

# CROSS ALAMEDA TRAIL Feasibility Study

## FINAL REPORT



**Prepared for:**

Association of Bay Area Governments  
Bay Trail Project

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City of Alameda Public Works Department  
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## **ACKNOWLEDGEMENTS**

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The City would also like to thank the Association of Bay Area Governments (ABAG), which awarded the City a Bay Trail Grant for the Study. Additional funding for this project was provided by Measure B sales tax funds, which are administered by the Alameda County Transportation Improvement Authority (ACTIA).

## PREFACE

Much of the corridor studied in this report has been historically utilized by the Alameda Belt Line railroad (ABL). Evaluation of possible alternative public uses of the ABL, including the benefits of preserving the property intact as open space or for other compatible uses, is especially timely. First, much of the ABL has been out of service for a decade or more. ABL granted trackage rights on the remainder to Union Pacific (UP) in 1998 and has otherwise ceased service. UP's last customer no longer uses the line. ABL is offering parcels comprising the line for sale. The remaining property is at risk of fragmentation. Second, as part of the transaction approved by the Interstate Commerce Commission in 1926 which created ABL and authorized its extension, the City of Alameda retained a right to repurchase the railroad at original cost. Finally, there is considerable citizen interest in preserving the ABL property for public use, particularly for uses compatible with open space. Rail, transit, and trail uses are all open space compatible. In order to protect its interests and consonant with citizen interest, the City is actively exploring acquisition of the property, and has duly served notice upon ABL of an intent to exercise the City's option to repurchase. ABL is contesting the vitality of the option in ongoing litigation.

It has long been recognized that railroad corridors have many valuable uses in addition to handling freight:

“[T]o assemble a right-of-way in our increasingly populous nation is no longer simple. A scarcity of fuel and the adverse consequences of too many motor vehicles suggest that society may someday have need either for railroad or for the rights-of-way over which they have been built. A[n] ... agency charged with designing part of our transportation policy does not overstep its authority when it prudently undertakes to minimize the destruction of available transportation corridors painstakingly created over several generations.”<sup>1</sup>

The federal Council on Environmental Quality (CEQ) has specifically observed that “Converting railroad rights-of-way to trails is an example of an action that can affect transportation, energy efficiency, natural resources and historic preservation.”<sup>2</sup>

Not surprisingly, the ABL property has already been recognized as a logical candidate for a variety of public uses. Moreover, preservation of the property for those uses may result in substantial public benefits, now and in the future.

The potential benefits of preserving the ABL for passenger rail transit have been examined in other reports and planning documents. These studies have indicated that the ABL line is a major rail transit candidate. Since passenger rail operates on the same gauge as freight rail, preservation of the property for passenger transit is also consistent with freight rail operation.

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<sup>1</sup> U.S. Court of Appeals for the First Circuit, in *Reed v. Meserve*, 487 Fed. Rptr. 2d 646 at pp. 649-650 (1973).

<sup>2</sup> Council on Environmental Quality, *Environmental Quality: 21<sup>st</sup> Annual Report 188* (1991).

The ABL also has potential value as a commuting and recreational trail corridor. Indeed, the purpose of the *Cross Alameda Trail Feasibility Study* is to evaluate portions of the ABL for such use, as well as to examine alternative locations for a Cross Alameda Trail. Because of the interest in preservation of the ABL for rail (or other transit mode) purposes, the *Cross Alameda Trail Feasibility Study* also looks at the joint use of the ABL property for both transit and trail purposes.

Nothing in this study should be construed to suggest that the City should seek, or is seeking, to acquire ABL property for trail, and most especially solely for trail, purposes. Rather, the Study is designed to evaluate, among other things, whether the property, if acquired, could appropriately be employed for trail use, or for transit and trail use. As the contents of this Study make clear, the authors conclude that the ABL property is appropriate for development of a multi-use trail, or possibly a joint trail/transit corridor.

While not otherwise discussed herein, this Study assumes that the ABL is an operating freight railroad, albeit without any active shippers, and that it remains under the jurisdiction of the federal Surface Transportation Board (STB). Under that assumption, an acquisition by the City at the current time should be consistent with the continued discharge of all freight rail obligations in connection with the shippers served by ABL and would be subject to STB authorization.

## **CHAPTER I**

### **PROJECT BACKGROUND**

The north side of the City of Alameda's main island encompasses a transportation corridor which includes a currently inactive rail line. The rail line was formerly used by the Alameda Belt Line railroad to serve some of Alameda's major industrial sites on the north side of Alameda's main island during the past 100 years. Because the line is now inactive, it is a candidate for alternative public uses, and its potential availability means that the City of Alameda may have an opportunity to develop a new multi-use trail along the northern side of the City's main island.

The proposed "Cross Alameda Trail" would enhance the City's transportation infrastructure and recreational opportunities; provide enhanced bicycle and pedestrian access to the City's major commercial districts and redevelopment sites; and provide a link to the corridor's historic past by celebrating its industrial history. The multiple uses for the Trail would ensure that there is a strong, diverse constituency in the community to carry the project through to completion and maintain it as a high-quality facility in the future. One of the key challenges of this project would be to meet the needs of all of the potential users of the Trail, including commuters and others making utilitarian trips, as well as recreational users. In some cases, to avoid conflicts between the various types of users, separate "recreational" and "commuter" routes may be required.

This corridor has long been identified as a potential trail route, but the growing interest in developing the former rail corridor has brought a new urgency to the project. Opportunities to construct new trails are infrequent in older cities such as Alameda, and the City appropriately must be concerned that by neglecting to act now, this opportunity could be lost.

In December 2003, the City of Alameda was awarded a Bay Trail grant from the Association of Bay Area Governments (ABAG) to conduct a feasibility study of the Cross Alameda Trail. Shortly before the City was selected for this funding, the Rails-to-Trails Conservancy (RTC), a non-profit organization dedicated to converting abandoned railroad corridors to public trails, received funding from the San Francisco Foundation to develop a concept plan for the Cross Alameda Trail. To maximize the efficient use of resources, the City and RTC coordinated their respective efforts, with the RTC effort serving as the primary mechanism for soliciting public input regarding the City's feasibility study. This framework also enabled the public involvement process to not be constrained by the needs or goals of the City, which would be accounted for as part of the technical analysis. This report focuses on the results of the City's technical feasibility of constructing the Trail.

#### **Bay Trail**

The Bay Trail, once complete, will encircle San Francisco Bay with over 500 miles of trail in nine counties. Portions of the Bay Trail in Alameda are complete, notably the paths along Shoreline Drive and on Bay Farm Island, which are heavily used for recreation. But many other segments have also been completed, including paths in Marina Village and at the Grand Marina.

While the Bay Trail is generally located as close to the shoreline as possible, much of the northern shore of Alameda's main island has not been available for development, so the Bay Trail alignment adopted by ABAG is further from the shore. In this corridor, the Bay Trail alignment includes Ralph Appezzato Memorial Parkway, Atlantic Avenue, Buena Vista Avenue, and Tilden Way.

### **Work Scope**

The work scope of this feasibility study includes the following tasks:

1. Identify legal constraints of acquiring property or easements for the proposed alignment and acquire preliminary information. Current property owners, existing easements, and title/deed restrictions of parcels in the study area will be identified.
2. Prepare a base map, including property ownership, land use types, topography, environmental features, existing infrastructure, and existing roadways, trails, and bicycle facilities.
3. Create trail corridor map. Develop and evaluate three alternative trail alignments, then identify a preferred alignment.
4. Conduct field analysis.
  - Identify and evaluate constraints to trail development in this corridor.
  - Identify connections to nearby commercial areas, parks, schools, other trails, parking and other important sites.
5. Identify constraints, including engineering issues, environmental concerns, and community opposition.
6. Develop general trail design standards, including width, access, placement, surface, and grade.
7. Develop typical cross-sections for each segment of the trail.
8. Site-specific standards to illustrate roadway crossings.
9. Estimate costs of right-of-way acquisition, engineering, construction, ongoing operations and maintenance.
10. Determine locations of access points.
11. Develop a trail management strategy.

It was recognized early on that the current status of properties along the waterfront made the development of a shoreline path a long-term prospect. In addition, there is the potential for additional development at inland locations in the corridor. Therefore, in addition to looking at the specific characteristics of the proposed trail corridor, a significant product of the study was a set of guidelines to be applied to new development projects in the trail corridor to ensure that sufficient right-of-way is provided to accommodate the trail. This will facilitate proactive long-range planning by the City as development opportunities present themselves.



## **Study Area**

The limits of the Cross-Alameda Trail are from Main Street (westerly terminus) to Tilden Way (easterly terminus). In addition, it is envisioned that the Trail will ultimately continue west of Main Street into Alameda Point, terminating at the Seaplane Lagoon.

The study area is divided into five sections:

1. Main Street to Webster Street
2. Webster Street to Constitution Way
3. Constitution Way to Sherman Street
4. Sherman Street to Grand Street
5. Grand Street to Tilden Way

To facilitate ease of trail implementation, the proposed alignments took advantage of vacant properties in the corridor. The parcels formerly used by the Alameda Belt Line railroad provide a linear corridor with a limited number of landowners, which reduces the number of potential land acquisition negotiations. This is especially true for the portion of the trail from Main Street to Sherman Street.

Since a goal of the San Francisco Bay Trail Project is to promote and advocate implementation of the Bay Trail as a means of maximizing shoreline access, the status of the shoreline properties in this corridor was assessed. A shoreline path would be somewhat circuitous, and would serve a primarily recreational function. By contrast, the former Alameda Belt Line route is more direct and closer to many key destinations in Alameda, potentially providing a viable off-road route for bicycle commuters as well as pedestrians.

## **Public Involvement**

As noted above, the Rails-to-Trails Conservancy took the lead on the public involvement component of the project, while the City's Public Works Department managed the feasibility study and conducted the technical analysis related to the development of the Trail. RTC completed the first phase of its public outreach initiatives while the City was conducting the feasibility study. To help guide the process, RTC contacted various groups that had indicated their support for the Cross Alameda Trail to solicit their interest in participating in the project steering committee. While the Public Works Department was not a formal member of the steering committee, staff participated and provided input into its discussions and work products to ensure coordination with the City portion of the project. The City also provided technical support to the Steering Committee throughout the public outreach process.

- Brochure/survey: The Steering Committee developed and distributed a brochure about the proposed Cross Alameda Trail to raise awareness about the project. The brochure included a map of the trail corridor and a survey. It was distributed at meetings of numerous community groups, at local businesses, and was made available on RTC's web site.
- Community Meeting: On June 2, 2004 the Steering Committee sponsored a public meeting at Coffee for Thought, a local café on Webster Street, located a few blocks from the proposed Trail.

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- Tour of Trail Corridor: The meeting was followed up by a tour of the proposed trail alignment on June 5, 2004, which was National Trails Day. This gave residents the opportunity to discuss and visualize what the corridor could potentially look like.
- Web Site: RTC posted project information on its web site ([www.railtrails.org](http://www.railtrails.org)). In addition to the brochure and the survey, the site included computer-enhanced photos of the potential trail corridor to help people visualize the completed facility.
- Presentations to Community Organizations: RTC staff and steering committee members made presentations on the Trail to the Alameda Point Advisory Committee, Homebase, and the Kiwanis Club.

Comments collected in the surveys illustrated a strong preference for an off-road trail, as opposed to on-street bicycle facilities with sidewalks. When asked an open-ended question about what elements of the proposed trail would be most important to them, respondents emphasized two features:

- proximity to nature and the presence of trees or landscaping (86%), and
- off-road path, separated from vehicular traffic (75%).

On July 20, 2004, Melanie Mintz of RTC made a presentation the Alameda City Council to provide them with an overview of their work. Since that time, RTC has been awarded additional funding by the San Francisco Foundation to continue its public involvement work associated with the Cross Alameda Trail.

### **Feasibility Study Goals**

As described in the work scope above, the Public Works Department evaluated the technical feasibility of constructing a trail in this corridor. Using the information that was collected, the input collected through the efforts of RTC and the steering committee, and existing City policies, the following goals were established for the Trail:

- Develop an off-road trail where possible.
- The Trail corridor should include landscaping and trees.
- Utilize the former alignment of the Alameda Belt Line railroad.
- Trail should be a viable transportation corridor as well as a recreational facility.
- Provide protection to bicyclists and pedestrians at intersection crossings along the Trail.
- Include amenities, such as benches, parking areas, lighting.
- Explore ways to link nearby businesses and places of interest to the Trail.

### **Facility Types**

Based on input from the public and the City's adopted policy framework, there are multiple user groups and purposes envisioned for the Cross Alameda Trail, and the needs of some user groups may sometimes conflict. Therefore, as noted above, it was decided to develop separate facilities in some portions of the corridor so that the Trail could best serve these varied user groups.

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Several different types of facilities have been recommended as an outcome from this study. In discussing bikeway facilities, this report has used the definitions from Caltrans' *Highway Design Manual*:

- (1) Class I Bikeway (Bike Path). "Provides a completely separated right of way for the exclusive use of bicycles and pedestrians with crossflow minimized."
- (2) Class II Bikeway (Bike Lane). "Provides a striped lane for one-way bike travel on a street or highway."
- (3) Class III Bikeway (Bike Route). "Provides for shared use with pedestrian or motor vehicle traffic." Bike routes are generally indicated with signage and may also include pavement markings to help raise the awareness of motorists to the presence of bicyclists.

Bicycle "boulevards" may be another option on some low-volume, residential streets. There is no standard definition for a bicycle boulevard, but it is generally similar to a bike route in that motor vehicles share space with bicycles; however, a bicycle boulevard may also include enhanced signage, pavement markings, traffic calming devices, and other modifications to improve the street conditions for bicyclists beyond the typical Class III bikeway.

## **CHAPTER II**

### **HISTORY OF THE TRAIL CORRIDOR**

The City of Alameda has a rich industrial history. The northern shoreline of the City's main island has long been the home to major shipping and commercial marine activities, particularly the Northern Waterfront. However, development trends in the area are resulting in a transformation from an industrial corridor to one with more of a mix of land uses.

#### Industrial and Military History

The Northern Waterfront, located approximately in the center of the Cross Alameda Trail corridor, has been home to Alameda's principal industrial area for over 100 years. Around 1890, the Alaska Packers Association – then the world's largest salmon-packing company – started berthing its vessels in the area currently run by the Grand Marina. During the two world wars and the Vietnam war, large industrial, shipbuilding, and commercial uses such as Encinal Terminals, Del Monte Warehouse, Weyerhaeuser, Pennzoil, and Listo Pencil Company emerged as leading economic activities at the Northern Waterfront. However, during the 1970s, the Northern Waterfront area experienced a decline in activity when many of the commercial shipyards closed.

The other major employer in this corridor was the Alameda Naval Air Station (NAS), which was commissioned in 1940 and remained open until 1996. It was the City's largest employer, with over 18,000 military and civilian personnel. Since the closure of the base, the property – now known as Alameda Point – has been undergoing a redevelopment process. This project is anticipated to create a major new destination point at the City's west end.

#### Alameda Belt Line Railroad

The Alameda Belt Line railroad (ABL) played a key role in the historical development of the City of Alameda, and played an important role in the success of the companies mentioned above as well as the NAS. The City initially developed rail service through this corridor in part to ensure that shippers relying on carriers other than Southern Pacific would receive cost-effective rail service. In order to better ensure extension of the railroad, the City transferred its interests to ABL, a joint venture of the Western Pacific Railroad Company and Atchison, Topeka and Santa Fe Railway Company, pursuant to an authorization from the Interstate Commerce Commission (ICC) issued in 1926. The ICC, over the opposition of Southern Pacific, also authorized certain extensions of the rail line in its 1926 authorization. The City retained a right to repurchase the rail line, including the extensions. In accordance with the ICC order, rail service was extended to provide rail access for the Northern Waterfront area, including ultimately across the island to the NAS. ABL established the area south of Atlantic Avenue between Constitution Way and Sherman Street as a rail yard in 1926, a function it continued to serve until 1988. Pursuant to an authorization by the Surface Transportation Board (STB), Union Pacific obtained "trackage rights" on the ABL line in 1998. ABL has effectively stopped service,

as Pennzoil, Union Pacific's last remaining customer on the ABL, no longer uses rail to transport products.

The past 30 years have seen the beginning of a dramatic change for this corridor. With the closing of the NAS and the phasing out of much of the industry in the area, many of the properties have been or are proposed to be converted for mixed or residential use. Current and proposed projects are described in Chapter 3.

#### Current Status of the Corridor

In the transaction forming the ABL and providing for its extension as authorized by the ICC in 1926, the City retained a right to repurchase the rail line and all extensions for the original purchase (or in the case of extensions, investment) price. With the decline in freight rail use of the corridor, there has been growing interest in use of the property for other open space purposes, including a trail, or for joint rail and trail use. The City's 1991 General Plan includes an open space designation through the two primary ABL properties, the south side of Appezato Memorial Parkway from Main Street to Webster Street, and the former ABL rail yard between Constitution Way and Sherman Street. Currently, the City of Alameda and the owners of the ABL property are in litigation to determine whether the City may exercise the repurchase option to acquire the property.

Alameda residents have also expressed their support for the use of the ABL properties as open space. In 2002 two ballot measures (Measure D & E) involving the ABL property were approved. Measure E proposed changing the designation of the property in the Land Use element of the General Plan to Parks and Public Open Space, and amending the City's zoning ordinance and zoning map to classify the property as an Open Space District. Measure D proposed delaying the implementation of Measure E until voters approve a means of funding the acquisition of the property if required.

So far as the City is aware, ABL has never sought authorization from either the ICC or the STB (the ICC's successor agency) for abandonment of any portion of its right-of-way. Nonetheless, ABL has sold, and is offering for sale, parcels in the right-of-way. Sales of regulated rights of way that are inconsistent with continued freight rail use are generally unlawful absent prior ICC or STB authorization. It is not clear that ABL can take the position that the right-of-way is not currently regulated since it was specifically authorized by an ICC order in 1926. Accordingly, the authors of this Study shall assume that STB retains jurisdiction over the right-of-way. Nonetheless, because the rail corridor is no longer actively in rail use and is being offered for piecemeal sale, it is important that the City consider measures to acquire it pursuant to the repurchase option, or otherwise, if the City wishes to preserve it intact as a transportation corridor for rail freight, passenger rail, trail, or other purpose now or in the future.

## **CHAPTER III**

### **RELATIONSHIP TO ADOPTED PLANS**

The Cross Alameda Trail supports adopted Regional, County and City plans. In addition, there are several City planning and development efforts currently under way in the trail corridor. This makes the Trail very timely, as there is the opportunity to integrate the Trail with these projects while they are in the early stages of project development.

#### **Consistency with Regional and County Plans**

The Bay Area has a complex governmental hierarchy, and various agencies are responsible for different aspects of transportation and shoreline development. Coordination between the City and these agencies is essential not only for acquiring the approvals needed to advance the implementation of projects, but to access the full range of funding opportunities.

Below is a description of a number of key plans relating to the development of the Cross Alameda Trail.

#### **Bay Trail Plan**

The Bay Trail Plan proposes the development of a trail around the perimeter of San Francisco and San Pablo Bays. The adopted alignment for the Bay Trail is approximately 500 miles long and links the shoreline in the nine Bay Area counties. The Cross Alameda Trail is located along the adopted alignment, and the City will meet one of the primary goals of the Bay Trail Plan by pursuing a shoreline path in this corridor as a long-term objective. The Bay Trail Project, which includes staff dedicated to planning, promoting and advocating implementation of the Bay Trail, is administered by the Association of Bay Area Governments (ABAG), which provided the primary funding for this study.

#### **Regional Bicycle Plan**

The Regional Bicycle Plan, prepared by the Metropolitan Transportation Commission (MTC) and adopted in 2001, includes regionally significant bicycle facilities throughout the nine Bay Area counties. The Alameda Bay Trail is a project in the regional plan and includes all Bay Trail segments in Alameda.

#### **Alameda Countywide Bicycle Plan**

The Countywide Bicycle Plan, completed in 2001, is a project of the Alameda County Congestion Management Agency (CMA). Most of the Cross Alameda Trail is included in the countywide plan, from the intersection of Appezatto Memorial Parkway and Fifth Street to the east end of the Trail at Tilden Way.

#### **Consistency with City Policies and Plans**

The Cross Alameda Trail will support policies contained in numerous City plans, as it will enhance bicycle and pedestrian transportation opportunities as well as shoreline access. The Trail is being included in the plans discussed below that are still being developed.

**City of Alameda General Plan**

This project supports a number of policies in the City of Alameda's General Plan (GP), which was adopted in 1991, as well as some policies from subsequent GP amendments. Below is a list of the relevant policies, arranged by element:

*Land Use Element:*

- 2.10.d At locations where it is infeasible to provide public access to the shoreline, or allow public use or publicly owned shoreline, such as along the Tidal Canal, continued private use should be permitted only if mitigation is provided by improving public shoreline access elsewhere in the City.

*City Design Element:*

- 3.2.a Maximize views of water and access to shorelines.

*Transportation Element:*

- 4.4.c Identify potential conflicts between bicyclists and pedestrians and develop projects to minimize such conflicts.

*Parks and Recreation, Shoreline Access, Schools, and Cultural Facilities Element:*

- 6.1.d Promote the development and retention of private open space to compensate for the shortage of public open space.
- 6.1.h Develop a continuous greenway, east of Main Street and north of Atlantic Avenue, and along the general alignment of the railroad right-of-way between Webster Street and Sherman Street, provided that the greenway design on each parcel allows for connection throughout the length of the greenway.
- 6.2.a Maximize visual and physical access to the shoreline and to open water.
- 6.2.b Regulate development on City-owned shoreline property to maximize public use opportunities.
- 6.2.e Remove impediments to enjoyment of shoreline access where legal access exists.
- 6.2.f Cooperate with property owners adjoining shoreline access points to ensure that public use does not cause unnecessary loss of privacy or unwarranted nuisance.
- 6.2.h Require shoreline access where appropriate as a condition of development approval regardless of whether development occurs within the area of BCDC regulation.
- 6.2.i Seek grants for implementation of Bay Trail segments

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### *Alameda Point General Plan Amendment:*

- 9.2.g Integrate Alameda Point into the community by creating transit and physical connections to adjacent community centers such as Marina Village and Webster Street.
- 9.3.mm Support a system of trails that provide public access to and within the Wildlife Refuge.
- 9.4.f Minimize vehicle trips to and from Alameda Point that must use the Webster/Posey tubes by providing alternative travel modes and connections to the regional transportation system.
- 9.4.y Provide a system of connections for pedestrians and bicyclists including sidewalks, crosswalks, bike lanes and multi-use paths connecting residential, schools, parks, transit stops, employment, commercial districts, and other areas of community activity on Alameda Point.

### *Northern Waterfront General Plan Amendment (draft):*

The Northern Waterfront General Plan Amendment addresses development in the area that is primarily between Buena Vista Avenue and the estuary, and bounded by Sherman Street and Minturn Street. The General Plan Amendment is currently in draft form, and it is scheduled to go before the Planning Board the first quarter of 2005. As of this writing, there are numerous draft policies addressing the needs of bicyclists and pedestrians throughout the Northern Waterfront area, and including a bicycle/pedestrian pathway through the former Alameda Belt Line rail yard has been recommended.

### *Bicycle Master Plan Map:*

The Bicycle Master Plan map (see Attachment 1) was adopted as part of the General Plan, and includes a number of proposed bicycle facilities in the proposed Trail corridor. These facilities are all components of the various alignments that were evaluated as part of this feasibility study. The relevant segments from the map are:

- Multi-use path along Ralph Appezato Memorial Parkway from Main Street to Webster Street.
- Bike route along Atlantic Avenue from Webster Street to Constitution Way – Connects to existing bike lanes on Atlantic Avenue for an additional block to the west.
- Bike lanes along the proposed extension of Clement Avenue from Sherman Street to Grand Street – Extend the existing bike lanes on Atlantic Avenue to the east.
- Bike lanes along existing Clement Avenue from Grand Street to Oak Street.
- Bike lanes along Oak Street – Connects to Blanding Avenue.
- Bike lanes along Blanding Avenue. from Oak Street to Broadway – Connects to existing bike route on Blanding Avenue.
- Multi-use path along shoreline from Fortmann Marina to Miller-Sweeney/Fruitvale Bridge.



### **City of Alameda Bicycle Master Plan**

The City's Bicycle Master Plan, adopted by the City Council in 1999, provides additional recommendations beyond the GP map regarding the development of bicycle facilities in the proposed trail corridor. Two of the ten high priority projects identified in the Bicycle Master Plan pertain directly to the Cross Alameda Trail corridor:

- Project #6 – Northern Bikeway Corridor and Park/Fruitvale Bridges Bicycle Access was included to enhance bicycle facilities along the north side of the main island. The plan calls for the development of a trail “possibly utilizing portions of the old Alameda Belt Line right-of-way for a new pathway” and “new bike lanes where feasible.” It also states that “[a] long term goal is to provide shoreline access along the Northern Waterfront as the area develops.”
- Project #10 – Atlantic Avenue Bikeway refers to the Main-to-Webster section of the proposed Cross Alameda Trail. The plan recommends that the City “move ahead with the easement acquisition and development of a linear park and pathway in this corridor to help provide an important connection to the Alameda Point area. The plan also recommends enhanced bicycle protection at the intersection of Atlantic and Webster.”

### **Long Range Transit Plan**

The City's Long Range Transit Plan, which was accepted by the City Council in 2001, does not address the issue of bicycle facilities, but does include an analysis of issues relating to the proposed Cross Alameda Trail corridor. The transit plan considers the potential of using the former Alameda Belt Line right-of-way as a transit corridor, using light rail or other technology. To that end, the City has been reserving space within this corridor to accommodate future transit service (the specific transit mode has not been defined). Based on the physical requirements for light rail, the minimum required corridor width has been determined to be 17 feet. While the Cross Alameda Trail Feasibility Study does not include an assessment of the feasibility of transit service in this corridor, and the cost estimates do not include construction of a rail transit project, the required space for such a service has been included as a constraint in our analysis.

### **Transportation Master Plan**

The City is in the process of developing its Transportation Master Plan (TMP), which will ultimately include a comprehensive set of transportation policies as well as prioritized projects. The policy portion of the TMP will be presented as an update to the Transportation Element of the General Plan. Within the TMP will be a multimodal circulation plan as well as five mode-specific plans: motor vehicle, bicycle, pedestrian, transit, and transportation system management/transportation demand management (TSM/TDM).

### **Webster District Strategic Plan**

Through the Strategic Plan process, the City is working with the community to develop a vision for the Webster Street business district. Through this process, the City will work with the public to prioritize key issues and identify opportunities to enhance and revitalize the Webster Street area.

**Completing Sections of Trail in Conjunction with Development**

Some of the proposed Trail will be located on properties that are owned by private individuals. The City has several options for constructing a trail on private property, including purchasing the required land for the trail, obtaining an easement to permit access for trail users, or when a sufficient nexus exists, working with developers to ensure that the trail is built as part of their projects. However, since opportunities to negotiate with developers for public access under the last option are triggered only at the time when property development occurs, the City's control over trail development on private property is somewhat limited. For the foreseeable future, it is anticipated that no new development will occur on several properties along the water, including the U.S. Navy facility on Clement Avenue. As a result, the City's best opportunity to build the Trail in these areas is in a piecemeal fashion, taking advantage of opportunities as they arise.

In addition to the City's role in negotiating with developers to provide segments of the Trail, agencies outside the City are involved in the development process as well. In terms of developing the Cross Alameda Trail along the shoreline, the Bay Conservation and Development Commission (BCDC) will play a key role. BCDC was created by the state to ensure, among other things, maximum feasible public access to San Francisco Bay. To help achieve this mandate, BCDC has been given authority to regulate new development within approximately 100 feet of the bay, and has already required shoreline access on a number of projects in Alameda. A portion of the Trail study area falls within 100 feet of the shoreline, so BCDC approval will be required when that land undergoes redevelopment.

**Development Projects in the Study Area**

There are a number of ongoing development projects in the study area that are important to consider in the development of the Trail. The main projects, which are described in Chapter 5, are:

- Alameda Point Redevelopment
- Fleet Industrial Supply Center Redevelopment
- West Alameda Neighborhood Improvement Project
- Marina Cove Phase II
- Del Monte
- Encinal Terminals
- Grand Marina
- Bridgeside Shopping Center

**CHAPTER IV**

**CORRIDOR LAND USE AND TRAIL CONNECTIONS**

The Cross-Alameda Trail will establish a major bicycle and pedestrian route to key points along the north side of Alameda’s Main Island. This chapter describes how the proposed trail will provide connections to existing points of interest as well as proposed/planned projects in the vicinity of the trail corridor. For reference, the heading of each section indicates the sheet in Appendix A that displays the relevant portion of the Trail corridor.

**Summary of Existing/Planned/Proposed Development  
in the Cross Alameda Trail Corridor**

<b>Trail Section</b>	<b>Site</b>	<b>Status</b>	<b>Location</b>	<b>Description of Project</b>
1 – Main Street to Webster Street	Alameda Point	Planned	Former Alameda Naval Air Station, west of Main St.	Over 4 million square feet of mixed use, including nearly 2,000 residential units.
	FISC	Planned/under construction	North of Appezzato Memorial Parkway	Up to 1.3 million square feet of office and R&D facilities, over 500 residential units, and a school.
	Harbor Island Apartments	Planned renovations to existing facility	South of Appezzato Memorial Parkway, east of Poggi Street	Renovation of 615-unit apartment complex.
2 – Webster Street to Constitution Way	Webster Square	Existing	Southeast corner of Atlantic Avenue and Webster Street	21,500 square feet of retail space.
3 – Constitution Way to Sherman St.	Marina Village	Existing	East of Constitution Way, north of former Alameda Belt Line railroad yard	1.2 million square feet of offices, 180 residential units, 240,000 square foot shopping center, marina, and hotel
4 – Sherman Street to Grand Street	Del Monte	Proposed	Northeast corner of Buena Vista Ave./ Sherman St.	250,000 square feet of commercial, including 80,595 square feet of work/live studios (60 units).
	Encinal Terminals	Proposed	East of Wind River complex	222,000 square feet of residential (165 units) and 400 marina berths
	Marina Cove	Phase I complete, Phase II proposed	East of Del Monte	45-50 new single-family units
	Pennzoil	Existing	West of Grand St.	30,000 square foot petroleum storage and distribution facility
	Grand Marina	Proposed	West of Grand St., north of Pennzoil site	Up to 180 new residential units.
5 – Grand Street to Tilden Way	Alameda Marina	Existing	Clement Avenue, east of Grand Street	530 slips, as well as marine businesses such as engine repair, marine electrician, and sailmakers
	Park Street Landing	Existing	Blanding Avenue, west of Park Street	38,000 square feet of restaurants, retail, and business services
	Bridgeside Shopping Center	Planned expansion of existing facility	Northwest corner of Blanding Ave./Tilden Way	Expansion of existing shopping center to 108,500 square feet of commercial space

## **Section 1: Main Street to Webster Street (Sheets 1-3)**

This section of the former rail alignment links the Webster Street business district to the west end's major development projects. It is currently designated as open space in the General Plan (see Figure IV-1); it is largely zoned as multi-unit residential, with the eastern end of the property zoned commercial. This trail section will serve as both the Recreational and Commuter Routes.

### Existing development:

The area south of Appezzato Memorial Parkway includes both apartments and single-family homes. Residents of this neighborhood have the lowest household income level in Alameda. Since lower-income people have relatively low levels of automobile ownership and are more reliant on walking, bicycling, and public transportation, the addition of the Trail will be of significant benefit to this community.

The eastern terminus of this section is at Webster Street, one of Alameda's primary business districts. Streetscape improvements – including transit plazas, curb extensions, and landscaping – are under construction on a portion of Webster Street, and the Trail would be an important east/west connector between this revitalized business district and Alameda Point.

The Trail will also provide an access route for students at the College of Alameda (which has an enrollment of over 5,000 students) on Appezzato Memorial Parkway and to Woodstock Elementary School (enrollment of about 300 students), located on Third Street just south of Appezzato Memorial Parkway.

### Proposed/planned development:

Alameda's West End is undergoing a major transformation, as the former Alameda Naval Air Station (Alameda Point) and the former Fleet Industrial Supply Center (FISC) are being redeveloped for civilian use. The residential portion of the former FISC site – known as Bayport – is located on the north side of Appezzato Memorial Parkway and is currently under construction. The segment along the water is currently zoned for office/commercial, but due to a downturn in the commercial real estate market, the developer has not finalized its plans for this portion of the project.

The Harbor Island Apartments, a 615-unit complex just south of the proposed trail alignment, is about to undergo a major renovation.

### Recreational facilities:

Woodstock Park, which includes a recreation center, ball fields and a picnic area, is adjacent to Woodstock Elementary School, just off Third Street.

### Bicycle and pedestrian facilities:

The western terminus of the Trail is across the street from the existing Main Street Greenway, which has been designated as a segment of Bay Trail. The Main Street Greenway, located on the east side of Main Street, includes separate bicycle and pedestrian paths. It connects to Coast

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[INSERT GENERAL PLAN LAND USE MAP]

Guard housing off Singleton Ave. and the 200 units of low-income housing at Alameda Point, which is overseen by the Alameda Point Collaborative.

It should also be noted that the proposed development of Alameda Point includes an extension of the Trail west of Main Street to the Seaplane Lagoon.

Transit:

AC Transit's 63 line operates along Appezzato Memorial Parkway every 30 minutes from 5:00 AM-1:00 PM, with stops at Main Street, Third Street, Poggi Street, and West Campus Drive. The 63 connects to the Park and Webster Street districts, South Shore Shopping Center, Alameda Point, Marina Village, as well as the 12<sup>th</sup> Street and Fruitvale BART stations in Oakland. This segment of the Trail also offers connections to bus routes operating on Webster Street. The 51 line – which serves downtown Oakland and Berkeley – stops at the corner of Atlantic Avenue and Webster Street and offers service throughout the day, including 15 minute headways during peak commute times. The O and W transbay bus routes also stop at Atlantic and Webster and offer peak-hour service. The Main Street Greenway extends to Singleton Ave., one block from the Main Street ferry terminal, where the Alameda/Oakland Ferry Service connects to San Francisco. The ferry terminal has bike lockers and the boats accommodate bicycles.

**Section 2: Webster Street to Constitution Way (Sheet 4)**

This section links the proposed open space areas in Section 1 with Section 3, and will serve as both Recreational and Commuter Routes. The southern side of Atlantic Avenue is designated as open space in the City's General Plan, and the property is zoned for industrial use.

Existing Development:

On the south side of Atlantic Avenue is Webster Square, a small retail complex anchored by a Walgreen's drug store. This development is at the northern end of the Webster Street business district. On the north side of Atlantic Avenue is the City of Alameda's Housing Authority and Independence Plaza, a senior housing development with 186 units.

Proposed/planned development:

None.

Recreational facilities:

Neptune Park is located north of Atlantic Avenue between Webster Street and Constitution Way.

Bicycle and pedestrian facilities:

There is an existing sidewalk along both sides of Atlantic Ave. The south side is directly across Webster Street from Section 1. There are marked crosswalks at both ends of this segment.

Transit:

This section also connects to the 51, 63, O, and W routes described in Section 1 above.

### **Section 3: Constitution Way to Sherman Street (Sheets 4-6)**

In this section, the Trail would be routed through the former Alameda Belt Line rail yard, which may be established as public open space or redeveloped. The General Plan designates a narrow corridor along the northwest property of the rail yard as open space, and the property is zoned for industrial use.

Existing development:

North of this section is Marina Village, which includes residences, a business park, and a shopping center. South of the Alameda Belt Line property are single-family homes as well as Parrot Village, an affordable housing development owned by the City's Housing Authority.

Proposed/planned development:

Although no development is planned at this time, the Northern Waterfront General Plan Amendment recommends that the ABL property be established as open space if funding is available. Otherwise, it is recommended that no more than 100 residential units be constructed here.

Recreational facilities:

None.

Bicycle and pedestrian facilities:

Marina Village is well-served by existing bicycle and pedestrian facilities. There are sidewalks throughout the area, and bike lanes on Atlantic Avenue, Challenger Dr, and Marina Village Parkway. There is a path along the eastern side of Constitution and Mariner Square Loop, providing a connection to the Posey Tube, and eventually Oakland. While there is a pathway through the Posey Tube to enable bicyclists and pedestrians to travel between Alameda and Oakland, it is approximately three feet wide, significantly narrower than Caltrans standards for Class I facilities.

Transit:

There are no bus stops immediately adjacent to this trail segment, but line 19 has stops at Challenger Drive/Atlantic Avenue, with headways of 30 minutes throughout the day.

### **Section 4: Sherman Street to Grand Street (Sheets 6-8)**

Although a shoreline path would provide direct connections to proposed commercial sites in the Northern Waterfront area, alternative recreational alignments would serve residential neighborhoods. The former rail alignment in this segment would best serve commuters. The Fortmann and Grand Marinas are both designated as commercial recreation areas in the General Plan, the existing and proposed sections of the Marina Cove housing development are designated residential, and the rest of the area north of Buena Vista Avenue is designated for industrial use. Pacific Avenue and the south side of Buena Vista Avenue are designated residential, with the exception of Littlejohn Park, which is classified as open space.

Existing development:

Wind River Systems, a software company, is located just north of this section. Other than Clement Avenue, the streets through this section are largely residential, featuring many Victorian homes. There are also newer homes at the recently completed 83-unit Marina Cove Phase I housing development. The Del Monte building currently hosts light industrial warehouse uses and the Encinal Terminals site is occupied by a storage and cleaning facility for freight containers. At the east end of this section, Pennzoil operates a petroleum storage and distribution facility, and the Grand Marina is just north of this site.

Proposed/planned development:

This section is undergoing significant redevelopment. The second phase of the Marina Cove residential development is expected to consist of 45-50 single-family homes. Proposals have been submitted for mixed-use projects at the former Del Monte warehouse site, Encinal Terminals, and at Grand Marina. The City has begun discussions with Pennzoil – the current property owner on the east end of this section – regarding potential acquisition of the property. The City is interested in rezoning the site for residential use, which would complement the proposed uses on adjacent properties. The extension of Clement Avenue west of Grand Street and through to Atlantic Avenue is planned to occur in conjunction with these projects.

Recreational facilities:

Littlejohn Park on the south side of Buena Vista Avenue includes a play area, picnic facilities, ball fields, and basketball courts. The Fortmann and Grand Marinas are located along the shoreline in this section.

Bicycle and pedestrian facilities:

There is a path on the Wind River property that connects to Marina Village and the shoreline park there. Fortmann Marina includes a pedestrian walkway, which connects to the recently completed waterfront park on the north side of Clement Ave. The paths through the park connect to the shoreline path at Grand Marina; the park and marina paths are wide enough to accommodate both bicyclists and pedestrians. The completed portion of Clement Avenue was designed to accommodate a bike lane, as will the planned extensions of Clement Avenue through to Sherman and Grand Streets.

Transit:

AC Transit's 19 bus operates along Buena Vista Avenue with headways of 30 minutes throughout the day.

## **Section 5: Grand Street to Tilden Way (Sheets 8-12)**

This section will link together the Northern Waterfront area with the Park Street business district and eventually Oakland. An on-street route will be developed along the former rail alignment in the near term, with a long-term goal of completing a shoreline path for recreational users as well. For bicyclists and pedestrians traveling between Alameda and Oakland, the Trail corridor will provide connections to the Park Street Bridge and Miller-Sweeney/Fruitvale Bridge. Oakland is currently developing a shoreline trail on its side of the estuary. The shoreline area at the



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Alameda Marina is designated by the General Plan for commercial recreation, while the property north of Clement Avenue carries a mixed use designation. The General Plan also designates the U.S. Navy Training Center as a federal facility, while the shoreline to the east is designated as open space, with the exception of an industrial section east of the Park Street Bridge. In terms of zoning, the properties along the shoreline are classified as industrial, with the exceptions of the commercially-zoned Park Street Landing and Bridgeside Shopping Centers. The Buena Vista Avenue and Pacific Avenue corridors are zoned residential, except for the section located in the Park Street business district, which is zoned commercial.

### Existing Development:

The waterfront development in this segment includes marine and industrial uses, and there is also a U.S. Coast Guard facility. The Trail would cross the historic Park Street business district, one of the City's primary commercial areas. Park Street includes a variety of restaurants and other services, including two bicycle shops. Like Webster Street, a portion of Park Street is undergoing a streetscape project that will add curb extensions, transit plazas, landscaping, and other features to make this corridor more pedestrian- and transit-friendly.

### Proposed/planned development:

The major new project in the corridor is the redevelopment of the Bridgeside Shopping Center at the corner of Blanding Avenue and Tilden Way. In the Park Street area, the new Main Alameda Public Library will be constructed on Lincoln Avenue near Oak Street just south of the rail alignment, and major renovations have been proposed for the historic Alameda Theater on Central Avenue.

### Recreational facilities:

McKinley Park is located on Buena Vista Avenue and would provide a potential destination for Trail users. Adjacent to the park is Thompson Field, which is used by Alameda High School for its football games. The Trail could also provide a route to school for students at Island High School on Eagle Avenue east of Park Street.

### Bicycle and pedestrian facilities:

The Trail will provide important connections to other parts of the City's bicycle facilities network in this area. There are currently bike lanes on Broadway, which connects the main island's southern (bay) shoreline to the northern (estuary) shoreline. There is also a bike route on Blanding Avenue and bike lanes on Fernside Boulevard, which is on the adopted Bay Trail alignment.

### Transit:

There are numerous bus routes in proximity to this part of the Trail. AC Transit's line 50 runs on Park Street with headways of 15 minutes during the day and connects to Fruitvale BART. Line 51 begins at the Bridgeside Shopping Center and serves the Park and Webster Street areas, as well as downtown Oakland and Berkeley with service every 15 minutes. The 19 operates along Buena Vista Avenue, parallel to the proposed Trail route, with 30 minute headways with stops including the Bridgeside Shopping Center and the Fruitvale BART station at its eastern end. The OX crosses the Trail corridor at Park Street and provides service to San Francisco at 15 minutes intervals during peak commute hours.

## CHAPTER V

### POTENTIAL ALIGNMENT OPTIONS AND CONSTRAINTS

The Cross Alameda Trail corridor currently includes a wide variety of land uses and conditions. This section provides a visual look and general description of the current site conditions, key issues that will need to be addressed in each section, and potential commuter and recreational alignment options for the Trail corridor.

As a segment of Bay Trail, the preferred alignment for the Cross Alameda Trail is a Class I bikeway/multi-use path. In some sections of the proposed Trail corridor, where the off-street path offers a direct, uninterrupted route, the path should be able to serve the needs of both recreational users and commuters. However in many locations, such a path would result in a somewhat circuitous route, especially along the shoreline, and this would not be useful for commuter-oriented users in this corridor. For trail sections where this is the case, this project has evaluated the feasibility of on-street bicycle facilities to complement the off-street path. This “Commuter Trail Alignment” generally features Class II bike lanes, which would be designed to enable riders to reach their destinations as quickly as possible. The inclusion of both off-street and on-street routes in this corridor supports the City’s Bicycle Master Plan.

An important consideration in terms of project implementation is timing. The development of a shoreline path east of Grand Street may be feasible in the long-term, and such a facility is the preferred recreational route, but the property is privately-owned and the current uses are not compatible with a trail at many locations. So while a path can be constructed parcel-by-parcel, as redevelopment occurs, the City is also pursuing interim “Recreational Trail Alignment” options. These interim options will utilize sidewalks and Class III bike routes.

The accompanying maps in Appendix A illustrate the location of each alignment option, parcel boundaries, existing infrastructure, major destination points in Alameda, connections to existing bicycle facilities, and existing shoreline access areas. The sheet numbers for each section are indicated in the heading for each section of the Trail. A summary of the features of each section is included on page V-22.

Appendix D includes typical cross-sections for each portion of the proposed Trail. The specific section(s) associated with each part of the Trail are referenced in the headings throughout this chapter.

#### Cross Alameda Trail Alignment Overview

Trail Section	Description of Section and Alignment Options
<b>Section 1:</b> Main St. to Webster St.	<u>Commuter/Recreational Trail Alignment:</u> Class I path would be built along the south side of Appezzato Memorial Parkway on vacant property formerly used by the Alameda Belt Line Railroad.

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<b>Section 2:</b> Webster St. to Constitution Way	<u>Commuter/Recreational Trail Alignment:</u> Class I path would utilize and expand the existing sidewalk on south side of Atlantic Avenue.
<b>Section 3:</b> Constitution Way to Sherman St.	<u>Commuter Trail Alignment:</u> Maintain existing Class II facility (bike lane) along Atlantic Avenue. <u>Recreational Trail Alignment 1:</u> Route would be constructed as a Class I path through the former Alameda Belt Line railroad yard.
<b>Section 4:</b> Sherman St. to Grand St.	<u>Commuter Trail Alignment:</u> Route consists of bike lanes along Clement Avenue <u>Recreational Trail Alignment 1:</u> Route consists of bike route along Sherman Street and Buena Vista Avenue <u>Recreational Trail Alignment 2:</u> Recreational route consisting of bike route or bike boulevard along Sherman Street and Pacific Avenue <u>Recreational Trail Alignment 3:</u> Recreational route, consisting of Class I path along shoreline
<b>Section 5:</b> Grand St. to Tilden Way	<u>Commuter Trail Alignment:</u> Route consists of bike lanes along Clement Avenue <u>Recreational Trail Alignment 1:</u> Route consists of bike route along Buena Vista Avenue <u>Recreational Trail Alignment 2:</u> Route consists of bike route or bike boulevard along Pacific Avenue, Walnut Street, and Buena Vista Avenue <u>Recreational Trail Alignment 3:</u> Route consists of Class I path along shoreline

As discussed in Chapter III, the Cross Alameda Trail corridor coincides with the location for a proposed transit corridor extending from Alameda Point to the Fruitvale BART station in Oakland. While along some sections of the Trail, both facilities can be designed for safe operations in proximity to one another, there are some locations where the amount of available space is quite constrained. As described below, these constraints mean that at the time a transit service is implemented, additional property will have to be acquired or the bicycle facilities will have to be relocated to a parallel route.

For the purposes of this study, the main issue in determining the feasibility of locating a transit corridor is to determine the amount of space required, how that will be accommodated in the proposed cross-sections, and the impact this will have on the Trail. Earlier analysis determined that 17 feet will be sufficient to accommodate a single-track light rail or bus rapid transit system, and this is the amount of space the City has required to be reserved by other development projects in this corridor. Some locations along the corridor will require additional width for a double-tracked transit corridor or to accommodate passing sidings or station platforms. The sections of the Trail that will be constructed in open space areas – from Main Street to Webster Street, and from Constitution Way to Sherman Street – have the fewest spatial constraints and will most easily allow for these facilities.

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The 17-foot right-of-way will enable the City to accommodate a range of transit technologies in this corridor. As the City moves toward implementation of transit service in this corridor, more detailed evaluation of available technologies will be conducted. If it is determined that transit service can be employed that will require less space, this may enable the inclusion of bike lanes, parking, or wider travel lanes in cross-sections throughout the corridor.

**Transit Corridor in Proximity to Cross Alameda Trail – Alignment Summary**

<b>Trail Section</b>	<b>Location of Potential Rail Service</b>	<b>Alignment Characteristics</b>
Main Street to Webster Street	South side of Appezzato Memorial Parkway, within linear park	exclusive right-of-way
Webster Street to Constitution Way	Within roadway of Atlantic Avenue	shared right-of-way with vehicle traffic
Constitution Way to Sherman Street	Within former Alameda Belt Line rail yard	exclusive right-of-way
Sherman Street to Grand Street	Center of Clement Avenue, share with bidirectional motor vehicle turn lane	shared right-of-way with vehicle traffic
Grand Street to Tilden Way	Shared with bi-directional turn lane along Clement Avenue	shared right-of-way with vehicle traffic

**Section 1: Main Street to Webster Street (Sheets 1-3; Sections A-A, B-B)**

The property between Main Street and Webster Street to the south of Appezzato Memorial Parkway is the former route of the Alameda Belt Line railroad. This section is approximately 4500 feet long and 70 feet wide. There are four signalized intersections – at Main Street, Poggi Street, Third Street, and Webster Street – that the Trail would cross in this section. This corridor serves an important function, as it will be the primary gateway into Alameda Point.

The two parcels in this corridor are currently owned by the Burlington Northern Santa Fe Railway and Union Pacific. The properties are currently vacant, with the exception of a wooden structure just east of Third Street (see Figure V-2). The rails and ballast have generally been removed, although rails remain in the two road crossings in this section. The smaller of the two parcels is currently being leased by the Alameda Unified School District for use as a parking lot. Adjacent properties in this corridor are developed with residential uses, with the exception of retail shops at the corner of Appezzato Memorial Parkway and Main Street and a car lot on Webster Street.

Although the rail has been removed, this property is suitable for continued transportation uses, including trail use. While the cost of residential property in Alameda has increased dramatically in recent years, the building potential of this property is constrained by several factors, including the existence of a 20 to 30-foot wide sewer easement along the southern boundary of the

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property, and restrictions in the City's zoning ordinance. The unusual dimensions of the property make it well-suited for the development of a linear park, with a transit corridor along the roadway edge.

The proposed path in this section would serve as the combined Commuter and Recreational Trail Alignment. The on-street environment is not suitable for bike lanes, as the roadway between the median and the curb is 32 feet wide, which is not sufficient to accommodate two through travel lanes, bike lanes, and dedicated turn lanes that are required on Appezzato Memorial Parkway at each of the signalized intersections. The City's most recent speed surveys indicate that the 85<sup>th</sup> percentile speed on Appezzato Memorial Parkway was 39 mph for eastbound traffic, and 40 mph for westbound traffic, and the loss of the bike lanes at the intersections would create undesirable conditions for bicyclists. The straight route of the proposed Trail and limited number of street crossings in this section make this a viable option for commuters as well as recreational users.

### *Issues Regarding Accommodation of Combined Trail/Transit Corridor*

This section is largely vacant, providing an opportunity to construct both a double-tracked transit facility as well as a multi-use path. However, there are two significant constraints along this section in terms of accommodating both the Trail and a transit corridor.

At the southwest corner of the Appezzato Memorial Parkway/Main Street intersection is a block of several retail stores. While the Trail alone could be designed to run south of the curb without impacting on this parcel, a transit corridor could not be completed through this location without the use of much of the existing parking lot.

The second concern is that just east of Third Street, the Alameda Unified School District leases a parcel from the Alameda Belt Line for use as a parking lot. The parking area is approximately 50 feet wide, leaving only about 20 feet of width, use of this property would be needed to accommodate both the Trail and a transit corridor. When the transit corridor reaches the design phase, the City will work with the school district to determine its parking needs and explore alternate configurations of the site or other parking opportunities; this will ensure that the necessary parking will be provided in addition to space for the transit corridor.

On the west side of Webster Street, near the intersection with Appezzato Memorial Parkway (and within the Webster Street business district), the transit corridor would become a single-track facility and space will be reserved for a station platform. The station would be designed to ensure safe and convenient access to the station from bus stops at the Atlantic Avenue/Webster Street intersection.

An alternative design for the transit corridor in this section is to follow a preliminary light rail feasibility study completed as part of the City's transit plan in 2001, for which the transit corridor was assumed to be located in the center of the existing roadway. To maintain the required traffic capacity, the existing curb would have to be relocated approximately 20 feet to the south of its current location along most of the segment. Nearing the intersection of Atlantic Avenue and Webster Street, the curb would be relocated up to 40 feet to accommodate an additional turn lane that will be required at this intersection. At its narrowest point, the remaining property would

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still be over 20 feet wide, which would easily accommodate a multi-use path. For most of the segment, approximately 45 feet would be available.



**FIGURE V-1.** Former Alameda Belt Line property on south side of Appezzato Memorial Parkway, looking east from Main Street (Section 1).



**FIGURE V-2.** Structure located in the right-of-way, parcel behind is being leased for use as a parking lot (Section 1).



**FIGURE V-3.** Looking east from Poggi Street. Harbor Island Apartments are located at the right side of the photo (Section 1).



**FIGURE V-4.** Looking west from Webster Street (Section 1).

## **Section 2: Webster Street to Constitution Way (Sheet 4; Section C-C)**

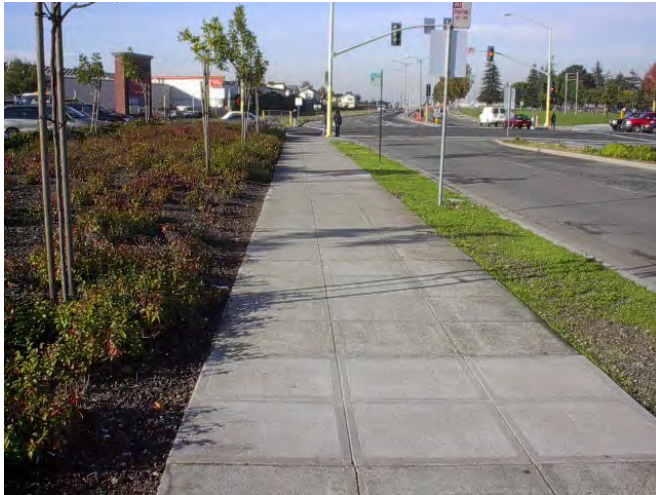
This section is approximately 500 feet long and continues along the south side of Atlantic Avenue. Major intersection crossings include Atlantic Avenue/Webster Street and Atlantic Avenue/Constitution Way, which are the main routes to and from the Webster and Posey Tubes and are at either end of this segment.

The two parcels in this section were developed as commercial properties, including a Walgreen's drug store and Starbucks coffee shop. This section of the Trail would be constructed entirely within the public right-of-way and would require no land acquisition. Construction of a trail through this area was accounted for to some degree at the time this project was approved, as the developer was required to reserve space for a future greenway. A portion of this area can be seen as a landscaped area on the left side of Figure V-5. This is located at the west end of the block, where the City has a 21-foot easement for bicycle and pedestrian facilities.

However, as shown in Figure V-6, the center of the block is more constrained, due to the small space between the building and the sidewalk. As a condition of the project, the developer was required to reserve a three to seven foot area for the greenway. East of the building, the City has a 12-foot wide greenway easement, which is sufficient to accommodate the Trail.

The Trail can be accommodated by widening the existing sidewalk along the south side of Atlantic Avenue. This would serve as the combined Commuter and Recreational Trail Alignment, as it provides the only direct route between the open space areas west of Webster Street (Section 1) and east of Constitution Way (Section 3). Currently the sidewalk on this block is eight feet wide. While this meets the minimum Caltrans requirements for a Class I bikeway, a wider trail is recommended due to the large amount of pedestrian traffic in this area and the presence of a bus stop. Since the City has a greenway easement for at least three feet along this entire block, the most viable option for the Trail at this location is to widen the existing 8-foot sidewalk. It is recommended that the sidewalk be widened by an additional two feet on the south

side to create a consistent 10-foot side path in this section. In addition, it is recommended that the existing 5-foot planting strip be paved – while there are some obstructions in the planter strip, this would provide some additional width for Trail users along most of this section.



**FIGURE V-5.** Looking west from driveway near Walgreen’s/ Starbucks (Section 2).

*Issues Regarding Accommodation of Combined Trail/Transit Corridor*

The transit corridor would be located in the center of the street. Currently this space is occupied by a median (six feet wide) and turn lanes (11 feet wide). The total width of this area is equal to 17 feet, the same amount of space being reserved for the transit corridor across the rest of island. In addition to serving as a transit corridor, this space will be used as a turn lane for motor vehicles.

Since the available width is available within the existing cross-section, no additional construction would be required to accommodate the transit corridor. Interactions between transit vehicles and other traffic at the intersections of Webster Street/Atlantic Avenue and Atlantic Avenue/Constitution Way will be addressed in the design phase of the project.



**FIGURE V-6.** Looking west from east end of Kinko’s/Togo’s /Starbucks (Section 2).





**FIGURE V-7.** Looking east from southwest corner of Atlantic/Constitution intersection (Section 2).

### **Section 3: Constitution Way to Sherman Street (Sheets 4-6; Sections D-D, E-E)**

In this section, the rail alignment turns south from Atlantic Avenue and east through the former Alameda Belt Line rail yard. There are two adjacent parcels in this area, totaling approximately 22 acres. One parcel includes a set of tracks owned by Union Pacific Rail Road, and the other is the former Alameda Belt Line rail yard. Some of the tracks have been removed from this parcel, but the status of the tracks will be fully evaluated as part of the environmental analysis. In 2002, Alameda residents voted to maintain this area as open space if funding was made available to purchase the property. Otherwise the current zoning will allow it to accommodate approximately 100 residential units. Whether this property is used as open space or developed, there will still be sufficient space available to accommodate the Trail and the transit corridor.

#### *Commuter Trail Alignment:*

The Commuter Trail Alignment would utilize the existing bike lanes on Atlantic Avenue. The lanes also connect to existing bike lanes on Challenger Drive, providing bicycle access to Marina Village. This route is being recommended primarily for bicycle commuters since Atlantic Avenue is a designated truck route and may not be preferred by recreational bicyclists. Westbound recreational bicyclists may be further discouraged from using this route since they would be required to navigate the transition from the bike lanes on Atlantic Avenue onto the Trail west of Constitution Way (Section 2), first by crossing to the south side of Atlantic Avenue and then to the west side of Constitution Way. The only improvements required for this (commuter) option are enhanced signage to facilitate the transition to the beginning and end of this trail segment and to indicate that the facility is part of the Cross Alameda Trail. Another recommended improvement is an enhanced intersection crossing at the proposed signalized intersection of Atlantic Avenue/Sherman Street/Clement Avenue at the east side of this section to facilitate access for bicyclists and pedestrians to the shoreline area near Wind River and the Northern Waterfront area. Crossing enhancements would have to be determined in the design process, but some examples are additional signage, a pedestrian paddle, or a flashing beacon.

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### *Recreational Trail Alignment:*

The Recreational Trail Alignment would consist of a 12-foot wide multi-use path through the former Alameda Belt Line rail yard, which is currently unused. The property is of sufficient width to easily accommodate the Trail as well as any proposed transit service. The Trail through the rail yard would be approximately 4000 feet long.

As noted in Chapter 2, there are legal issues that need to be resolved before the City can acquire the property. However, even if the City acquires the property there may be additional issues that need to be addressed. One constraint with the selection of this option is the possibility of hazardous waste contamination, as the rail yard property was identified in the City's analysis of the Northern Waterfront as a potential hazardous materials release site. Since this property was formerly used for train maintenance, oil and solvents may be deposited in the soil. An environmental analysis will need to be conducted following the completion of the feasibility study to fully assess if there is contamination and to estimate the potential remediation costs.

### *Issues Regarding Accommodation of Combined Trail/Transit Corridor*

This section is sufficiently wide to accommodate the Trail as well as a double-tracked transit corridor. Additional space will be reserved for a parking area and station platforms at the eastern end of this property, on the west side of Sherman Street. The station platforms would be designed to facilitate safe and convenient access from nearby bus stops.



**FIGURE V-8.** Looking south from Atlantic/Constitution intersection into former Alameda Belt Line Rail Yard (Section 3).



**FIGURE V-9.** Looking west from east end of former Alameda Belt Line Rail Yard (Section 3).

**Section 4: Sherman Street to Grand Street (Sheets 6-8; Sections F-F, G-G, H-H, I-I, J-J, J1-J1, J2-J2, K-K, L-L)**

The section of the Trail from Sherman Street to Grand Street would be approximately 3000 feet in length. Located in this area is the Wind River property, Marina Cove homes (first phase completed, second phase is planned) as well as properties currently being considered for redevelopment – the former Del Monte warehouse, Encinal Terminals, Pennzoil, and Grand Marina – as part of the Northern Waterfront General Plan Amendment. The first three sites proposed for redevelopment are currently being used for industrial purposes.

In addition to the off-street shoreline path option, three on-street Trail alignments were considered for bicyclists in this section. Since the completion of the shoreline path is anticipated to take a considerable amount of time, alignment options utilizing Buena Vista Avenue and Pacific Avenue were evaluated to serve as the interim Recreational Trail Alignment. Clement Avenue, which is to be constructed along the alignment of the former rail line, will offer the most direct on-road route. This was identified as the Commuter Trail Alignment because of the anticipated traffic volumes and planned street designation as a truck route.

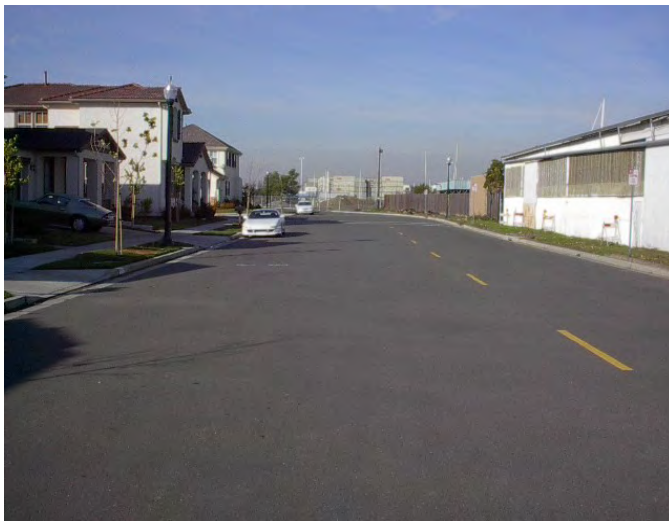
*Commuter Trail Alignment:*

The proposed extension of Clement Avenue from Atlantic Avenue to Grand Street offers an opportunity to extend the Atlantic Avenue bike lanes to the east and complete a cross island route. The construction of bike lanes on the Clement Avenue extension is included in the City’s General Plan, and preliminary discussions of proposed development in this corridor have stated the need to include the bike lanes. The portion of the Clement Avenue extension that was constructed as part of the first phase of the Marina Cove development – from Hibbard Street to Ohlone Street – was designed with sufficient width to accommodate bike lanes. Once the extension links Grand Street with Atlantic Avenue, the truck route designation on Clement Avenue (currently from Grand Street to Park Street) would be extended through this area (and the designation would be removed from Buena Vista Avenue). While there is sufficient space to accommodate bicyclists here along the current cross section, the volume of trucks traveling along this existing route could detract from the bicycling environment, especially for users not

comfortable riding with traffic. But because it is the most direct route and is designed to accommodate through traffic, it has been identified as the preferred Commuter Trail Alignment. No land would need to be acquired for this option, as improvements would be constructed within the public right-of-way.



**FIGURE V-10.** Looking east from Wind River along future Clement Avenue extension. Former Del Monte factory is on the right (south of the street). This road currently provides access to the Chipman container storage facility (Section 4).



**FIGURE V-11.** Looking west on Clement Avenue from the Clement Avenue/Hibbard Street intersection. First phase of Marina Cove homes is on the left (south of the street). The street has been constructed with sufficient width to accommodate bike lanes (Section 4).

*Recreational Trail Alignments:*

*Recreational Trail Alignment 1* would direct bicyclists from the former rail yard (Section 3) south on Sherman Street, and east on Buena Vista Avenue. Sherman Street is a two-lane street in this section, with bus service and is currently designated as a truck route. Buena Vista Avenue is a two-lane street that is currently designated as a truck route from Sherman Street to Grand Street; traffic volumes along this segment are 12,300 vehicles per day. However, once the Clement Avenue extension from Grand Street to Atlantic Avenue is completed, it is expected that much of the cross-island traffic on Buena Vista Avenue will be diverted to Clement Avenue. In addition, the truck route designations on Buena Vista Avenue (from Sherman Street to Grand Street) and on Sherman Street (from Buena Vista Avenue to Atlantic Avenue) would be shifted to the new section of Clement Avenue to form a continuous truck route. With the traffic volumes reduced, and connection to Littlejohn Park, Buena Vista Avenue would provide an attractive

route for bicyclists and pedestrians, and is included in the adopted Bay Trail alignment. Pedestrians are served by 5- to 6-foot wide sidewalks on Buena Vista Avenue, and there is an intermittent planter strip up to 5 feet in width, which acts as a buffer from traffic. Buena Vista Avenue is one of the wider residential streets with a 42-foot width; however, to accommodate bike lanes the dedicated turning lanes in this segment would need to be removed. While this route is located two blocks south of Clement Avenue, it is the nearest street that offers a continuous cross-island route. No property would have to be acquired, as the bike routes and sidewalks would be located entirely within the public right-of-way.

*Recreational Trail Alignment 2* would utilize Sherman Street and Pacific Avenue. Pacific Avenue is a two-lane residential street and also borders on Littlejohn Park. It carries an estimated traffic volume of less than 1,000 vehicles per day. Pacific Avenue is only 38 feet wide, with parking on both sides of the street, so it cannot accommodate bike lanes. One option suggested in the City's bicycle master plan is the development of a "bicycle boulevard" along Pacific Avenue, which could incorporate traffic calming techniques in addition to signage and pavement stencils to enhance bicyclist safety. In terms of pedestrian facilities, there are generally 5-foot sidewalks and a 5-foot planter strip along this street. As with Recreational Trail Alignment 1, these facilities would be located within the public right-of-way, so no property would have to be acquired for this option.

The major difficulty with Recreational Trail Alignment 2 is that, compared to the Buena Vista Avenue option, it requires Trail users to deviate an additional block off their route to an unsignalized intersection. There are additional problems associated with this option in the next segment, from Grand Street to Tilden Way (see discussion for Trail Section 5). Since Buena Vista Avenue and Pacific Avenue both have sidewalks with similar characteristics, Pacific Avenue offers no distinct advantage for pedestrians other than aesthetics, and the additional travel distance would probably reduce the usage levels of this portion of the Trail. The additional distance to reach this route may also discourage bicyclists from selecting this route.

*Recreational Trail Alignment 3* would be located along the shoreline, connecting the Wind River property to Encinal Terminals, Fortmann Marina, marina waterfront park, and Grand Marina. Since the shoreline properties in this section are privately owned, the development of the trail is contingent on the completion of the associated development projects in the area, which will include the extension of Clement Avenue from Grand Street to Atlantic Avenue, as described above. Portions of the shoreline path are already complete, as indicated in Figures V-14 and V-15.



**FIGURE V-12.** Pier at Wind River, designated for pedestrian access (Section 4).

Currently a path through the Wind River site connects to a pier (see Figure V-12), which leads to the area of the proposed Clement Avenue extension. To provide continuous shoreline access, Wind River's BCDC permit requires Wind River to construct a path at least 10 feet wide from this pier to the adjoining Encinal Terminals property when the latter property is developed. Since portions of the Encinal Terminals site is located within 100 feet of the shoreline, BCDC approval is required, and it is assumed that BCDC will require developers of the Encinal Terminals site to include a shoreline path at least 10 feet wide, similar to requirements at Wind River and Grand Marina. This would extend a shoreline path around the western and northern portions of the site.

Fortmann Marina includes shoreline access along its entire length, and ultimately connects to the Marina Waterfront Park. The access area is approximately five feet wide, which is sufficient for pedestrians. However, it includes steps at several locations, preventing wheelchair access, and the narrow width and low railing make it unsuitable for bicyclists. Further development at Fortmann Marina would offer an opportunity to discuss providing a path that meets Class I standards as well as modifying the existing facility to comply with ADA requirements.



**FIGURE V-13.** Public access area at Fortmann Marina (Section 4).

## Cross Alameda Trail Feasibility Study

East of the Fortmann Marina, the marina waterfront park was constructed as part of the Marina Cove Phase I project, per BCDC and City requirements. The park includes a network of multi-use paths ranging from 5-12 feet in width. The park, in turn, connects to the shoreline access area at the Grand Marina, which has a 10-foot wide Class I path. The Grand Marina path continues east to Grand Street. The waterfront park includes a playground and seating areas. Public rest rooms are available at both Fortmann and Grand Marinas.



**FIGURE V-14.** Path at Marina Waterfront Park, looking toward Grand Marina (Section 4).



**FIGURE V-15.** Public access area at Grand Marina (Section 4).

Although the property in this section is privately owned, the City would not have to purchase it for the Trail, assuming BCDC continues to implement its public access requirements the way it has in the past.

### *Issues Regarding Accommodation of Combined Trail/Transit Corridor*

There is a very limited right-of-way available in this section, and accommodating both a transit corridor and bicycle facilities will be difficult. The City would have to work with developers of properties in this area to ensure that sufficient space is available. As part of this study, sample cross-sections have been developed and the portions of property that need to be acquired have been identified to enable this portion of the corridor to accommodate all transportation users.

Beginning at the proposed Atlantic Avenue/Clement Avenue/Sherman Street intersection and proceeding eastward (see Sections F-F, G-G, and H-H), the transit service will share a bi-directional turn lane with eastbound and westbound motor vehicle traffic. Clement Avenue is slated to function as a truck route, so the City's goal is for the through travel lanes to be at least 12 feet wide. As indicated in the sections referenced above, the transit corridor and the bike lanes would both be able to be accommodated between Sherman Street and Entrance Road by removing the planter strip on the north side of the street.

About 160 feet east of Entrance Road is an existing pump station. Between Entrance Road and the pump station (see Section I-I), 10 feet of additional right-of-way is required on the north side of Clement Avenue (from Fortmann Marina). On the south side of the street, the site of the proposed Marina Cove Phase II housing project, accommodating the transit corridor would require the City to condition the property owner to provide an additional 17 feet of right-of-way for any new development to move forward.

From the pump station to the west end of the Marina Cove Phase I project (just west of Ohlone Street, see Section J-J), the marina waterfront park borders on the north side of Clement Avenue. Due to the narrow width of the property, a portion of the park could not be used for the street without damaging the park's integrity. Therefore the potential available right-of-way narrows considerably. As in the previous section, the property owner would have to provide an additional 17 feet of right-of-way to accommodate both the transit corridor and the proposed bike lanes. As indicated in Section J-J, the proposed transit service would operate in a space that would also serve as a bi-directional turn lane for motor vehicles.

From the west end of the Marina Cove Phase I development to the east end of the waterfront park, about 140 feet east of Ohlone Street (see Sections J1-J1 and J2-J2), the Marina Cove Phase I development exists along the south side of Clement Avenue. As part of the Marina Cove project, a City-owned shoreline park was constructed on the north side of Clement Avenue. The park is located within 100 feet of the shoreline, so the park design was approved by BCDC and includes a public access dedication. To add the transit corridor and maintain the bike lanes along Clement Avenue, the City would need 10 feet of right-of-way from the existing park. The City requested that BCDC approve the use of a portion of the park for a future transit corridor. BCDC opposed the inclusion of this provision in the permit for the project, although they didn't completely rule out the possibility that such a use of the property would be approved if the City had exhausted other options. As stated in the permit: "[t]he Commission ... hereby notifies the City of Alameda that the Commission may not authorize an alternative transportation corridor that would be located within the ... waterfront park, that the City of Alameda should continue to look for alternative transportation corridors and facilities that would not encroach on the waterfront park, and that the development of the Clement [Avenue] alternative transportation corridor would likely only be approved if it was designed to minimize impacts to the remaining portions of the shoreline access and provided safe, convenient, and multiple connections to the shoreline access area from inland areas. The City of Alameda agreed to explore alternative locations and designs for the alternative transportation corridor that would not overlap with the ... waterfront park."



The available right-of-way cannot accommodate the proposed bike lanes and the transit corridor, and the existing houses on the south side of Clement Avenue preclude widening of the roadway in that direction. Therefore, the only available option is to use a portion of the park (ranging from 9-20 feet in width) on the north side of the street. This requires shifting the entire street to the north. Also, while the transit corridor and bike lanes will both fit in the available space, the on-street parking along the south side of Clement Avenue would have to be removed. If BCDC refuses to allow the City to use the park property in this way, the bike lanes would have to be replaced by a bike route (shared roadway) along this segment of Clement Avenue (see Section J2-J2). Under this scenario, it is also possible to relocate the Commuter Trail Alignment to Buena Vista Avenue.



**FIGURE V-16.** The marina waterfront park north of the proposed Clement Avenue extension. To accommodate motor vehicle travel lanes, bike lanes, and the proposed transit corridor, a portion of the park would have to be used. This would be almost entirely taken from the grass strip visible in this photo.

From the eastern end of the park to Hibbard Street (see Section K-K), the limited right-of-way is also a significant constraint. On the south side of Clement Avenue is the recently completed Marina Cove Phase I housing development, so to accommodate the proposed transit corridor, Clement Avenue would have to be widened by relocating the curb 17 feet to the north, replacing the existing sidewalk and landscaping. As in the adjacent section, the transit corridor would utilize the bi-directional turn lane. From Hibbard Street through the current Pennzoil site to Grand Street (Section L-L), the configuration would be similar to the section west of Hibbard Street.

### **Section 5: Grand Street to Tilden Way (Sheets 8-12; Sections M-M, N-N, O-O, P-P, Q-Q)**

The section of the Trail from Grand Street to Tilden Way is approximately 6200' feet in length. The character of this corridor alignment varies considerably by street. Clement Avenue is primarily industrial, with a limited number of residential properties. Buena Vista Avenue is primarily residential, with other land uses including McKinley Park and a few commercial properties near Park Street. Pacific Avenue is entirely residential along this segment. The shoreline area, between Clement Avenue and the estuary, includes industrial uses, a Navy facility, and two shopping centers. Any future development of these properties within 100 feet of the shoreline will have to conform with BCDC public access requirements.

*Commuter Trail Alignment:*

The Commuter Trail Alignment would continue east from Section 4 with bike lanes on Clement Avenue from Grand Street to Tilden Way (see Sections M-M and Q-Q)). This could be accomplished by constructing the currently unfunded Clement Avenue extension from Broadway to Tilden Way. Although this alignment has sidewalks and sufficient street width to accommodate bike lanes, the sidewalks are obstructed in many locations by utility poles, and there are no planter strips to help buffer pedestrians from parked vehicles. These factors, combined with the largely industrial character of the neighborhood, may make it a less attractive place to walk for many Trail users. Removing the utility poles by placing all overhead utilities underground – as is being done in other locations in the City – would enhance the pedestrian environment, but would be prohibitively expensive due to the presence of high voltage lines.



**FIGURE V-17.** Looking east on Clement Avenue from east of Grand Street (Section 5).

Clement Avenue currently terminates at Broadway at its eastern end, and the City will need to acquire the necessary property from the Alameda Belt Line and/or Union Pacific to extend Clement Avenue through to Tilden Way. This extension would include bike lanes, enabling the development of a continuous bicycle lane from Constitution Way through to Tilden Way (Trail sections 3, 4, and 5). From this point, bicyclists could transition to the 7-foot wide sidewalk along Tilden Way, which provides access to Oakland via the Miller-Sweeney/Fruitvale Bridge.



**FIGURE V-18.** Looking east at the property which could be acquired to extend Clement Avenue to Tilden Way (Section 5).

*Recreational Trail Alignment:*

The preferred Recreational Trail Alignment in this section is along the shoreline. However, since a number of the current uses are incompatible with a trail, interim recreational alignment options were also evaluated below.

*Recreational Trail Alignment 1* continues the use of Buena Vista Avenue from Section 4 located west of Grand Street. This section of Buena Vista Avenue (see Section N-N) is lined with trees and includes many historic homes, making it an attractive route for the Trail. The land uses are primarily residential (see Figure V-19) until Buena Vista Avenue reaches the Park Street area. Since this is an older neighborhood where off-street parking is minimal, on-street parking is at a premium, and public support for the removal of parking is unlikely. However, there are other signing and striping options that could enhance the environment on Buena Vista for bicyclists (see Appendix C). East of Park Street to Tilden Way, Buena Vista Avenue has more of a mixed-use character. As in Recreational Trail Alignment 1 in the adjacent trail section, purchase of right-of-way for the Trail will not be necessary.



**FIGURE V-19.** Buena Vista Avenue looking east (Section 5).

*Recreational Trail Alignment 2* continues the Pacific Avenue option from west of Grand Street. Unlike Buena Vista Avenue, Pacific Avenue (see Section O-O) ends at Park Street, and does not provide a direct connection to Tilden Way. To avoid routing recreational bicyclists onto the heavily traveled Park Street or Oak Street, this alignment includes a deviation north onto Walnut Street and then east onto Buena Vista Avenue, which completes the connection to Tilden Way.



**FIGURE V-20.** Pacific Avenue looking westbound (Section 5).

Like Buena Vista Avenue, Pacific Avenue (Figure V-20) is a tree-lined street with many historic homes, and has 5-foot sidewalks on both sides of the street. However, Pacific Avenue has traffic volumes of only 800 per day, significantly less than Buena Vista Avenue. Pacific Avenue is only 38 feet wide, with two travel lanes and on-street parking, so there is not sufficient space to accommodate bike lanes, as the removal of parking is not likely at this location. However, given the low traffic volumes, a bike route designation or bike boulevard treatment could be sufficient to provide safe bicycle access. Walnut Street is only 24 feet wide from Pacific Avenue to Buena Vista Avenue and includes parking on one side of the street, so it would have to be signed as a bike route, similar to Pacific Avenue, if Alignment 3 were chosen as the recreational route. No additional right-of-way would have to be purchased to implement this alignment.

## Cross Alameda Trail Feasibility Study

In addition to offering a route with low traffic volumes, which should serve a wide range of users, Pacific Avenue would provide a good route in terms of overall network connectivity, as it is signed as a bike route west of Grand Street. However, Pacific Avenue is three blocks south of Clement Avenue, so cross-island travelers would be required to take a significant detour. It is also further from the shoreline, which is the ultimate goal of the Trail, and the deviations required to reach Tilden Way may discourage usage by bicyclists. Since the sidewalks along this alignment are similar to those along Buena Vista Avenue, pedestrians would have no incentive to walk the extra distance required.

*Recreational Trail Alignment 3* would be located along the shoreline (see Section P-P). While several parcels in this section currently include a public access area, other properties between the shoreline and Clement Avenue have uses which may conflict with the presence of a trail.

There is public access on the east side of Grand Street by the City's central garage (see Figure V-21). A direct connection to Alameda Marina is prevented by a chain link fence (see Figure V-22). There are some public access areas in the marina itself and the adjacent marine-related properties (see Figures V-23 and V-24), as required by BCDC, to serve pedestrians. However, as at the Fortmann Marina, the public access area is only five feet wide, too narrow to be used by bicyclists. The marina public access areas are only accessible to the public when the gates are open, which is generally dawn to dusk.



**FIGURE V-21.** Public access area east of Grand Street, near City's central garage (Section 5).



**FIGURE V-22.** Fence between public access area east of Grand Street and at the Alameda Marina (Section 5).



**FIGURE V-23.** Picnic area located in Alameda Marina public access area (Section 5).



**FIGURE V-24.** Public access area east of the marina includes obstructions that make passage difficult (Section 5).

## *Cross Alameda Trail Feasibility Study*

East of the marina is a U.S. Navy Marine Training Center, which could pose a significant constraint to the completion of this segment of the shoreline Trail. There is no indication that the Navy plans to relocate this facility in the foreseeable future, and security concerns prevent the use of the shoreline for recreational purposes.

The property owners of three sites to the east of the Navy facility have engaged in preliminary discussions with the City about redeveloping the parcels as residential sites. Part of this area is designated as parks and open space in the GP and may be potentially developed as a soccer field. Due to the proximity of these sites to the shoreline, they would be required to meet BCDC public access conditions.

A path has been constructed at the Park Street Landing shopping center (see Figure V-25), located north of Blanding Avenue just west of the Park Street Bridge. This path would connect any required public access area on the adjacent site to the west, should the parcel be redeveloped.



**FIGURE V-25.** Path behind Park Street Landing shopping center, west of the Park Street Bridge (Section 5).

Another major constraint in completing the shoreline path is the Park Street Bridge. There is not sufficient space to route the Trail under the bridge, so the path would have to veer away from the shoreline and cross Park Street at the intersection with Blanding Avenue.

In addition, a convalescent home just east of the Park Street Bridge is developed to the edge of the shoreline (Figure V-26). This development further constrains the potential extension of the shoreline trail. In addition to the convalescent home, there are several industrial properties and some existing structures close to the shoreline in this section east of the Park Street Bridge. Therefore the shoreline path will have to be rerouted.



**FIGURE V-26.** Shoreline area just east of the Park Street Bridge (Section 5).

The Stone Boat Yard recently ceased operations and plans for the property are unclear. This may provide an opportunity to develop a shoreline path at this location.

On the easternmost portion of the Cross Alameda Trail, a waterfront path is included in the preliminary designs for the remodeled Bridgeside Shopping Center (Figure V-27 shows the existing path). The path will connect from Tilden Way to the water and to the west end of the shopping center property, then will lead out to Blanding Avenue. Since this path could potentially have heavy pedestrian use, the compatibility with bicycle use will need to be examined.



**FIGURE V-27.** Path behind Bridgeside Shopping Center, west of Tilden Way and the Miller-Sweeney Bridge (Section 5).

While it is anticipated that several parcels in Section 5 of the Trail corridor will be redeveloped, others are expected to remain in their current uses for the foreseeable future, so it is anticipated that the implementation of this section will take a considerable amount of time. In addition, while the Alameda Marina, Park Street Landing, and Bridgeside Shopping Center do currently include a public access area, the characteristics of these access areas are not consistent from



parcel to parcel. As individual parcels are developed, the City will have the opportunity to work with developers and BCDC to construct new or improved public access areas that would enhance the environment for bicyclists and pedestrians. The City is currently considering the implementation of its own shoreline standards, in order to tailor the requirements to Alameda's needs. As noted in the discussion of Recreational Trail Alignment 3 in the adjacent Trail section, it is not anticipated that right-of-way will have to be purchased for the shoreline path, as the Trail will be privately owned but with public access permitted.

Once the Clement Avenue extension is completed – this is anticipated to be between 5 and 10 years – the recreational route should be established on Buena Vista Avenue. At that point, the traffic on Buena Vista will have been largely shifted to Clement Avenue, so Buena Vista Avenue will become a more attractive bicycling option. Buena Vista also offers a direct connection to Tilden Way, unlike Pacific Avenue.

For a more direct, transportation-oriented route for bicyclists, the Clement Avenue bike lanes are recommended. However, as future development occurs, this route may have to be reconsidered, due to the limited width of the cross-section. As noted above, Clement Avenue is designated as a truck route, and it has also been proposed for use as a major transit corridor. While bicyclists will not be prohibited from using Clement Avenue, the City may decide to shift the designated Trail route to a less-congested street if it appears that there will be significant conflicts between bicyclists, transit vehicles and trucks on Clement.

#### *Issues Regarding Accommodation of Transit Corridor*

As in the Sherman Street to Grand Street section, the width of the available right-of-way along Clement Avenue restricts the options in terms of accommodating the transit corridor and bicyclists. If Clement Avenue is reconstructed before transit service is implemented, bike lanes can easily be included. However, if transit service is implemented, it will need to share a bi-directional turn lane with motor vehicles, and there will not be sufficient width available to accommodate both the bike lanes and on-street parking. The proposed cross-section – which maintains the existing curb-to-curb width of 48 feet – assumes that the transit corridor/turn lane will remain in the center of the roadway and that motor vehicles and bicyclists will share the 15½ foot travel lanes. Since Clement Avenue serves as a truck route, the City does not believe that it is safe to stripe 10½ foot travel lanes – the maximum width that would allow for 5-foot bike lanes – through this corridor. The proposed extension of Clement Avenue from Tilden to Broadway would be developed with a similar cross-section as the portion west of Broadway.

## **PREFERRED TRAIL ALIGNMENTS**

Based on the constraints observed in this corridor, input from the public, and consistency with adopted City plans, a recommended Commuter Trail Alignment and Recreational Trail Alignment were selected for the Cross Alameda Trail. The alignments are summarized in the table below. Note that for Sections 1 and 2 the Preferred Alignment would be designed to serve both Commuter and Recreational users.

*Cross Alameda Trail Feasibility Study*

<b>Section</b>	<b>Alignment Option</b>	<b>Recreational/ Commuter Trail Alignment</b>	<b>Facility Type</b>
1 – Main Street to Webster Street	South side of Appezzato Memorial Parkway	Combined Recreational and Commuter	Multi-use path
2 – Webster Street to Constitution Way	South side of Atlantic Avenue	Combined Recreational and Commuter	Multi-use path
3 – Constitution Way to Sherman Street	Atlantic Avenue	Commuter	Bike lane and sidewalk
	Former Alameda Belt Line rail yard	Recreational	Multi-use path
4 – Sherman Street to Grand Street	Clement Avenue	Commuter	Bike lane and sidewalk
	Buena Vista Avenue	Interim Recreational/ Commuter Alternate*	Bike route and sidewalk
	Shoreline path	Recreational	Multi-use path
5 – Grand Street to Tilden Way	Clement Avenue	Commuter	Bike lane (bike route if transit corridor implemented) and sidewalk
	Buena Vista Avenue	Interim Recreational/ Commuter Alternate*	Bike route and sidewalk
	Shoreline path	Recreational	Multi-use path

\* Will be considered if design of transit corridor precludes bike lanes for Commuter Trail Alignment on Clement Avenue.

Whether the proposed transit corridor is ultimately implemented may have implications for the identification of an optimal Commuter Trail Alignment. As noted above, it will not be possible to include bike lanes along the entire length of Clement Avenue if the full 17 feet is required for transit use. Once a full evaluation of transit technologies is completed, and the precise spatial requirements are determined, it will be possible to more accurately assess the tradeoffs of maintaining the Commuter Trail Alignment on Clement Avenue or relocating it to Buena Vista Avenue, which would provide the next most direct route.

Cross Alameda Trail Feasibility Study

Summary of Trail Alignment Details and Features

	1-Main to Webster	2-Webster to Constitution	3-Constitution to Sherman		4-Sherman to Grand				5-Grand to Tilden			
Route	Combined Recreational/Commuter Route	Combined Recreational/Commuter Route	Atlantic Ave.: Commuter Route (C)	Belt Line Path: Recreational Route (R)	Clement Ave.: Commuter Route (C)	Shoreline Path: Long-Term Recreational Route (R1)	Buena Vista Ave: Short-Term Recreational Route (R2)	Pacific Ave: Short-Term Recreational Route (R3)	Clement Ave.: Commuter Route (C)	Shoreline Path: Long-Term Recreational Route (R1)	Buena Vista Ave: Short-Term Recreational Route (R2)	Pacific/ Walnut/ Buena Vista: Short-Term Recreational Route (R3)
<b>Length</b>	4300'	500'	4000'		3000'				6200'			
<b>Facility width</b>	12-foot Class I path	10-foot Class I path	5' sidewalks and 5' Class II bike lanes	12-foot Class I path	5' sidewalks and 5' Class II bike lanes	10-foot Class I path	5' sidewalks and Class III bike route	5' sidewalks & Class III bike route/bike boulevard	6' sidewalks & 5' Class II bike lanes	10-foot Class I path	5' sidewalks and Class III bike route	5' sidewalks & Class III bike route/bike boulevard
<b>Street width</b>	N/A (off-street)	N/A (off-street)	50'	N/A (off-street)	42'-52'	N/A (off-street)	42'	38'	48'	N/A (off-street)	42'	Pacific: 38' Walnut: 24'
<b>Street constraints</b>	N/A (off-street)	N/A (off-street)	Turn lanes and parking near Sherman	N/A (off-street)	Parking in some sections	N/A (off-street)	Parking both sides	Parking both sides	Turning lane	N/A (off-street)	Parking both sides	Parking both sides
<b>Key destinations</b>	Alameda Pt., FISC, Woodstock School, College of Alameda, Webster St.	Shopping center (Walgreen's, Starbuck's, etc.), Housing Auth., senior housing	Marina Village – residences, business park, and shopping center	Marina Village – residences, bus. park, and shopping center; Parrot Village	Wind River, Del Monte, Encinal Terminals, Fortmann & Grand Marinas, waterfront park		Littlejohn Park, Del Monte site, McKinley Park	Littlejohn Park	Alameda Power & Telecom, Alameda Marina, Navy facility, Thompson Field		Park Street business district, McKinley Park	Park Street business district, McKinley Park
<b>Adjacent land uses</b>	Single- & multi-family resid, commercial, schools	Commercial, multi-family residential	Commercial, single-& multi-family residential	Commercial, single-& multi-family residential	Marinas, commercial, single-family residential		Commercial, open space, single-family residential	Open space, single-family residential	Industrial, commercial, single-fam. residential	Industrial, commercial	Single-family residential, commercial	Single-family residential, commercial
<b>Truck/bus route</b>	None (off- street)	None (off- street)	Truck route; AC Transit #19	None (off-street)	Potential truck route	None (off-street)	AC Transit #19	None	Truck route	N/A (off-street)	AC Transit #19	AC Transit #19 on Buena Vista
<b>Traffic volume (vehicles/day)</b>	None (off- street)	None (off- street)	10,800	None (off-street)	N/A –not yet completed	None (off-street)	Buena Vista: 12,302	Pacific: 1,065	5,946	N/A (off-street)	10,538	Pacific: 718 Walnut: 2,322 Buena Vista: 10,538
<b>Network connectivity/directness of route</b>	Main Street Greenway at western terminus	Shortest possible link between adjacent segments	Connects to Marina Village bike lanes	Connects to path along east side of Constitution	Connects to Atlantic Ave. bike lanes	Connects to Wind River path & existing shoreline access	Circuitous route – located 2 blocks from long-term route	Circuitous route – located 3 blocks from long-term route	Most direct connection	Connects to existing shoreline access areas	Circuitous route – located 2 blocks from long-term route	Circuitous route – 3 blocks from long-term route; additional turns required

Summary of Trail Alignment Details and Features (continued)

	1-Main to Webster	2-Webster to Constitution	3-Constitution to Sherman		4-Sherman to Grand			5-Grand to Tilden				
Route	Combined Recreational/Commuter Route	Combined Recreational/Commuter Route	Atlantic Ave.: Commuter Route (C)	Belt Line Path: Recreational Route (R)	Clement Ave.: Commuter Route (C)	Shoreline Path: Long-Term Recreational Route (R1)	Buena Vista Ave: Short-Term Recreational Route (R2)	Pacific Ave: Short-Term Recreational Route (R3)	Clement Ave.: Commuter Route (C)	Shoreline Path: Long-Term Recreational Route (R1)	Buena Vista Ave: Short-Term Recreational Route (R2)	Pacific/ Walnut/ Buena Vista: Short-Term Recreational Route (R3)
Traffic controls	5 signalized intersections	2 signalized intersections, 1 commercial driveway	3 existing & 1 planned signalized intersection	2 signalized intersections (at ends of segment)	2 planned signalized intersections	No planned intersections	2 existing signalized intersections	3 stop signs	1 traffic signal & 2 stop signs	1 traffic signal	4 traffic signals & 2 stop signs	3 traffic signals & 7 stop signs
Property Acquisition	Value of property currently the subject of litigation, but City is engaged in discussions with property owners to purchase this section	None required – within public right-of-way	None required – within public right-of-way	Value of property currently the subject of litigation	City will purchase property for Clement Ave. extension in conjunction with development project; Pennzoil site also to be purchased	None required – public access will be permitted on private property	None required – within public right-of-way	None required – within public right-of-way	None required – within public right-of-way	None required – shoreline path to be privately owned and maintained	None required – within public right-of-way	None required – within public right-of-way
Issues with Accommodating Transit Corridor	Must accommodate double tracking, and station platforms west of Webster. Access required through parking lot at corner of Main/Apezzato and through AUSD parking lot leased from Belt Line	Relocation of curbs, narrowing of lanes, and removal of medians	None required – not used as transit corridor	Must accommodate double tracking, and station platforms and parking area west of Sherman Street	Developer will be conditioned to provide right-of-way to accommodate the proposed cross-section	None required – not used as transit corridor	None required – not used as transit corridor	None required – not used as transit corridor	None required – within public right-of-way	None required – not used as transit corridor	None required – not used as transit corridor	None required – not used as transit corridor

## CHAPTER VI

### STREET CROSSINGS

The recommended alignment for the Cross Alameda Trail will include numerous roadway crossings. Since a significant portion of collisions between motor vehicles and bicyclists or pedestrians occurs at intersections, a primary concern in terms of designing multi-use paths, on-street bicycle facilities, and pedestrian facilities is where they cross streets with high traffic volumes. Since some segments of the Trail will be developed as off-road facilities and other segments will be on-street bicycle facilities with adjacent sidewalks, the specific street crossing issues will vary considerably by location. This section of the report summarizes the conditions at the proposed crossing locations, and identifies issues that should be further investigated in the design phase of the project.

#### *Intersections of Off-Street Paths with Streets*

Intersections of multi-use paths and streets can be complex, as motorists may not be anticipating trail users – especially bicyclists – approaching from both sides of a crosswalk. Such crossings will generally be designed in accordance with Caltrans’ *Highway Design Manual* (HDM), the *Manual on Uniform Traffic Control Devices* (MUTCD), and the *MUTCD California Supplement*, although alternative treatments may be considered depending on the specific site conditions. The HDM highlights several issues that should be accounted for in the design of paths that cross arterial streets:

Location of crossing: “[T]he crossing should occur either at the pedestrian crossing, where motorists can be expected to stop, or at a location completely out of the influence of any intersection to permit adequate opportunity for bicyclists to see turning vehicles.”

Signage: “When crossing within or adjacent to the pedestrian crossing, stop or yield signs for bicyclists should be placed to minimize potential for conflict resulting from turning autos.” “In some cases, Bike Xing signs may be placed in advance of the crossing to alert motorists.”

Accommodation of people with disabilities: “Ramps should be installed in the curbs, to preserve the utility of the bike path. Ramps should be the same width as the bicycle paths. Curb cuts and ramps should provide a smooth transition between the bicycle paths and the roadway.”<sup>1</sup>

There are five locations along the multi-use path portion of the Trail where users will have to cross an intersecting street. City staff surveyed the proposed Trail/street intersections to assess the current features of these crossings and to determine whether any additional design elements should be considered to enhance safety. The table below summarizes the characteristics of the proposed crossings.

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<sup>1</sup> *Highway Design Manual*, Caltrans, Chapter 1000, p.6.

**Characteristics of Cross Alameda Trail Proposed Street Crossings  
(Multi-Use Path Sections)**

Crossing Location	Marked Cross-walk?	Cross-walk Length	Existing Traffic Control Device	Ped Heads?	Ped Push Buttons	Ramp Width (W leg)	Ramp Width (E leg)	Existing Signal Phasing	Level of Service
Third St., S side of Appezzato Memorial Pkwy.	√	40'	Signal	√ (count-down; vibratory)	√	Flush	4	protected left for WB traffic	N/A
Poggi St., S side of Appezzato Memorial Pkwy.	√	38'	Signal	√ (count-down; vibratory)	√	4	Flush	protected left for WB traffic	N/A
Webster St., S side of Appezzato Memorial Pkwy./ Atlantic Ave.	√	82'	Signal	√	√	4	4.5	protected left for WB traffic	D
Constitution Way, S side of Atlantic Avenue	√ (ladder)	90'	Signal	√ (auditory)	√	4.5	4	no protected turns from Atlantic	D
Sherman St./Atlantic Ave./ Clement Ave.	Intersection to be reconstructed in conjunction with proposed extension of Clement Avenue from Ohlone Street to Sherman Street								

Where possible, intersections of streets with the multi-use path sections of the Cross Alameda Trail should include the following:

- Enhanced crosswalk markings, such as a ladder- or zebra-style crosswalk or colored pavement, should be used to enhance visibility of Trail users to motorists.
- Right turns on red across the Trail should be prohibited where feasible. Each intersection should be evaluated for the impact that a prohibition of right turns on red would have on traffic flow. Currently all the affected intersections permit this movement.
- Curb ramps should be the same width as the path leading to it to facilitate a smooth transition for Trail users across the intersection.

Intersections should also be evaluated for additional treatments, as appropriate, such as:

- Wide streets should be evaluated for medians or curb extensions to shorten crossing distances for Trail users.
- The pedestrian signal timing at each location should be evaluated to facilitate street crossings for Trail users. In addition to longer crossing times, options include a leading pedestrian interval (LPI), which would allow Trail users to begin crossing before motor

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vehicles are permitted to turn. Locations crossing wide streets, especially near senior housing or schools, are often good candidates for longer pedestrian crossing times.

- All traffic signals should include pedestrian-activated push buttons and pedestrian heads, as well as auditory and vibrational signals.
- Flashing beacons or in-roadway lights to provide additional visibility for Trail users.

### *Intersections of Streets with Class II Bicycle Lanes and Sidewalks*

For other sections of the Trail, bicyclists using either bike lanes have the option of navigating intersection much as motor vehicle users would or acting more like a pedestrian. In the former case, left-turning bicyclists would have to wait for a sufficient gap and merge into the flow of traffic before turning. For bicyclists who do not feel comfortable with this maneuver, they can make a two-legged turn, similar to the movements used by pedestrians in crosswalks.

For bicyclists traveling on streets with Class II bike lanes, there are two primary types of collisions: 1) between straight-through bicycle traffic and right-turning motorists, and 2) between left-turning bicyclists and motorists traveling in both the same and opposite direction as the bicyclists. The City will use the HDM guidelines for striping and signing bike lanes at intersections. The proposed Commuter Route includes bike lanes along Clement Avenue from Sherman Street to Tilden Way. While there are numerous intersections along this stretch of the Trail, there are only six intersections with streets that have significant traffic volumes (over 6,000 vehicles per day) – Sherman Street, Grand Street, Oak Street, Park Street, Broadway, and Tilden Way. The remaining intersections are with low-volume streets that serve local neighborhoods.

Beyond striping and signing, additional facilities can help establish a more bicycle-friendly environment. For example, bicyclists often experience difficulty negotiating intersections controlled with actuated signals, as the signals may not detect bicycles. The City has recently installed loop detectors to detect bicycles at selected locations to address this concern. In addition, the City has adopted a standard of Type D loop detectors for new actuated signals, which supports the recommendation in the countywide bicycle plan, as Type D detectors can be set to detect bicycles. Where possible, the City installs separate detectors for bicycles in bike lanes to minimize detection of turning motor vehicles. The City also uses bicycle-sensitive loop detectors in left turn lanes at some locations in accordance with anticipated need.

### *Intersections of Streets with Class III Bike Routes and Sidewalks*

Where the Trail consists of bicycle routes and sidewalks, the Trail intersections will coincide with existing street intersections. Bike routes are a shared environment for bicycles and motor vehicles, and no additional treatments beyond conventional intersection design are necessary. Crosswalks will serve pedestrians.

Intersections along these routes will be evaluated for various types of improvements that will enhance pedestrian and bicycle safety. Examples of such treatments are:

- Marked crosswalks where they do not currently exist
- Bicycle-sensitive loop detectors at actuated traffic signals

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Along Pacific Avenue, which includes one of the Trail’s recreational alignments, the City’s Bicycle Master Plan recommends consideration of developing a “bicycle boulevard.” Such facilities generally include measures to discourage vehicle traffic, while not impeding bicycles. There are many potential ways to accomplish this goal, such as potentially eliminating some of the stop signs along this section of Pacific Avenue, and introducing traffic calming measures (e.g. speed lumps, curb extensions, or pedestrian paddles) to impede the flow of vehicular traffic. The application of traffic calming would have to be done in accordance with the *Traffic Calming Toolbox* adopted by the Alameda City Council.

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**CHAPTER VII**

**TRAIL DESIGN CHARACTERISTICS**

There are many aspects of the Trail that will need to be addressed during the Cross Alameda Trail’s design phase. While the design details are beyond the scope of this feasibility study, this chapter describes the factors that will have to be considered in selecting design elements. In addition to the Trail’s general characteristics as it pertains to bicyclists and pedestrians – e.g. width, slope, types of materials – considerations include conforming to the requirements of the Americans with Disabilities Act (ADA), interaction of trail users with adjacent traffic, installation of amenities, and use of appropriate signage along the Trail.

**Trail Design Standards**

As noted in Chapter I, due to existing development and other constraints, the Cross Alameda Trail will include a range of facility types throughout the corridor. While the preferred design is for a Class I multi-use path, some portion of the Trail will consist of sidewalks and either bicycle lanes or bicycle routes. The design of amenities such as unique Trail signage, directional signs, and historical markers along the route will help to unify the Trail segments and provide a sense of continuity for users.

The Caltrans *Highway Design Manual*, Chapter 1000, entitled “Bikeway Planning and Design,” is the design standard for all bicycle facilities in California. This document will be used for Class I, II and III bikeways throughout the Trail alignment. Included in this section are criteria for trail width, vertical and horizontal clearance to obstructions, sight distance, grades, drainage, lighting, and signing and striping.

**Caltrans Highway Design Manual**

	<b>Class I (2-way paths)</b>		<b>Class II (1-way bike lanes)</b>	
	<b>minimum</b>	<b>recommended</b>	<b>minimum</b>	<b>recommended</b>
width	2.4 m (7.9’)	3.6 m (11.8’)	1.2 m (3.9’) without gutter, 1.5 m (4.9’) with gutter	1.8 – 2.4 m (5.9’-7.9’)
vertical clearance	2.5 m (8.2’)	3.0 m (9.8’)	N/A	N/A
horizontal clearance	0.6 m (2.0’)	1.0 m (3.2’)	N/A	N/A
grade	5% maximum		N/A	N/A

Signalized intersections along the trail route will include bicycle-sensitive loop detectors on the roadway. If there are bike lanes on the intersecting street, the City will, wherever possible, install separate detectors in the bike lanes. Push-button signals or loop detectors will be provided for Trail users to facilitate crossing the intersection.

**User Groups**

A wide range of users are anticipated to benefit from the Trail, and they will have very different needs from one another. For example, elderly users tend to have slower reaction times, vision constraints and reduced endurance. Children, on the other hand, may be more difficult for drivers to see, exercise less peripheral vision than adults, and may not be able to accurately

assess complex intersections or the speed of approaching vehicles. People with disabilities – which include mobility, sensory, and cognitive impairments – may also have needs that are different from the majority of the population<sup>1</sup>. The Trail will be designed to conform to the standards established through the Americans with Disabilities Act (ADA), but certain locations may be enhanced for specific user groups where their presence is anticipated to be high. For example, there are two elementary schools in proximity to the Trail, as well as a senior housing complex. Potential design elements that can improve the safety and accessibility for these user groups, including adjusting traffic signal timing to create more time for people to cross intersections, installation of tactile or audible signals, or constructing refuge islands to provide pedestrians with protection if they pause while crossing the street.

Another important consideration for users is the mode they will be using on the Trail. Pedestrians, bicyclists, and wheelchair users each require different amounts of space and travel at different speeds.

### **User Amenities**

Amenities for Trail users will be determined based on a variety of factors, including the level of usage at a particular location, the existence of such amenities in the vicinity of the Trail, funding, community support, and the amount of physical space available. Trail amenities may include benches, bike racks, information kiosks, drinking fountains, trash receptacles, or a playground.

There are amenities at some of the existing segments of public shoreline access that would be included in the Cross Alameda Trail. The newly constructed marina waterfront park – between the Fortmann and Grand Marinas – includes a playground, picnic tables, drinking fountains, benches, and an eight-space parking lot. The Fortmann Marina has a public restroom, public parking, picnic tables, benches, and a fountain. A public restroom is also available at Grand Marina.



**FIGURE VI-1.** Amenities at public shore area by Fortmann Marina.

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<sup>1</sup> See *Designing Sidewalks and Trails for Access, Part I of II: Review of Existing Guidelines and Practices*, US Department of Transportation, July 1999.



**FIGURE VI-2.** Lighting, water fountain, and trash receptacle at marina waterfront park.

### **Rail-with-Trail Issues**

As noted in Chapter 3, the Cross Alameda Trail could potentially co-exist with a rail system in the same corridor. While an evaluation of the feasibility of a rail system is beyond the scope of this study, the trail design and alignment options will be evaluated with consideration of the rail line as a constraint. This has implications in terms of the amount of space available for the Trail.

In terms of future design issues, there are many examples in the U.S. of active rail systems safely coexisting with trails in the same corridor. In 2002, the U.S. Department of Transportation published a study, which analyzed the characteristics of 65 rail-with-trail projects across the country<sup>2</sup>. While there are no formal guidelines for rail-with-trail projects, this study does offer some valuable case studies regarding the safe design of such a multi-use corridor.

### **Parking**

For Trail users who drive motor vehicles to get access to the Trail, they will be able to use the designated public access parking located at many of the segments of shoreline access. An 8-space parking lot has been constructed in the waterfront park on Clement Avenue, at approximately the mid-point of the Trail. For most other sections of the Trail, on-street parking is available.

### **Signage**

A variety of sign types should be considered for use along the trail to enhance the trail users' ability to navigate the trail and to provide a safe environment for trail users. These include:

**Trail identification signs:** Bay Trail signage should be installed to indicate that the Cross Alameda Trail is part of the Bay Trail.

**Directional signs:** To help promote usage of the Trail and orient users, directional signs may be designed and installed. These signs will help users access many of the key destinations throughout Alameda and will encourage the use of the Trail as a means of

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<sup>2</sup> *Rails with Trails: Lessons Learned*, U.S. Department of Transportation, August 1, 2002.

accessing those destinations. Also, since the Trail will be constructed in phases, directional signs will enable users to more easily identify interim routes.

**Educational/interpretive signs:** To provide information to the public on the unique history and character of various sites within the Trail corridor, educational and interpretive signs may be created and installed at selected locations along the trail alignment. Existing examples of such signage are already in place at the Wind River site.

**Safety/etiquette signs:** Signage may also be used as a means of enhancing user safety along the Trail route. There will be numerous points along the Trail where bicyclists and pedestrians may encounter potential conflicts, either with motor vehicles or each other. Traffic safety signs can raise the awareness of motorists to the presence of bicyclists and pedestrians, and can help ensure that the range of Trail users – including bicyclists, pedestrians, and wheelchair users – are respectful of one another and behave in a safe manner.

**Regulatory signs:** Regulatory signs will provide information on the operational requirements for Trail users – this includes right-of-way (e.g. bicyclists yield to pedestrians), speed limits, stop signs, and prohibitions on motor vehicles. Warning signs are generally used near intersections, where a trail narrows, near driveways, and other locations where there is a change that could impact user safety. The usage of regulatory signs is specified in the Manual of Uniform Traffic Control Devices.<sup>3</sup>



**FIGURE VI-3.** Interpretive sign at the Wind River office park, overlooking the Encinal Terminals site.

### **Intersection Design**

Pedestrians using the Trail will face the same issues along the trail alignment as they would at intersections in other locations throughout the City. However, motorists may not expect to encounter bicyclists at intersections, especially if they are riding against traffic. For example, along Section 1, south of Appezzato Memorial Parkway, eastbound motor vehicle traffic turning right onto Third Street, Poggi Street, or Webster Street may encounter bicyclists heading west

<sup>3</sup> *National Bicycle and Pedestrian Clearinghouse Technical Brief*, Technical Assistance Series, Number 9, August, 1996.

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toward Alameda Point. There are numerous devices that can be used to enhance safety where trails cross streets.

Signage for drivers and trail users, curb ramps whose width equal that of the Trail, and lighting should be considered at all locations along the Trail corridor where the facility is a Class I path and intersects with a street.

Where funding is available, the enhancements such as pavers, pedestrian heads, countdown signals, or auditory signals may be considered as a way to enhance the visibility and safety of pedestrians at intersections.

## CHAPTER VIII

### COST ESTIMATES

Cost estimates were prepared for the Cross Alameda Trail for each trail section. Below is a brief description of the facility and assumptions that were made in developing the cost calculations. The detailed cost estimates are included on the following sheets.

A significant portion of the Trail's overall cost will be right of way acquisition. As discussed in Chapter II, the cost will depend on the outcome of current litigation. Based on California Railroad Commission reports and ICC orders, it appears that the original investment cost of the ABL was about \$1,000,000. If the repurchase option held by the City and covering the ABL and its extensions is exercised by the City, the right of way acquisition cost would presumably be less than \$1,000,000.

If the right of way were acquired in derogation of the repurchase option, the right of way acquisition cost has been estimated at \$3,455,000, assuming the ABL holds the parcels in question in fee absolute. The purchase price of the property to be acquired was estimated merely to provide an order of magnitude of the total project costs. For the ABL property located between Main Street and Appezzato Memorial Parkway, the estimate was based on an appraisal of the property, and it was assumed that the entire property would be purchased.

For the portion of the Trail that would be located in the former rail yard, which is much larger and has more potential uses than the property west of Webster Street, it was assumed that only the portion of the property to be used for the Trail itself would be purchased. Therefore the estimated cost assumed that just over 3 acres would be purchased out of a 22-acre parcel.

#### **Section 1: Main Street to Webster Street (Sheets 1-3)**

##### **Cost: \$1.87 million + right-of-way purchase**

Construction costs assumed that the path would be twelve feet wide. Since there are bus stops along the south side of Appezzato Memorial Parkway, costs also include the construction of connecting sections of sidewalk to link the path to the bus stop areas. It was also assumed that the Trail would be constructed near the southern property line, so the cost estimate included a five-foot landscaping strip between the Trail and the property line.

#### **Section 2: Webster Street to Constitution Way (Sheet 4)**

##### **Cost: \$153,000**

This section requires construction of an additional two feet of concrete to supplement the existing eight-foot sidewalk. Also, the crosswalk across Constitution Way at the intersection with Atlantic Avenue would be slightly re-oriented, and therefore restriped, to

enable Trail users to more easily access the Recreational Alignment through the former Alameda Belt Line rail yard. Other required expenses include the relocation of traffic signals at both ends of the section to avoid conflicts with Trail users, widening of the curb ramps to match the width of the Trail, and reconfiguring the existing irrigation system.

**Section 3: Constitution Way to Sherman Street (Sheets 4-6)**

**Cost: \$1.53 million + right-of-way purchase**

The cost estimates for this section only concern the proposed Recreational Alignment through the former Alameda Belt Line rail yard, as the Commuter Route on Atlantic Avenue already exists. The estimates assume a twelve-foot asphalt path through the property, with a five-foot landscape strip on both sides. Other costs included in the estimate are for the purchase of the portion of the right-of-way that would be associated with the path and the landscape buffer, installation of lighting, irrigation, and required drainage improvements.

**Section 4: Sherman Street to Grand Street (Sheets 6-8)**

**Cost: \$31,000**

- Commuter Alignment (Clement Avenue): \$19,008  
Striping and signing for Class II bike lane.
- Recreational Alignment 2 (Buena Vista Avenue): \$11,880  
Pavement marking and signing for Class III bike route.
- Recreational Alignment 3 (shoreline): N/A (trail to be constructed as condition of development)

**Section 5: Grand Street to Tilden Way (Sheets 8-12)**

**Cost: \$65,000**

- Commuter Alignment (Clement Avenue): \$33,000  
Signing and striping for Class II bike lane.
- Recreational Alignment 2 (Buena Vista Avenue): \$31,995  
Pavement marking and signing for Class III bike route.
- Recreational Alignment 3 (shoreline): N/A  
Pavement marking and signing for Class III bike route.

**ESTIMATED TOTAL PROJECT COST**

<b>Construction:</b>	<b>\$3.65 million</b>
<b>Right-of-way acquisition:</b>	<b>&lt; \$1 million to \$3.455 million</b>
<b>Total project costs:</b>	<b>\$3.65 million to \$7.1 million</b>

## **CHAPTER IX**

### **TRAIL MANAGEMENT STRATEGY**

The City of Alameda currently oversees and maintains several trail projects as well as bike lanes and sidewalks throughout the City. The City has the experience to manage the Trail's full range of facility types – paths, bicycle lanes, and bicycle routes – once it is completed. City-owned trails are maintained by the Recreation and Parks Department, while bike lanes, sidewalks, and traffic control devices within the City's street right-of-way are under the jurisdiction of the Public Works Department (although sidewalk maintenance is the responsibility of the adjacent property owner).

The off-road portions of the Trail will be managed by the City of Alameda Recreation and Parks Department. ARPD currently manages other park facilities in the City, the most similar to the Trail being the Main Street Greenway. Funding is not currently allocated for maintenance of the Cross Alameda Trail, but if the community identifies it as a high priority, the City Council will need to earmark the required funds and staffing.

#### **Stakeholder Support**

Perhaps the most important factor in determining the success of the Trail is the number of users. An important part of attracting users is the cultivation of stakeholders in the community to assist in marketing the Trail.

The Cross Alameda Trail is envisioned not only as a facility for transportation and recreational travel, but in many locations as a destination in itself. The emergence of the corridor as a series of destinations can already be seen with the development of the marina waterfront park between the Fortmann and Grand Marinas, as the park includes a playground, benches, tables, and a parking area. The preliminary plans for the Bridgeside Shopping Center include the Trail in close proximity to an outdoor seating area for restaurants. The former railroad yard between Constitution Way and Sherman Street could also potentially become an attraction, depending on how the property is ultimately developed.

There is a broad range of potential stakeholders who would have a direct interest in the Trail's success. Chapter III discussed the various development projects, business districts, schools, and other sites in proximity to the Trail. The Trail can provide a convenient and attractive way for residents, employees, business customers, students, and others to access many of these places or to connect to the regional transit network. Businesses and organizations with a stake in the success of the Trail can help raise awareness about the Trail by either passing information to their employees or customers, or as part of a "friends" organization, as described below. Other potential partners in a marketing initiative include locally-based advocacy organizations, such as Bike Alameda and Pedestrian Friendly Alameda, that have indicated their strong support for the project.

#### **Operations and Maintenance**

Maintenance costs include tasks such as pavement stabilization, landscape maintenance, facility upkeep, sign replacement, mowing, litter removal and painting.



### **Trail Design and Public Safety**

Management issues will largely be addressed in the trail design process. The design of the Trail itself offers many opportunities to address management issues up front, as design choices can often help to significantly reduce maintenance costs. For example, it will be important to consider the impacts of different materials used to construct the trail, the type of landscaping to be included, and location of amenities needing electric or water connections and where they are situated with respect to existing utility lines.

However, there are other potential safety concerns as well. People who live in the vicinity of the Trail may be concerned about the potential for crime and vandalism – The potential for crime associated with the development of a trail – whether founded or not – can be deterred by careful design and maintenance of the facility. Crime Prevention Through Environmental Design (CPTED) techniques, which include the appropriate use of lighting, sufficient sight lines, a high quality of maintenance, visibility from adjacent roadways, and other strategies, have proven to be effective ways of deterring crime on trails as well as other types of projects. It will also be important to enable emergency vehicles to access the Trail.

But perhaps the best way to prevent crime from becoming a problem is for the Trail to be heavily used. The more “eyes” on the Trail – from trail users, neighbors, drivers on adjacent roadways, or people working or doing business at locations in the vicinity – the safer the facility will be. It will be important to have input from law enforcement personnel and members of the community to identify major security concerns early in the design process.

### **Financial and Community Support**

An approach that many successful communities around the country have adopted to ensure the long-term success of their trail projects is to develop active partnerships with local individuals and organizations to form “friends of the trail” groups. In Alameda, the Rails to Trails Conservancy established a steering committee to help oversee the public outreach component of the Cross Alameda Trail project, and through this process a number of members of the community have taken on the role of advocate for the Trail. However, once a trail has been constructed, there is the need for additional types of support. Friends of the trail groups can play a vital role in the long-term success of trails, and may take responsibility for volunteering labor for cleanup crews, maintenance projects, surveillance to protect the security of users, fundraising support, political support, and help with outreach to the community at large.

As trail supporters shift from an advocacy role to one that is engaged in procuring resources and implementing trail enhancement projects, the composition of the group will need to evolve. While some members may remain, it will be important to involve new members with appropriate skills and community connections. For example, key roles could potentially be assumed by members of the business community, major employers located near the Trail, and local churches and homeowners associations.

An example of a successful group of this type is the Friends of Anne Arundel County Trails, based in suburban Maryland. The group was originally formed to support the Baltimore-

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Annapolis Trail – a 13-mile rail-trail with over 2 million estimated users per year – and has since expanded to include other trail projects in Anne Arundel County. Activities the group has been involved with to date include obtaining funding for a variety of improvements, such as garden and public art projects along trails. In addition to supporting the public agency in its work as trails operator, the organization has helped build a strong sense of ownership for the trail system in the community.<sup>1</sup>

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<sup>1</sup> David Dionne, Anne Arundel County Superintendent of Trails, personal communication, 8/2/04.

**APPENDIX A**

**Alignment Sheets**

## **APPENDIX B**

### **Shoreline Access Areas Connecting To the Trail**

## APPENDIX B

### CROSS ALAMEDA TRAIL CONNECTIONS TO EXISTING SHORELINE ROUTE

The proposed shoreline route will connect to the existing shoreline access areas on Alameda's north shore, from the former Fleet Industrial Supply Center (FISC) site to Marina Village.

- 1) FISC site: The development plan for the FISC site includes the construction of a segment of Bay Trail along the portion of the site bordering on the Oakland/Alameda Estuary. The plan calls for utilizing an existing wharf to develop a waterfront promenade and plaza to accommodate bicycle and pedestrian routes, as well as seating areas and other street furniture<sup>1</sup>. Approximate completion date:
- 2) Mariner Square Waterfront Esplanade: The proposed shoreline park is being constructed as part of a larger project including an assisted living facility and a yacht storage facility. The park, which will be partly city-owned and partly private, will connect to the adjacent bicycle/pedestrian accommodations at the FISC site. Public access requirements for an 8-foot path through the property as well as a 12-foot wide waterfront promenade have been approved by BCDC. The eastern end (City-owned portion) of the park will include an open paved area which will link to paths on either side. The project is currently under construction.
- 3) 2402 Mariner Square Drive: A café was formerly on this site and was destroyed in a fire, and a proposal has been submitted to construct an office building in its place. The existing 6-8 foot concrete sidewalk will connect to the waterfront esplanade and path behind Chevy's restaurant.
- 4) Chevy's Restaurant: Shoreline access consists of a 6-foot wide concrete sidewalk.
- 5) Barnhill Marina: Shoreline access consists of a 12-foot wide path.
- 6) Marina Village: The public access path is complete with the exception of the Shipway site, for which redevelopment has been proposed. The public access area is primarily asphalt, although one section is a wooden deck. Width of the access area ranges from approximately 5½-12 feet. The Shipway project would include the construction of a shoreline path. Approximate completion date:
- 7) Wind River: There is an existing 12-foot asphalt path through the site, which connects to an existing pier that has been reserved for pedestrian use. The pier will ultimately connect to the Clement Avenue extension, just east of Sherman Street.

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<sup>1</sup> *Catellus Alameda Project Site Wide Landscape Development Plan*, Catellus Development Corporation and EDAW, April 2002, p. 24.

To help provide the context for the Cross Alameda Trail, below is an overview of existing facilities for this adjacent area. To help locate these sites on the trail corridor map, each photograph includes a description of where it lies relative to the proposed Trail.



Shoreline in front of Pasta Pelican restaurant, east of the FISC site (north of Trail Section 1, Sheet 3). This is part of the location for the future Mariner Square Waterfront Esplanade (see page B-1).



Shoreline east of Pasta Pelican restaurant, future site of Mariner Square Waterfront Esplanade (north of Trail Section 1, Sheet 3).



Walkway adjacent to Chevy's restaurant, in front of 2402 Mariner Square Drive, described on page B-1 (north of Trail Section 2, Sheet 4).



Shoreline access behind Chevy's restaurant (north of Trail Section 2, Sheet 4).



Shoreline access at Barnhill Marina (north of Trail Section 2, Sheet 4).



Shoreline access at Extended Stay Hotel  
(north of Trail Section 2, Sheet 4).



Marina Village shoreline path (north of Trail  
Section 3, Sheet 5).



Path at Marina Village leading onto  
boardwalk area (north of Trail Section 3,  
Sheet 5).





Path at Shoreline Park in Marina Village (north of Trail Section 3, Sheet 5).



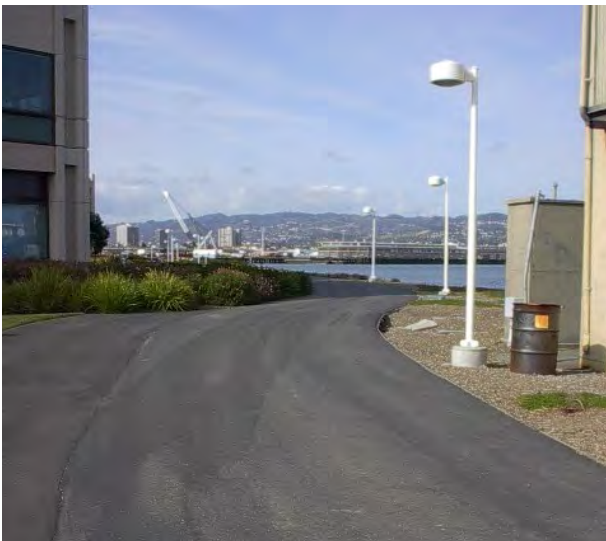
Bay Trail route stops at boundary of Encinal Yacht Club and is routed through a parking lot (north of Trail Section 3, Sheet 6).



Path at Wind River connects to Marina Village shoreline park through parking lot (north of Trail Section 3, Sheet 5).



Path connecting Wind River to parking lot at Encinal Yacht Club (north of Trail Section 3, Sheet 6).



Path through Wind River campus (north of Trail Section 3, Sheet 6).



Pier at southeastern end of Wind River site (north of Trail Section 3, Sheet 6).

# **APPENDIX C**

## **Alternative Pavement Markings for Shared Roadway Facilities**

## APPENDIX C

### Alternative Pavement Markings for Shared Roadway Facilities



Cambridge, MA – The line was used in locations that were not wide enough to accommodate a bike lane. The line is striped 11 feet from the curb. City of Cambridge staff have indicated that bicyclists tend to adhere very close to the line (source: *San Francisco's Shared Lane Pavement Markings*, 2004).



San Francisco, CA – This symbol indicates that although the street is not wide enough to accommodate a bike lane, the lane should be shared by motorists and bicyclists (source: *San Francisco's Shared Lane Pavement Markings*, 2004). The stencil has been recommended by the California Traffic Control Device Committee (CTCDC) for inclusion in the Manual of Uniform Traffic Control Devices (MUTCD) 2003 California Supplement.

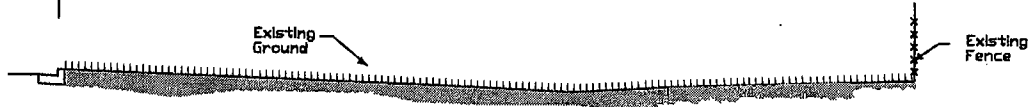
# **APPENDIX D**

## **Trail Cross-Sections**

Ralph Appezzato Memorial Parkway

Existing Unimproved Railroad Property

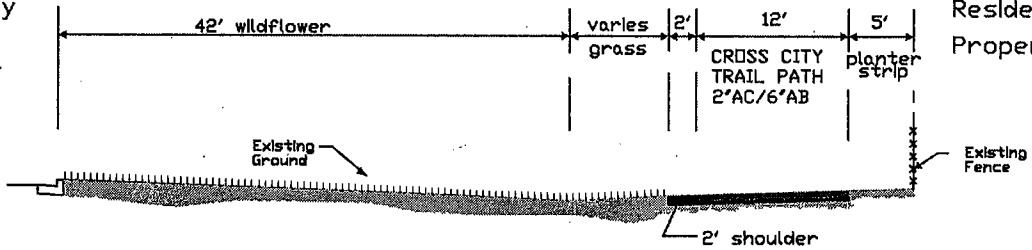
Adjacent Residential Properties



**EXISTING SECTION**

Ralph Appezzato Memorial Parkway

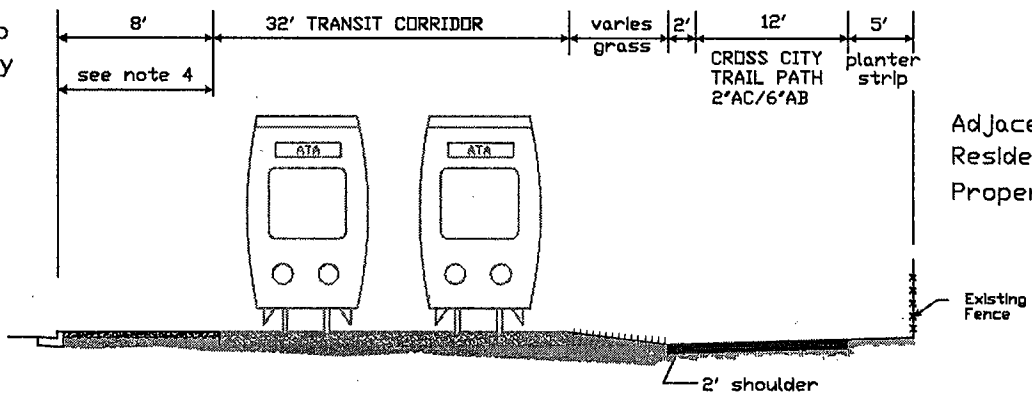
Adjacent Residential Properties



**PROPOSED SECTION WITHOUT TRANSIT CORRIDOR**

Ralph Appezzato Memorial Parkway

Adjacent Residential Properties



**PROPOSED SECTION WITH TRANSIT CORRIDOR**

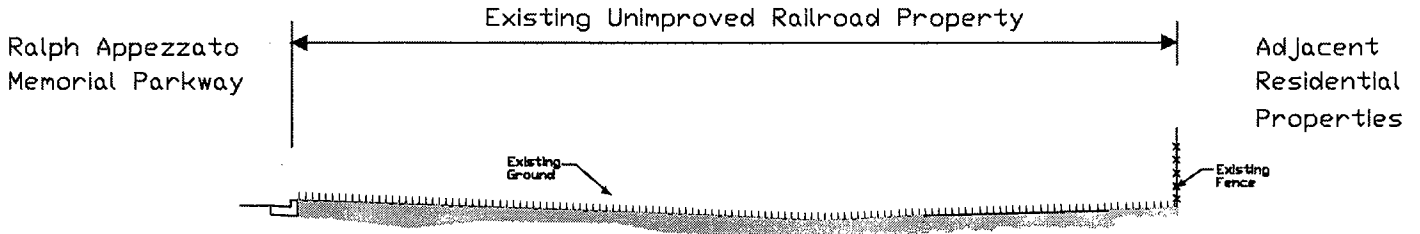
Notes:

- 1) Alternate transit corridor alignment down center of Appezzato Memorial Parkway would require curb to be relocated into the railroad property approximately 20' south.

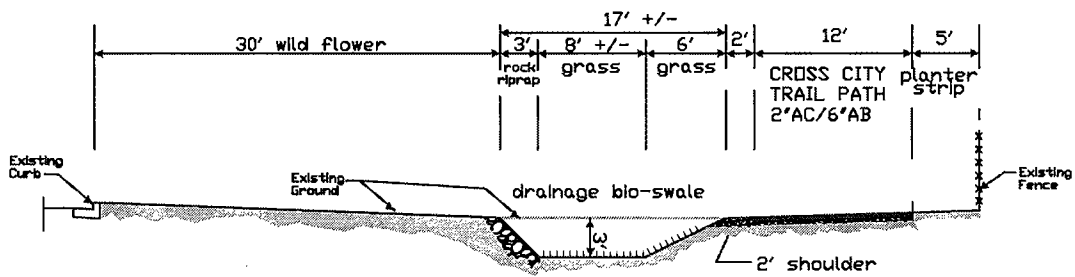
(no scale)

- 2) Facility Type - Minimum 12' Class I Multiuse path.
- 3) property lines not shown
- 4) Transit stop.

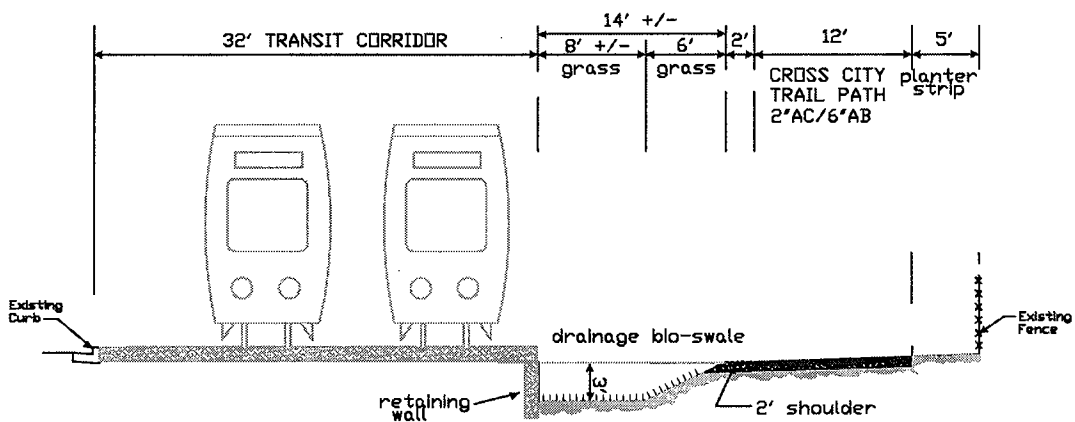
**COMMUTER/RECREATION ALIGNMENT - SECTION A-A**  
 Appezzato Memorial Parkway  
 Main Street to 3rd Street



**EXISTING SECTION**



**PROPOSED SECTION WITHOUT TRANSIT CORRIDOR**



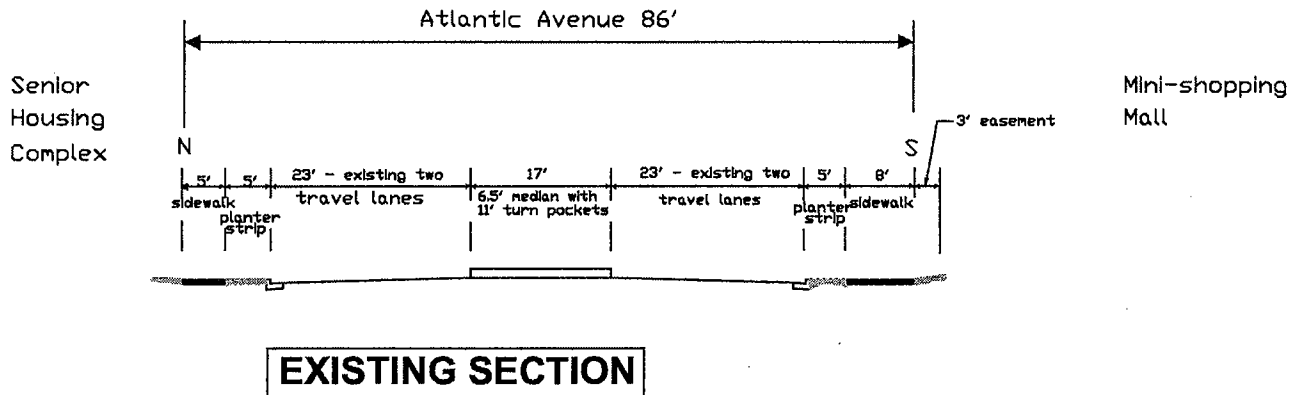
**PROPOSED SECTION WITH TRANSIT CORRIDOR**

Notes:

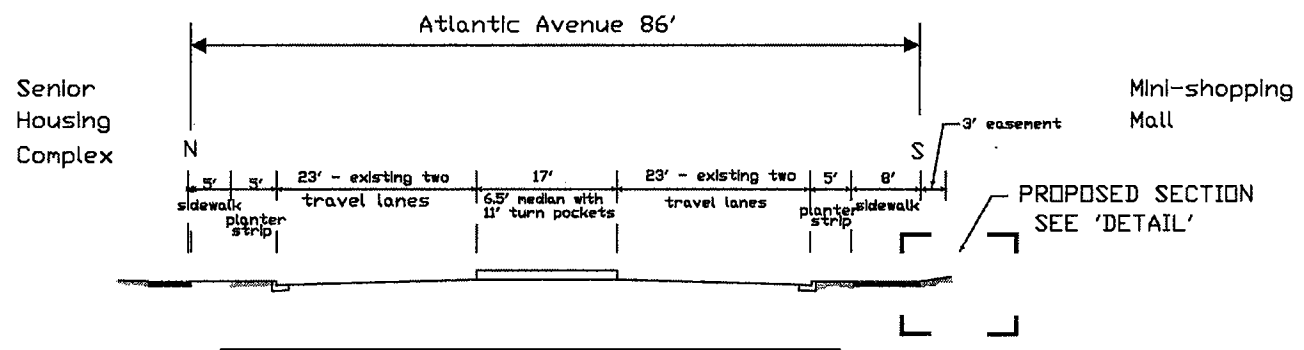
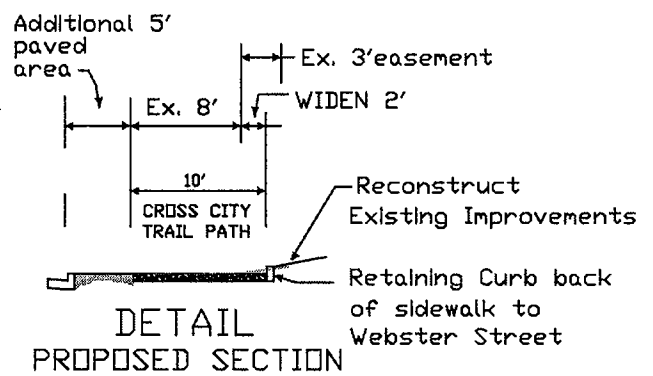
- 1) Alternate transit corridor alignment down center of Appezato Memorial Parkway would require curb to be relocated into the railroad property approximately 20' south.
- 2) Facility Type - Minimum 12' Class I Multiuse path.
- 3) property lines not shown

(no scale)

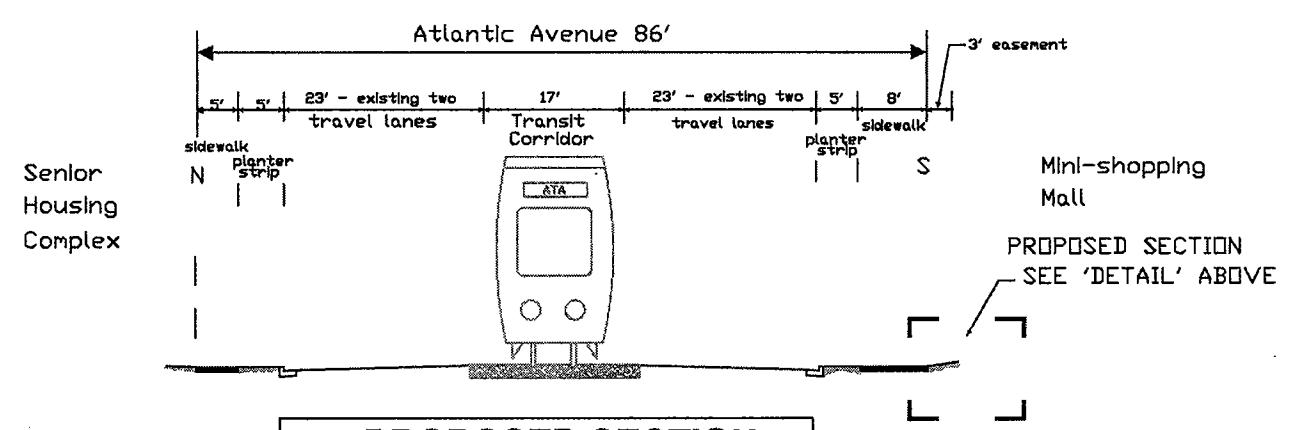
**COMMUTER/RECREATION  
ALIGNMENT - SECTION B-B**  
Appezato Memorial Parkway  
3rd Street to Webster Street



**EXISTING SECTION**



**PROPOSED SECTION WITHOUT TRANSIT CORRIDOR**



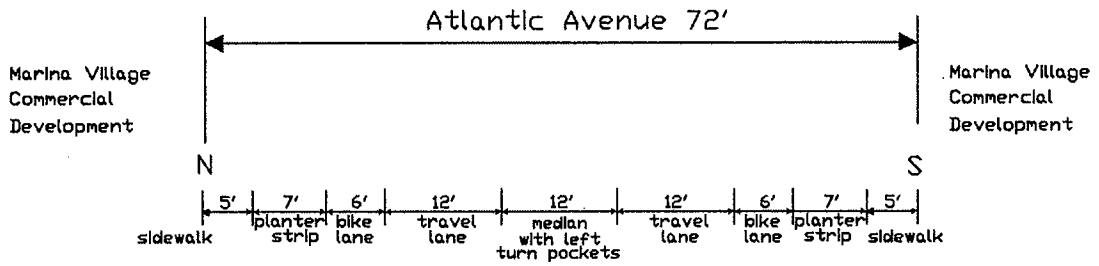
**PROPOSED SECTION WITH TRANSIT CORRIDOR**

(no scale)

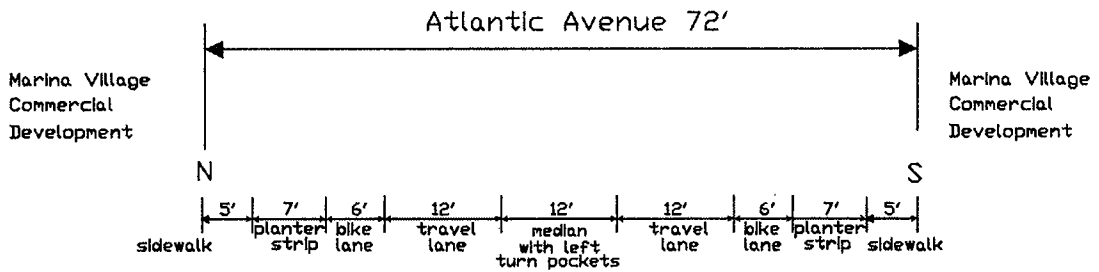
- Notes:
- 1) Facility Type - 10' Class I Multiuse path.
  - 2) property lines not shown

**COMMUTER/RECREATION ALIGNMENT - SECTION C-C**  
Atlantic Avenue  
Webster Street to Constitution Way





**EXISTING SECTION**



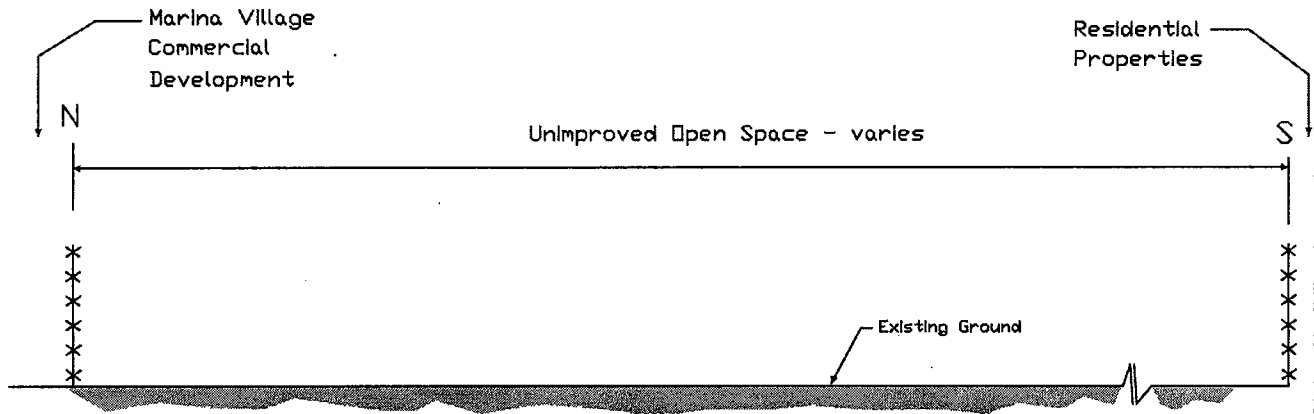
**PROPOSED SECTION**

NO TRANSIT CORRIDOR ALONG THIS SECTION

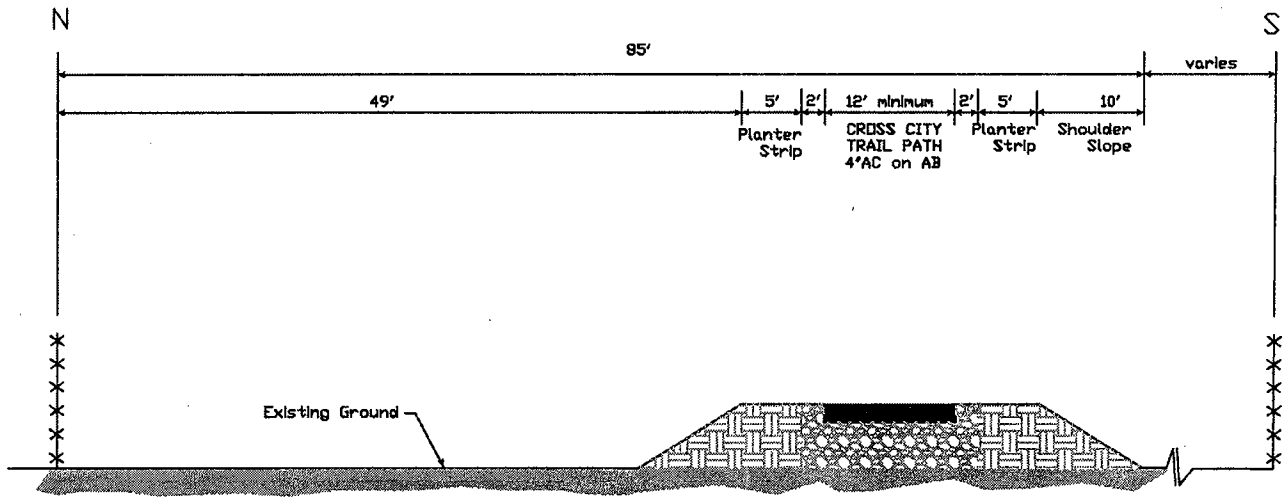
- Notes: 1) Facility Type - existing 6' Class II bike lanes, 5' sidewalk.  
 2) property lines not shown  
 3) No change between existing and proposed.

(no scale)

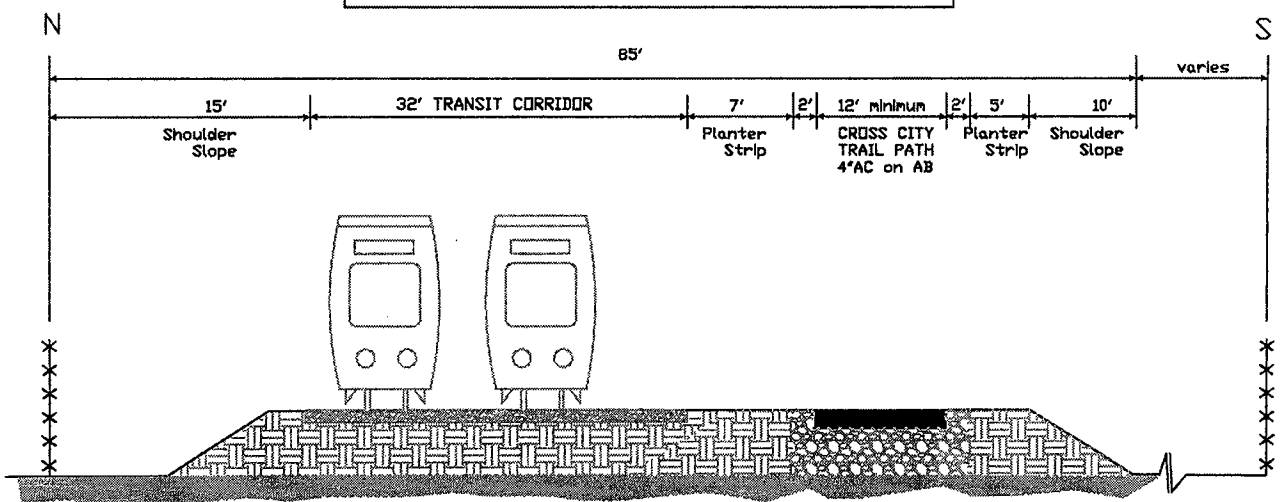
**COMMUTER ALIGNMENT - SECTION D-D**  
Atlantic Avenue  
 Constitution Way to Sherman Street



**EXISTING SECTION**



**PROPOSED SECTION WITHOUT TRANSIT CORRIDOR**



**PROPOSED SECTION WITH TRANSIT CORRIDOR**

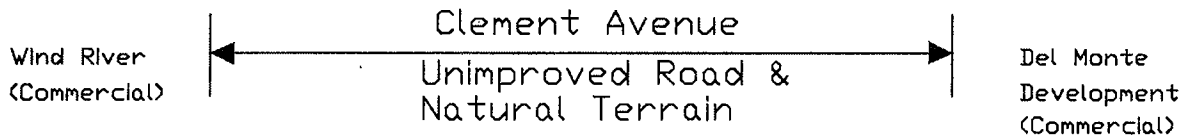
Notes: 1) Facility Type - Minimum 12'

(no scale)

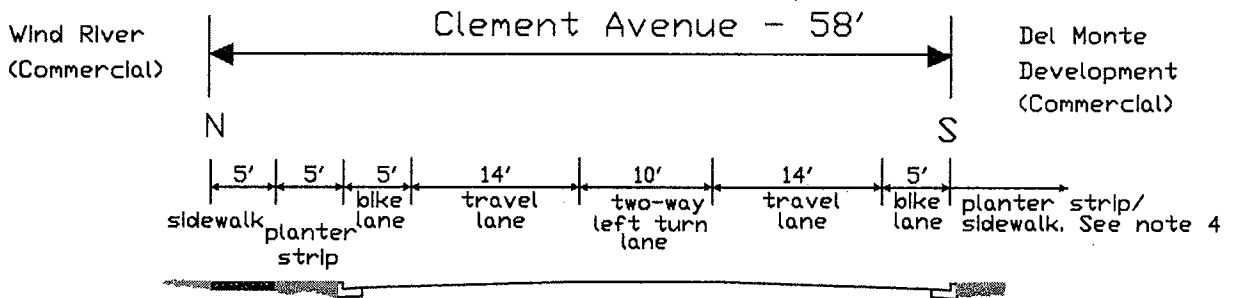
- 1) Facility Type - Minimum 12' Class I Multiluse path.
- 2) Property lines not shown
- 3) Install storm drain pipe across section for cross drainage as necessary.
- 4) Site is located within the Northern Waterfront Specific Plan.

**RECREATION ALIGNMENT 1 - SECTION E-E**

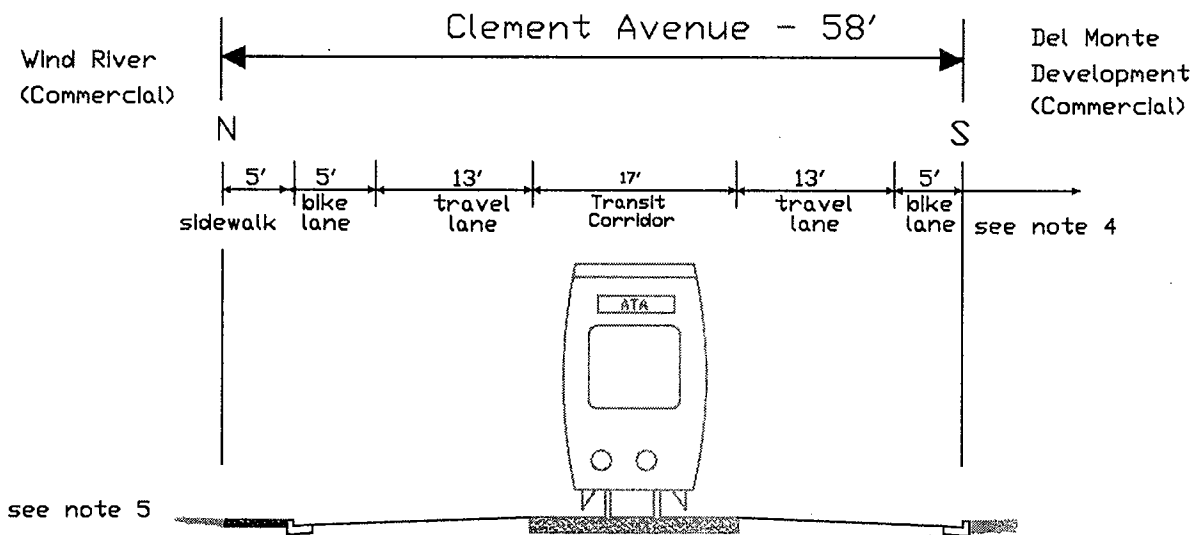
Belt Line Railroad Property  
 Constitution Way to Sherman Street



**EXISTING SECTION**



**PROPOSED SECTION WITHOUT TRANSIT CORRIDOR**



**PROPOSED SECTION WITH TRANSIT CORRIDOR**

Notes:

- 1) Facility Type - Sidewalk and Class II Bike Lane.
- 2) Property lines not shown.
- 3) Site is located within the Northern Waterfront Specific Plan.
- 4) Landscaping and sidewalk improvements. Minimum sidewalk 5' Minimum planter strip 5'
- 5) Planter strip deleted.

(no scale)

**COMMUTER ALIGNMENT - SECTION F-F**

Clement Avenue  
Sherman Street to BCDC Jurisdiction

BCDC  
Estuary  
Frontage  
(see note #3)

Clement Avenue  
(Narrow Roadway &  
Natural Terrain)

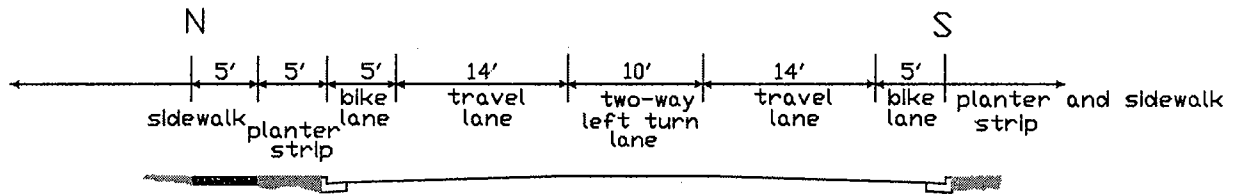
Del Monte  
Development  
(see note #4)

**EXISTING SECTION**

BCDC  
Estuary  
Frontage  
(see note #3)

Clement Avenue - 58'

Del Monte  
Development  
(see note #4)

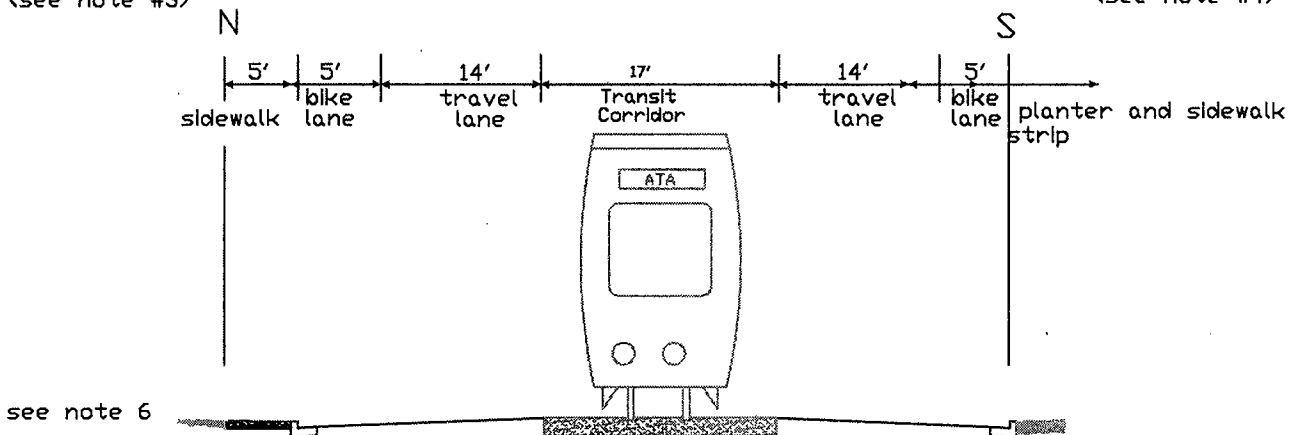


**PROPOSED SECTION  
WITHOUT TRANSIT CORRIDOR**

BCDC  
Estuary  
Frontage  
(see note #3)

Clement Avenue - 60'

Del Monte  
Development  
(see note #4)



**PROPOSED SECTION  
WITH TRANSIT CORRIDOR**

Notes:

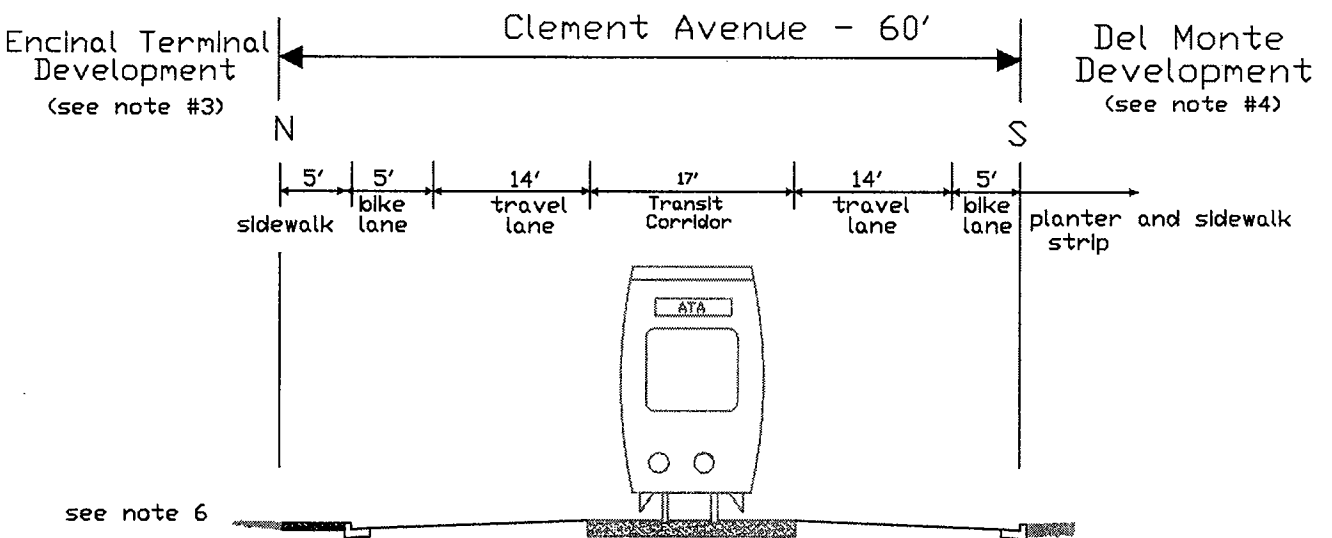
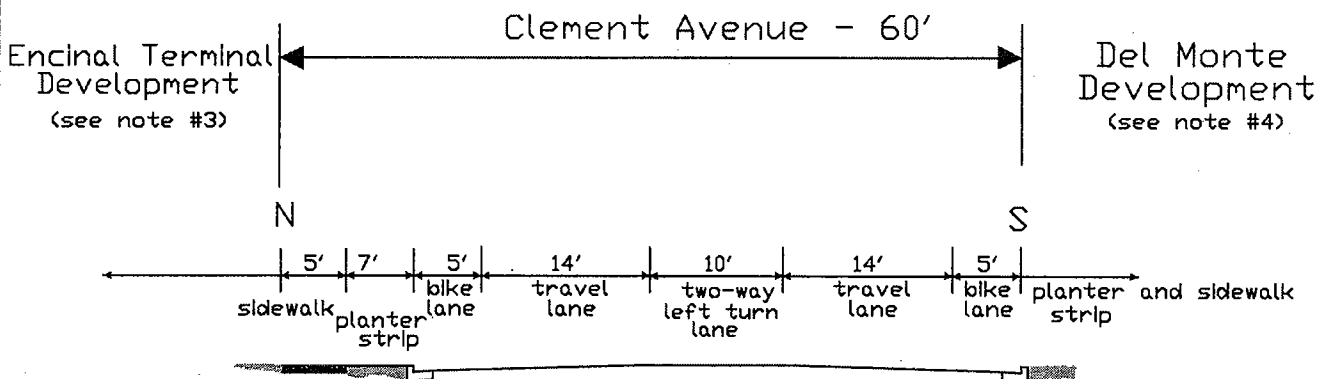
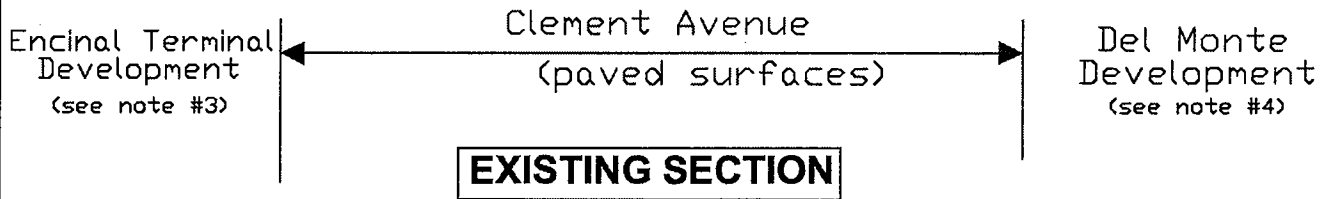
- 1) Facility Type - To be determined
- 2) Property lines not shown
- 3) Public improvements along shoreline to be determined by Bay Conservation & Development Commission in conjunction with adjacent Del Monte development.
- 4) Landscaping and sidewalk improvements, including limits, to be determined at time of Del Monte development.  
2' reserve for transit corridor.  
5' minimum reserve for planter strip  
5' minimum reserve for sidewalk

- 5) Site is located within the Northern Waterfront Specific Plan.
- 6) Planter strip deleted.

(no scale)

**COMMUTER ALIGNMENT - SECTION G-G**

Clement Avenue  
Within BCDC Jurisdiction



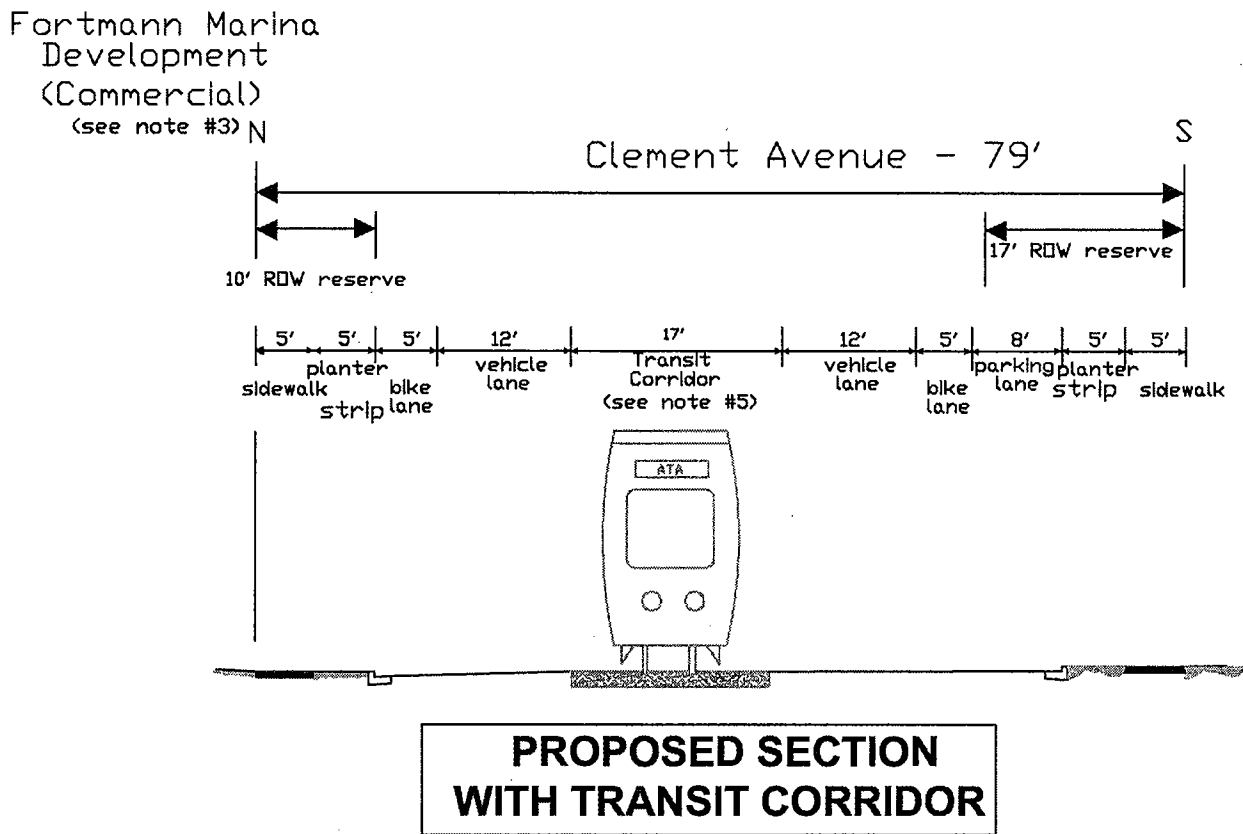
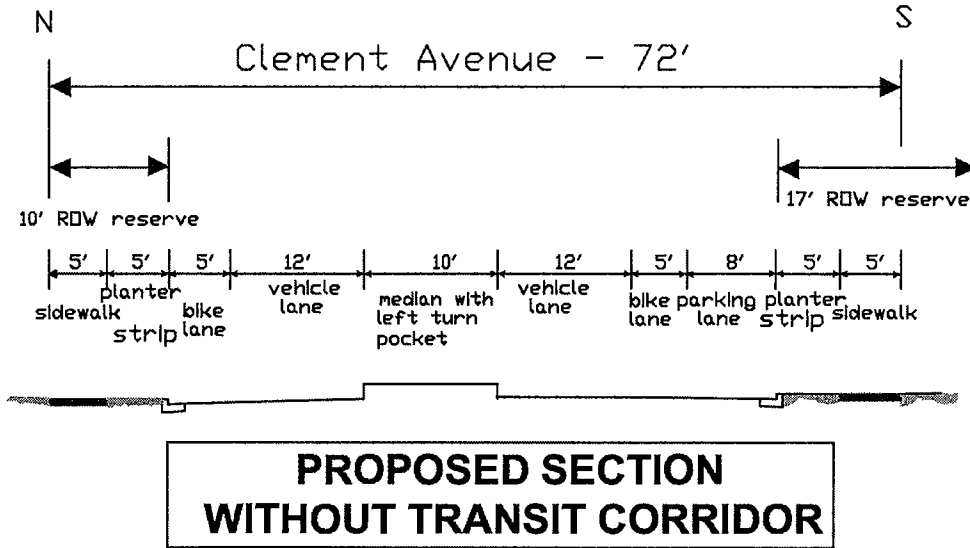
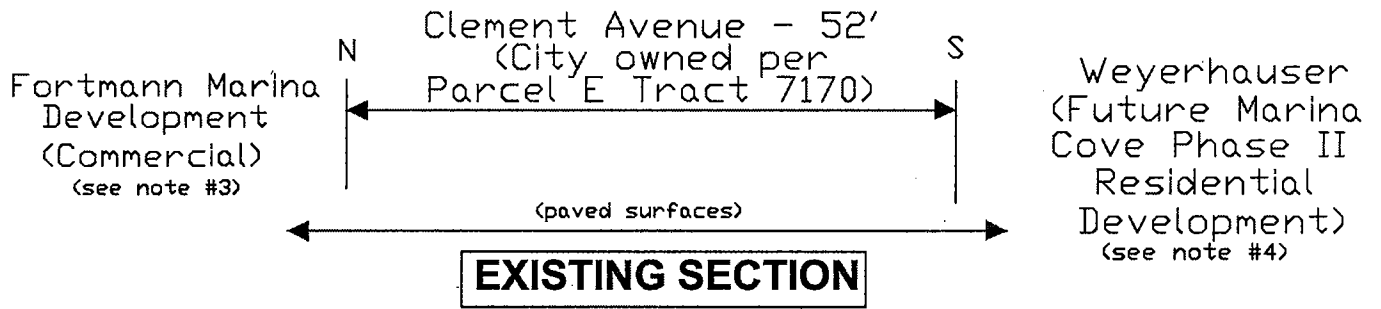
Notes:

- 1) Facility Type - Sidewalk and Class II bike lanes.
- 2) Property lines not shown
- 3) Landscaping and sidewalk improvements, including limits, to be determined at time of Encinal Terminal development.  
5' minimum reserve for sidewalk  
5' minimum reserve for planter strip

- 5) Site is located within the Northern Waterfront Specific Plan.
- 6) Planter strip deleted.

(no scale)

**COMMUTER ALIGNMENT - SECTION H-H**  
Clement Avenue  
 BCDC Jurisdiction to Entrance Road



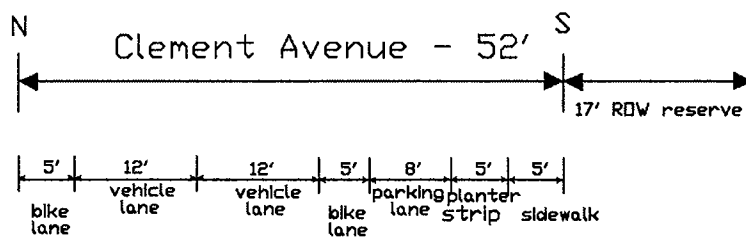
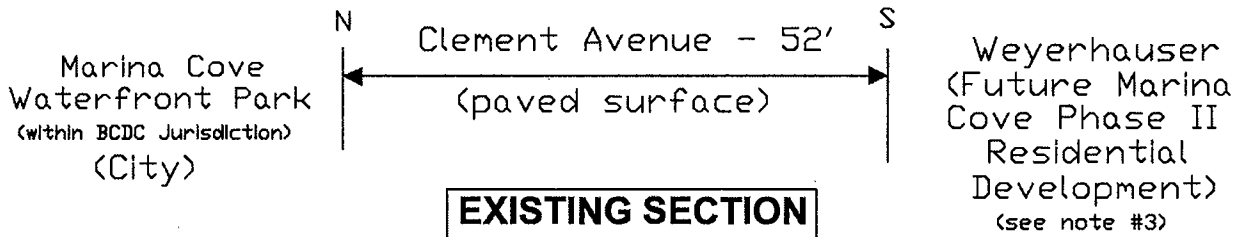
Notes:

- 1) Facility Type - Sidewalk and Class II bike lanes.
- 2) Property lines not shown
- 3) 10' Right-of-Way reserve space required for landscape and sidewalk improvements. Limits to be determined at time of Fortmann Marina development.
- 4) 17' Right-of-Way reserve space required for future transit corridor.
- 5) Left turn movement shared with transit corridor.

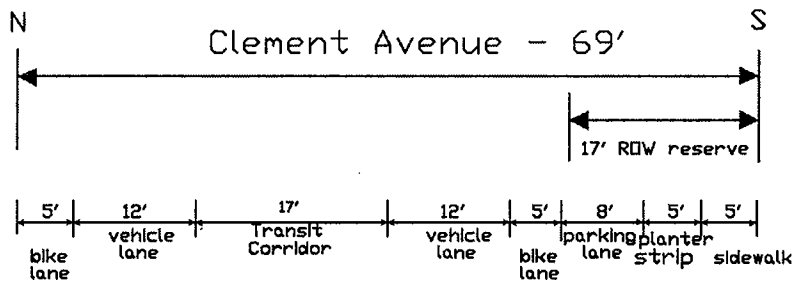
(no scale)

**COMMUTER ALIGNMENT - SECTION I-I**

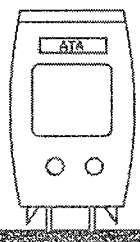
Clement Avenue  
Entrance Road to 160' East



**PROPOSED SECTION WITHOUT TRANSIT CORRIDOR**



**PROPOSED SECTION WITH TRANSIT CORRIDOR**



- Notes:
- 1) Facility Type - Sidewalk and Class II bike lanes.
  - 2) Property lines not shown
  - 3) 17' Right-of-Way reserve space required for transit corridor

(no scale)

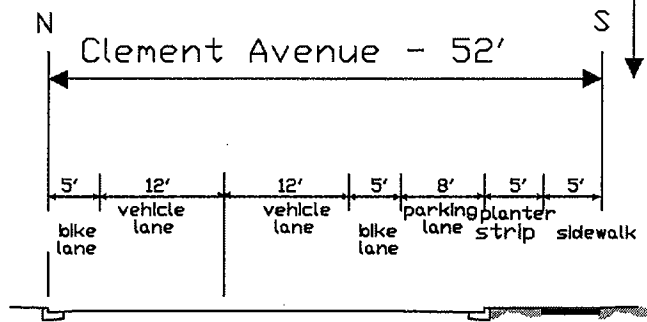
**COMMUTER ALIGNMENT - SECTION J-J**

Clement Avenue

Waterfront Park and Marina Cove Phase II

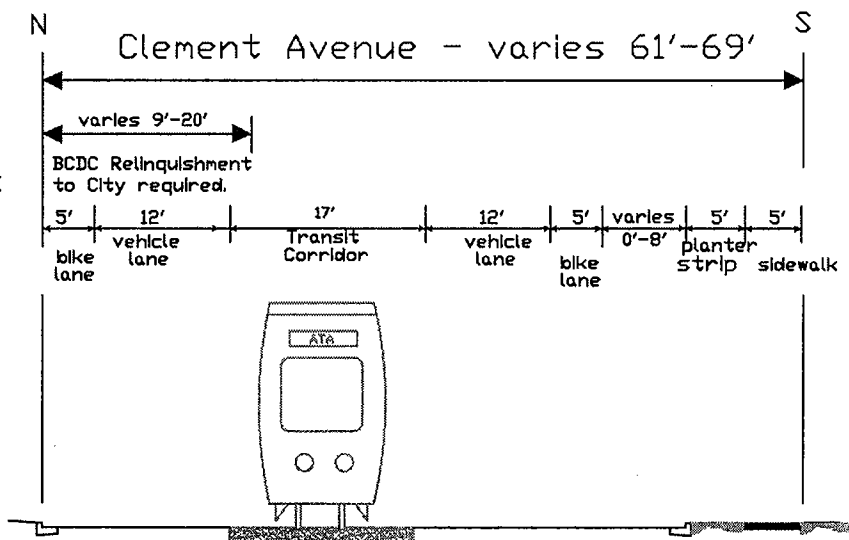
Marina Cove Waterfront Park  
(within BCDC Jurisdiction)

Ex. Marina Cove Phase I Development  
(Residential)



**EXISTING SECTION WITHOUT TRANSIT CORRIDOR**

Marina Cove Waterfront Park  
(within BCDC Jurisdiction)



**PROPOSED SECTION WITH TRANSIT CORRIDOR**

Notes:

- 1) Facility Type - Sidewalk and Class II bike lanes.
- 2) Property lines not shown
- 3) Park BCDC right-of-way relinquishment required to maintain separate bike/vehicle lanes.
- 4) Existing Section same as proposed section without transit corridor.

(no scale)

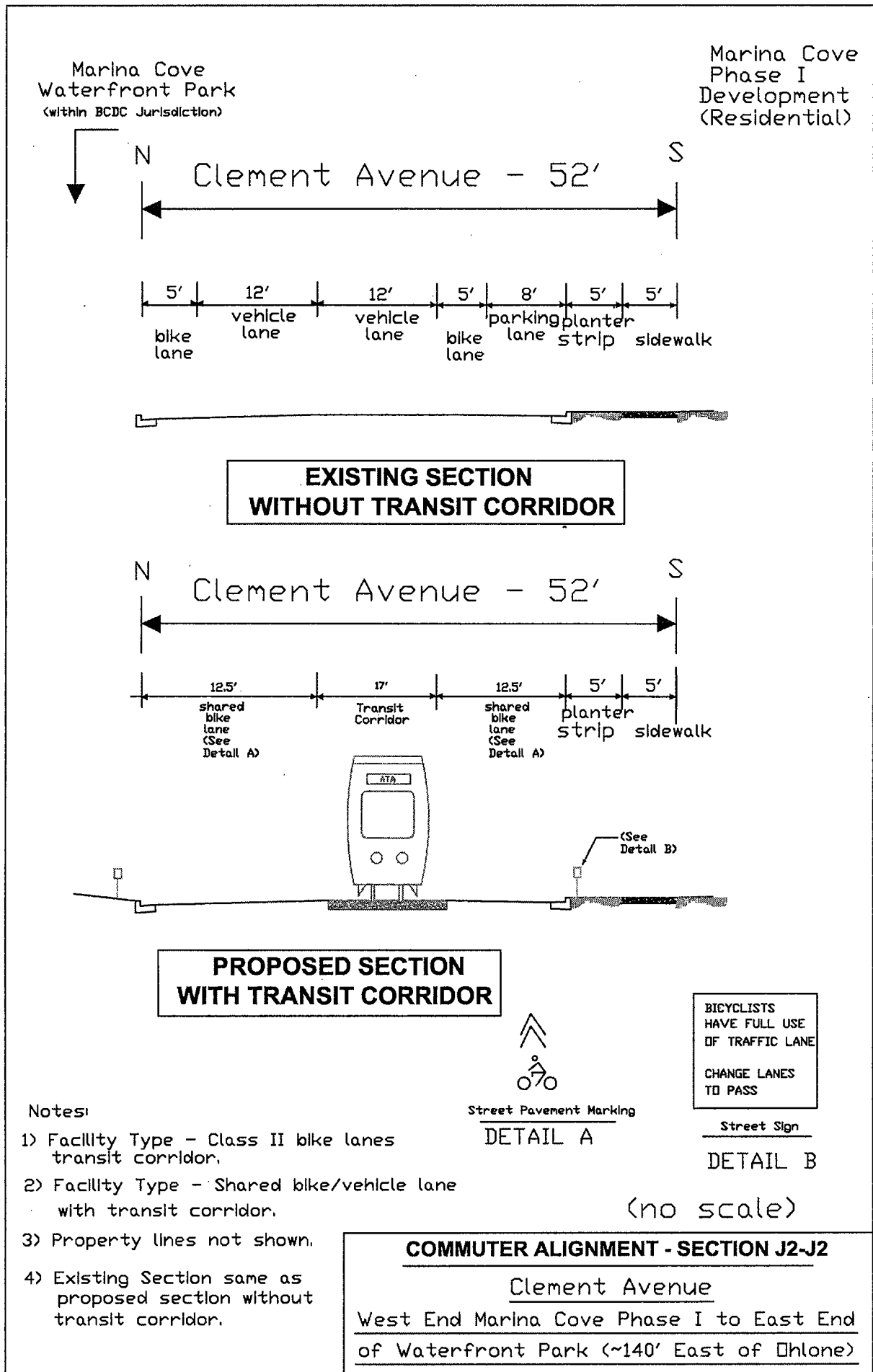
**COMMUTER ALIGNMENT - SECTION J1-J1**

Clement Avenue

West End Marina Cove Phase I to East End of Waterfront Park (~140' East of Ohlone)

THIS ALTERNATE MAINTAINS SEPARATE DRIVING AND BIKE LANES ASSUMING BCDC RELINQUISHES A PORTION OF THE PARK.

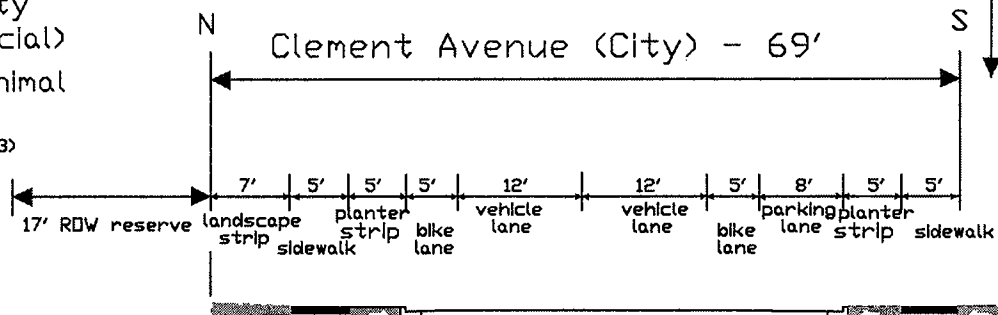




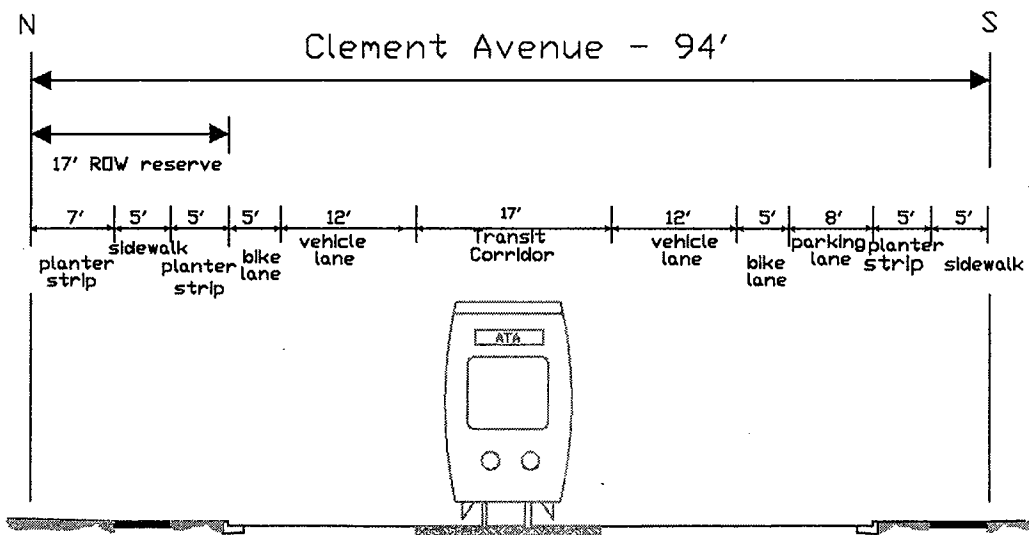
THIS ALTERNATE PROVIDES FOR A SHARED TRAFFIC LANE AND BIKE LANE ASSUMING THAT BCDC DOES NOT RELINQUISH A PORTION OF THE PARK.

Pennzoll  
Property  
(Commercial)  
& City Animal  
Shelter  
(see note #3)

Ex. Marina Cove  
Phase I Development  
(Residential)



**EXISTING SECTION  
WITHOUT TRANSIT CORRIDOR**



**PROPOSED SECTION  
WITH TRANSIT CORRIDOR**

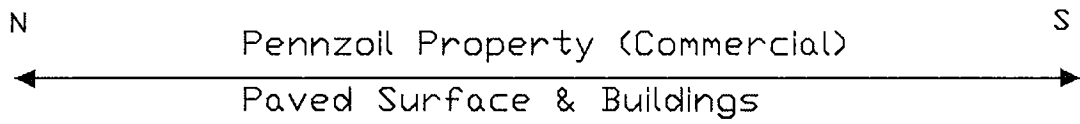
Notes:

- 1) Facility Type - Sidewalk and Class II bike lanes.
- 2) Property lines not shown
- 3) 17' additional Right-of-Way reserve space required for transit corridor
- 4) Existing Section same as proposed section without transit corridor.

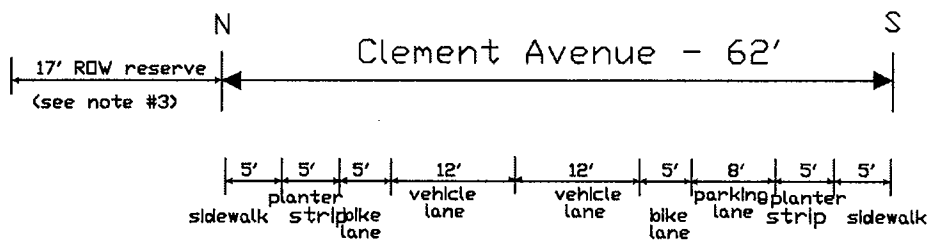
(no scale)

**COMMUTER ALIGNMENT - SECTION K-K**

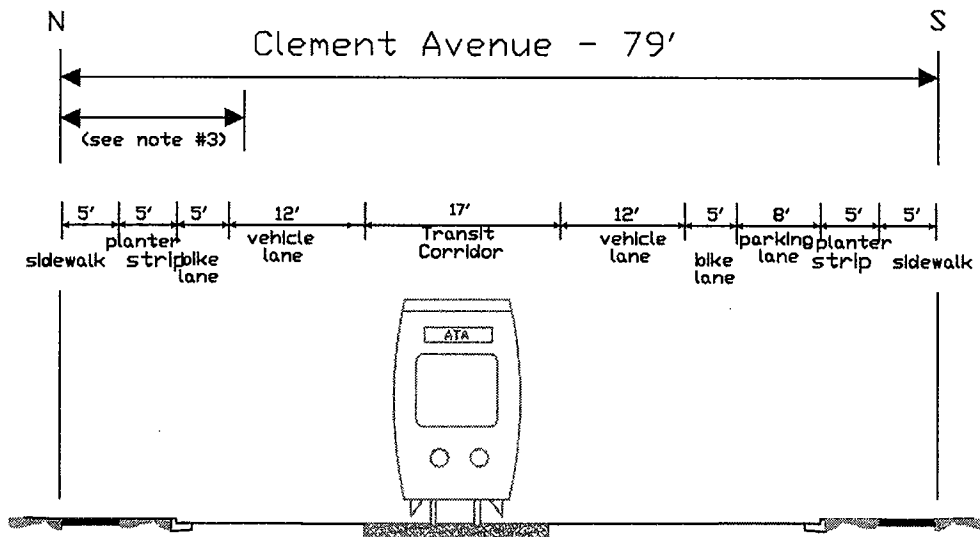
Clement Avenue  
East End of Park (Marina Cove  
Phase 1) to Hibbard Street



**EXISTING SECTION**



**PROPOSED SECTION WITHOUT TRANSIT CORRIDOR**



**PROPOSED SECTION WITH TRANSIT CORRIDOR**

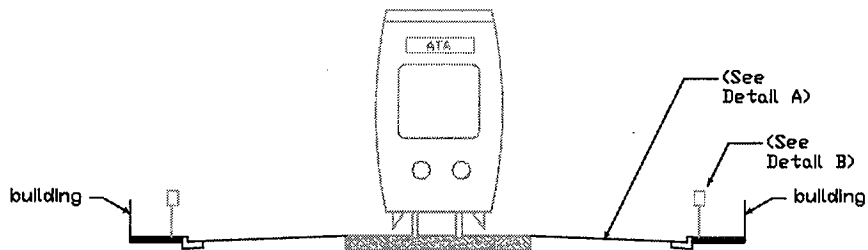
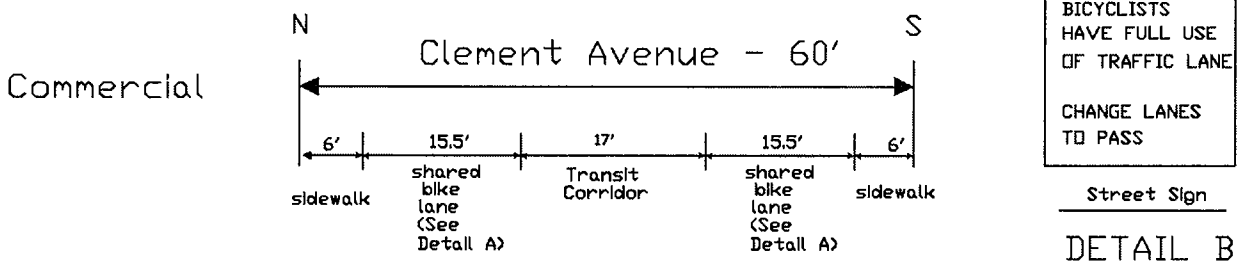
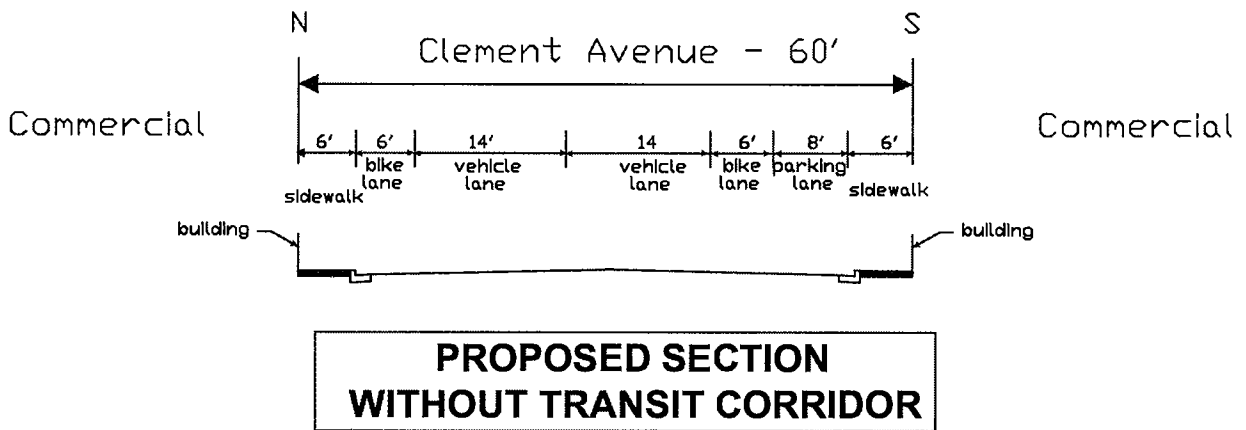
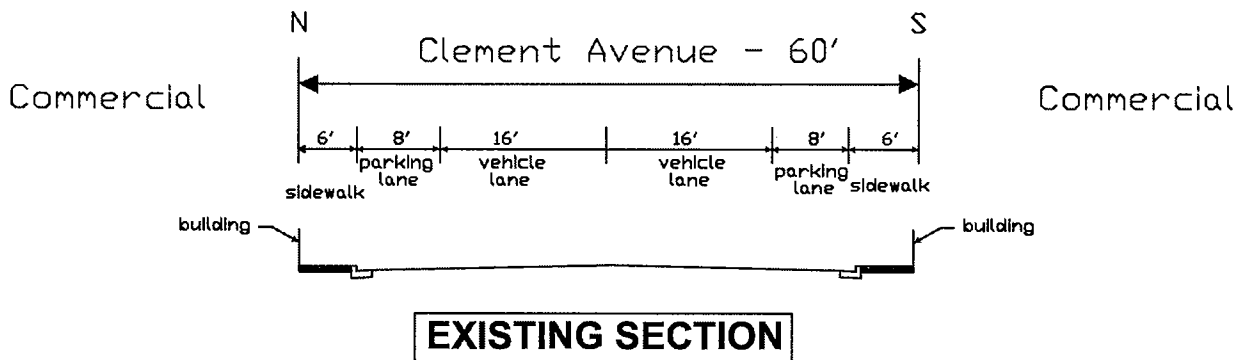
Notes:

- 1) Facility Type - Sidewalk and Class II bike lanes.
- 2) Property lines not shown
- 3) 17' additional Right-of-Way reserve space required for transit corridor

(no scale)

**COMMUTER ALIGNMENT - SECTION L-L**

Clement Avenue  
Hibbard Street to Grand Street



**PROPOSED SECTION WITH TRANSIT CORRIDOR**



Street Pavement Marking  
**DETAIL A**

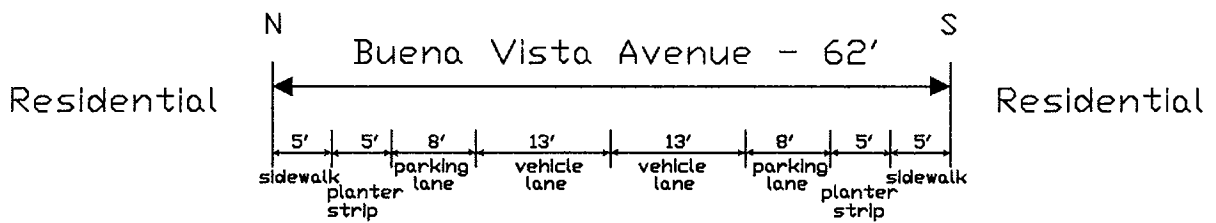
**Notes:**

- 1) Facility Type - Class II bike lanes without transit corridor.
- 2) Facility Type - Shared bike/vehicle lane with transit corridor.
- 3) Property lines not shown
- 4) Parking removed on north side for section without transit and on both sides for section with transit corridor.

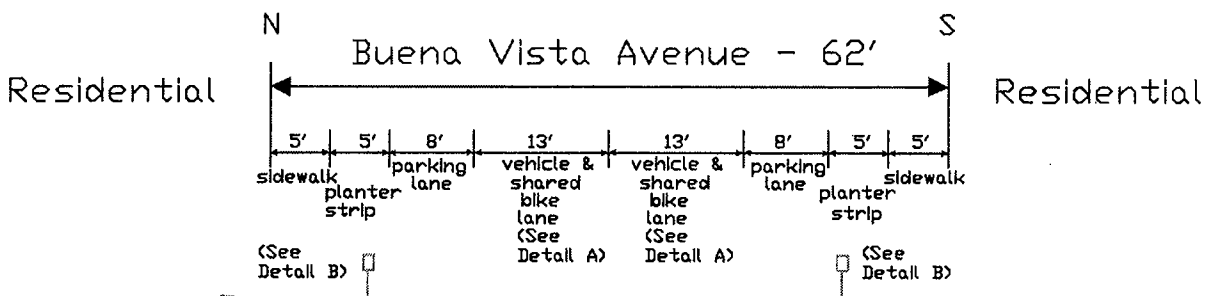
(no scale)

**COMMUTER ALIGNMENT - SECTION M-M**

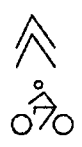
Clement Avenue  
Grand Street to Broadway



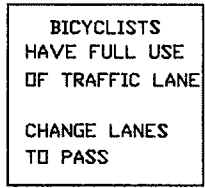
**EXISTING SECTION**



**PROPOSED SECTION**



Street Pavement Marking  
**DETAIL A**



Street Sign  
**DETAIL B**

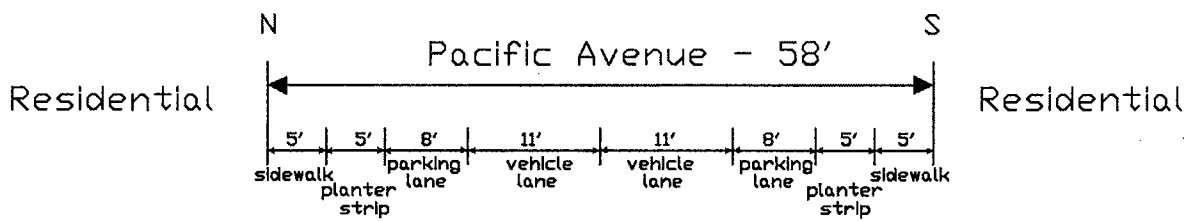
NO TRANSIT CORRIDOR ALONG THIS SECTION

Notes: 1) Facility Type - Sidewalk and Class III bike routes.

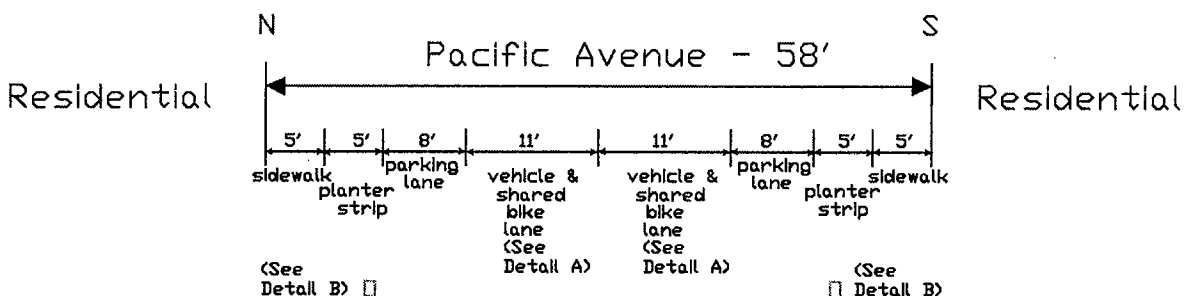
2) Property lines not shown

(no scale)

**RECREATION ALIGNMENT 1 - SECTION N-N**  
Buena Vista Avenue  
Sherman Street to Broadway



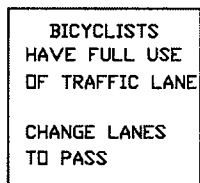
**EXISTING SECTION**



**PROPOSED SECTION**



Street Pavement Marking  
**DETAIL A**



Street Sign  
**DETAIL B**

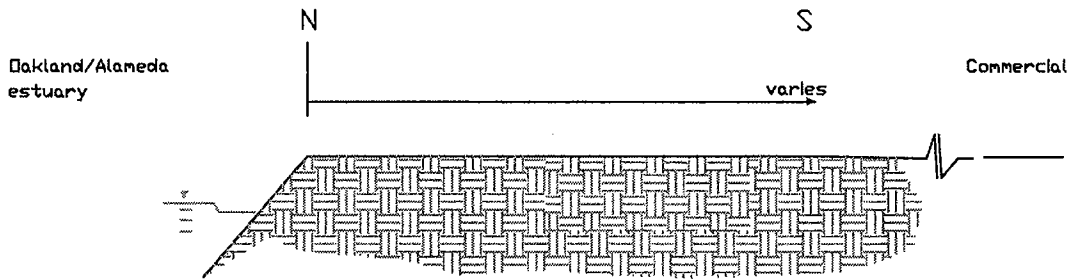
NO TRANSIT CORRIDOR ALONG THIS SECTION

Notes: 1) Facility Type - Sidewalk and Class III bike routes.

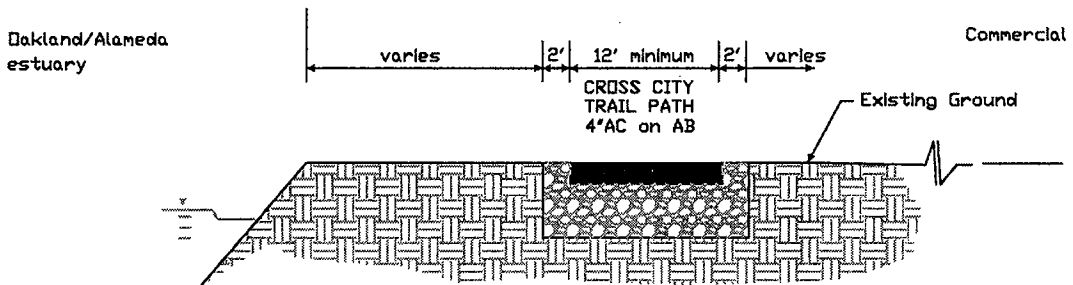
2) Property lines not shown

(no scale)

**RECREATION ALIGNMENT 2 - SECTION O-O**  
Pacific Avenue  
Sherman Street to Walnut Street



**EXISTING SECTION**



**PROPOSED SECTION**

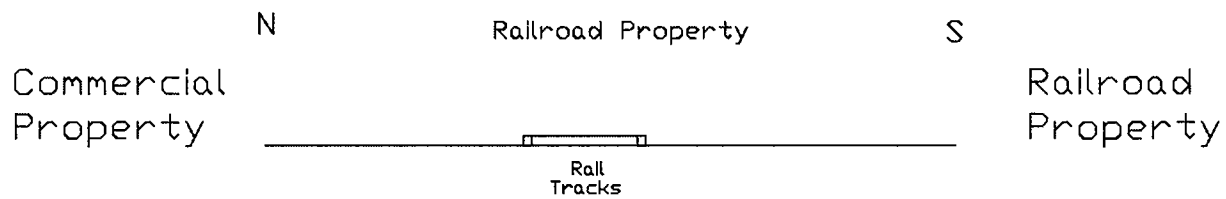
NO TRANSIT CORRIDOR ALONG THIS SECTION

Notes:

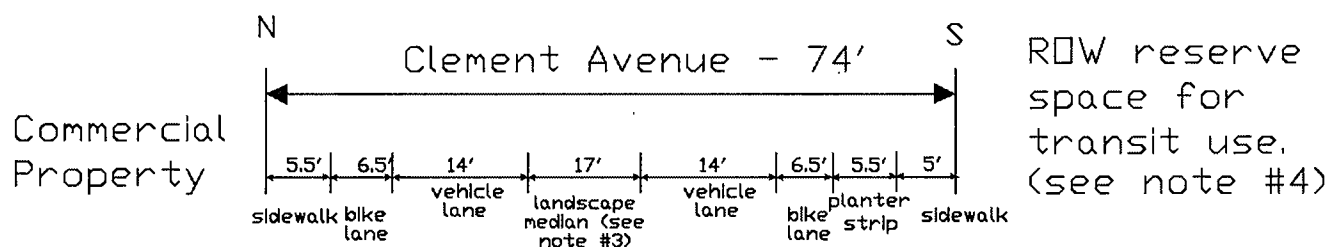
- 1) Facility Type - Recreational Multiuse Shoreline Class I path.
- 2) Property lines not shown
- 3) Facility within BCDC Jurisdiction.

(no scale)

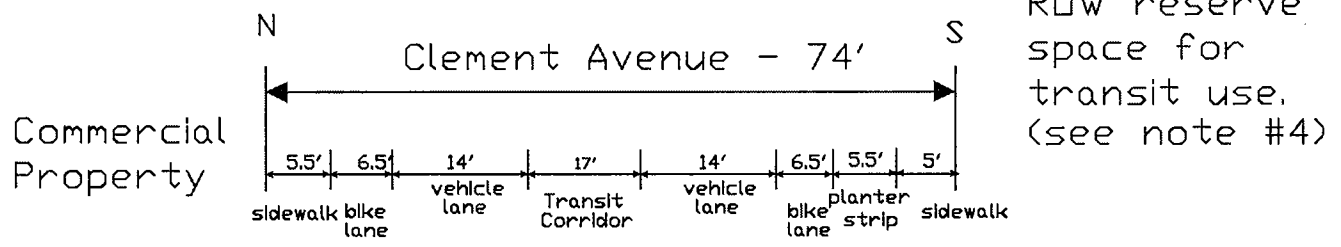
**SECTION P-P**  
Recreational Shoreline Path  
Marina Cove to Tilden Way



**EXISTING SECTION**



**PROPOSED SECTION WITHOUT TRANSIT CORRIDOR**



**PROPOSED SECTION WITH TRANSIT CORRIDOR**

Notes:

- 1) Facility Type - Sidewalk and Class II bike lanes.
- 2) Property lines not shown
- 3) Landscaping median reserved for future transit corridor.
- 4) Reserve space for transit platform and/or parking. Limit - triangular area Broadway/Tilden/Clement.

(no scale)

**COMMUTER ALIGNMENT - SECTION Q-Q**

Clement Avenue  
Broadway to Tilden Way



# **APPENDIX E**

## **Public Comments**

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### **PUBLIC COMMENTS**

#### Planning Board

*Discussion from April 25, 2005 Planning Board meeting:*

In response to an inquiry by Ms. McNamara, Ms. Hawkins explained the difference between commuter alignment and recreational alignments #1 and #2. She noted that in the past, Bike Alameda has proposed a bicycle boulevard down Pacific, which would enhance bicycle opportunities by creating less of a desired route for vehicles.

Mr. Lynch did not believe that a bike rider considered a Class 1, 2 or 3, but that they moved to avoid traffic upon perception of that traffic. As bike paths are being created, he suggested that other traffic calming techniques be considered that are not currently in place, and that may mean additional inconvenience in terms of travel time for vehicles.

Ms. Hawkins advised that the Transportation Master Plan will feature a grid system for vehicles, pedestrians, and bicyclists.

In response to an inquiry by Mr. Piziali regarding funding, Ms. Hawkins replied that they had a grant in to the MTC for \$2 million, for Atlantic to Webster to Main. She noted that they would pursue grants whenever they were available, and that the feasibility study provided the needed weight as the grant-seeking process goes forward. She noted that the grant would make a bare-bones trail with some landscaping possible; they would find out within the next week. She was optimistic about the chances of getting the grant.

Ms. Kohlstrand wished to ensure that policies ensuring bicycle uses and future transit system rights-of-way were preserved in the plan. She noted that there would be limitations to getting a continuous trail along the waterside, but believed it should be reflected as an ultimate goal to have a pathway designated along the waterfront.

Ms. Hawkins noted that the entire length was examined during the study, and a 17-foot width was reserved for potential Bus Rapid Transit or rail.

Ms. McNamara did not believe the costs of removing the rails were included in the estimates. Ms. Hawkins detailed the costs contained in the estimate.

President Cunningham inquired about the aspirations of the trail, and whether the text allowed for modifications or improvements. Ms. Hawkins replied that it was a corridor that would connect residential with commercial, and that surrounding businesses may wish to contribute to it because of their proximity to the trail.

President Cunningham inquired whether the bike path would be adopted in a landscape strip, and whether that would be a general policy. He referenced the section by Starbucks. Ms. Hawkins replied that was the most difficult section in the whole alignment. In trying to accommodate that

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option, along with the pedestrians, the landscaping was sacrificed. If that area is not used for the bus rapid transit corridor, it would not be sacrificed. She noted that would not be a typical policy.

### Transportation Commission

*Discussion from February 23, 2005 Transportation Commission meeting:*

Commissioner Parker asked if the proposed routes would undermine the ultimate goal of shoreline route. Staff Bergman responded that the shoreline route is the preferred recreational route.

Staff Bergman noted that the City has applied for funding from the Metropolitan Transportation Commission for funding for the first phase of the Trail, from Main Street to Webster Street.

Staff Bergman stated that Lucy Gigli of BikeAlameda had expressed concerns regarding the proposed striping and lane widths on Clement Avenue. He distributed the letter from Ms. Gigli to the Commissioners.

Mr. Spangler noted that there is an additional former railroad right-of-way east of Constitution Way that connects to the former FISC site, which could potentially connect to the Cross Alameda Trail.

Chair Knox White suggested that the Commissioners e-mail comments to staff prior to the April meeting, and the comments would be brought to the Commission at that time for approval.

*Discussion from March 23, 2005 Transportation Commission meeting:*

Chair Knox White noted that the proposed bike lanes on Clement Avenue are only five feet wide, yet the connecting bike lanes on Atlantic Avenue are six feet wide. He stated that the proposed travel lanes on Clement Avenue are 12 to 14 feet wide. Chair Knox White noted that Caltrans requires lanes to be less than 12 feet wide on highways, and stated that the travel lanes on Clement Avenue could be narrower, even with the presence of a truck route. He recommended that the bike lanes be widened to six or seven feet in width along this corridor.

Chair Knox White recommended that the proposed off-street paths include separate bicycle and pedestrian facilities since sufficient space appeared to be available. This should help avoid conflicts, as trail users would not have to compete for space as they currently do along the path adjacent to Shoreline Drive.

Commissioner Krueger also recommended that wider bike lanes be used along Clement Avenue. He noted that at times he bikes and rides along Atlantic Avenue, which has 12-foot travel lanes and six-foot bike lanes, and believes that this configuration works well. Commissioner Krueger noted that this section of Atlantic Avenue is a designated truck route, similar to the proposed Clement Avenue extension. He expressed concern that wider travel lanes would encourage speeding by motor vehicles.

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### Public Comments

BikeAlameda (comments submitted by Lucy Gigli, President of BikeAlameda):

“We recommend that optimum bike lane widths from the Alameda Countywide Bike Plan be used. Funding for completion of this project will be heavily dependent on grants. A large part of that may be the Alameda County Transportation Improvement Authority Measure B Discretionary funds. The recommendations are found in Table 6-2. The more that our plans align with recommendations in the Countywide Bike Plan, the more likely we are to receive their grant funds.

“It is critical that portions of the bike lanes on Clement Avenue that will continue to have parking allow adequate distance from car doors. 13 feet is the minimum parking plus bike lane width for a posted speed below 35 MPH, 14 feet for faster speed limits.

“These on-road portions of the Cross Alameda Trail are intended to be pleasant and inviting. They are also continuations of off-road paths. It is important to make those portions even, without parking as comfortable as possible. Wider widths of 6 feet, where street widths allow will be more attractive and inviting to all bicyclists.”

Jon Spangler:

*From April 25, 2005 Planning Board meeting minutes:*

[He] commended the Public Works staff for their efforts in finding a logistical solution for a difficult trail. He noted that it would provide an east-west transportation link for pedestrians and bicyclists; it will provide better links to BART; it will provide the possibility of a bus-rapid transit or ultralight rail right-of-way. The eventual development of Alameda Point would make those items necessary. He noted that it would be easier to address the section between Main Street and Webster Street, which he believed would have a great effect on the Webster/Atlantic intersection, if grant money could be obtained.

Mr. Spangler noted that the Marina waterfront access on the Estuary was very important to many people. He noted that the concerns were: toxic pollution from industrial uses, such as shipyards, the ownership issues, and the security for all the boat owners, particularly those who reside on liveaboards. He noted that Pacific was a Class 1 route, which was signed, and with no extra line or striping on the pavement; stop signs were placed on every block to maintain pedestrian safety and lower traffic speeds. He noted that those stop signs were obstructions for bicycle commuters, and a bicycle boulevard would allow straight-through, non-stop bike traffic. He believed that would enhance safety.

Monika Slay Pitchford:

“I would like to express my support for the Cross Alameda Trail. However, I would like to suggest that the trail in photo #4, 5, and 6 be altered so that it is located along the southern length of the Belt Line property. This will provide more convenient access for the residents of the streets dead-ending at the Belt Line.”

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Debra Arbuckle:

“The NWSP designates the southern side of the property as the best location for the pathway. A broad section of interests were involved in making this choice. An important note is the contaminated portion of the RR site is on the northern side.

“On the use of Pacific Ave. for recreational bikes and walking. This street is so much quieter traffic wise and there fore much safer and a much more enjoyable walk or ride.

“Adding one block out of the way is really worth the effort unless only being used for a couple blocks. Pacific is really a much better experience for someone not in a car.

“Ask the neighborhood we all walk or bike up one more block to use Pacific.

“Use of

- Educational/Interpretive signs very nice idea to include
- ADA or different use planning for the various sections of the trail tailored to specific to that areas use.
- Varied landscaping along with variety in views and terrain.

“These type of use issues properly addressed give the trail that extra bit of class.

“Section 3 on Costs between Constitution and Sherman it would seem within reasonable expectations to assume two costs here. We may very well prevail on the lawsuit with ABL. So how about an estimate assuming we don't have to pay for the right of way?

“The Annapolis Trail is an excellent example of what the citizens and neighbors involved in this issue and the larger Open Space issues here in Alameda want to do. The Neighborhood Network which is basically but not exclusively a group of neighbors from the Streets on the South boundary of the RR Yard have stated they would like participation. Way back when the Developer Mike Valley came to us we had several meeting and the almost all the neighbors wanted a greenway with path on the South side of the property (At the end of the dead end street away from traffic). The developer had planned just that with neighborhood input. The neighborhood has been very supportive.”

Donald K. Hardiman:

[Regarding the following statement in the Feasibility Study:] “ ‘Although no development is planned at this time, the Northern Waterfront General Plan Amendment recommends that the ABL property be established as open space if funding is available. Otherwise, it is recommended that no more than 100 residences’

“--100 Units is too dense when considering all the development east of Sherman and Buena Vista; planned for near Grand Marina; underway on Atlantic by College of Ala.; as well as traffic into the Marina Village workplaces and in general.

“Keep ABL railyard open space at all costs. Keep roads south of yard closed to through traffic.”