

Supplement to Final Report **Bay Trail Feasibility Study**

prepared for the
City of Menlo Park

January 6, 2005



funding assistance provided by
San Francisco Bay Trail,
a project of the Association of Bay Area Governments and
the Coastal Conservancy

project assistance provided by
Callander Associates Landscape Architecture, Inc.
landscape architecture
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Introduction

This report is a supplement document to the Final Report: Bay Trail Feasibility Study for the City of Menlo Park dated November 30, 2004. The information included in the following chapters contains the background information and descriptions of the concept trail alignments presented in the Draft Bay Trail Feasibility Study, dated June 18, 2004. This information and planning process led to the determination of the Preferred Alignment. At the time of this document, the meeting minutes for the City of East Palo Alto Transportation Commission meetings and City Council meetings were not available. The City of Menlo Park City Council meeting minutes were not yet available at this time either. This document is to be used as a reference tool for the Bay Trail Feasibility Study planning process that led to the selection of Bay Trail Option 2 as the Preferred Alignment concept trail.

Property, Legal and Management Issues

WORKING PAPER: PROPERTY, LEGAL AND MANAGEMENT ISSUES MENLO PARK BAY TRAIL FEASIBILITY STUDY

August 29, 2003

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Bay Trail Feasibility Study
Final Report: Supplement

PROPERTY, LEGAL AND MANAGEMENT ISSUES

PROPERTY OWNERSHIP IN STUDY AREA

Property in the vicinity of the proposed Menlo Park Bay Trail alignment falls under a variety of ownerships. This section discusses ownership of parcels that could fall within or adjacent to the trail alignment. Property ownership is identified on **Figure 1, Property Ownership in Study Area**.

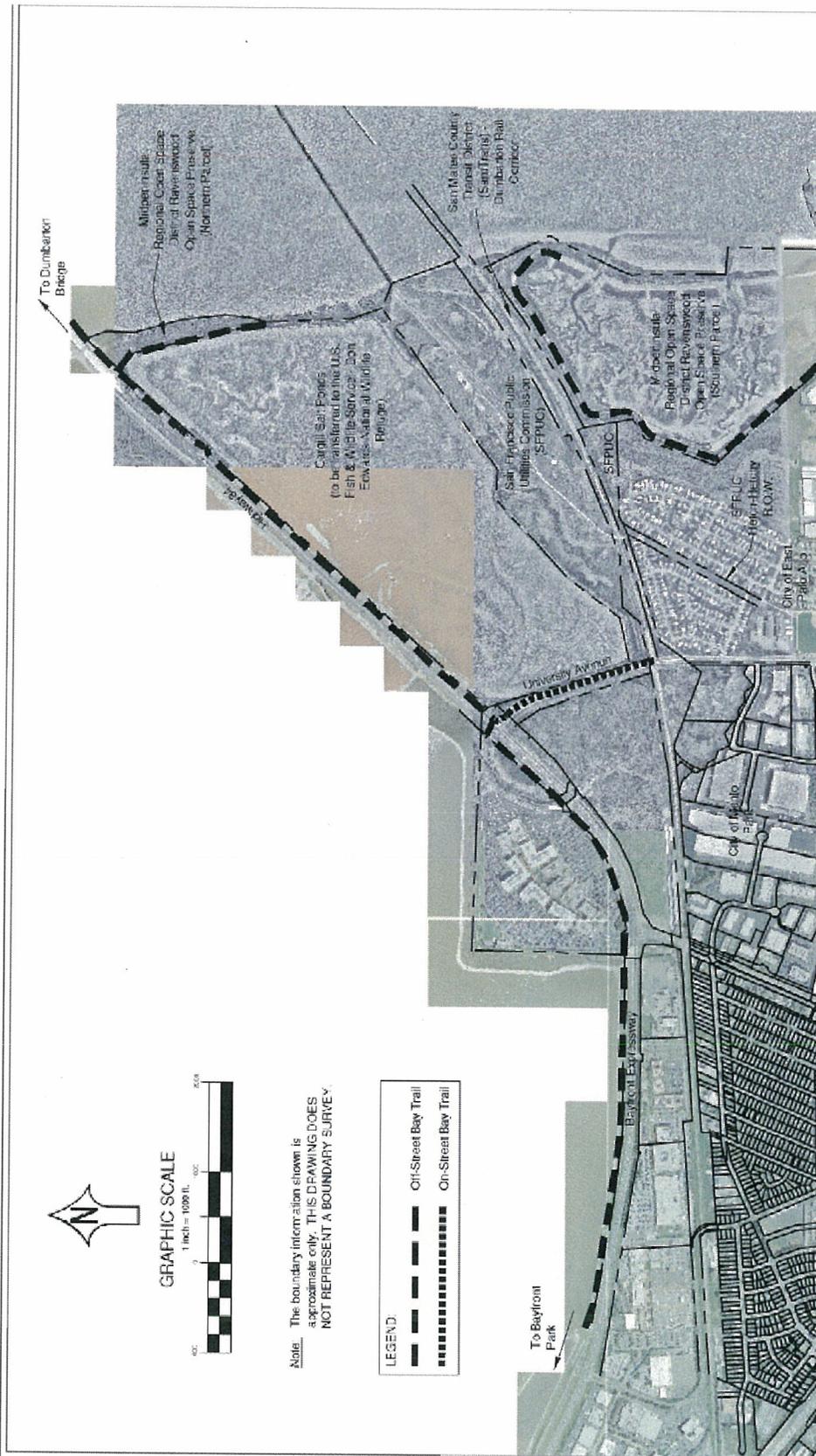
HETCH HETCHY LINE

San Francisco's Hetch Hetchy water system is a 167-mile, gravity-driven network of dams, reservoirs, tunnels, pump stations, aqueducts and pipelines that collects Tuolumne River runoff in the Hetch Hetchy reservoir in Yosemite and transports it to the San Francisco Bay Area. The San Francisco Public Utilities Commission (SFPUC) manages and operates the Hetch Hetchy system. In 2000-2001, the system delivered approximately 260 million gallons of water per day to retail customers in San Francisco and to 29 wholesale buyers that supply communities in San Mateo, Santa Clara and Alameda Counties. In total, SFPUC delivers water to a customer base of about 2.4 million people in the region.

The Hetch Hetchy system crosses the San Francisco Bay in two pipelines just south of the Dumbarton Bridge. On the east side, the pipelines extend above ground through Newark Slough and out into the Bay, then dip below the surface for the Bay crossing. The pipelines resurface on the western side of the Bay and come onto land just north of the San Mateo County Transit District railroad right-of-way (discussed below). The pipelines extend above ground for approximately 2,400 feet and then enter a pump house; the pipelines continue below ground west of the pump house.

The SFPUC property in Menlo Park is a wedge-shaped parcel encompassing approximately 75 acres, bounded by the Midpeninsula Open Space District and Cargill properties on the north, the San Francisco Bay on the east, and the Caltrain right-of-way on the south. The Hetch Hetchy pipeline easement continues south, extending along an 85-foot right-of-way through the single-family residential neighborhoods of East Palo Alto

Portions of the SFPUC property were leased to the Peninsula Sportsmen's Club for trap and skeet shooting from 1939 until 1994. The Sportsman's Club activities left lead shot, clay pigeon debris, and shot gun shell casings on approximately 33 acres of the SFPUC property, and on portions of an adjacent levee and salt pond owned by Cargill Salt. In 1994, the Regional Water Quality Control Board (RWQCB) issued a cleanup order requiring the Club to investigate and, if necessary, clean up the site. When the Club abandoned the site, the SFPUC became liable for the cleanup order. Currently a number of technical studies have been completed by the SFPUC and a three-phase clean up and wetland restoration effort called the Baylands Recovery Project is underway. Clean-up and restoration activities are expected to be completed by 2005.



**Figure 1: Property Ownership in Study Area
 Menlo Park Bay Trail Feasibility Study**

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DUMBARTON RAIL CORRIDOR

The Dumbarton Rail Corridor is an 11-mile railroad line owned by the San Mateo County Transit District (SamTrans). The corridor links Redwood City (San Mateo County) with Newark (Alameda County). At Redwood Junction, the Dumbarton Corridor connects with the Caltrain peninsula line, and at Newark Junction it connects with the Union Pacific's Coast Line freight corridor between Oakland and San Jose. The Dumbarton Corridor also connects to the east-west Union Pacific Centerville Line, which continues east from Newark Junction for 5.2 miles to Niles Junction. The corridor consists of single track with two tracks at several locations, 11 highway grade crossings (all equipped with flashing lights and gates), the Route 101 underpass, and ten major bridges (the Dumbarton swing bridge, eight approach trestles; and the Newark Slough swing bridge).

The Dumbarton Rail Corridor was constructed by the Central Pacific Railway and opened for service on September 12, 1910. Various events, including the development of the Port of Oakland, the construction of the Benicia Rail Bridge and the general decline of rail transportation after World War II, led to the reduction and eventual suspension of rail traffic over the Dumbarton rail bridge. Southern Pacific Railroad (SP) started a rehabilitation of the bridge in the 1960s, but the decline of traffic from the Port of San Francisco at the same time led to a halt in the rehabilitation work.

In 1994, the San Mateo County Transportation Authority (SMCTA) purchased the Dumbarton Rail Corridor right-of-way for future transportation purposes and/or to activate rail service. The SMCTA, with assistance from the California Department of Transportation (Caltrans), paid \$6.9 million for the right-of-way. The agreement between these two agencies designated SamTrans as the agency to hold title to, manage and maintain the railroad bridge because it is a permanent agency, while the SMCTA will be dissolved when the sales tax expires in 2008.

A proposal to reactivate the Dumbarton Rail Corridor to carry nine daily passenger trains across the rail bridge is currently being evaluated by the affected transportation agencies, which include the Alameda County Transportation Authority, Caltrain, SamTrans, and Santa Clara Valley Transportation Authority. The service would connect the Union City BART station with the Redwood City Caltrain Station, with new stations proposed in East Palo Alto and Menlo Park. Caltrain would be expected to operate the rail line, with construction and operating costs shared by Alameda County, Santa Clara and San Mateo Counties.

CARGILL SALT PONDS

Cargill Salt owns an approximately 242-acre parcel ("Cargill parcel") bounded by University Avenue on the west, Highway 84 on the north, the SFPUC property on the south, and the Midpeninsula Regional Open Space District property on the east. The site was formerly used for evaporation ponds for the Cargill salt production operations. In January 2003, the Cargill parcel was agreed to be sold to the U.S. Fish and Wildlife Service (USFWS) as part of a 16,500 acre, \$100 million land transfer of several Cargill salt ponds in the South San Francisco Bay and along the Napa River. The Cargill parcel is identified as Pond SF2, part of Cargill's West Bay evaporating ponds. The Cargill parcel is intended to become part of the Don Edwards San Francisco Bay National Wildlife Refuge, a 21,500 acre natural habitat refuge of uplands, marshes, salt ponds, and a freshwater tidal slough located in the southern tip of the San Francisco Bay. The southern boundary of the Cargill parcel is adjacent to the SFPUC property and the southern area has been impacted by the Peninsula

Sportsmen's Club activities and is to be included in the clean-up and restoration activities that will take place on the SFPUC parcel. As noted in the Conveyance Agreement for the Cargill Salt transfer, the USFWS will not take title to Pond SF2 until lead shot and clay pigeon debris are removed from the property by the SFPUC. The transfer of the Cargill parcel will be subject to a public access easement that will run south from Highway 84 along the eastern edge of the parcel with the Ravenswood Open Space Preserve to the east, then heading east and running along the southern edge of the parcel with the SFPUC parcel to the south. Additionally, Cargill Salt will retain a ten-foot wide access easement to service their pipeline that runs under the Bay.

EAST PALO ALTO SINGLE FAMILY RESIDENCES

A portion of the City of East Palo Alto is located immediately south of the project area, with the city limits extending to the SamTrans railroad right-of-way on the north, University Avenue on the west, and the Ravenswood Open Space preserve on the east. This area of East Palo Alto is comprised of a single family residential neighborhood.

RAVENSWOOD OPEN SPACE PRESERVE

The Midpeninsula Regional Open Space District (MROSD) manages the 370-acre Ravenswood Open Space Preserve. The preserve is comprised of two noncontiguous areas located south of the Dumbarton Bridge and adjacent to San Francisco Bay. The larger, southern area is located near Cooley Landing in East Palo Alto, south of the Dumbarton Rail Line. This area of the preserve consists of a former salt pond, surrounded by levees. Public access improvements have recently been completed on this portion of the preserve. The project was a joint effort by San Mateo County and the District, funded by the Coastal Conservancy. Improvements include a bicycle and pedestrian trail along the levee surrounding the pond, a 12-car parking lot, and two observation decks. The trail and observation decks are wheelchair accessible.

The smaller, northern portion of the preserve lies adjacent to and south of the Dumbarton Bridge approach, just east of the Cargill Salt evaporation ponds. This portion of the preserve includes about 100 acres of wetlands and an adjacent levee. Preserve visitors can hike along the unpaved levee for about one-half mile. Parking is available off of Highway 84 near the Dumbarton Bridge Fishing Pier.

Connecting the existing Bay Trail in the southern part of the Ravenswood Preserve, with the unimproved trail along the levee top in the northern part of the Preserve is a key goal of this Bay Trail Feasibility Study.

EASEMENTS AND LICENSES

Before a trail can be developed within the Study Area, the lead agency must acquire the legal right to use the preferred corridor. In the case of the Menlo Park Bay Trail, connecting between the existing Bay Trail segment at the southern area of Ravenswood Open Space Preserve to University Avenue, or to the existing trail segment at the northern portion of Ravenswood Preserve would require traversing property owned by the SFPUC, SamTrans, and the USFWS, and a potential at-grade crossing of a rail corridor that is planned to be activated in the future. Given the existing ownerships and planned uses, fee-simple (i.e., full ownership) acquisition for the entire proposed trail alignment is not considered a viable option, particularly for the SFPUC and SamTrans parcels which are not expected to be put forth for sale. (The USFWS may develop trails through the Cargill Salt Pond property in the future as part of integration of that parcel into the Don Edwards National Wildlife Refuge.) Accordingly, easements and licenses are left as the most common means of assembling the proposed trail corridor. How these property agreements are written can affect the management and operation of the trail. This section discusses the most common type of property agreements used in multi-use trail development.

EASEMENTS

A permanent easement is a non-possessory interest held by one party in another party's land in which the first party is accorded practical use of such land for a specific purpose or purposes. Easements typically are acquired when the landowner is willing to forego use of the property and development rights for an extended period, or even in perpetuity. The advantage to the landowner is that they retain title to the land while relinquishing much of the liability and the day-to-day management of the property. The advantage to the trail manager is that the price is often lower than a fee interest acquisition, but the interest is sufficient for trail purposes and practical control of surface uses. Moreover, the easement is attached to the property title, so even if the property is sold, the easement survives. Nonetheless, it is important to negotiate the easement agreement with ease of trail management in mind. A model trail easement should:

- Guarantee exclusive use;
- Be granted in perpetuity;
- Include air rights if there is any possible need for a structure;
- Broadly define purpose of the easement and identify all conceivable activities, uses, invitees and vehicular types allowed to avoid any need to renegotiate with fee interest owner in future;
- State that all structures and fixtures installed as part of the trail are property of grantee; and
- Limit grantor indemnification to trail-related activities only.

Because easements are legally recorded documents, it is imperative that both the trail manager and the property owner (e.g. SamTrans, SFPUC) retain an attorney to assure that the easement is drafted correctly and is a legally enforceable document.

LICENSE AGREEMENTS

A license is usually a fixed-term agreement that provides limited rights to the licensee for use of the property. Typically, these are employed in situations when the property cannot be sold (e.g., a publicly owned, active electrical utility corridor), or the owner chooses not to sell because he wants to retain use of and everyday control over the property. The major advantage to the trail management authority is that it can avoid a large outlay of cash, yet still obtain sufficient interest in the property to build and operate a trail. However, with a license agreement the management agency will have far less control over use of the property, and may be subject to some stringent requirements that complicate trail development and operation. In many instances, the trail manager will not be able to obtain exclusive use of the property.

Table 1 lists the key components that should be covered in a license agreement.

Table 1
Key Components of a License Agreement

Subject	Why Necessary
Term length that satisfies funding agency	Without a minimum number of years guaranteed, many funding agencies will not obligate grants. The minimum is likely to be at least 25 years.
“Option to renew” clause	Inclusion in the agreement will increase the chance that the trail will have a permanent home because if the trail is popular, the landlord will be motivated to renew the lease
Description of all conceivable activities, uses, invitees, and vehicular types allowed	Include all contingencies so as to avoid the need for future amendments.
A plan review and approval process for the trail design	Be as specific, as possible, particularly in setting time restraints. The point is to avoid letting plan review unnecessarily stall trail development.
Clear, unambiguous language on maintenance responsibilities for property	This can be an issue if some areas of a corridor are “joint-use.” Resolution of details early in the process is needed to avoid budgetary surprises later
Temporary trail closure process	Define situations that warrant closure by the property owner. This ensures that the property owner will not close the trail at will, yet preserves the ability of the owner to continue to manage their property and interest in concert with public expectations of trail availability.
Insurance, liability, and indemnification	This is obligatory in any kind of license or lease arrangement for trail purposes. It is highly desirable to have an attorney to write or review the language in this section.
Narrowly tailored environmental liability	Exclude language that shifts aspects of environment liability that pre-date the trail to the trail managing entity.
Specific limits on other uses of licensed property	Limitations are necessary to preclude the opening of the trail corridor to other incidental uses or events that are not compatible, or possibly harmful, to the trail.
Carefully defined revocability clause	As a goal, parties to the agreement should attempt to narrow “cause” for revoking the agreement to specific actions, and be sure there is a process in place that limits the ability of the parties to the agreement from acting preemptively.
Process for amending agreement	This is essential in case some aspect of the agreement is malfunctioning or an unexpected issue emerges.

Recommendation:

The trail management agency should explore both easements and license agreements for development the Menlo Park Bay Trail through SFPUC and SamTrans property. An easement in perpetuity would be the preferred method of acquiring a property interest for developing the Bay Trail. However, due to the utility and railroad interest in maintaining control over the property, an easement may not be feasible, and a long-term license agreement should be explored.

LIABILITY AND INDEMNIFICATION

Fear of lawsuits is prevalent in our society, so it is no surprise that liability is often perceived as a major concern in trail development. In fact, research has shown there are no unusual problems associated trails with respect to legal liability. This section discusses specific approaches to managing the liability and indemnification of the trail management entity, as well as adjacent property owners.

LIABILITY AND THE TRAIL MANAGEMENT ENTITY

The entity that builds, operates and/or manages a trail is the most likely target of a lawsuit should an injury occur on the trail. There are a number of protections for the trail manager.

Insurance: Most trails are owned and managed by a public agency or entity that is self-insured under an umbrella policy that covers all governmental activities. Thus there is no additional premium cost associated with the operation and maintenance of a trail. However, while insurance may cover costs associated with lawsuits, it neither prevents suits nor minimizes the risk of court judgments that can cost the public entity a considerable sum of money.

Governmental Tort Claims Acts: Some states have legislation related to civil lawsuits that establish the limits of government liability for injuries to persons or damage to property resulting from the acts or omissions of government officials. The trail manager should inquire with an attorney on whether the state has such a law.

Risk Management: To minimize liability, it is critical to adhere to established standards in trail design, signage and maintenance. This is especially important because a substantial proportion of trail-related lawsuits stem from accidents between trail users who try to blame the incident on the design of the trail. In some states, substantial immunity is afforded public agencies that design trails in accordance with widely accepted standards or guidelines, such as the American Association of State Highway and Transportation Officials (AASHTO) Guide for the Development of Bicycle Facilities. Other practical measures include:

- Post warning signs for known hazards that are not easily eliminated;
- Post and enforce trail regulations;
- Enact a trail maintenance plan and maintain accurate records;
- Maintain the trail to the level defined in the maintenance plan;

- Inspect the trail regularly for hazards;
- Promptly evaluate and address hazards and maintenance problems reported by trail users; and
- Ensure that there is adequate emergency access to the trail.

These common-sense precautions are indicative of good faith and responsible stewardship of the trail facility, and likely will reduce the number of successful lawsuits or the size of settlements.

ABUTTING PROPERTY OWNERS

One of the most persistent patterns in the development of trails is the belief of property owners abutting the trail corridor that they will become targets of lawsuits if the trail is developed. In the case of the Menlo Park Bay Trail, a segment of the proposed alignment extends adjacent to a neighborhood of single-family homes in East Palo Alto. The liability fears of adjacent residents, which has largely proved groundless, is one of the major hurdles trail managers must face during the trail planning process. This concern usually evaporates once the trail is open and operating. Nonetheless, nervous neighbors can become an insurmountable obstacle in the early stages of trail development, so it is important to be able to explain exactly how liability will be addressed.

For an adjacent property owner, the main protections against lawsuits are trespassing laws. Trail users that wander off the trail corridor onto private property are afforded the least “duty of care” in most states. Landowners generally are not deemed responsible for unsafe conditions, unless these are the result of deliberate or reckless misconduct. However, because a greater duty of care is owed child trespassers in many states, trail managers may want to advise abutting property owners to remove any “attractive nuisance” accessible from the trail. There are other common sense precautions abutting property owners might consider to avoid putting themselves at risk of lawsuits. For example, an adjacent property owner located on a trail curve should avoid placing a shrub or a fence right at their property line, especially if there is little clearance between the edge of trail and the property line. This could create a visual obstruction in the sight lines of trail users that could contribute to an accident. Trail managers (who may also be liable in this situation since they failed to assure adequate clearance in their trail design) should encourage property owners to avoid these and other similar scenarios. In addition, neighbors should make sure they have standard liability coverage – trail or no trail. But there is no indication that owning property next to trails requires additional or special insurance coverage. According to the Rails-to-Trails Conservancy, “there are no special or surprising problems associated with rail-trails or trails in general from the point of view of legal liability or risk management.”

Recommendation

During the planning phase, the trail manager should make available to abutting property owners an “information sheet” that discusses risk management and outlines the common sense steps property owners might want to take. By separating fact from fiction this could help reduce adjacent concerns over trail impacts.

SAFETY AND SECURITY ISSUES

The proposed Menlo Park Bay Trail alignment could be routed within a portion of the SamTrans Dumbarton Rail right-of-way. Although this rail corridor is currently inactive, re-activating passenger rail service across the Dumbarton Bridge is planned by SamTrans in the future. Development of a trail next to an active rail line (known as a “rail-with-trail” or RWT) requires consideration of a variety of unique safety, security, and operational issues.

Specifically, the alignment from the Bay Trail in the southern parcel of the Ravenswood Open Space Preserve northwest toward University Avenue could connect to and extend along the south side of the rail right-of-way. East of University Avenue, an asphalt service road exists on the south side of the tracks. The service road is used by both SFPUC and SamTrans, and crosses the tracks at the Hetch Hetchy right-of-way and extends diagonally northeast into the SFPUC property toward the Hetch Hetchy pump station. East of the service road, an unpaved service road continues on the south side of the rail tracks, roughly paralleling the northern boundary of the adjacent residential neighborhood. As the rail line extends east past the neighborhood, the ballast becomes built up onto a levee as it heads toward the wetland areas bordering the Bay. The possibility of developing a trail through this area would depend on several issues, including the required setback from the rail line, the ability of the raised ballast/levee to accommodate a trail given the required setback, and management/operational issues related to using the existing paved service road as a trail.

In addition to the rail line, the trail alignment could extend adjacent to, or possibly through, portions of the SFPUC Hetchy Hetchy parcel. The SFPUC has stated that security is a critical issue in the vicinity of the Hetch Hetchy line. Currently the overall security of the Hetch Hetchy site is being evaluated by the SFPUC. During this security evaluation, which is expected to take approximately six months, the SFPUC has indicated that it will not provide any detailed information about the Hetch Hetchy parcel, nor consider any proposals to develop a trail through this property. They did state that they would be willing to engage in a discussion regarding trail development once the security evaluation had been completed. In general, the SFPUC does not want to encourage increased public access near their facilities.

This section provides guidance for design issues related to the safety and security of the Menlo Park Bay trail, particularly related to its location along a future active rail lines and the SFPUC Hetch Hetchy property.

MINIMUM REQUIRED SETBACK FROM RAIL LINE

It should be noted that there are no national standards for the design trail facilities next to active rail lines available at this time. As such, none of the designs in this section should be construed as standards or guidelines. They represent best practices as derived from existing rail-with-trails and research on their performance.

Minimum setback from the rail line is perhaps the most important feature of the trail design. Setback is measured from the nearest edge of the trail to the centerline of the nearest railroad track. No empirical data has been discovered indicating the precise setback that is recommended between a public trail and an active railroad, and a review of 61 existing rail-with-trails shows wide variance in

the setback distance. Researchers attempted to determine if narrower setback distances have a direct correlation to safety problems; however, based on the almost non-existent record of claims, crashes, and other problems on these RWTs, they were unable to conclude a strong correlation between setback and safety. At an absolute minimum, the setback must keep trail users outside the “dynamic envelope” of the track, defined as “the clearance required for the train and its cargo overhang due to any combination of loading, lateral motion, or suspension failure.” Additionally, in corridors with regular use of maintenance equipment that operates outside the dynamic envelope, the setback distance should allow adequate clearance between the maintenance equipment and the trail.

The Federal Railroad Administration (FRA) already publishes minimum setback standards for fixed objects next to active railroad tracks, the distance between two active tracks, and adjacent walkways (for railroad switchmen). These published setbacks represent the legal minimum setbacks based on the physical size of the railroad cars, and are commonly employed along all railroads and at all public grade crossings.

The California Public Utilities Commission (CPUC), which regulates railroad activities within California, also has specific minimum setbacks for any structures or improvements adjacent to railroads, including any sidewalk or trail that parallels active railroad tracks. According to the CPUC standards, minimum distances from the centerline of an active railroad to the outside edge of a trail or bikeway is 8.5 feet on tangent and 9.5 feet on curved track (General Order No. 26-D). Wherever possible, the CPUC recommends that the trail be set back at least 25 feet from the centerline of the tracks, or at least 15 feet when there is a vertical separation of more than 10 feet.

SamTrans, who in 1994 purchased the Dumbarton Rail Corridor right-of-way for future rail service, has stated that it will not consider any trail improvements less than 15 feet from the centerline of the track alignment. It should be noted that future rail service on the Dumbarton corridor would involve a double-track configuration; therefore the actual setback would depend on the final location of the double track within the existing right of way. SamTrans has indicated that a double track configuration would require a minimum separation of 15 feet between the track centerlines. Assuming that the double track would be constructed equidistant from the current single track, the centerline of the southern track would be an additional 7.5 feet from the location of the current track.

Recommendation:

For the Menlo Park Bay Trail, it is recommended that where sufficient right-of-way is available the trail shall have a minimum 25-foot setback (from the track centerline).

It appears that the trail would be able to meet required setback (25 foot setback, plus the additional width required for the double track configuration) by using the paved and unpaved service roads along the southern side of the tracks east of University Avenue. This alignment would locate the trail outside of the SamTrans right-of-way, and in SFPUC property. Both the paved and unpaved service roads would need to be upgraded to meet Class I multi-use trail standards, and to allow for joint use by service/maintenance vehicles and trail users.

East of where the unpaved service road curves away from the tracks and the rail line begins to be built up along a levee, achieving the minimum setback will not be possible on the existing narrow

levee. However, through this area it does not appear that there is enough room on the ballast/levee even to double track the rail line. In this case, it appears that the entire ballast/levee would need to be reengineered and widened to accommodate the double track. This may present an opportunity to allow for a trail along the tracks in this location. The main issues with widening the ballast/levee are related to wetlands that surround the rail line. At the time of a field visit in mid-summer, the area was generally dry, but during the wet winter months it is assumed that there is substantial standing water in the low-lying areas on both sides of the rail line. Alternately, if a trail cannot be accommodated on a widened earth levee, a boardwalk structure could be used to connect the trail to the existing Bay Trail in the southern parcel of Ravenswood Preserve.

FENCING AND BARRIERS

For segments of the Menlo Park Bay Trail that will run adjacent to the railroad corridor, installation of a fencing or barrier between the trail and rail line is recommended to prevent trespassing. In addition, although the speed and frequency of future trains that may run along the Dumbarton rail corridor is not known at this time, these trains will generate noise, dust, and vibration, which may be seen as a nuisance to adjacent trail users. Of the 61 known RWT facilities operating in the United States today, 71 percent have some type of physical barrier between the trail and tracks. The types of barriers in use include fences, walls, vegetation, grade differences and ditches.

Fencing should also be considered for trail segments areas adjacent to the SFPUC property, where security of the water supply infrastructure is of critical importance. Currently a barbed wired fence runs between the paved service road and the rail line. It is expected that if the service road were modified to serve as a multi-use trail, a new barrier would be put up to prevent trespass into the rail right-of-way and adjacent SFPUC property.

FENCES

Fences are the most common type of physical barrier used along trail corridors to prevent trespassing. A number of fencing types are available, ranging from simple low wood rail fences to tall, heavy-duty steel fences. Selection of a fencing type depends on the amount of trespassing anticipated along a given segment of the RWT, and the aesthetic qualities desired. Typically there is a trade-off between security and aesthetics: the more trespass-resistant a given fencing type the more visually unattractive it tends to be. Fencing style and material is a matter of local preference and railroad requirements. For the Menlo Park Bay Trail, a chain-link fence is expected to be the most appropriate fencing style. This inexpensive and ubiquitous fencing material is perhaps the most common fencing type, and is considered adequate for most situations to keep people on the trail and discourage trespassing. Most chain link fences are visually unappealing; however, vinyl-coated chain link fencing (in black or green) is often considered a more aesthetically pleasing alternative. A chain link fence with a plastic woven fabric or wood battens in the chain link material provides an additional solid-type barrier to help catch debris and provide wind and visual buffering.

VEGETATION

Whether natural or planted, vegetation can serve as both a visual and physical barrier between a track and a trail. The density and species of plants in a vegetative barrier determine how effective the barrier can be in deterring potential trespassers. A dense thicket can be, in some cases, just as effective as a fence (if not more so) in keeping trail users from trespassing onto adjacent property.

Planted barriers typically take a few years before they become effective barriers. Separation between the trail and the track may need to be augmented with other temporary barriers until planted trees and hedges have sufficiently matured.

Recommendation:

Due to safety and security issues, fencing should be installed in all locations where the Menlo Park Bay Trail alignment runs adjacent to the Dumbarton rail line or SFPUC property. All fencing should be located a minimum of 15 feet from the nearest track to allow for maintenance vehicles. With normal setback, fencing height should range between 36 inches and 48 inches, with 42 inches standard. Baffling material includes vegetation such as ivy or other vines, or a solid material such as wood. Regardless of fence type, railroad maintenance vehicles and/or emergency vehicles may need fence gates in certain areas to facilitate access to the track and/or trail. Fence design should be coordinated with SamTrams railroad maintenance personnel, as well as representatives from SFPUC.

MANAGEMENT ISSUES

Segments of the Menlo Park Bay Trail located along the SamTrams and SFPUC service road would be considered a joint or “shared-use” facility, defined as a paved trail open to the general public for recreation and non-motorized transportation purposes in a corridor that primarily serves other transportation or utility functions. Virtually all paved multi-use trails in the United States are shared-use facilities between the general public and maintenance vehicles. Trails require their own maintenance, emergency access, and security vehicles, ranging from light pickup trucks to heavy dump trucks.

The presence of the active rail line and a major water pipeline facility will be a dominant factor in the management and maintenance of the Menlo Park Bay Trail. The trail must be managed, operated, and maintained in a way so as to a) protect and secure the adjacent SamTrams and SFPUC infrastructure and operators; b) minimize costs to the SamTrams, SFPUC, and to the trail managing entity; and c) maximize the enjoyment and safety of the public. There are a number of unique considerations that must be taken into account when operating and managing a shared use trail facility, discussed below.

PROPERTY OWNERSHIP

It is important to note that the relationship of the parties in a shared-use corridor will be driven to a great extent by which entity holds the dominant property interest. Unlike most trail facilities where the trail managing entity owns the corridor and licenses other compatible uses, for many shared-use corridors it is the trail that is the incidental use and must conform to the dictates of the primary user, in this case SFPUC or SamTrams. In many of these cases the owner will be unwilling or unable to sell a fee interest or easement to the trail manager, particularly if the owner cannot completely separate their operations from the trail corridor and they want to retain the ability to cancel the incidental use. To maintain greater control on use and operation of shared physical space, typically a license or lease agreement is negotiated detailing the development and operation of the trail. In this case, that means the interests and concerns of SFPUC and SamTrams generally will take primacy over the trail in the overall operation of the corridor.

SECURITY AND PUBLIC SAFETY

Locating a trail facility proximate to an active railroad line and a major water pipeline inevitably raises question of safety, so understandably it is the number one concern of both trail managers and the utility/railroad. Key issues include the following:

Trespassing Reduction: If trail users are kept out of adjacent SamTrans and SFPUC property, most accidents can be eliminated. The key to trespassing relief appears to be good design, particularly providing as much separation as is feasible. If fencing is used for the trail to provide separation, it should be kept well-maintained, and any holes that develop should be quickly repaired. If a barrier of tall, thick vegetation has been installed, it should be kept pruned so that it does not obstruct trail or rail operations, yet provides a strong disincentive for trespassing onto rail property and illegal crossings of the tracks.

Security Patrols: It may be in the trail manager's best interest to organize security patrols of the corridor. The trail manager will be responsible for selecting the most appropriate means of patrolling their segment. It may be beneficial to patrol the trail using bicycle-mounted officers. Trail patrols may be supplemented by volunteers from local organizations, who could provide information to trail users and report problems to the authorities.

A summary of key security and safety recommendations related to trails adjacent to utilities and railroads is presented below.

- Adhere to the established design, operation, and maintenance standards presented in this document. Supplement these standards with the sound judgment of professional engineers and law enforcement officials.
- The SamTrans right-of-way and SFPUC property should be clearly posted 'No Trespassing' to keep trail users out of restricted areas. Appropriate fencing that discourages scaling by potential trespassers or a thick, tall landscape barrier should be provided.
- No Trespassing and other trail restrictions, including speed limit and motor vehicle restrictions, should be clearly marked. No Trespassing signs should be posted every 200 feet, with maximum fines of up to \$200 cited and supported by local ordinance.
- Clearly post the hours of trail operation. In developed areas, it is appropriate to limit hours of operation from 6 a.m. to 10 p.m. Penalties for violating these hours should be clearly identified. Random patrols should provide security on the trail after it is closed.
- Maintain adequate recording and response mechanisms for reported safety and maintenance problems. Thoroughly research the causes of each reported accident on the rail-with-trail. Respond to accident investigations by appropriate design or operation improvements.

- Provide fire and police departments with map of system, along with access points and keys/combinations to gates/bollards.
- Enforce rules of the road and other standard recreational guidelines.
- Provide emergency cell phones in isolated areas approximately every 2,500 feet, providing a direct linkage from the trail to local law enforcement agencies

MAINTENANCE

While most maintenance items for a trail located adjacent to a railroad or public utility facility are largely identical to any multi-use trail of the same surface, sub-grade and sub-base, if the railroad or utility owns the property and must use the trail section as an operations and maintenance access road, a number of other issues must be addressed:

Trail design: The trail surface should be wide enough to allow for a light vehicle to pass trail users slowly, including disabled persons, without either having to leave the paved surface. Typically, a 10-foot-wide pathway with a hard-packed shoulder would be a minimal width, although 12 feet is preferred. The trail agreement should state that the trail should be constructed to standards sufficient to support the expected range of equipment and activities to occur on the railroad or adjacent utility, that the railroad/utility will take reasonable care not to impact the trail or other improvements, including fencing and landscaping. Most trail agreements assign responsibility for any trail repairs or other related improvements to the trail managing entity.

Frequency of Access: This is a key issue, as it will determine the frequency of risk to trail users and/or the need to implement temporary trail closures. This must be addressed in any license or easement agreement. The greater the need to use the trail as a maintenance road, the more important the design and operation.

Routine Maintenance: Most routine maintenance, such as track and corridor inspections and security patrols, can be accomplished with lighter vehicles traveling at lower speeds (25 mph or less). These activities are typically compatible with shared-use trails, but should be scheduled if at all possible for times when expected trail use is low (i.e., weekdays). Railroad/utility personnel should be trained how to drive on the trail, and especially how to be cautious in areas of limited visibility. Trail users should be advised that the trail is used by maintenance vehicles, and to expect vehicles on the paved surface. The general parameters of time of day and week, type of vehicle, activities, speed limits, and liability should be covered in a use, license, or easement agreement.

Long-Term Maintenance: A license agreement should address advance notice when railroad/utility maintenance activities are expected to require closure of the trail between public access points. The trail should be closed if any heavy equipment is expected to use the trail, or when any maintenance activities are occurring that could be injurious to the general public. The agreement should identify

who would take the appropriate measures to close the segment of trail and be responsible for keeping the public off of the trail, arranging detours, and notifying the public.

Emergency Access: Emergency access for safety, security, or maintenance purposes should be covered in a license agreement. The contact and response protocol and responsibility should be covered in detail. Appropriate contact information for emergencies, including railroad and utility contracts, should be posted on the trail, and be available to all local police, fire, and other relevant agencies.

LIABILITY/INDEMNIFICATION

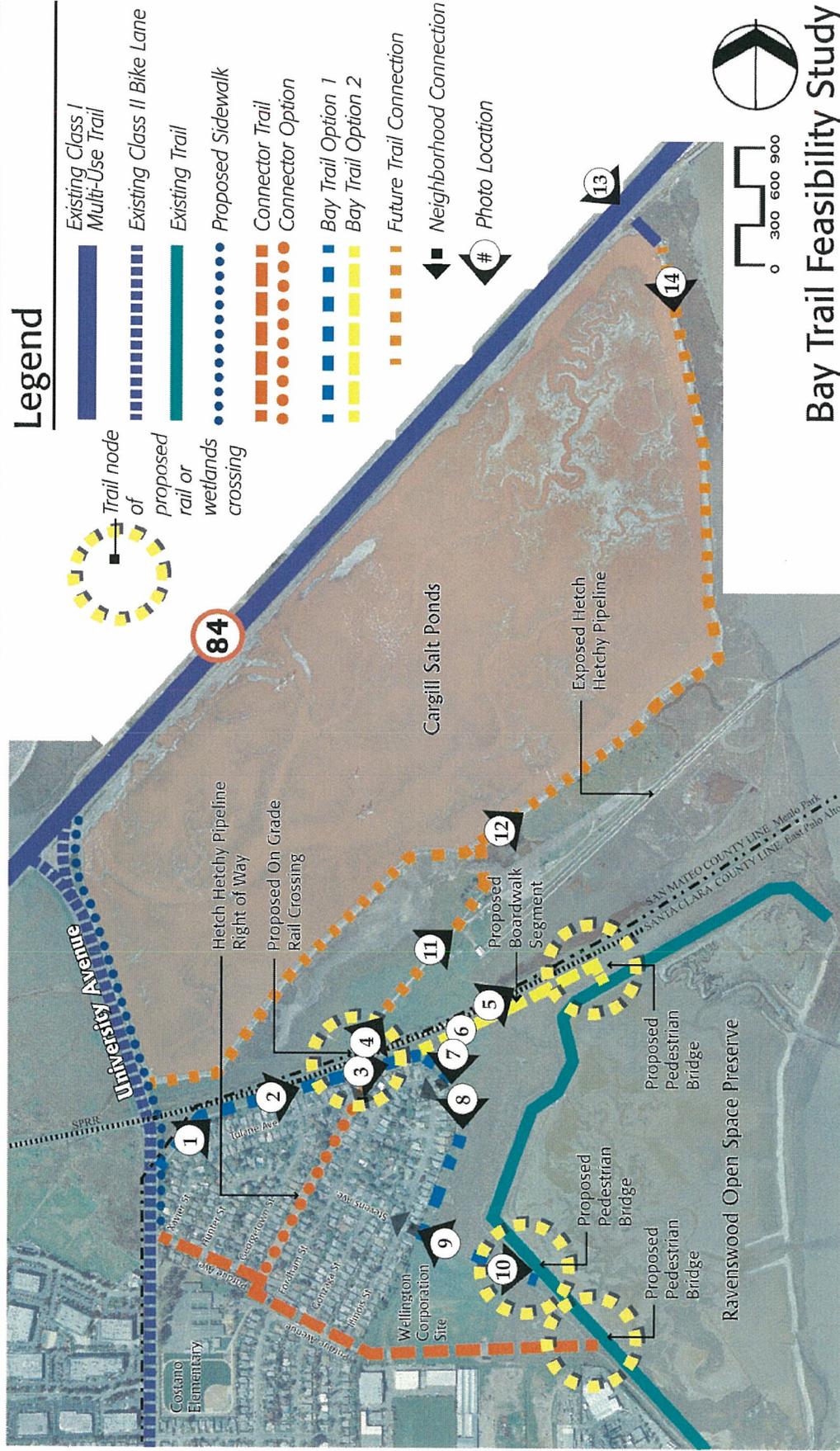
It is important to recognize the implicit dangers of human activity near railroad and utility operations, particularly moving trains. Given the potential for increased incidents, it is understandable that the railroad and utility will want to shield themselves as best as possible from lawsuits should accidents occur.

All 50 States have Recreational Use Statutes (RUSs) that provide protection to landowners who allow the public to use their land for recreational purposes. Under an RUS, an injured person must prove the landowner deliberately intended to harm him or her. States created RUSs to encourage landowners to make their land available for public recreation by limiting their liability, provided they do not charge a fee. Railroad and utilities who agree to a trail on their property would have limited liability due to these statutes. It is imperative that the trail manager understand the extent to which the state's RUS will indemnify the railroad or utility when negotiating a trail agreement.

EDUCATION AND OUTREACH

Trail users, especially young children, need to understand the risks associated with traveling or recreating in the presence of railroads or utility operations. The trail manager should consider developing a trail brochure that emphasizes safety or organizing a safety education program, perhaps with the assistance of trail advocates, bicycle clubs, etc. This is particularly true for the active rail line. The trail manager may want to consider contacting Operation Lifesaver, a nationally-recognized nonprofit organization dedicated to educating the public about the dangers associated with railroad rights-of-ways. The program hopes to help eliminate collisions, deaths, and injuries at on railroad property through the enforcement of existing traffic and trespassing laws, consolidation and closure of redundant highway-rail crossings, and engineering improvements, including installation and upgrading of crossing warning devices and signs. It is sponsored cooperatively by a wide variety of partners, including Federal, State, and local government agencies, highway safety and transportation organizations, and the nation's railroads. Though Operation Lifesaver currently does not have a specific program for trails adjacent to rail facilities, their message is clearly applicable to the presumed safety issues associated with rail-with-trails.

OPPORTUNITIES PLAN



Legend

- Existing Class I Multi-Use Trail
- Existing Class II Bike Lane
- Existing Trail
- Proposed Sidewalk
- Connector Trail
- Connector Option
- Bay Trail Option 1
- Bay Trail Option 2
- Future Trail Connection
- Neighborhood Connection
- Photo Location
- Trail node of proposed rail or wetlands crossing



Bay Trail Feasibility Study
 City of Menlo Park
 February 24, 2004

Site Issues

Images taken 6-18-03



Existing entry road from University Avenue

EXISTING CONDITIONS

- fenced backyards of adjacent residential properties
- varied fence conditions
- potential wetland areas north (left) of trail

OPPORTUNITIES AND CONSTRAINTS

- access control, privacy and security for residents



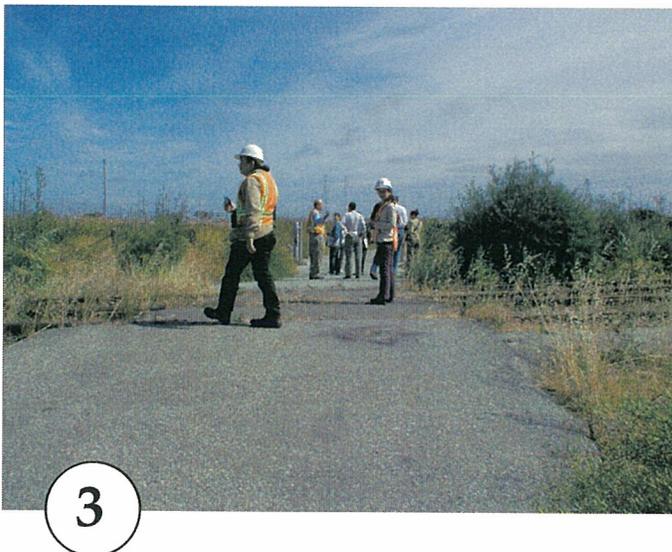
Mid-way on entry road from University Avenue

EXISTING CONDITIONS

- existing trees and shrubs buffering to residential backyards
- varied conditions of residential fences
- potential wetland areas north (left) of trail

OPPORTUNITIES AND CONSTRAINTS

- access control towards trail, privacy and security concerns



Intersection of railroad line with trail

EXISTING CONDITIONS

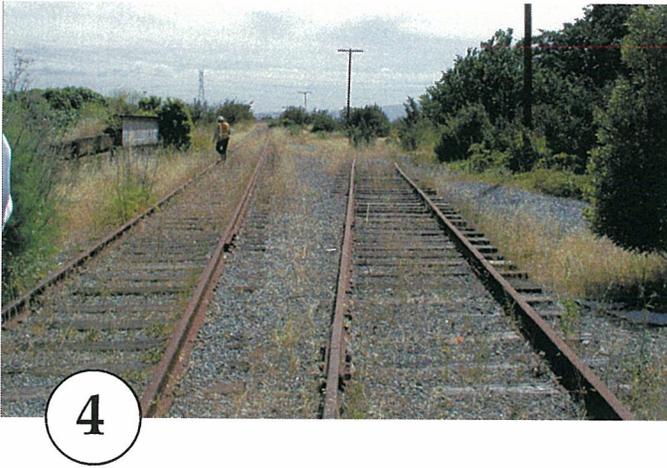
- potential on grade trail crossing with railway

OPPORTUNITIES AND CONSTRAINTS

- access to property, security concerns, safety of trail users with active rail line, and safety of rail operations with trail adjacency (liability)
- potential of rail to become reactive with additional parallel rail to be installed, hence wide setbacks for trail alignment needed for access, security and safety

Site Issues

Images taken 6-18-03



Spur in railroad line

EXISTING CONDITIONS

- existing vegetation adjacent to rail lines
- narrow setback of rail lines on northern property line (left)

OPPORTUNITIES AND CONSTRAINTS

- potential for existing line to become reactivated with second parallel rail installed, hence rail right of way to be widened limiting the location of a permanent trail



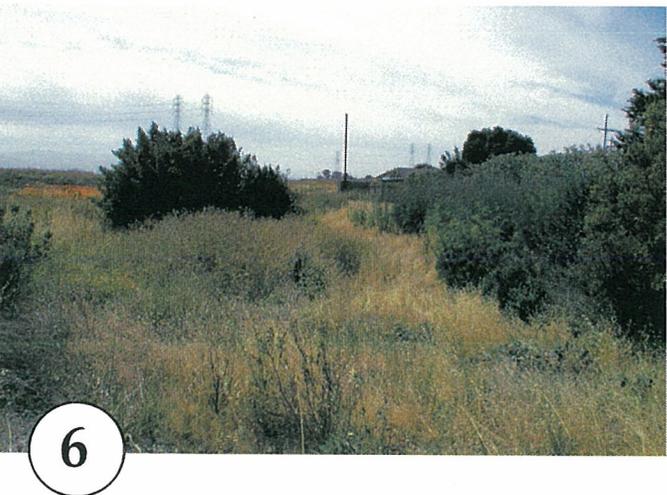
Railroad line toward rail bridge

EXISTING CONDITIONS

- narrow setback of rail lines on northern property line (left)
- narrow setback south of rail line, with large marsh area south (right) of rail

OPPORTUNITIES AND CONSTRAINTS

- impact of crossing bike trail through marshlands with bridging to connect existing trail with new trail segment; mitigation probably needed, hence a potentially lengthy and costly process
- with future expansion of rail lines and proximity to an active rail line, a trail presents concerns for both trail users and train operations, including safety and access for rail maintenance and installation



From rail line towards neighborhood connection

EXISTING CONDITIONS

- slight grade change with no apparent established wetlands
- near proximity to residential properties
- existing 10' and 20' easements from fence lines owned by residents, per City of East Palo Alto

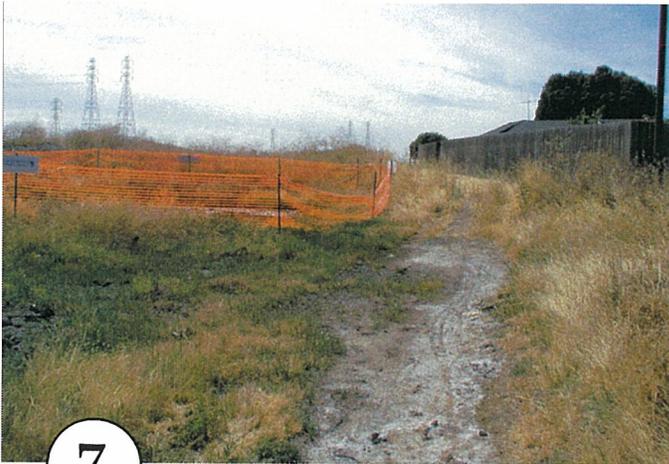
OPPORTUNITIES AND CONSTRAINTS

- access, security and privacy concerns
- potential land ownership complications in obtaining easement for permanent trail at this location; legal and financial implications

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Site Issues

Images taken 6-18-03



7

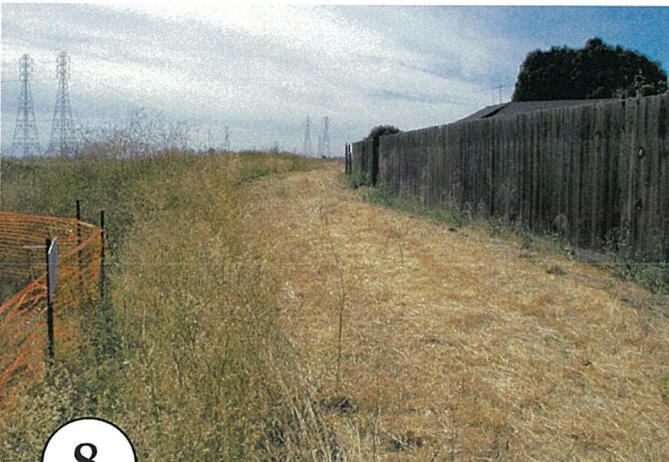
Connection towards neighborhood

EXISTING CONDITIONS

- fenced area is existing wetlands area
- area under current arsenic cleanup process, per City of East Palo Alto
- existing 10' and 20' easements from fence line owned by residents, per City of East Palo Alto

OPPORTUNITIES AND CONSTRAINTS

- potential for circumnavigation of wetlands with trail
- potential land ownership complications in obtaining easement for permanent trail at this location; legal and financial implications



8

Between Ravenswood Open Space Preserve and the neighborhood

EXISTING CONDITIONS

- (See comments of #7 above.)

OPPORTUNITIES AND CONSTRAINTS

- (See comments of #7 above.)



9

From Ravenswood Open Space Preserve to neighborhood connection

EXISTING CONDITIONS

- near proximity to residential properties; access, security and privacy issues
- site is known as Wellington Corporation site, approximately 20-acre vacant parcel; currently undergoing initial environmental review and access evaluation for proposed future housing development

OPPORTUNITIES AND CONSTRAINTS

- with future new development and infrastructure possible, potential for Bay Trail realignment or revised trail connection to the site

Bay Trail Feasibility Study Final Report: Supplement

Site Issues

Images taken 6-18-03



10

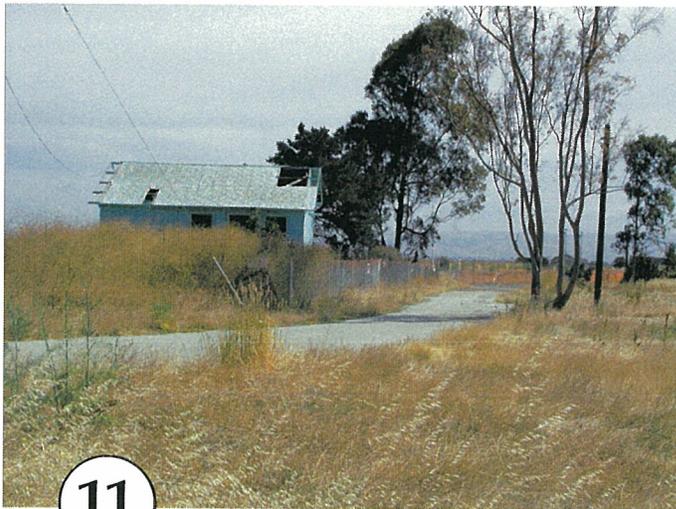
Connection towards Ravenswood Openspace Preserve

EXISTING CONDITIONS

- marsh area at edge of Ravenswood Open Space Preserve adjacent to existing Bay Trail

OPPORTUNITIES AND CONSTRAINTS

- potential connection from new trail to existing Bay Trail via a pedestrian bridge or raised catwalk; potential mitigation needed, hence a potentially lengthy and costly process



11

Between Ravenswood Open Space Preserve and Cargill Salt Ponds

EXISTING CONDITIONS

- existing road for utility access
- near proximity to the Hetch Hetchy pipeline

OPPORTUNITIES AND CONSTRAINTS

- access, security and safety of water network concerns
- adequate right of way width for new trail without apparent wetlands constraints
- other potential land uses being considered by property owner; a trail concept does not take consideration until after this land planning process is complete. (See "Working Paper" in the Property, Legal and Management issues, found in this Supplement.)



12

On levee adjacent to Cargill Salt ponds

EXISTING CONDITIONS

- near proximity to Hetch Hetchy reservoir pipeline
- salt ponds with surrounding raised levee

OPPORTUNITIES AND CONSTRAINTS

- access, security and safety of water network concerns
- currently under going several phases of environmental cleanup and wetlands restoration
- a trail alignment limited to existing levee berms; surface grading needed

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Site Issues

Images taken 12-2-02

Entrance to Ravenswood Open Space Preserve near Highway 84

EXISTING CONDITIONS

- isolated trail access near Highway 84
- existing trail head with short segment of established trail adjacent to established parking area and accessibly Dumbarton Bridge Fishing Pier

OPPORTUNITIES AND CONSTRAINTS

- potential connection from new trail to existing trail via a pedestrian bridge may be needed due to wetlands restoration
- security and patrol concern; would be an added territory, in between current jurisdictions



13

Ravenswood Open Space Preserve on levee adjacent to Cargill Salt Ponds

EXISTING CONDITIONS

- uneven levee surface due to dredging of the salt ponds
- potential opening of levee to flood the Cargill Salt ponds during wetlands restoration process

OPPORTUNITIES AND CONSTRAINTS

- location of the levee break and permanence of the break yet to be determined; potential temporary or permanent pedestrian bridging may be needed



14

Draft Report: Opportunities Plan

The Opportunities Plan, depicted in this chapter, illustrates the vision generated from the Task Force collaboration, agency feedback, community input, and City guidance. The proposed alignments close the gap from the San Francisco Bay Trail at the Ravenswood Open Space Preserve to Class II bicycle lanes at the shoulders of University Avenue. A new sidewalk is proposed along the east side of University Avenue between Purdue Avenue and Highway 84 to complete the pedestrian connection. This sidewalk should be included in the first trail reach to be implemented.

A future Bay Trail connection or spur trail is desired along the Bay to an existing trail head at the Dumbarton Bridge overpass (84). The proposed concept trail alignment options are graphically illustrated in the Opportunities Plan and described narratively in this chapter. Respective concept sections for typical trail segments are also illustrated.

The proposed trail concept alignments include the following reaches described from the San Francisco Bay Trail at the Ravenswood Open Space Preserve:

- **Neighborhood Alignment:** an urban alignment.
Proposed bridge over wetlands areas, through the Wellington Corporation site on proposed streets, adjacent to Purdue Avenue on an existing utility easement, terminating at University Avenue.
- **Neighborhood Alignment Option:** an urban alignment (alternate).
Proposed bridge over wetlands area; through the Wellington Corporation site on proposed streets, adjacent Purdue Avenue on an existing utility easement, to Hetch-Hetchy right of way, terminating at University Avenue via an existing service road.
- **Bay Trail Option 1:** a shoreline spine.
Proposed bridge over wetlands area, through the Wellington Corporation site adjacent the Bay edge, neighborhood connections, behind Ravenswood residential area (on or outside of utility/RR easements), between the service road and SPRR to University Avenue.
- **Bay Trail Option 2:** a shoreline spine (alternate).
Proposed bridge over wetlands area, proposed raised boardwalk over wetlands area and parallel to SPRR lines, between service road and railroad to University Avenue.
- **Future Trail Spur and/or Spine:** a future spur and/or spine (long term alignment); connects to Neighborhood Alignment Option, Bay Trail Option 1. From Rutgers Street neighborhood connection, across the service road, at grade railroad crossing, on top of existing service road, trail split to travel southeast on top of service road to University Avenue, north east trail split to travel on top of existing service road, to proposed new trail on top of raised levee (around the Cargill Salt Ponds), to the existing trail head and parking area at the Dumbarton Bridge overpass (84).

Draft Report: Opportunities Plan

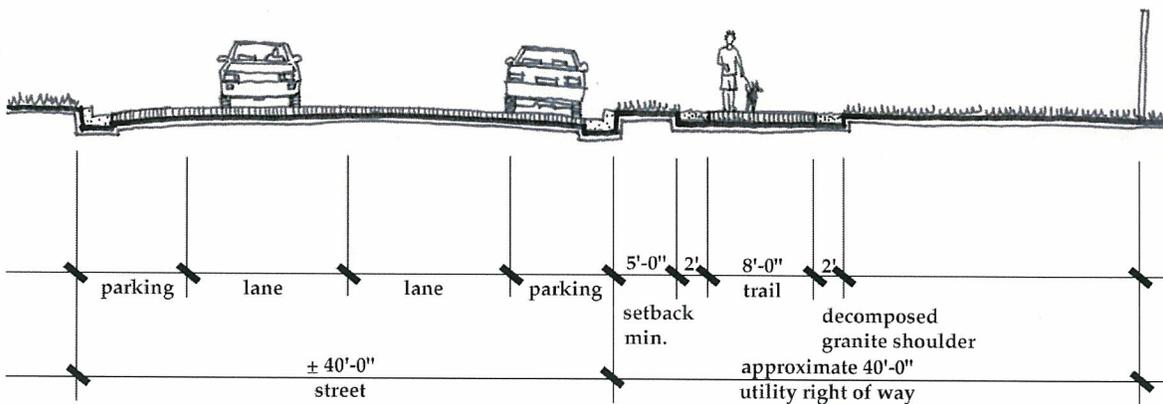
Neighborhood Alignment

The Neighborhood Alignment is illustrated as the red dashed line on the Opportunities Plan. This alignment links the Ravenswood Open Space Preserve to University Avenue, via the Wellington Corporation site, a utility easement parallel Purdue Avenue, and an on-street alignment on Purdue Avenue. From the Ravenswood Open Space Preserve trail, a proposed new pedestrian bridge would be needed to cross a marsh area. The end of this bridge would then connect to the Wellington Corporation site, a potential multi-family housing development. This trail segment would travel along the southern edge of the site, adjacent to anticipated residential streets within the multi-family housing development. Bay Trail Option 1 describes the Wellington site in more detail.

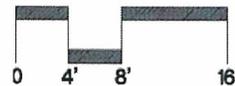
The trail then runs parallel to the Purdue Avenue within an existing utility right of way (see below). When the utility easements ends or is not available, the trail would turn into a Class III route on Purdue Avenue terminating at University Avenue. This would then connect to existing Class II bike lanes and proposed pedestrian sidewalk. This trail would provide the shortest proposed trail, a safe-route-to-school, and the most urban trail experience.



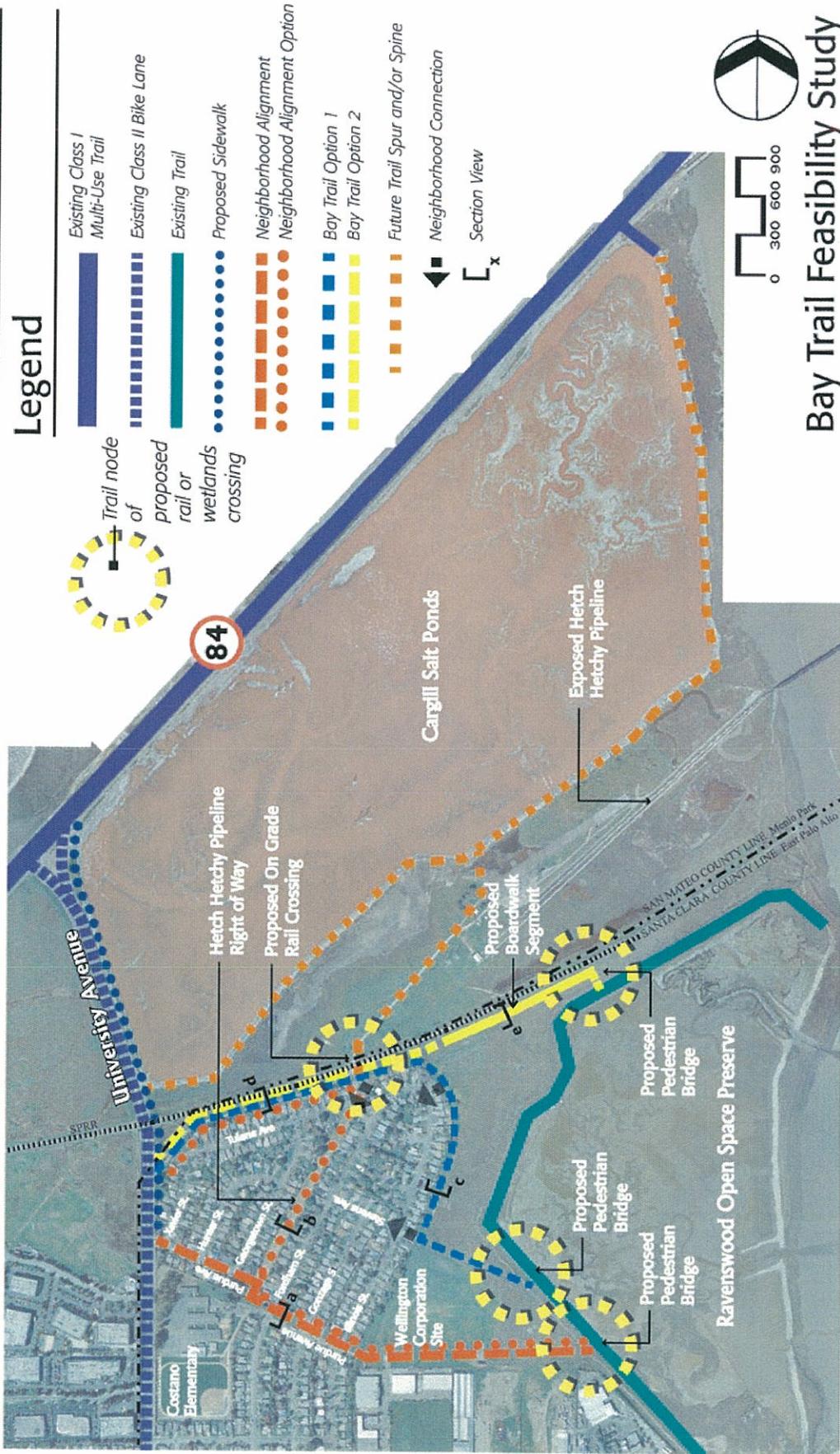
PG&E Easement along Purdue Avenue



Section a: Purdue Avenue looking west



OPPORTUNITIES PLAN



Legend

- Existing Class I Multi-Use Trail
- Existing Class II Bike Lane
- Existing Trail
- Proposed Sidewalk
- Neighborhood Alignment
- Neighborhood Alignment Option
- Bay Trail Option 1
- Bay Trail Option 2
- Future Trail Spur and/or Spine
- Neighborhood Connection
- Section View



Bay Trail Feasibility Study
 City of Menlo Park
 June 18, 2004

Draft Report: Opportunities Plan

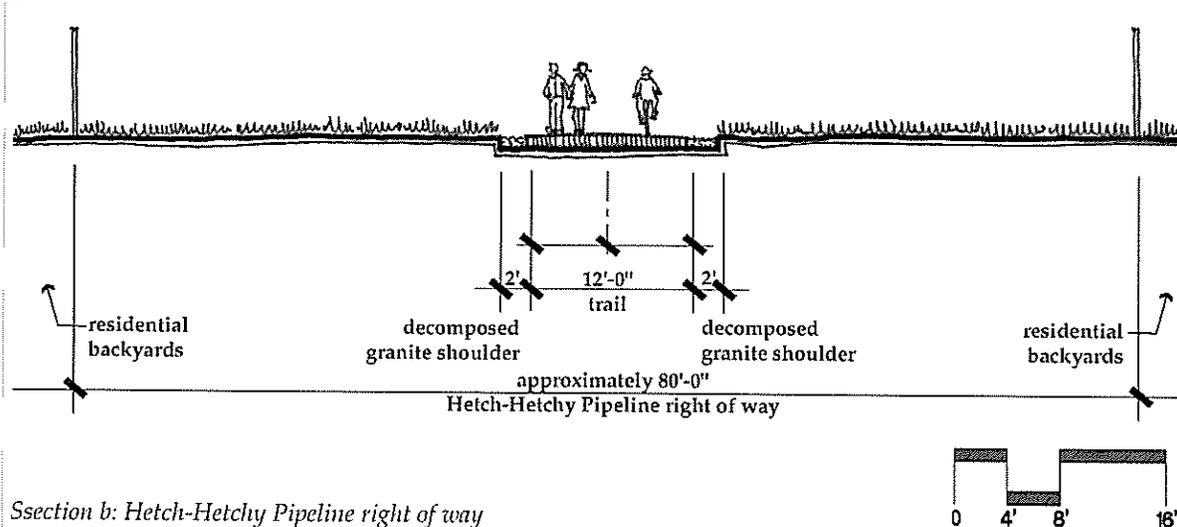
Neighborhood Alignment Option

The Neighborhood Alignment Option is illustrated as the red dotted line on the Opportunities Plan. This alignment links the Ravenswood Open Space Preserve to University Avenue, via the Hetch Hetchy right of way and parallel to the existing service road near the back side of residents.

From the Ravenswood Open Space Preserve trail, a proposed new pedestrian bridge would be needed to cross a marsh area. The end of this bridge would then connect to the Wellington Corporation site, a potential multi-family housing development. This trail segment would travel along the southern edge of the site, a much longer distance than the Bay Trail Option 1 length. (Bay Trail Option 1 describes the Wellington site in more detail.)

The trail then runs parallel to Purdue Avenue within an existing utility right of way. Neighborhood Alignment Option trail then turns northeast traversing through the Hetch Hetchy right-of-way. (Permission from the water district would need to be granted for trail construction within the right-of-way.) Police accessibility, residential property concerns for safety, fence screening, secured access points, and trail user safety would need to be taken into consideration. This right-of-way travels behind residential backyard fences, located between Fordham Street to the east and Georgetown Street to the west. This is a longer than typical block that presents concerns for safety and security because of this. The next cross street is Tulane Avenue, to the north. From Tulane Avenue, the trail would travel to the rear of these parcels to the SFPUC and SamTrans property.

Here, the trail would run adjacent to an existing access road, parallel to the rail right-of-way, towards University Avenue. The trail would not cross the tracks. A trail head would be present at University Avenue, connecting to existing Class II bike lane and proposed pedestrian sidewalk.



Section b: Hetch-Hetchy Pipeline right of way

Draft Report: Opportunities Plan

Bay Trail Option 1

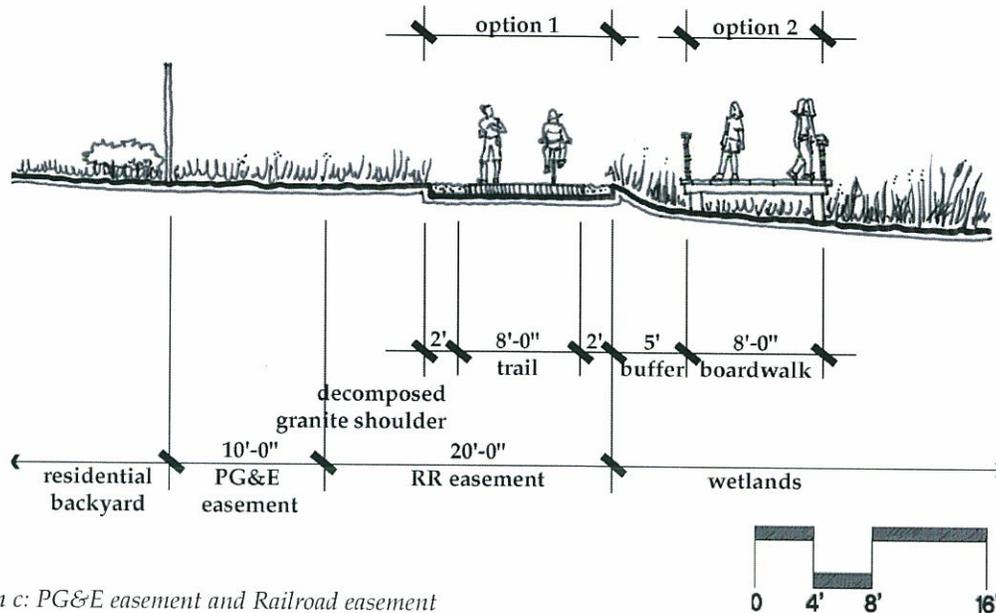
Bay Trail Option 1, illustrated as a blue dashed line, links the Ravenswood Open Space Preserve to University Avenue. University Avenue currently contains an existing Class II bike lane on either side of University Avenue. From the Ravenswood Open Space Preserve trail, a proposed new pedestrian bridge would be needed to cross a marsh area. The end of this bridge would then connect to a currently vacant parcel, currently in the planning phase as future multi-family housing.

This housing site, known as the Wellington Corporation site. In the preliminary planning phase, this site may potentially house 400 to 600 new dwelling units, as outlined in the *East Palo Alto Revitalization Plan* for the Ravenswood Business District (RBD). Here, trail access could provide a bayside amenity for recreational use and wildlife viewing, incorporating this connection to a proposed bayside pedestrian and bicycle trail associated with the development.

Following the outside edge of the existing Ravenswood residential area, Option 1 trail then curves along the backyard fencing to the north. According to the City of East Palo Alto, thirty feet behind these fences is owned in fee title by the residents, though it is comprised of two



PG&E and Railroad Easement at back of Ravenswood residential area



Section c: PG&E easement and Railroad easement

Draft Report: Opportunities Plan

easements. One easement is that for PG&E, at 10', and the other is of the railroad, at approximately 20'. Hence, there are multiple property owners that would need to be involved in a trail easement if desired at this location. According to the City of East Palo Alto, the rear residential property lines are not flush with each other. A property line survey was taken six inches behind the rear property fences, in preparation for current arsenic cleanup. This survey illustrated a slight jog in property lines. Currently, arsenic cleanup is estimated for completion in the winter of 2004. Once the cleanup is completed, the City plans to revert the easement property back to the residents.

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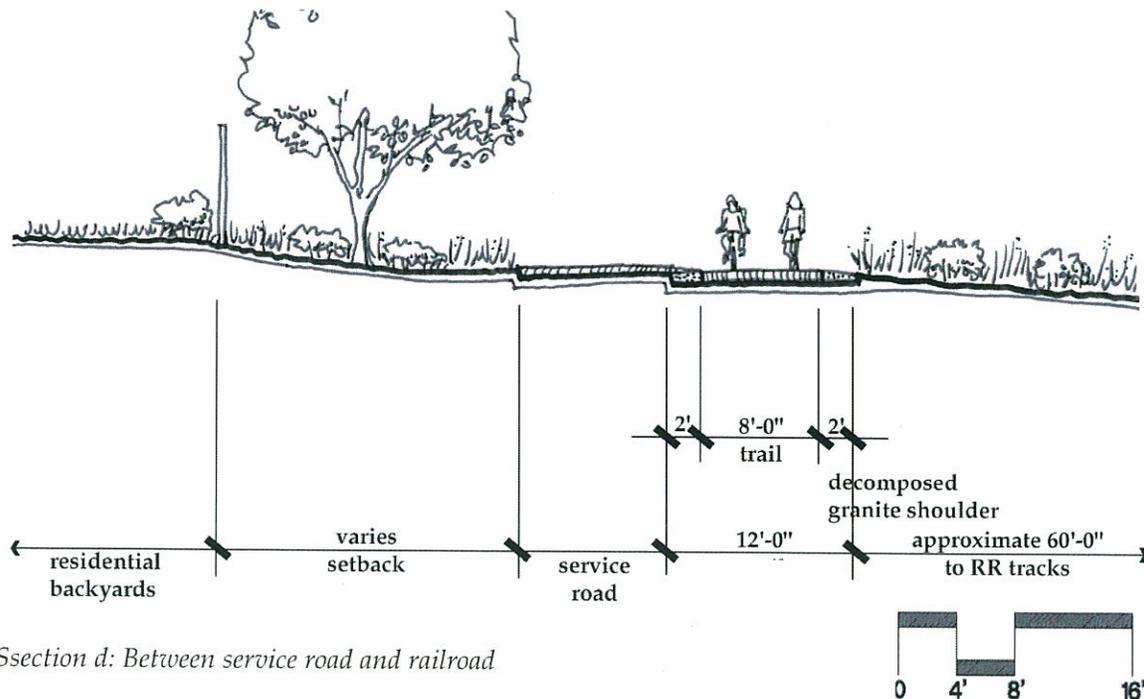
Draft Report: Opportunities Plan

The trail section e, illustrates two trail options. Section e, Option 1 illustrates an on-grade trail, if the alignment is possible within the easement right of ways. Section e, Option 2 illustrates a boardwalk alternative, if the alignment must occur outside of the easement right of ways. Option 2 alternate of Bay Trail Option 1 is more likely to incur greater impact to wetlands habitat, than the alternate Bay Trail Option 1, option 1. This is because it is on the Bay edge, outside of the right of way easements that have already been graded and impacted by transportation and utility access, and environmental clean up in recent history.

Rounding the bend and directly adjacent to an existing access road, the trail then runs parallel to the rail right-of-way, without crossing the tracks. The train tracks are currently non-active and have been for years. Future plans for this rail are guided towards re-activation, adding an additional rail line, and moving the existing rail line over to recenter the two parallel rail lines.



Service Road looking eastbound



Section d: Between service road and railroad

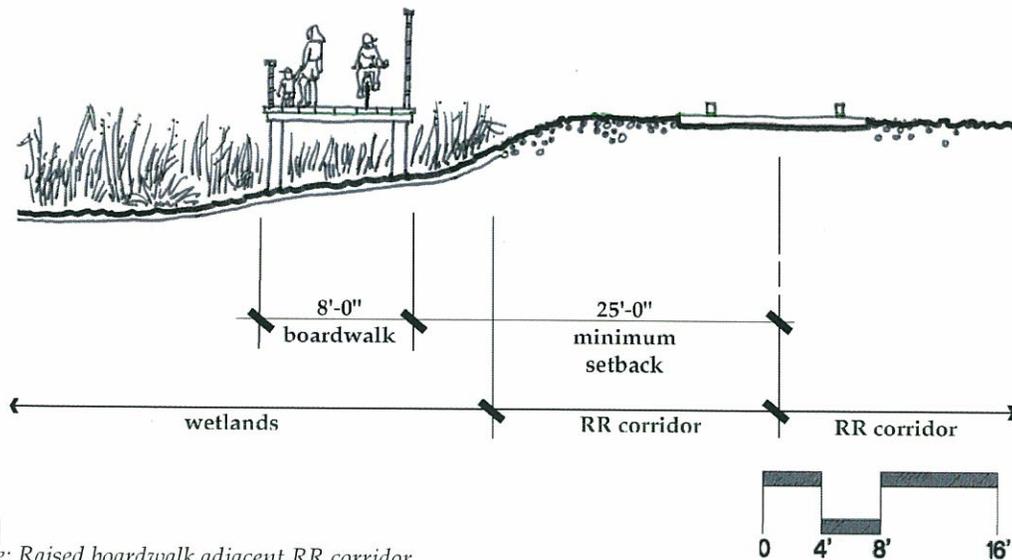
Draft Report: Opportunities Plan

Bay Trail Option 2

A second Bay Trail option illustrated in the yellow dashed line, takes advantage of the Ravenswood Open Space Preserve trail proximity, crossing towards the rail lines directly via a new pedestrian bridge. This option incorporates the longest length of existing Ravenswood Open Space Preserve trail. The rail is currently non-active though future planning efforts seek to re-activate and add an additional parallel rail line for commuters. A second rail line would increase the right of way width and its needed buffer zone for safety and maintenance access. With the two proposed rail alignments, the southern track would be approximately 7.5 (to the south) from its current location. This future rail narrows the options for placing a Class 1 trail in its proximity and seeks a challenging process to have a rail with trail. For the trail to run parallel with the tracks, the trail would most likely be in a wetlands area. This environmental impact of a new structure would require extensive permitting and potentially expensive boardwalk structure. Further design guidelines are recommended in the following chapter, entitled Railroad Operation Issues, to address rail-with-trail design considerations and suggestions for setback distances buffering, and crossing signalization.



View east at railroad, Ravenswood Open Space Preserve seen on right



Section e: Raised boardwalk adjacent RR corridor

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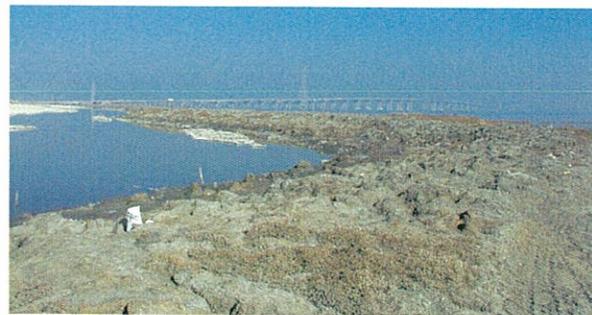
If the trail and rail proximity were able to be safely and feasibly addressed at this juncture, the trail would then travel near the rear of the existing residential properties. This segment of the trail would be juxtaposed between the existing paved service road and the railroad, see Section d. This road is used occasionally by maintenance trucks. The proposed Bay Trail connection would then meet with University Avenue.

It should be noted that the United States Fish and Wildlife Service has expressed some concerns about this alignment. The Cargill Salt Pond area was acquired by the Service from Cargill Salt as part of a 16,500 acre purchase. Efforts are underway to identify former salt pond areas for restoration for tidal marsh habitat. This alignment may constrain or restrict future habitat restoration options between Ravenswood Open Space Preserve and the Cargill Salt Pond area, salt pond SF2. A letter from USFWS regarding this concern is included in the Agency Letters chapter.

Future Trail Spur and/or Spine

This proposed Future Trail Spur and/or Spine, illustrated in an orange dashed line, connects many of the proposed Bay Trail and Neighborhood Alignment alignments with the existing staging area at the Dumbarton Bridge underpass (84). This route travels via the Cargill Salt Pond area. This is a longer trail segment that proposes an at-grade rail crossing near the Ravenswood residential area. Accessibility, security, and safety of allowing public use are concerns of the rail property owners.

From the rail crossing, the trail then enters SFPUC property and roughly follows the alignment of the existing service road and connects to the existing salt pond levee. The levee trail would then split with one path connecting to University Avenue, on the western side of the rail tracks, and one connecting to the trail head at Bayfront Expressway (84) near the Dumbarton Bridge underpass. Overall, this trail alignment would provide the closest proximity to the San Francisco Bay itself, compared to other reaches proposed in this study. This alignment circumnavigates the salt pond on top of an existing raised levee. Future restoration of the salt ponds may require temporary flooding and a new bridge may be needed at the levee break. A permit was just obtained from the San Francisco Bay Regional Water Quality Control Board to open the saline ponds to the tides. The efforts to restore the salt ponds to native habitat are still underway and may take several years.



Raised levee looking eastbound

Draft Report: Opportunities Plan

Due to the near proximity of the Bay, this trail alignment would provide a "bay" experience. This trail has several constraints due to environmental clean up efforts, proximity to regional utility infrastructure, crossing of potentially active rail lines, and potential for sensitive habitat in the project area. While the Opportunities Plan illustrates a spine trail that connects from the Ravenswood neighborhood area to Highway 84, a shorter, spur trail may be more feasible.

BCDC and the USFWS have expressed more concerns about this alignment, compared to other proposed alignments in this study. The United States Fish and Wildlife Service prefers this alignment less than the Bay Trail Option 2. The Cargill Salt Pond area was acquired by the Service from Cargill Salt as part of a 16,500 acre purchase. Efforts are underway to identify former salt pond areas for restoration for tidal marsh habitat. This alignment proposes to circumnavigate the Cargill Salt Pond area, specifically Pond SF2. The location of this alignment would severely hinder environmental restoration. A letter from USFWS regarding this concern is included in the Agency Letters chapter.

BCDC also expressed concern about this encompassing trail. Their concerns are similar to those of the USFWS. The intent of the area is to restore the wetlands and find a balance between habitat and public access. The restored Cargill Salt Pond area will be added to the Don Edwards San Francisco Bay National Wildlife Refuge (the Refuge). A collaborative effort of the City(ies) and the Refuge to establish a trail alignment. A point connection, or "dead end" trail, would be preferred over a trail that surrounds the pond area. BCDC has environmental requirements for obtaining a BCDC permit for the trail that should be followed.

Summary

There is not an alignment that provides a clear and easy opportunity for near-term implementation. Because of the close proximity of sensitive habitats (wetlands and salt marsh), there are a disproportionate number of sensitive species that could be found in the project area. Impacts to species might occur when trails are widened, boardwalks and/or bridges installed, or from users of the trail, particularly those with dogs. A biological resources letter is included in the Agency Letters chapter that identifies potential sensitive plant and animal species that may be found in the area, including the salt-marsh harvest mouse. The Department of Fish and Game could not evaluate the proposed trail alignments without requested habitat maps and mentioned other factors may be valuable in determining alignments.

All proposed alignments are conceptual and need further planning development and biological research before they could be implemented. This includes resolution of preliminary planning efforts on many of the properties the trail could traverse. These steps needed to identify a preferred alignment are outlined as a matrix in the Draft Report: Action Plan.

Draft Report: Railroad Operation Issues

Overview of Rail Operations Along Dumbarton right-of-way

It may be feasible for a Bay Trail alignment to be routed along a portion of the SamTrans Dumbarton Rail right-of-way between the Ravenswood Open Space Preserve and University Avenue. Currently this rail corridor is inactive. However, re-activating passenger rail service across a rebuilt Dumbarton trestle is planned by SamTrans and trail planning within this area cannot be furthered until plans are solidified. The recent passage of Regional Measure 2 by Bay Area voters provided a major boost for the future Dumbarton Rail Service, setting aside \$135 million in funding for the project. Other funding would come from local tax measures and some state sources.

As currently proposed, the future Dumbarton Rail Service would include 12 commuter trains and carry about 4,800 passengers a day. Initial service would include six trains during the peak a.m. commute period, leaving from Union City with stops in Fremont, Newark, Menlo Park and Redwood City. From Redwood City, three of the trains would continue south to San Jose along existing Caltrain tracks; the other three would head to San Francisco. The trains would make return trips along the same routes during peak evening commute hours. Planners for the Dumbarton Rail Service anticipate having the service operational by 2010.

According to SamTrans, the design speed for the re-activated Dumbarton rail line through this segment would be 79 mile per hour. Actual operating speeds of the commuter trains through this segment is not known at this time, but SamTrans has indicated that the authorized operating speed could be 79 mph as well. The proposed Menlo Park station would be located between Willow Road and Chilco Street.

Development of a trail next to an active rail line (known as a “rail-with-trail” or RWT) requires consideration of a variety of unique safety, security, and operational issues, described in this chapter.

Minimum Required Setback from rail line

The term ‘setback’ refers to the distance between the edge of a RWT and the centerline of the closest active railroad track while ‘separation’ refers to the treatment of the space between a RWT and the closest active railroad tracks, including fences, vegetation, ditches, and other items. When determining the minimum setback for a RWT, factors to consider include train speed and frequency, maintenance needs, State standards, separation techniques, historical problems, track curvature, topography, and engineering judgment.

It should be noted that there are no national standards for the design trail facilities next to active rail lines available at this time. As such, none of the designs in this section should be construed as standards or guidelines. They represent best practices as derived from existing rail-with-trails and research on their performance.

Draft Report: Railroad Operation Issues

Minimum setback from the rail line is perhaps the most important feature of the trail design. Setback is measured from the nearest edge of the trail to the centerline of the nearest railroad track. No empirical data has been discovered indicating the precise setback that is recommended between a public trail and an active railroad, and a review of 61 existing rail-with-trails shows wide variance in the setback distance. Researchers attempted to determine if narrower setback distances have a direct correlation to safety problems; however, based on the almost non-existent record of claims, crashes, and other problems on these RWTs, they were unable to conclude a strong correlation between setback and safety.

An FRA study on the impact of high train speed on people standing on boarding platforms concludes that induced airflow is a safety issue for a person within 2 m (6.5 ft) of a train traveling at 240 km/h (150 mi/h.) There is no consensus on either appropriate setback requirements or a method of determining the requirement. Some trail planners use the AASHTO Bike Guide for guidance. Given that bicycle lanes are set back 1.5 to 2.1 m (5 to 7 ft) from the centerline of the outside travel lane of even the busiest roadway, some consider this analogous. Others use their State Public Utilities Commission's minimum setback standards (also known as 'clearance standards') for adjacent walkways (for railroad switchmen.) These published setbacks represent the legal minimum setbacks based on the physical size of the railroad cars, and are commonly employed along all railroads and at public grade crossings. The minimum setback distance is typically 2.6 m (8.5 ft) on tangent and 2.9 m (9.5 ft) on curved track. However, FRA and railroad officials do not consider either of these methods to be appropriate for a RWT. This is because AASHTO's guidelines for motor vehicle facility design are not seen as comparable to rail design, and the setback distance for the general public should be much greater than that allowed for railroad workers.

At an absolute minimum, the setback must keep trail users outside the "dynamic envelope" of the track, defined as "the clearance required for the train and its cargo overhang due to any combination of loading, lateral motion, or suspension failure." Additionally, in corridors with regular use of maintenance equipment that operates outside the dynamic envelope, the setback distance should allow adequate clearance between the maintenance equipment and the trail.

The Federal Railroad Administration (FRA) already publishes minimum setback standards for fixed objects next to active railroad tracks, the distance between two active tracks, and adjacent walkways (for railroad switchmen). These published setbacks represent the legal minimum setbacks based on the physical size of the railroad cars, and are commonly employed along all railroads and at all public grade crossings.

Draft Report: Railroad Operation Issues

The California Public Utilities Commission (CPUC), which regulates railroad activities within California, also has specific minimum setbacks for any structures or improvements adjacent to railroads, including any sidewalk or trail that parallels active railroad tracks. According to the CPUC standards, minimum distances from the centerline of an active railroad to the outside edge of a trail or bikeway is 8.5 feet on tangent and 9.5 feet on curved track (General Order No. 26-D). Wherever possible, the CPUC recommends that the trail be set back at least 25 feet from the centerline of the tracks, or at least 15 feet when there is a vertical separation of more than 10 feet.

SamTrans, who in 1994 purchased the Dumbarton Rail Corridor right-of-way for future rail service, has stated that it will not consider any trail improvements less than 15 feet from the centerline of the track alignment. It should be noted that future rail service on the Dumbarton corridor would involve a double-track configuration; therefore the actual setback would depend on the final location of the double track within the existing right of way. SamTrans has indicated that a double track configuration would require a minimum separation of 15 feet between the track centerlines. Assuming that the double track would be constructed equidistant from the current single track, the centerline of the southern track would be an additional 7.5 feet from the location of the current track.

Recommendation

Given the potential high-speeds of the proposed commuter rail service that will run along the Dumbarton Corridor, it is recommended that the proposed Bay Trail have a minimum 25-foot setback (from the track centerline), and that 50 foot setback is recommended where feasible to achieve the additional width.

For the Option 1 trail segment along the rail line, achieving the recommended 50 foot setback appears to be possible by using the paved and unpaved service roads along the southern side of the tracks east of University Avenue. Through this area, there is approximately 60 feet between the railroad tracks and the service road. This alignment would locate the trail outside of the SamTrans right-of-way, and in SFPUC property. Both the paved and unpaved service roads would need to be upgraded to meet Class I multi-use trail standards, and to allow for joint use by service/maintenance vehicles and trail users.

For the Option 2 trail segment, east of where the unpaved service road curves away from the tracks and the rail line begins to be built up along a levee, achieving neither the minimum 25 foot setback or recommended 50 foot setback nor would be possible on the existing narrow railroad levee. In this area, a boardwalk trail design is recommended to locate the trail with an appropriate setback from the railroad centerline. The vertical separation in along this segment (the rail line will be located up on the levee at a higher elevation than the boardwalk trail) would achieve many of the benefits of the horizontal separation.

Draft Report: Railroad Operation Issues

In addition to the setback, fencing or a vegetation barrier is recommended to be planted between the trail and the railroad tracks to provide a physical and visual barrier. Fencing and other barriers are discussed in greater detail later in this section.

Railroad Track Crossings

The point at which trails cross active tracks is the area of greatest concern to railroads, trail planners, and trail users. Railroad owners, the FRA, and states have spent years working to reduce the number of at-grade crossings in order to improve public safety and increase the efficiency of service. RWT design should minimize new at-grade crossings wherever possible.

The proposed Bay Trail Options 1 and 2 would not involve any crossings of the Dumbarton Rail line as they connect out toward University Avenue. However, the proposed plans do show a “future trail spur and/or spine” that crosses the rail line and connects to the Dumbarton Bridge Class I trail. The trail crossing of the rail line is shown at the existing at-grade SFPUC service road crossing. This location is currently not controlled with gates or other warning devices, as it is located on SFPUC property and intended for use only by service vehicles.

SamTrans and the California Public Utility Commission would need to approve the new rail trail crossing, the design of which must be in compliance with the MUTCD. Relevant information also is contained in the Railroad-Highway Grade Crossing Handbook (FHWA, 1986) and U.S. DOT Highway-Rail Grade Crossing Technical Working Group (TWG) document, Guidance on Traffic Control Devices at Highway-Rail Grade Crossings (FHWA, 2002).

Advanced Warning Devices at Trail-Rail Crossings

A variety of warning devices are available for trail-rail crossings. In addition to the MUTCD standard devices, there are innovative treatments developed to encourage cautious bicyclist and pedestrian behavior. This report does not sanction one type of treatment as being appropriate for all trail-rail crossings, nor does the MUTCD provide a standard design for highway-track crossings. The MUTCD states, “Because of the large number of significant variables to be considered, no single standard system of traffic control devices is universally applicable for all highway-rail grade crossings. The appropriate traffic control system should be determined by an engineering study involving both the highway agency and the railroad company.” The same applies for trail-rail intersections.

Draft Report: Railroad Operation Issues

There are two categories of advanced warning devices:

- Passive warning devices: signs and pavement markings that alert trail users that they are approaching a trail-rail crossing and direct them to proceed with caution and look for trains.
- Active warning devices: advise trail users of the approach or presence of a train at railroad crossings. These consist of bells, flashing lights, automatic gates, and other devices that are triggered by the presence of an approaching train.

Passive Warning Devices at Trail-Rail Crossings

Trail-rail crossings with passive warning devices should comply with the MUTCD's minimum recommended treatment at highway- rail grade crossings. The MUTCD states, "One Crossbuck sign shall be installed on each highway approach to every highway-rail grade crossing, alone or in combination with other traffic control devices."

The MUTCD also states that "if automatic gates are not present and if there are two or more tracks at the highway-rail grade crossing, the number of tracks shall be indicated on a supplemental Number of Tracks (R15-2) sign...mounted below the Crossbuck sign... (R15-1)." Refer to the MUTCD for further guidance regarding the location and retro-reflectivity of these signs.

Stop and Yield Signs

The MUTCD makes the following statements about the use of STOP and YIELD signs at highway-rail grade crossings: "At the discretion of the responsible State or local highway agency, STOP or YIELD signs may be used at highway-rail grade crossings that have two or more trains per day and are without automatic traffic control devices." This may also apply to trail crossings, as determined by an engineering study that considers the number and speed of trains, sight distances, the collision history of the area, and other factors. Willingness of local law enforcement personnel to enforce the STOP signs should also be considered.

Warning Signs

The MUTCD also contains a number of warning signs that can be used to indicate the configuration of the upcoming crossing, or to otherwise warn users of special conditions. Warning signs that may be appropriate for RWTs include MUTCD signs: W10-1, W10-2, W10-3, W-10-4, W10-8, W10-8a, R15-1, R-15-2, R15-8, and W10-11.

Other Signs

The MUTCD applies to all signs that may be considered traffic control devices, whether on roads or on shared use paths. The MUTCD provides specifications on sign shapes,

Draft Report: Railroad Operation Issues

colors, dimensions, legends, borders, and illumination or retro-reflectivity. Section 2A.06 notes that “State and local highway agencies may develop special word message signs in situations where roadway conditions make it necessary to provide road users with additional regulatory, warning, or guidance information.”

The MUTCD does not apply to signs that are not traffic control devices, such as “No Trespassing” signs and informational kiosks. Many jurisdictions require “No Trespassing” signs to be posted along railroad tracks. Some railroad companies, trail developers, and State and local governments have used a number of non-MUTCD-compliant supplemental signs at rail-trail crossings. Some of these have been adopted in State or local roadway and/or trail design guidelines. While these signs may provide information not available on MUTCD-compliant signs, they may increase the trail developer’s or community’s liability exposure.

The MUTCD recognizes that continuing advances in technology will produce changes that will require updating the Manual, and that unique situations often arise for signs and other traffic control devices which may require changes. Section 1A.10 describes the procedure to request changes or permission to experiment with traffic control signs and devices.

Pavement Markings

In the case of paved trails, pavement markings also are required by the MUTCD. At a minimum, they should consist of an “X”, the letters “RR”, and a stop bar line. (See Parts 8 and 9 of the MUTCD.) For unpaved trails, consideration should be given to paving the approaches to trail-rail crossings, not only so that appropriate pavement markings can be installed, but also to provide a smooth crossing. If it is not possible to pave the approaches, additional warning devices may be needed.

Active Warning Devices at Trail-Rail Crossings

An engineering study is recommended for all trail-rail crossings to determine the best combination of active safety devices. Key considerations include train frequency and speed, sight distance, other train operating characteristics, presence of potential obstructions, and volume of trail users.

Active traffic control systems advise trail users of the approach or presence of a train at railroad crossings. Information regarding the appropriate uses, location, and clearance dimensions for active traffic control devices can be found in Part 8 of the MUTCD. In addition, Part 10 of the MUTCD contains specific recommendations for pedestrian and bicycle signals at light rail transit tracks, and should be referred to in cases where trails cross light rail transit corridors.

Draft Report: Railroad Operation Issues

See Guidance on Traffic Control Devices at Highway-Rail Grade Crossings for information about selection of traffic control devices. Flashing light signals combined with swing gates may be needed in cases of high speed transit or freight rail, limited sight distance, multiple tracks, and temporary sight obstructions, such as standing freight cars.

Railroad and trail planners should note that the same controls that generally keep a motor vehicle from crossing a track may not keep a pedestrian or bicyclist from proceeding through a crossing. People on foot or bicycle are reluctant to stop at barriers and will often find a way to proceed over, under, or around barricades.

Fencing and Barriers

For segments of the proposed Bay Trail that will run adjacent to the railroad corridor, installation of a fencing or barrier between the trail and rail line is recommended to prevent trespassing. In addition, trains will generate noise, dust, and vibration, which may be seen as a nuisance to adjacent trail users. Of the 61 known RWT facilities operating in the United States today, 71 percent have some type of physical barrier between the trail and tracks. The types of barriers in use include fences, walls, vegetation, grade differences and ditches.

Fences

Fences are the most common type of physical barrier used along trail corridors to prevent trespassing. A number of fencing types are available, ranging from simple low wood rail fences to tall, heavy-duty steel fences. Selection of a fencing type depends on the amount of trespassing anticipated along a given segment of the RWT, and the aesthetic qualities desired. Typically there is a trade-off between security and aesthetics: the more trespass-resistant a given fencing type the more visually unattractive it tends to be. Fencing style and material is a matter of local preference and railroad requirements. For the proposed Bay Trail, a chain-link fence is expected to be the most appropriate fencing style. This inexpensive and ubiquitous fencing material is perhaps the most common fencing type, and is considered adequate for most situations to keep people on the trail and discourage trespassing. Most chain link fences are visually unappealing; however, vinyl-coated chain link fencing (in black or green) is often considered a more aesthetically pleasing alternative. A chain link fence with a plastic woven fabric or wood battens in the chain link material provides an additional solid-type barrier to help catch debris and provide wind and visual buffering.

Draft Report: Railroad Operation Issues

Vegetation

Whether natural or planted, vegetation can serve as both a visual and physical barrier between a track and a trail. The density and species of plants in a vegetative barrier determine how effective the barrier can be in deterring potential trespassers. A dense thicket can be, in some cases, just as effective as a fence (if not more so) in keeping trail users from trespassing onto adjacent property. Planted barriers typically take a few years before they become effective barriers. Separation between the trail and the track may need to be augmented with other temporary barriers until planted trees and hedges have sufficiently matured.

Recommendation

Due to safety and security issues, fencing should be installed in all locations where the proposed Bay Trail alignment runs adjacent to the Dumbarton rail line or SFPUC property. All fencing should be located a minimum of 15 feet from the nearest track to allow for maintenance vehicles. With normal setback, fencing height should range between 36 inches and 48 inches, with 42 inches standard. Baffling material includes vegetation such as ivy or other vines, or a solid material such as wood. Regardless of fence type, railroad maintenance vehicles and/or emergency vehicles may need fence gates in certain areas to facilitate access to the track and/or trail. Fence design should be coordinated with SamTrams railroad maintenance personnel, as well as representatives from SFPUC.

Maintenance

While most maintenance items for a trail located adjacent to a railroad facility are largely identical to any multi-use trail of the same surface, sub-grade and sub-base, if the railroad or utility owns the property and must use the trail section as an operations and maintenance access road, a number of other issues must be addressed:

Trail design: The trail surface should be wide enough to allow for a light vehicle to pass trail users slowly, including disabled persons, without either having to leave the paved surface. Typically, a 10-foot wide pathway with a hard-packed shoulder would be a minimal width, although 12 feet is preferred. The trail agreement should state that the trail should be constructed to standards sufficient to support the expected range of equipment and activities to occur on the railroad or adjacent utility, that the railroad/utility will take reasonable care not to impact the trail or other improvements, including fencing and landscaping. Most trail agreements assign responsibility for any trail repairs or other related improvements to the trail managing entity.

Frequency of Access: This is a key issue, as it will determine the frequency of risk to trail users and/or the need to implement temporary trail closures. This must be addressed in any license or easement agreement. The greater the need to use the trail as a maintenance road, the more important the design and operation.

Draft Report: Railroad Operation Issues

Routine Maintenance: Most routine maintenance, such as track and corridor inspections and security patrols, can be accomplished with lighter vehicles traveling at lower speeds (25 mph or less). These activities are typically compatible with shared-use trails, but should be scheduled if at all possible for times when expected trail use is low (i.e., weekdays). Railroad/utility personnel should be trained how to drive on the trail, and especially how to be cautious in areas of limited visibility. Trail users should be advised that the trail is used by maintenance vehicles, and to expect vehicles on the paved surface. The general parameters of time of day and week, type of vehicle, activities, speed limits, and liability should be covered in a use, license, or easement agreement.

Long-Term Maintenance: A license agreement should address advance notice when railroad/utility maintenance activities are expected to require closure of the trail between public access points. The trail should be closed if any heavy equipment is expected to use the trail, or when any maintenance activities are occurring that could be injurious to the general public. The agreement should identify who would take the appropriate measures to close the segment of trail and be responsible for keeping the public off of the trail, arranging detours, and notifying the public.

Emergency Access: Emergency access for safety, security, or maintenance purposes should be covered in a license agreement. The contact and response protocol and responsibility should be covered in detail. Appropriate contact information for emergencies, including railroad and utility contracts, should be posted on the trail, and be available to all local police, fire, and other relevant agencies.

Draft Report: Agency Overview

The following list summarizes comments received from the respective regulatory agencies in regard to future planning efforts and permitting requirements. The *Existing Conditions Report*, biological resources letter, and a handout similar to the PowerPoint show from Workshop #1 were sent to the agencies for comment. Copies of the letters received from the regulatory agencies are included in the Agency Letters chapter.

Bay Conservation and Development Commission (BCDC)

Collaboration of the City with the Refuge is encouraged to continue to help identify an appropriate Bay Trail alignment. BCDC prefers a point connection, or look-out area, as opposed to a loop trail which circumnavigates the salt pond area, hence the "future trail spine" proposed is not desirable. A spur trail in this area is more desirable. A connection that is more direct, provides a clear sight line, and encourages public access is preferred, such as Bay Trail Option 2. If this segment is infeasible due to the cost of the boardwalk, trails through the Wellington Corporation site might be possible too, though might not feel as public. The trail should follow the public access policies as outlined in the *Bay Plan*.

California Department of Fish and Game

Not enough information had been developed at this current planning level for them to comment on an appropriate trail alignment at this time. A habitat map of the study area was requested to identify the areas which could provide habitat for sensitive species listed in the biological resources letter (August 11, 2003) found in the Agency Letters chapter. A significant number of sightings of sensitive species, including the salt marsh harvest mouse, have been seen in the project area of the Bay Trail Option 2 and the future trail spur and/or trail.

California Regional Water Quality Control Board

Comments were received in response to the biological letter (August 11, 2003) found in the Agency Letters chapter. This biological letter mentioned salt evaporators and salt water marsh mitigation, it should be noted that this Bay Trail project would still be responsible for any mitigation for any impacts to wetlands. The USFWS and the CDFG are completing the salt pond restoration at the Cargill site at considerable expense. Any excess mitigation credit created by the restoration of the salt ponds will be sold to cover the mitigation costs.

The biological letter, found in the Agency Letters chapter, should be amended to state that a 404 permit from the Army Corps of Engineers would not be valid without a Section 401 Certification from the Regional Water Quality Control Board. In areas where the Army Corps of Engineers does not exert jurisdiction, Waste Discharge Requirements may still be needed from the Regional Water Quality Control Board.

Draft Report: Agency Overview

U.S. Army Corps of Engineers, San Francisco District, Regulatory Branch

The Corps of Engineers jurisdiction includes all proposed work and/or structures extending bayward or seaward of the line on shore reached by: mean high water (MHW) in tidal waters, or ordinary high water in non-tidal waters designated as navigable waters of the United States. Work or structures proposed in unfilled portions of interior diked areas below former MHW must also be authorized under Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403). Proposed discharge of fill into waters of the United States must be authorized by the Corps of Engineers under Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344). File number 28696S should be attached with any further correspondence with the Corps of Engineers on this project.

U.S. Fish and Wildlife Service

The USFWS has concerns about the proposed the Bay Trail Option 2 alignment and the Future Trail Spur and/or Spine. The proposed future trail surrounds Pond SF2 which was purchased by the Service in 2003 as part of a purchase of 16,500 acres of salt ponds from Cargill Salt. Planning efforts are still underway to evaluate which ponds will be restored to tidal marsh habitat for federally and State listed species. Significant planning efforts, time, and funding resources have been put into this effort. Concerns for hinderence of restoration efforts and impacts to sensitive habitat areas and species are a priority for the Service. Currently, Pond SF2 is being considered for habitat restoration. The Service has a concern for the proposed Future Trail Spine alignment because of impacts to restoration efforts. The proposed Bay Trail Option 2 is less problematic than the Future Trail Spine, but also poposes a potential concern with respect to restoration efforts. This is due to it's near proximity to the area to the Cargill Salt pond area that is being restored back to native wetland habitat. The actual letter from the Fish and Wildlife Service, dated May 26, 2004, found n the Agency Letters chapter, discusses the concern for environmental impacts in greater detail. File number 1-1-04-TA-1339 should be attached with any further correspondence with the Service on this project.

Draft Report: Cost Evaluation

Cost estimates for design and construction have been developed on an order-of-magnitude basis. These cost estimates reflect the proposed trail alignment design as envisioned in this feasibility study. Because the estimates have been developed without the benefit of specific design drawings, they are considered to be preliminary and subject to change.

It should be noted that the cost estimates reflect an separate estimate for each proposed alignment. Neither environmental mitigation costs nor property acquisition costs are included in this estimate. A wetlands delineation map and habitat map should also be created and reviewed by the regulatory agencies to help avoid any impacts to sensitive species in the project area. In reality, each reach would need to undergo further study, including CEQA analysis, and more detailed design development before the trail could be implemented.

For all proposed trail alignments, the cost of a new sidewalk along the east side of University Avenue has been added to each of the proposed alignments. This cost is only anticipated for the trail reach that is constructed first. This new sidewalk from Purdue Avenue north to the Bayfront Expressway (Highway 84) would provide the pedestrian access adjacent to an existing Class II bike lane, within the University Avenue street right of way.

The cost estimates relate to the Opportunities Plan illustrated previously and are summarized as follows:

- Neighborhood Alignment: \$3,072,000
- Neighborhood Alignment Option: \$3,601,600
- Bay Trail Option 1 (option 1: at-grade): \$2,979,000
- Bay Trail Option 1 (alternate option 2: raised boardwalk): \$4,175,500
- Bay Trail Option 2: \$2,553,500
- Future Trail Spur and/or Spine: Not included.

It should be noted that the cost estimates for Neighborhood Alignment, Neighborhood Alignment Option and Bay Trail Option 1 could be greatly reduced if the trail segments over the Wellington Corporation site are able to be coordinated and incorporated into development patterns of that project.

Two estimates are given for Bay Trail Option 1: option 1 and option 2, an alternate. The option 1, on-grade alignment, illustrates how the trail may be built on the existing grade. This would occur within the RR easement, if a trail easement is purchased from each of the individual residential property owners. This involves the cooperation of all property owners for success of the alignment. The option 2, raised boardwalk alignment, illustrates the trail alignment outside of this privately owned RR easement. This alignment would occur over a wetlands area, if a trail easement was granted from only one property owner in this boardwalk area.

prepared for the
City of Menlo Park

Estimate of Probable Construction Costs
Bay Trail Feasibility Study
Conceptual Plan

Neighborhood Alignment (including University Avenue sidewalk)

prepared on: 6/18/04
prepared by: WS/BF/PC

Item #	Description	Qty	Unit	Cost	Item Total	Subtotal
A	Project Start-up					
1.	Mobilization	Allow	1%	\$16,729.80	\$16,729.80	
2.	Bonding	Allow	2.5%	\$41,824.50	\$41,824.50	
3.	Traffic control	Allow	0.5%	\$8,364.90	\$8,364.90	
4.	Staking	Allow	0.5%	\$8,364.90	\$8,364.90	
5.	Stormwater pollution prevention measures	Allow	LS	\$10,000.00	\$10,000.00	
						\$85,280.00
B	Demolition					
1.	Clearing and grubbing	37,400	SF	\$0.20	\$7,480.00	
2.	Curb and gutter (9 curb corners)	126	LF	\$5.00	\$630.00	
3.	Concrete sidewalk	2,640	SF	\$2.50	\$6,600.00	
4.	Miscellaneous fence removal (assume)	200	LF	\$1.50	\$300.00	
5.	Miscellaneous removals	Allow	LS	\$5,000.00	\$5,000.00	
						\$20,010.00
C	Grading and Drainage					
1.	Trail grading, 1' depth	1,776	CY	\$20.00	\$35,520.00	
2.	Miscellaneous drainage	Allow	LS	\$5,000.00	\$5,000.00	
						\$40,520.00
D	Site Construction					
1.	AC path, 8' wide	2,180	LF	\$24.00	\$52,320.00	
2.	Decomposed granite shoulder, 2' wide	6,120	LF	\$5.00	\$30,600.00	
3.	Curb ramp	5	EA	\$500.00	\$2,500.00	
4.	Curb and gutter	126	LF	\$30.00	\$3,780.00	
5.	Striping	1,880	LF	\$1.00	\$1,880.00	
						\$91,080.00
E	University Avenue Sidewalk, Curb and Gutter					
1.	Clearing and grubbing	30,500	SF	\$0.20	\$6,100.00	
2.	Miscellaneous removals	Allow	LS	\$2,000.00	\$2,000.00	
3.	Rough grading, 6" depth	282	CY	\$20.00	\$5,640.00	
4.	Concrete sidewalk	15,250	SF	\$8.00	\$122,000.00	
5.	Curb and gutter	3,050	LF	\$30.00	\$91,500.00	
6.	Railroad crossing - warning gates			(not in contract)		
7.	Hydroseeding - native grasses	15,250	SF	\$0.10	\$1,525.00	
						\$228,770.00
F	Bridge and/or Boardwalk					
1.	Prefabricated bridge (estimated length)	650	LF	\$1,800.00	\$1,170,000.00	
2.	Abutments	2	EA	\$20,000.00	\$40,000.00	
3.	Piles	4	EA	\$10,000.00	\$40,000.00	
4.	Rip rap at abutments	600	SF	\$20.00	\$12,000.00	
						\$1,262,000.00
G	Site Furnishings					
1.	Rules and regulations signage	2	EA	\$250.00	\$500.00	
2.	Directional signage	4	EA	\$250.00	\$1,000.00	
3.	Miscellaneous signage	Allow	LS	\$1,000.00	\$1,000.00	
4.	Trail map	1	EA	\$8,000.00	\$8,000.00	
5.	Interpretive signage	1	EA	\$6,000.00	\$6,000.00	
6.	Bollard	11	EA	\$400.00	\$4,400.00	
						\$20,900.00
H	Planting					
1.	Hydroseeding - native grasses	17,000	SF	\$0.10	\$1,700.00	
2.	Revegetation	Allow	LS	\$5,000.00	\$5,000.00	
3.	Plant establishment	6	MO	\$500.00	\$3,000.00	

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Estimate of Probable Construction Costs
Bay Trail Feasibility Study
Conceptual Plan

Neighborhood Alignment (including University Avenue sidewalk)

prepared on: 6/18/04
prepared by: WS/BF/PC

Item #	Description	Qty	Unit	Cost	Item Total	Subtotal
						\$9,700.00
I	Mitigation		(to be determined)			
J	Total of Construction					\$1,758,260.00
K	Contingencies					
1.	Construction changes	Allow	4%	\$70,330.40	\$70,330.40	
2.	Inflation (3% over next ten years)	Allow	30%	\$527,478.00	\$527,478.00	
3.	Level of estimate accuracy	Allow	15%	\$263,739.00	\$263,739.00	
4.	Regulatory agency measures	Allow	1%	\$17,582.60	\$17,582.60	
						\$879,130.00
L	Professional Services					
1.	Topographic survey	Allow	LS	\$20,000.00	\$20,000.00	
2.	Geotechnical engineer	Allow	LS	\$8,000.00	\$8,000.00	
3.	Biological consultant	Allow	LS	\$3,000.00	\$3,000.00	
4.	Habitat map (species map, mitigation map)	Allow	LS	\$4,000.00	\$4,000.00	
5.	Wetlands delineation map	Allow	LS	\$4,000.00	\$4,000.00	
6.	Design development	Allow	3%	\$79,121.70	\$79,121.70	
7.	Construction documents	Allow	8%	\$210,991.20	\$210,991.20	
8.	Bidding and construction administration	Allow	3%	\$79,121.70	\$79,121.70	
9.	Testing and special inspection	Allow	1%	\$26,373.90	\$26,373.90	
						\$434,610.00
M	Permitting					
N	Property Acquisition/Trail Easements					
O	Total Estimated Project Costs					\$3,072,000.00
P	Cost of Trail per Linear Foot	3,630	LF	\$846.28	\$846.28	
						\$846.28
	Note: Depending on development type and patterns with the trail, the trail may be included into that and reduce the costs dramatically.					
	Based on drawing entitled "Bay Trail Feasibility Study Opportunities Plan" dated 6/18/04.					
	<i>The above items, amounts, quantities, and related information are based on Callander Associates' judgment at this level of document preparation and is offered only as reference data. Callander Associates has no control over construction quantities, costs and related factors affecting costs, and advises the client that significant variation may occur between this estimate of probable construction costs and actual construction prices.</i>					

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Estimate of Probable Construction Costs
Bay Trail Feasibility Study
Conceptual Plan

Neighborhood Alignment Option (including University Avenue sidewalk)

prepared on: 6/18/04
prepared by: WS/BF/PC

Item #	Description	Qty	Unit	Cost	Item Total	Subtotal
A	Project Start-up					
1.	Mobilization	Allow	1%	\$19,667.70	\$19,667.70	
2.	Bonding	Allow	2.5%	\$49,169.25	\$49,169.25	
3.	Traffic control	Allow	0.5%	\$9,833.85	\$9,833.85	
4.	Staking	Allow	0.5%	\$9,833.85	\$9,833.85	
5.	Stormwater pollution prevention measures	Allow	LS	\$10,000.00	\$10,000.00	
						\$98,500.00
B	Demolition					
1.	Clearing and grubbing	110,000	SF	\$0.20	\$22,000.00	
2.	Curb and gutter (10 curb corners)	140	LF	\$5.00	\$700.00	
3.	Miscellaneous fence removal (assume)	200	LF	\$1.50	\$300.00	
4.	Miscellaneous removals	Allow	LS	\$8,000.00	\$8,000.00	
						\$31,000.00
C	Grading and Drainage					
1.	Trail grading, 1' depth	4,100	CY	\$20.00	\$82,000.00	
2.	Miscellaneous drainage	Allow	LS	\$5,000.00	\$5,000.00	
						\$87,000.00
D	Site Construction					
1.	AC path, 8' wide	4,180	LF	\$24.00	\$100,320.00	
2.	AC path, 12' wide	1,900	LF	\$36.00	\$68,400.00	
3.	Decomposed granite shoulder, 2' wide	12,160	LF	\$5.00	\$60,800.00	
4.	Curb ramp	10	EA	\$500.00	\$5,000.00	
5.	Curb and gutter	140	LF	\$30.00	\$4,200.00	
6.	Striping	6,080	LF	\$0.50	\$3,040.00	
7.	Access gate (at Hetch Hetchy r.o.w.)	2	EA	\$2,000.00	\$4,000.00	
8.	Chain link fencing (along railroad), 8' height	2,000	LF	\$35.00	\$70,000.00	
9.	Railroad crossing - warning gates, signals, striping)		(not in contract)			
						\$315,760.00
E	University Avenue Sidewalk, Curb and Gutter					
1.	Clearing and grubbing	30,500	SF	\$0.20	\$6,100.00	
2.	Miscellaneous removals	Allow	LS	\$2,000.00	\$2,000.00	
3.	Rough grading, 6" depth	282	CY	\$20.00	\$5,640.00	
4.	Concrete sidewalk	15,250	SF	\$8.00	\$122,000.00	
5.	Curb and gutter	3,050	LF	\$30.00	\$91,500.00	
6.	Curb ramp	1	EA	\$500.00	\$500.00	
7.	Railroad crossing - warning gates		(not in contract)			
8.	Hydroseeding - native grasses	15,250	SF	\$0.10	\$1,525.00	
						\$229,270.00
F	Bridge and/or Boardwalk					
1.	Prefabricated bridge (estimated length)	650	LF	\$1,800.00	\$1,170,000.00	
2.	Abutments	2	EA	\$20,000.00	\$40,000.00	
3.	Piles	4	EA	\$10,000.00	\$40,000.00	
4.	Rip rap at abutments	600	SF	\$20.00	\$12,000.00	
						\$1,262,000.00
G	Site Furnishings					
1.	Rules and regulations signage	4	EA	\$250.00	\$1,000.00	
2.	Directional signage	6	EA	\$250.00	\$1,500.00	
3.	Miscellaneous signage	Allow	LS	\$1,000.00	\$1,000.00	
4.	Trail map	1	EA	\$8,000.00	\$8,000.00	
5.	Interpretive signage	2	EA	\$6,000.00	\$12,000.00	

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Estimate of Probable Construction Costs
Bay Trail Feasibility Study
Conceptual Plan

Neighborhood Alignment Option (including University Avenue sidewalk)

prepared on: 6/18/04
prepared by: WS/BF/PC

Item #	Description	Qty	Unit	Cost	Item Total	Subtotal
6.	Bollard	14	EA	\$400.00	\$5,600.00	
						\$29,100.00
H	Planting					
1.	Hydroseeding - native grasses	46,400	SF	\$0.10	\$4,640.00	
2.	Revegetation	Allow	LS	\$5,000.00	\$5,000.00	
3.	Plant establishment	6	MO	\$500.00	\$3,000.00	
						\$12,640.00
I	Mitigation		(to be determined)			
J	Total of Construction					\$2,065,270.00
K	Contingencies					
1.	Construction changes	Allow	4%	\$82,610.80	\$82,610.80	
2.	Inflation (3% over next ten years)	Allow	30%	\$619,581.00	\$619,581.00	
3.	Level of estimate accuracy	Allow	15%	\$309,790.50	\$309,790.50	
4.	Regulatory agency measures	Allow	1%	\$20,652.70	\$20,652.70	
						\$1,032,640.00
L	Professional Services					
1.	Topographic survey	Allow	LS	\$20,000.00	\$20,000.00	
2.	Geotechnical engineer	Allow	LS	\$8,000.00	\$8,000.00	
3.	Biological consultant	Allow	LS	\$3,000.00	\$3,000.00	
4.	Habitat map (species map, mitigation map)	Allow	LS	\$4,000.00	\$4,000.00	
5.	Wetlands delineation map	Allow	LS	\$4,000.00	\$4,000.00	
6.	Design development	Allow	3%	\$92,937.30	\$92,937.30	
7.	Construction documents	Allow	8%	\$247,832.80	\$247,832.80	
8.	Bidding and construction administration	Allow	3%	\$92,937.30	\$92,937.30	
9.	Testing and special inspection	Allow	1%	\$30,979.10	\$30,979.10	
						\$503,690.00
M	Permitting		(to be determined)			
N	Property Acquisition/Trail Easements		(to be determined)			
O	Total Estimated Project Costs					\$3,601,600.00
P	Cost of Trail per Linear Foot	6,730	LF	\$535.16	\$535.16	\$535.16
	Note: Depending on development type and patterns with the trail, the trail may be included into that and reduce the costs dramatically.					

Based on drawing entitled "Bay Trail Feasibility Study Opportunities Plan" dated 6/18/04.

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Estimate of Probable Construction Costs
Bay Trail Feasibility Study
Conceptual Plan

**Bay Trail Option 1, Alternate Option 1 (including at grade alignment
on Railroad easement and University Avenue sidewalk)**

prepared on: 6/18/04
prepared by: WS/BF/PC

Item #	Description	Qty	Unit	Cost	Item Total	Subtotal
A	Project Start-up					
1.	Mobilization	Allow	1%	\$16,166.30	\$16,166.30	
2.	Bonding	Allow	2.5%	\$40,415.75	\$40,415.75	
3.	Traffic control	Allow	0.5%	\$8,083.15	\$8,083.15	
4.	Staking	Allow	0.5%	\$8,083.15	\$8,083.15	
5.	Stormwater pollution prevention measures	Allow	LS	\$15,000.00	\$15,000.00	
						\$87,750.00
B	Demolition					
1.	Clearing and grubbing	46,300	SF	\$0.20	\$9,260.00	
2.	Miscellaneous removals	Allow	LS	\$10,000.00	\$10,000.00	
						\$19,260.00
C	Grading and Drainage					
1.	Trail grading, 1' depth	1,700	CY	\$20.00	\$34,000.00	
2.	Miscellaneous drainage	Allow	LS	\$8,000.00	\$8,000.00	
						\$42,000.00
D	Site Construction					
1.	AC path, 8' wide	4,400	LF	\$24.00	\$105,600.00	
2.	Decomposed granite shoulder, 2' wide	8,800	LF	\$5.00	\$44,000.00	
3.	Striping	4,400	LF	\$0.50	\$2,200.00	
4.	Chain link fencing (along railroad), 8' height	3,700	LF	\$35.00	\$129,500.00	
5.	Railroad crossing - warning gates, signals and striping		(not in contract)			
						\$281,300.00
E	University Avenue Sidewalk, Curb and Gutter					
1.	Clearing and grubbing	30,500	SF	\$0.20	\$6,100.00	
2.	Miscellaneous removals	Allow	LS	\$2,000.00	\$2,000.00	
3.	Rough grading, 6" depth	282	CY	\$20.00	\$5,640.00	
4.	Concrete sidewalk	15,250	SF	\$8.00	\$122,000.00	
5.	Curb and gutter	3,050	LF	\$30.00	\$91,500.00	
6.	Curb ramp	1	EA	\$500.00	\$500.00	
7.	Railroad crossing - warning gates		(not in contract)			
8.	Hydroseeding - native grasses	15,250	SF	\$0.10	\$1,525.00	
						\$229,270.00
F	Bridge and/or Boardwalk					
1.	Prefabricated bridge (estimated length)	500	LF	\$1,800.00	\$900,000.00	
2.	Abutments	2	EA	\$20,000.00	\$40,000.00	
3.	Piles	4	EA	\$10,000.00	\$40,000.00	
4.	Rip rap at abutments	600	SF	\$20.00	\$12,000.00	
						\$992,000.00
G	Site Furnishings					
1.	Rules and regulations signage	4	EA	\$250.00	\$1,000.00	
2.	Directional signage	5	EA	\$250.00	\$1,250.00	
3.	Miscellaneous signage	Allow	LS	\$1,000.00	\$1,000.00	
4.	Trail map	2	EA	\$8,000.00	\$16,000.00	
5.	Interpretive signage	2	EA	\$6,000.00	\$12,000.00	
6.	Bollard	9	EA	\$400.00	\$3,600.00	
						\$34,850.00
H	Planting					
1.	Hydroseeding - native grasses	29,500	SF	\$0.10	\$2,950.00	
2.	Revegetation	Allow	LS	\$12,000.00	\$12,000.00	
3.	Plant establishment	6	MO	\$500.00	\$3,000.00	

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Estimate of Probable Construction Costs
Bay Trail Feasibility Study
Conceptual Plan

**Bay Trail Option 1, Alternate Option 1 (including at grade alignment
on Railroad easement and University Avenue sidewalk)**

prepared on: 6/18/04
prepared by: WS/BF/PC

Item #	Description	Qty	Unit	Cost	Item Total	Subtotal
						\$17,950.00
I	Mitigation		(to be determined)			
J	Total of Construction					\$1,704,380.00
K	Contingencies					
1.	Construction changes	Allow	4%	\$68,175.20	\$68,175.20	
2.	Inflation (3% over next ten years)	Allow	30%	\$511,314.00	\$511,314.00	
3.	Level of estimate accuracy	Allow	15%	\$255,657.00	\$255,657.00	
4.	Regulatory agency measures	Allow	1%	\$17,043.80	\$17,043.80	
						\$852,190.00
L	Professional Services					
1.	Topographic survey	Allow	LS	\$20,000.00	\$20,000.00	
2.	Geotechnical engineer	Allow	LS	\$8,000.00	\$8,000.00	
3.	Biological consultant	Allow	LS	\$3,000.00	\$3,000.00	
4.	Habitat map (species map, mitigation map)	Allow	LS	\$4,000.00	\$4,000.00	
5.	Wetlands delineation map	Allow	LS	\$4,000.00	\$4,000.00	
5.	Design development	Allow	3%	\$76,697.10	\$76,697.10	
6.	Construction documents	Allow	8%	\$204,525.60	\$204,525.60	
7.	Bidding and construction administration	Allow	3%	\$76,697.10	\$76,697.10	
8.	Testing and special inspection	Allow	1%	\$25,565.70	\$25,565.70	
						\$422,490.00
M	Permitting					
						(to be determined)
N	Property Acquisition/Trail Easements					
						(to be determined)
O	Total Estimated Project Costs					\$2,979,060.00
P	Cost of Trail per Linear Foot	4,900	LF	\$607.97	\$607.97	
						\$607.97
	Note: Depending on development type and patterns with the trail, the trail may be included into that and reduce the costs dramatically.					
Based on drawing entitled "Bay Trail Feasibility Study Opportunities Plan" dated 6/18/04.						
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Estimate of Probable Construction Costs
Bay Trail Feasibility Study
Conceptual Plan

**Bay Trail Option 1, Alternate Option 2 (including raised boardwalk
just outside of railroad easements, and University Avenue sidewalk)**

prepared on: 6/18/04
prepared by: WS/BF/PC

Item #	Description	Qty	Unit	Cost	Item Total	Subtotal
A	Project Start-up					
1.	Mobilization	Allow	1%	\$22,803.70	\$22,803.70	
2.	Bonding	Allow	2.5%	\$57,009.25	\$57,009.25	
3.	Traffic control	Allow	0.5%	\$11,401.85	\$11,401.85	
4.	Staking	Allow	0.5%	\$11,401.85	\$11,401.85	
5.	Stormwater pollution prevention measures	Allow	LS	\$15,000.00	\$15,000.00	
						\$117,620.00
B	Demolition					
1.	Clearing and grubbing	35,100	SF	\$0.20	\$7,020.00	
2.	Miscellaneous removals	Allow	LS	\$10,000.00	\$10,000.00	
						\$17,020.00
C	Grading and Drainage					
1.	Trail grading, 1' depth	1,300	CY	\$20.00	\$26,000.00	
2.	Miscellaneous drainage	Allow	LS	\$8,000.00	\$8,000.00	
						\$34,000.00
D	Site Construction					
1.	AC path, 8' wide	2,950	LF	\$24.00	\$70,800.00	
2.	Decomposed granite shoulder, 2' wide	5,900	LF	\$5.00	\$29,500.00	
3.	Striping	2,950	LF	\$0.50	\$1,475.00	
4.	Chain link fencing (along railroad), 8' height	3,700	LF	\$35.00	\$129,500.00	
5.	Railroad crossing - warning gates, signals and striping			(not in contract)		
						\$231,280.00
E	University Avenue Sidewalk, Curb and Gutter					
1.	Clearing and grubbing	30,500	SF	\$0.20	\$6,100.00	
2.	Miscellaneous removals	Allow	LS	\$2,000.00	\$2,000.00	
3.	Rough grading, 6" depth	282	CY	\$20.00	\$5,640.00	
4.	Concrete sidewalk	15,250	SF	\$8.00	\$122,000.00	
5.	Curb and gutter	3,050	LF	\$30.00	\$91,500.00	
6.	Curb ramp	1	EA	\$500.00	\$500.00	
7.	Railroad crossing - warning gates			(not in contract)		
8.	Hydroseeding - native grasses	15,250	SF	\$0.10	\$1,525.00	
						\$229,270.00
F	Bridge and/or Boardwalk					
1.	Prefabricated bridge (estimated length)	500	LF	\$1,800.00	\$900,000.00	
2.	Abutments	2	EA	\$20,000.00	\$40,000.00	
3.	Piles	4	EA	\$10,000.00	\$40,000.00	
4.	Rip rap at abutments	600	SF	\$20.00	\$12,000.00	
5.	Boardwalk, 8' wide	1,450	LF	\$300.00	\$435,000.00	
6.	Pedestrian railings at boardwalk	2,900	LF	\$100.00	\$290,000.00	
						\$1,717,000.00
G	Site Furnishings					
1.	Rules and regulations signage	4	EA	\$250.00	\$1,000.00	
2.	Directional signage	5	EA	\$250.00	\$1,250.00	
3.	Miscellaneous signage	Allow	LS	\$1,000.00	\$1,000.00	
4.	Trail map	2	EA	\$8,000.00	\$16,000.00	
5.	Interpretive signage	2	EA	\$6,000.00	\$12,000.00	
6.	Bollard	9	EA	\$400.00	\$3,600.00	
						\$34,850.00
H	Planting					
1.	Hydroseeding - native grasses	19,500	SF	\$0.10	\$1,950.00	
2.	Revegetation	Allow	LS	\$12,000.00	\$12,000.00	
3.	Plant establishment	6	MO	\$500.00	\$3,000.00	

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City of Menlo Park

Estimate of Probable Construction Costs
Bay Trail Feasibility Study
Conceptual Plan

**Bay Trail Option 1, Alternate Option 2 (including raised boardwalk
just outside of railroad easements, and University Avenue sidewalk)**

prepared on: 6/18/04
prepared by: WS/BF/PC

Item #	Description	Qty	Unit	Cost	Item Total	Subtotal
						\$16,950.00
I	Mitigation		(to be determined)			
J	Total of Construction					\$2,397,990.00
K	Contingencies					
1.	Construction changes	Allow	4%	\$95,919.60	\$95,919.60	
2.	Inflation (3% over next ten years)	Allow	30%	\$719,397.00	\$719,397.00	
3.	Level of estimate accuracy	Allow	15%	\$359,698.50	\$359,698.50	
4.	Regulatory agency measures	Allow	1%	\$23,979.90	\$23,979.90	
						\$1,199,000.00
L	Professional Services					
1.	Topographic survey	Allow	LS	\$20,000.00	\$20,000.00	
2.	Geotechnical engineer	Allow	LS	\$8,000.00	\$8,000.00	
3.	Biological consultant	Allow	LS	\$3,000.00	\$3,000.00	
4.	Habitat map (species map, mitigation map)	Allow	LS	\$4,000.00	\$4,000.00	
5.	Wetlands delineation map	Allow	LS	\$4,000.00	\$4,000.00	
6.	Design development	Allow	3%	\$107,909.70	\$107,909.70	
7.	Construction documents	Allow	8%	\$287,759.20	\$287,759.20	
8.	Bidding and construction administration	Allow	3%	\$107,909.70	\$107,909.70	
9.	Testing and special inspection	Allow	1%	\$35,969.90	\$35,969.90	
						\$578,550.00
M	Permitting					
						(to be determined)
N	Property Acquisition/Trail Easements					
						(to be determined)
O	Total Estimated Project Costs					\$4,175,540.00
P	Cost of Trail per Linear Foot	4,900	LF	\$852.15	\$852.15	
						\$852.15
	Note: Depending on development type and patterns with the trail, the trail may be included into that and reduce the costs dramatically.					
Based on drawing entitled "Bay Trail Feasibility Study Opportunities Plan" dated 6/18/04.						
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Estimate of Probable Construction Costs
Bay Trail Feasibility Study
Conceptual Plan

**Bay Trail Option 2 (including raised boardwalk along SPRR
and University Avenue sidewalk)**

prepared on: 6/18/04
prepared by: WS/BF/PC

Item #	Description	Qty	Unit	Cost	Item Total	Subtotal
A	Project Start-up					
1.	Mobilization	Allow	1%	\$13,809.00	\$13,809.00	
2.	Bonding	Allow	2.5%	\$34,522.50	\$34,522.50	
3.	Traffic control	Allow	0.5%	\$6,904.50	\$6,904.50	
4.	Staking	Allow	0.5%	\$6,904.50	\$6,904.50	
5.	Stormwater pollution prevention measures	Allow	LS	\$10,000.00	\$10,000.00	
						\$72,140.00
B	Demolition					
1.	Clearing and grubbing	49,400	SF	\$0.20	\$9,880.00	
2.	Miscellaneous removals	Allow	LS	\$5,000.00	\$5,000.00	
						\$14,880.00
C	Grading and Drainage					
1.	Trail grading, 1' depth	1,800	CY	\$20.00	\$36,000.00	
2.	Miscellaneous drainage	Allow	LS	\$8,000.00	\$8,000.00	
						\$44,000.00
D	Site Construction					
1.	AC path, 8' wide	2,700	LF	\$24.00	\$64,800.00	
2.	Decomposed granite shoulder, 2' wide	5,400	LF	\$5.00	\$27,000.00	
3.	Striping	2,700	LF	\$0.50	\$1,350.00	
4.	Chain link fencing (along railroad), 8' height	2,700	LF	\$35.00	\$94,500.00	
5.	Railroad crossing - warning gates, signals and striping			(not in contract)		
						\$187,650.00
E	University Avenue Sidewalk, Curb and Gutter					
1.	Clearing and grubbing	30,500	SF	\$0.20	\$6,100.00	
2.	Miscellaneous removals	Allow	LS	\$2,000.00	\$2,000.00	
3.	Rough grading, 6" depth	282	CY	\$20.00	\$5,640.00	
4.	Concrete sidewalk	15,250	SF	\$8.00	\$122,000.00	
5.	Curb and gutter	3,050	LF	\$30.00	\$91,500.00	
6.	Curb ramp	1	EA	\$500.00	\$500.00	
7.	Railroad crossing - warning gates			(not in contract)		
8.	Hydroseeding - native grasses	15,250	SF	\$0.10	\$1,525.00	
						\$229,270.00
F	Bridge and/or Boardwalk					
1.	Prefabricated bridge (estimated length)	150	LF	\$1,800.00	\$270,000.00	
2.	Abutments	2	EA	\$20,000.00	\$40,000.00	
3.	Rip rap at abutments	600	SF	\$20.00	\$12,000.00	
4.	Boardwalk, 8' wide	1,250	LF	\$300.00	\$375,000.00	
5.	Pedestrian railing at boardwalk	1,250	LF	\$100.00	\$125,000.00	
6.	Metal fencing at boardwalk, 6' height	1,250	LF	\$30.00	\$37,500.00	
						\$859,500.00
G	Site Furnishings					
1.	Rules and regulations signage	2	EA	\$250.00	\$500.00	
2.	Directional signage	4	EA	\$250.00	\$1,000.00	
3.	Miscellaneous signage	Allow	LS	\$1,000.00	\$1,000.00	
4.	Trail map	1	EA	\$8,000.00	\$8,000.00	
5.	Interpretive signage	2	EA	\$6,000.00	\$12,000.00	
6.	Bollard	6	EA	\$400.00	\$2,400.00	
						\$24,900.00
H	Planting					
1.	Hydroseeding - native grasses	27,000	SF	\$0.10	\$2,700.00	
2.	Revegetation	Allow	LS	\$15,000.00	\$15,000.00	
3.	Plant establishment	6	MO	\$500.00	\$3,000.00	
						\$20,700.00
I	Mitigation					
				(to be determined)		
J	Total of Construction					\$1,453,040.00
K	Contingencies					
1.	Construction changes	Allow	4%	\$58,121.60	\$58,121.60	
2.	Inflation (3% over next ten years)	Allow	30%	\$435,912.00	\$435,912.00	

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prepared for the
City of Menlo Park

Estimate of Probable Construction Costs
Bay Trail Feasibility Study
Conceptual Plan

**Bay Trail Option 2 (including raised boardwalk along SPRR
and University Avenue sidewalk)**

prepared on: 6/18/04
prepared by: WS/BF/PC

Item #	Description	Qty	Unit	Cost	Item Total	Subtotal
3.	Level of estimate accuracy	Allow	15%	\$217,956.00	\$217,956.00	
4.	Regulatory agency measures	Allow	1%	\$14,530.40	\$14,530.40	
						\$726,520.00
L	Professional Services					
1.	Topographic survey	Allow	LS	\$20,000.00	\$20,000.00	
2.	Geotechnical engineer	Allow	LS	\$16,000.00	\$16,000.00	
3.	Biological consultant	Allow	LS	\$3,000.00	\$3,000.00	
4.	Habitat map (species map, mitigation map)	Allow	LS	\$4,000.00	\$4,000.00	
5.	Wetlands delineation map	Allow	LS	\$4,000.00	\$4,000.00	
6.	Design development	Allow	3%	\$65,386.80	\$65,386.80	
7.	Construction documents	Allow	8%	\$174,364.80	\$174,364.80	
8.	Bidding and construction administration	Allow	3%	\$65,386.80	\$65,386.80	
9.	Testing and special inspection	Allow	1%	\$21,795.60	\$21,795.60	
						\$373,930.00
M	Permitting		(to be determined)			
N	Property Acquisition/Trail Easements		(to be determined)			
O	Total Estimated Project Costs					\$2,553,490.00
P	Cost of Trail per Linear Foot	4,100	LF	\$622.80	\$622.80	
						\$622.80

Based on drawing entitled "Bay Trail Feasibility Study Opportunities Plan" dated 6/18/04.
The above items, amounts, quantities, and related information are based on Callander Associates' judgment at this level of document preparation and is offered only as reference data. Callander Associates has no control over construction quantities, costs and related factors affecting costs, and advises the client that significant variation may occur between this estimate of probable construction costs and actual construction prices.

Draft Report: Action Plan

This chapter summarizes the future steps needed to complete this reach of the Bay Trail as presented in the Draft Report. Each proposed trail alignment reach is included in the following matrix, outlining needed actions for implementation. The matrix addresses such issues as property acquisition or easements, liability agreements, environmental documentation, further planning and design, and construction documents needed.

The matrix prioritizes the proposed trails from the highest preference to the lowest preference, based on comments from the community, agencies, stakeholders, and City of Menlo Park and East Palo Alto staff to date. This ranking was completed prior to the presentation of the Draft Feasibility Study to the Transportation Commissions and City Councils of the City of East Palo Alto and the City of Menlo Park.

From this Draft Report, the Bay Trail Option 1 has the higher preference, with Neighborhood Alignment and Neighborhood Alignment Option tied as second preference, Bay Trail Option 2 is the lower preference, and the Future Trail Spur and/or Spine is a potential future reach (anticipated to occur after a proposed Bay Trail reach or Neighborhood Alignment reach are implemented). Only one trail reach is anticipated to be implemented.

Following the Commission and Council meetings and presentation of the Draft Report the four concept alignments were narrowed down to one concept alignment. Further public input was gathered at the meetings and Council action determined a Preferred Trail, as Bay Trail Option 2. Only this option is desired, if feasible, after more detailed planning efforts are completed. No other concept trail options that were presented in the Draft Report are to be implemented.

It should be noted that this Action Plan matrix is only a conceptual road map that identifies the major tasks. As the planning process continues, issues or actions may be added, deleted or reprioritized as necessary to accommodate the changing regulatory, stakeholder, planning and environmental issues.

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Issues	Bay Trail Option 1	Neighborhood Alignment	Neighborhood Alignment Option	Bay Trail Option 2	Future Trail Spur and/or Spine
<p>Property issues (related to "Stakeholders, issues and planning effort needed to occur" below)</p>	<ul style="list-style-type: none"> • be considerate of environmental cleanup efforts and ongoing salt pond to salt marsh restoration efforts • collaborate with stakeholders and related City/County government departments on short-term and long term site planning for privately/publicly owned sites • outreach and network with stakeholders as to the potential, timing, type of acquisition/trail easement agreements possible • evaluate timing, probability, and feasibility of property acquisitions and/or trail easement negotiations for proposed trail alignments • identify preferred alignment 				
<p>Stakeholders, site specific issues and planning effort needed to occur (related to "Property issues" above)</p>	<ul style="list-style-type: none"> • <i>Midpeninsula Regional Open Space District (MPROSD)</i> <ul style="list-style-type: none"> • negotiate trail easement • <i>Wellington Corporation site owner</i> <ul style="list-style-type: none"> • preliminary site planning • finalized • project constructed and/or negotiate trail easement only • <i>Union Pacific (railroad easement)</i> <ul style="list-style-type: none"> • environmental clean up • finalized • release of easement use • discuss easement use with City Council/property owners • <i>City of East Palo Alto (City Council)</i> <ul style="list-style-type: none"> • environmental clean up • finalized of RR easement • release of easement use from RR • discuss former RR easement use for dedication as trail easement • <i>City of East Palo Alto property owners</i> (east side of Illinois Street) <ul style="list-style-type: none"> • environmental clean up • finalized of RR easement • release of easement use from RR and City Council approval • discuss former RR easement use for trail easement • <i>San Francisco Public Utilities Commission (SFPUC)</i> (service road and parcel south of Dumbarton Rail Corridor) <ul style="list-style-type: none"> • negotiate trail easement with 	<p>MPROSD</p> <ul style="list-style-type: none"> • negotiate trail easement <p><i>Wellington Corporation site owner</i></p> <ul style="list-style-type: none"> • site development planning • project constructed and/or negotiate trail easement only <p><i>PG&E (utility easement)</i></p> <ul style="list-style-type: none"> • negotiate trail easement along Purdue Avenue <p><i>City of East Palo Alto (street right of way)</i></p> <ul style="list-style-type: none"> • negotiate on street trail alignment (Class III) <p><i>Caltrans (University Avenue R.O.W.)</i></p> <ul style="list-style-type: none"> • encroachment permit for sidewalk 	<p>MPROSD</p> <ul style="list-style-type: none"> • negotiate trail easement <p><i>Wellington Corporation site owner</i></p> <ul style="list-style-type: none"> • site development planning • project constructed and/or negotiate trail easement only <p><i>PG&E (utility easement)</i></p> <ul style="list-style-type: none"> • negotiate trail easement along Purdue Avenue <p><i>SFPUC (Hetch Hetchy R.O.W. and service road / parcel south of Dumbarton Rail Corridor)</i></p> <ul style="list-style-type: none"> • negotiate trail easement within R.O.W. between Georgetown Street and Fordham Street • negotiation of trail easement with regard to reactivation of rail corridor and service truck access <p><i>SanTrans (Dumbarton Rail Corridor)</i></p> <ul style="list-style-type: none"> • reactivation of rail corridor • negotiate easement associated with railroad reactivation <p><i>Caltrans (University Avenue R.O.W.)</i></p> <ul style="list-style-type: none"> • encroachment permit for sidewalk 	<p>MPROSD</p> <ul style="list-style-type: none"> • negotiate trail easement <p><i>SanTrans (Dumbarton Rail Corridor)</i></p> <ul style="list-style-type: none"> • reactivation of rail corridor • negotiate easement associated with railroad reactivation <p><i>SFPUC (service road and parcel south of Dumbarton Rail Corridor)</i></p> <ul style="list-style-type: none"> • negotiate trail easement with regard to reactivation of rail corridor and service truck access <p><i>Caltrans (University Avenue R.O.W.)</i></p> <ul style="list-style-type: none"> • encroachment permit for sidewalk 	<p><i>SanTrans (Dumbarton Rail Corridor)</i></p> <ul style="list-style-type: none"> • reactivation of rail corridor • negotiate easement associated with railroad reactivation • approve rail crossing methods <p><i>SFPUC (service road and parcel south of Dumbarton Rail Corridor)</i></p> <ul style="list-style-type: none"> • negotiate trail easement with regard to reactivation of rail corridor and service truck access <p><i>Cargill Salt (Cargill salt ponds)</i></p> <ul style="list-style-type: none"> • wetlands restoration complete • negotiate trail easement in conjunction with USFWS <p><i>U.S. Fish and Wildlife Service (to be transferred after Cargill restoration)</i></p> <ul style="list-style-type: none"> • wetlands restoration complete • negotiate trail easement in conjunction with Cargill Salt Ponds <p><i>MPROSD (parcel east of Cargill salt ponds at edge of the San Francisco Bay)</i></p> <ul style="list-style-type: none"> • negotiate trail easement

Issues	Bay Trail Option 1	Neighborhood Alignment	Neighborhood Alignment Option	Bay Trail Option 2	Future Trail Spur and/or Spine
Caltrans coordination	<ul style="list-style-type: none"> • collaborate with Caltrans for encroachment of proposed sidewalk within the right-of-way on the east side of University Avenue from Purdue Avenue to Highway 84 • apply for encroachment permit for new sidewalk 				
Funding for advanced trail planning, design, and construction	<ul style="list-style-type: none"> • apply for and secure funding for advanced planning process network through ABAG and other local regional agencies, governments, and non-profits • seek and write grants • potential to raise funds through environmental, educational, bicycle/pedestrian advocacy groups 				
Refine preferred trail alignment	<ul style="list-style-type: none"> • based upon environmental agency, stakeholder, completion of environmental cleanup, salt marsh restoration, and other planning efforts help identify a trail alignment that is most feasible • identify a final preferred trail alignment • develop more detailed drawings • hold public outreach process for input • revise alignment and trail amenities to reflect input • develop construction drawings and specifications for the trail reach • develop maintenance plan and identify agencies responsible for patrolling/enforcement 				
CEQA review	<ul style="list-style-type: none"> • take the project through the CEQA process • identify any mitigation resources as needed • collaborate with Cargill, U.S. Fish and Wildlife Service, and local stakeholders for potential opportunities for mitigation improvements on their site • identify mitigation actions as near to the trail site as possible 				
Property acquisition and trail easement negotiation	<ul style="list-style-type: none"> • acquire properties needed and/or trail easement negotiations as identified in action item "Property issues" above 				
Advanced design development	<ul style="list-style-type: none"> • revise drawings and specifications to address CEQA recommendations • submit finalized drawings for environmental CEQA 				
Permits	<ul style="list-style-type: none"> • submit approved CEQA construction drawings and specifications for necessary City, County, Caltrans, and other permits as needed • receive needed permits prior to construction • partial list of potential permit/regulatory agencies: <ul style="list-style-type: none"> • City of Menlo Park • City of East Palo Alto • Bay Conservation and Development Commission • California Dept. of Fish and Game • California RWQCB • U.S. Army Corps of Engineers • U.S. Fish and Wildlife Services • Caltrans 				
Trail construction	<ul style="list-style-type: none"> • be considerate of natural, sensitive habitat, transit operations, and neighbors that are near trail construction areas • provide high quality of workmanship in a timely manner to help reduce construction impacts • complete the trail on time and on budget, closing one gap in the San Francisco Bay Trail loop 				

Meeting Minutes: Task Force Meeting #1

via email

Revised May 21, 2003

Meeting Minutes

Task Force Meeting #1

Re: Bay Trail Feasibility Study

Location: City of Menlo Park, Administrative Conference Room

Date of Meeting: Thursday, May 15, 2003, 10:00 a.m. - noon

Page 1 of 5

Attendees: *Task Force:*

Dino Teddyputra, City of Menlo Park, email DTeddyputra@menlopark.org

Robert Cronin, Menlo Park, PBPC, email shawms@bigvalley.net

Bob Emert, San Mateo County Trails Committee, email bbemert@sbcglobal.net

Melissa Barry, ABAG, email MelissaB@abag.ca.gov

Stefan Galvez, Caltrans, email email.Stefan_Galvez@dot.ca.gov

Jane Lockwood, Sam Trans, email lockwoodj@samtrans.com

Ana Ruiz, Mid-peninsula Regional Open Space Trust, email aruiz@openspace.org

Kirit Bavishi, San Francisco PUC, email kread@sfgwater.org

Lily Lee, City of East Palo Alto, email lee.lily@epamail.epa.gov

Brian Fletcher, Callander Associates, email bfletcher@callanderassociates.com

Wendy Swenson, Callander Associates, email wswenson@callanderassociates.com

Brett Hondorp, Alta Planning + Design, email bhondorp@altaplanning.com

Not Present at Meeting:

Lloyd Dakin, General Public, email lloyd_dakin@hp.com

Dani Weber, PBPC, email _____

Ellen Miramontes, BCDC, email ellenm@bcdc.ca.gov

Lori Johnson, Cargill, email Lori_Johnson@cargill.com

Ramon True, PG&E, email _____

Walter Martone, C/CAG San Mateo County, email wmartone@co.sanmateo.ca.us

Goals and Objectives, Opportunities and Constraints

Bob Emert (County Trails Commission)

- San Mateo County multi use trails: pedestrian, bicycle, jogger, roller bladders, non-motorized.
- Smaller loop off main trail as alt.; Caltrans standard: strolling/nature loop (to get off main path).
- Pedestrian accommodation as much as possible.

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- Close to nature and protect nature.
- Speed limits – width of trail, jogger on side, biker on middle.

Dino Teddyputra (City)

- Goal 1: Path that was accepted by locals/government:
- Goal 2: Adopted for future construction (construction date in economy?).
- Goal 3: Alignment with (E) trails.

Melissa Barry (ABAG)

- Funding – consensus/trail gap closed.
- Cost estimates – construction documents follow through.
- Multi-use path: bikers, hikers, roller bladers.
- Also working on closing other trail gap(s) of Ravenswood Park, East Palo Alto.

Lilly Lee (EPA environmental)

- Residents interest – improve recreation access, fishing (do currently?).
- Mayor interest – educational access to beauty of Bay.
- Interest: more transit modes to access area; potential rail in future (want to connect to this).
- Current Ravenswood Industrial Revitalization.
 - Housing development.
 - Now EIR for 100 acre infrastructure assessment.
 - Potential for future trail in area.
- Arsenic contamination – current clean-up.
 - Currently fee title to adjacent area owned by residential area.
 - Interim zoning.
 - Community meetings for EIR – finish next winter.
 - City only on clean-up.
- Residential concern – criminals access to backyard.

Jane Lockwood (Sam Trans)

- Goal to run rail from Union City connecting to Peninsula corridor.
- Alameda/Santa Clara/San Mateo counties joint effort to activate this rail corridor.
- SB-916 senate bill, operating fund potential (which is currently unknown).

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- Alignment wide enough to expand from one track to two tracks and probably enough room for an adjacent trail, if necessary, with concern for safety.
- Historically, one official's attempted effort for trail alongside RWC right of way was defeated by community groups including the Brotherhood of Locomotive Engineers and others because of inherent dangers with trail proximity.
 - Erik Olafsson suggested Caltrans may wish to examine a possible grade separation at University Avenue.
- Supports concept of trail: will help with access to rail if needed.
- Callander Associates to work with Jane for: plan documents, real estate contacts, etc.
- Sam Trans owns the right of way and UPRR has limited trackage rights. No trains on it now.
- Safety first concern – design issues also.
- Sam Trans purchased right of way from Caltrans in '92.

Feedback from Group

- '89 last train on track.
- Brian at Mid-peninsula committee – previous trail efforts – good resource for designing efforts/drawings.
- Alternatives for temporary trail alignment: gun club until after baylands restoration.

Kirit Bavishi (SFPUC)

- Concerns: Gun club clean-up (50 years use) – lead/PH issues; Safety: open air channel.
- 50% completion of Phase 1 of three phases. "...completion 2006".
 - Phase 1 – PUC pipeline south side of salt pond.
 - Phase 2 – salt pond clean-up.
 - Phase 3 – bring site back to wetlands.
- Issues: safety, water quality, vandalism/dumping.
 - Regional Water Control, Army Corps, others.
 - Two pipelines (water lines).
 - Gated now at University Avenue, Need Water Dept. o.k. for permission to access (since 9/11).
 - Property goes through to gun club.
- Bike paths on previous Hetch-Hetchy over? Redwood City has residential over (closed piping).

- Open air water channel – underground.

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- Well house pumps – sensitive area.
- People dumping at sides of access area.
- Potential area at north of levee for trail (after clean-up).

Jamal Rahimi (City of Menlo Park)

- Legal/political/environmental appreciation.
- Interest: schedule and budget.
 - Tunnel at Arguello north side of Willow: potential for restoration for bike use.
 - Goes between Tyco – Sun Microsystems.

Anna Ruiz (MROST)

- Interest: Regional bay corridor promotion.
 - They own two segments, though not connected. Bikers/hikers use only on (E) trails.
 - Roller bladers would be new use for discussion. Trails not paved (policy).
- Support: neighborhood connections and no impacts to current restoration.
- Issue – dumping of dredging onto levee. Hard to walk on.
- South Bay restoration – salty – last to restore.
 - Clyde Morris – Fish/Wildlife (want to be included on project info since future property owner).
- Impacts on TAC on recreation for traffic – Woodside to 85.
- Patrol of site: Who is responsible? How to do that?
 - Long distance from current parks, so not patrolled as frequently.
 - Dumping plus illegal issues now. Maintenance/housekeeping issues later.
- East Palo Alto - Menlo Park should help with long term budget/maintenance (residence benefits), larger employees: volunteer and fundraising potential.
- Palo Alto and Menlo Park ranger joint effort/monitor. Collaboration exists now.
- Opportunity for education (get kids out within walking distance).
 - School input for information etc. at interpretive center. Would help rally support.

Bob Cronin (Bike Advocate)

- Connectivity with (E) and proposed County bicycle routes.
- Design aspects (Multi-use): bikers (at some speed), walkers (slower).
 - Trail connection at major thoroughfare – safety.
 - Maintenance desired: unkept (weeds) overgrowing on trail.

Bay Trail Feasibility Study

Final Report: Supplement

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Revised May 21, 2003

Meeting Minutes

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- Support well-designed Class II and Class I (when it makes sense).
- Take different route than longer – side bike route.
- Probably minimal commuter bike use (two unpaved areas).

Stefan Galvez (Caltrans)

- Bike rider use? Counts? Who to serve efficiently? Recreation use. Commuters.
 - Commuters more organized activists than recreationalists.
- Other resources already done? ABAG. San Mateo County. Caltrans – ridership – three years ago.
- MTC Bay Crossing Study? Study completed at University Avenue.
 - Enhance traffic across the Bay...so a new bridge needed? \$8 billion cost – plus improve 880/101. Would only be moving the bottleneck unless highways improved.
 - Five conclusions for improvements (San Mateo County):
 - Rail, SB-915, SB-916, Bus service (SamTrans, Transit, Transbay), Extending
 - Phase 2 – funding gone – Davis has bonds for engineering/socio-economic studies.
 - Conflicting. Feasible at all?
- Issue: safety - train corridor and trail, minimize risk to users.
- Union City/bumper tract.
- Gap in trail at San Carlos Airport – Marsh Lane to Airway Boulevard.
- Ravenswood Pier.
 - South of bridge (old bridge minus bridge span) used to have public access.
 - Open less than one year – illegal activity, closed.
- Partner with Menlo Park – financially if have project alternate reviews.
 - If not feasible – potential to open pier?
 - Structural repair needed – have done feasibility study.
 - If remove – need to supply other public access.
- No mans land for agency supervision – locality.

Also, please note that the (two sided) comments are attached from Lloyd Dakin.

The information above is Callander Associates' understanding of items discussed and decisions reached at the meeting. Callander Associates is proceeding with the project based on this understanding. If you have any questions, additions, or corrections to this memo, please contact Callander Associates in writing within 3 days.

Submitted by:
Brian Fletcher and Wendy Swenson

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Comments on Bay Trail Feasibility Study

COMMENTS ON BAY TRAIL FEASIBILITY STUDY FROM LLOYD DAKIN:

Here are some comments that I'd planned on making regarding the new path. Please read them to the taskforce when appropriate.

- 1) I commuted from Fremont to Palo Alto practically every day over the Dumbarton bridge by bicycle from about December 2000 through about January 2002. These were times when the automobile traffic was at its worst both in the morning when going over the Dumbarton and in the evening. I would park my car at the Don Edwards National Wildlife Refuge in Fremont and then bike into work on Page Mill Rd. in Palo Alto.
- 2) My route initially took me down University and then zig-zagging through East Palo Alto neighborhoods to Bay Rd. then Pulgas, then Runnymede to the Bay Trail heading toward Palo Alto. I stopped using this route when one day I was nearly run over by a car as I fixed my flat tire in a residential section.
- 3) My route then changed to Hwy 84 to Willow Rd. I then took Willow across the Highway 101 interchange. When traffic was heavy during 2001, cars would be stopped on most of Willow both in the morning and the evenings so navigating through this interchange was fairly safe.
- 4) I stopped bicycling to work after about January 2002 since due to the downturn in the economy, traffic was substantially reduced and thus the Willow Rd. - Highway 101 interchange became too dangerous since cars were quickly merging and switching lanes at high speed.
- 5) The thought that the Bay Trail gap between the Dumbarton Bridge and points South has got my hopes up that I can in the near future start bicycling to work again safely. SAFETY is THE #1 CONCERN of most bicyclists and is in my opinion the main reason most people do not bicycle to work.
- 6) Other thoughts: Glass (mostly beer and alcohol bottles) on the bike path over the Dumbarton bridge and along Highway 84 Rd to University was another recurrent hazard. I've also hear stories where bicyclists were hit by bottles thrown from cars which were specifically intended to hit the bicyclist. From how the bottle's glass spread across the path, I believe that most were thrown from cars. Flat tires are quite a burden on bicyclists who already are spending extra time commuting to work. It typically adds 15 to 20 minutes to a bike commute to have to fix a flat.
- 7) Car exhaust fumes were also more prevalent on the parts of the path on the peninsula side of Dumbarton bridge.

Bay Trail Recommendations:

- 1) First, It's really great that this segment of the trail is being completed!!!

Comments on Bay Trail Feasibility Study

- 2) As a bicyclist commuting to points South, I'd strongly recommend keeping the bay trail as far away from the car traffic as possible. Such a route would minimize the bicyclist exposure to objects thrown from cars, broken glass, and exhaust fumes.
- 3) Also I'd recommend that there be some separation from what will someday be the reactivated Dumbarton Rail line.
- 4) I'd also encourage all members to select a route which would encourage a maximum number of bicyclists and others to use for commuting and pleasure. To this end the path should be paved.
- 5) And lastly I'd encourage you to select a route which will can actually be built without undue cost, as closing the gap is very important. To this end, and in these difficult economic times, perhaps an easement along the old rail line could be a temporary solution and then the trail moved a little further away when trains actually start running. **Perhaps additional funds to separate/improve the trail path could be obtained as part of the Dumbarton Rail Reactivation funds to be voted on this March 2004 and funded by a new \$3 toll on the bridges. This last point may be where the funds to actually close the gap in the first instance could come from.**

Best,

Lloyd

(650) 857-2295

Biological Resources

August 11, 2003

Mr. Brian Fletcher
Callander Associates
311 Seventh Avenue
San Mateo, CA 94401-4259

Subject: Bay Trail Feasibility Study – Biological Resources

Dear Brian,

This letter is to report the results of our site walk on June 18, 2003, for the proposed new portion of the Bay Trail near the west end of Highway 84, and to advise you of potential limitations or constraints related to the construction of the trail.

Proposed Project Description

The proposed project is to construct a multi-use recreational trail to connect the existing trails at the portion of Ravenswood Open Space Preserve on the south with the public parking lot adjacent to the Dumbarton Bridge (Highway 84) on the north. The following trail alignments were discussed during the site walk.

- Entry point at University Avenue on the west, using an existing paved access road to the railroad crossing at the eastern end.
- New boardwalk crossing saltwater marsh from the railroad on the north to connect to existing trails in the Ravenswood Open Space on the south.
- An at-grade crossing of the railroad tracks to access new trail to north.
- Crossing at an underground portion of the Hetchy-Hetchy waterpipes.
- Use of the existing levee around a former Cargill salt pond extending the trail to the parking lot under the Dumbarton Bridge.

Existing Biotic Conditions

Most of the proposed trail will follow existing paved and dirt access roads. These areas support primarily bare disturbed areas, non-native grassland, and ruderal vegetation types. The most common plants observed included mustard, harding grass, wild oat, poison oak, star thistle, milk thistle, ripgut brome, radish, rye, dock, bristly oxtongue, fennel, Russian thistle, coyote brush, salt grass and poison hemlock.

Biological Resources



Figure 1. Paved access road from University Avenue to railroad crossing.

Saltwater marsh habitat occurs in the portion of the trail proposed to connect from the railroad tracks to the Ravenswood Open Space trail on the south. The most common plants observed were pickleweed, salt grass and frankenia. No cordgrass was observed in the marsh.

Biological Resources



Figure 2. Pickleweed marsh between railroad tracks on north and Ravenswood Open Space on south.

The proposed trail will also cross or be adjacent to former salt evaporator ponds. Future plans call for the restoration of these evaporators to saltwater marsh habitat. Currently the evaporators have little or no vegetation on the pond bottoms. The sides of the levees around the evaporators have sparse saltwater marsh vegetation including pickleweed, saltgrass and frankenia.

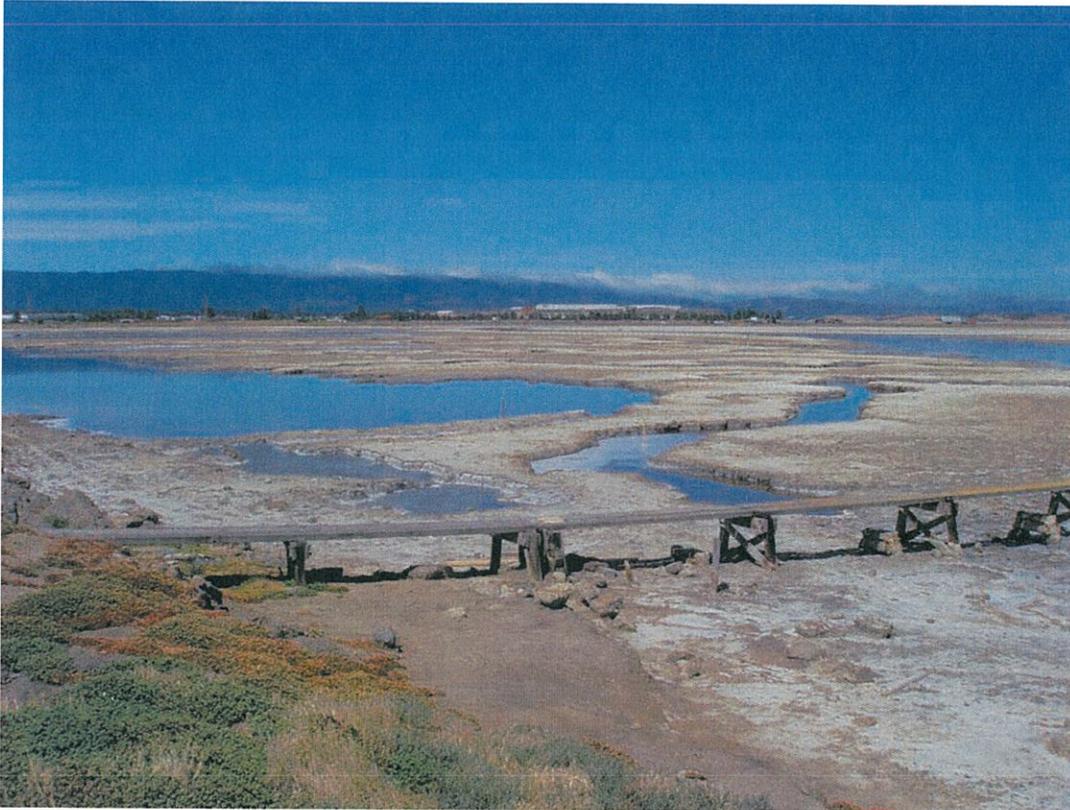


Figure 3. Former salt evaporator ponds.

SPECIAL STATUS SPECIES AND REGULATED HABITATS

Table 1 lists the special status plants and animals that are known to occur in similar habitats within the general project vicinity, and which may occur within or adjacent to the proposed trail alignment. In addition to these species, the saltwater marsh between the railroad tracks and the existing trails in Ravenswood Open Space on the south would be considered jurisdictional wetlands under Section 404 of the Clean Water Act, and any fill placed in the wetlands for the construction of this portion of the trail would require a permit from the U. S. Army Corps of Engineers.

Biological Resources

Table 2. List Of Special Status Species with Potential to Occur In The Vicinity Of the Bay Trail Project Area, Palo Alto, California

Species	State Status	Federal Status	Habitat Types
PLANTS			
Congdon's tarplant <i>Centromadia parryi</i> ssp. <i>Congdonii</i>	1B	FSC	Grasslands with alkaline soils
BIRDS			
Northern harrier <i>Circus cyaneus</i>	CSC		Nests in tall grasses, marshes
California clapper rail <i>Rallus longirostris obsoletus</i>	SE	FE	Nests in salt and brackish water marshes with pickleweed and cordgrass
California black rail <i>Laterallus jamaicensis coturniculus</i>	ST	FSC	Nests in salt and brackish water marshes with pickleweed and cordgrass
western snowy plover <i>Charadrius alexandrinum nivosus</i>	CSC	FT	Nests on beaches of oceans, bays and estuaries; may also nest in salt evaporators
California least tern <i>Sterna antillarum browni</i>	SE	FE	Nests on bare or sparsely vegetated flat surfaces such as beaches, alkali flats, and roads
Saltmarsh common yellowthroat <i>Geothlypis trichas sinuosa</i>	CSC	FSC	Shrubs and cattails near marshes
MAMMALS			
Salt-marsh wandering shrew <i>Sorex vagrans halicoetes</i>	CSC	FSC	Salt marshes dominated by pickleweed
Salt-marsh harvest mouse <i>Reithrodontomys raviventris</i>	SE	FE	Salt marshes dominated by pickleweed

Key:

CNPS List 1B: These plants (predominately endemic) are rare through their range and are currently vulnerable or have a high potential for vulnerability due to limited or threatened habitat, few individuals per population, or a limited number of populations. List 1B plants meet the definitions of Section 1901, Chapter 10 of the CDF&G Code.

- FE = Federally listed as endangered species
- FT = Federally listed as threatened species
- FSC = Federal species of special concern
- SE = State listed as endangered species
- ST = State listed as threatened species
- CSC = California species of special concern

Biological Resources

POTENTIAL PROJECT CONSTRAINTS

The following potential biological constraints were identified for the proposed trail project.

- Disturbance to protected species of nesting birds if they are present on or adjacent to trail during construction. Noise and dust may cause nesting birds to abandon nests with eggs or nestlings, causing nest failure.
- Crushing of bird nests and/or small mammals during construction of the trail in the pickleweed marsh.
- Loss of rare plant species during vegetation clearing for new trail.
- Loss of jurisdictional wetlands during placement of footings for boardwalk over pickleweed marsh.
- Long-term loss of small amounts of habitat for certain endangered species (e.g., salt marsh harvest mouse).

The following measures are recommended to avoid and minimize the potential constraints identified above.

- Have a qualified biologist conduct surveys for presence of protected species of nesting birds during the peak of breeding season for each species.
- Schedule trail construction for late summer to early fall (e.g., from September 1 to November 1) to avoid potential disturbance to nesting birds.
- If these birds are found present, the biologist in consultation with U. S. Fish and Wildlife Service (USFWS) and/or California Department of Fish and Game (CDFG), shall determine an appropriate buffer zone around the nest. No construction shall take place within the buffer zone until the biologist has determined that all young have fledged and are able to feed on their own.
- If the project will result in permanent loss of habitat for any protected bird species, consult with USFWS and/or CDFG to determine appropriate level of mitigation. The planned restoration of the salt evaporators to saltwater marsh may provide adequate mitigation to offset small amounts of permanent habitat loss for these species.
- If protected birds are found nesting near trails, consult with USFWS and/or CDFG regarding need for seasonal trail closure during nesting season and either prohibit dogs on trail or enforce leash laws.
- Have a qualified botanist survey for rare plants along the proposed trail alignment during the spring/summer. If rare plants are found to be present, consider modifying trail to avoid plants. If trail cannot avoid rare plants, consult with CDFG to develop a plan to relocate rare plants.
- Have a qualified biologist survey pickleweed marsh for protected mammal species. If federally protected species (e.g., saltmarsh harvest mouse) are found,

Biological Resources

consult with USFWS, and if state species of concern (e.g., wandering shrew) are found consult with CDFG, to determine appropriate avoidance measures during construction and mitigation for small amount of permanent habitat loss.

- Have a qualified biologist conduct a wetland delineation of the saltwater marsh habitat that may be filled by construction of the boardwalk.
- Apply for a 404 permit with the U. S. Army Corps of Engineers for fill in the saltwater marsh.
- The consultation with USFWS for federally listed species, if any are present, may be accomplished through Section 7 of the Endangered Species Act, during the 404 permit process.

If you have any questions or concerns, or need any additional information, please feel free to contact me.

Sincerely,

Dana Bland
Wildlife Biologist

Meeting Minutes: Draft Alignment Concept Meeting

via email only

August 26, 2003

Meeting Minutes

Draft Alignment Concepts Meeting

Re: Bay Trail Feasibility Study

Location: City of East Palo Alto

Date of Meeting: Monday, August 25, 2003, 1:00 p.m.

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Attendees: Lily Lee, City of East Palo Alto, email lee.lily@epamail.epa.gov
Meda Okelo, City of East Palo Alto, Community Services Department, email mokelo@cityofepa.org
Audree V. Jones-Taylor, City of East Palo Alto, email ajtaylor@cityofepa.org
Dario Brown, City of East Palo Alto, email dbrown@cityofepa.org
Brian Fletcher, Callander Associates, email bfletcher@callanderassociates.com
Wendy Swenson, Callander Associates, email wswenson@callanderassociates.com

1. Project background presented.
2. Current (draft) alignments with opportunities and constraints as known to date.
3. Discussion of opportunities/constraints/current East Palo Alto efforts.
 - Rail spur right-of-way.
 - Arsenic contamination – clean-up currently finished soon.
 - Residents want open space to extend from their backyard – promised this by City Council.
 - July 31st – Agreement with Union Pacific for clean-up.
 - “Quit-claim” it.
 - Talk of clean-up.
- Residents’ probable concern if trail along back of fence:

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- If trail concern of break-in – vandals, security issues.
- Don't want see-through fence; maintain backyard privacy.
- Property owners' own "fee-title" – easement for rail purposes r.o.w.
 - Behind fence towards baylands:
 - 10' PG&E easement.
 - 20' rail easement.
 - City surveyed parcels – 6" behind fences of parcels along Illinois Road (along baylands).
City wants quit-claim.
 - City quick-claim to residents.
- Railroad and City – clean-up arsenic – move on.
- Callander Associates to wait – resident/community reaction pending trail alignments; if through wetlands and over tracks, then o.k. to proceed.
- At vacant site adjacent to Ravenswood Neighborhood and industrial area at housing site.
- Redevelopment (East Palo Alto Redevelopment Plan) – BCDC has given input.
 - Regarding Ravenswood redevelopment concept:
 - No road – no cars proposed on previous concept with roadway along baylands.
 - Steve McAdams of BCDC reviewed concept and gave approval for trail along northeast perimeter of upland area.
 - Trail (pedestrian and bicycle) seen as positive replacement of the road in the more recent redevelopment concept.
 - Pedestrian amenities to be included:
 - Trash receptacles.
 - Benches.
 - Trees.
 - Pedestrian-scale lighting.
- Carlos to know update of redevelopment planning issues; currently out sick; Lily will pass along Draft Existing Conditions to him for review.

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- Housing development site – developers are trying to decide if their plans pencil out financially; density requirements; height restrictions; parking requirements; low water level for basement paving.
 - “Dutra Act”: Can’t reduce density if already in writing.
- Discussion of potential trail alignment from Ravenswood Open Space – under the power line r.o.w. – north above Hetch Hetchy r.o.w.
- School District property – in area of potential alignment from under utility lines – directly out to University Avenue.
- Fordam Street:
 - Wide street, with fronts of houses facing it.
 - Dangerous – doing some traffic calming measures.
 - Dangerous to cross or travel for children.
 - Having a bicycle trail might help calm traffic along with other traffic calming devices.
- Wetlands:
 - Delineation map received.
 - May/June 2002 – Army Corps “blessed”.
 - Contact information listed at end of minutes.
- If proposing a trail concept on Hetch Hetchy r.o.w., concern for:
 - Long stretch (police ability).
 - Crime.
 - Currently gated at either end 24/7.
 - At the rear of residential properties; backyard accessibility? How is this handled?
 - City would like to see as a potential opportunity – but feels alignment on the Bay would be more scenic/preferred.
- Bay Road – has current planning efforts of bicycle lanes and streetscape improvements.
 - Received MTC funding and matching “Clean Air” grant to help implement Bay Street improvements.
 - Bay Street improvements start at University – few blocks (east) near transit hub.

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- Summer 2004 construction slated to start.
- RFP for Bay Street project to be issued after traffic study complete.
- Cooley Landing (at end of Bay Road).
 - May see future public access – Packard brought to the table again.
- Deborah O’Leary – Army Corps Liaison; phone (650) 853-3166
- Menlo Park – Palo Alto: Joint coordination, decision making.
- Peg Henderson (National Park Service, offered technical assistance on planning for future uses in the baylands).

Pacific West Division

One Jackson Center

1111 Jackson Street, Suite 700

Oakland, CA 94607

phone (510) 817-1300

- Have request to M.P.S. for additional technical assistance, outreach, etc.; not funding.
- Resource contact:
 - Brian Stice (wetlands mapping contact); manager of Forward Planning, Wellington Corporation, developer for Facciola property; phone (408) 782-1669.

The information above is Callander Associates’ understanding of items discussed and decisions reached at the meeting. Callander Associates is proceeding with the project based on this understanding. If you have any questions, additions, or corrections to this memo, please contact Callander Associates in writing within 3 days.

Submitted by:

Brian Fletcher and Wendy Swenson

cc: Melissa Barry, Association of Bay Area Governments, email MelissaB@abag.ca.gov
Dino Teddyputra, City of Menlo Park, email DTeddyputra@menlopark.org

Meeting Minutes: Task Force Meeting #2

via email

November 5, 2003

Meeting Minutes

Task Force Meeting #2

Re: Bay Trail Feasibility Study

Location: City of Menlo Park

Date of Meeting: Thursday, October 30, 2003, 2:00 p.m. – 4:00 p.m.

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Attendees: *Task Force:*

Rene Baile, City of Menlo Park, email rbaile@menlopark.org
Robert Cronin, Menlo Park, PBPC, email shawms@bigvalley.net
Melissa Barry, ABAG, email MelissaB@abag.ca.gov
Jane Lockwood, Sam Trans, email lockwoodj@samtrans.com
Ana Ruiz, Mid-peninsula Regional Open Space Trust, email aruiz@openspace.org
Lily Lee, City of East Palo Alto, email lee.lily@epamail.epa.gov
Jeff Jensen, Caltrans, email in care of Stefan Galvez-Abadia, Caltrans
Brian Fletcher, Callander Associates, email bfletcher@callanderassociates.com
Wendy Swenson, Callander Associates, email wswenson@callanderassociates.com
Brett Hondorp, Alta Planning + Design, email bhondorp@altaplanning.com

Not Present at Meeting:

Bob Emert, San Mateo County Trails Committee, email bbemert@sbcglobal.net
Stefan Galvez-Abadia, Caltrans, email Stefan_Galvez@dot.ca.gov
Maureen Barry, San Francisco PUC, email mbarry@sfwater.org
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Bob Douglass, Cargill, email robert_douglass@cargill.com
Steve Willoughby, PG&E, email sewb@pge.com
Sandy Wong, C/CAG San Mateo County, email slwong@co.sanmateo.ca.us
Dana Bland, Dana Bland & Associates, email danabland@charter.net
Joan Cardellino, California State Coastal Conservancy, email jcard@scc.ca.gov
Sam Herzberg, San Mateo County, email sherzberg@co.sanmateo.ca.us
Audrey Rust, Peninsula Open Space Trust, email kkancler@openspacetrust.org
Amy Hutzel, California Coastal Conservancy, email ahutzel@scc.ca.gov
Clyde Morris, Don Edwards SF Bay National Wildlife Refuge, email Clyde_Morris@r1.fws.gov

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Issues and concerns of the Bay Trail Alignment Options:

- Are there conflicts between bikes and the service road? – *No. At this segment, the trail would travel parallel to the service road on the side towards the Ravenswood residents.*
- Have costs been identified for any of the potential alignments? – *No.*
- For regulatory permits the amount/limit of proposed fill will need to be determined.
- Has the limit of railroad expansion and the remaining right of way for potential trail purposes been identified? – *No, there are no definitive plans for the railroad project at this time. However, it was observed that during the site walk, there is very limited right of way and any addition of railroad tracks would place a potential trail alignment in the wetlands.*
- A discussion with the committee members was raised to rank potential alignment alternatives in desirability of experience:
 - Alignment #3 provides the most scenic route and closest to wetlands and environment.
 - Alignments #1 and #2 provide a more residential alignment, sacrificing the experience of a Bay trail for a more direct route.
 - Alignment #4 provides a more urban route that seems a bit too disconnected from the baylands experience.
- Potential trail alignments should be reviewed by residents first, before selecting a preferred option. – *A public workshop is planned for in the next steps of this project.*
- Options for trail alignment #1 include preserving a portion of the current easements for trail use, purchasing this property from residents, or placing the trail on an elevated boardwalk system behind the property lines.
- The Fish and Wildlife Department should give buy-off on an alignment concept, especially if any landfill is needed. A site walk-through with the FWLD should be completed early on in the project design to help with project support and communication. Mark Littlefield was suggested as a potential contact for this. – *Callander Associates had anticipated a site walk with the Department of Fish and Wildlife for review of a preferred alternative.*

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- Are there any wetlands or endangered species in the area? – *Not sure at this point. A biology overview was completed for this project, but not at the level of detail that would identify endangered species.*
- Currently there is the Senate Bill 916, which would affect potential funding for the proposed train lines. If approved by voters, this bill addresses a bridge toll increase toll on bridges by \$1.00, providing additional funds to possibly open Dumbarton rails.
- As long as safety is not diminished to trail patrons, rail property owner and homeowners, Options #1 and #2 are preferable alignments.
- Option #4 along the salt pond levee presents the least impact as far as humans, though there are future planning efforts for the Cargill site and currently undergoing environmental clean-up.
- Option #4 is viewed more so as a future alignment, following the environmental clean-up. This alignment should not be as an alternative in and of itself, but as a trail to be built in the long term. This would be in conjunction with a connector trail segment to the Ravenswood Open Space.
- This project should aim high to get the best possible alignment for the Bay Trail segment that is both feasible and a great bay trail experience.
- For the rail property owner, on any trail alignment the less impact the trail has on the rails the better. SamTrans cannot encourage any design concepts at this time due to their current rail planning status. For them, there are too many unknowns.
- As a possibility of realigning the Option #2 outlined in the Opportunities Plan (of the *Existing Conditions* report), a direct connection of Option #2 straight through to University was suggested. This would be in lieu of the path above the Hetch-Hetchy reservoir right of way. This alignment to University from the Wellington site would not provide the ultimate alignment for the Bay Trail, but is seen as an alternative route as access to the baylands.
- Currently, trails along the rails are undetermined in their specific placement due to the unknown location of the two rails. The rail trackage width is anticipated to be widened due to the addition of a second rail line.

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- Designers need to consider what is done to the land carefully, i.e., connection between pictures #1 and #7. This segment would be present in almost any of the options illustrated. How the trail parallels the tracks and potentially crosses the tracks to access Option #4 and to cross at University Avenue is a concern.
- Has the right-of-way for pedestrian access along University been looked at? – *No. But that will be explored further in the next steps of this project.*
- It was noted that from a financial and trail user aspect, none of the options are straight forward. All options have some long term need whether it is pending planning efforts, environmental clean-up, safety concerns, multiple property owner involvement, potential wetlands impact, or lengthy and costly permitting approval process. What would Task Force members like to see happen?
- Shouldn't a pedestrian component along University be implemented in conjunction with this Bay Trail segment? As currently built along University only bicycles would seek the direct connection to University Avenue, since there are no built sidewalks for pedestrian use. Currently there is a Class II bike lane along University Avenue and a Class I separate multi-use trail along 84. – *Pedestrian access along University Avenue will be reviewed.*
- Option #2 is potentially the least attractive option. It might be improved by removing the alignment above the Hetch-Hetchy reservoir right of way, creating a direct alignment to University. This could also provide an opportunity to link to access the school too.
- Given the proximity of the Bay Road connection to the Ravenswood Open Space Preserve should there be an adjacent connection of Option #2 to University Avenue? It was discussed that the Bay Road and Option #2 are not actually that close in proximity on University and that the two paths would not be redundant. – *Currently, the City of East Palo Alto is planning for streetscape improvement on Bay Road near University Avenue. At this time, it is not understood if a bike path is included in those efforts.*
- Option #2 was discussed to not be included as a "Bay Trail" segment. It was felt that this alignment should be considered in conjunction with the City of East Palo Alto redevelopment efforts, as opposed to a preferred alignment for this Bay Trail project.

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- Collaboration with the City of East Palo Alto should occur to piggyback trail alignment with redevelopment efforts on the Wellington Corporation site.
- Given Options #1 and #3, what are the key differences?
- Option #1 should be considered due to the proximity for allowing a wetlands experience. This trail is unique in its regional location. The Bay Trail should encourage a wetlands experience as much as possible via a Class I trail.
- If Option #3 is considered, it has the following requirements: to be outside of the train right-of-way, potential barriers in providing trail access in close proximity to the rails, and the need for a long boardwalk, which involves environmental permitting and a potentially lengthy and expensive process. Installation costs and maintenance of the boardwalk would also have to be considered.
- It seems difficult to consider all of the opportunities and constraints of any one trail option, due to the factor of unknown planning outcomes of the other developments. There are too many unknowns for trail options.
- For Option #3, would the trail alignment work if the boardwalk were located on the edge of the Peninsula Open Space Trust property (as opposed to SamTrans property)? - *Cost and permitting for placement of the boardwalk would still need to be considered. Maintenance costs would also need to be addressed as well as safety from the rail right of way from frequent trains.*
- Option #2, aligned through to University Avenue directly, was suggested to be an East Palo Alto project, not a Bay Trail segment.
- For Option #4 alignment of the Cargill site, it was suggested that since BCDC would be involved in that process, in conjunction with the Fish and Wildlife Department. A partnership would be formed. With this partnership, funding allocations for public access could be taken advantage of to help implement the Bay Trail efforts.
- Options #1 and #3 should factor in the cost of permitting and installation of the boardwalk.
- Caltrans has an interest in the Bay Trail as an option to potentially help provide public access. If the public wanted to save the Dumbarton Pier as a public access amenity it could

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be kept, if feasible. If not, it would be removed. Option #4 could help provide the mitigated need to provide for public access for Caltrans.

- Safety, policing, and maintenance of the Cargill area should be taken into consideration.
- Hopefully, East Palo Alto residents will see the Bay Trail as an enhanced recreational amenity that provides a safe, clean, educational, environmental amenity in their neighborhood. – *Public input is desired in this project to help rally support for and mitigate concerns that neighbors may have. Sensitivity to current East Palo Alto planning efforts will be taken into consideration. The Bay Trail should be a positive amenity for local and regional visitors.*
- As part of the trail project, funding should be estimated and allocated to provide new residential fencing. – *Yes, this is done frequently in trail and park projects where a private property owner abuts a public access area or trail. New fencing may be installed to help provide a uniform look to the project, provide a visual buffer for the private owner, help provide safety from trespassers and control access to the public area.*
- In East Palo Alto, the crime rate is getting better, though there may still be concerns for illegal activity in the area. Escape routes and access to backyards should be considered. – *Several approaches can be made to help negate undesired activity. This might include a well rounded approach that includes fencing, lighting (if possible – i.e. wetland issues), frequent patrolling, active neighborhood watch, encouraged public access (i.e. school outings, bicycle commuters, recreation visitors, birdwatchers, neighbors and others), scheduled trail maintenance, and funding to help provide these services.*
- Currently there is a delay on proposed residential development of the Wellington site. The site is zoned as a very dense parcel with parking requirements. Due to the high underground water level, parking is not a feasible option to occur below grade. With environmental and zoning issues, development on this is more difficult than anticipated. Timing on the completion of this project is currently unknown.
- The arsenic clean-up in the Ravenswood area on the railroad easement is currently on hold due to an unforeseen delay. The City of East Palo Alto does not know the completion date of the cleanup. – *Callander Associates is trying to be sensitive to the timing of the East Palo Alto*

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project. We will try and get feed back from a member of City Council to find out appropriate timing before presenting the Bay Trail project to the public.

- Due to the phasing of current planning projects in the Bay Trail study area, it seems unlikely that a preferred alternative alignment will be chosen as outlined in the project scope. The scope should be revised to reflect possible include an implementation matrix of how this project may be phased with regard to future projects (i.e. rail, environmental clean-up, housing development, etc.) and still provide a tool for this segment to be built in the future. The *Bay Trail Master Plan* by the City of San Jose was suggested as a document that contained a flow chart for future development of reaches, due to long term planning projects in that area. - *Callander Associates is currently revising the project scope for the City of Menlo Park and ABAG review. A copy of the San Jose's Bay Trail document has also been received.*
- One example of how the implementation matrix might work includes breaking the trail into separate reaches with alternative alignments and a preferred alternative that may be phased.
- It was suggested that this project should still be brought to the community for feedback, before a trail alignments are studied further. –*Task Force Committee members will be invited to attend this meeting as well. SamTrans expressed an interest in having a representative at the meeting to discuss train/rail safety concerns.*
- Conceptual plans and diagrammatic sections were suggested to result from this study as a dialog for future development. - *Callander Associates will try and accommodate this in the revised scope, to summarize all planning efforts of this Bay Trail segment into one planning document for future development. Maintaining the current Bay Trail project budget is also goal.*

Other Input from Members Not Present at Meeting

- *Maureen Barry, SFPUC, 10/31/03: Will be taking over committee representation for Kirit Bavishi. Currently, they are starting the final segment of Phase I cleanup, which includes the upland areas of off-hauling the debris, i.e., lead shot, etc. A permit is still needed for Phase II of the cleanup for the salt pond and slough. This will hopefully be completed before next fall. Phase III will hopefully be complete by early 2005.*

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- *Lloyd Dakin, General Public, 10/28/03*: The best Bay Trail route may depend heavily on the final Dumbarton Rail track layout, and since the \$1 bay crossings toll ballot measure increase will go on the March 4 ballot for voters to decide the future of several transit oriented projects, including the Dumbarton Rail, it seems that now is as close a time as any for the Dumbarton Rail project to get a go-ahead.

As such, the Bay Trail task force should work very closely with those entities who would actually decide how the rail would be rebuilt, if there will be one or two tracks, and if somehow the bay trail could be incorporated into their design proposals. Unfortunately, the material sent out to task force members on the proposed Bay Trail routes seems somewhat vague on what the actual Dumbarton Rail track layout will be. Perhaps more definitive information on the actual Dumbarton Rail route should be obtained before a final Bay Trail route is recommended.

Also, could someone investigate whether the \$1 toll increase measure would also provide the funding necessary to actually build the Ravenswood Bay Trail Section?

- *Bob Emert, San Mateo County Trails Committee, 10/27/03*: Impressed by the existing conditions report. For alternative alignments preferred the Option 4 and 1 combo. Option 4 looked o.k. the way drawn, though this could even be eliminated as a trail. The second preference was for a combination of Options 3 and 4. Option 2 through the neighborhood had no real use as a Bay Trail, but might be used for bicyclists.
- *Brad McCrea, BCDC, 10/28/03*: Will be taking over committee representation for Ellen Miramontes. Brad received the documents and had no comments at this time. He had passed the existing conditions report around the office, including to Joel LeClair, senior planner, on the Bay Trail Steering Committee.
- *Sandy Wong, C/CAG, 10/31/03*: Will be taking over bicycle planning projects for Walter Martone. She was inquiring if this segment was a part of the County-wide Bicycle Plan. For future funding, the trail alignment needs to be in certain planning documents. She was going to check-in with the City of Menlo Park, Rene Baile, and the City of East Palo Alto, Lilly Lee. She inquired about the grant funding source for this Bay Trail segment and had not other concerns with the Existing Conditions Report.

The information above is Callander Associates' understanding of items discussed and decisions reached at the meeting. Callander Associates is proceeding with the project based on this understanding. If you have any questions, additions, or corrections to this memo, please contact Callander Associates in writing within 3 days.

Submitted by:

Brian Fletcher and Wendy Swenson

Distribution: All Task Force Members

Bay Trail Feasibility Study

Final Report: Supplement

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Landscape Architecture, Inc.

Meeting Minutes: Public Workshop Meeting

Via email

March 1, 2004

Meeting Summary

Public Workshop Meeting

Re: Bay Trail Feasibility Study

Location: City of Menlo Park Senior Center

Date of Meeting: Thursday, February 26, 2004,

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Attendees:

Rene Baile, City of Menlo Park, email rbaile@menlopark.org
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Brian Fletcher, Callander Associates, email bfletcher@callanderassociates.com
Wendy Swenson, Callander Associates, email wswenson@callanderassociates.com
Tikisa Anderson, community member

Not Present at Meeting:

Robert Cronin, Menlo Park, PBPC, email shawms@bigvalley.net
Janet McBride, ABAG, email Janetm@abag.ca.gov
Jane Lockwood, Sam Trans, email lockwoodj@samtrans.com
Ana Ruiz, Mid-peninsula Regional Open Space Trust, email aruiz@openspace.org
Jeff Jensen, Caltrans, email in care of Stefan Galvez-Abadia, Caltrans
Brett Hondorp, Alta Planning + Design, email bhondorp@altaplanning.com
Bob Emert, San Mateo County Trails Committee, email bbemert@sbcglobal.net
Stefan Galvez-Abadia, Caltrans, email Stefan_Galvez@dot.ca.gov
Maureen Barry, San Francisco PUC, email mbarry@sfwater.org
Lloyd Dakin, Hewlett-Packard, email lloyd_dakin@hp.com
Joe Leclair, BCDC, email joel@bcdc.ca.gov
Bob Douglass, Cargill, email robert_douglass@cargill.com
Steve Willoughby, PG&E, email sewb@pge.com
Sandy Wong, C/CAG San Mateo County, email slwong@co.sanmateo.ca.us
Dana Bland, Dana Bland & Associates, email danabland@charter.net
Joan Cardellino, California State Coastal Conservancy, email jcard@scc.ca.gov
Sam Herzberg, San Mateo County, email sherzberg@co.sanmateo.ca.us
Audrey Rust, Peninsula Open Space Trust, email kkancler@openspacetrust.org
Amy Hutzl, California Coastal Conservancy, email ahutzl@scc.ca.gov
Clyde Morris, Don Edwards SF Bay National Wildlife Refuge, email Clyde_Morris@r1.fws.gov

The following are comments received from the public workshop meeting. At the meeting a total of four trails were presented, including:

- **Connector Trail** through the Ravenswood neighborhood on Purdue Avenue with one option illustrated:

February 27, 2004

Meeting Summary

Public Workshop Meeting

Re: Bay Trail Feasibility Study

Location: City of Menlo Park Senior Center

Date of Meeting: Thursday, February 26, 2004,

Page 2 of 4

- Alignment on the Hetch-Hetchy right-of-way
- **Bay Trail Option 1** which wraps behind the Ravenswood neighborhood to University Avenue, running parallel to the existing service road and between the tracks; two alternates illustrated:
 - On the Bayside edge of the utility/RR easement, at grade segment
 - Outside of the easement in the wetlands, boardwalk segment
- **Bay Trail Option 2** that contains a long boardwalk parallel the RR tracks to University Avenue, running parallel to the existing service road and between the tracks; and
- **Future Trail Connection** that includes two trails that diverge after the at-grade rail crossing on a service road to University Avenue and on the levee to the 84 underpass staging area.

The comments received at the meeting included the following needs and concerns for Bay Trail alignments and implementation process.

- There was concern expressed regarding safety issues related to rail crossing, especially with the potential for groups of children present (school trips), elderly and very young people. How security measures and safety precautions are taken at a rail and trail crossing should be handled with great attention to help ensure safe crossing in a timely fashion.
- Damage to the wetlands is a concern both during the construction of the trail and during use of the trail from trail visitors. The area should not be destroyed when in fact it is a resource that is trying to be protected, enjoyed, and utilized as an educational resource.
- Hours of operation for the trail segments should be determined, posted and enforced. This is especially true for segments that are within neighborhood corridors, including the potential alignment on the Hetch-Hetchy Pipeline right-of-way that runs behind residential properties.
- Signage should be posted to illustrate the hours of operation, safety rules and regulations, and orientation to the trail and it's network.
- On the Hetch-Hetchy segment a pedestrian gate would be preferred to allow passage of pedestrians and bicyclists, but not motorized vehicles. It is not envisioned that this is a gate that would be locked after hours, though could have that potential. The residents should provide more feedback on this issue.
- It is possible that the residents would not want lights on the trail to help preserve privacy of the residential areas.

- The trail should include environmental education opportunities, especially due to it's proximity to local East Palo Alto schools. Interpretive signage including informational kiosks and signage to the trail should be added as a trail amenity.
- Other methods were suggested to gather input on the project due to a low turnout at the public workshop. These are suggested as follows:
 - Mailer with questionnaire.
 - Send questionnaire home with kids at school to hand to their parents.
 - Hold the workshop in a location closer to the site on a night that isn't bustling with other City meetings.
- A physical survey could provide opportunity for additional public outreach. This could be distributed via the following methods:
 - Talk to people and residents
 - High school students.
 - School District.
 - Established organizations, including churches.
 - EPA mural art project.
- Decision to help determine a preferred trail alignment may be economic. All of the trails illustrated would potentially work and did not have a strong preference for one or the other. Property owners, such as the Wellington Corporation site should be collaborated with to include the trail with new development opportunities.
- When you develop the trail in further detail, people will have issues.
- The fragility of area should be preserved.
- Don't destroy what you are trying to preserve with the development of the new trail segments.
- Access to the Bay Trail via community streets is desirable.
 - Trailheads and connections including staging areas should be included in the trail network.
- Technical measures of the trail development should be sufficiently addressed.

February 27, 2004
Meeting Summary
Public Workshop Meeting
Re: Bay Trail Feasibility Study
Location: City of Menlo Park Senior Center
Date of Meeting: Thursday, February 26, 2004,
Page 4 of 4

- Agreements with agencies and stakeholders should be collaborated with and met before development of trail segments occurs.
- The plan report should identify:
 - What can be built now and later (phasing).
 - A preferred option or the "grand plan".
 - Sub options to build on as new trail development opportunities become available.
- Is there going to be public access to Bay, i.e. the access to launch boats or rafts?
- Bicycle access is needed on the trail. Trail junctures should accommodate bicycle accessibility.
 - Which trail provides best access for bikes should be identified.

The information above is Callander Associates' understanding of items discussed and decisions reached at the meeting. Callander Associates is proceeding with the project based on this understanding. If you have any questions, additions, or corrections to this memo, please contact Callander Associates in writing within 3 days.

Submitted by:

Brian Fletcher and Wendy Swenson

Meeting Minutes: Task Force (Meeting #3) and Menlo Park Bicycle Commission



Callander Associates Landscape Architecture, Inc.

Via Email Only

July 27, 2004

Meeting Minutes

Joint Task Force Meeting #3 and Menlo Park Bicycle Commission

Re: Menlo Park - Bay Trail Feasibility Study

Location: City of Menlo Park, Administrative Conference Room

Date of Meeting: Thursday, July 8, 7:00 – 8:30 p.m.

Page 1 of 4

Attendees: *Task Force and Bicycle Commission:*
Rene Baile, City of Menlo Park, email rcbaile@menlopark.org
Robert Cronin, Menlo Park, PBPC, email shawms@bigvalley.net
Bob Emert, San Mateo County Trails Committee, email bbemert@sbcglobal.net
Lily Lee, City of East Palo Alto, email lee.lily@epamail.epa.gov
Sandy Napel, email snapel@stanford.edu
Brian Fletcher, Callander Associates, email bfletcher@callanderassociates.com
Wendy Swenson, Callander Associates, email wswenson@callanderassociates.com

Not Present at Meeting: Laura Thompson, ABAG, email laurat@abag.ca.gov
Dick Dahllof, SamTrans, email dahllofr@samtrans.com
Ana Ruiz, Mid-Peninsula Regional Open Space Trust, email aruiz@openspace.org
Jeff Jensen, Caltrans, email in care of Stefan Galvez-Abadia, email Stefan_Galvez@dot.ca.gov
Maureen Barry, San Francisco PUC, email mbarry@sfgwater.org
Lloyd Dakin, Hewlett-Packard, email lloyd_dakin@hp.com
Joe Leclair, BCDC, email joel@bcdc.ca.gov
Bob Douglass, Cargill, email robert_douglass@cargill.com
Steve Willoughby, PG&E, email sewb@pge.com
Sandy Wong, C/CAG San Mateo County, email slwong@co.sanmateo.ca.us
Dana Bland, Dana Bland & Associates, email danabland@charter.net
Joan Cardellino, California State Coastal Conservancy, email jcard@scc.ca.gov
Sam Herzberg, San Mateo County, email sherzberg@co.sanmateo.ca.us
Audrey Rust, Peninsula Open Space Trust, email kancler@openspacetrust.org
Amy Hutzler, California Coastal Conservancy, email ahutzler@scc.ca.gov
Clyde Morris, Don Edwards SF Bay National Wildlife Refuge, email Clyde_Morris@r1.fws.gov

July 27, 2004
Meeting Minutes
**Joint Task Force Meeting #3
and Menlo Park Bicycle Commission**
Re: Menlo Park - Bay Trail Feasibility Study
Location: City of Menlo Park, Administrative Conference Room
Date of Meeting: Thursday, July 8, 7:00 – 8:30 p.m.
Page 2 of 4

The goal of this meeting was to present an overview of the project to date and receive comments on the Draft Bay Trail Feasibility Study from Task Force members and the Menlo Park Bicycle Commission. After receiving comments and revising the report, the project will be presented to the City of East Palo Alto City Council and then to the City of Menlo Park City Council.

To date, prior to the meeting, comments have been received from Dick Dahllof (SamTrans), Ana Ruiz (MPROSD), Stefan Galvez-Abadia (Caltrans), Lloyd Dakin (Hewlett-Packard), and Joan Cardellino (Coastal Conservancy). Comments were generally supportive of the project with minor edits for narrative clarity and additional project background.

- Too little time for the East Palo Alto (EPA) Council to review in time for July 20th Council meeting, hence the meeting date will need to be changed to a later date.
- EPA next City Council – September 7th – 21st.
- EPA Transportation Commission next meeting scheduled for July 21st – group doesn't meet in August. Pending a grant extension with ABAG? Meets typically at 6:30 p.m.
- Another meeting - Menlo Park Bicycle Commission – Wednesday, July 21st which is a regular meeting. Third Wednesday another presentation will be made by the City of Menlo Park of this project for feedback. (Commission approved the report July 21st.)
- No quorum for City of Menlo Park Bicycle Commission at tonight's meeting. We still need to get more feedback on the study and help provide recommendation for Menlo Park City Council.
- Rene can maybe present to Menlo Park Bicycle Commission with Callander Associates' "PowerPoint" show.
- On the report graphics, map labels need to be revised: Label City/County boundary property; Ravenswood open space is in Master Plan; check boundary alignment.
- EPA looking at putting in road at Purdue Avenue.
- At this new road, there are some concerns about bicycle/pedestrian conflicts with vehicular traffic.

July 27, 2004

Meeting Minutes

**Joint Task Force Meeting #3
and Menlo Park Bicycle Commission**

Re: Menlo Park - Bay Trail Feasibility Study

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- Though with this potentially wider street, the alignment could also provide to be useful as a trail too.
- The cost estimate does not take into consideration the costs for mitigation, trail easements/property acquisition, or permitting.
- As a commuter trail, University Avenue (as commuter bicyclist) would probably want to see money spent to connect to the Dumbarton. There are bike lanes on University. This is where commuter bicyclists would want money spent.
- As a recreation trail and bicycle use, it is not easy crossing in the area without some skill. There are several intersections, i.e. on University Avenue and 84, that require careful navigation in order to access the Ravenswood area.
- A question was posed to the bicyclists about the ease of bicycle use in the area for families with kids.
- Bob Emert:
 - Preferred Alternate: Bay Trail Option 2 with raised boardwalk. He hopes that mitigation for the railroad will pay for the segment.
 - Second Alternate: Bay Trail Option 1 if the residential property owners could come to an agreement to allow for an on-grade trail within their property easement. Funds could be used to buy those easements for trail use.
- Should the Menlo Park Bicycle Commission identify a preferred trail? There are trade-offs to identify a “preferred” trail.
- The report needs to add: (1) map of Bay Trail around the Bay – how we connect to the big picture; (2) larger Bay Trail map; (3) local Bay Trail map, and (4) list of the uncompleted Bay Trail segments (to help encourage Menlo Park and East Palo Alto to work together to complete this segment).

Since the meeting, the following actions have been determined:

- ABAG is willing to extend the time of the grant funding to help accommodate the timeline for Commission and Council meetings.

July 27, 2004

Meeting Minutes

Joint Task Force Meeting #3

and Menlo Park Bicycle Commission

Re: Menlo Park - Bay Trail Feasibility Study

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- The City of Menlo Park is writing a letter to ABAG to request this extension until the end of October, 2004.
- The study is currently being reviewed by several City of East Palo Alto staff and City Council members.
- The City of East Palo Alto Public Works and Transportation Commission will receive a presentation of the project on September 8th at 6:30 p.m.

The information above is Callander Associates' understanding of items discussed and decisions reached at the meeting. Callander Associates is proceeding with the project based on this understanding. If you have any questions, additions, or corrections to this memo, please contact Callander Associates in writing within 3 days.

Submitted by:

Brian Fletcher and Wendy Swenson

Meeting Minutes: Menlo Park Bicycle Commission



Bicycle Commission

Regular Meeting

July 21, 2004

7:30 PM

Civic Center Administration Main Conference Room
701 Laurel Street

CALL TO ORDER – This meeting was called to order by John Fox 7:40 PM.

ROLL CALL:

Members Present: John Fox, Kurt Servos, Sandy Napel, David Roise, Peter Fechheimer

Member Absent: Joe Fantuzzi, Robert Cronin

MP Staff Present: Rich Angulo, Rene Baile

A. PUBLIC COMMENTS

There were no public comments

B. REPORTS AND ANNOUNCEMENTS

1. Road Hazard Reports: David Roise requested a temporary speed feedback indicator on Oak near Lemon
2. Design Subcommittee: no report
3. Downtown Bike Rack Subcommittee: re: in May we discussed that the bike rack in front of Starbucks on Santa Cruz Ave. is unsafe, primarily because there is no direct access to the sidewalk. John Fox wrote the letter to the City Attorney, and the committee approved sending it to the City Attorney.
4. Safe School Routes Subcommittee: no report
5. Sand Hill Road Subcommittee: re: in May we discussed that John Fox had received several comments about the test striping on Sand Hill Road. We will put on the agenda for next meeting to vote on eliminating this test striping and replacing it with standard bike lane markings.
6. Santa Cruz Subcommittee: no report
7. Update on Bike Plan: see business items

C. BUSINESS ITEMS

1. Sandy and Rene were at the previous "Bay Trail" meeting. They reported that the consultant was not able to identify a single best alignment and so presented four together with the attendant tradeoffs. Sandy moved that we accept the report and support the goal of completing the Bay Trail. Fox seconded. Unanimously passed.
2. Consideration of the Comprehensive Bicycle Plan (Presentation by ALTA planning and design):
 - a. Brett presented highlights of the plan for ALTA
 - b. Kurt mentioned that, re: a Caltrain undercrossing south of Ravenswood, there was a design and feasibility study for one location done in the past that needs to be pointed to the report.

- c. Kurt wanted to see something in the report requiring the installation of bike racks as part of the EIR for new construction of living and business uses. Palo Alto may have a suitable model, in addition to San Francisco (already in the report's Appendix). All agreed. Brett said he would amend the report appropriately.
 - d. SRI was missing from the map. Brett said he would amend the map appropriately.
 - e. Results of the Menlo Park Bicycle survey will be made an Appendix.
 - f. John suggested the idea of having bicycle-riding police officers promoted in the report.
 - g. John moved that the report be approved and presented to the council with the above changes. Sandy seconded. Passed unanimously.
3. Discussion of Bicycle Commission Regular Monthly Meeting Date Change: There was not a consensus for changing the meeting day. John moved that the next meeting be Monday August 16th. At that time we will re-open the question of moving the meeting.

D. INFORMATION ITEMS -

1. We discussed and agreed to the addition of a "funding opportunities" report, made by staff at each commissioners' meeting, to alert the commission to potential opportunities for funding projects called for in the Bicycle Plan. This should be added to the "committee" report section of each agenda.

E. ACTION ITEMS

1. For next agenda:
 - a. New "funding opportunities" committee report
 - b. Discussion and vote on changing the regular monthly meeting day.
 - c. Discussion and vote on eliminating the Sand Hill Road test striping and replacing it with standard bike lane markings.
 - d. Report on status of temporary speed feedback indicator on Oak near Lemon
 - e. Report on status of passage of Bike Plan and Bay Trail plans through city council

F. ADJOURNMENT - Kurt Servos motioned that the meeting be adjourned at 9:00PM. This was seconded by David Roise and carried unanimously.

Prepared by: Sandy Napel



Making San Francisco Bay Better

May 28, 2004

Wendy Swenson
Callander Associates
311 Seventh Avenue
San Mateo, California 94401-4259

SUBJECT: Comments on the City of Menlo Park Bay Trail Feasibility Study
Inquiry File No. SM.NP.6705.1

Dear Ms. Swenson:

I am writing to provide the BCDC staff comments on the City of Menlo Park Bay Trail Feasibility Study (the Study) which evaluates potential Bay Trail links from University Avenue near the Dumbarton Bridge to the Ravenswood Open Space Preserve (Ravenswood) in the City of Menlo Park, San Mateo County. Thank you for providing the BCDC staff with the opportunity to comment on this project. Although the Commission itself has not reviewed the Study, the staff comments are based on the McAteer-Petris Act, the Commission's San Francisco Bay Plan (Bay Plan), the Commission's federally-approved management plan for the San Francisco Bay, and the federal Coastal Zone Management Act (CZMA). These comments should also help the City of Menlo Park with its future BCDC permit application for the resulting trail proposal.

The connection between University Avenue near the Dumbarton Bridge to the Ravenswood trail is an important link in the Bay Trail system. This connection will become increasingly desirable with the restoration of the adjacent Cargill salt pond, which is the intent of the Don Edwards San Francisco Bay National Wildlife Refuge (the Refuge). BCDC continues to work with the Refuge to develop its long-term management plan for the salt ponds and, in particular, to balance the need for public access with the restoration of areas for wildlife. We encourage the City of Menlo Park to continue working with the Refuge through the course of its study. In addition, we are attaching a copy of our *San Francisco Bay Plan* public access policies, which address public access and wildlife compatibility. Any project requiring a BCDC permit must comply with these policies.

The Study is a preliminary evaluation of four trail alignment options. It appears that you are proposing either one or a combination of options to achieve the stated purpose of connecting University Avenue to Ravenswood. The staff believes that a single connection to Ravenswood is most likely to be consistent with the public access policies in the *Bay Plan*. Furthermore, the staff believes that point access to the former salt pond is preferable to the Option 4 alignment (also referred to as the "future trail connection"), which extends around the entire south and southeast sides of the pond and connects with the existing Bay Trail along the north and northwest edges of the pond. Option 4 would result in a trail that completely surrounds a future wetland.

REC'D JUN - 1 2004

State of California • SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT COMMISSION • Arnold Schwarzenegger, Governor
50 California Street, Suite 2600 • San Francisco, California 94111 • (415) 352-3600 • Fax: (415) 352-3606 • info@bcdc.ca.gov • www.bcdc.ca.gov

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Landscape Architecture, Inc.

Agency Letters: BCDC

Wendy Swenson
Callander Associates
May 28, 2004
Page 2

Public access is most successful when the trail and surrounding area feels public and is designed to welcome the public. Typically, a trail extending through the center of a residential community does not feel as public as a trail that extends through a public or open space area. Additionally, trails connecting major thoroughfares, such as University Avenue, to shoreline trails are typically most successful when the alignment is as direct as possible. A clear site line is preferable. Therefore, the trail option that parallels the San Mateo County and Santa Clara County line appears to be the connection that would be most consistent with the public access policies in the *Bay Plan*. Should the boardwalk required for this option prove to have unmitigable adverse impacts, the trail option extending south of the Wellington Corporation site is also direct, but may prove to feel too private with the future Wellington development.

Thank you again for the opportunity to comment on the Study. Please do not hesitate to call me with any questions at 415/352-3616.

Sincerely,

Leslie Lacko
LESLIE LACKO *by Brenda Gaden*
Coastal Program Analyst

LL/ra
Enc.

cc. Clyde Morris, Don Edwards SF Bay National Wildlife Refuge
City of Menlo Park Planning Department

Agency Letters: California Dept. of Fish and Game



DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS
333 MARKET STREET
SAN FRANCISCO, CALIFORNIA 94105-2197

MAY 20 2004

Regulatory Branch

SUBJECT: File Number 28696S

REC'D MAY 21 2004

Ms. Wendy Swenson
Callander Associates
311 Seventh Avenue
San Mateo, California 94401-4259

Dear Ms. Swenson:

This letter is in response to your request on behalf of the City of Menlo Park for comments regarding the Bay Trail Feasibility Study Opportunities Plan, received on April 8, 2004, by your notice dated April 7, 2004. This component of the Bay Trail project is located near San Francisco Bay in the City of Menlo Park, San Mateo County, California. Since the activity of building the Bay Trail segment may involve the partial filling of a salt marsh, which is a jurisdictional water of the U.S., the Corps of Engineers will need to review those portions of your project.

All proposed work and/or structures extending bayward or seaward of the line on shore reached by: (1) mean high water (MHW) in tidal waters, or (2) ordinary high water in non-tidal waters designated as navigable waters of the United States, must be authorized by the Corps of Engineers pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403). Additionally, all work and structures proposed in unfilled portions of the interior of diked areas below former MHW must be authorized under Section 10 of the same statute.

All proposed discharges of fill material into waters of the United States must be authorized by the Corps of Engineers pursuant to Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344). Waters of the United States generally include tidal waters, lakes, ponds, rivers, streams (including intermittent streams), and wetlands.

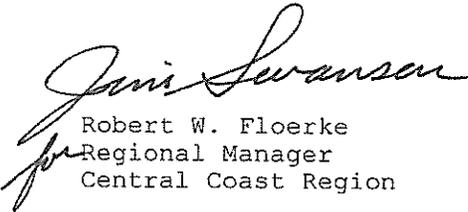
Your proposed work appears to be within our jurisdiction and a permit may be required. Application for Corps authorization should be made to this office using the application form in the enclosed pamphlet. To avoid delays it is essential that you enter the File Number at the top of this letter into Item No. 1. The application must include plans showing the location, extent and character of the proposed activity, prepared in accordance with the requirements contained in this pamphlet. You should note, in planning your work, that upon receipt of a properly completed application and plans, it may be necessary to advertise the proposed work by issuing a Public Notice for a period of 30 days.

Agency Letters: California Dept. of Fish and Game

Ms. Wendy Swenson
May 5, 2004
Page 2

Questions regarding this letter and further coordination on these issues should be directed to Dave Johnston, Environmental Scientist, at (831) 475-9065; or Scott Wilson, Habitat Conservation Supervisor, at (707) 944-5584. Also, please note that Andrew Muss is employed by the U. S. Corps of Engineers, rather than DFG.

Sincerely,


Robert W. Floerke
Regional Manager
Central Coast Region

cc: Ms. Mary Hammer
U. S. Fish and Wildlife Service
2800 Cottage Way, W-2605
Sacramento, California 95825

Agency Letters: California RWQCB

The following response from Brian Wines was received on April 26, 2004, to Wendy Swenson of Callander Associates via e-mail. These comments refer to bulleted items that were listed in the Biological Resources letter that is also found in the Appendix of this document.

Date: Mon, 26 Apr 2004

From: "Brian Wines" <bkw@rb2.swrcb.ca.gov>

Subject: Re: Bay Trail: Agency Feedback Desired (1 of 2)

Wendy

I was only able to take a quick look at the material.

I have a few comments.

In the August 11, 2003, Bay Trail Feasibility Study, page 6, the fourth bullet from the bottom states that the planned restoration of the salt evaporators to salt water marsh may provide adequate mitigation to offset small amounts of permanent habitat loss for these [special status] species. Please note that the project proponent would still be responsible for providing mitigation for any impacts to wetlands. The salt pond restoration is being performed by the USFWS and CDFG at considerable expense to these two government agencies. Any excess mitigation credit created by the restoration of the salt ponds is likely to be sold to cover mitigation expenses. The responsible party for the trail construction will be responsible for securing/creating appropriate mitigation for any impacts to wetlands.

In the August 11, 2003, Bay Trail Feasibility Study, page 7, the second bullet from the bottom states the trail would apply for a 404 permit from the Army Corps of Engineers. The text should be modified to note that 404 permits are not valid without Section 401 Certification from the Regional Water Quality Control Board. In addition, in areas where the Army Corps does not exert jurisdiction, Waste Discharge Requirements may still be needed from the Regional Water Quality Control Board. The definition of Waters of the State covers more features than the definition of Waters of the U.S.

Brian

Agency Letters: U.S. Army Corps of Engineers



DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS
333 MARKET STREET
SAN FRANCISCO, CALIFORNIA 94105-2197

MAY 5 3 2004

Regulatory Branch

SUBJECT: File Number 28696S

REC'D MAY 21 2004

Ms. Wendy Swenson
Callander Associates
311 Seventh Avenue
San Mateo, California 94401-4259

Dear Ms. Swenson:

This letter is in response to your request on behalf of the City of Menlo Park for comments regarding the Bay Trail Feasibility Study Opportunities Plan, received on April 8, 2004, by your notice dated April 7, 2004. This component of the Bay Trail project is located near San Francisco Bay in the City of Menlo Park, San Mateo County, California. Since the activity of building the Bay Trail segment may involve the partial filling of a salt marsh, which is a jurisdictional water of the U.S., the Corps of Engineers will need to review those portions of your project.

All proposed work and/or structures extending bayward or seaward of the line on shore reached by: (1) mean high water (MHW) in tidal waters, or (2) ordinary high water in non-tidal waters designated as navigable waters of the United States, must be authorized by the Corps of Engineers pursuant to Section 10 of the Rivers and Harbors Act of 1899 (33 U.S.C. 403). Additionally, all work and structures proposed in unfilled portions of the interior of diked areas below former MHW must be authorized under Section 10 of the same statute.

All proposed discharges of fill material into waters of the United States must be authorized by the Corps of Engineers pursuant to Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344). Waters of the United States generally include tidal waters, lakes, ponds, rivers, streams (including intermittent streams), and wetlands.

Your proposed work appears to be within our jurisdiction and a permit may be required. Application for Corps authorization should be made to this office using the application form in the enclosed pamphlet. To avoid delays it is essential that you enter the File Number at the top of this letter into Item No. 1. The application must include plans showing the location, extent and character of the proposed activity, prepared in accordance with the requirements contained in this pamphlet. You should note, in planning your work, that upon receipt of a properly completed application and plans, it may be necessary to advertise the proposed work by issuing a Public Notice for a period of 30 days.

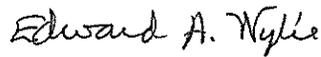
Agency Letters: U.S. Army Corps of Engineers

2

If an individual permit is required, it will be necessary for you to demonstrate to the Corps that your proposed fill is necessary because there are no practicable alternatives, as outlined in the U.S. Environmental Protection Agency's Section 404(b)(1) Guidelines. A copy is enclosed to aid you in preparation of this alternative analysis.

Should you have any questions regarding this matter, please call Andrew Muss of our Regulatory Branch at 415-977-8442. Please address all correspondence to the Regulatory Branch and refer to the File Number at the head of this letter.

Sincerely,



Edward A. Wylie
Chief, South Section

Enclosures

City of Menlo Park Transportation Division Attn: Rene Baile

Agency Letters: U.S. Fish and Wildlife Service



United States Department of the Interior
FISH AND WILDLIFE SERVICE
Sacramento Fish and Wildlife Office
2800 Cottage Way, Room W-2605
Sacramento, California 95825-1846



IN REPLY REFER TO:
I-1-04-TA-1439

MAY 26 2004

Ms. Wendy Swenson
Callendar Associates Landscape Architecture, Inc.
311 Seventh Avenue
San Mateo, California 94401-4259

Subject: Technical Assistance on the Bay Trail Feasibility Study, City of Menlo Park, Santa Clara and San Mateo Counties, California

Dear Ms. Swenson:

This is in response to your April 6, 2004, electronic mail requesting our review and comments on the Bay Trail Feasibility Study report (Study report) for the City of Menlo Park, California.

The Study report proposes four trail options to connect existing trails at the Ravenswood Open Space Preserve and University Avenue. Option 1 would link these two areas along the northern and eastern boundaries of the Wellington Corporation housing area. Option 2 would link these areas with a trail running through the Wellington Corporation housing area along the Hetch Hetchy pipeline right-of-way and along the northern boundary of the Wellington Corporation housing area. Option 3 would basically run east-west along the boundary of Santa Clara and San Mateo counties along the existing rail line and along the northern boundary of the Wellington Corporation housing area. Option 4 would run from Highway 84 along the eastern and southern boundaries of a former Cargill Salt pond; this option would bifurcate along the southern boundary of the pond with one trail connecting to University Avenue and the other trail connecting to the Ravenswood Open Space Preserve through the Wellington Corporation housing area.

Based on our review of the proposed trail options, the U.S. Fish and Wildlife Service (Service) has concerns about trail options 3 and 4. Option 4 would result in the full encirclement of former Cargill salt pond SF2 by Highway 84, University Avenue, and the new trail. Pond SF2 was acquired by the Service in 2003 as part of the purchase of 16,500 acres of salt ponds from Cargill Salt in South San Francisco Bay. Planning is currently underway to determine which former ponds may be restored to tidal marsh habitat for federally and State listed species. Because of its adjacency to San Francisco Bay, pond SF2 is being considered for restoration to tidal marsh.

REC'D MAY 27 2004

Agency Letters: U.S. Fish and Wildlife Service

Ms. Wendy Swenson

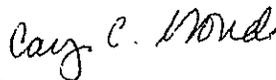
2

Development of trail option 4 likely would severely hinder, if not eliminate, the ability to effectively restore pond SF2 to tidal marsh in the future to meet the recovery objectives of federally listed species such as the endangered California clapper rail (*Rallus longirostris obsoletus*) and salt marsh harvest mouse (*Reithrodontomys raviventris*). Option 3 is less problematic than Option 4 but, because of its location, development of this trail option may also constrain or restrict future habitat restoration options in the area between the Ravenswood Open Space Preserve and salt pond SF2.

Therefore, based on our review of the information provided with your request, we have determined that trail options 1 and 2 represent the best options for linking the Ravenswood Open Space Preserve Area and University Avenue. We base this determination on the fact that these options are mostly located along the boundaries of or within existing development areas and likely would have the least infringement on future tidal marsh restoration efforts for federally listed species in the area.

If you have any questions or concerns regarding this letter, please contact Jim Browning or Dan Buford at (916) 414-6625.

Sincerely,


 Catrina Martin
Deputy Assistant Field Supervisor

cc:
San Francisco Bay National Wildlife Refuge, Fremont, CA (M. Kolar)

*It should be noted that this letter was received on May 26, 2004, by Wendy Swenson, of Callander Associates. These comments refer to the Opportunities Plan in the Existing Conditions report. Thus the trails that this agency has concerns about are the Bay Trail Option 2 (yellow) and the Future Trail Spur and/or Spine (orange). They are more supportive of the Neighborhood Alignment (red dotted) and Bay Trail Option 1 (blue). Neighborhood Alignment Option (red dashed) was not illustrated in the map he commented on, but is very similar to the proposed Neighborhood Option alignment.