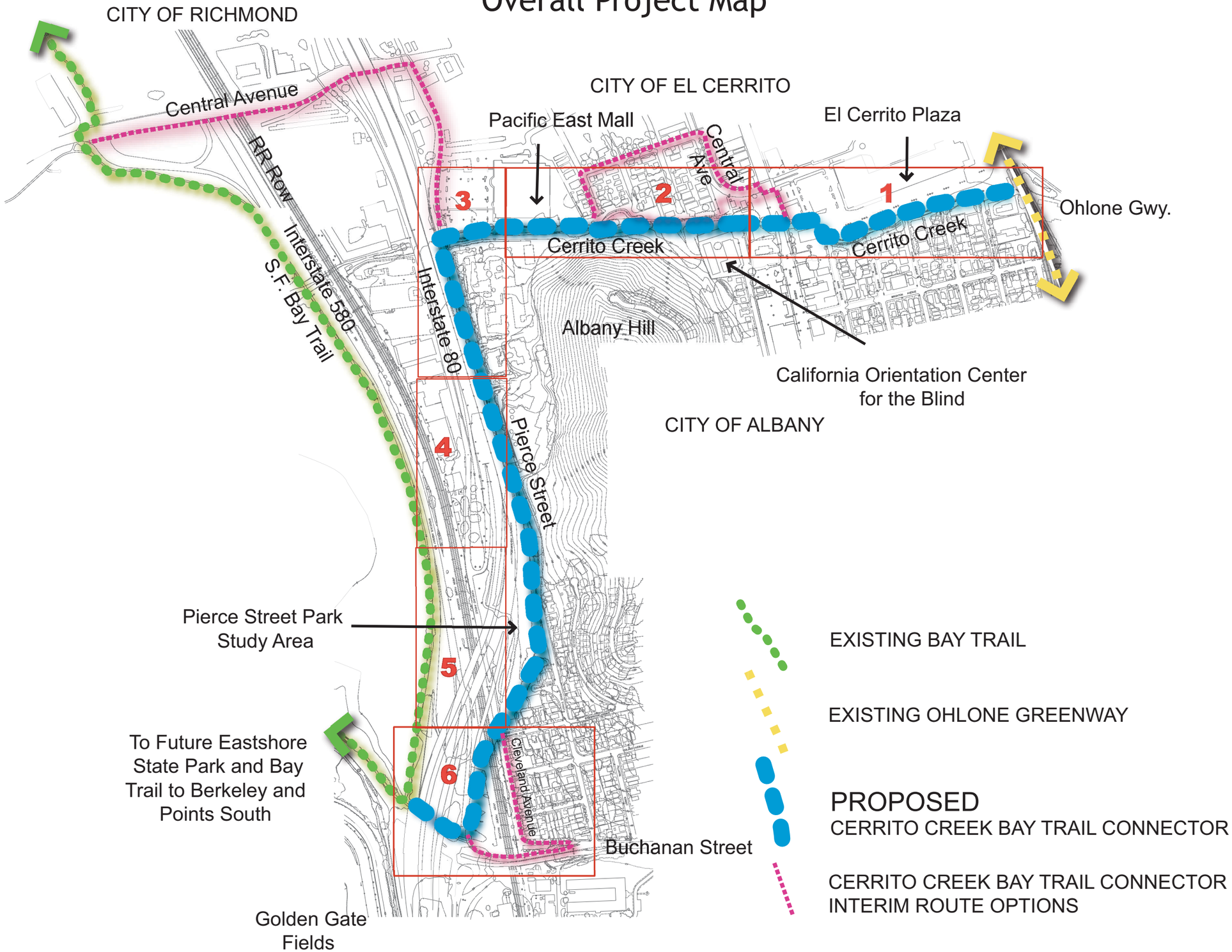
Interim routes are presented on pages 2-52 through 2-65.

CONCEPT DESIGN PLAN PRESENTATION

The proposed route is presented first with interim route options presented at the end of this section. The discussion for each proposed route segment where route options are provided includes a reference to this option.

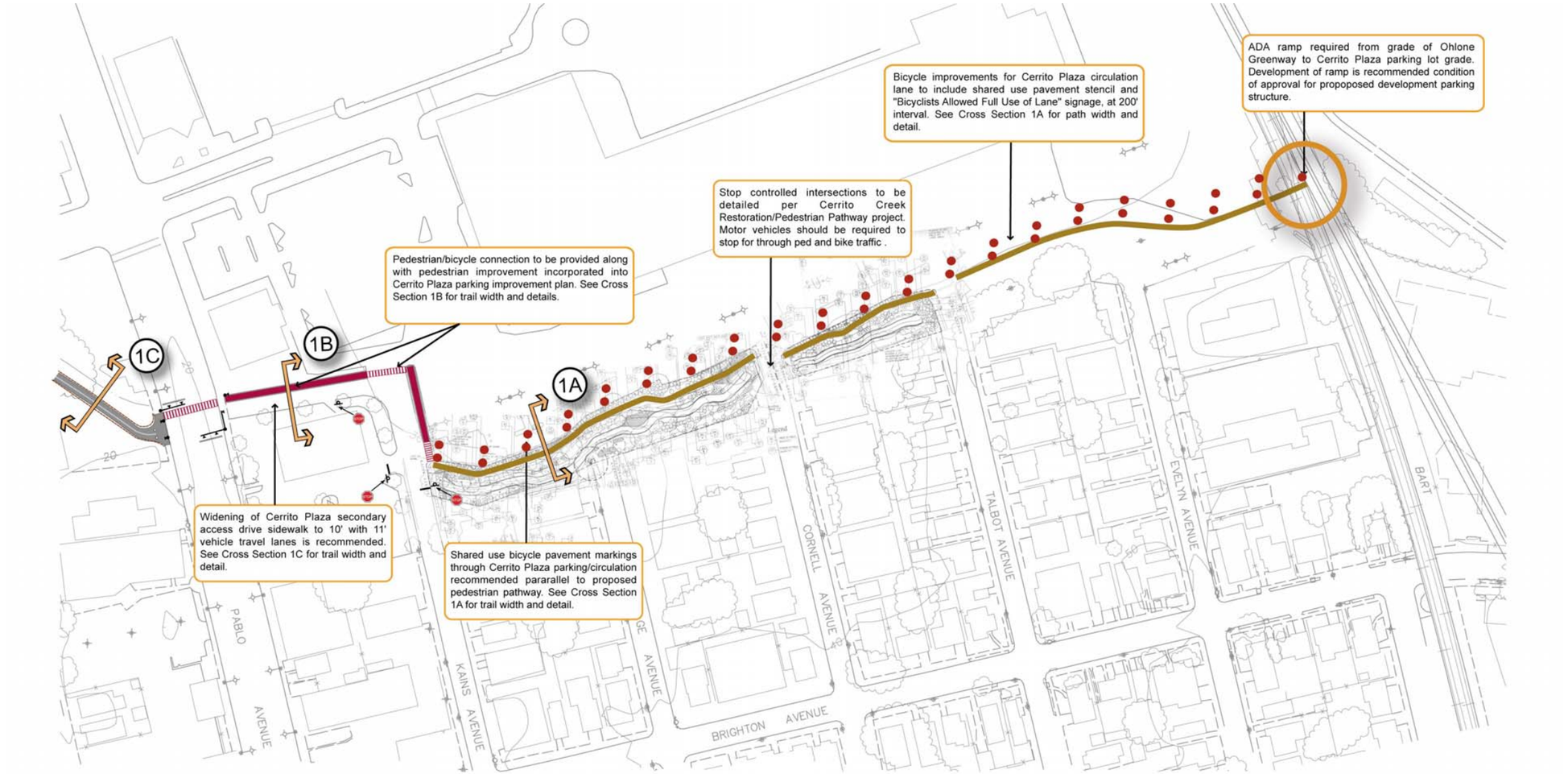
Each segment is presented in plan view with relevant cross-sections keyed to that section.

Overall Project Map



SEGMENT 1 (PROPOSED)

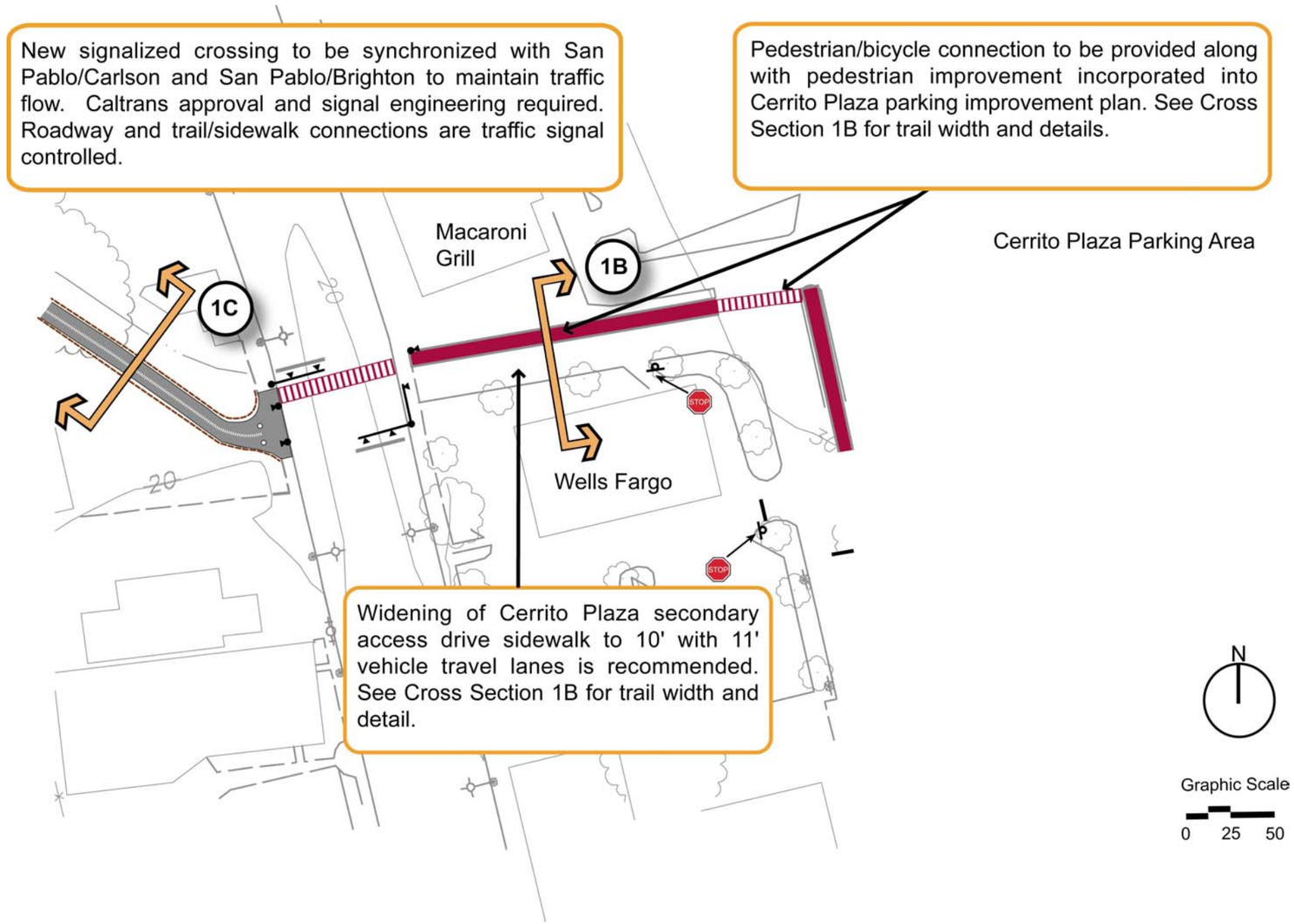
Segment 1 takes advantage of the Cerrito Creek restoration and the design and grading for a pedestrian path along a three-block stretch of Cerrito Plaza, and will provide bicycle improvements along the Plaza, along with a signal protected, mid-block, bicycle and pedestrian crossing of San Pablo Avenue. The feasibility, design, and engineering issues associated with these proposals are detailed below under the cross section discussion.



Concept Design Plan Sheet 1: Ohlone Greenway to San Pablo Avenue (PROPOSED)

SEGMENT 1 SAN PABLO AVENUE MIDBLOCK CROSSING (PROPOSED)

The "Proposed" trail alignment requires development of a new signal controlled mid-block crossing of San Pablo Avenue. The planning, permitting, and design requirements for this proposal are outlined below in the detail section discussion.



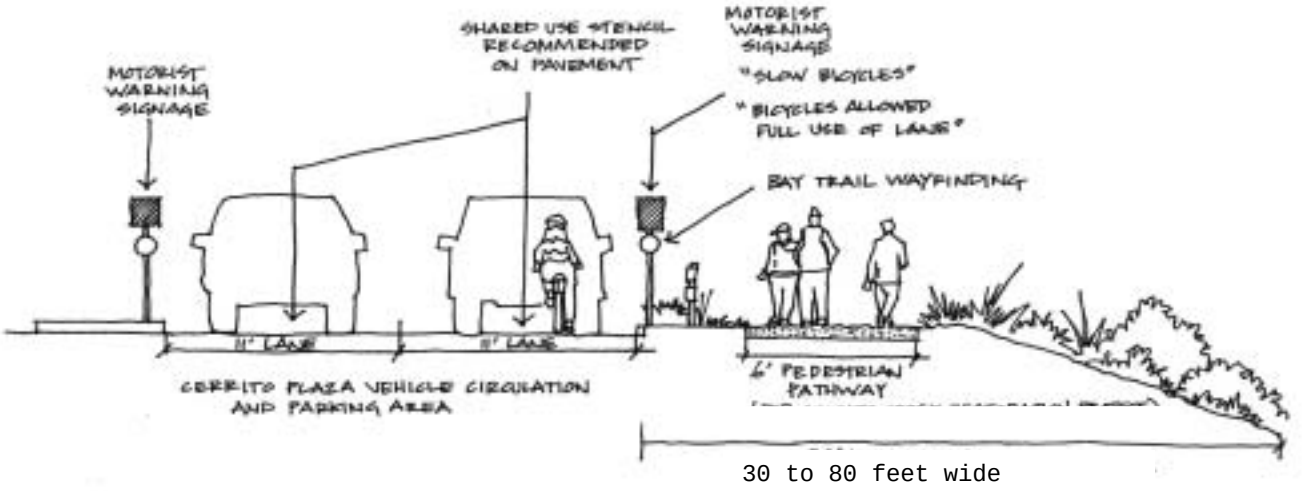
SEGMENT 1: CROSS SECTIONS (PROPOSED)

1A. CERRITO PLAZA PARKING AREA (FACING EAST)

The Cerrito Creek restoration project on the southern perimeter of the Cerrito Plaza parking area has been constructed within a property dedication from the Cerrito Plaza property owner ranging in width from 30 to 80 feet. Area for a six- to eight-foot pedestrian path was graded and left open for completion of a pedestrian trail along the length of this project; however, the pedestrian path needs to be constructed. Because this path has been provided for at a width for pedestrians only and cannot be modified now that the restoration design and construction is complete, bicycle traffic must be accommodated within the circulation lanes of the parking area. The narrow vehicle circulation lanes (11' in each direction) along the southern perimeter of Cerrito Plaza can provide a shared-use facility for vehicles and bicycles. In order to safely accommodate bicycles a "bicycle boulevard" type treatment is recommended, including information and warning signage and on-pavement stenciling, alerting motorists that bicyclists will be present.

REQUIRED TASKS

- Bicycle-specific signage and stencil locations must be established by the City of El Cerrito through negotiations and agreements with the Cerrito Plaza property owners, and should be completed as a part of any future circulation improvements to this area.
- The pedestrian path must be constructed in the six- to eight-foot wide area set aside in the Cerrito Creek Restoration project for this purpose. Final design and construction documents must show details for constructing a sub-base, installing trail edging, and installing a surface that will minimize impact to the creek.

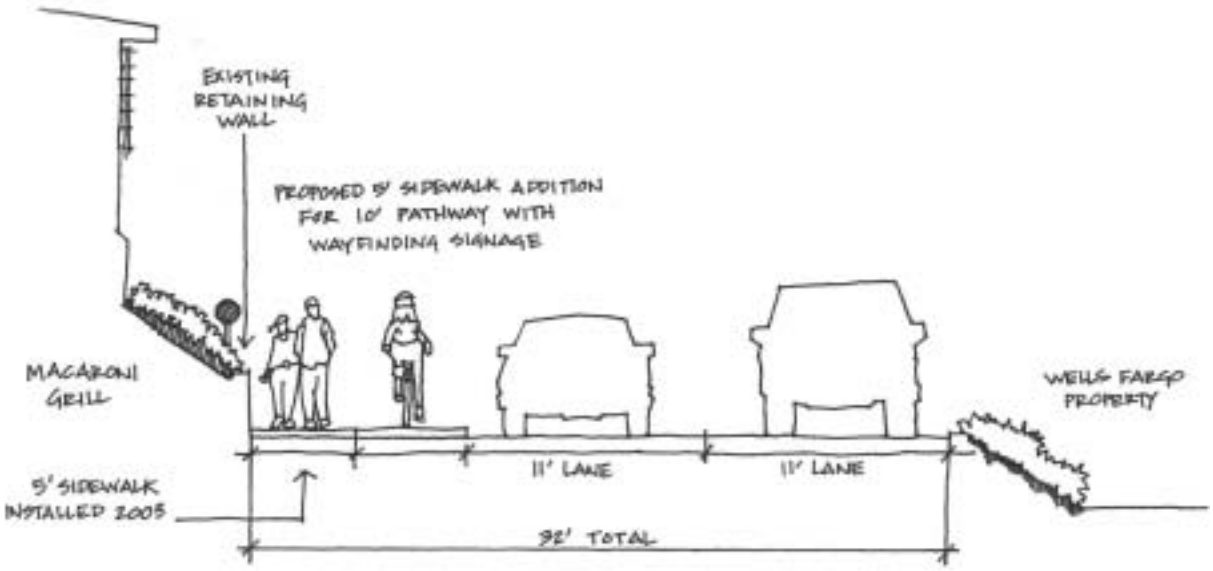


1B. CERRITO PLAZA DRIVEWAY (FACING EAST)

Bicyclists and pedestrians must exit the Cerrito Plaza area in as direct and controlled a manner as is possible to access San Pablo Avenue. The proposed route is via the secondary access driveway located immediately south of the existing Macaroni's Grill property and immediately north of the existing Well's Fargo property. The existing driveway is approximately thirty-two feet in width, including the 5-foot wide sidewalk installed on the north side of the drive in 2003. In order to better accommodate pedestrians and bicycles, a minimum ten-foot wide sidewalk should be constructed, narrowing the vehicle travel lanes to eleven feet in each direction. In order to provide for continued truck access at this location, the curve radii at San Pablo must be maintained at a geometry that will allow large trucks to enter and exit easily. Bicyclists and pedestrians must be kept clear of this truck turning area at the intersection. The proposed driveway section is shown here.

REQUIRED TASKS

- City of El Cerrito negotiation with property owners regarding sidewalk expansion and lane narrowing.
- Determination of truck turning radius constraints to ensure proper design for both delivery vehicles and pedestrian/bicycle access and separation from vehicle traffic.
- Complete preliminary engineering and design.

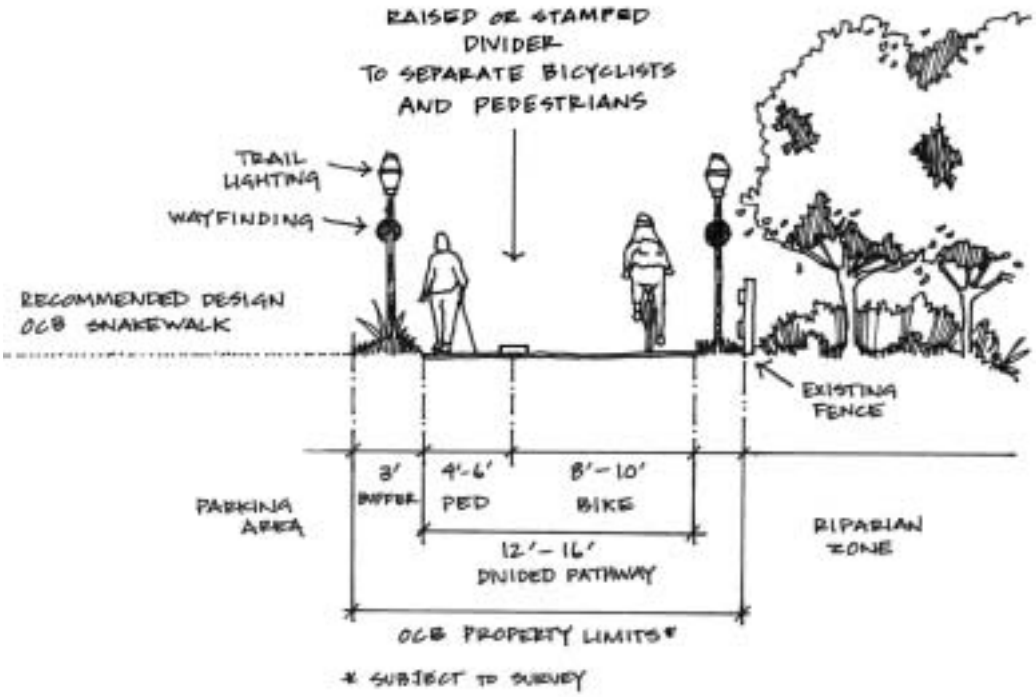


1C. OCB "SNAKE WALK" (FACING WEST)

The Orientation Center for the Blind (OCB) currently maintains a pedestrian pathway beginning at San Pablo Avenue in the east and extending to Adams Street in the west. Under the proposed design this pedestrian pathway is converted to accommodate both pedestrians and bicycles for this segment. This requires a widening of the pathway, signage to warn bicyclists of the presence of blind pedestrians, and a visual and textural divider indicating to bicyclists that they must ride on the north side of the path separate from pedestrians. The preferred minimum width for this separated use trail is 16 feet, with four to six feet for pedestrians and eight to ten feet for two-way bicycle travel.

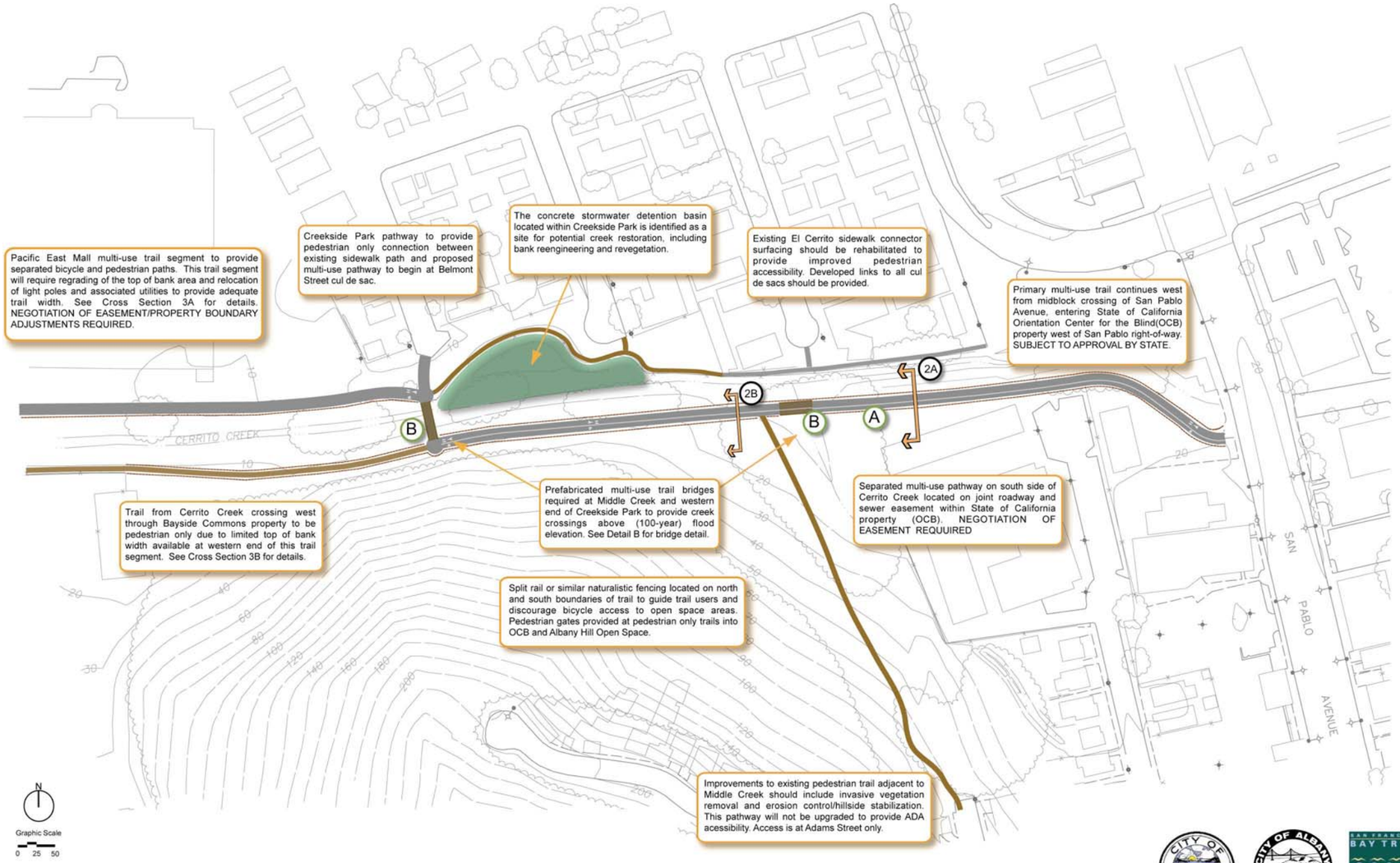
REQUIRED TASKS

- City of Albany negotiations with State of California to establish maintenance access to Orientation Center for the Blind (OCB).
- City of Albany negotiations with State of California to establish public trail access to OCB.
- Preliminary engineering and design.



SEGMENT 2 (PROPOSED)

Segment 2 extends from the Orientation Center for the Blind property to the Pacific East Mall and includes the majority of the off-street trail development for the project. This segments includes locations for two prefabricated trail bridges, one at Middle Creek and one over Cerrito Creek at the western end of Creekside Park. These features are detailed below under the detailed cross section discussion.

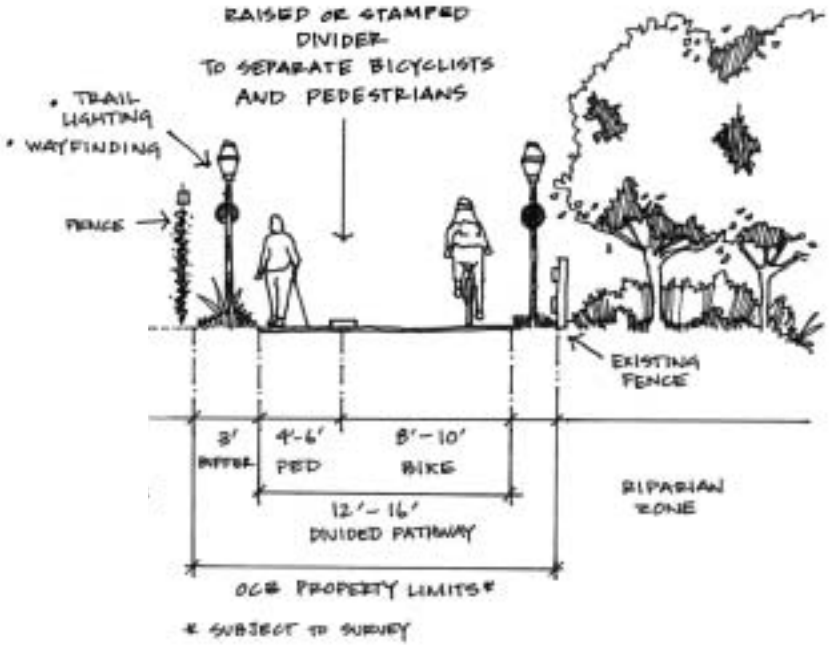


Concept Design Plan Sheet 2: San Pablo Avenue to Pacific East Mall (PROPOSED)

SEGMENT 2: CROSS SECTIONS (PROPOSED)

2A. ORIENTATION CENTER FOR THE BLIND PROPERTY (FACING WEST)

Continuing west from the OCB "Snake Walk" requires the negotiation and establishment of a public access trail easement across the State of California property, owned and managed by the State Department of Rehabilitation and managed locally by the Orientation Center. Two existing easements cross this property parallel to Cerrito Creek and must be modified to accommodate public trail uses. The City of Albany holds roadway and maintenance access easements. The preferred trail cross section for the proposed trail is to create a divided pathway, providing four- to six-foot wide pedestrian path and an eight- to ten-foot two-way bicycle path. These separated trail treads must also provide for maintenance and emergency vehicle access and cannot be divided by vertical separation. The separation technique must also be ADA compliant and not create a greater than .25 inch vertical obstacle.

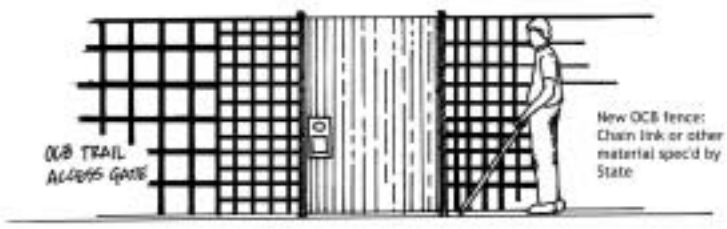


REQUIRED TASKS

- City of Albany negotiations with State of California to establish maintenance access to Orientation Center for the Blind (OCB).
- City of Albany negotiations with State of California to establish public trail access to OCB.
- Preliminary engineering and design.

DETAIL A: ORIENTATION CENTER FOR THE BLIND ACCESS

In order to provide direct access for Orientation Center for the Blind (OCB) residents, staff and visitors, a code or key locked gate could be provided in the reconstructed fence. This feature would enable OCB to access the trail freely from the north side yard.

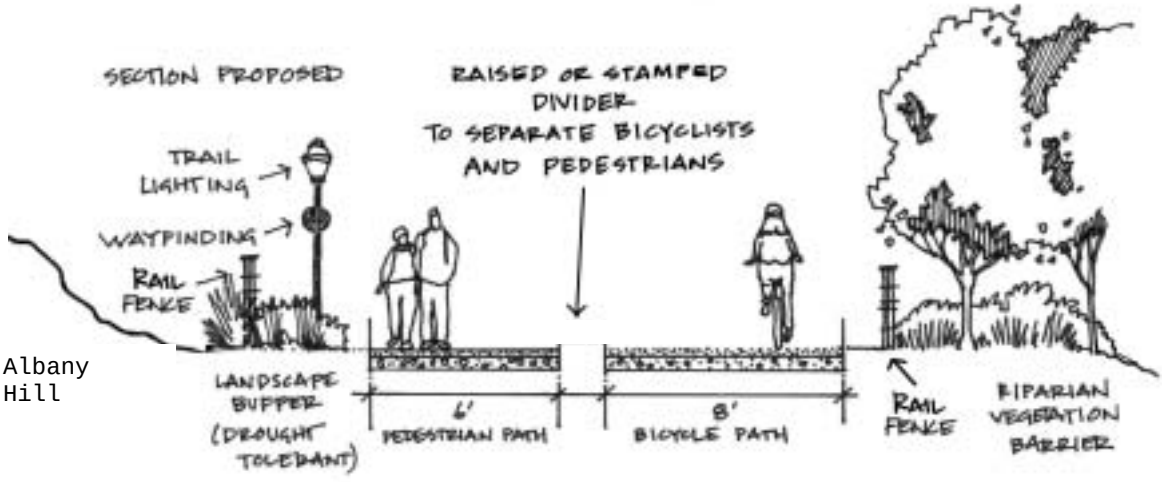


2B. ALBANY HILL OPEN SPACE (FACING WEST)

Albany Hill Open Space is a sensitive resource that requires protection from the increased public access that would be created by a multi-use trail. West of the OCB property is City of Albany owned open space. The northern boundary, on the south bank of Cerrito Creek, was extensively graded in 2000 and is currently and open gravel roadbed. This area presents an ideal substrate for a multi-use trail, but adjacent sensitive resources including Native American sites and sensitive plant species must be addressed. Wooden rail fences should be used on both sides of the trail to keep trail users on the trail areas. The proposed trail should also be fenced and signed to promote resource protection. Other details include the need to provide for continued separation of pedestrian and bicycle traffic, while also ensuring ADA compliance.

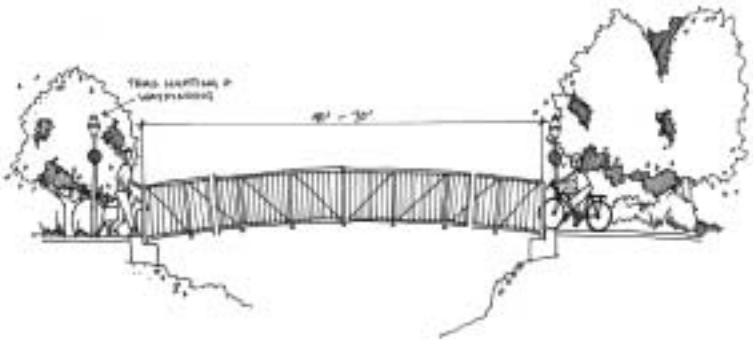
REQUIRED TASKS

- Preliminary engineering for Middle Creek bridge and trail approach.



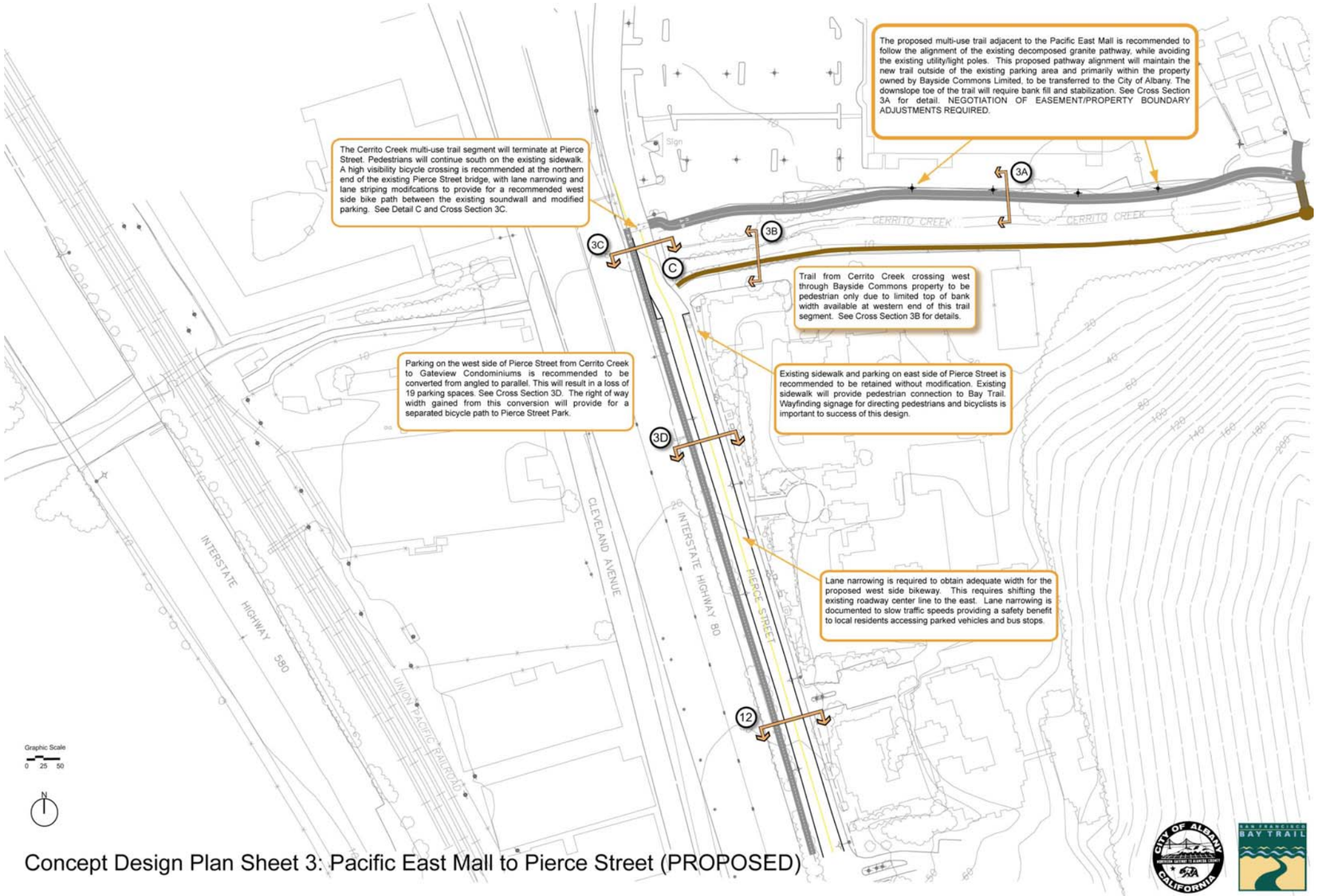
DETAIL B. BRIDGE CROSSINGS

In order to develop the trail west from the OCB property to the Albany Hill Open Space, a bridge is required to cross Middle Creek, a tributary to Cerrito Creek. In order to minimize cost for both the structure and engineering, a prefabricated bridge should be used at this location. The required footings must be constructed without impact to the existing creek channel and surrounding resources. The bridge at this location must be approximately 40 feet in length and should provide for maintenance and heavy emergency vehicle access. A qualified engineer in consultation with the City of Albany police, fire, and City of Berkeley public works shall determine specific load bearing requirements. Construction of the bridge at this location must take into account the location of subsurface utilities, specifically the City of Berkeley sewer.



SEGMENT 3 (PROPOSED)

Segment 3 includes the western reach of the Cerrito Creek off-street trail and the northern segment of Pierce Street. The cross sections below present the proposed design solutions for this segment of the creek trail and present the proposed configuration for Pierce Street parking. Neighborhood and design issues related to the parking constraints are addressed in this section and options are presented. This proposed segment cannot proceed to preliminary engineering and design prior to further traffic study and neighborhood workshops.

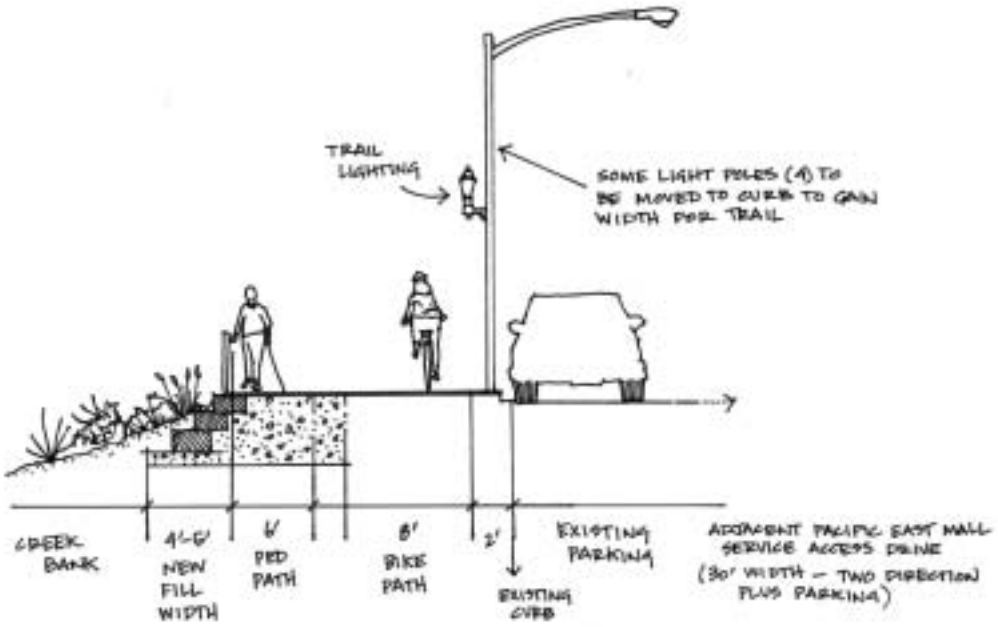


Concept Design Plan Sheet 3: Pacific East Mall to Pierce Street (PROPOSED)

SEGMENT 3: CROSS SECTIONS (PROPOSED)

3A. PACIFIC EAST MALL SEGMENT (FACING WEST)

Development of the proposed trail west from Creekside Park within the City of El Cerrito to Pierce Street requires traversing private property within the City of Richmond. The Pacific East Mall abuts the northern bank of Cerrito Creek and provides paved parking immediately adjacent to an existing decomposed granite pedestrian pathway constructed by the Friends of Five Creeks. The proposed trail would follow the same alignment as the existing pedestrian path but would require widening and low retaining wall and fill in order to accommodate the added trail width. These items are detailed in the project cost estimate. Some of the existing parking lot light poles would be required to be moved to the existing curb in order to gain additional width at the top of the creek bank. This portion of the project requires negotiations with the private property owner to establish a permanent trail easement and to limit the landowner's liability for trail activities, and would require coordination with the City of Richmond. The existing trail use is compatible with the parking lot boundary area, and more clear definition of the trail zone would improve the situation for both mall patrons and trail users.

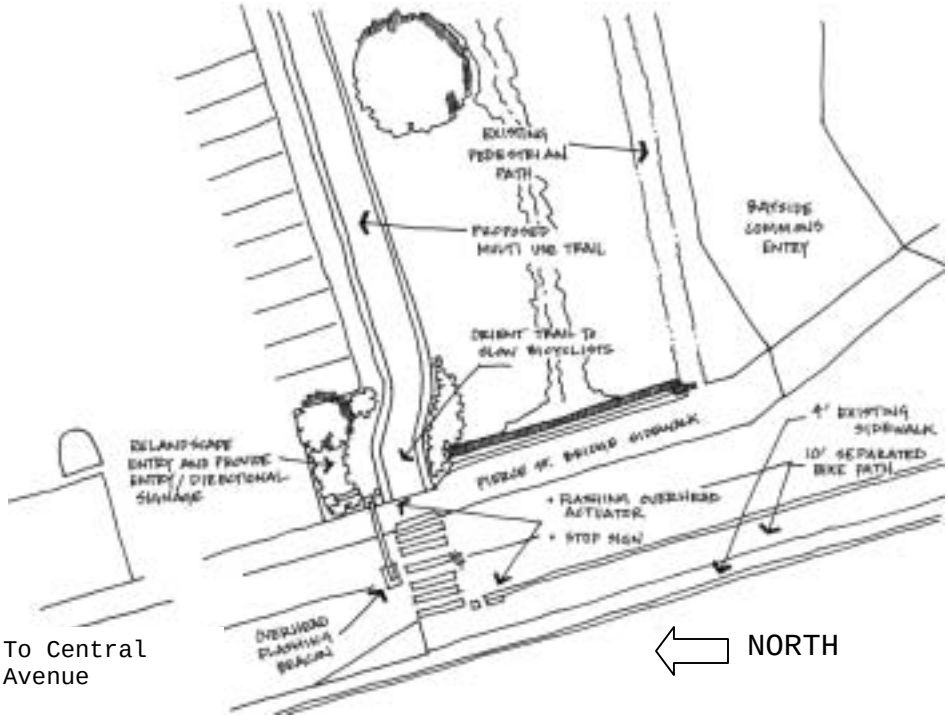


REQUIRED TASKS

- City of Albany negotiation with Pacific East Mall property owner and Bayside Commons to establish change of ownership/lot line adjustment for establishment of trail location.
- Preliminary engineering and design.
- City of Richmond construction permitting.

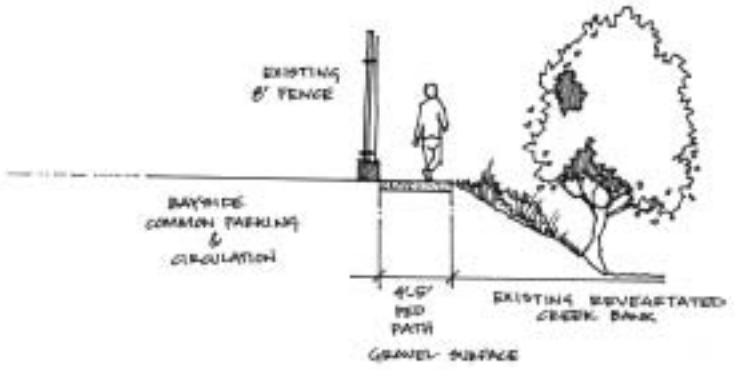
DETAIL C. PACIFIC EAST MALL TRAIL ENTRANCE (PLAN VIEW)

The intersection of the proposed trail and Pierce Street at the southwest corner of the Pacific East Mall requires special treatment as a trail entrance. This location is the intersection of on-street and off-street segments and presents specific needs for wayfinding and other trail user information. This location should provide a well-designed formal trail entrance area, within the constrained area available. Wayfinding signage at this location should properly direct Bay Trail bound pedestrians to use the existing sidewalk on the east side of Pierce Street and direct bicyclists to use the bike path or bicycle lanes (depending on the option ultimately adopted and implemented for Pierce Street). In addition to the entry features, crossing improvements are required at this location if bicycle lanes or a separated bicycle path is implemented on Pierce Street.



3B. EXISTING PEDESTRIAN PATH (FACING WEST)

The existing pedestrian path on the south side of Cerrito Creek, on the Bayside Commons property, should be maintained to provide pedestrian access only from Pierce Street through to the proposed multi-use trail on the Albany Hill Open Space parcel. There are no construction requirements for this segment.



3C. PIERCE STREET CONFIGURATION 1 (FACING NORTH)

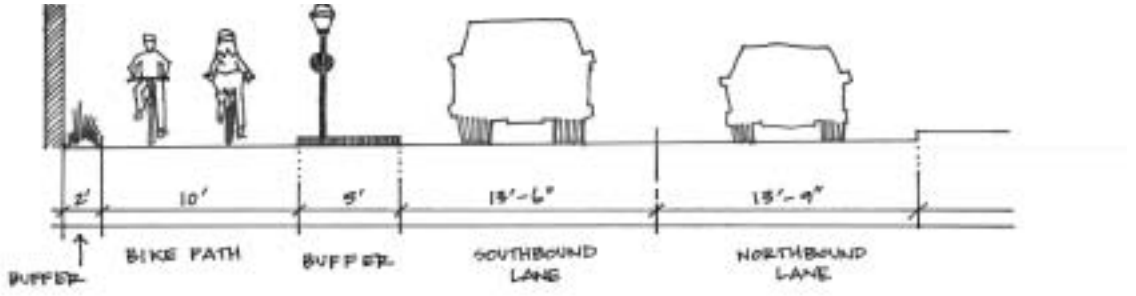
Pierce Street can be divided into several segments beginning in the north at Cerrito Creek. The northern-most segment, discussed here, extends from the Pierce Street Bridge over Cerrito Creek to the Bayside Commons parking entrance. This short segment has no existing parking. Several options for improving bicycle and pedestrian safety were considered for this northernmost segment, including: (1) travel lane narrowing to provide for a separated two-way bicycle path on the west side of Pierce Street with crossing improvements to access the path, (2) travel lane narrowing to provide for the development of a two-way shared use path on the east side of Pierce Street, also requiring substantial reconstruction of the existing pedestrian sidewalk, and (3) lane narrowing to provide for striping of bicycle lanes.

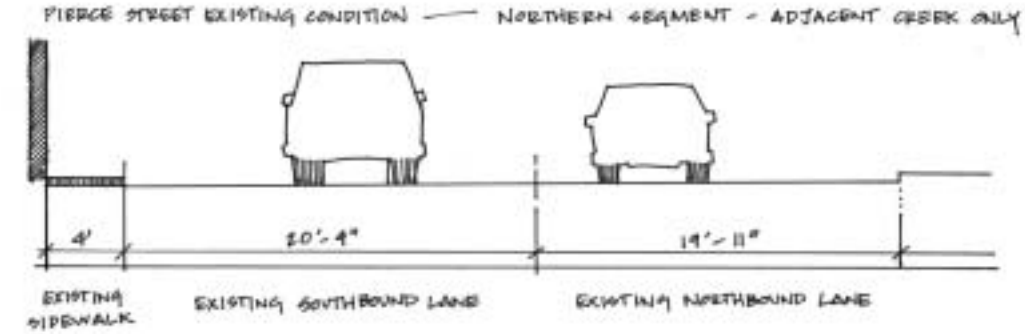
The proposed design is to provide for a separated bicycle pathway, however this design cannot be achieved for this segments unless it is continued south along Pierce Street. There is significant neighborhood concern about this proposal due to the parking loss that would result (this is treated in greater detail below under 3D). Interim treatments are discussed below under "Interim Trail Options."

The separated bikeway on the west side of the street, with pedestrians using the existing sidewalk on the east side, provides the greatest improvement in safety over the existing condition and would allow for the widest range of trail users to safely use the trail.

REQUIRED TASKS

- Pierce Street parking and traffic studies to determine options for parking replacement for proposed alternative.
- Detailed design for neighborhood preferred alternative.
- Preliminary engineering and design.





No Existing Parking

3D. PIERCE STREET CONFIGURATION 2 (FACING NORTH)

Beginning at the Bayside Commons entrance and continuing south along the condominium residences to the west entrance to Albany Hill Open Space there is existing diagonal parking along the west side of Pierce Street, wide travel lanes, and parallel parking on the east side of the street. Parking is continuous along the west side, while there are numerous driveways and red curb zones on the east side. The complexity of developing pedestrian and bicycle improvements for this segment requires that additional information is presented in this study over other segments.

EXISTING CONDITION

Immediately south of the Bayside Commons, the street right-of-way widens. From this point south the to the Bridgewater development, Pierce Street provides one lane in each direction with unmarked parallel parking on the east side of the street and marked 30^0 angle parking on the west side of the street adjacent to the sound wall located within the Caltrans right-of-way. The northbound lane is generally 22'-0" in width with unmarked parallel parking. The southbound lane is generally 30'-0" in width with marked 30^0 angle parking.

Existing Parking Summary

West Side (30^0 Angle Parking)	East Side (Unmarked Parallel Parking)	TOTAL
75 stalls	43 stalls	118

PROPOSED DESIGN

The proposed design takes advantage of the lack of driveways to provide a separated multi-use trail.

From Bayside Commons to Bridgewater, the required modifications for the proposed design include:

- Conversion of **75** 30^0 angle parking stalls to **56** parallel parking stalls on west side
- Roadway restriping/redesign consisting of:
  - 8' northbound marked parallel parking lane (east side of Pierce);
  - 12' northbound through lane;
  - 2' shift of center line to east;
  - 12' southbound through lane;
  - 8' southbound marked parallel parking lane (west side of Pierce);
  - 4' buffer/divider (raised sidewalk to provide parking access);
  - 10' paved Class I bikeway with center line stripe; and
  - 2' planted wall buffer.

IMPACTS

This recommendation will result in the loss of **19** parking spaces.

Impacts to existing bus stops can be addressed through proper trail design and curb bulb outs to provide additional width and refuge for pedestrian in the vicinity of the stops.

Proposed Parking Summary

West Side (Conversion to Parallel)	East Side (Unmarked Parallel Parking)	TOTAL	PARKING LOSS
56 stalls	43 stalls	99	19

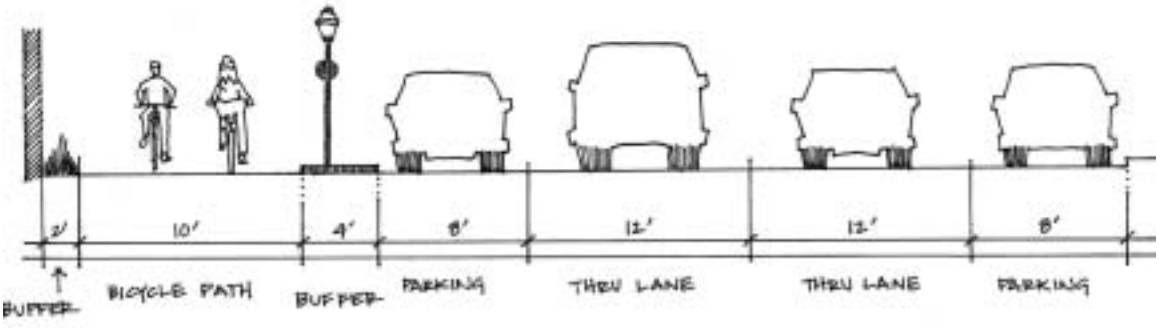
DISCUSSION AND OPTIONS

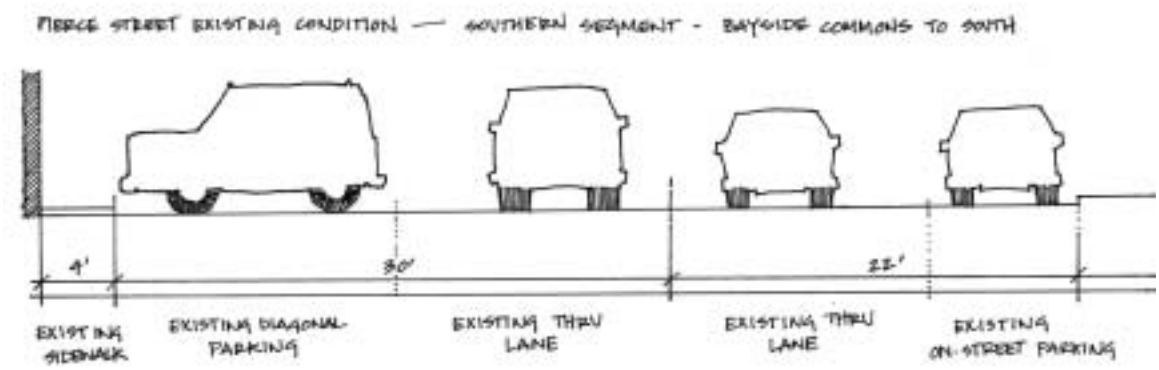
This design is not acceptable to neighborhood residents with the parking loss as presented above. In order to implement the proposed design, this parking loss must be offset through development of an off-street parking area within acceptable walking distance from the existing condominium residences.

An interim design solution that would not result in any parking loss is presented below under "Interim Trail Options."

REQUIRED TASKS

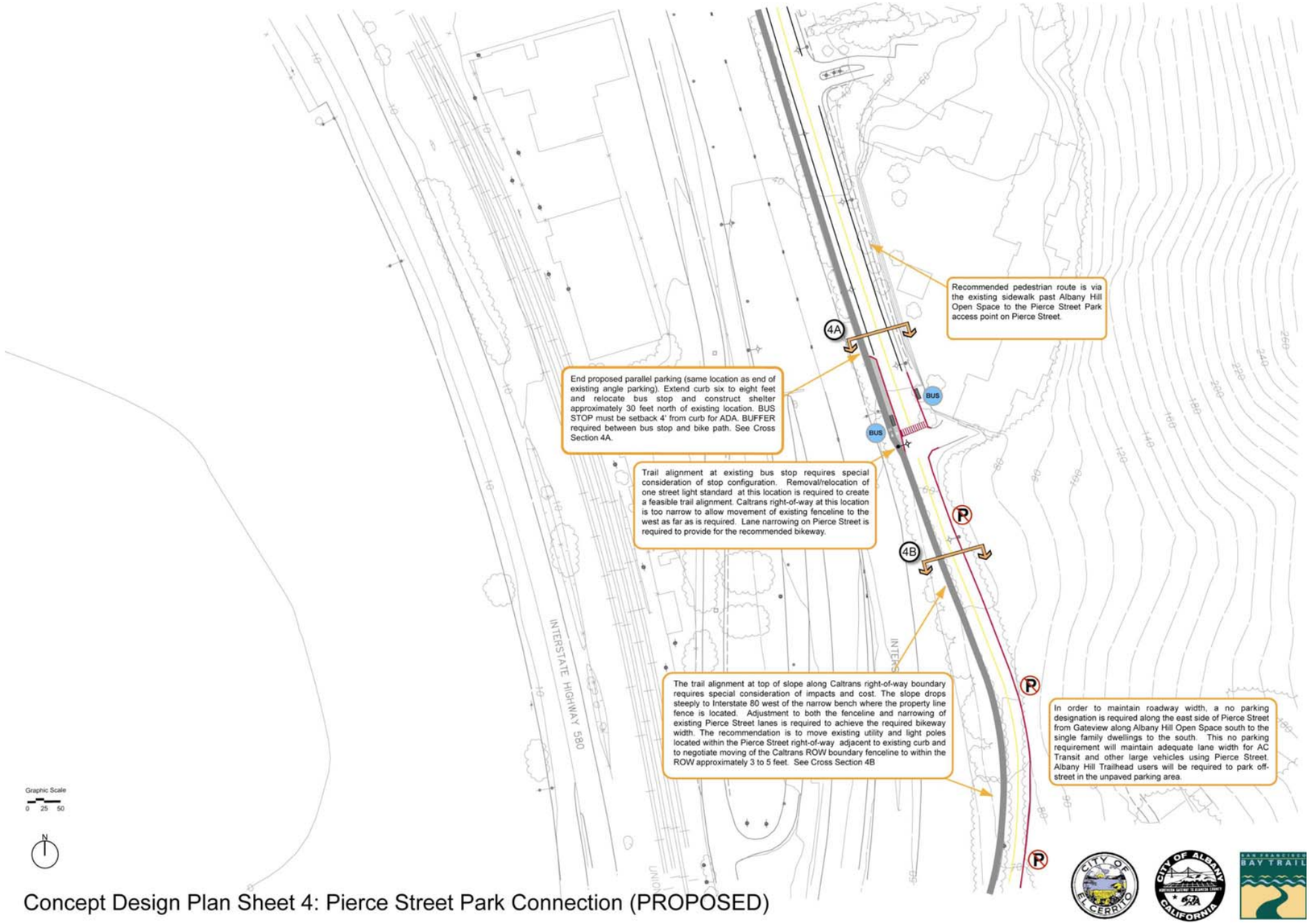
- Pierce Street parking and traffic studies to determine options for parking replacement for proposed alternative.
- Detailed design for neighborhood preferred alternative.





SEGMENT 4 (PROPOSED)

Segment 4 includes the southern-most section of the Pierce Street parking and bus stop reconfiguration and presents options for the separated trail connection to Pierce Street Park. These designs are detailed in the cross sections below.



Concept Design Plan Sheet 4: Pierce Street Park Connection (PROPOSED)

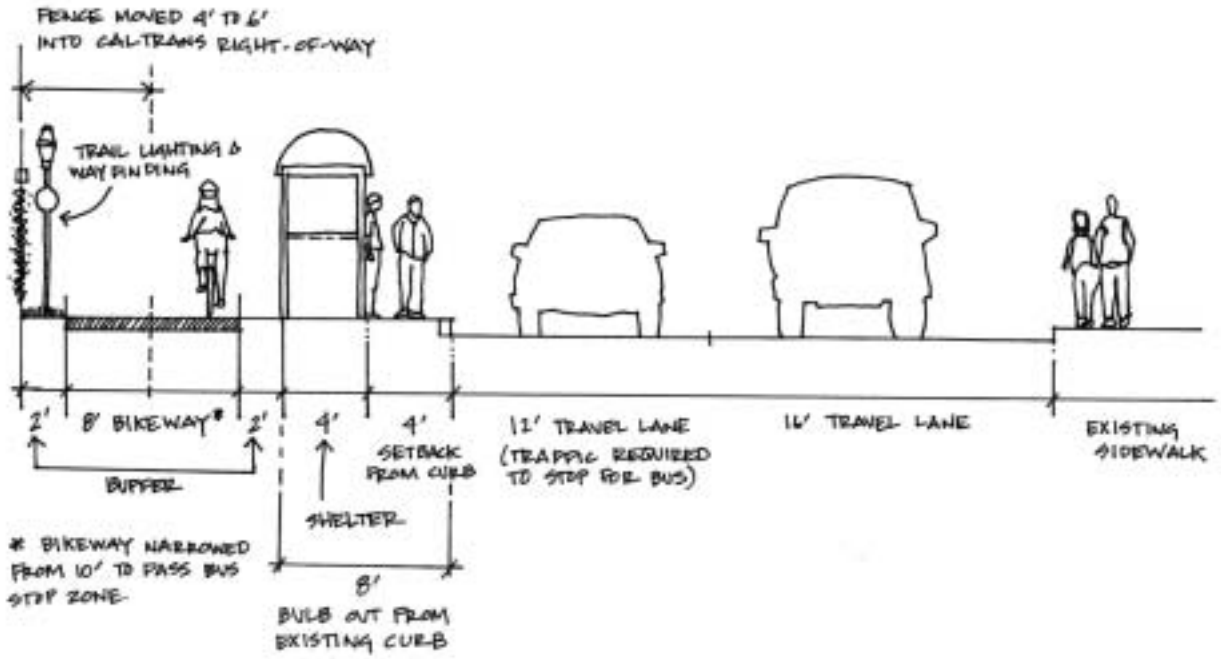
SEGMENT 4: CROSS SECTIONS (PROPOSED)

4A. PIERCE STREET CONFIGURATION AT GATEVIEW (FACING NORTH)

The development of the trail at the southern terminus of the existing diagonal-oriented parking provides an opportunity to address bus stop improvement needs, and roadway crossing improvement needs. These improvements can be made in conjunction with the proposed trail, if developed, and would also be required as a part of the interim option for this segment presented below. Under the existing condition, the bus stop on the west side of Pierce Street is accessed via a low-visibility crosswalk and the stop itself does not have an adequate landing area or ADA access. The proposed trail alignment can improve this situation by providing the multi-use trail immediately adjacent the Caltrans right-of-way, providing a pedestrian zone around the bus stop, and by providing an improved crossing with pedestrian activated flashing beacon. The bus stop must meet all current ADA guidelines for access. The drawing shown here is conceptual and additional site analysis and Caltrans consultation is required to complete a site-specific design to accommodate all proposed uses.

REQUIRED TASKS

- Pierce Street parking and traffic studies to determine options for parking replacement for proposed alternative (Required Task repeated from previous cross-section).
- Determine design requirements and timeline for bus stop improvements, and ensure that trail needs are addressed in design if project precedes design for trail.
- Preliminary engineering and design.



4B. PIERCE STREET PARK CONNECTION (FACING NORTH)

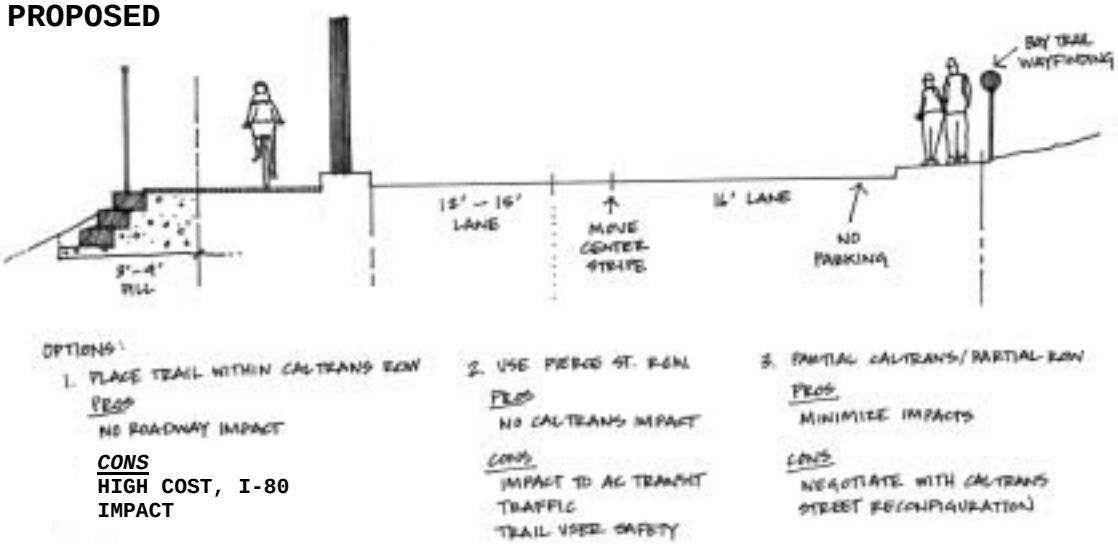
The existing roadway cross section for this segment includes the following: the existing Caltrans right-of-way fence, an undefined dirt pathway and utility easement with power poles, a 12-foot to 15-foot wide southbound travel lane, and a 20-foot wide northbound travel lane.

Modifications to the existing cross-section are required in order to provide for the proposed multi-use trail cross, extending from the proposed bus stop crossing improvements in the north, to Pierce Street Park in the south. In order to provide a minimum ten foot wide shared-use trail at this location, it is necessary to narrow the travel lanes on Pierce Street, relocate the curb, move one or more utility poles, and negotiate a relocation of the Caltrans right-of-way fence.[1] These modifications are required for a linear distance of approximately 300 feet. A low retaining wall of approximately three feet in height is required to create a level cross section for the trail bed.

REQUIRED TASKS

- Completion of Pierce Street Park negotiations between Caltrans and City of Albany and preliminary design (to include provisions for the Cerrito Creek Bay Trail Connector).
- Additional engineering analysis is required to determine the design details for this proposed segment; and,
- Consultation with Caltrans is required to determine how this segment can be developed along with the property transfer of the Pierce Street Park parcel from Caltrans to the City of Albany.

PROPOSED



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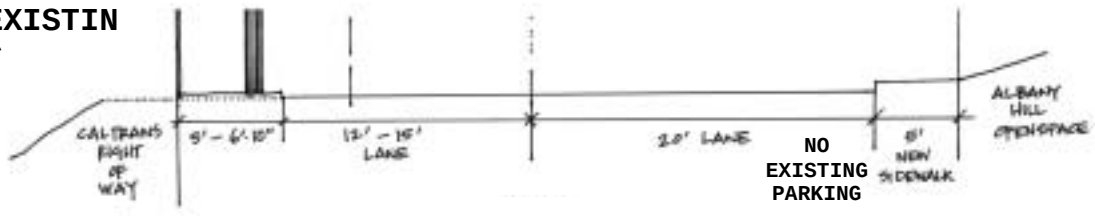
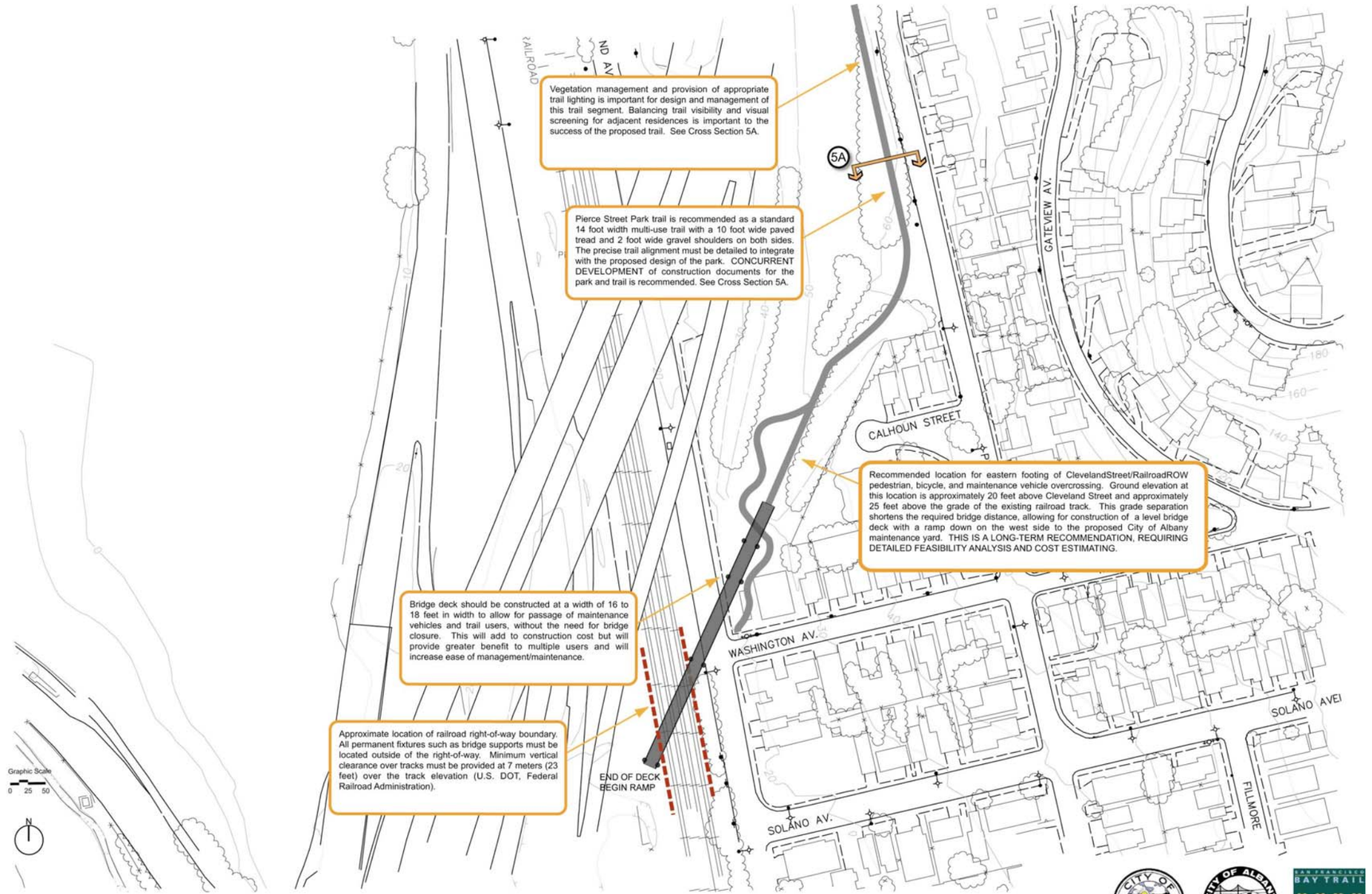


[1] Other options were considered at this location, including: (1) further narrowing of the travel lanes on Pierce Street, which was rejected due to concerns regarding driver visibility and transit turning radii; and, (2) preserving the existing Pierce Street configuration and extending further into the Caltrans right-of-way, which was rejected due to steep slopes, high engineering costs and limited separation from the I-80 northbound travel lanes.

SEGMENT 5 (PROPOSED)

Segment 5 illustrates the proposed design for Pierce Street Park. The proposed multi-use trail will extend through the proposed park. This design is detailed in the cross sections below.



Concept Design Plan Sheet 5: Pierce Street Park (PROPOSED)

SEGMENT 5: CROSS SECTIONS (PROPOSED)

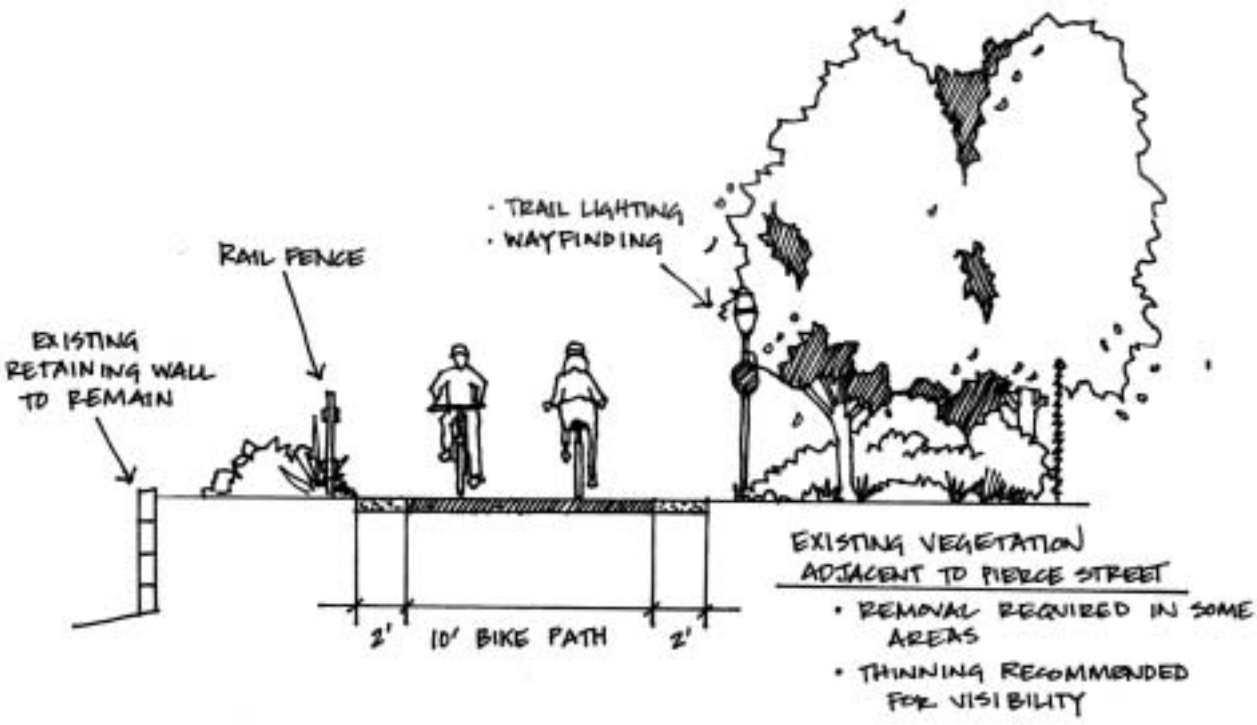
5A. PIERCE STREET PARK (FACING SOUTH)

The development of Pierce Street Park by the City of Albany should include the development of the proposed Cerrito Creek Bay Trail Connector segment from Pierce Street to Cleveland Street. At the completion of this feasibility study, the property has not yet been transferred from Caltrans to the City and detailed design for the park has not been completed.

In order to develop the multi-use trail through this segment, several design issues must be addressed, including: relationship of the trail to the existing retaining wall along the eastern perimeter of the park, vegetation management and tree removal along the eastern perimeter of the park, and trail access control depending on management hours for the proposed park.

REQUIRED TASKS

- Incorporate proposed Cerrito Creek Bay Trail Connector alignment into Pierce Street Park proposals.
- Identify a Segment 5 Interim Route in the event Pierce Street Park proposals are delayed, such as stenciling and signage for an on-road bike route running one block south of P Street and one block west on Washington Avenue.
- Incorporate trail management into proposed park management plan.
- Preliminary engineering and design.

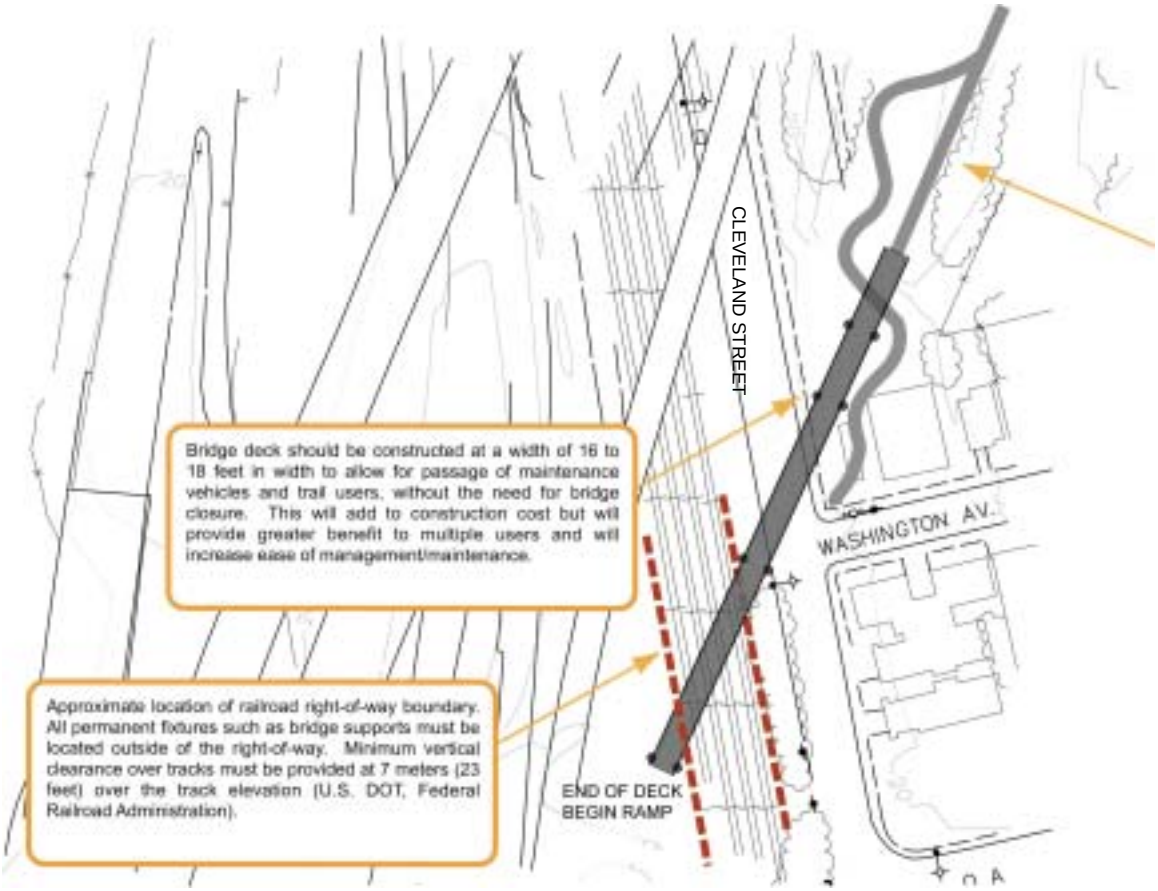


DETAIL D. PROPOSED TRAIL OVERCROSSING LOCATION (PLAN VIEW)

As discussed earlier in this study, the connection to the San Francisco Bay Trail is extremely complex due to the two freeways, railroad right-of-way, narrow bay shore zone, and property ownership configuration. The ideal way to overcome these obstacles and to create a safe pedestrian and bicycle connection from the neighborhoods of Albany, El Cerrito and Richmond to the Bay Trail is to develop a trail overcrossing requiring the shortest possible span. Other sites were examined, but span distance and property ownership eliminated them from consideration. The proposed location is to span from the higher elevation of Pierce Street Park in the east over Cleveland Street and the railroad right-of-way to the Caltrans right-of-way east of the I-80 and I-580 on ramps. This west down parcel is to be acquired by the City of Albany for a city maintenance yard. This location is the former site of the I-80 vehicle off-ramp. The plan below illustrates this design concept.

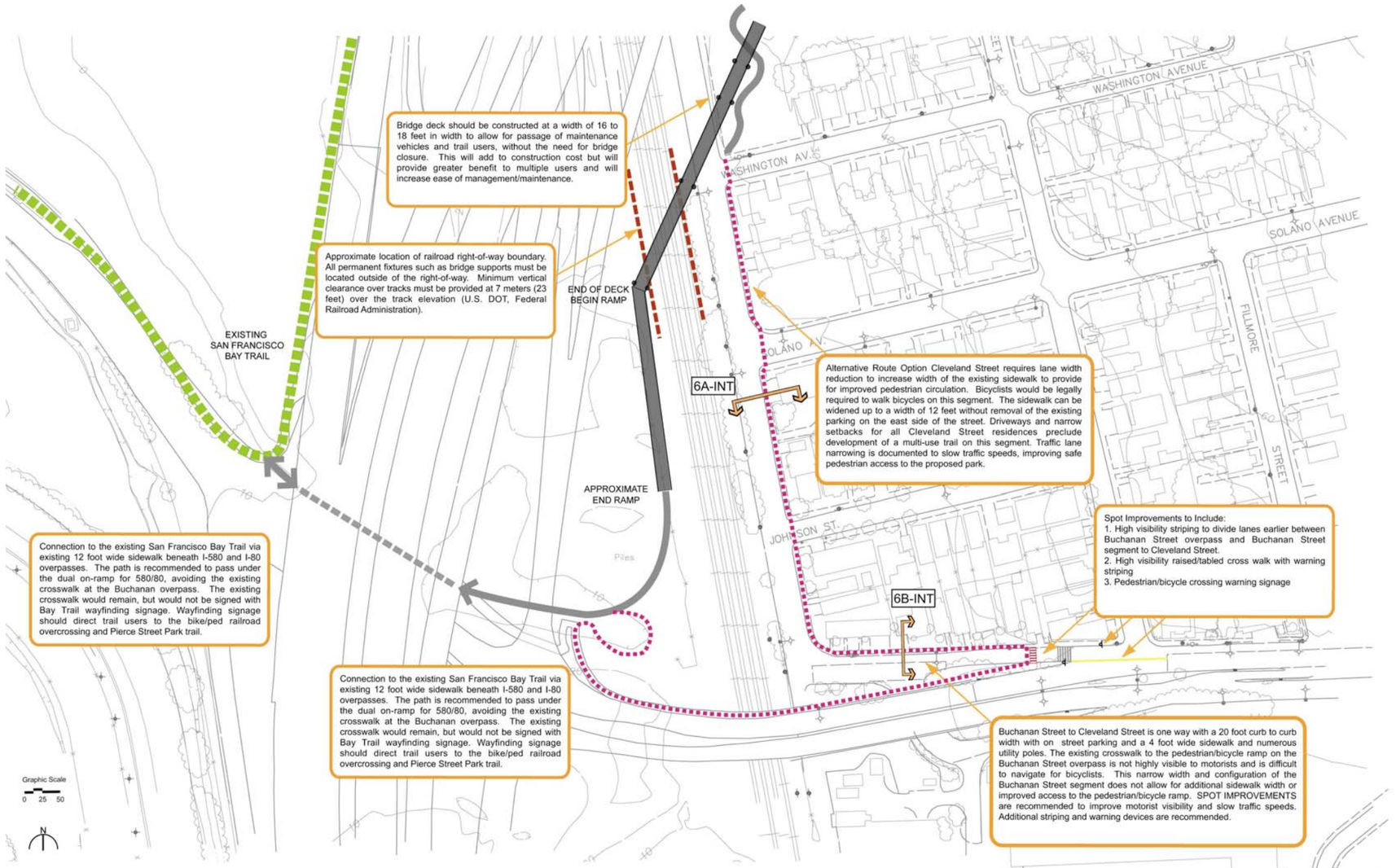
REQUIRED TASKS

- Incorporate proposed Cerrito Creek Bay Trail Connector alignment into Pierce Street Park proposals (Repeated task from previous segment).
- Request inclusion of bridge proposal in regional pedestrian and bicycle planning documents to make eligible for broadest possible range of funding sources.
- Conceptual engineering design for structure.



SEGMENT 6 (PROPOSED)

Segment 6 includes the proposed overcrossing from the proposed Pierce Street Park to the future City of Albany Maintenance Yard on the west side of the railroad right-of-way, adjacent to the I-80/I-580 ramps. Additional detail is provided in the cross sections below. The Interim on-street connection is also shown in this figure, and is detailed on pages 2-62 through 2-64.



Concept Design Plan Sheet 6: Cleveland Street to Buchanan Street
(PROPOSED) and (INTERIM ROUTE OPTION) .....

SEGMENT 6: CROSS SECTIONS (PROPOSED)

6A. CITY OF ALBANY MAINTENANCE YARD (FACING NORTH)

The proposed trail overcrossing will touch down within the boundary of the City of Albany maintenance to be negotiated with Caltrans. Maintenance vehicles and trail users mix on most multi-use trails, albeit infrequently in most typically trail situations. In order to provide for a safe trail connection from the touch down of the proposed bridge to the San Francisco Bay Trail, the trail must be designed to provide a clear separation from the proposed maintenance yard activities.

This trail segment will also provide an alternative to the existing crosswalk crossing of the dual I-80/I-580 on-ramp. The existing crossing provides the connection between the Buchanan overpass and the Bay Trail but is currently a cause for concern for many pedestrians and bicyclists who feel that the sight lines for drivers do not provide for adequate safety at this crossing. The proposed trail provides for the trail crossing under the existing vehicle ramp with minor grading requirements.

REQUIRED TASKS

- Complete City of Albany and Caltrans negotiations to establish City ownership of parcel.
- Provide for the Cerrito Creek Bay Trail Connector in the conceptual and detailed plans for the City of Albany maintenance yard.

INTERIM ROUTES

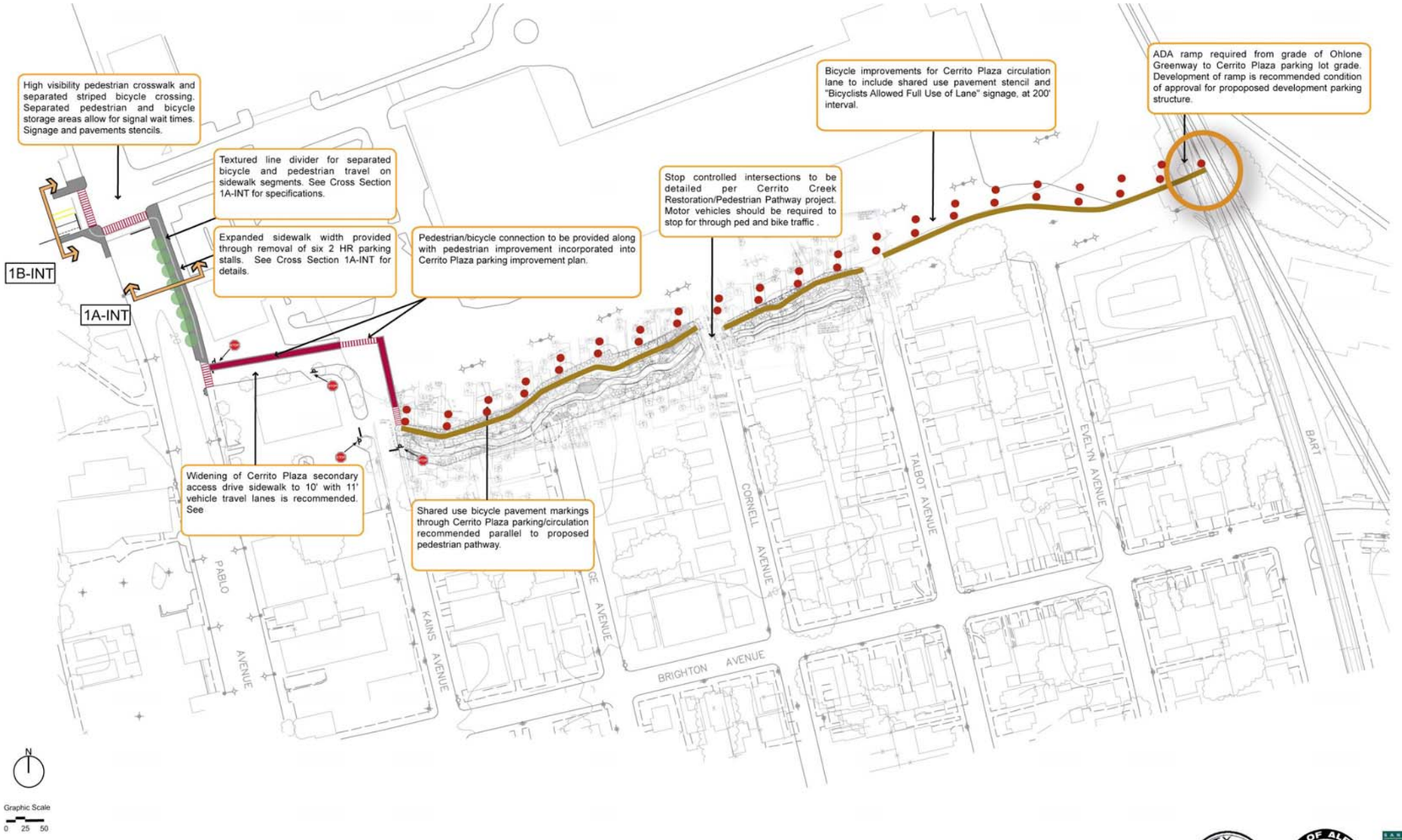
The interim routes presented in this feasibility study provide lower cost, more easily implemented alternatives to some of the more complex and costly segments outlined under the proposed route. While these interim routes may be more easily implemented with lower cost, they do not meet the project goals as fully as does the proposed route. Depending on the preferences and abilities of the lead agencies, the interim route will provide safety and experiential improvements for trail users over the existing condition. The interim route will not compromise trail user safety but is less direct, does not provide access to Cerrito Creek, and requires longer on-street segments for all trail users.

The interim routes presented in this section include:

- Segment 1 Interim Route: Use San Pablo Avenue/Carlson Boulevard Intersection for Crossing.
- Segment 2 Interim Route: On-Street Bicycle Connection and Existing Pedestrian Path.
- Segment 3 Interim Route: On-Street Bicycle Lanes with Back-In Angle Parking.
- Segment 6 Interim Route: Cleveland Street/Buchanan Overpass Bay Trail Connection.

SEGMENT 1 (INTERIM)

Segment 1 Interim illustrates the optional San Pablo Avenue crossing, making use of the existing intersection crosswalks and Carlson Boulevard. This interim option is detailed in the cross sections below.



Concept Design Plan Sheet 1: Ohlone Greenway to San Pablo Avenue
(INTERIM ALIGNMENT OPTION)

SEGMENT 1: CROSS SECTIONS (INTERIM)

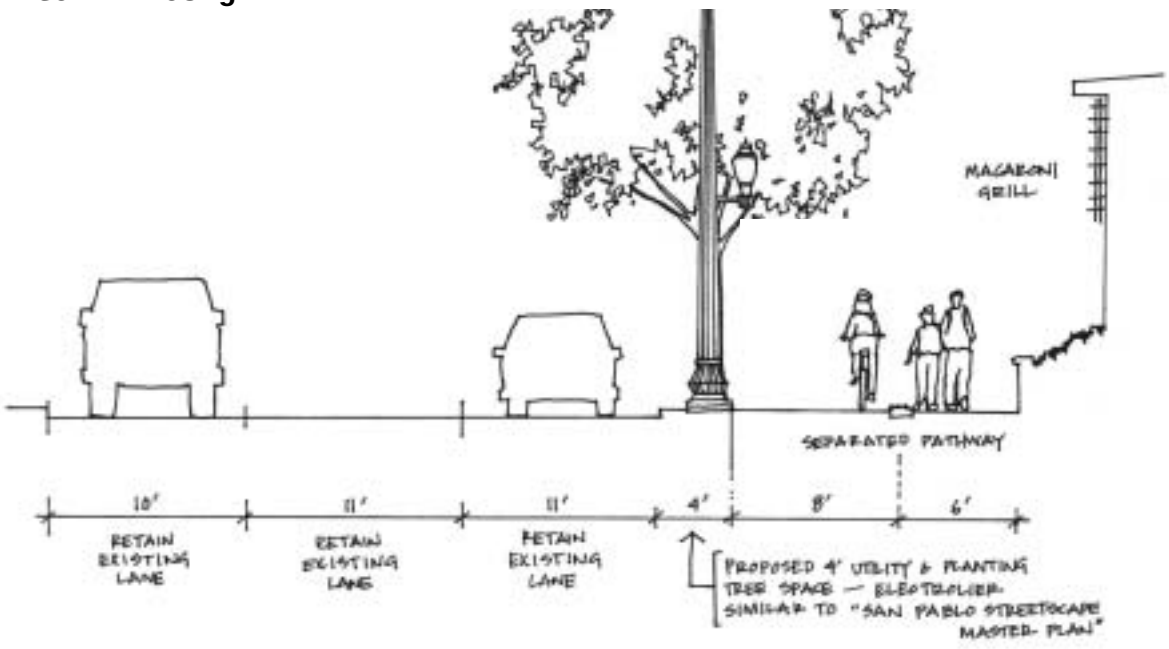
1A-INT. SAN PABLO AVENUE (FACING NORTH)

Use of the existing San Pablo Avenue and Carlson Boulevard crossing is the best alternative to the proposed mid-block crossing of San Pablo Avenue. In order to route trail users from the Cerrito Plaza driveway several modifications are recommended for the east side of San Pablo Avenue from the driveway access to the south side of Carlson Boulevard. The existing conditions from the eastern edge of right-of-way to the street center line are (from east to west): a seven-foot clear zone from the low retaining wall to light poles, four feet from light pole to curb, a seven-foot wide marked parking lane, 11-foot combined right/through lane, 11-foot wide thru lane, and a 10-foot wide left turn lane. The existing parking is regulated 2 HR only parking and appears to have a low utilization rate. Removal of this parking and extension of the sidewalk into the former parking area for approximately 230 linear feet from the driveway to the intersection provides a wider sidewalk connection to the intersection crossing. Crosswalk improvements on San Pablo Avenue should also be made to increase space for pedestrians and bicycles and to increase visibility of the crosswalk area. Such improvements could be made to match the Cerrito Plaza entrance.

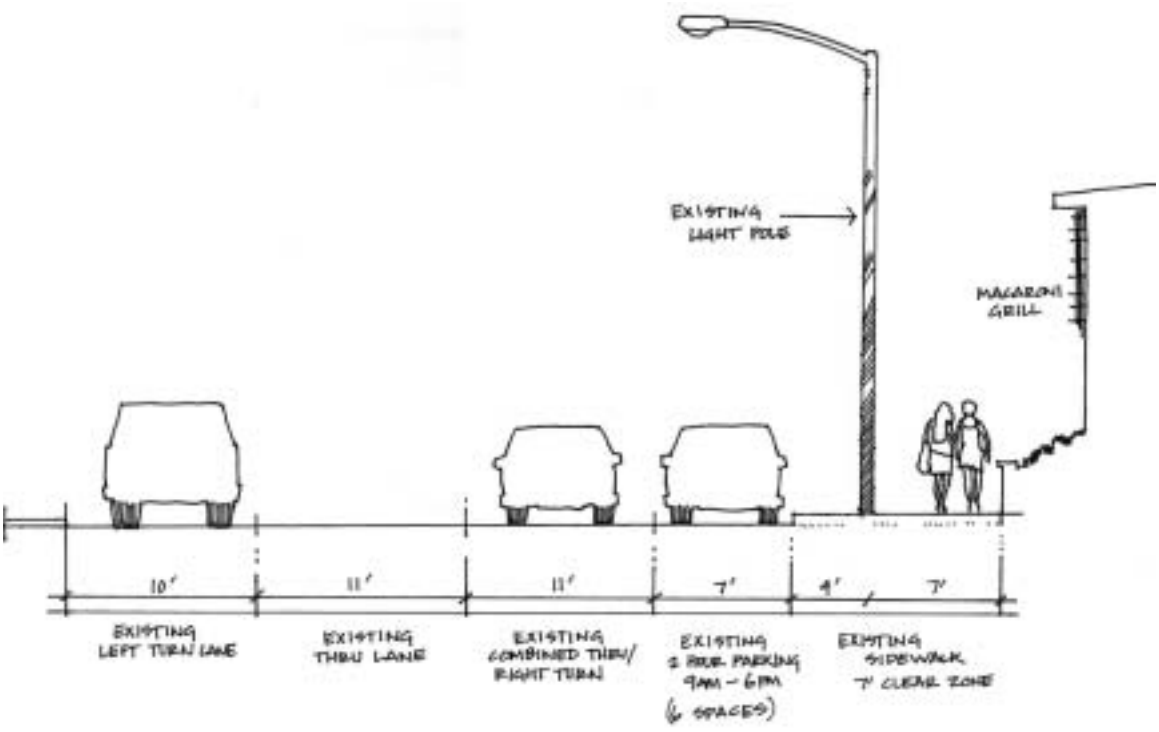
REQUIRED STEPS:

- Completion of Caltrans permitting requirements for sidewalk extension and parking removal.
- Traffic study to determine if removal of parking will result in queuing impacts at San Pablo Carlson (frequently unoccupied parking acts as a de facto dedicated right turn lane).
- Preliminary engineering of sidewalk and crosswalk improvements.

Interim Design



Existing Condition



1B-INT. CARLSON BOULEVARD (FACING EAST)

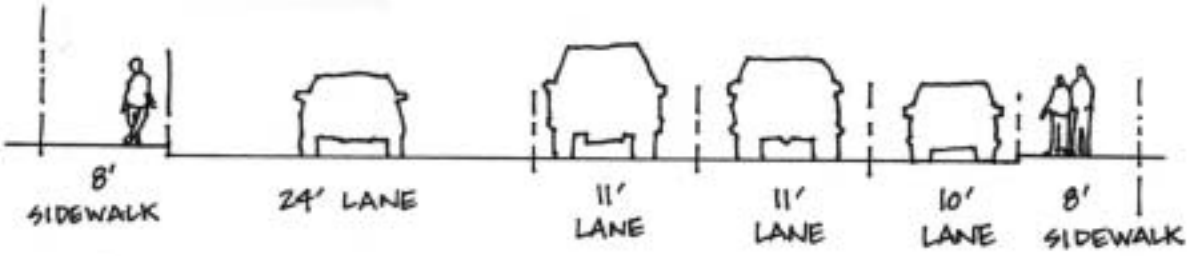
The bicycle connection to the Creekside Park from the San Pablo Avenue/Carlson Boulevard intersection requires that an on-street bicycle connection be developed. The existing Creekside Park pedestrian sidewalk connection from Adams Street is too narrow to safely provide for bicycle circulation.

Carlson Boulevard between San Pablo Avenue and Lassen Street in El Cerrito is a key component of the bicycle circulation element of the alternative route option for this segment. Carlson Boulevard is recommended as regional bicycle route with the Contra Costa County Draft Countywide Bicycle and Pedestrian Plan.

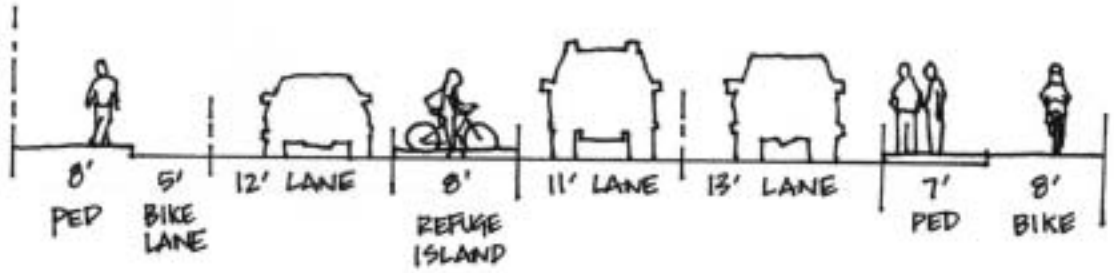
REQUIRED TASKS

- Traffic study to determine impacts associated with changes in lane configuration at intersection of Carlson Boulevard and San Pablo Avenue.
- Preliminary striping design for intersection and Carlson Boulevard to Lassen Street.
- City of El Cerrito to coordinate with the Contra Costa Transportation Authority regarding the status of this project.

EXISTING — CARLSON BLVD. AT SAN PABLO AVENUE



PROPOSED — CARLSON BLVD. AT SAN PABLO AVENUE



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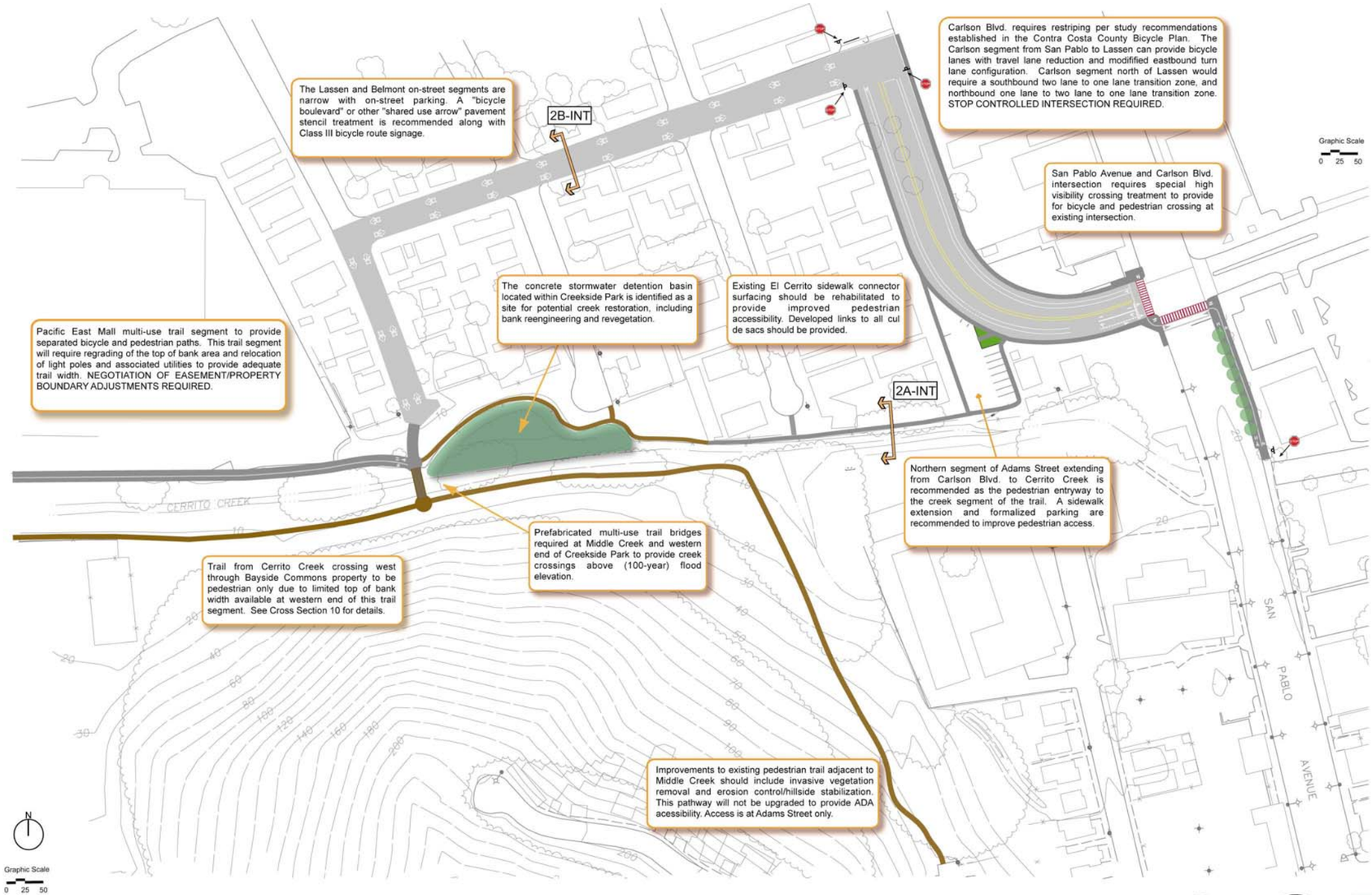
SEGMENT 2 (INTERIM)

Segment 2 Interim illustrates the optional Carlson Boulevard and Lassen Street bicycle connection and Creekside Park sidewalk pedestrian connection. This interim option is detailed in the cross sections below.



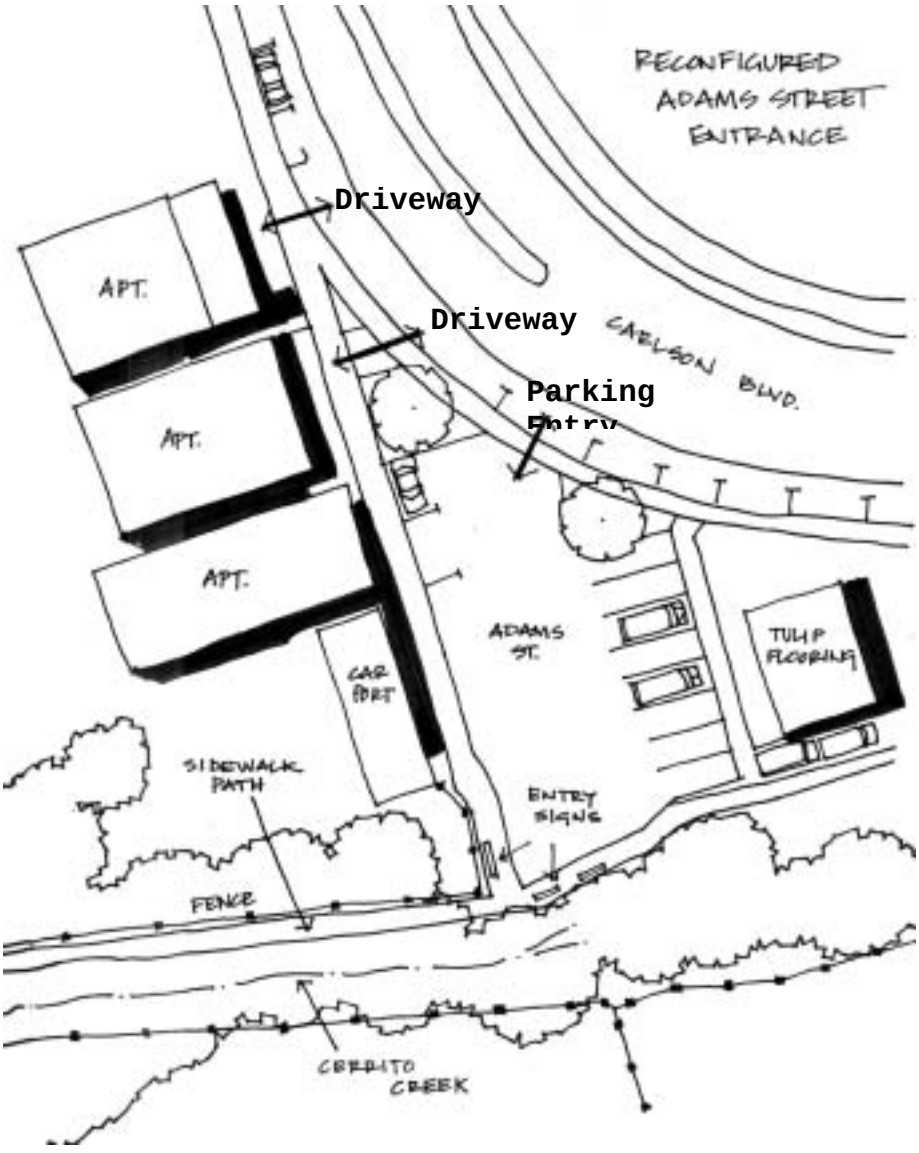
Concept Design Plan Sheet 2: San Pablo Avenue to Pacific East Mall
(INTERIM ROUTE OPTION)

DETAIL A-INT

Entrance to the existing Creekside Park sidewalk entry from Adams Street should enhance pedestrian access to this segment of the trail. Currently the short segment of Adams Street from Carlson Boulevard to Cerrito Creek is not striped, and parking is not striped or regulated. This creates an unpredictable environment for pedestrians. The functional and aesthetic character of this area can be improved with an extension of the Carlson Boulevard sidewalk, a narrowing of the entrance to Adams Street and formalized parking. The addition of Bay Trail wayfinding and other signage will further enhance this entry point to the off-street trail for pedestrians. This concept is show in the figure below.

REQUIRED STEPS

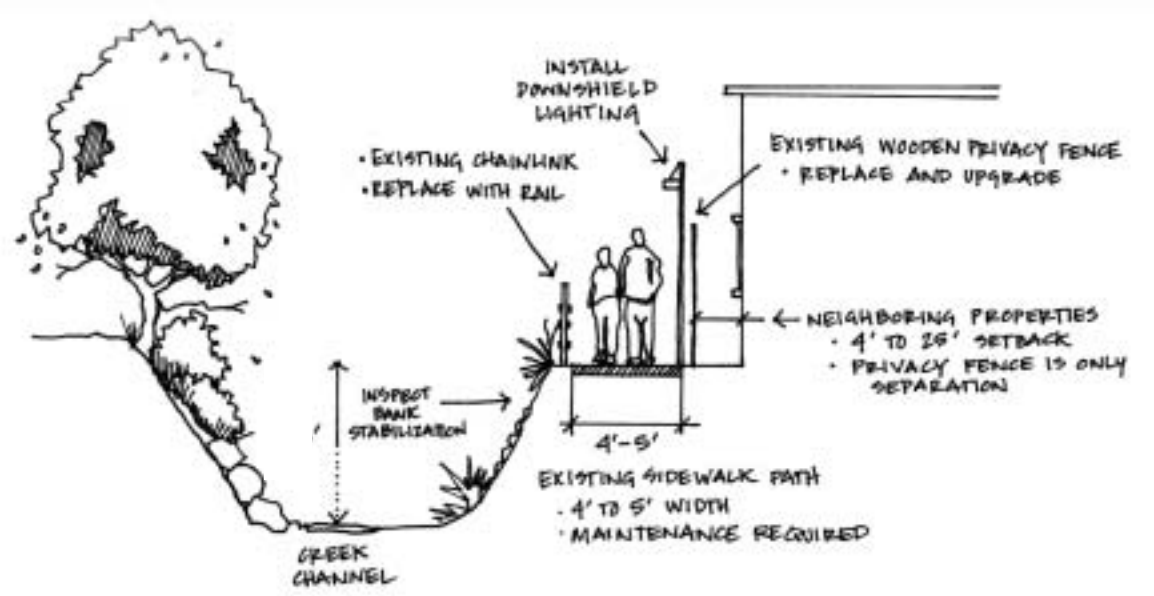
- City of El Cerrito workshop with local commercial and residential property owners and tenants to determine specific access needs.
- Preliminary engineering and design.



SEGMENT 2: CROSS SECTIONS (INTERIM)

2A-INT CREEKSIDE PARK PATH CONNECTOR (FACING WEST)

The Cerrito Creek sidewalk connecting Adams Street to Creekside Park should be upgraded to provide greater visual access to the creek and to provide a smooth, ADA compliant trail surface.



REQUIRED TASKS

- Engineering inspection and preliminary engineering design for proposed improvements.
- Determine permitting needs and obtain necessary permits.
- Scheduling for improvements.

2B-INT. ON-STREET BICYCLE TREATMENT

Lassen Street and Belmont Street require a Class III on street bicycle treatment to include bike route signage and shared-use pavement arrow stenciling (optional). The addition of the shared-use pavement arrow would provide motorists with a greater awareness of the presence of bicyclists on these residential street segments and potentially improve safety conditions for bicyclists. The proper configuration for on-street stenciling is shown in the Design Guidelines chapter of this study.

REQUIRED TASKS

- City of El Cerrito notification of neighborhood regarding installation of Class III bicycle signage.

- Scheduling for improvements.

SEGMENT 3: INTERIM

No plan view diagram is included in this study for Segment 3 Interim.

An alternative treatment for Segment 3 that would not result in parking reduction, is implementation of bicycle lanes in conjunction with conversion of the head in angle parking to back in angle parking. This diagram is shown on page 2-8 of this document. Explanation of the existing condition is included above on pages 2-37 and 2-38 of this document.

REQUIRED STEPS

- Pierce Street traffic study to determine speeds and volumes (background studies completed for City of Albany Bicycle Plan).
- Investigation of City of Albany parking code and proposal for modification to include back-in angle parking.
- Preliminary engineering and design.

SEGMENT 6: INTERIM

The plan view presentation of Segment 6 Interim is shown in the figure for Segment 6 Proposed, on page 2-49 of this document.

SEGMENT 6: CROSS SECTIONS (INTERIM)

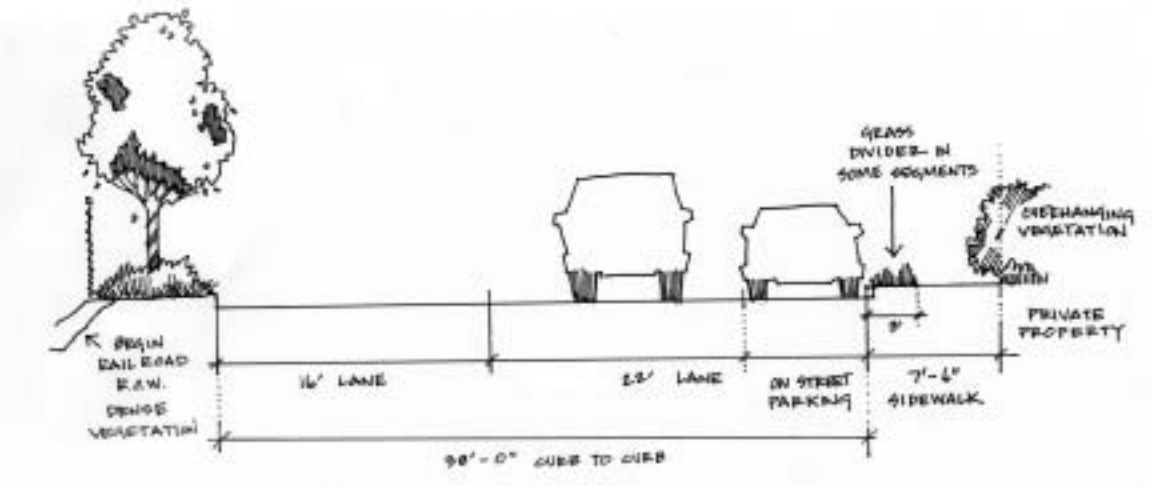
6A-INT. CLEVELAND STREET CONNECTION (FACING NORTH)

If the proposed overcrossing is not constructed in the near term, an on-street connection to the San Francisco Bay Trail from Pierce Street Park will be required. This requires following Cleveland Street south from the proposed park. The existing Cleveland Street configuration consists of (from east to west): a seven-foot six-inch sidewalk, seven –foot wide on street parking, a 22-foot northbound travel lane, and a 16-foot southbound travel lane. The existing curb-to-curb dimension is 38 feet. Lane narrowing and sidewalk widening can create a safer environment for bicycles and pedestrians. Due to the numerous driveways, bus stops and intersections it is recommended that this segment be signed "walk bicycles" as specified in the California Vehicle Code and local ordinances.

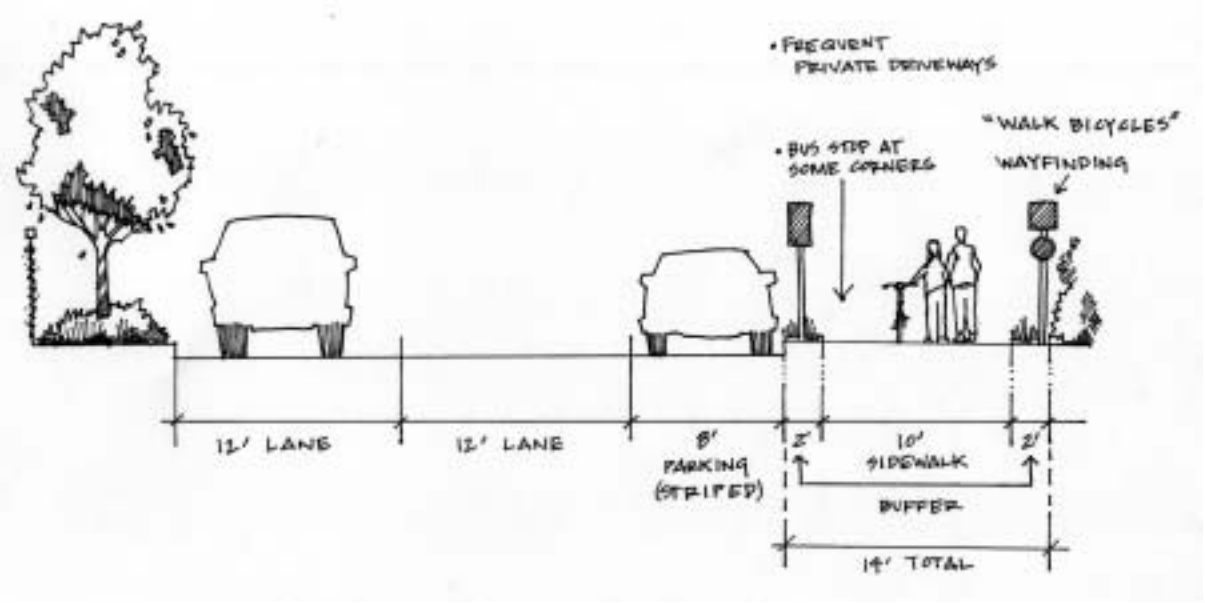
REQUIRED TASKS

- City of Albany prioritization of the improvement in conjunction with development of Pierce Street Park to provide improved access.
- Preliminary engineering and design.

Existing

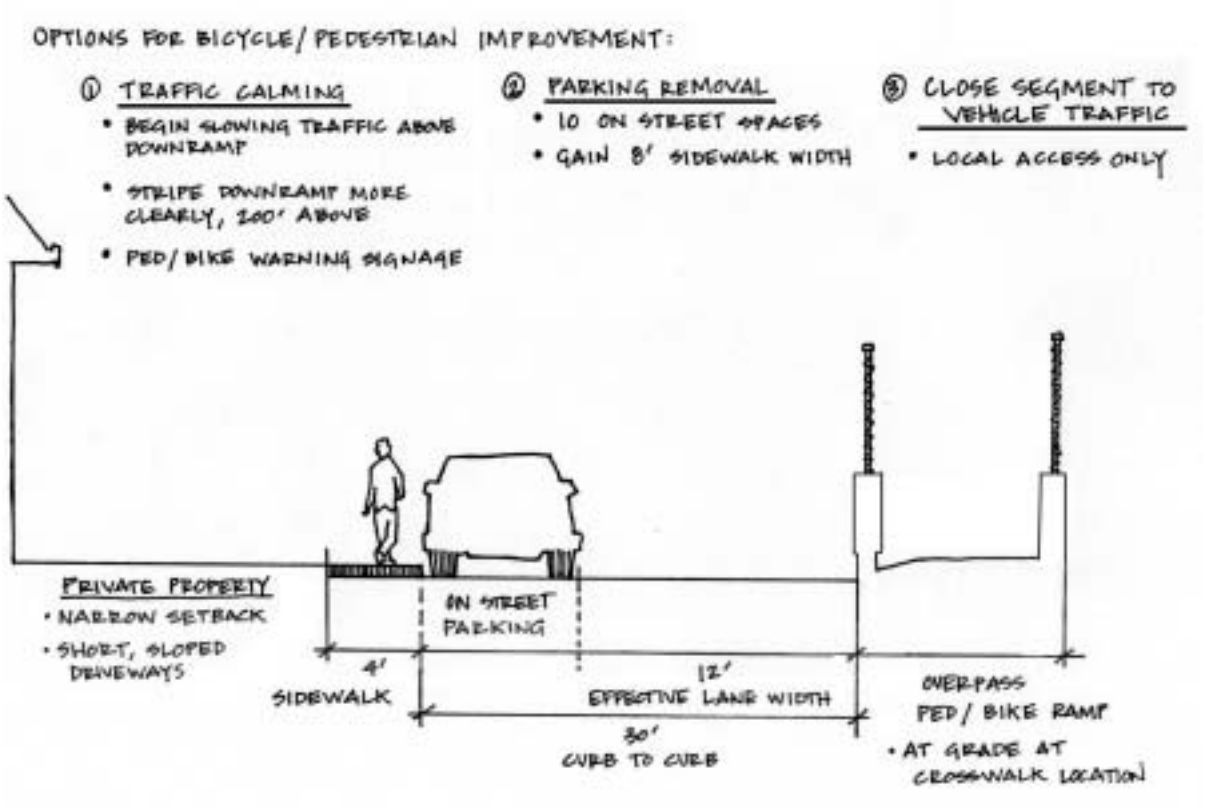


Proposed



6B-INT. BUCHANAN STREET CONNECTION (FACING NORTH)

Cleveland Street intersects with Buchanan Street (see page 2-49). This segment of Buchanan is one-way west down hill from the Buchanan Street overpass. In order to connect to the overpass an on-street route is required. The section below presents these options.



REQUIRED TASKS

- City of Albany sponsored neighborhood traffic study to determine feasibility of options.
- City of Albany sponsored neighborhood workshop to determine preference for options presented.
- Selection of preferred alternative.
- Preliminary engineering and design.

CENTRAL AVENUE CONNECTION

This study also investigated the option of providing a primary Bay Trail Connector route via Pierce Street and Central Avenue. Concept design development has not been completed for this northern route due to the traffic and right-of-way constraints identified during the preliminary analysis of all alignment options.

The project team identified the following challenges:

- Complex traffic mix on Pierce. The northern segment of Pierce Street from Cerrito Creek to Central Avenue serves a variety of functions with limited capacity. This short street segment serves as the primary access to Pacific East Mall in Richmond, condominium development in north Albany, and serves numerous light industrial operations with frequent large truck and forklift traffic making use of the roadway. Existing on-street parking serving the local commercial and industrial parcels fronting on Pierce Street further complicates the traffic in this area.
- Narrow right-of-way on Pierce. Pierce Street ranges in width from 34 feet to 38 feet in width, with on street parking. This width does not allow for installation of bicycle lanes or sidewalk widening. These existing sidewalks are obstructed by numerous utility poles and are in many places too narrow to comply with current ADA regulations.
- High traffic volumes on Pierce and Central. High traffic volumes on both Pierce Street and Central Avenue make lane reconfiguration complex, requiring regional analysis of traffic flow in order to address what is a regional congestion problem.
- Eight on-off ramps on Central. Central Avenue from Pierce Street to the San Francisco Bay Trail serves multiple on and off ramps for I-80, I-580, and frontage roads. Each of these ramps poses a safety issue for bicyclists and pedestrians due to the long crossing distances.
- High traffic speeds on ramps. Traffic speeds on the above-mentioned ramps are high due to the existing geometry and visibility for motorists is low in several locations.

RECOMMENDED SPOT IMPROVEMENTS

The following general approaches are recommended to begin improving pedestrian and bicycle access to the San Francisco Bay Trail along Pierce Street and Central Avenue. Both northbound and southbound on Pierce Street should be addressed, and both westbound and eastbound on Central.

- Upgrade Pierce Street Sidewalk to ADA standards.
- Work with Caltrans to improve bicycle and pedestrian safety and on-off ramps through signage, striping, and other warning devices.
- Work with Caltrans to shorten crosswalks and distance that ped/bikes exposed to entering/exiting freeway traffic.

3. IMPLEMENTATION PHASING PLAN

PHASING

Phasing is an important aspect of planning for implementation of trail facilities in today's highly competitive funding environment. Due to the high cost of many urban trail facilities, and heavy reliance on grant funding it is difficult, if not impossible, for local agencies to identify and secure all of the required funding to engineer and build a proposed trail facility at one time. It is necessary to break up the project, in most cases, in manageable pieces that can be funded with one or more grants within an appropriate timeframe for final design and engineering and construction.

In the case of the Cerrito Creek Bay Trail Connector, as with many proposed trails, this feasibility study has left several important questions without complete resolution. In this case the first recommended phase is for the project partners to resolve key property ownership issues and agreements with adjacent landowners. Additional traffic study, preliminary engineering, and CEQA documentation should also be completed.

RECOMMENDED PHASE I

Each of the cross sections and design details presented above in the Concept Design (Chapter 2) of this feasibility study includes "Required Tasks" that identify appropriate next steps in the planning and design development for this project. This section summarizes these identified "Required Tasks."

The City of Albany and City of El Cerrito, as well as the City of Richmond, each have property ownership and private property impacts within their jurisdictions related to the proposed development of the Cerrito Creek Bay Trail Connector. These issues should be addressed by City staff or consultants in order to obtain additional survey information and written agreements with the affected land owners to ensure that the trail can be developed as proposed. This recommendation relates to the location discussed below.

CERRITO PLAZA

The property dedication to the City of El Cerrito and associated Cerrito Creek restoration has been designed and will be constructed in such a manner that provides for pedestrian circulation only. In order to provide for bicycle circulation through this area, it is necessary to develop an agreement with the Cerrito Plaza manager. The recommended stenciling and signage can be installed and maintained by the City of El Cerrito, but must be agreed to by the property owner through the current planning process for Plaza renovations and circulation improvements.

ORIENTATION CENTER FOR THE BLIND, CALIFORNIA DEPARTMENT OF REHABILITATION

The recommended route requires agreement with the Orientation Center for the Blind in order to cross this property on the south bank of Cerrito Creek, from the east at San Pablo Avenue to

the City of Albany open space parcel in the west. Through the preparation of this Master Plan, the project partners have met extensively with the staff of the Orientation Center but no formal agreement has been reached. Prior to seeking funding for development of this portion of the trail, a written agreement is required with the State of California. This agreement may take the form of a renegotiated easement to provide for public access over the existing roadway, maintenance access, and sewer easements on this property.

BAYSIDE COMMONS/PACIFIC EAST MALL

Based on recent survey work, the City of Albany should move to acquire the land adjacent to the Bayside Commons existing northern fence in order to establish permanent pedestrian access along the south side of the creek. The City should further discuss with Bayside Commons Limited and the Pacific East Mall landowner the results of the survey and the desire to acquire land surrounding the creek in order to provide for both the multi-use trail and riparian zone protection.

PIERCE STREET PARK

The recommended route crosses through the proposed Pierce Street Park, on the Caltrans ramp parcel between I-80 and Pierce Street. Transfer of this property from Caltrans to the City of Albany is currently being negotiated, as of the writing of this feasibility study. In order to provide for the proposed trail within the park design, it is important that City of Albany staff keep the Parks and Recreation Commission and City Engineer apprised of the proposed trail.

ON-STREET SEGMENTS

Carlson Boulevard between San Pablo Avenue and Lassen Street in El Cerrito is a key component of the bicycle circulation element of the alternative route option for this segment. Carlson Boulevard is recommended as regional bicycle route with the Contra Costa County Draft Countywide Bicycle and Pedestrian Plan. In order to implement this section, it is important for the City of El Cerrito to coordinate with the Contra Costa Transportation Authority regarding the status of this project.

Pierce Street from Cerrito Creek south to the Albany Hill Open Space may require parking reconfiguration in order to more safely accommodate bicycles. Parking loss is opposed by local residents, requiring creative parking solutions in order to allow for wide, on-street bicycle lanes. One possible viable alternative is reorientation of existing angle parking and appropriate signage to require back-in, angle parking. In order to establish an enforceable or citable violation, further encouraging drivers to park as instructed, it is necessary for the City of Albany to pass legislation creating this parking configuration at the Pierce Street location.

PHASE I ENVIRONMENTAL DOCUMENTATION

Once property agreements are established and partnering agencies have established the segments of the recommended route and alternative route options that will be pursued, the lead agency should prepare a California Environmental Quality Act (CEQA) Initial Study. The purpose of this study is outlined below.

According to *CEQA Guidelines Section 15063(c)*, the purpose of an Initial Study is to provide a preliminary analysis of a proposed action to determine whether a Negative Declaration or an Environmental Impact Report should be prepared. An Initial Study also enables an applicant or Lead Agency to modify a project, mitigating adverse impacts in lieu of preparing an EIR, thereby potentially enabling the project to qualify for a Negative Declaration. The Initial Study provides a factual basis for the Negative Declaration, or serves to focus an EIR on the significant effects of a project. The Initial Study should be used to determine the extent which the EIR analysis adequately addresses impacts of a subsequent project.

The evaluation of environmental impacts is based upon the completion of the checklist portion of the Environmental Checklist Form, and consists of the analysis of each impact issue area required under CEQA. The analysis of each issue should identify any significant criteria or thresholds used to evaluate each impact question, and any mitigation measure(s) identified to reduce the impact to a less-than-significant level. A list of supporting information sources should be attached to the checklist upon its completion.

In order to prepare the CEQA initial study, consultation with relevant resource and transportation agencies is required to properly identify permitting needs and requirements for analysis of potential impacts to the project area environment. The following agencies should be consulted regarding this project:

- Caltrans: Traffic impacts to San Pablo Avenue.
- California Department of Fish and Game (CDFG): Habitat/species impacts to Cerrito Creek.
- U.S. Army Corp of Engineers (USACE): Impacts to floodway/channel and habitat/specifies impacts, USACE will coordinate with NMFS and USFWS.
- National Marine Fisheries Service (NMFS): Habitat/species impacts to Cerrito Creek.
- U.S. Fish and Wildlife Service (USFWS): Habitat/species impacts to Cerrito Creek.
- Regional Water Quality Control Board

Agency consultation and identification of any impact categories with potentially significant impacts at this stage of the implementation process will enable the partnering local agencies on the Cerrito Creek Bay Trail Connector project to identify the appropriate level of environmental documentation.

Following completion of the Initial Study Checklist, it is anticipated that an Initial Study/Mitigated Negative Declaration (IS/MND) can be prepared for Phase II and Phase III. Based on the limited construction impacts associated with the proposed project, and ample opportunities for mitigation related to potential impact areas, the project should not result in any significant impacts.

RECOMMENDED PHASE II

Upon completion of Phase I, the recommended Phase II should included detailed design and engineering and implementation of the segment from Ohlone Greenway in the east to Pierce

Street in the west. This segment includes all of the recommended Cerrito Plaza improvements, implementation of either the recommended route or alternative route options for the San Pablo Avenue crossing, and implementation of the multi-use trail following Cerrito Creek.

It is recommended that final design and engineering be completed under grant funding obtained for the Phase II segment independently from Phase III. Given the complexity of the project site, and the cost magnitude of Phase III elements in the plan, the project will succeed most successfully if the design and engineering for the phases is separated.

RECOMMENDED PHASE III

Upon completion of Phase II, the recommended Phase III should include detailed design and engineering and implementation of the segment from Cerrito Creek/Pierce Street south to the San Francisco Bay Trail, connecting to the Bay Trail via the recommended multi-use trail over-crossing from Pierce Street Park to the proposed City of Albany maintenance yard or via the alternative route option along Cleveland Street.

Following the recommended route, a separate detailed feasibility study of the proposed multi-use trail over-crossing will be required. The cost associated with this structure necessitates that the Cerrito Creek Bay Trail Connector be established as a important link in the overall East Bay non-motorized transportation network. In this scenario, the over-crossing would become a justifiable northern alternative to the one other East Bay trail over-crossing located south of University Avenue in Berkeley.

RECOMMENDED PHASE IV

Additional improvements northbound from Cerrito Creek/Pierce Street are recommended through the City of Richmond via Pierce Street north and Central Avenue. Currently the sidewalks on northbound Pierce Street between Cerrito Creek and Central Avenue are not ADA compliant. Also important, cross walks crossing the numerous on- and off-ramps on Central Avenue are extremely long (ranging in length from approximately 60 to 110 feet). These crosswalk lengths expose pedestrians and bicyclists to turning motor vehicle traffic for long periods of time. In order to address these issues, it is necessary to establish a staff contact with Caltrans in order to determine the long-term plans for improvements to Central Avenue. Currently the City of El Cerrito and City of Richmond are analyzing the Central Avenue corridor for vehicular circulation improvement options. This study should be expanded to address pedestrian and bicycle safety along this corridor as well, chiefly in order to improve access to the San Francisco Bay Trail, East Shore State Park, and shopping destinations at the western terminus of Central Avenue. These safety improvements will serve residents from many neighborhoods throughout the cities of Albany, El Cerrito and Richmond.

4. PROJECT COST ESTIMATES

This chapter presents project cost estimates organized according to project segment. The cost estimate presents each segment detailed by estimated quantities with regionally appropriate unit costs. The subtotals for each segment are presented at the bottom of the corresponding columns. The Recommended Alignment columns and subtotals are presented first, with Alternative Route Options presented in the right-most columns.

The total cost of the Recommended Alignment is approximately $4,400,000. This cost figure includes both a new mid-block signalized crossing and an approximately 400-foot long new bicycle/pedestrian bridge crossing over Cleveland Street and the existing railroad track. These two large cost items add significantly to the total project costs. Subtracting these two cost items, the trail development is comparable in cost with other Bay Area multi-use trails and bicycle lane segments requiring some traffic engineering and lane re-striping.

Following all Optional Route Alternatives, rather than the Recommended Alignment, results in a total project cost of approximately $900,000. This Optional Route Alternative does not include the new mid-block signalized crossing or the multi-use trail overcrossing.

When reviewing the Cerrito Creek Bay Trail Connector cost estimate, it is important to keep in mind that this trail is traversing a complex, built out environment and that a substantial amount of site engineering is required for most segments in order to achieve the desired multi-use trail cross section minimum standards. When weighing the costs of the Proposed Alignment against the Interim Alignment it is particularly important to consider the safety and trail user experience of these options.

Cerrito Creek Bay Trail Connector Feasibility Study

Project Cost Estimate By Segment

SEGMENT				1 PROPOSED		1 PROPOSED(San Pablo Xing)		2 PROPOSED		3 PROPOSED		4 PROPOSED		5 PROPOSED		6 PROPOSED		1 INTERIM		2 INTERIM		3 INTERIM		6 INTERIM	
FROM				BART ROW		Cerrito Plaza Ingress/Egress		OCB Pedestrian Path		Pierce Street/Cerrito Creek		Bridgewater		Pierce Street Park at Pierce Street		Cleveland Street		San Pablo Ave. West Side		San Pablo Ave. West Side		Pierce Street/Cerrito Creek		Cleveland Street	
TO				Cerrito Plaza Ingress /Egress		OCB Pedestrian Path		Pierce Street		Bridgewater		Pierce Street Park		Pierce Street Park at Cleveland Street		Buchanan Street		Pacific East Mall		Pacific East Mall		Bridgewater Commons		Buchanan Street	
ITEM	UNIT		COST	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost	Quantity	Cost
On-Street Items																									
Traffic Signal	PER	$	250,000.00		$ -	1	$ 250,000.00		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -
Overhead Flashing Beacon (w/ ped actuators)	PER	$	125,000.00		$ -		$ -		$ -	1	$ 125,000.00	1	$ 125,000.00		$ -		$ -		$ -		$ -	1	$ 125,000.00		$ -
Crosswalk Striping	LF	$	1.25	200	$ 250.00	250	$ 312.50		$ -	30	$ 37.50	70	$ 87.50		$ -		$ -	200	$ 250.00		$ -	100	$ 125.00	150	$ 187.50
Bicycle Lane Striping	LF	$	1.25	270	$ 337.50		$ -		$ -		$ -		$ -		$ -		$ -	270	$ 337.50		$ -	3000	$ 3,750.00		$ -
Textured (Thermo-plast) Striping	LF	$	2.10		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -
Lane Striping (Parking, Travel Lane)	LF	$	1.25		$ -		$ -		$ -	3000	$ 3,750.00	1600	$ 2,000.00		$ -		$ -		$ -	3,160	$ 3,950.00	6000	$ 7,500.00	300	$ 375.00
Stop Bar Stripe	LF	$	1.25	50	$ 62.50	100	$ 125.00		$ -		$ -		$ -		$ -		$ -	50	$ 62.50	75	$ 93.75		$ -		$ -
Curb Cut (ADA)	PER	$	800.00		$ -	2	$ 1,600.00		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -
Signage and Installation	PER	$	275.00	20	$ 5,500.00	6	$ 1,650.00		$ -	4	$ 1,100.00	6	$ 1,650.00		$ -		$ -	20	$ 5,500.00	5	$ 1,375.00	6	$ 1,650.00	18	$ 4,950.00
Pavement Stencil and Installation	PER	$	250.00	24	$ 6,000.00	4	$ 1,000.00		$ -	6	$ 1,500.00	2	$ 500.00		$ -		$ -	24	$ 6,000.00	22	$ 5,500.00	5	$ 1,250.00		$ -
Curb Removal	LF	$	1.75	270	$ 472.50		$ -		$ -	1000	$ 1,750.00	120	$ 210.00		$ -		$ -	270	$ 472.50		$ -		$ -	550	$ 962.50
Sidewalk and Curb Construction	SF	$	3.25	3500	$ 11,375.00	200	$ 650.00		$ -	1000	$ 3,250.00		$ -		$ -		$ -	8000	$ 26,000.00	120	$ 390.00		$ -	550	$ 1,787.50
Light Pole Relocation	PER	$	2,000.00		$ -	4	$ 8,000.00		$ -		$ -	4	$ 8,000.00		$ -		$ -	5	$ 10,000.00		$ -		$ -		$ -
Bus Stop Relocation	PER	$	20,000.00		$ -		$ -		$ -	1	$ 20,000.00		$ -		$ -		$ -		$ -		$ -	1	$ 20,000.00		$ -
Ped Activate Signal Button	PER	$	5,000.00		$ -	2	$ 10,000.00		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -
Off-Street Items																									
Vegetation Removal and Clearing	SF	$	0.25		$ -		$ -	8000	$ 2,000.00		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -
Asphalt Pavement with Aggregate Base: 14' Width	LF	$	32.50		$ -		$ -	1305	$ 42,412.50		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -
Asphalt Pavement with Aggregate Base: 10' Width	LF	$	25.00		$ -		$ -		$ -	650	$ 16,250.00	1200	$ 30,000.00	950	$ 23,750.00		$ -		$ -	710	$ 17,750.00		$ -		$ -
Stabilized Natural Soil Trail: 6' Width	LF	$	1.20		$ -		$ -	1220	$ 1,464.00		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -
Metal Edger for Trail Edge Stabilization	LF	$	6.50		$ -		$ -	1305	$ 8,482.50	650	$ 4,225.00	1340	$ 8,710.00	950	$ 6,175.00		$ -		$ -	710	$ 4,615.00		$ -	680	$ 4,420.00
Center Line Trail Striping	LF	$	1.25		$ -		$ -	1405	$ 1,756.25	650	$ 812.50	1340	$ 1,675.00	1520	$ 1,900.00		$ -		$ -	230	$ 287.50		$ -	680	$ 850.00
Retaining Wall Structure: 3' Height	LF	$	105.00		$ -		$ -	250	$ 26,250.00	650	$ 68,250.00		$ -	1520	$ 159,600.00		$ -		$ -		$ -		$ -		$ -
Revegetation of Graded Shoulder Areas	LF	$	0.24		$ -		$ -	250	$ 60.00		$ -		$ -	1520	$ 364.80		$ -		$ -		$ -		$ -		$ -
Fill for Graded Paths	CY	$	15.00		$ -		$ -	83	$ 1,245.00		$ -		$ -	4560	$ 68,400.00		$ -		$ -	217	$ 3,255.00		$ -		$ -
Prefabricated Trail Bridge	SF	$	90.00		$ -		$ -	700	$ 63,000.00		$ -		$ -		$ -	7200	$ 648,000.00		$ -		$ -		$ -	400	$ 36,000.00
Engineered Trail Overcrossing	SF	$	235.00		$ -		$ -		$ -		$ -		$ -		$ -	7200	$ 1,692,000.00		$ -		$ -		$ -	290	$ 68,150.00
Steel Prefabricated Bridge with Engineering Abutments	SF	$	120.00		$ -		$ -	1200	$ 144,000.00		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -
Stencil and Installation	PER	$	150.00		$ -		$ -	10	$ 1,500.00		$ -	14	$ 2,100.00	5	$ 750.00		$ -		$ -	4	$ 600.00		$ -	4	$ 600.00
Signage and Installation	PER	$	275.00		$ -		$ -	10	$ 2,750.00	5	$ 1,375.00	14	$ 3,850.00	5	$ 1,375.00		$ -		$ -	4	$ 1,100.00		$ -	4	$ 1,100.00
Trailhead/Entry Area Landscaping	PER	$	20,000.00		$ -		$ -	1	$ 20,000.00		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -
Trail Lighting	PER	$	3,000.00		$ -		$ -	16	$ 48,000.00		$ -		$ -		$ -		$ -		$ -	10	$ 30,000.00		$ -		$ -
Entry Signage	PER	$	2,000.00		$ -		$ -	2	$ 4,000.00		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -
Other Items																									
					$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -
Post and Rail Fence, 3 Rail, 54" High	LF	$	17.50		$ -		$ -	2300	$ 40,250.00	2700	$ 47,250.00		$ -		$ -		$ -		$ -		$ -		$ -		$ -
Security Rail	LF	$	40.00		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -
Chainlink Fencing	LF	$	12.00		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -
Trash Receptacles	PER	$	800.00		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -
Benches	PER	$	2,000.00		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -
Removable Bollards	PER	$	700.00		$ -	4	$ 2,800.00		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -
**********					$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -		$ -
CONTRACTOR MOBILIZATION COSTS			$75,759																						
TRAFFIC CONTROL - including intersection controls			$18,940																						
NPDES/SWPPP COMPLIANCE PROGRAM			$37,880																						
MITIGATION AND MONITORING PROGRAM			$37,880																						
CONTRACTOR OVERHEAD AND PROFIT @ 15%			$568,193																						
TRAIL SEGMENT SUBTOTALS					$23,998		$276,138		$407,170		$294,550		$183,783		$262,315		$2,340,000		$48,623		$68,916		$159,275		$119,383

Project Cost Total - Recommended Route	$4,526,603
Project Cost Total - Alternative Route Option	$992,294

NOTES:

1 Proposed	Trail facilities from the Ohlone Greenway down to the Cerrito Plaza grade (ramp costs not included) through to the San Pablo Avenue signalized trail crossing (Ramp from BART row to parking lot grade not included) (Pedestrian path not included)
1 Proposed (San Pablo MidBlock Crossing)	Midblock crossing costs only, Design and permitting not included in estimate
2 Proposed	From the west side of San Pablo Avenue through to the east side of Pierce Street, including all off-street trail adjacent to Cerrito Creek as well as required multi-use trail bridges, trail access control, signage, and fill and slope stabilization.
3 Proposed	Proposed configuration is separated bicycle path on west side of Pierce Street (Other options presented in Chapter 2 and here under 2 Interim)
4 Proposed	Proposed configuration is crossing improvement at bus stop, and multi use trail on west side of Pierce for both bicylists and pedestrians
5 Proposed	All off-street trail development, fence relocation, vegetation removal, fill, and slope stabilization required for the Pierce Street park segment
6 Proposed	Pedestrian/biccyle/maintenance vehicle bridge including abutments, deck and ramp and trail access approach
1 Interim	Modifications to the east side sidewalk on San Pablo Avenue, the existing San Pablo/Carlson intersection, bike lane striping and lane reconfiguration on Carlson, stenciling and signage on Lassen and pedestrian access improvements on Adams.
2 Interim	Lassen, Belmont bicycle improvements and Creekside Park sidewalk access improvements
3 Interim	Pierce Street bicycle lanes and back-in angle parking configuration from Cerrito Creek to Bridgewater/Albany Hill
6 Interim	Sidewalk modifications, intersection treatments, signage, lane narrowing required for parallel path/on-street connection from intersection of Pierce/Washington to Buchanan Street overpass
OVERALL	The total cost of the Proposed Alignment is approximately $4,200,000. This cost figure includes both a new mid-block signalized crossing and an approximately 400-foot long new bicycle/pedestrian bridge crossing over Cleveland Street and the existing railroad track. These two large cost items add significantly to the total project costs. Subtracting these two cost items, the trail development is comparable in cost with other Bay Area multi-use trails and bicycle lane segments requiring some traffic engineering and lane re-striping and multi-use trail construction.

5. MANAGEMENT AND MAINTENANCE

INTRODUCTION FOR FUTURE TRAIL MANAGERS

The proposed Cerrito Creek Bay Trail Connector will connect the Ohlone Greenway with the San Francisco Bay Trail. This trail will provide a unique urban trail environment and enhanced safety for pedestrians, bicyclists and other trail users. There are a broad range of funds available for trail planning, implementation and design yet local jurisdictions are often faced with the challenge of organizing and funding ongoing maintenance for complex urban trails that pass through multiple jurisdictions.

The proposed Cerrito Creek Bay Trail Connector passes through the cities of Albany, El Cerrito and Richmond. In order to achieve high levels of maintenance for this proposed facility over the long-term this chapter of the Cerrito Creek Bay Trail Connector Master Plan provides:

- A summary of management issues typically faced by urban trail managers,
- A summary of projected maintenance needs for the proposed trail, and
- Proposes a framework for cooperation between relevant governmental agencies from each city.

The cities of Albany, El Cerrito, and Richmond will be required to enter into an intergovernmental agreement in order to effectively manage the proposed Cerrito Creek Bay Trail Connector. The cities must agree on responsibility for management, responsibility for development of appropriate maintenance funds, cost sharing for maintenance activities, and numerous other trail management responsibilities outlined below.

WHO SHOULD MANAGE THE TRAIL?

During the completion of the Cerrito Creek Bay Trail Connector Feasibility Study the cities of Albany, El Cerrito and Richmond have cooperated extensively. Cooperative management of the trail by a variety of city agencies located in different cities is not recommended for this trail, due to the small scale of the project area. An individual senior staff person in a single city should be designated as the "trail manager." Multiple-agencies may have obligation to participate in on-going maintenance, but all must be coordinated by the "trail manager" with clear communication channels, maintenance standards, and accountability measures established by the "trail manager."

The management of the trail may also depend on the implementation of the recommended or alternative alignments. Should the complete recommended alignment be implemented, the City of Albany would be a likely choice to head the management effort for the trail,

because almost the whole of the recommended alignment falls within the Albany city limits. However, the trail segment along the Cerrito Creek (starting at the most eastern end of the Cerrito Creek Bay Trail project), and up to San Pablo Avenue should be managed by the City of El Cerrito because it is a right-of-way within their jurisdiction. Should the alignment include the alternative route option that provides on-street segments on Carlson, Belmont and Lassen Streets, north of Cerrito Creek, the City of El Cerrito should manage that short on-street portion. .

In the event that multiple-agency coordination is required for on-going maintenance, participating cities must enter into a long-term renewable inter-governmental agreement (MOU or MOA). This inter-governmental agreement should designate agency responsibilities, cost-sharing, and other issues that will enable the "trail manager" to be successful in maintaining the trail at all of the communities' desired standards. Establishment of the "trail manager" position and adoption of an appropriate intergovernmental agreement is the responsibility of local elected and appointed officials, including Parks and Recreation Commissioners, Public Works Committee Members, or City Council Members.

The "trail manager" should be an existing staff member within the appropriate agency in the City of Albany or El Cerrito, given their greater involvement and ultimate responsibility for the trail. Depending on the implementation strategy that the cities elect to follow, this management will naturally gravitate to the trail manager, depending on which city applies and receives the grant funding for construction of the trail and related facilities. Once the maintenance plan is in place, the "trail manager" should anticipate allotting a minimal amount of time (20 hours annually) towards the trail management, as it would essentially be a matter of coordinating with the maintenance departments.

MANAGEMENT CONCERNS

MULTI - JURISDICTIONAL TRAIL

The Cerrito Creek Bay Trail Connector will be a multi-jurisdictional trail passing through three separate cities and with responsibility for management potentially shared by numerous agencies due to the fact that the trail will have both on-street and off-street segments. Because of this characteristic of the proposed trail, it is essential that all three cities agree on a unified management and maintenance plan that will result in effective management of the trail as a single unit or corridor.

Urban trails passing through complex and varied environments, such as exist within the Cerrito Creek project area, must provide trail users with clear way-finding signage, high levels of surface maintenance, and with the feeling that the trail is a safe and comfortable place to be for people of all ages and abilities. Trail users are not typically aware that they are crossing administrative and jurisdictional boundaries and the trail should not indicate that one jurisdiction is doing a good job of maintaining the trail while another is not. Trails must be maintained uniformly across different boundaries if they are to serve the public well.

ON-STREET SEGMENTS

On-street segments of the Cerrito Creek Bay Trail Connector are recommended in several locations due to the lack of available off-street options. There are several configurations recommended in the Cerrito Creek Bay Trail Connector Trail Master Plan, including: (1) pedestrian use of existing sidewalk, bicycle use of shared-use lane, (2) pedestrian and bicycle use of existing crosswalk with street striping modifications, and, (3) pedestrian and bicycle use of parallel multi-use pathway adjacent to existing roadway. In all of these cases, the proposed Cerrito Creek Bay Trail Connector will be located within an existing public road right-of-way. Key management and maintenance issues for the on-street segments will include: signage installation and maintenance, sidewalk and street sweeping, pavement maintenance, and landscape maintenance. Each of these maintenance needs must be performed consistently for the length of the entire Connector Trail.

OFF-STREET SEGMENTS

Off-street segments of the Cerrito Creek Bay Trail Connector include: (1) from the intersection of Adams Street and Cerrito Creek in the east to the intersection of Pierce Street and Cerrito Creek in the west, and, (2) through the proposed Pierce Street Park from Pierce Street to Cleveland Street. Off-street segments must be managed as dedicated multi-use trails. Key management and maintenance issues include: law enforcement, signage installation and maintenance, trail surface maintenance, site amenities installation and maintenance, lighting and utilities and landscape maintenance. Each of these management and maintenance activities must be completed in a consistent manner for all off-street segments.

MANAGEMENT RESPONSIBILITIES

The following list represents the major tasks to be completed and/or delegated by the designated "trail manager." These responsibilities may be delegated to program (grant writing and outreach), engineering, public safety or planning staff, according to departmental organization and needs.

IMPLEMENTATION MANAGEMENT

- Coordinate development of implementation design
- Coordinate future development of trail
- Pursue competitive grant funding for trail implementation
- Identify and coordinate existing and potential local funding
- Acquire trail easement and other agreements, where applicable
- Assist in coordination of art in public places programming

ONGOING TRAIL MANAGEMENT

- Develop and manage an emergency response system in coordination with local fire and police departments
- Develop and implement maintenance plan and ensure adequate funding
- Organize, coordinate and implement trail operations plan

- Obtain bids and manage contracts for maintenance and improvements
- Monitor security/safety of the trail through routine inspections
- Oversee maintenance and rehabilitation efforts
- Establish consistency in the trail user regulations with other agencies
- Manage and respond to issues and incidents along the trail
- Coordinate routine law enforcement needs
- Act as the local trail spokesperson with the public and elected officials, and address the issues and concerns raised by trail users and direct them to the appropriate department.
- Act as liaison to the Association of Bay Area Governments Bay Trail Program in order to assure ongoing consistency with the goals and standards for Bay Trail Connector trails

OPERATIONS RESPONSIBILITIES

SECURITY

Most multi-use trails in the United States do not have a dedicated police patrol of the facility. As a rule of thumb, a multi-use trail such as the Cerrito Creek Bay Trail Connector with average or above average usage will require 1 man-hour per day for every 5 miles of bike path. This translates into roughly 0.5 man-hours/day for the recommended alignment. This figure would also vary by time of week and year. Off-peak weekdays may require only 0.5 man-hours/day, while peak weekends may require as much as 1 man-hours/day.

Albany policing levels would likely require increase of patrols due to increase in level of access to trail corridor. El Cerrito policing levels would likely remain the same, as three cul-de-sacs terminate at Creekside Park providing easy access to the project corridor. Existing frequency of patrols for the park would be adequate. Richmond police currently have access to the project corridor via Pacific East Mall, and given high level of commercial retail activity, current patrols are likely adequate.

While the Cerrito Creek Bay Trail Connector is expected to reduce the number of law-enforcement concerns along current less-used areas of the Cerrito Creek corridor by providing greater access and higher visibility, the City of Albany and City of El Cerrito Police Departments should be committed to providing sufficient security to ensure that this goal is achieved.

A summary of key security recommendations is presented below.

- Provide for regular law enforcement presence along the off-street segments of the trail
- Ensure that trail users obey traffic laws and trail rules on on-street segments
- Make sure that all segments of the Cerrito Creek Trail are accessible to emergency vehicles
- Illuminate all roadway crossings
- Illuminate key gathering areas along the proposed trail
- Construct all site fixtures from vandal resistant, culturally appropriate materials, including way-finding signage, warning signage, bridges and other site amenities. For

example, the Pierce Street bridge over Cerrito Creek is painted green to reduce graffiti or "tagging."
- Trim all vegetation at least five feet from the trail where possible to maximize visibility
- Provide bicycle racks and lockers at key destinations that allow for both frame and wheels to be locked.
- Provide fire and police departments with map of system, along with access points and knox boxes to gates/bollards.
- Enforce speed limits and other rules of the road.
- Enforce all trespassing laws for people attempting to enter adjacent private properties.

MAINTENANCE

Maintenance needs for the Cerrito Creek Bay Trail Connector will vary considerably by segment. The varying physical characteristics and proposed features along the different segments of the Cerrito Creek require varying maintenance activities. On-street segments will require one-set of maintenance activities while off-street multi-use trail segments will require another. The following table summarizes general maintenance activities for these two different trail types:

Maintenance Activities

Item	Frequency
Sign replacement/repair	As needed
Trail pavement marking replacement	As needed
On-Street pavement marking replacement	As needed
Planted tree, shrub, & grass trimming	5 months-1 year
Pavement sealing/potholes	5-15 years/30-40 years for concrete
Clean drainage system	Annual
Pavement sweeping	Monthly
Shoulder mowing and weed removal	Bi-Annual – Fall/Spring
Trash disposal	As needed, twice a week
Inspect bridge abutments and structures	After each storm
Graffiti removal	As needed
Maintain furniture	As needed
Pruning to maintain vertical clearance	Annual, as needed
Remove fallen trees (on trail only)	As needed
Weed control	Monthly
Maintain irrigation lines/replace sprinklers	As needed
Irrigate/water plants	As needed and as required during establishment growth period
Fencing	Monthly, as needed

Typical maintenance vehicles for the trail will be light pick up trucks and occasionally heavy dump trucks and tractors. A mechanical sweeper is recommended to keep the trail clear of loose

gravel and other debris. Care should be taken when operating heavier equipment on the trail to warn trail users and to avoid breaking the edge of the trail surface.

PROJECTED MAINTENANCE COSTS

East Bay Regional Parks estimates annual multi-use trail maintenance costs at around $18,000 – $20,000 per mile. The Cerrito Creek Bay Trail Connector is a complex urban trail, with many segments located in corridors traditionally maintained by roadway and sidewalk maintenance budgets. These sections are atypical of traditional Class-I bikeway multi-use trails. In order to provide an accurate estimate of annual maintenance costs, this discussion divides the trail into segments.

IMPACT OF ROUTE OPTION ON MAINTENANCE RESPONSIBILITIES

The projected annual maintenance cost of $18,000 - $20,000 for a Class I facility per mile will slightly lower for Class II and Class III facilities. The primary difference will be that there will be less trail sweeping or landscaping needs for Class II and Class III facilities because they are likely on roads that are maintained regularly by the respective Public Works departments of each city. The primary costs associated with a Class II facility would be maintaining the signage and stencils and lane striping needs that are generally required no more than once a year, as well as signalized crossings. A Class III facility is also on-street and would not require lane-striping or pavement stencils. Maintaining surface quality and signage would be the primary maintenance tasks for a Class III facility.

A general estimate would be that the annual costs for maintaining a Class I facility would be $18,000 - $20,000 per mile, $8,000 – $16,000 per mile for a Class II facility, and $2,000 - $10,000 per mile of Class III facility.

SUB-SURFACE UTILITIES

All existing utility easements on the Cerrito Creek alignment that will be impacted by the trail will need to be addressed in the management agreement between the cities of Albany, El Cerrito, Richmond and Berkeley. The primary utility easement that must be addressed is the City of Berkeley sewer main that parallels Cerrito Creek on the south side within the City of Albany from Adams Street in the east to Pierce Street in the west. While it is not uncommon for trails to be constructed on top of utilities, including gas lines and fiber optic lines, the agreement needs to identify the following:

- Advance notice and trail closure procedures for routine maintenance
- Procedures and responsibilities for unscheduled maintenance
- Minimum trail covering
- Required warning signs
- Responsibilities for trail re-construction and construction standards

Where the trail may require additional width along the south creek bank, any changes in retaining structures or addition of bridge abutments must be developed with review by the City of Berkeley Public Works, Engineering Division.

SAFETY AND SECURITY

Compared with widely-accepted alternatives such as riding bicycles or walking on busy arterial streets like San Pablo Avenue, trail user's exposure to potential injury will be greatly reduced on the Cerrito Creek Bay Trail Connector based solely on the number of proposed safety measures.

The fact is that people already walk along and cross the Cerrito Creek and, without tremendous investment in fencing, maintenance, and enforcement, would continue to do so with or without the proposed trail. Providing a developed trail along the existing creek corridor and along existing roadways with few pedestrian and bicycle safety features will help to better organize and separate an activity that is already underway. The Cerrito Creek Bay Trail Connector will improve safety conditions along the El Cerrito Plaza Shopping Center parking area, at the San Pablo Avenue street crossing, along Cerrito Creek and along Pierce Street.

Safety will be addressed on the Cerrito Creek Bay Trail Connector in the following manner:

1. Adhere to the established design, operation, and maintenance standards presented in this Master Plan.
2. Supplement these standards with the sound judgment of professional planners, public safety officials and engineers.
3. Maintain adequate recording and response mechanisms for reported safety and maintenance problems.
4. Thoroughly research the causes of each reported accident on the Cerrito Creek Bay Trail Connector. Respond to accident investigations by appropriate design or operation improvements.
5. Provide location signs on the trail so that emergency response can be directed.
6. Design the trail, its structures, and access points to be accessible by emergency vehicles. Bollards at the entrance to each trail segment should be removable by the appropriate fire, ambulance, and police agencies. Constrained segments of the trail that cannot accommodate emergency vehicles should not be longer than 500 feet, and identified in advance by the appropriate police, fire, and ambulance services.
7. Provide regular police patrols to the extent needed.
8. Post appropriate warning, regulatory and information signs in appropriate languages, responsive to local demographics, at least every 200 feet along the trail.

PRIVATE PROPERTY PROTECTION

The Cerrito Creek Bay Trail Connector will be located directly adjacent to private properties along much of its proposed alignment. Neighbor concerns typically include a loss of visual privacy, and concerns about increased crime, vandalism, noise, and fire. Wherever possible, the trail should be located as far away as possible to protect the privacy of adjacent property owners. New privacy fencing is not be required as part of the project as most land owners have already taken measures to screen their property from existing public access. Fencing types, designs, and landscaping suggestions may be provided to property owners so that they can select the most appropriate type of fencing for their property.

Studies conducted by Sonoma State University[1] and the Rails-to-Trails Conservancy have shown that new multi-use trails do not result in increases in crime to adjacent property owners. Criminal activity is not likely to occur along a trail that is well planned, designed, operated, maintained, and used. Fire concerns should be addressed in part by adequate weed abatement.

TRANSPORTATION MANAGEMENT PLAN

Trail users will need to be managed during construction and periodic maintenance of the trail, when sections of the trail will be closed or unavailable to trail users. Trail users must be warned of impending trail closures, and given adequate detour information to bypass the closed or unfinished section of trail. Trail users must be warned through the use of standard signing at the entrance to each affected section of trail ("Trail Closed"), including (but not limited to) information on alternate routes and dates of closure. Sections of the trail that are closed must be gated or otherwise blockaded and clearly signed as closed to public use. Alternate routes should provide a reasonable level of directness and lower traffic volumes, and signed consistently. If no reasonable alternate routes are available, the trail should have an "End Trail" sign and provide access to the street and sidewalk system.

LIABILITY

Bay Area cities and the East Bay Regional Park District have a long history of dealing effectively with liability issues related to multi-use trails. In general, liability risks for neighbors of multi-use trails is well protected and probably reduced from current levels by the recreational use statute and other statutes. Assuming the trail is designed, built, and operated to established standards, there is no additional liability for the managing agencies.

[1] Brush Creek Trail Study, Sonoma State University, 1992.

6. FUNDING STRATEGY

This section provides information and recommendations regarding securing funding for designing, constructing and maintaining the Cerrito Creek Bay Trail Connector.

PLAN ADOPTION AND INCLUSION

An adopted master plan sends a message to any funding agent that confirms political and public support, and provides a measure of assurance to the funding agent that the project will move forward. In addition to the master plan adoption, the City and trail advocates should pursue incorporation of the trail into the Regional Transportation Plan (RTP), MTC's Regional Bicycle Plan, CCTA's Countywide Bicycle and Pedestrian Plan, as well as local plans such as the City of Albany Bicycle Plan and future bicycle plans that may be completed by the City of El Cerrito. It is anticipated that inclusion of the trail on the RTP may in fact be a requirement for consideration of future funding sources, including TEA-21.

PROJECT PHASING

Project phasing has been tailored to anticipate funding amounts, and a description of each phase has been provided to assist with meeting anticipated funding criteria.

FUNDING SOURCES

There are a variety of potential funding sources including local, State, regional, and federal funding programs that can be used to construct the proposed bicycle improvements. Most Federal, state, and regional programs are competitive, and involve the completion of extensive applications with clear documentation of the project need, costs, and benefits. Local funding for bicycle projects typically comes from Transportation Development Act (TDA) funding, which is prorated to each community based on return of gasoline taxes. Funding for many of the programs would need to be funded either with TDA, general fund (staff time), or possibly private grants. The following table presents a summary of available funding along with timing, criteria, and funding agency.

TABLE 1: FUNDING SOURCES

Acronyms:	Jurisdictions for Albany, California:
AQMD - Air Quality Management District Caltrans - California Department of Transportation CMA - Congestion Management Agency CTC - California Transportation Commission FHWA - Federal Highway Administration MPO - Metropolitan Planning Organization RTPA - Regional Transportation Planning Agency State DPR - California Department of Parks and Recreation (under the State Resources Agency) TEA-21 - Transportation Equity Act of the 21st Century	AQMD – Bay Area Regional Air Quality Management District (BAAQMD) Caltrans - Caltrans District 4 ACCMA – Alameda County Congestion Management Agency MTC – Metropolitan Transportation Commission ABAG – Association of Bay Area Governments ACTIA – Alameda County Transportation Improvement Authority Resources: Caltrans TEA-21 website - http://www.dot.ca.gov/hq/TransEnhAct/

Grant Source	Due Date	Agency	Annual Total	Matching Requirement	Eligible Applicants	Eligible Bikeway Projects			Comments
						Commute	Recreation	Safety/Ed	
Federal Funding									
TEA-21 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
TEA-21 Congestion Mitigation and Air Quality Program (CMAQ)	Dec. 1 yearly	RTPAs, Caltrans	$400 m	11.47% non-federal match	federally certified jurisdictions	X			Counties redesignated to attainment status for ozone may lose this source. Contact Cathy Gomes, Caltrans, (916) 654-3271
TEA-21 Transportation Enhancement Activities (TEA)	varies by RTPA	RPTAs, Caltrans	$60 m	11.47% non-federal match	federally certified jurisdictions	X	X		Funds are dispersed through the four shares listed below.
Regional Share	varies by RTPA	RTPAs, Caltrans	$45 m	"	federal, state, or local, depending on category	X	X		Funding share to RTPAs.
Caltrans Share	varies by RTPA	Caltrans	$6.6 m	"	Caltrans	X	X		Funding share to Caltrans. Available only if regional TEA funds are not used
Statewide Transportation Enhancement Share	varies by RTPA	Caltrans, State Resources Agency	$20-30 m	"	federal, state (except Caltrans), regional and local agencies with a state partner	X	X		Funding share for all 12 TEA categories except conservation lands.
Conservation Lands Share	varies by RTPA	Caltrans, State Resources Agency	$11 m	"	RTPAs, counties, cities and non-profits.	X	X		Funding share for conservations lands category - acquisitions of scenic lands with high habitat conservation value.

Grant Source	Due Date	Agency	Annual Total	Matching Requirement	Eligible Applicants	Eligible Bikeway Projects			Comments
						Commute	Recreation	Safety/Ed	
TEA-21 Recreational Trails Program (RTP)	Oct. 1	State DPR	$3 m	20% 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
Transportation and Community and System Preservation Pilot Program	pending	FHWA	$25 m nationwide	--	state, local, MPO's	--	--	--	Projects that improve system efficiency, reduce environmental impacts of transportation, etc. Contact K. Sue Kiser, Regional FHWA office, (916) 498-5009
Land & Water Conservation Fund (LWCF)	May 1st	State DPR	$7.7 m statewide	50%, including in-kind	Federal, state, city, county, eligible districts		X		Federally-funded. Projects that acquire and develop outdoor recreation areas and facilities. Contact Odel King, State DPR, (916) 653-8758
State Funding									
Environmental Enhancement and Mitigation Program (EEMP)	Nov.	State Resources Agency, Caltrans	$10 m statewide	not required but favored	local, state and federal government non-profit agencies	X	X	X	Projects that enhance or mitigate future transportation projects; can include acquisition or development of roadside recreational facilities. Contact Carolyn Dudley, State Resources Agency, (916) 653-5656
Safe Routes to School (SB 10)	May 31	Caltrans	$18 m	11.5% min.	city, county	X	X	X	Primarily construction program to enhance safety of pedestrian and bicycle facilities. Contact. Caltrans District 8, (909) 383-4030
Habitat Conservation Fund Grant Program	October 1	State DPR	--	50% non-state	city, county, eligible districts	-	-	-	Includes a trails/program/urban access category. Contact Contact Odel King, State DPR, (916) 653-8758
Bicycle Transportation Account	December	Caltrans	$7.2 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
Regional Transportation Improvement Program (RTIP)	December 15, odd years	RTPA	--	--	city, county, transit operators, Caltrans	X		X	Part of State Transportation Improvement Program (STIP), the main state program for transportation project funding. For "improving transportation within the region." RTPA must program funds.
Petroleum Violation Escrow Account (PVEA)	On-going	State Legislature	$5 m	--	city, county, transit operators, Caltrans	--	--	--	Bicycle and trail facilities have been funded with this program. Contact Caltrans Federal Resource Office, (916) 654-7287

Grant Source	Due Date	Agency	Annual Total	Matching Requirement	Eligible Applicants	Eligible Bikeway Projects			Comments
						Commute	Recreation	Safety/Ed	
Community Based Transportation Planning Demonstration Grant Program	Nov.	Caltrans	$3 m	20% local	MPO, RPTA, city, county	X			Projects that exemplify livable community concepts. Contact Leigh Levine, Caltrans, (916) 651-6012
Office of Traffic Safety Grants	Jan. 31	Office of Traffic Safety	--	--	state, city, county			X	Bicycle and pedestrian projects have been funded through this program. Contact OTS, (916) 262-0990
Local Funding									
Measure B	--	ACTIA	$40,000	--	--	X		X	More funds available on a competitive basis
Transportation Development Act (TDA) Article 3 (2% of total TDA)	Jan.	RPTA	--	--	--	--	--	--	Allocated by MTC
Transportation Fund for Clean Air (TFCA)	June 30	ACCMA	$10 million	20%	City, county, transit agencies	X		X	
State Gas Tax (local share)	--	Allocated by State Auditor Controller	--	--	--	X		X	--
Developer Fees or Exactions (developer fee for street improvements - DFSI)	--	Cities or County	--	--	--	--	--	--	Mitigation required during land use approval process

CALTRANS LOAN PROGRAMS

(See http://www.dot.ca.gov/hq/innovfinance/about_us.htm)

CALTRANS SHA LOAN PROGRAM (AB 1012)

This program offers short-term (maximum four-year) construction loans to local entities for State Transportation Improvement Program (STIP)-eligible projects included within an adopted Regional Transportation Plan. Total project costs must be greater than $10 million; however, for counties with populations under 500,000, this requirement may be waived.

Michael Yee, Loan Officer (916) 324-7624

CALTRANS GRANT ANTICIPATION REVENUE VEHICLES (GARVEE BONDS)

GARVEE Bond funding offers local entities the means to accelerate construction of critical transportation projects to provide congestion relief benefits significantly sooner than traditional funding mechanisms. Debt service on the bonds is repaid through future county or interregional share allocations. Projects must be STIP-eligible for federal funds apportioned to the State, have environmental clearance, a completed project design, and must meet all applicable federal requirements. Funding is limited to right-of-way and construction costs.

Barbara Lewis, Finance Manager

Innovative Finance (916) 324-7623

TRANSPORTATION FINANCE BANK (TFB)

The U.S. Department of Transportation (US DOT) designated California to participate in its State Infrastructure Bank (SIB) Pilot Program, authorized under the National Highway System Designation Act of 1995. The SIB Program was established to provide flexible project financing through loans, debt service guarantees, lines of credit, and other capital financing support. California established its SIB, the Transportation Finance Bank, to offer credit assistance to public and private entities for any stage of an eligible highway construction or transit capital project.

Michael Yee, Loan Officer (916) 324-7624

FEDERAL FUNDING

TRANSPORTATION EQUITY ACT FOR THE 21ST CENTURY (TEA-21)

Federal funding through the TEA-21 (Transportation Enhancements Act) program provides the bulk of outside funding. TEA-21 currently contains three major programs, STP (Surface Transportation Program), TEA (Transportation Enhancement Activities), and CMAQ (Congestion Mitigation and Air Quality Improvement) along with other programs such as the National Recreational Trails Fund, Section 402 (Safety) funds, Scenic Byways funds, and Federal Lands Highway funds (see Table 1).

TEA-21 funding is administered through the state (Caltrans or Resources Agency) and regional governments (Alameda County Congestion Management Agency, Contra Costa Transportation Authority). Most, but not all, of the funding programs are transportation versus recreational oriented, with an emphasis on (a) reducing auto trips and (b) providing an inter-modal connection. Funding criteria often includes completion and adoption of a master plan, quantification of the costs and benefits of the system (such as saved vehicle trips and reduced air pollution), proof of public involvement and support, CEQA compliance, and commitment of some local resources. In most cases, TEA-21 provides matching grants of 80 to 90 percent--but prefers to leverage other moneys at a lower rate.

All TEA-21 funds have been programmed. The successor legislation to be renewed in 2003, SAFETEA (Safe, Accountable, Flexible, and Efficient Transportation Equity Act of 2003), will be a future source of funds. This new legislation, scheduled for fiscal years 2004 through 2009, may come with additional categories of funding and guidelines. With an active and effective regional agency such as the ACCMA, the City of Albany should be in a good position to secure more than its fair share of future SAFETEA funding. It will be critical to get the local state assemblyman and senator briefed on these projects and lobbying Caltrans and the California Transportation Commission for these projects.

STATE FUNDING

BICYCLE TRANSPORTATION ACCOUNT

The State Bicycle Transportation Account (BTA) is an annual statewide discretionary program that is available through the Caltrans Bicycle Facilities Unit. Available as grants to local jurisdictions, the emphasis is on projects that benefit bicycling for commuting purposes. Over $7 million is awarded annually throughout the state. The City of Albany may apply for these funds through the Caltrans Bicycle Facilities Unit.

SAFE ROUTES TO SCHOOL (SB 10)

The Safe Routes to School program, recently extended to January 1, 2005, is a state program using federal transportation funds. This program is meant to improve school commute routes by eliminating barriers to bicycle and pedestrian travel through rehabilitation, new projects, and traffic calming. A local match of 11.5% is required for this competitive program, which will allocate $18 million annually. Since it is a construction program, planning grants are not available through this program.

TDA ARTICLE III (SB 821)

Transportation Development Act (TDA) Article III funds are state block grants awarded annually to local jurisdictions for bicycle and pedestrian projects in California. These funds originate from the state gasoline tax and are distributed to local jurisdictions through the regional transportation planning agencies (Alameda County Congestion Management Agency).

LOCAL FUNDING

TRANSPORTATION FUND FOR CLEAN AIR (TFCA)

TFCA funds are generated by a $4 surcharge on automobile registration in the Bay Area Air Quality Management District (BAAQMD). This collection funds two programs that can finance projects such as bicycle facility improvement projects. One program is the Regional Fund, a regional competitive fund appropriated by the baaqmd. In fy 2002/03, approximately $10 million was available in the Regional Fund, with grants ranging from $10,000 to $1 million per project. The second program, the Program Manager Fund (40% Fund), results from the return of 40% of funds collected in each county to be appropriated by its' CMA or Transportation Authority.

MEASURE B

In 2000, the voters in Alameda County approved Measure B, a half-cent sales tax to fund transportation improvement projects. The new Measure B started on April 1, 2002 and will continue until March 31, 2022, generating approximately $3 billion over the next 20 years. Sixty percent of the net sales tax is distributed to local jurisdictions, with five percent of the net revenues designated for bicycle and pedestrian safety projects. Seventy-five percent of the Bike and Pedestrian Safety programmatic funds are distributed to the cities monthly (based on 2001 population data), while the remaining 25 percent will be awarded through a competitive basis. The Alameda County Transportation Improvement Authority's 2002/2003 Strategic Plan estimated that Albany would receive nearly $40,000 for bicycle and pedestrian safety projects during 2002/2003.

OTHER FUNDING SOURCES

NEW CONSTRUCTION

As a unit cost, trail crossings with intersections are typically the most costly items to develop on a trail project. They are also essential for safe passage along the trail.

Future road widening and construction projects are one means of providing trail crossing improvements. To ensure that roadway construction projects that cross the trail provide needed improvements, it is important that an effective review process is in place so that crossings meet the standards and guidelines presented in this master plan.

IMPACT FEES

Another potential local source of funding is developer impact fees that typically tie to trip generation rates and traffic impacts produced by a proposed project. A developer may reduce the number of trips (and hence impacts and cost) by paying for on- and off-site bikeway improvements that will encourage residents to bicycle rather than drive. In-lieu parking fees may be used to help construct new or improved bicycle parking. Establishing a clear nexus or connection between the impact fee and the project's impacts is critical in avoiding a potential lawsuit.

MELLO ROOS COMMUNITY FACILITIES DISTRICTS

Bike paths, lanes, and pedestrian facilities can be funded as part of a local assessment or benefit district. Defining the boundaries of the benefit district may be difficult unless the facility is part of a larger parks and recreation or public infrastructure program with broad community benefits and support.

OTHER

Local sales taxes, fees, and permits may be implemented, requiring a local election. Volunteer programs may substantially reduce the cost of implementing some of the proposed pathways. Use of groups such as the California Conservation Corps (who offer low cost assistance) will be effective at reducing project costs. Local schools or community groups may use the trail 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.

Other opportunities for implementation will appear over time which may be used to implement the system.

FINANCING

Proposed improvements and programs to be developed over the next 20 years along the Cerrito Creek Bay Trail Connector have been analyzed to determine the annual financing requirements, and to allow the City to budget its resources and target funding applications.

It is important to note that the majority of funding for bicycle projects is expected to be derived from federal sources. These funding sources are extremely competitive, and require a combination of sound applications, local support, and lobbying on the regional and state level.

Local available matching funds, such as TDA, should be allocated whenever possible to these projects. The actual schedule for implementation on a year-to-year basis should be determined by (a) the readiness of each project in terms of local support, (b) CEQA approvals, (c) right-of-way control, (d) timing with other related improvements, and/or (e) success in obtaining competitive funding.

The managing agencies and citizen support groups should monitor the project phases identified in this Master Plan and subsequent updates, and keep a year-to-year list of projects and their TDA and other local funding allocations. Should a project not be ready or able to utilize its allocation, it may trade with another short-term project. This process eliminates the constant evaluation of new projects and ensures that viable top priority projects have access to matching funding. It provides the city a five to ten year schedule so that it may program its resources and feel assured that its projects will be implemented in the short-term. Each year the City BAC and staff should review the

list of projects slated for that year, review the readiness of each project to be funded, and listen to requests for changes to the sequencing of the projects.

CERRITO CREEK
BAY TRAIL CONNECTOR
FEASIBILITY STUDY
APPENDIX 1

PROJECT GOALS

The Cerrito Creek Pedestrian/Bicycle Trail will serve as an important connecting trail between the Ohlone Greenway and the San Francisco Bay Trail, linking neighborhoods, schools, and parks along the corridor, providing transportation and recreational opportunities. The proposed trail has the potential to focus interest and awareness on a unique community resource.

The major project goals include:

Goal 1: Identify safe and functional circulation trails for both pedestrians and bicyclists from the Ohlone Greenway to the San Francisco Bay Trail.

Goal 2: Identify physical, biological and social constraints and opportunities in the Cerrito Creek project area related to the development of a multi-use trail(s)

Goal 3: Involve stakeholders and neighboring property owners in the design of the proposed pedestrian and bicycle pathways and key features

Goal 4: Develop design solutions that preserve existing biological and cultural features of the Cerrito Creek corridor, enhance existing opportunities, and solve identified problems.

Goal 5: Develop design solutions founded on the principles of "crime prevention through environmental design," to provide a trail environment that promotes community monitoring and ownership while discouraging unlawful activities

Goal 6: Design roadway crossings and on-road trail segments according to current best practices that meet or exceed existing local, state and federal standards for pedestrian and bicycle facilities.

Goal 7: Design trail engineering features in a manner that provides for future creek restoration opportunities and does not interfere with flood management of the existing creek bed.

Goal 8: Address the unique needs of the California Orientation Center for the Blind

Goal 9: Design enhanced community gateway features consistent with adopted streetscape plans at San Pablo Avenue that highlight the presence of the creek, and the city and county borders

Goal 10: Identify interpretive, educational and way finding signage locations and appropriate content for signage types along the proposed trail

Goal 11: Design a trail with low maintenance requirements and identify management and maintenance responsibilities for participating jurisdictions in the form of a detailed management plan

Goal 12: Develop a trail plan, design, and cost estimates that will enable all participating agencies to successfully obtain competitive grant funding for the proposed project

GOALS BACKGROUND

The following "List of Relevant Plans" and list of relevant goals and policies from each plan serves as the policy background for the Cerrito Creek Pedestrian/Bicycle Pathway Master Plan. The project consultants have reviewed each relevant plan for goals that directly or indirectly refer to issues encompassed by the proposed project.

LIST OF RELEVANT PLANS

- City of Albany General Plan 1990 - 2010 December, 1992
- Albany Hill Creekside Master Plan Goals November, 1991
- San Pablo Avenue Streetscape Master Plan February, 2001
- Final Report Of The Cerrito Creek Working Group April 10, 2000
- City of Albany Watershed Management Plan October, 1998
- City of El Cerrito General Plan August, 1999
- City Of Richmond General Plan August, 1994
- Alameda Countywide Bicycle Plan July, 2001
- Contra Costa Countywide Bicycle and Pedestrian Plan December, 2002

CITY OF ALBANY

CITY OF ALBANY GENERAL PLAN 1990 - 2010 December, 1992

CIRCULATION ELEMENT

GOAL CIRC 4 Support public transit, and other means to reduce reliance on the automobile as the primary means of transportation.

CIRC 4.5 Increase pedestrian travel throughout the City by connecting major pathway systems such as the BART linear park to other regional, and State parks, and other community facilities.

GOAL CIRC 6 Improve and enhance the City's bicycle route and path system.

CIRC 6.1 Develop a plan for bike routes for Albany, linking existing bike paths and routes in Berkeley an El Cerrito. Implement this plan as part of the City's overal road maintenance and traffic sign program within the annual capital projects budget, as well as through specific transportation funding.

CONSERVATION, RECREATION AND OPEN SPACE ELEMENT

GOAL CROS 1 Enhance the natural features of the City's creeks and increase public access to them.

CROS 1.1 Develop a comprehensive program to sponsor restoration and public access improvements to Albany's creeks. Continue to implement the 1977 Albany Creek Restoration Program. As part of this effort, continue to recognize that these areas have important wildlife and vegetation values.

CROS 1.2 Pursue funding for the restoration of Codornices and Cerrito Creeks through the Department of Water Resources Urban Stream Restoration Program and the Coastal Conservancy.

GOALS CROS 6 Develop the maximum feasible public open space areas in Albany.

CROS 6.4 Increase non-automobile public access routes throughout the City by connecting major pathway systems such as the BART linear park to other City, regional and State parks.

ALBANY HILL CREEKSIDE MASTER PLAN GOALS November, 1991

- To protect, maintain and enhance the natural features, native vegetation, and wildlife habitats on the site;
- To protect the cultural resources;
- To improve basic services to make the site safe and accessible to all people;
- To provide simple amenities which respect the site, educate the user and allow for the appreciation and enjoyment of the site

SAN PABLO AVENUE STREETSCAPE MASTER PLAN February, 2001

CREEK CROSSING GATEWAYS

"Albany's northern and southern boundaries are created by creeks: Cerrito Creek to the north and Codornices Creek to the south. These creeks are currently difficult to notice from San Pablo Avenue. In this plan, San Pablo Avenue's crossings over the creeks will be accentuated through special gateway treatments.

Each gateway will be marked with a scored concrete paving in the street that will be designed reminiscent of the water flowing underneath the street. The concrete can be colored, and will be installed in a wave pattern within the street.

An added feature will mark Albany's northern border, which is currently the County line and was historically the border between two Spanish ranchos. A plaque commemorating the rancho boundary was originally installed at this location in the 1930's, and it is now installed in a masonry holder on the Wells Fargo Bank property at the city limit line. This commemorative plaque will be reinstalled in a more ornate bench along the sidewalk, as shown in Figure 7. The bench is proposed to follow a Spanish design theme to reflect the Spanish land grant history begin commemorated."

CITY OF ALBANY WATERSHED MANAGEMENT PLAN October, 1998

RECOMMENDED PROJECTS

Project CR-2A: Between San Pablo Avenue and Pierce Street, approximately 2,100 LF

Estimated Cost: $400,000

Description: Restore 2,100 LFof currently open creek channel

Restoration Elements:

- Removal of debris and exotic plants
- Planting of native riparian plants
- Widening the creek section in a few areas
- Constructing a pedestrian/bicycle path with overlooks, creek identification and education signs
- Creating a vegetation management/maintenance program

Project CR-4: San Pablo Avenue to Kains Avenue, approximately 300 LF

Estimated Cost: $465,000

Description: The project plans for the removal of a secion of the creek from a culvert and the rerouting of the creek north and west around existing commercial development. The creek is contained within a culvert under an existing building east of San Pablo Avenue. Although this section of creek is located within the City of El Cerrito, the project would also serve as a gateway into the City of Albany. It is anticipated that any construction project would be jointly funded by the cities of Albany and El Cerrito, or by the ultimate developer of El Cerrito Plaza.

Project elements would include:

- Opening of the buried creek as part of the Cerrito Plaza renovation
- Relocation of approximately 300 feet of creek north into El Cerrito
- Design elements, such as bridge railings, signs and banners, at San Pablo Avenue to create a gateway into Albany
- Creek identification and educational signs

FINAL REPORT OF THE CERRITO CREEK WORKING GROUP April 10, 2000

GOAL: Restore Cerrito Creek and design a means of access between Pierce Street and San Pablo Avenue that recognizes the competing needs of natural habitat, both aquatic and terrestrial, pedestrian and bicycle access, and safety considerations.

CITY OF EL CERRITO

CITY OF EL CERRITO GENERAL PLAN GOALS August, 1999

LAND USE

GOAL LU5: A land use pattern and types of development that support alternatives for the movement of people, goods, and ideas.

LU5.5 Pedestrians and Bicycle Access. Ensure that business areas have adequate pedestrian and bicycle facilities and accessibility for persons with disabilities, and that easy connections to transit are available wherever possible.

COMMUNITY DESIGN

GOAL CD1: A city organized and designed with an overall attractive, positive image, and "sense of place."

CD1.6 Entrances to the City. Improve the major entrances to the city with landmark entry features, signs, and gateways to enhance the sense of community and improve the City's image.

CD2.8 City Sidewalk and Pedestrian Walkways. City streets and pedestrian walkways should be designed to be safe, accessible, convenient, comfortable, and functionally adequate at all times, including design of pedestrian crossings, intersection design, sidewalk widths, street tree planting, street furniture, and signal timing.

GOAL CD3: A city with attractive landscaping of public and private properties, open space, and public gathering spaces.

CD3.3 Site Landscaping. Improve the appearance of the community by requiring aesthetically designed screening and landscaping on public and private sites. Ensure that public landscaping includes entry areas, street medians, parks and schools. Require landscaping for all private sites, yard spaces, parking lots, plazas, courtyards, and recreational areass.

CD3.5 Creek Preservation. Where possible, preserve and restore natural drainage ways as parts of the storm drainage system, coordinating with recreational and trail use.

CD3.6 Cerrito Creek. Where possible, open the Cerrito Creek channel, providing access and recreational opportunities along the creek in conjunction with its flood control function.

CD3.10 Greenway Spur Trails. Develop greenway spur trails for creekside access to the Bay for recreational use and environmental protection.

CD3.12 Landscape Species. Indigenous and drought-tolerant species that reduce water usage and are compatible with El Cerrito's climate are encouraged.

TRANSPORTATION

GOAL T1: A transportation system that allows safe and efficient travel by a variety of modes and promotes alternatives to the single occupant vehicle.

T1.1 Balances Transportation System. Create and maintain a balanced transportation system with a choice of transit, bicycle, pedestrian and private automobile modes.

T1.3 Bicycle Circulation. Create a complete, interconnected bicycle circulation system. Provide a bicycle system that serves the commuter as well as recreational travel. Improve bicycle routes and access to an between major destinations.

T1.4 Pedestrian Circulation. Provide a safe, convenient, continuous and interconnected pedestrian circulation system throughout the City. Ensure safe pedestrian access to local schools.

PUBLIC FACILITIES AND SERVICES

GOAL PR1: Adequate, diverse, and accessible recreational opportunities for all residents – including children, youth, seniors, and others with special needs – in parks, school yards, and open space.

PR1.5 Costs Resulting from New Facilities: Assure that long-term maintenance needs are considered when reviewing new park facility proposals, including the need for future staff and equipment.

PR1.6 Private Involvement. Continue to encourage community organizations and private citizens to help maintain public parks and open spaces, and to assist in running recreation programs.

PR1.8 Inter-Agency Coordination. Continue to coordinate with adjacent cities and other agencies in providing adequate recreational facilities for all El Cerrito residents.

PR1.12 People with Special Needs. Ensure that public access points to open space areas and design features for all recreational facilities provide equal opportunity for people with special needs.

PR1.14 Bicycles. Implement bicycle routes improvements, including signing, striping, paving and providing bicycle racks.

GOAL PR3: Public access to open space while protecting important habitats.

PR3.3 Creek Restoration: Integrate recreational amenities with creek restoration efforts in a way that protects riparian values, including natural habitats.

RESOURCES AND HAZARDS

GOAL R1: Protected natural resources (important habitat, ecological resources, key visual resources, ridges and ridgelines, creeks and stream banks, steeper slopes, vista points, and major features), and clean air and water.

R1.1 Habitat Protection. Preserve oak/woodland , riparian vegetation, creeks, native grasslands, and other important wildlife habitats. Loss of these habitats should be fully offset through creation of habitat of equal value. Compensation rate for habitat re-creation shall be determined by a qualified biologist.

R1.2 Rare and Endangered Species. Limit development in areas that support rare and endangered species. If development in these areas must occur, any loss of habitat should be fully compensated on site. If off-site mitigation is necessary, it should occur within the El Cerrito planning area whenever possible, and must be accompanied by plans and a monitoring program by a qualified biologist.

R1.3 Potential Environmental Impacts. Encourage development patterns that minimize impacts on the City's biological, visual and cultural resources, and integrate development with open space areas.

R1.7 **Creek Protection**. Preserve riparian vegetation, protect owners and buyers of property from erosion and flooding, and increase public access to the creeks. Lands adjacent to riparian areas should be protected as public or private permanent open space through dedication or easements.

R1.8 **Creek Improvements**. Accomplish design and improvements along creeks (Cerrito Creek, Baxter Creek, etc.) in consultation and cooperation with creek restoration and design professionals.

R1.10 **Cerrito Creek and Baxter Creek**. In implementing improvements to Cerrito Creek, follow design objectives established in 1996 by the City Council. Similarly, establish a set of design objectives that are specific to Baxter Creek.

R1.11 **Native Plant Communities**. Encourage use of native plant species for landscaping in hillside areas, preserve unique plant communities, and use fire-preventive landscaping techniques.

R1.14 **Continued Inter-Agency Cooperation in Environmental Resource Protection**. Ensure that the mandatory referral process is utilized by all governmental projects prior to any authorization, and that the cities, county, and appropriate agencies initiate cooperative studies, when needed, in matters pertaining to open space and environmental resource protection.

GOAL R2: Protected and rehabilitated architectural, historical, cultural and archaeological resources that are of local, state and federal significance.

R2.3 **Vegetation**. Include significant trees and other plans materials in the definition of significance.

GOAL H1: Minimal protection for loss of life, injury, damage to property, economic and social dislocation and unusual public expense due to natural or man-made hazards, including protection from the risk of flood damage, hazards of soil erosion, fire hazards, weak and expansive soils, potentially hazardous soils materials, other hazardous materials, geologic instability, seismic activity, and release of hazardous materials from refineries and chemical plants in West County.

H1.15 **Flood Hazards**. Assure existing and new structures are designed to protect people and property from the threat of potential flooding. New development shall be designed to provide protection from potential impacts of flooding during the "1% chance" or "100-year" flood.

CITY OF RICHMOND

CITY OF RICHMOND GENERAL PLAN August, 1994

CIRCULATION ELEMENT

CIR-C.2 Promote the use of alternatives to the single-occupant automobile to satisfy community transportation needs.

CIR-C.3 Provide a network of bicycle routes offering safe and easy access to all portions of the City.

IMPLEMENTATION PROGRAMS

GOAL CIR-B Provide a balanced, safe, attractive and efficient transportation system for automobile/truck users, transit passengers, and pedestrians and bicyclists.

GOAL CIR-C Develop and encourage the effective use of multi-modal circulation systems

OPEN SPACE AND CONSERVATION ELEMENT

GOALS

OSC-O Preserve, enhance and expand sites for public access to the Bay in accordance with the Bikeways and Trail Circulation Plan. (VI)

IMPLEMENTATION POLICIES

OSC 1.1 Adopt flood control systems which maintain the natural qualities of the creeks as much as possible.

OSC 1.4 Prevent creek bank erosion, preserve wildlife habitat, protect the scenic quality of the creeks, and secure public access to the natural waterways.

OSC-S.3 Encourage development of special facilities to provide public access where ordinary trails and paths are impractical or where free public access would create a safety hazard

OSC-S.4 Protect hiking and biking paths from conflicts with motor vehicles to the greatest extent possible.

OSC-S.5 Provide public access where a local or regional trail is planned or located.

OSC-S.6 Promote the development of regional and local urban trails and collaborate with regional, County, or other local public agencies and with nonprofit and private groups to develop urban trail systems

OSC-S.7 Develop a network of trails linking residential areas with parks, schools, open space, shopping and various public facilities.

ALAMEDA COUNTYWIDE BICYCLE PLAN

GOALS AND OBJECTIVES

The Bicycle Task Force Members established the following goals for this plan:

1. Create and maintain an inter-county and intra-county bicycle network that is safe, convenient and continuous.
2. Integrate bicycle travel in transportation planning activities and in transportation improvement projects.
3. Encourage policies and actions that foster bicycling as a mode of travel.
4. Improve bicycle safety through facilities, education and enforcement.
5. Maximize the use of public and private resources in establishing the bikeway network.

CONTRA COSTA COUNTYWIDE BICYCLE AND PEDESTRIAN PLAN

Goals not completed at this date (6/11/02)

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