

The Bay Trail

Planning for a Recreational Ring Around San Francisco Bay



San Francisco Bay Trail Project

a nonprofit organization administered by the Association of Bay Area Governments

July 1989 • Reprinted March 2001



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The Bay Trail

The plan for the Bay Trail proposes development of a regional hiking and bicycling trail around the perimeter of San Francisco and San Pablo Bays. The Plan was prepared by the Association of Bay Area Governments pursuant to Senate Bill 100, which mandated that the Bay Trail:

- provide connections to existing park and recreation facilities,
- create links to existing and proposed transportation facilities, and
- be planned in such a way as to avoid adverse effects on environmentally sensitive areas.

Bay Trail Alignment

This plan proposes an alignment for what will become a 400-mile recreational “ring around the Bay.” When developed, the Bay Trail will be a trail *system* comprised of three components:

- spine trails, encircling the Bay and creating a continuous recreational corridor which links all nine Bay Area counties;
- spur trails, providing access from the spine trail to points of natural, historic and cultural interest along the Bay shoreline; and
- connector trails, providing restricted access to interpretive trails in environmentally-sensitive areas along the shoreline and connections to recreational opportunities as well as residential and employment centers inland from the Bay.

Approximately one-third of the trail already exists, either as hiking-only paths, hiking and bicycling paths or as on-street bicycle lanes.

Bay Trail Policies

The Bay Trail Plan also contains policies to guide selection of the trail route and implementation of the trail system. Policies fall into five categories:

- 1) *Trail alignment policies* reflect the goals of the Bay Trail program—to develop a continuous trail which highlights the wide variety of recreational and interpretive experiences offered by the diverse bay environment and is situated as close as feasible to the shoreline, within the constraints defined by other policies of the plan.
- 2) *Trail design policies* underscore the importance of creating a trail which is accessible to the widest possible range of trail users and which is designed to respect the natural or built environments through which it passes. Minimum design guidelines for trail development are recommended for application by implementing agencies.
- 3) *Environmental protection policies* underscore the importance of the San Francisco Bay’s natural environment and define the relationship of the proposed trail to sensitive natural environments such as wetlands.
- 4) *Transportation access policies* reflect the need for bicycle and pedestrian access on Bay Area toll bridges, in order to create a continuous trail and to permit cross-bay connections as alternative trail routes.
- 5) *Implementation policies* define a structure for successful implementation of the Bay Trail, including mechanisms for continuing trail advocacy, oversight and management.

Executive Summary

Overview of Issues

When completed, the Bay Trail will create connections between more than 90 parks and publicly-accessible open space areas around San Francisco and San Pablo Bays. By providing access to a wide array of commercial ferries and public boat launches, the trail will establish connections to "water trails" which will enable outdoor enthusiasts to appreciate the Bay not only from the shoreline, but from the water as well.

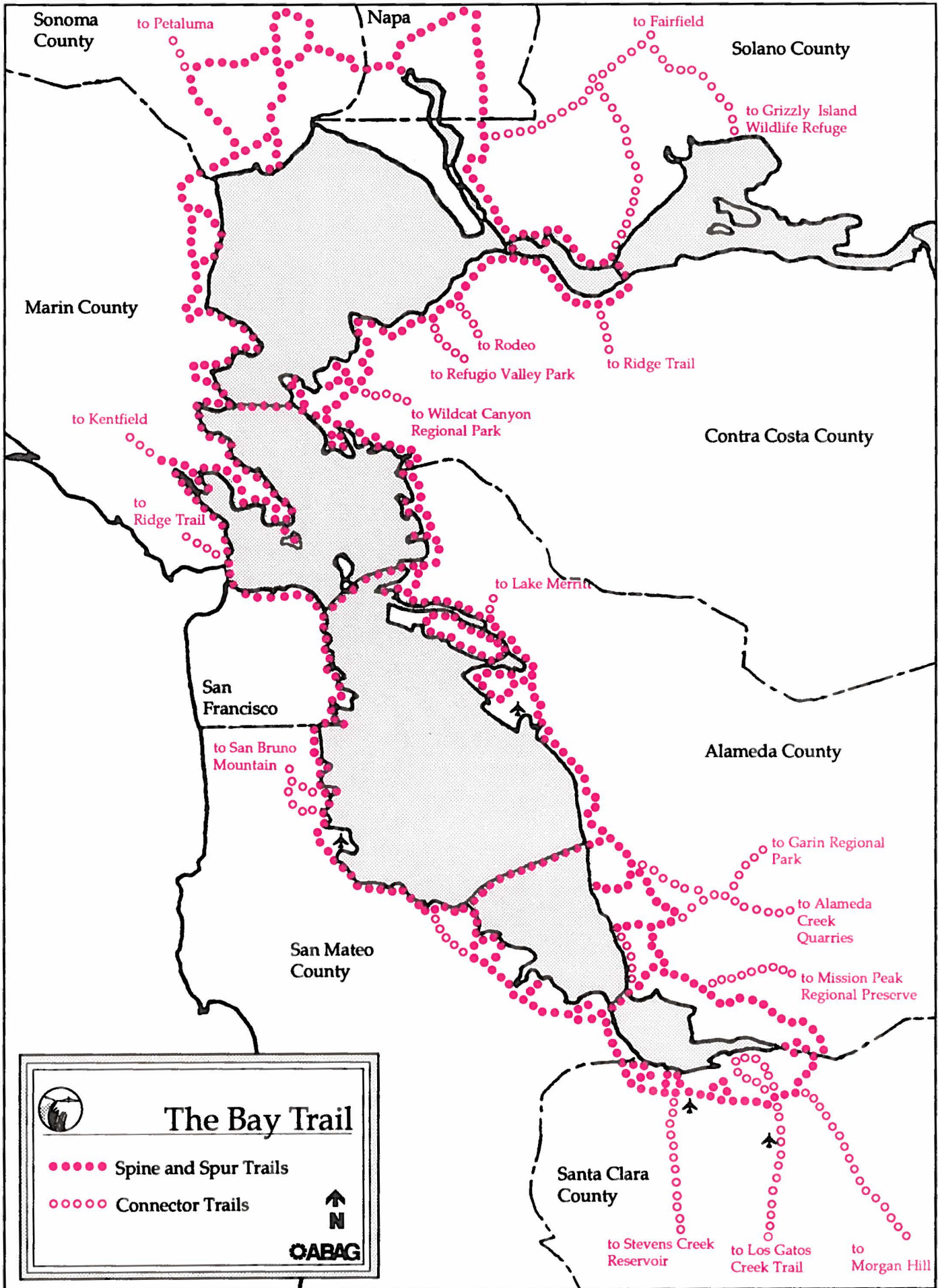
Trail access across all seven of the Bay Area's toll bridges is proposed, defining a series of trail "loops" which will provide a variety of excursions for hikers and bicyclists of varying abilities. To increase options for trail access from homes and worksites, the proposed alignment provides connections to local and regional transit--BART, Santa Clara County's light rail trolley system, and Caltrain--which can themselves become extensions of the Bay Area's recreational network. Trail connections to existing and planned local bikeway systems will encourage recreational as well as commute bicycling, as safer bicycle networks are established and expanded.

While the Trail will provide access to wetlands and other sensitive natural features along the Bay's shoreline, Bay Trail policies were designed specifically to protect these areas. Existing bay fill (primarily in the form of levees) provides shoreline trail access in many locations, and trail design policies require that trail design, construction and use be appropriate to the surroundings.

Relationship to Other Plans and Policies

Bay Trail policies and design guidelines are intended to complement, rather than supplant the adopted regulations and guidelines of local managing agencies. Implementation of the Bay Trail will rely on the continued cooperation among shoreline property owners, the hundreds of local, regional, state and federal agencies with jurisdiction over the trail alignment, the numerous trusts and foundations which operate in the region, and the countless environmental and recreational interests whose members care deeply about the future of the Bay Area.

This extraordinary regional cooperation has already begun with the work of the Bay Trail Advisory Committee, which drafted the policies presented here, and the ABAG Regional Planning Committee and Executive Board, which adopted the final plan.



Section I

Introducing the Bay Trail

- **The Vision of a Trail Around the Bay**
- **Making the Vision a Reality**
- **Benefits of the Bay Trail**



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Introducing the Bay Trail

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You always remember the first time you saw San Francisco Bay.

It comes back to you in later years with vivid intensity: the sudden, breath-taking impact of that initial moment when the great bay was first spread out before you, fresh and new and shining like a banner and a herald of things to come.

Even if you were a native of the area and grew up on these shores, it is probable that there was some single instant, on a bridge or a hilltop or some unfrequented beach, when you suddenly became conscious of the bay, when you really saw it for the first time--no longer an accustomed part of the background but a thing of beauty and power that had somehow become part of you.

Or, if you came from another part of the country, you may have seen it first from the air or from one of its highway approaches or from the deck of the Oakland ferry at sundown, when the water around you was luminous with crimson fire and vertical patterns of lights glowed from the darkening towers of San Francisco. Then, suddenly, no matter what your age, you were young, and the bay around you and the city beyond it were the future, full of great and glowing promise.

--Harold Gilliam¹

The Vision of a Trail Around the Bay

When Padre Pedro Font, accompanying Juan Bautista de Anza in 1776, first viewed San Francisco Bay, he described it as "a prodigy of nature." De Anza himself referred to the Bay as "a marvel of nature [which] might well be called the harbor of harbors."²

With a keen sense of the Bay's potential, Richard Henry Dana prophesied:

If California ever becomes a prosperous country, this bay will be the center of its prosperity. The abundance of wood and water; the extreme fertility of its shores; the excellence of its climate, which is as near to being perfect as any in the world; and its facilities for navigation, affording the best anchoring-grounds in the whole western coast of America--all fit it for a place of great importance.³

¹ Harold Gilliam, *San Francisco Bay*, Doubleday & Co., Garden City, New York, 1957, pp. 46-47.

² *Ibid.*, pp. 51-52.

³ *Ibid.*, p. 57.

Introducing the Bay Trail

While the face of the Bay has changed greatly since it was described by early explorers and adventurers, its importance as the physical and emotional focus of the region has not. The ancient peoples of California—the Ohlone, Coast Miwok and Patwin Indians—were drawn to the richness of hunting and fishing the Bay provided. Later, with European exploration and trade along the Pacific Coast, sailors and explorers marveled at the Bay's extraordinary beauty and prized its natural harbor as a center for exploration and commerce. As the region began to modernize, industrial activities proliferated along the shoreline, and commercial waterfronts developed in response to the region's increasing prominence and prosperity. Now, although industry and commerce still occupy strategic portions of the Bay's shoreline, public attention increasingly is being placed on recreational and open space uses at the water's edge.

Enhancing opportunities for public access to the bayshore became a State priority in 1965 with the passage of the McAteer-Petris Act. Establishment of the San Francisco Bay Conservation and Development Commission (BCDC), signalled State recognition of the Bay's importance and a governmental commitment to enhancing opportunities for public access to this extraordinary natural resource.

Progress in this respect has been startling. In 1965, only four miles of the Bay shoreline was accessible to the public. After only 20 years, this figure had grown to more than 100 miles, due to the combined efforts of BCDC and initiatives by local, regional, state and federal agencies which created new shoreline recreational opportunities throughout the Bay Area.

With the proliferation of public access, the value of enhancing the recreational experience by creating a network of accessways has been increasingly apparent. BCDC's Bay Plan underscores this need:

Federal, state, regional and local jurisdictions, special districts, and the San Francisco Bay Conservation and Development Commission should cooperate to provide new public access, *especially to link the entire series of shoreline parks and existing public access areas* to the extent feasible without additional Bay filling or adversely affecting natural resources.¹
(Public Access Policy #8, *emphasis added*)

Making the Vision a Reality

The dream of continuous access around the Bay moved one step closer to reality in the fall of 1987, when Senate Bill 100 became law. Conceived and authored by State Senator Bill Lockyer, the "ring around the Bay" legislation received widespread support from local agencies and organizations throughout the San Francisco Bay Region, and was coauthored by the entire Bay Area legislative delegation. Passage of SB 100 brought State support and planning funds to the project and initiated the regional planning program which has resulted in the recommendations presented here.

Senate Bill 100 proposed that a plan be developed for a bicycling and hiking trail around San Francisco and San Pablo Bays. The legislation directed the Association of Bay Area Governments (ABAG), in cooperation with a wide array of local and regional agencies, environmental organizations and recreational interests, to develop and adopt a plan and implementation program for what has become known as the Bay Trail. The complete text of SB100 appears in Appendix A. The principal provisions of the measure were:

- to provide connections to existing park and recreation facilities,
- to create links to existing and proposed transportation facilities, and
- to plan the trail in such a way as to avoid adverse effects on environmentally sensitive areas.

Section III describes how the proposed trail alignment and policies meet the mandate of Senate Bill 100.

¹ San Francisco Bay Conservation and Development Commission, San Francisco Bay Plan, p. 28.

Benefits of the Bay Trail

Trails are playing an increasingly prominent role in recreation planning for many reasons. Trails serve multiple purposes: providing opportunities for recreation and exercise near the home and the workplace, creating visual amenities in developed areas, offering alternatives for shorter commute and shopping trips, and creating friendlier, more human-scale connections between communities.

The Bay Trail will offer Bay Area residents and visitors improved access to the Bay and enhanced opportunities to enjoy of the full range of the region's natural, recreational, historic and cultural resources. It will create an enjoyable way for Bay Area residents to learn more about the Bay and to appreciate its many facets. It will provide an incentive for expanding public access to the shoreline, and preservation of the Bay's natural resources. It can create recreational and aesthetic amenities for local economic development and waterfront planning projects, and will focus increased attention on existing waterfront commercial and recreation areas.

By connecting existing parks and recreation facilities, the Bay Trail can provide foot and bicycle access to these areas, offering an alternative to increased automobile travel to the shoreline. Where the trail expands the region's network of bikeways, it will create new commute alternatives for those who might prefer to commute to work by bicycle. It will reinforce the recreation potential of the region's transit systems, by linking recreational destinations along the Trail to bus service throughout the Bay region, and to rail transit services, such as BART, the Santa Clara County light rail system, and Caltrain. Opportunities for additional connections will be explored as other transit links become available.

Finally, the Bay Trail will reinforce the Bay Area's growing sense of regionalism, by underscoring the connection all Bay Area communities share—the connection to San Francisco Bay.

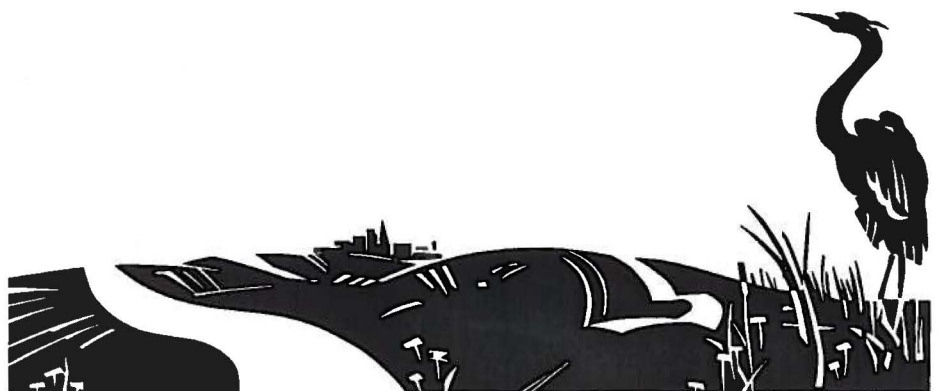
Why trails are increasing in popularity:

- As land values increase and land supplies diminish in the face of continued urbanization, new recreational opportunities in the traditional form of parks are more difficult and expensive to provide. Trail development is an attractive alternative, particularly in urban areas, where linear rights-of-way may already exist along flood control channels and transportation facilities.*
- Health-conscious Americans are seeking ways to fit exercise into their busy schedules. Lunchtime recreation and exercise is growing in popularity, increasing the demand for recreation facilities at the workplace. Trails are well-suited to serving this work-based recreational need.*
- As people age or experience injuries from more strenuous forms of recreation, they are turning to lower-impact forms of exercise. Walking provides a wide variety of health benefits for people of all ages and abilities.*
- More than ever before, employers are recognizing the relationship between a healthy workforce and a productive business. Moderate exercise promotes employee health and relieves stress, thus reducing lost productivity due to illness and absenteeism.*

Section II

Planning the Bay Trail

- **Physical Setting of the Bay Trail**
- **Institutional Setting for Bay Trail Planning**
- **Framework for Developing the Bay Trail Plan**



Section II

Planning the Bay Trail

- **Physical Setting of the Bay Trail**
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Physical Setting of the Bay Trail

The San Francisco Bay Area is one of the most highly urbanized estuaries in the world. Eight counties and thirty-six cities touch the Bay shoreline. Many more communities are connected to the Bay by the network of rivers, streams and creeks which flow into the Bay. Despite the fact that the majority of the 5.8 million people who now live in the San Francisco Bay Area live within five miles of the Bay, general appreciation and understanding of the Bay and its pivotal importance to the region is surprisingly limited.

As a natural resource, the San Francisco Bay Area owes its famous climate to the Bay, as its open expanse of water moderates extreme heat and cold, creating the moderate climate Bay Area residents enjoy. Wildlife in the Bay is remarkably diverse. The Bay's mudflats and vegetation provide food, shelter and nesting habitat for the birds which follow the Pacific flyway, the migratory path used by millions of birds each year as they travel south from the arctic. Fifty species of these migratory birds remain in the Bay Area during the winter; another three dozen are year-around residents of the Bay.

As a living classroom for the study of natural history, the Bay is an extraordinary resource for as diverse a group as scientists, university students and elementary school children who participate in the broad range of educational programs offered at interpretive centers scattered throughout the region.

San Francisco Bay continues to serve as an important economic resource for the region. Thriving ports, commercial waterfronts, and industrial uses along the Bay are vital components of the Bay Area's economic diversity. Each of these natural and built environments poses a variety of opportunities and challenges to the development of a regional recreational trail system such as the Bay Trail.

The Bay's Natural Environments

Of the Bay's natural environments, wetlands are one of the most prevalent and environmentally valuable, producing the basic nutrients that form the foundation of the food chain. Where the flow from creeks and rivers blend with the ocean tides, the nutrient levels are particularly rich. The marshes and mudflats along the San Francisco Bay shoreline are, therefore, a source of food and shelter to a wide variety of fish and wildlife.

The San Francisco estuary has historically been the largest contiguous tidal marsh system on the Pacific Coast of North America.¹ Although wetlands were once common along the bayshore, they are relatively scarce now, having diminished by 95 percent since the 19th century. Despite this, the approximately 31,360 acres of undiked marsh that remain represent 40 percent of all salt marshes in the state.²

¹ Michael Josselyn, The Ecology of San Francisco Bay Tidal Marshes: A Community Profile, 1983, p.1.

² Frederic Nichols, et. al. "The Modification of an Estuary," *Science*, Volume 231:7, February 1986.

Planning the Bay Trail

The value of this resource was acknowledged in 1972, when the San Francisco Bay National Wildlife Refuge was established. The Refuge includes more than 18,000 acres of South Bay wetlands in Alameda, Santa Clara and San Mateo Counties. Additional acreage in Sonoma and Solano Counties is included in the San Pablo Bay National Wildlife Refuge. Public access is limited to about 2 percent of the Refuge to minimize disturbance to the estuarine life, the resident harbor seals, and the multitude of waterfowl and shorebirds that rest and feed there, especially during the winter.

In addition to Refuge trails, public access trails and observation platforms for viewing wildlife are scattered throughout the Bay Area. Figure II-1 highlights locations of existing public access near wetlands. Due to the sensitive nature of this resource, access in wetlands is generally limited to hiking only. Frequently, access is restricted or eliminated during nesting season. Other regulations, particularly restrictions on domestic pets, reflect the concern that trail users respect wildlife's need for a secure environment in which to feed, nest and rest. Trails in these locations are generally unpaved; instead of asphalt surfacing, they may be left as natural-surface trails, improved with a compacted gravel or crushed rock surface, or developed as boardwalks.

The Bay's Built Environments

Land uses along the San Francisco Bay shoreline represent a microcosm of land uses throughout the region. Residential development along the proposed trail route ranges from very low-intensity rural residential to multifamily development in urban settings. Some newer communities have trails integrated into their site design, creating a direct link to the Bay.

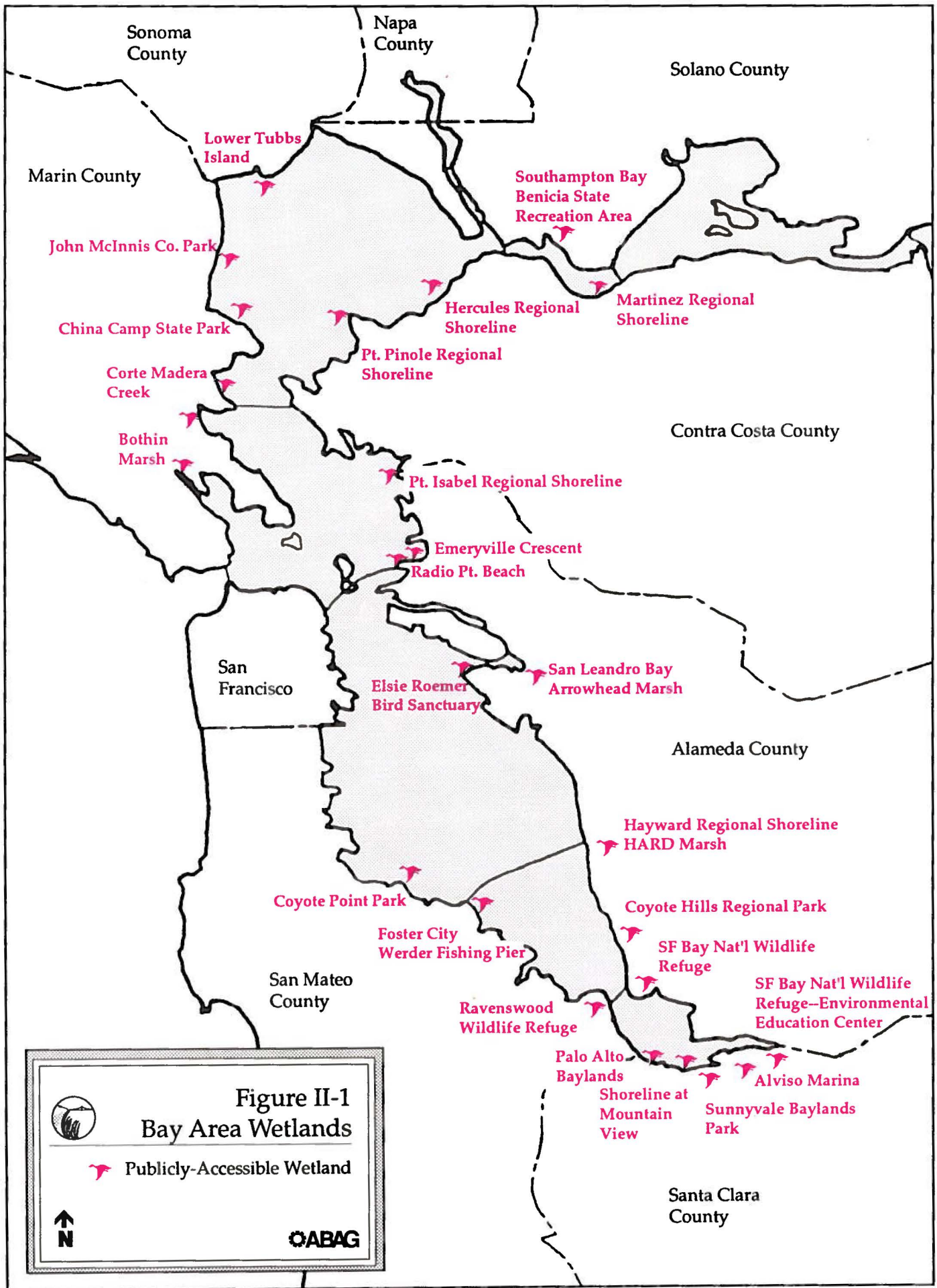
Commercial land uses will be among the most common activities near the Trail, due in large measure to the proliferation of office and light industrial parks along the bayfront. Commercial waterfronts and retail commercial activities are also common along the route; examples of these are Ghirardelli Square and Fisherman's Wharf in San Francisco, Jack London Square in Oakland, and the active commercial waterfronts of Emeryville, Benicia, Tiburon and Sausalito.

Mining, in the form of salt production, occurs on 22,000 acres of diked wetlands in the southern part of the Bay, making this activity by far the largest user of bayfront land. More than 15,000 acres of the salt evaporation ponds are within the San Francisco Bay National Wildlife Refuge.

Industrial land uses represent less than five percent of total bayfront land use. Two major ports—the Port of Oakland and the Port of San Francisco—occupy strategic locations along the shoreline. Other traditional heavy industries are concentrated in Contra Costa County, where eleven companies operate refineries, tank farms and storage and blending facilities between Richmond and Martinez. Hazards associated with heavy truck traffic and the criss-crossing of the industrial zones by railroad tracks present special challenges to trail development in these areas. Military facilities located along the shoreline, particularly Moffett Field Naval Air Station near Mountain View, Point Molate Naval Fuel Depot in Richmond and the U.S. Naval Air Station in Alameda, pose other challenges, due to their special security requirements.

Overall, industrial land uses in the Bay Area have been decreasing relative to commercial and residential uses. One indication that this trend is continuing is the number of ongoing development projects involving the conversion of industrial areas into mixed commercial and housing developments, a trend which is especially apparent in the East Bay.

The shoreline is also a focus for considerable recreation-oriented development, including marinas, boat launches, fishing piers, beaches, and shoreline parks. Many newer parks, such as Shoreline at Mountain View, and proposed parks in San Mateo and Sunnyvale, disguise former sanitary landfills. The extent of recreational opportunities along the trail will be explored more fully in Section III.



Institutional Setting for Bay Trail Planning

San Francisco Bay is the center of a complex web of regulation and land use control. Jurisdiction over use of the San Francisco Bay shoreline is shared by numerous federal, state, regional and local agencies. Cooperative, coordinated efforts by them all will be necessary to ensure that the Bay Trail is successfully implemented. The list which follows is not exhaustive; it does, however, illustrate the range of agencies on which successful implementation of the Bay Trail will depend.

Cities and Counties around the Bay are the principal land use regulatory authorities. Each agency exercises direct permit control over land use within its jurisdiction. Through general plans, zoning ordinances, subdivision controls, and plans and budgeting priorities for park and recreation projects, these agencies will provide the most direct and visible framework for establishing the Bay Trail.

A variety of *special districts* have regulatory authority on shoreline land which they own or manage. Notable examples are agencies with flood control powers (e.g., Alameda County Flood Control District, Santa Clara Valley Water District) and park and open space districts (e.g., East Bay Regional Park District, Midpeninsula Regional Open Space District).

The *San Francisco Bay Conservation and Development Commission* (BCDC) is one of the primary permitting agencies for bayshore land uses activities, exercising authority over a 100-foot wide strip of land around the Bay's margin. One of the policies most relevant to the Bay Trail is BCDC's charge, in issuing permits for shoreline development, to require "maximum feasible public access" to the shoreline. The Commission is also required to provide for water-oriented land use on the shore. These principles are enunciated in the Bay Plan, which identifies general locations and standards for creating public access and recreational facilities along San Francisco Bay.

The *California State Coastal Conservancy* implements a program of agricultural protection, wetlands and facilities restoration and resource enhancement in the coastal zone. Conservancy grants to local agencies for public access and resource enhancement projects have contributed to many existing segments of the Bay Trail.

The *California Department of Transportation* (CalTrans) is the State agency authorized to construct and maintain state and federal highways and bridges. CalTrans operates six of the Bay Area's seven major toll bridges, and will play a significant role in determining how the Bay Trail should interface with these facilities, as well as with the Bay Area's highway network.

The *U.S. Army Corps of Engineers* has jurisdiction over all bayshore areas at elevations lower than mean high tide; this includes all historic wetland areas below mean high tide, even if they are now dry. A Corps permit is required prior to the construction of any structures in or across navigable waters.

The *Environmental Protection Agency* (EPA) develops the environmental guidelines which are followed by the Corps of Engineers in evaluating permit proposals under Corps jurisdiction.

Although it is a non-regulatory agency, the *U.S. Fish and Wildlife Service* must be consulted on any federal project that involves the modification of any body of water. It advocates the preservation and restoration of wetlands.

As the state custodian of fish and wildlife resources, the *California Department of Fish Game* provides comments and advice to land use permitting agencies. Fish and Game has limited direct permit authority when a proposed project would alter any streambed.

The *California State Lands Commission* has authority over all tidal and submerged lands and the beds of navigable waters owned by the State. It also retains a "public trust" in those lands which have historically been subject to tidal influence, but which, due to dikes or fill, are now dry. In some instances, it can require a trail easement across these lands to fulfill the public trust interest, as part of negotiating a boundary line agreement (a legal document, drafted to settle the State's interest) with the property owner.

Framework for Developing the Bay Trail Plan

Senate Bill 100 directed ABAG to establish a policy committee to oversee development and implementation of the trail as well as an advisory committee, representing environmental and recreation interests, to assist in preparation of the plan. All meetings of the Bay Trail Policy Committee, Advisory Committee and their subcommittees were open to the public. Committee rosters appear in Appendix B.

Bay Trail Policy Committee

ABAG's Regional Planning Committee (RPC) was designated the Policy Committee for the Bay Trail program. The RPC is a standing committee of ABAG, comprised of 34 local elected officials and representatives of business, labor, community organizations, and other regional agencies. In its capacity as the Bay Trail Policy Committee, RPC membership was expanded to include representatives of two additional environmental organizations—Save San Francisco Bay Association and the Santa Clara Valley Chapter of the National Audubon Society. The Committee voted its unanimous recommendation for adoption of the Bay Trail Plan in April, 1989.

The Executive Board directs ABAG's operations. A body of 38 elected officials from member cities and counties, the Executive Board, after considering recommendations from the Advisory Committee and Regional Planning Committee, formally adopted the Bay Trail Plan on June 15, 1989.

Bay Trail Advisory Committee

Bay Trail Advisory Committee was formed in December, 1987, to advise project staff and the Bay Trail Policy Committee during preparation of the Bay Trail Plan. Thirty-seven delegates and twenty alternates, representing thirty-one local, regional, state and federal organizations and agencies serve on the Advisory Committee.

To facilitate the Advisory Committee's work, five subcommittees were formed: Transportation, Trail Design, Financing, Environmental Issues subcommittees developed policy recommendations. Three geographic area subcommittees were formed to review possible trail alignments in the North Bay (Marin, Sonoma, Napa and Solano Counties), East Bay (Alameda and Contra Costa Counties) and Peninsula and South Bay (San Francisco, San Mateo and Santa Clara Counties). Subcommittee meetings were conducted very informally, to allow all those interested in Bay Trail planning an opportunity to participate fully in the work of the Committee. In all, 13 Advisory Committee meetings and 24 subcommittee meetings were held in developing the plan for the Bay Trail.

Bay Trail Technical Committee

A Bay Trail Technical Committee was also formed, to provide an opportunity for all interested public agencies to participate directly in the Bay Trail planning process. Some agencies were represented both on the Technical and Advisory Committees. More than 110 agency representatives, representing 69 local, regional, state and federal agencies participated in the work of the Technical Committee.

Section III

Bay Trail Plan Recommendations

- **Bay Trail Alignment**
- **Bay Trail Policies**
- **Meeting the Mandate of Senate Bill 100**



Section III

Bay Trail Recommendations

- Bay Trail Alignment
- Bay Trail Policies
- Meeting the Mandate of Senate Bill 100

The Bay Trail Plan consists of two components: a proposed alignment for the Bay Trail and policies to guide the selection of a trail route and implementation of the trail system.

Bay Trail Alignment

This plan proposes an alignment for what will become a roughly 400-mile recreational “ring around the Bay.”¹ As Figure III-1 indicates, once completed, the Bay Trail will represent a trail *system* comprised of three components: spine trails, spur trails, and connector trails.² The spine and spur trails create the framework of the Bay Trail system. The spine trail encircles the Bay, providing a continuous recreational corridor which links all nine Bay Area counties. Depending on the location, spine trails may be multiple-use trails (hiking and bicycling) or may be restricted to hiking or bicycling only. In some areas, site constraints force the spine trail inland.

Where the spine trail does not follow the shoreline, spur trails provide access from the spine trail to points of interest along the Bay. Existing spur trails are predominantly hiking-only trails, which permit restricted access in environmentally-sensitive areas along the shore.

In addition to the spine and spur trails, Figure III-1 shows a series of connector trails. Connector trails fall into two categories: existing shoreline trails which connect to the Bay Trail but which have not been incorporated into the Bay Trail alignment, and trails which provide connections to urban centers located inland from the Bay. Trails falling into the first category are primarily those within the San Francisco Bay National Wildlife Refuge. Wildlife Refuge trails are generally passive, interpretive trails, rather than active, recreational facilities. Their use is restricted to pedestrians only and the trails may be subject to closing during certain times of the year in order to protect nesting wildlife.

Trail connections to inland urban centers principally rely on rivers or creeks to provide connections to the Bay. These trail connections are important because they tie residential and job centers into the Bay Trail system. They also create an alternative means of trail access for users who prefer not to rely solely on automobile transportation to reach staging areas along the shoreline. Some of these connector trails will ultimately serve as links between the Bay Trail and the proposed Ridge Trail, eventually forming a comprehensive regional trail network.

In one location (Robert’s Landing in San Leandro), an observation platform is proposed in lieu of a trail connection along the shoreline. This will allow trail users to view, but not disturb, the fragile dune environment which exists there.

¹The routes shown on the following alignment maps actually represent approximately 550 miles of trails, even though the Bay Trail is described as a 400-mile trail. This discrepancy is due to the fact that alternative routes have been suggested for some segments of the alignment where only one route will ultimately be developed.

²In addition to the following figures, detailed maps showing county-long segments of the trail are available separately. Please see the last page of this report for information about obtaining county reach maps.

Table III-1 provides a breakdown of Bay Trail mileage. It indicates that approximately one-third of the trail already exists, either as hiking-only paths, hiking-and-bicycling paths (Class I bikeways) or as on-street bicycle lanes (Class II bikeways). Figure III-2 illustrates the different types of bikeways which are likely to be incorporated into the Bay Trail.

Figure III-3 shows the proposed Bay Trail alignment in more detail. These maps illustrate some of the many opportunities and challenges facing the Bay Trail Advisory Committee as it sought to locate a continuous trail around the Bay.

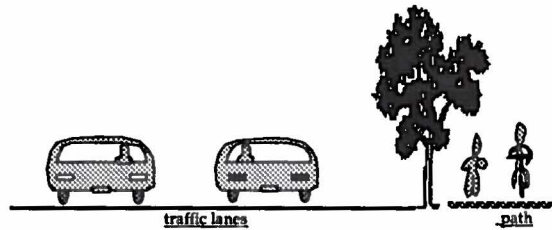
Table III-1 Bay Trail System Length Length of Spine and Spur Trails by County					
County	Trail Segment Length (in miles)				Total
	Spine Trails		Spur Trails		
	Existing	Proposed	Existing	Proposed	
Alameda	41 ¹	72	4	24	141
Contra Costa	4	59	1	9	73
Marin	20 ²	22	11	17	70
Napa	3 ³	28	0	4	35
San Francisco	6	6	0	5	17
San Mateo	27 ⁴	24	3	4	58
Santa Clara	5	28	6	5	44
Solano	56	15	0	0	71
Sonoma	0	33	3	3	39
Total	162	287	28	71	548
	449		99		

notes:
 Trail lengths are generalized and are provided for comparative purposes only, due to the margin of error and the varying scales of resources used to calculate trail mileage.
¹ includes 9 miles class II bicycle lanes
² includes 4 miles class II bicycle lanes
³ includes 3 miles class II bicycle lanes
⁴ includes 2 miles class II bicycle lanes

Bikeway Classifications

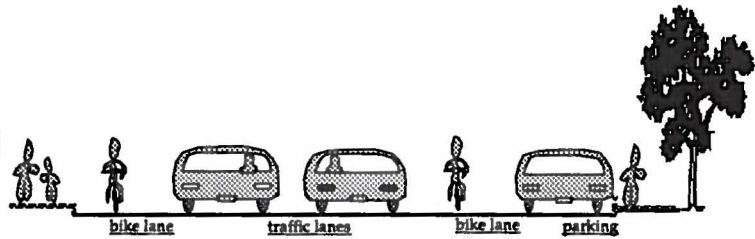
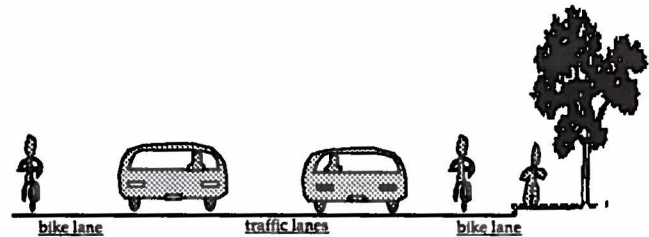
Class I Bicycle/Pedestrian Path

- exclusive right-of-way for bicyclists and pedestrians
- pathway completely separated from motor vehicles by space or physical barrier
- minimal cross-flow by motor vehicles (e.g., at intersections)



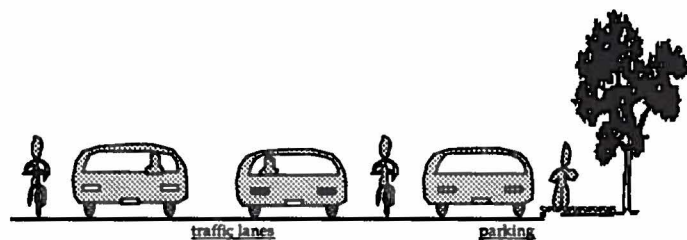
Class II Bicycle Lane

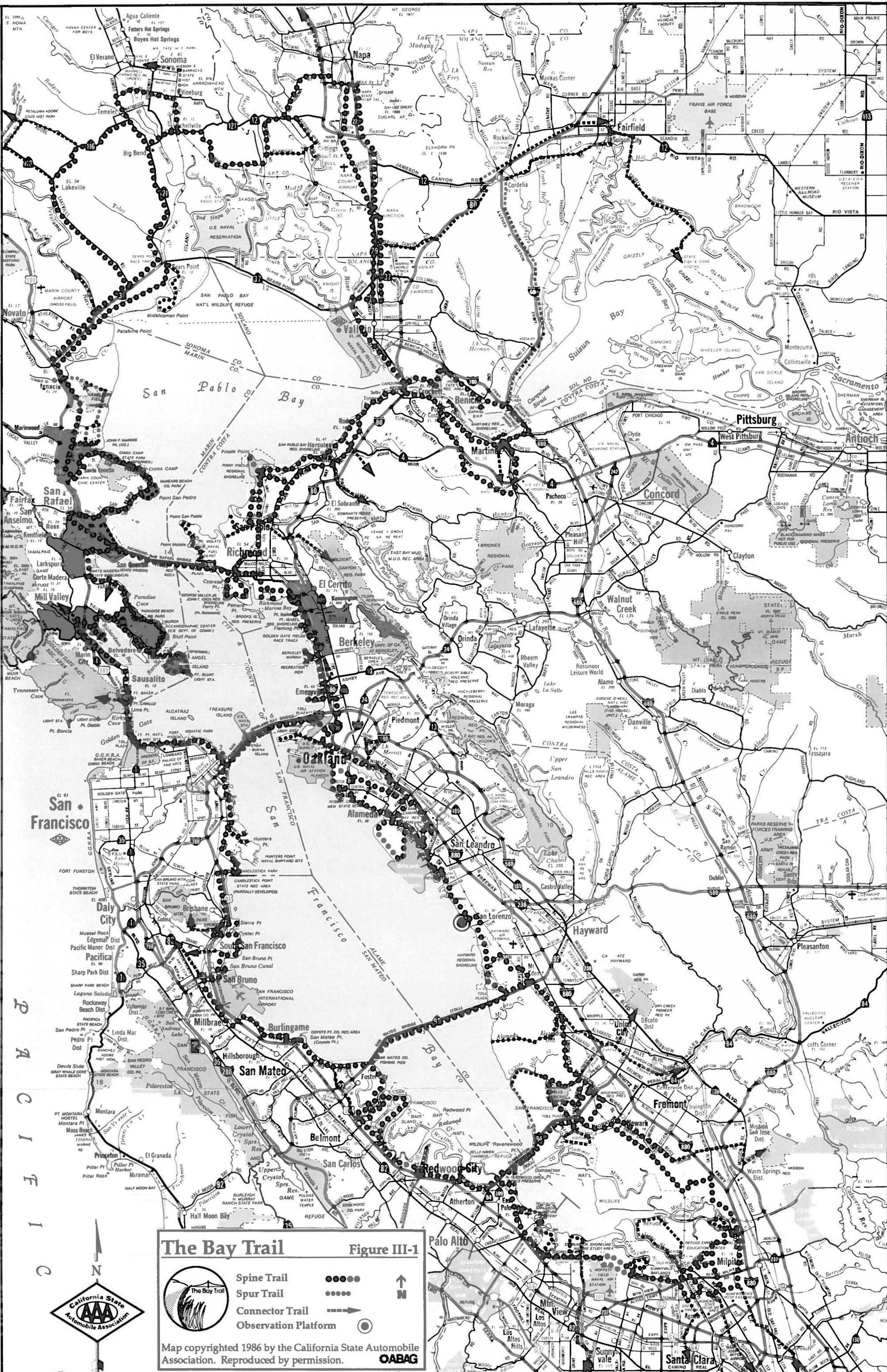
- restricted right-of-way designated for the exclusive flow of bicycles
- travel by motor vehicles or pedestrians prohibited, but vehicle cross-flow allowed for parking and turning
- signed as a bike lane
- lane designated by solid white striping (dashed striping at intersection approaches, where vehicles may cross to make turns)



Class III Bicycle Route

- shared right-of-way for motor vehicles and bicycles
- signed as a bike route



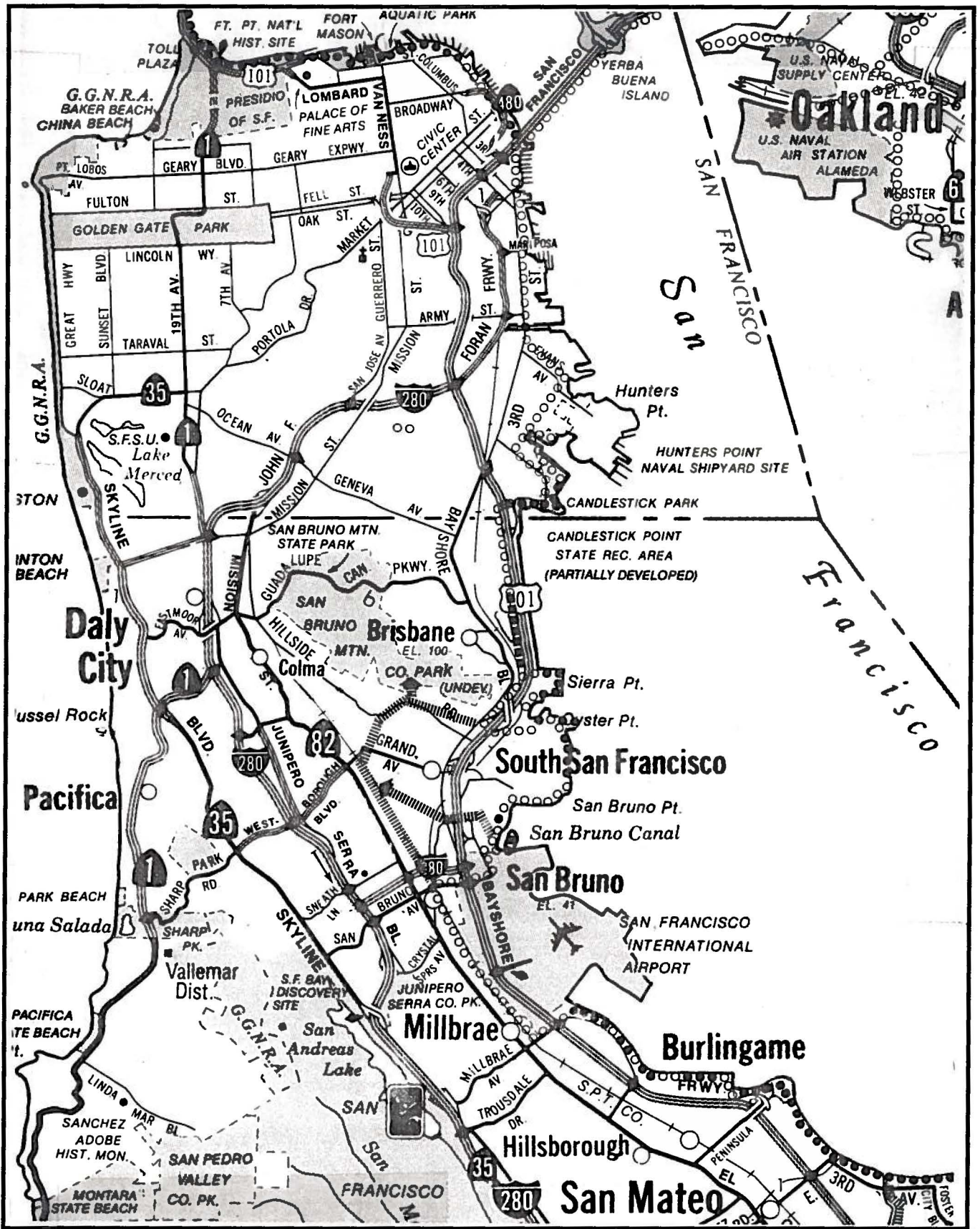



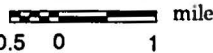
The Bay Trail **Figure III-1**

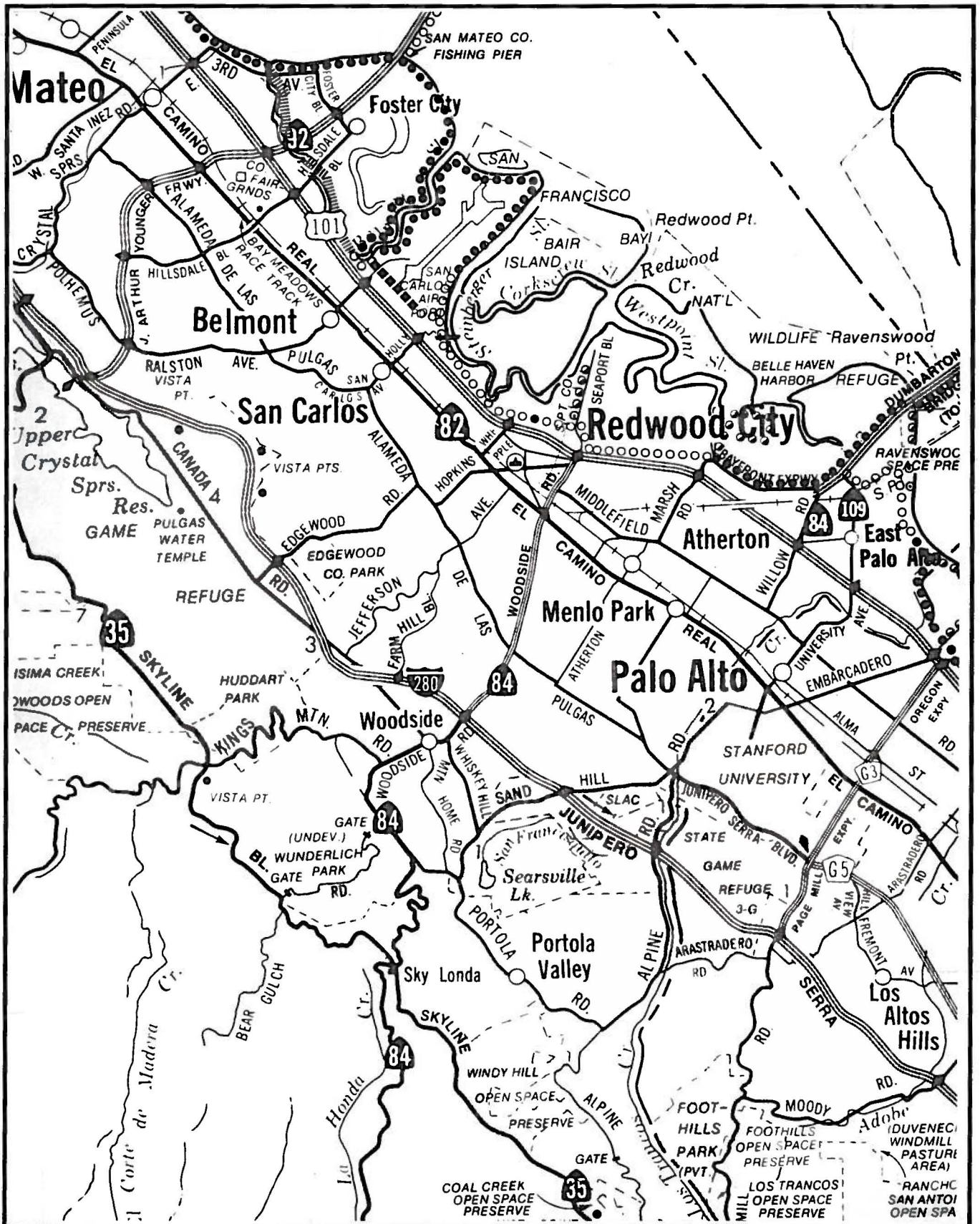
	Spine Trail	
	Spur Trail	
	Connector Trail	
	Observation Platform	

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	Proposed Spine Trail ○○○○ Spur Trail ⊙⊙⊙⊙ Connector Trail ▬▬▬▬▶	Existing ●●●● (path) ■■■■ (bike lane) ○○○○ (same)	Bay Trail Alignment Figure III-3 Plate 1 Approx. Scale  miles ↑ N Map copyrighted 1986 by the California State Automobile Association. Reproduced by permission. OABAG
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	Proposed	Existing
Spine Trail	○○○○○	●●●●● (path)
Spur Trail	◎◎◎◎◎	■ ■ ■ ■ ■ (bike lane)
Connector Trail	▶	◎◎◎◎◎ (same)

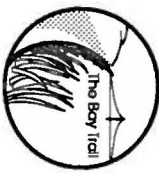
Bay Trail Alignment

Figure III-3
Plate 2

Approx. Scale miles



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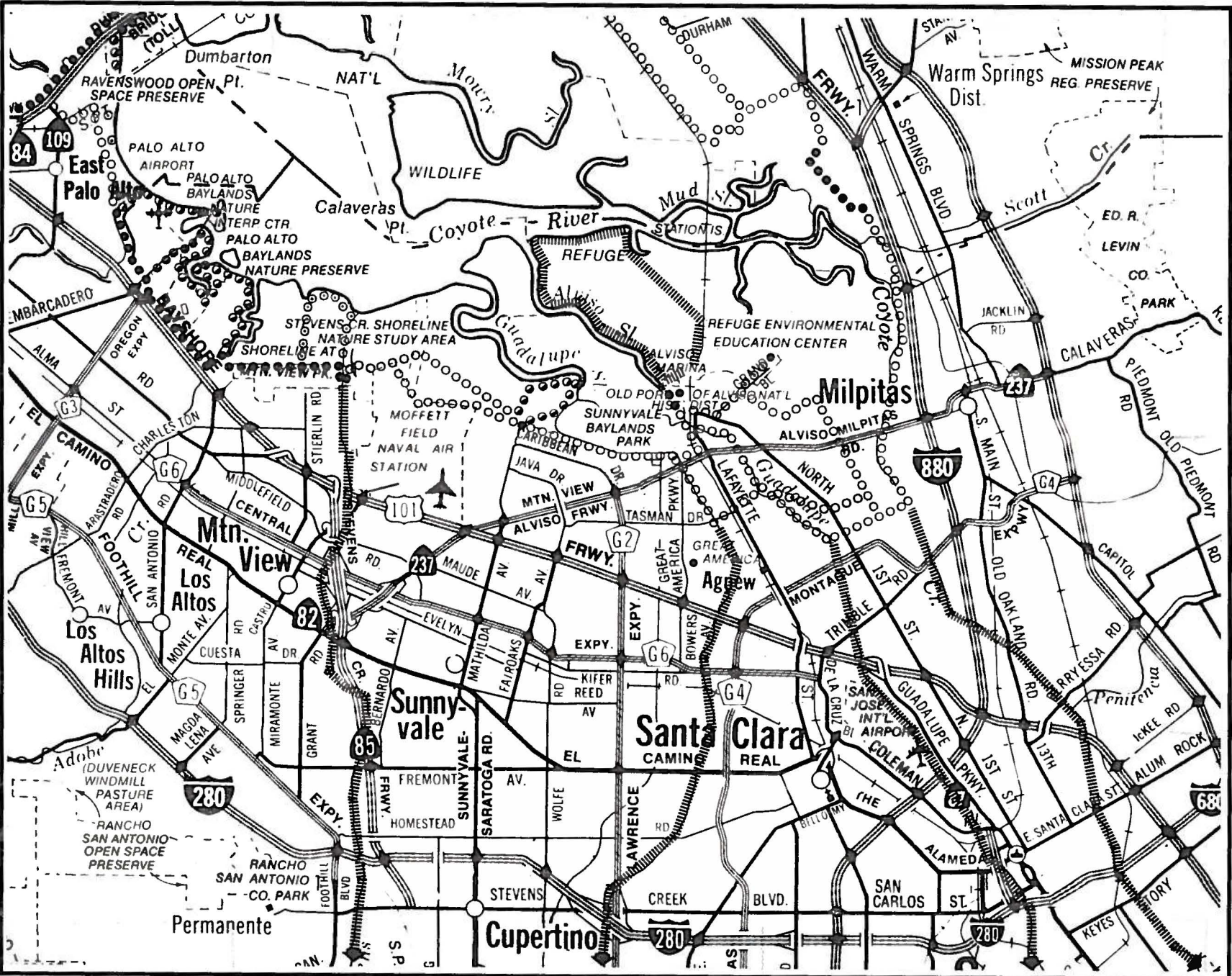
- Proposed**
- Spine Trail ○○○○○○
 - Spur Trail ○○○○○○
 - Connector Trail ■■■■■■
- Existing**
- (path) ●●●●●●
 - (bike lane) ■■■■■■
 - (same) ○○○○○○

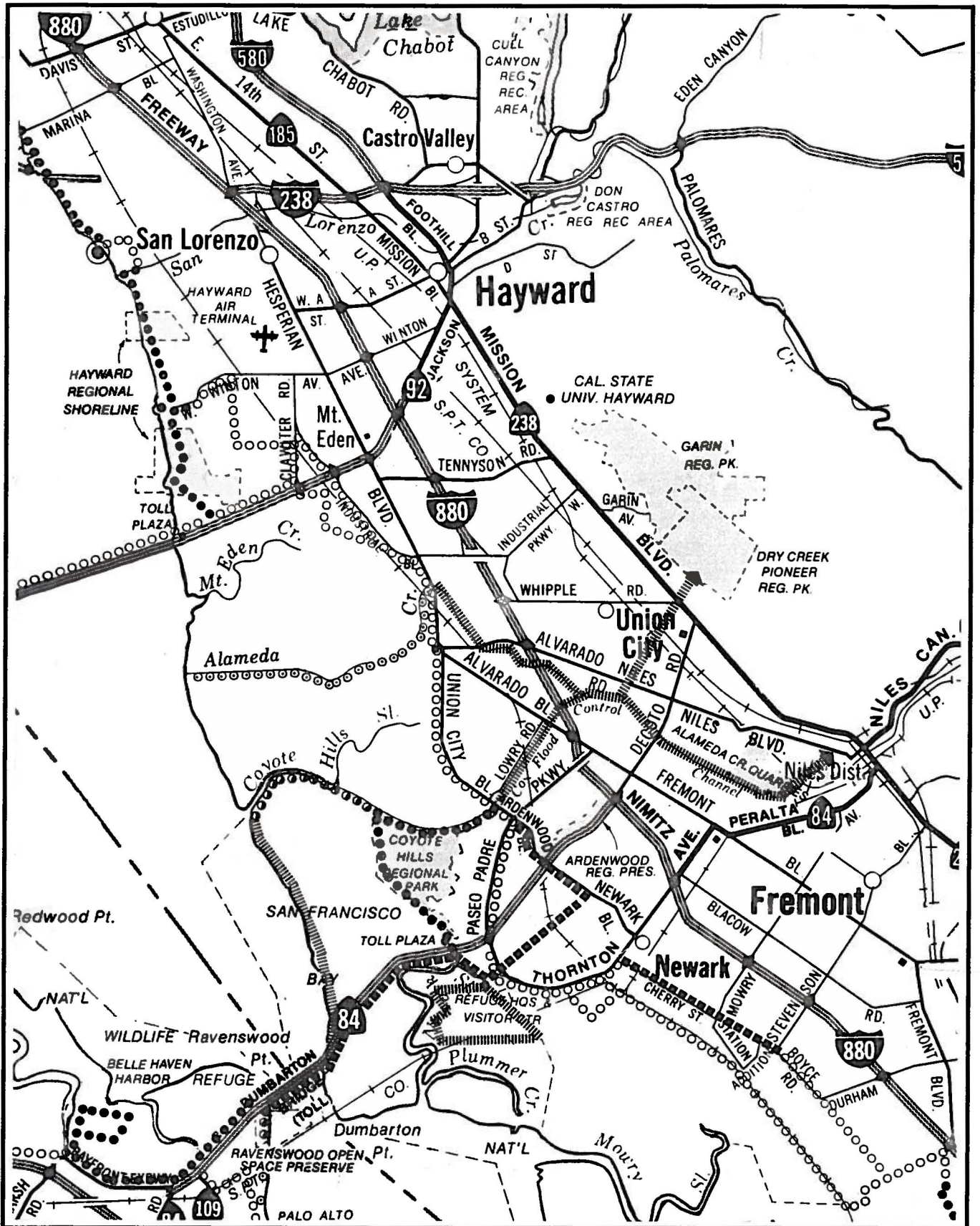
Bay Trail Alignment Figure III-3
Plate 3


Approx. Scale 0.5 0 1 miles

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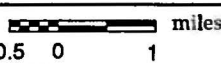


The Bay Trail

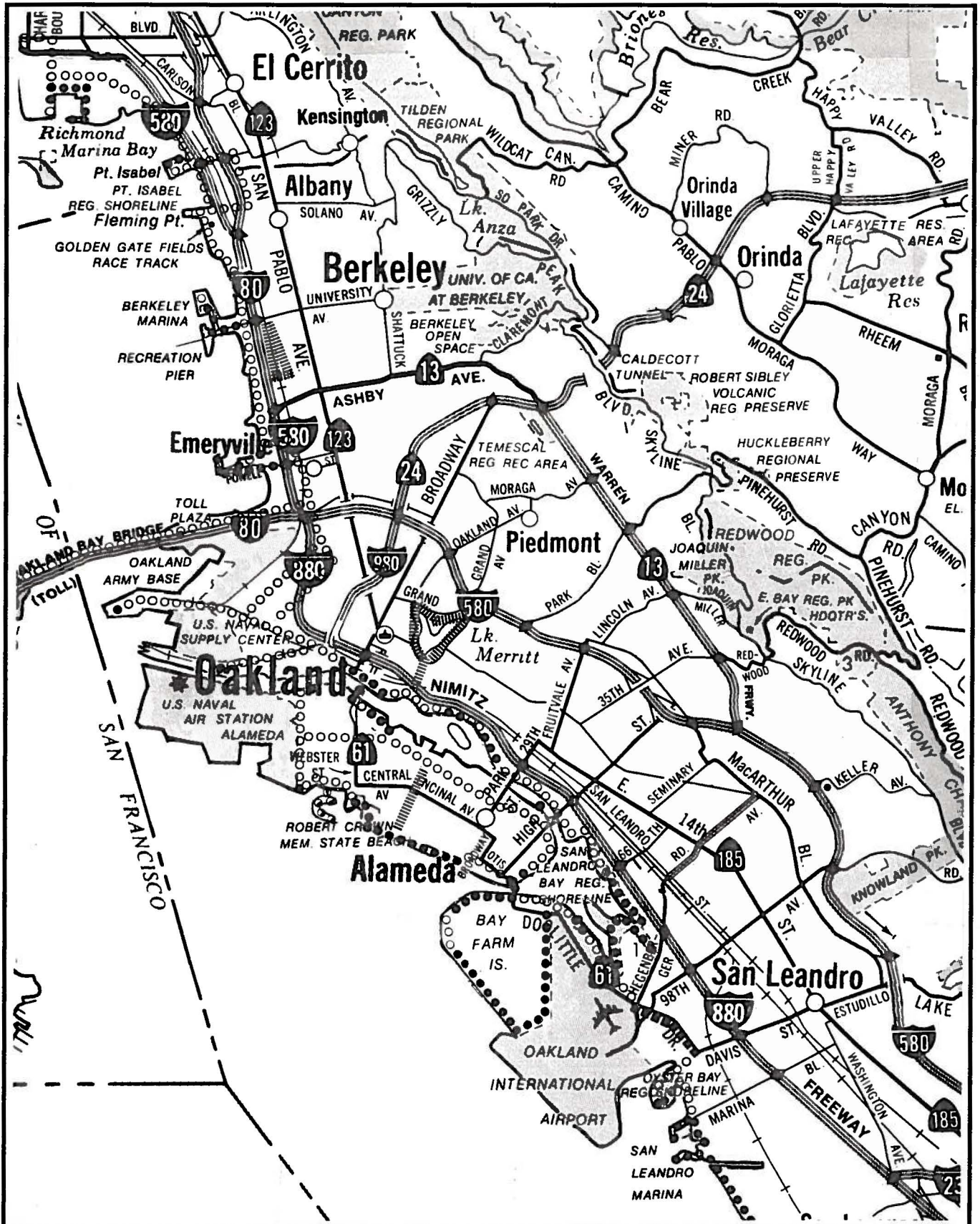
	Proposed	Existing
Spine Trail	○○○○○	●●●●● (path)
Spur Trail	◎◎◎◎◎	■ ■ ■ ■ ■ (bike lane)
Connector Trail	▶	◎◎◎◎◎ (same)


Bay Trail Alignment

Figure III-3
Plate 4

Approx. Scale  miles

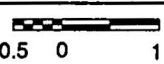
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	Proposed	Existing
Spine Trail	○○○○○	●●●●● (path)
Spur Trail	◎◎◎◎◎	■ ■ ■ ■ ■ (bike lane)
Connector Trail	▶	◎◎◎◎◎ (same)

Bay Trail Alignment

Approx. Scale  miles

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Figure III-3
Plate 5

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- | | | | |
|-----------------|-----------|-------------|-----------|
| Proposed | ○ ○ ○ ○ ○ | Existing | ● ● ● ● ● |
| Spine Trail | ○ ○ ○ ○ ○ | (path) | ● ● ● ● ● |
| Spur Trail | ○ ○ ○ ○ ○ | (bike lane) | ■ ■ ■ ■ ■ |
| Connector Trail | ▬ ▬ ▬ ▬ ▬ | (same) | ● ● ● ● ● |

Bay Trail Alignment

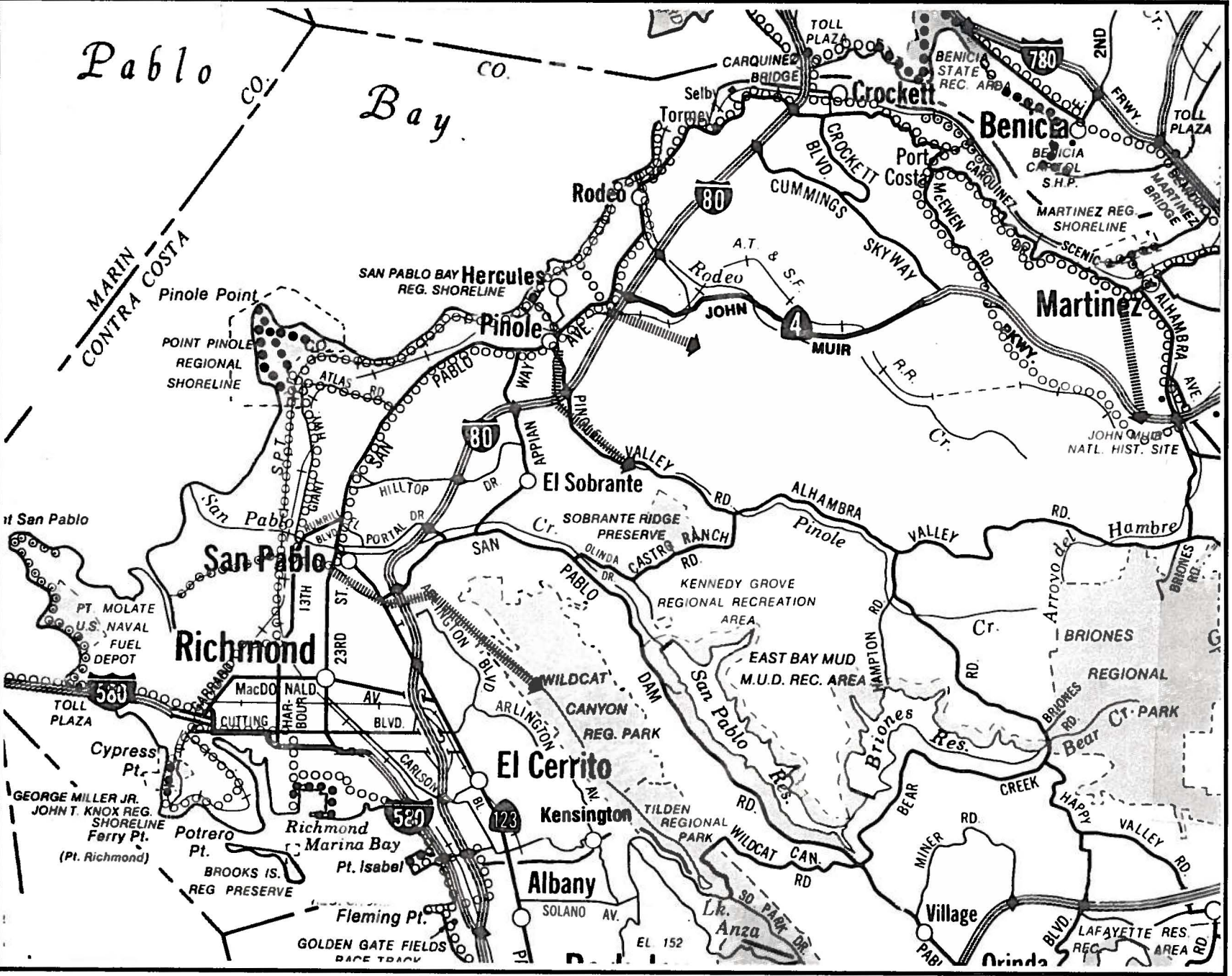
Figure III-3
Plate 6

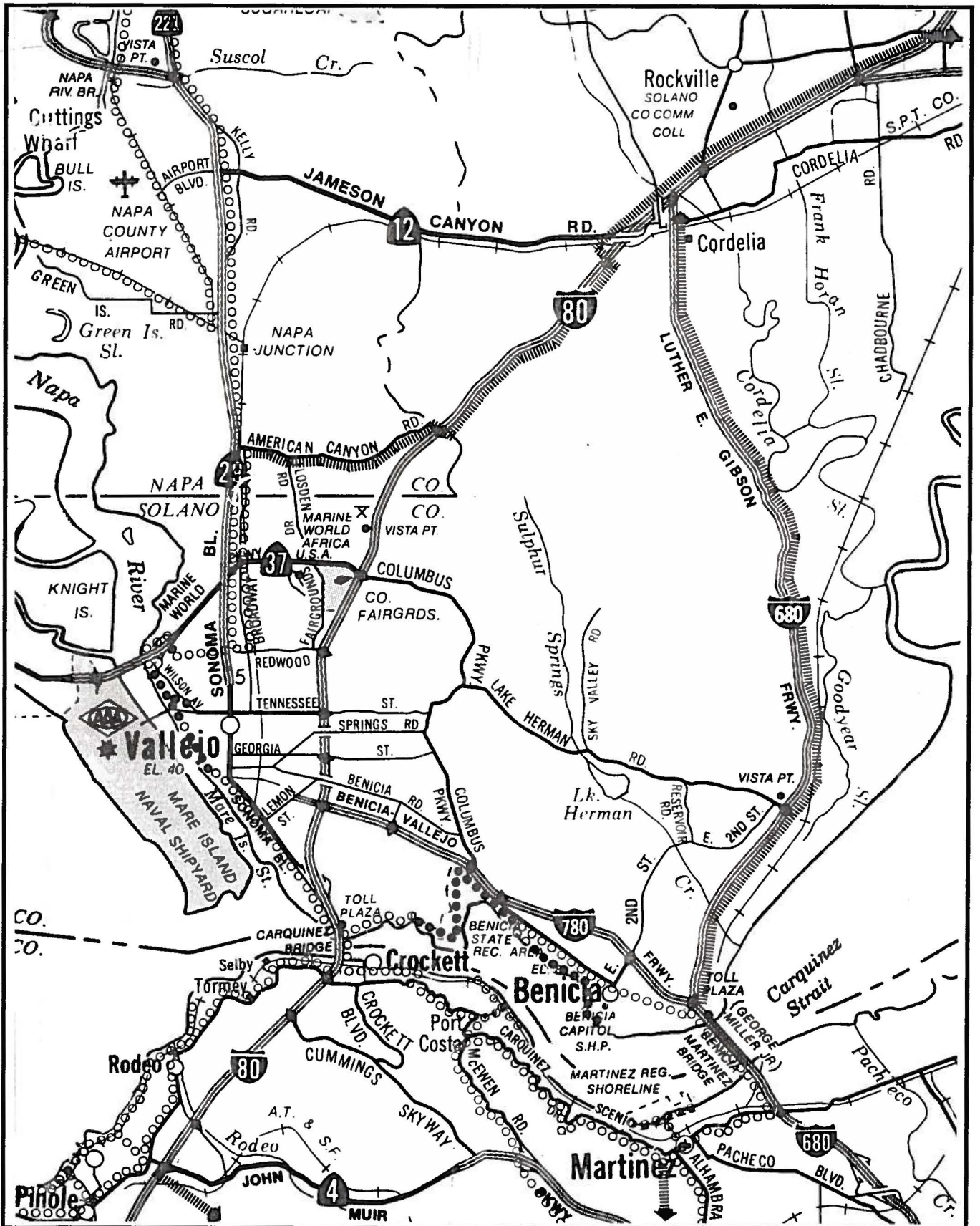
Approx. Scale 0 0.5 1 miles



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	Proposed Spine Trail ○○○○○○ Spur Trail ◎◎◎◎◎◎ Connector Trail ▬▬▬▬▬▬▶	Existing ●●●●●● (path) ■■■■■■ (bike lane) ◎◎◎◎◎◎ (same)	Bay Trail Alignment	Figure III-3 Plate 7	
	Approx. Scale miles		 N		
	Map copyrighted 1986 by the California State Automobile Association. Reproduced by permission.				
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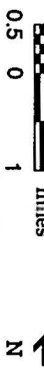


- Proposed Spine Trail ○○○○○○
- Existing Spine Trail ●●●●●● (path)
- Proposed Spur Trail ○○○○○○
- Existing Spur Trail ●●●●●● (bike lane)
- Proposed Connector Trail ■■■■■■
- Existing Connector Trail ●●●●●● (same)

Bay Trail Alignment

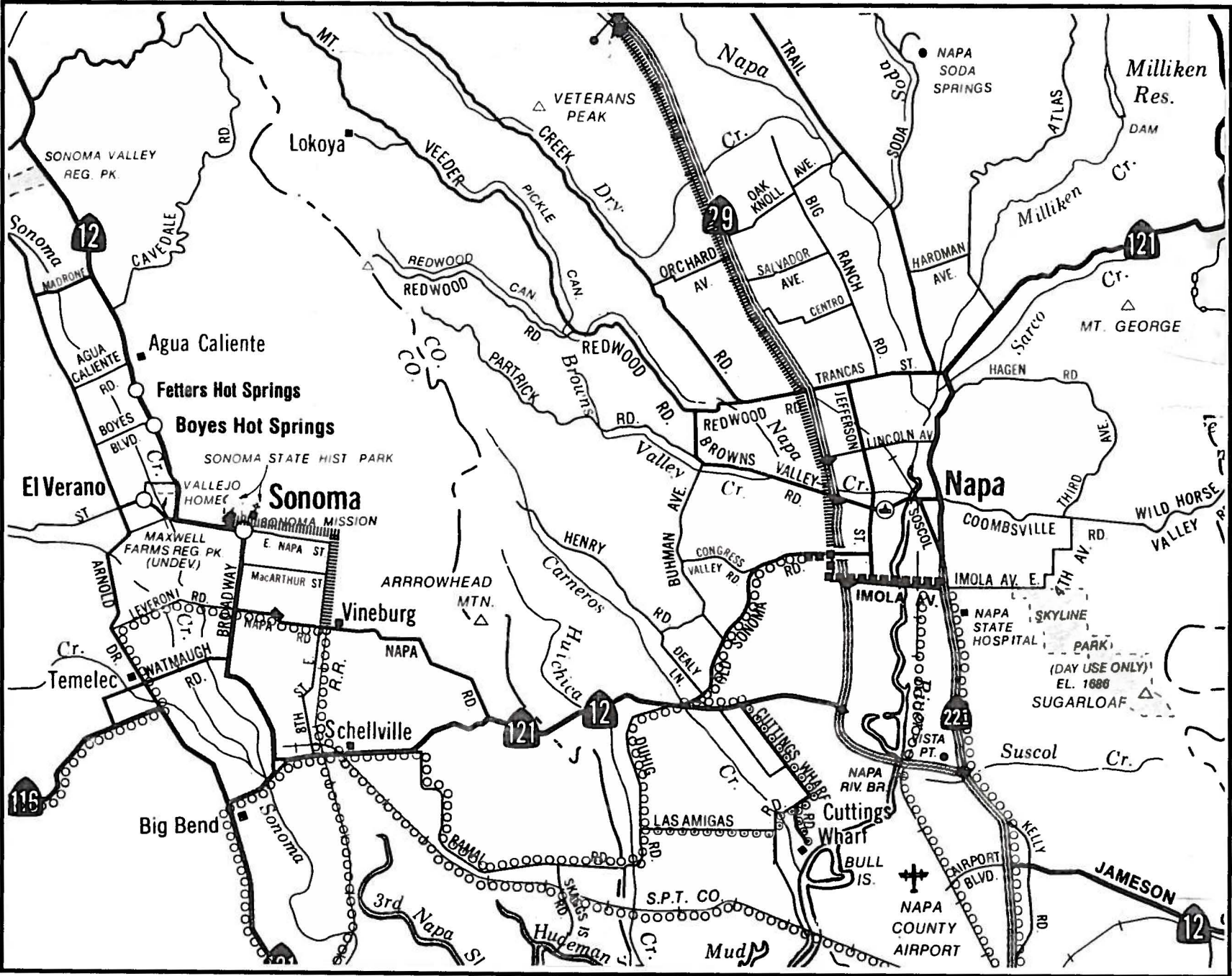
Figure III-3
Plate 8

Approx. Scale 0 0.5 1 miles



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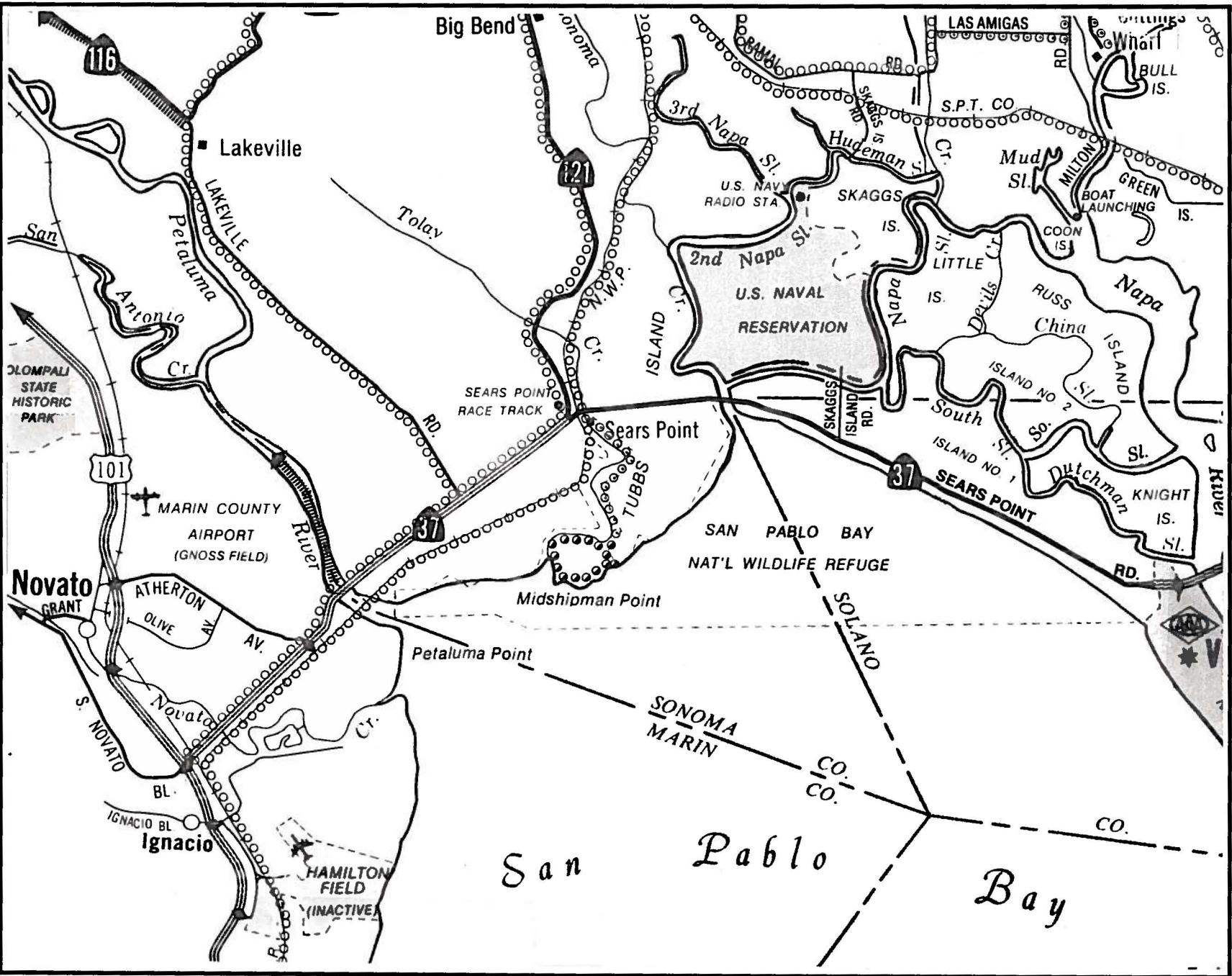
- Proposed**
- Spine Trail ○○○○○○
 - Spur Trail ○○○○○○
 - Connector Trail ■■■■■■
- Existing**
- (path) ●●●●●●
 - (bike lane) ■■■■■■
 - (same) ○○○○○○

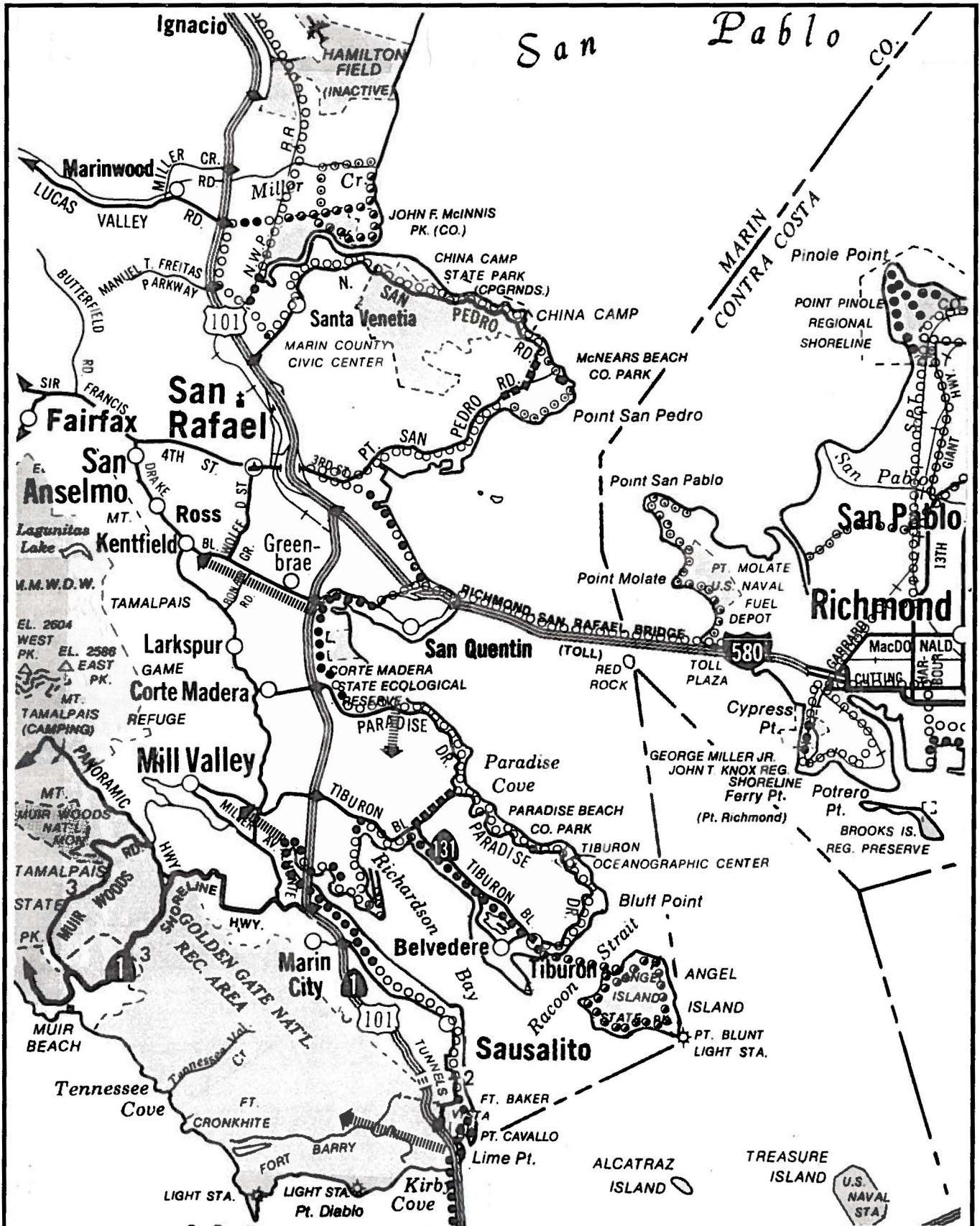
Bay Trail Alignment Figure III-3
Plate 9

Approx. Scale 0 0.5 1 miles

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	Proposed	Existing
Spine Trail	○○○○○	●●●●● (path)
Spur Trail	◎◎◎◎◎	■ ■ ■ ■ ■ (bike lane)
Connector Trail	▶	●●●●● (same)

Bay Trail Alignment

Figure III-3
Plate 10

Approx. Scale miles



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Bay Trail Policies

The Bay Trail policies are described in detail in Table III-2. The policies are grouped into five categories:

- 1) *Trail alignment policies* reflect the goals of the Bay Trail program—to develop a continuous trail which highlights the wide variety of recreational and interpretive experiences offered by the diverse bay environment and is situated as close as feasible to the shoreline, within the constraints defined by other policies of the plan.
- 2) *Trail design policies* underscore the importance of creating a trail which is accessible to the widest possible range of trail users and which is designed to respect the natural or built environments through which it passes. Minimum design guidelines for trail development are recommended for application by implementing agencies.
- 3) *Environmental protection policies* underscore the importance of the San Francisco Bay’s natural environment and define the relationship of the proposed trail to sensitive natural environments such as wetlands.
- 4) *Transportation access policies* reflect the need for bicycle and pedestrian access on Bay Area toll bridges, in order to create a continuous trail and to permit cross-bay connections as alternative trail routes.
- 5) *Implementation policies* define a structure for successful implementation of the Bay Trail, including mechanisms for continuing trail advocacy, oversight and management.

Bay Trail Policies		Table III-2
<u>Trail Alignment Policies</u>	<u>Discussion</u>	
1. Ensure a feasible, continuous trail around the Bay.	<i>In developing the trail alignment, attention was focused on providing a realistic route for trail development, consistent with the need to balance the constraints posed by the different natural and built environments around the Bay. Use of the spine and spur trail system provides the means to accomplish this goal.</i>	
2. Minimize impacts on and conflicts with sensitive environments.	<i>Policies relating specifically to the Bay’s sensitive natural environments are discussed below; however, natural areas are not the only sensitive environments around the Bay. Military facilities, sewage treatment facilities, landfills, and areas of heavy industry each have special requirements and constraints for locating public use. Security and safety are two considerations which play prominent roles in selecting trail alignments and in determining whether a separate trail facility (e.g., bike path, hiking trail) will be required.</i>	
3. Locate trail, where feasible, close to the shoreline.	<i>A range of constraints—physical, environmental, and safety-related—will prevent the trail from being located entirely along the Bay shoreline. Where a shoreline alignment is feasible, it is the preferred Bay Trail route.</i>	

Table III-2, continued		Bay Trail Policies
<u>Trail Alignment Policies, continued</u>	<u>Discussion</u>	
<p>4. Provide a wide variety of views along the Bay and recognize exceptional landscapes.</p>	<p><i>The richness of the Bay is reflected in the widely divergent views from its shoreline--vast expanses of marshland, open expanses of water, the lights of an urban panorama, the bustle of a working waterfront. Each of these scenes represents a valued facet of the San Francisco Bay experience.</i></p>	
<p>5. Investigate water trails as an enhancement to the trail system where necessary or appropriate.</p>	<p><i>The use of ferries and other forms of water transportation may be a feasible means of providing connections between shoreline areas. For example, the Bay Trail alignment shows ferry service to Angel Island trails. Additional ferry service may eventually be possible in the East Bay and across the Carquinez Strait.</i></p>	
<p>6. In selecting a route for the trail, incorporate local agency alignments where shoreline trail routes have been approved. Incorporate San Francisco Bay Conservation and Development Commission public access trails where they have been required.</p>	<p><i>Many agencies and jurisdictions are preparing plans for trails and other forms of public access to the shoreline. Where these plans have been adopted, the trail routes have been incorporated into the Bay Trail. In other cases, local planning is still ongoing.</i></p>	
<p>7. Where feasible and consistent with other policies of this plan, new trails may be routed along existing levees.</p>	<p><i>Levees will be an important component in the Bay Trail system. Existing trails in Hayward, Sunnyvale and Mountain View in the South Bay and Lower Tubb's Island in the North Bay are examples of levees which provide shoreline access. Because levees represent existing bay fill, they are one of the few options for trails in natural areas near the shoreline.</i></p>	
<p>8. Where existing trails through wetlands are well-maintained and well-managed, the Bay Trail can feasibly be routed there. In these cases, trails should be used according to current regulations. Alternate routes should be provided where necessary and additional buffering/transition areas designed to protect wetland habitats should be provided where appropriate to protect wildlife.</p>	<p><i>The Bay Trail alignment incorporates a number of existing trails through wetlands, where there is an established use pattern and where the facilities are well-maintained and well-managed. Among these are trails in the Hayward Regional Shoreline and near the Hayward Shoreline Interpretive Center. In other locations around the Bay, notably the Corte Madera Ecological Reserve, the Bay Trail has been routed inland, and marsh trails have not been incorporated into the Bay Trail alignment.</i></p>	
<p>9. In selecting a trail alignment, use existing stream, creek, slough and river crossings where they are available. This may require bridge widenings in some locations. In selecting trail alignments, new stream, creek and slough crossings should be discouraged. Where necessary because acceptable alternatives do not exist, bridging may be considered.</p>	<p><i>The Bay shoreline is cut by a number of rivers, streams, creeks and sloughs. Use of existing fill (foot or vehicle bridges) is preferred for locating trail crossings. In some instances, existing foot and vehicle bridges can accommodate bicycle and pedestrian use. Where bridges are designed for vehicle use only, some widening or cantilevering trail sections on the existing structure may be necessary to accommodate trail users safely.</i></p>	

Bay Trail Policies

Table III-2, continued

Trail Alignment Policies, cont'd**Discussion**

- | | |
|--|--|
| <p>10. In order to minimize the use of existing staging areas along the shoreline and to reduce the need for additional staging areas, the choice of trail alignment should take full advantage of available transit, including rail service (e.g., Caltrain, BART), ferries and bus service.</p> | <p><i>Trail users' reliance on the automobile to reach shoreline trails can be reduced if access by alternatives means of transportation is considered while planning trail alignments. The role of public transit as an adjunct to recreational activities can be greatly enhanced if convenient access to the trail is provided along bus lines, rail lines and ferry stops.</i></p> |
| <p>11. Connections to other local and regional trail and bikeway systems should be actively sought in order to provide alternatives to automobile access to the Bay Trail. In particular, opportunities should be explored for trail connections to the Bay Area Ridge Trail, which is envisioned to circle the Bay along the region's ridgelines.</p> | <p><i>Creation of a region-wide hiking and bicycling trail system can be achieved if planning for all trail facilities takes full advantage of opportunities for connections to other existing and proposed recreational systems. The proposed Bay Trail connector trails, in particular, begin to create a regional network by programming links with the Bay Area Ridge Trail.</i></p> |

Trail Design Policies

- | | |
|--|--|
| <p>12. Provide access wherever feasible to the greatest range of trail users on each segment.</p> | <p><i>It is the goal of the Bay Trail Plan that the full range of trail users be able to enjoy the trail, regardless of physical limitations due to age or disability. Separate standards have not been developed for "accessible trails"—segments of the trail which would be designed for disabled access. Accessibility guidelines have been incorporated throughout the trail design guidelines, which appear at the end of this table. This policy also refers to the Bay Trail Plan's goal to accommodate, as much as possible, the various modes of travel for which the trail is being designed (e.g., bicycling and hiking). Multiple use of trails will not always be possible or appropriate. In some instances, it may not be feasible to allow hikers or joggers on a specific portion of trail, due to traffic safety or environmental concerns. In other areas, use restrictions on existing trails may preclude bicycle access. The goal, however, is to have an alignment (or multiple alignments) that will meet the needs of all users.</i></p> |
| <p>13. Wherever possible, new trails should be physically separated from streets and roadways to ensure the safety of trail users.</p> | <p><i>The possibility of conflict between automobiles and trail users is a serious safety concern. Where creation of a class I path is feasible, this design is preferred.</i></p> |

Table III-2, continued

Bay Trail Policies

Trail Design Policies, cont'd

Discussion

14. Create a trail that is as wide as necessary to accommodate safely the intended use, with separate alignments, where feasible, to provide alternative experiences.

In some instances, competition among trail users for right-of-way may be relieved by providing a wide path. In other cases, separate facilities will be necessary. Throughways for long-distance bicycling will likely follow different routes than paths which are suitable for more leisurely bicycle activity, or for combined bicycle and pedestrian use.

15. Highlight the interpretive potential of certain trail segments, including opportunities for interpretation, education, rest and view enjoyment.

The Bay's varied landscapes offer opportunities for environmental and historical education, as well as a great diversity of natural and urban views. Enjoyment of the trail, especially by first-time trail users, can be enhanced by effective signing and other interpretive information and programs.

16. Incorporate necessary support facilities, using existing parks, parking lots, and other staging areas wherever possible.

Support facilities, such as parking lots, restrooms, water fountains, picnic tables and benches are important components of a trail system. They also have significant land use implications if they are not properly situated and designed. The Bay Trail alignment has been proposed to take advantage of existing facilities in parks and other shoreline access areas. As the trail is developed and use patterns emerge, the need for additional facilities can more accurately be evaluated and new or expanded facilities properly located and designed. Cooperative use of some existing private parking facilities may be possible by negotiating agreements between property owners and trail management agencies.

17. Design new segments of trail to meet the highest practical standards and regulations, depending on the nature and intensity of anticipated use, terrain, existing regulations, and standards on existing portions of the trail.

In designing the Trail, it will be important to ensure that new connecting segments of trail are built to a standard which not only is compatible with the terrain, but with existing trails, and which accommodate use restrictions on existing trails as well.

18. Minimum and maximum standards by use, width, surface, etc. should be developed, to ensure safe enjoyment of the trail and compatibility with surroundings and existing facilities, and to encourage use and design of surfaces for which long-term maintenance will be cost-effective.

The Advisory Committee adopted the trail design guidelines which appear at the end of this table. These guidelines identify minimum standards which meet CalTrans standards for bikeways and incorporate standards for accessibility.

Bay Trail Policies

Table III-2, continued

Trail Design Policies, cont'd**Discussion**

19. Design and route the trail to discourage use of undesignated trails.

Undesignated trails can be observed in areas where formal trails do not exist. These informal paths are also known as "casual," "bandit" or "social" trails. Use of these trails frequently creates severe environmental damage and destruction of habitat values. Proper alignment and design of formal trails can divert trail users away from areas where access should be restricted.

20. A consistent signing program should be established throughout the trail system, using a Bay Trail logo which will identify trails within the Bay Trail system as distinct from other connecting trails. The choice of materials used should be the concern of the individual implementing jurisdictions and agencies.

Because the distance covered by the trail—roughly 400 miles—is so great, it will be important to maintain a consistent form of identification along the length of the trail, so that trail users can orient themselves easily. At the same time, it is important to ensure that Bay Trail signs are compatible with and complementary to trail signs used by managing agencies, and "public trail" identification signs required on B.C.D.C. trails.

21. The Bay Trail signing program may include necessary cautionary and regulatory signing, including warnings of seasonal trail closings and other restrictions on trail use. Interpretive signing may be provided to help educate trail users about the surrounding environment and the importance of observing trail use restrictions and staying on designated trails.

Environmental damage caused by carelessness and lack of attention to trail regulations can be reduced by using the trail signing program to educate trail users about the reasons underlying trail regulations, in particular, the need to stay on the designated trail.

22. The trailhead signing program may include variety of information which will enhance the Bay Trail experience. This may include a description of the length and relative difficulty of the trail as a guide for trail users with mobility limitations, available support facilities, available access to other connecting trails, and a description of the habitat resource which emphasizes interpretive information as well as the need to observe posted trail use restrictions.

Trail users with mobility limitations should be able to gauge the difficulty of trail sections before starting off down the path. Signage describing the relative difficulty of the trail (e.g., grades, trail surfaces, high winds) should be provided at staging areas.

Environmental Protection Policies

23. The Committee is aware of the ecological value of wetlands; in many cases, they provide habitat for a variety of endangered species. In the San Francisco Bay Area, these areas serve as a vital link in the Pacific flyway for feeding, breeding, nesting and cover for migratory birds. To avoid impacts in wetland habitats, the Bay Trail should not require fill in wetlands, and should be designed so that use of the trail avoids adverse impacts on wetland habitats.

The environmental issues recommendations reflect the Advisory Committee's strong concern that the Bay Trail respect habitat values. While the Committee has approved of trail alignments on existing fill (e.g., levees), this policy language is clear in its intent that additional fill should not be necessary to accommodate the Bay Trail alignment.

Table III-2, continued		Bay Trail Policies	
Environmental Protection Policies, cont'd		Discussion	
<p>24. Future support facilities serving the Bay Trail should be designed and constructed in such a manner that they do not impact fish and wildlife resources, especially wetlands. These facilities should be located and designed in a way that no fill of wetlands will be required.</p>		<p><i>This policy is related to policy #23, and expands the Committee's concern to include impacts of future support facilities serving the Bay Trail.</i></p>	
<p>25. The Bay Trail should not be defined as a continuous asphalt loop at the Bay's edge, but as a system of interconnecting trails, the nature of which will vary according to the locale and the nature of the terrain and resources in the vicinity of each particular trail segment.</p>		<p><i>There is some duplication between certain of the environmental protection policies and trail design policies. The policies in this section differ slightly in that they reflect the more direct connection between environmental concerns and the policy intent represented by the recommendation. This policy reiterates the need to plan trail alignments and incorporate trail designs which respect the characteristics of the environment through which the trail passes.</i></p>	
<p>26. The path will not always follow the Bay shoreline; inland reaches may be more appropriate, especially for bicycle travel, in some parts of the San Francisco Bay region.</p>		<p><i>As the proposed alignment reflects, some segments of the Bay Trail divert inland to avoid sensitive environments.</i></p>	
<p>27. The path should be designed to accommodate different modes of travel (such as bicycling and hiking) and differing intensities of use, possibly requiring different trail alignments for each mode of travel, in order to avoid overly intensive use of sensitive areas.</p>		<p><i>In some locations, parallel trails are proposed to accommodate hiking and bicycling activity on separate paths. One example of this is the dual trail configuration in the vicinity of the Palo Alto Baylands.</i></p>	
<p>28. Where the alignment of the Bay Trail may more appropriately be located away from the shoreline in order to protect particularly sensitive habitats, access to shoreline areas may be possible by connecting the Bay Trail to existing loop trails and other interpretive facilities. These access points should be planned and designed to make clear the distinction between the continuous Bay Trail and the interpretive trail. (Features may include different trail surfaces, marked entry points to interpretive areas, expanded facilities for education and shoreline interpretation, signage, regulation and enforcement of regulations.)</p>		<p><i>As the alignment maps demonstrate, the Bay Trail will provide connections to interpretive trails within the San Francisco Bay National Wildlife Refuge. As connector trails, these paths will broaden the opportunities available to Bay Trail users.</i></p>	
<p>29. Provision of land or funds for Bay Trail planning or construction shall not be considered mitigation for wetland losses.</p>		<p><i>This policy reiterates the very clear language in SB 100.</i></p>	

Bay Trail Policies

Table III-2, continued

Transportation Access Policies**Discussion**

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| <p>30. Bridges and roads will be important connections in the Bay Trail system, providing not only commute routes, but enhancing the recreational use of the Trail by creating trail loops which will allow a greater number of people to enjoy the Trail.</p> | <p><i>The proposed alignment shows Bay Trail connections across all seven of the major Bay Area toll bridges. This policy stresses the importance of bridge connections for both commute and recreational use.</i></p> |
| <p>31. In the short term, attention should be focused on improving safe access to the bridges, possible expansion of bicycle shuttle services and public transit accommodations of bicycles to allow cross-bay access.</p> | <p><i>This policy reflects the need to look to both short-and long-term solutions for creating bicycle and pedestrian access on bridges. Unconstrained access (i.e., a path) is preferred for the flexibility that paths provide for trail users. Where this is not feasible, other alternatives should be pursued to provide cross-bay access for trail users.</i></p> |
| <p>32. In the long term, unconstrained access on bridge structures is preferred. This can more easily be accomplished in planning future facilities, as long as public access is a requirement for new structures. Legislative action which would require bicycle and pedestrian access on new facilities should be actively sought.</p> | <p><i>Current state law requires that bicycle access be considered in connection with construction of new bridges. If CalTrans determines that bicycle access is not feasible, physically or economically, it is required to report the basis for this finding to the Legislature. This policy reflects the need for a greater commitment to the provision of bicycle and pedestrian access in conjunction with construction of new bridges, due to the tremendous difficulty and cost associated with retrofit of a bridge structure once built without provision for bicycle access. Currently, CalTrans has plans for two new bridges in the Carquinez Strait—one in the vicinity of the Benicia-Martinez Bridge and one to replace the older span of the Carquinez Bridge.</i></p> |
| <p>33. Opportunities for cooperative funding of pedestrian and bicycle accessways should be investigated in order to make financing feasible.</p> | <p><i>In some cases, it may be appropriate to seek joint funding for pedestrian and bicycle access facilities on bridges. Use of recreational funding as well as transportation funding may make bicycle and pedestrian access more economically feasible.</i></p> |
| <p>34. Access to the trail by all forms of public transit should be strongly encouraged. Opportunities for reaching the trail by public transit should be highlighted on trail maps and promotional materials.</p> | <p><i>One means of encouraging trail users to take advantage of public transit is through promotional information and trail maps, which can make opportunities for transit access to the trail easier to recognize.</i></p> |

Table III-2, continued

Bay Trail Policies

Implementation Policies

Discussion

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| <p>35. Domestic pets should be prohibited on new trails if the managing agency determines that their presence would conflict with habitat values or other recreational users. This prohibition is not intended to apply to service animals such as guide dogs.</p> | <p><i>Uncontrolled animals on trails pose hazards to bicyclists as well as to wildlife. For this reason, the Advisory Committee recommends restrictions on domestic pets in those parts of the trail where their presence would create an environmental or safety conflict. The imposition of any such restriction would be the responsibility of each managing agency.</i></p> |
| <p>36. An ongoing Bay Trail Project should be established to implement the Bay Trail Plan. The Project should be jointly sponsored by a wide range of organizations and agencies committed to realizing the vision of the Bay Trail.</p> | <p><i>The cooperation and support of many agencies and organizations will be necessary to translate the Bay Trail Plan into reality. If commitment to the trail is widespread and responsibility for implementation is shared, the chances of success will be far greater than if one organization or agency alone assumes authority over Bay Trail implementation.</i></p> |
| <p>37. The Bay Trail Committee, technical committee and outreach program should be established as described in Section IV of the Bay Trail Plan.</p> | <p><i>Details of the structure for Bay Trail implementation are discussed fully in Section IV.</i></p> |
| <p>38. "Friends of the Bay Trail" should be established to provide widespread opportunities for the active involvement of individuals and organizations throughout the Bay Area to promote the Bay Trail.</p> | <p><i>Individuals and organizations throughout the Bay Area share the goal of creating the Bay Trail. Friends of the Bay Trail will provide a focal point for their involvement in the future of the Bay Trail project.</i></p> |
| <p>39. ABAG's Executive Board should continue Bay Trail Program oversight, by reviewing monitoring reports prepared by the Bay Trail Committee.</p> | <p><i>SB 100 requires ongoing oversight of Bay Trail implementation.</i></p> |
| <p>40. The Bay Trail Committee should continue to explore the establishment of a management authority to coordinate maintenance, patrolling and liability functions for portions of the Bay Trail.</p> | <p><i>Long-term management of the Bay Trail will, in some regions of the Bay Area, pose a fundamental challenge to trail implementation. By exploring the creation of a management authority to assume responsibility for trail management in these "gap" areas, this hurdle can be overcome.</i></p> |
| <p>41. Local governments and other implementing agencies should be strongly encouraged to amend relevant planning and policy documents (general plans, specific plans, zoning ordinances) to incorporate appropriate references to the Bay Trail.</p> | <p><i>Incorporation of the Bay Trail into local agencies general plans and other policy documents will be necessary to ensure that the Trail will continue to be a priority for local implementation through recreation planning as well as private development.</i></p> |

Bay Trail Policies

Table III-2, continued

Implementation Policies, cont'd**Discussion**

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| 42. The Bay Trail Plan recognizes the authority of managing agencies to set policy regarding the use of trails within their jurisdiction. | <i>This policy reiterates the authority of local agencies to determine the nature of trail use within their jurisdiction. Policies regarding presence of domestic pets on trails vary widely throughout the San Francisco region, as do policies regarding shared use of trails by bicyclists and pedestrians.</i> |
| 43. Since the passage of the McAteer-Petris Act in 1965 and adoption of the San Francisco Bay Plan, significant trail access to and along San Francisco Bay has been obtained for residents of the Bay Area by the San Francisco Bay Conservation and Development Commission. The Bay Trail Plan recognizes that BCDC has accomplished this without greatly interfering with wildlife values and property rights, and strongly recommends that the Commission's public access efforts be continued. | <i>Those segments of the Bay Trail which currently exist are due in large part to the work of the San Francisco Bay Conservation and Development Commission. Continuation of the Commission's commitment to public access to the Bay and its ability to create areas of public access while respecting wildlife values and property rights will be essential to continued progress in implementing the Bay Trail.</i> |
| 44. In constructing the trail and implementing signing programs, agencies should be encouraged to utilize non-profit organizations (e.g., the California Conservation Corps, the East Bay Conservation Corps, the Marin Conservation Corps, the San Jose Conservation Corps, the San Francisco Conservation Corps and the Trail Center). | <i>Many non-profit organizations have been active in assisting in the development of recreational facilities throughout the Bay Area. Opportunities for continuing this activity in support of the Bay Trail should be recognized and promoted.</i> |
| 45. Local agencies should be sensitive to the natural environment not only in project planning to implement segments of the Bay Trail, but also in maintaining and managing the trail once built. | <i>Long-term maintenance of the trail and management of trail activities should reflect the same concern for environmental values as does trail development. Restrictions on access to sensitive areas and use of herbicides and pesticides are two such issues.</i> |
| 46. Agencies should be encouraged to take advantage of the wide variety of available trail financing and implementation techniques identified in the Bay Trail Plan as they undertake implementation of Bay Trail segments in their jurisdictions. | <i>No potential financing technique should be ignored in searching for means to implement the Bay Trail.</i> |
| 47. The Bay Trail Committee should assist local agencies in identifying and securing funding for Bay Trail implementation. | <i>Finding funds to implement the Bay Trail will be a continuing challenge. Expertise and commitment of the Bay Trail Committee should be brought to bear in assisting local agencies in development of local Bay Trail segments.</i> |

Bay Trail Recommendations

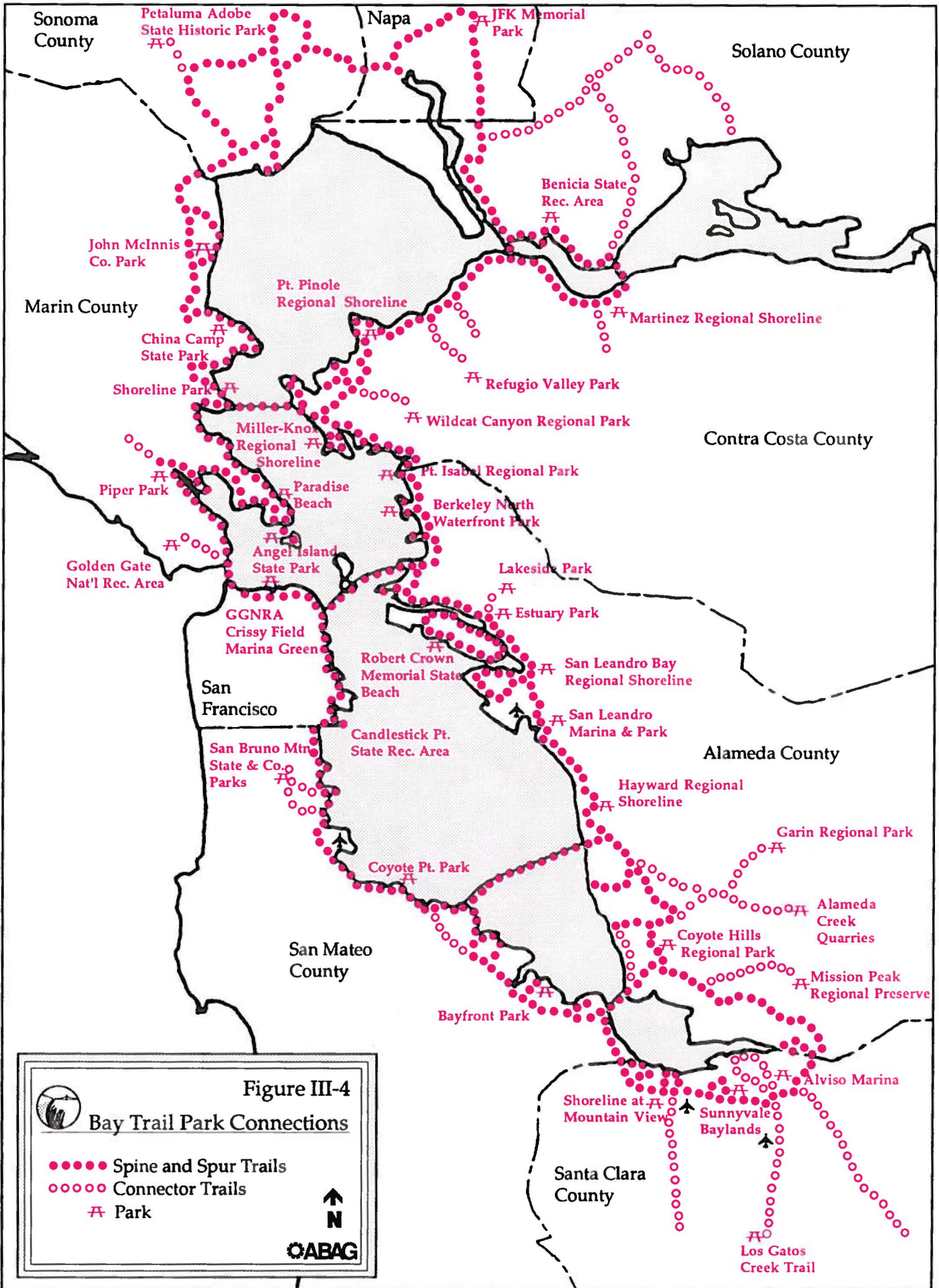
Table III-2, continued					
Bay Trail Policies					
Bay Trail Design Guidelines					
Item	High-use Facilities (separate paths)*	Multi-Use Paths *	Bicycle-only Paths *	Hiking-only Paths	Natural Trails
Min. width (one-way)	8-10'	10'	8'	5'	3-5' ^a
Min. width (two way)	10-12'	10-12'	10-12'	8-10'	5'
Surface	asphalt ^b	asphalt	asphalt	hardened	natural or boardwalks ^c
Horiz. clearance (incl. shoulders)	12-16'	14-16'	10'	9-12'	7-9'
Shoulder	2' area on both sides of the trail.....				unspecified
Vert. clearance	10'.....				unspecified
Cross slope	2% Max.....				unspecified
Max. grades	5% ^d for short distances with flat rest areas at turn outs...				unspecified
^a Standards meet Caltrans Class I Bikeway Standards ^a Min. widths that are less than 5' will be required to have 5x5 turnouts at intervals to meet accessibility standards. ^b High-use pedestrian path could be hardened surface other than asphalt ^c Natural surfaces may require surface hardening to provide accessibility. ^d Except where site conditions require a greater slope for short distances.					

Meeting the Mandate of SB 100

Providing Connections to Existing Park and Recreational Facilities

As the connecting feature of a system of shoreline open spaces, the Bay Trail will create connections between more than 90 parks and publicly-accessible open space areas around San Francisco Bay. Figure III-4 identifies some of the larger recreation and open space facilities with which the Bay Trail will connect. As Table III-3 suggests, this represents trail connections from Bay Trail spine and spur segments to more than 57,000 acres of publicly-accessible open space throughout the San Francisco Bay Area. Connector trails provide access to an additional 7000 acres of recreation and open space facilities.

These figures actually underrepresent the total amount of publicly-accessible land to which the Bay Trail will provide access. Not included in these figures, for example, is much of the BCDC-required public access trail network along the shoreline, and numerous small community parks and playgrounds.



Bay Trail Recommendations

Table III-3 Public Lands Accessible from the Bay Trail Peninsula/South Bay Reach					
Facility Name	City Location	Agency	Primary Use	Access	Acreege
San Francisco City & County					
Candlestick Point State Rec. Area	San Francisco	State Parks	Recreation	Open	135
Fort Point National Historic Site	San Francisco	National Parks	Historic ²	Open	29
Golden Gate National Rec. Area	San Francisco	National Parks	Recreation ²	Open	586
Marina Green	San Francisco	City/County	Recreation	Open	74
Presidio of San Francisco	San Francisco	Army	Military	Open	1774
Subtotal					2598
San Mateo County					
Bayfront Park	Menlo Park	City	Recreation ²	Open	160
Bayside Park	Burlingame	City	Recreation	Open	12
Brisbane Lagoon	Brisbane	City	Recreation	Open	122
Coyote Point	San Mateo	County	Recreation	Open	727
Foster City Wildlife Refuge	Foster City	City	Recreation	Open	33
Marina Park	Belmont	City	Recreation	Open	22
Orange Memorial Park ^c	S. San Francisco	City	Recreation	Open	30
Ravenswood Wildlife Refuge	Menlo Park	MROSD	Habitat ¹	Restricted	372
Redwood City Municipal Marina	Redwood City	City	Recreation	Open	20
Redwood Shores Ecolog.	Redwood City	Ca Fish & Game	Habitat	Open	152
San Bruno Mtn Park ^c	San Mateo Co.	County	Habitat ¹	Open	2054
San Bruno Mtn. State Park ^c	San Mateo Co.	State Parks	Recreation	Open	298
SF Bay Nat'l Wildlife Refuge	San Mateo Co.	US Fish & Wildlife	Habitat	Restricted	4301
Sea Cloud Park	Foster City	City	Recreation	Open	26
Shoreline Park	San Mateo	City	Recreation	Open	41
Tom Fry Golf Course	San Mateo	City	Recreation	Open	111
Subtotal					8481
Santa Clara County					
Alviso Marina	San Jose	County	Recreation	Open	29
Coyote Creek Park - North ^c	San Jose	County	Recreation	Open	223
Coyote Creek Park - Central ^c	San Jose	City	Recreation	Open	399
Los Gatos Creek Park ^c	Los Gatos/SJ/Campbell	Multi-Agency	Recreation	Open	30
Palo Alto Baylands Preserve	Palo Alto	City	Recreation	Open	2134
Palo Alto Municipal Golf Course	Palo Alto	City	Recreation	Open	184
SF Bay Nat'l Wildlife Refuge	Santa Clara Co.	US Fish & Wildlife	Habitat	Restricted	4301
Shoreline at Mountain View	Mountain View	City	Recreation	Open	544
Stevens Creek Nature Study Area	Mountain View	MROSD	Habitat ¹	Open	54
Sunnyvale Baylands Park	Sunnyvale	City/County	Recreation	Open	217
Subtotal					8115
Recreation-related 6157 acres (primary use) 8637 acres (primary & secondary use)					Total Peninsula/South Bay Reach 19,194
Habitat-related: 11,234 acres (primary use) 12,009 acres (primary & secondary use)					
Other: 1803 acres (primary use)					
^c Access from connector trail		MROSD: Midpeninsula Regional Open Space District			
¹ Recreation is a secondary use					
² Habitat is a secondary use					
Source: Greenbelt Alliance. <u>Public Lands Database for the San Francisco Bay Area</u> . March 1988, as corrected by local agencies, 1989.					

Public Lands Accessible from the Bay Trail
East Bay Reach

Table III-3

Facility Name	City Location	Agency	Primary Use	Access	Acreege
Alameda County					
Albany Point	Albany	City	Recreation	Open	32
Aquatic Park ^c	Berkeley	City	Recreation	Open	33
Ardenwood Regional Preserve	Fremont	EBRPD	Historic ²	Open	208
Casa Verde Park ^c	Union City	City	Recreation	Open	17
Coyote Hills Regional Park	Fremont	EBRPD	Recreation ²	Open	966
Crown Beach	Alameda	EBRPD	Recreation ²	Open	383
Crown Memorial State Beach	Alameda	State Parks	Recreation	Open	131
Galbraith Golf Course	Oakland	City	Recreation	Open	169
Garin Regional Park ^c	Hayward/Union	EBRPD	Recreation	Open	1317
Hayward Regional Shoreline	Cy Hayward	EBRPD	Recreation ²	Open	817
Hayward Shoreline Interp. Center	Hayward	HARD	Recreation ²	Open	800
Lakeside Park ^c	Oakland	City	Recreation	Open	122
Marina Park	San Leandro	City	Recreation	Open	30
Municipal Golf Course	Alameda	City	Recreation	Open	300
North Waterfront Park	Berkeley	City	Recreation	Open	90
Oyster Bay Regional Shoreline	San Leandro	EBRPD	Recreation ²	Open	157
SF Bay Nat'l Wildlife Refuge	Fremont	US Fish & Wildlife	Habitat	Restricted	3603
San Leandro Bay Reg'l Shoreline	Oakland	EBRPD	Recreation ²	Open	663
Sportsfield Park	Newark	City	Recreation	Open	26
Washington Park	Alameda	City	Recreation	Open	14
Subtotal					9878
Contra Costa County					
Davis Park	San Pablo	City	Recreation	Open	16
Carquinez Open Space	Martinez	City	Recreation	Open	100
Carquinez Strait Reg'l Shoreline	Contra Costa Co.	EBRPD	Recreation ²	Open	147
Miller Knox Regional Shoreline	Richmond	EBRPD	Recreation ²	Open	259
Martinez Regional Shoreline	Martinez	EBRPD	Recreation ²	Open	343
Point Isabel Regional Shoreline	Richmond	EBRPD	Recreation	Open	21
Point Pinole Regional Shoreline	Richmond	EBRPD	Recreation ²	Open	2147
Rankin Park	Martinez	City	Recreation	Open	30
San Pablo Bay Reg'l Park	Pinole/Hercules	EBRPD	Habitat	not yet	56
Waterfront Park	Martinez	City	Recreation	Open	10
Wildcat Canyon ^c	Richmond	EBRPD	Recreation	Open	2420
Subtotal					5549
Recreation-related 11,560 acres (primary use) Total East Bay Reach acres: 15,427					
Habitat-related: 3659 acres (primary use) 10,549 acres (primary & secondary use)					
Other: 208 acres (primary use)					
^c Access from connector trail ¹ Recreation is a secondary use ² Habitat is a secondary use		EBRPD: East Bay Regional Park District HARD: Hayward Area Recreation & Park District			
Source: Greenbelt Alliance. <u>Public Lands Database for the San Francisco Bay Area</u> . March 1988, as corrected by local agencies, 1989.					

Bay Trail Recommendations

Table III-3 Public Lands Accessible from the Bay Trail North Bay Reach					
Facility Name	City Location	Agency	Primary Use	Access	Acreeage
Solano County					
Benicia State Recreation Area	Benicia	GVRPD	Recreation	Open	450
Glen Cove Waterfront	Vallejo	GVRPD	Recreation	Open	15
Marina Park	Vallejo	GVRPD	Recreation	Open	12
River Park	Vallejo	GVRPD	Flood Control ¹	Open	55
Subtotal					532
Napa County					
Kennedy Park ^c	Napa	City	Recreation	Open	340
Subtotal					340
Sonoma County					
Petaluma Adobe State Historic Pk ^c	Petaluma	State Parks	Historic ¹	Open	41
San Pablo Bay Nat'l Wildlife Refg. (Lower Tubbs Island)	Sonoma Co.	US Fish & Wildlife	Habitat ¹	Open	332
Sonoma State Historic Park ^c	Sonoma	State Parks	Historic ¹	Open	64
Subtotal					437
Marin County					
Angel Island State Park	Tiburon	State Parks	Recreation	Open	758
Bayfront Park	Mill Valley	City	Recreation	Open	14
Blackie's Pasture	Tiburon	City	Habitat ¹	Open	27
Bothin Marsh Open Space Pres.	Mill Valley	MCOSD	Recreation ²	Open	112
China Camp State Park	San Rafael	State Parks	Recreation	Open	1512
Corte Madera Marsh Ecol Pres	Corte Madera	Ca Fish & Game	Habitat	Open	621
Dunphy Park	Sausalito	City	Recreation	Open	10
Golden Gate National Rec. Area	Marin Co.	Nat'l Parks	Recreation ²	Open	23,155
Co. Fairgrounds & Civic Center	San Rafael	County	Recreation	Open	140
McInnis Park	San Rafael	County	Recreation ²	Open	441
McNears Beach County Park	San Rafael	County	Recreation	Open	52
Paradise Beach County Park	Tiburon	County	Recreation	Open	19
Pickleweed Park	San Rafael	County	Recreation	Open	25
Piper Park ^c	Larkspur	City	Recreation	Open	30
Richardson Bay Park	Tiburon	City	Recreation	Open	55
Richardson Bay Open Space	Tiburon	MCOSD	Habitat ¹	Open	113
Richardson Bay Wildlife Pres.	Tiburon	Audubon	Habitat ¹	Open	891
Ring Mountain Open Space Pres.	San Rafael	Sempivirons Fund	Habitat ¹	Open	377
San Rafael Bayfront	San Rafael	MCOSD	Habitat ¹	Open	121
Strawberry Recreation District	Tiburon	Strawberry Rec. Dist.	Recreation	Open	48
Tiburon Uplands Nature Preserve	Tiburon	County	Recreation ²	Open	24
Subtotal					28,545
Recreation-related	27,212 acres (primary use)			Total North Bay Reach	29,854
	29,233 acres (primary & secondary use)				
Habitat-related:	2482 acres (primary use)				
	26,214 acres (primary & secondary use)				
^c Access from connector trail ¹ Recreation is a secondary use ² Habitat is a secondary use		GVRPD: Greater Vallejo Recreation & Park District MCOSD: Marin County Open Space District			
Source: Greenbelt Alliance. Public Lands Database for the San Francisco Bay Area. March 1988, as corrected by local agencies, 1989.					

The Bay Trail will enable outdoor enthusiasts to appreciate the Bay not only from the shoreline looking toward the water, but from the water looking toward the shore as well. Boating, recreational fishing and sports hunting are popular activities throughout the Bay. By establishing trail connections to "water trails"—commercial ferries, public boat launches and fishing piers—the Bay Trail will multiply the recreational benefits associated with the trail. The magnitude of boating and fishing facilities on the Bay is highlighted in Table III-4. Locations of ferry terminals and boat launches are illustrated in Figure III-5.

**Boating and Fishing Facilities
of the San Francisco and San Pablo Bays**

Table III-4

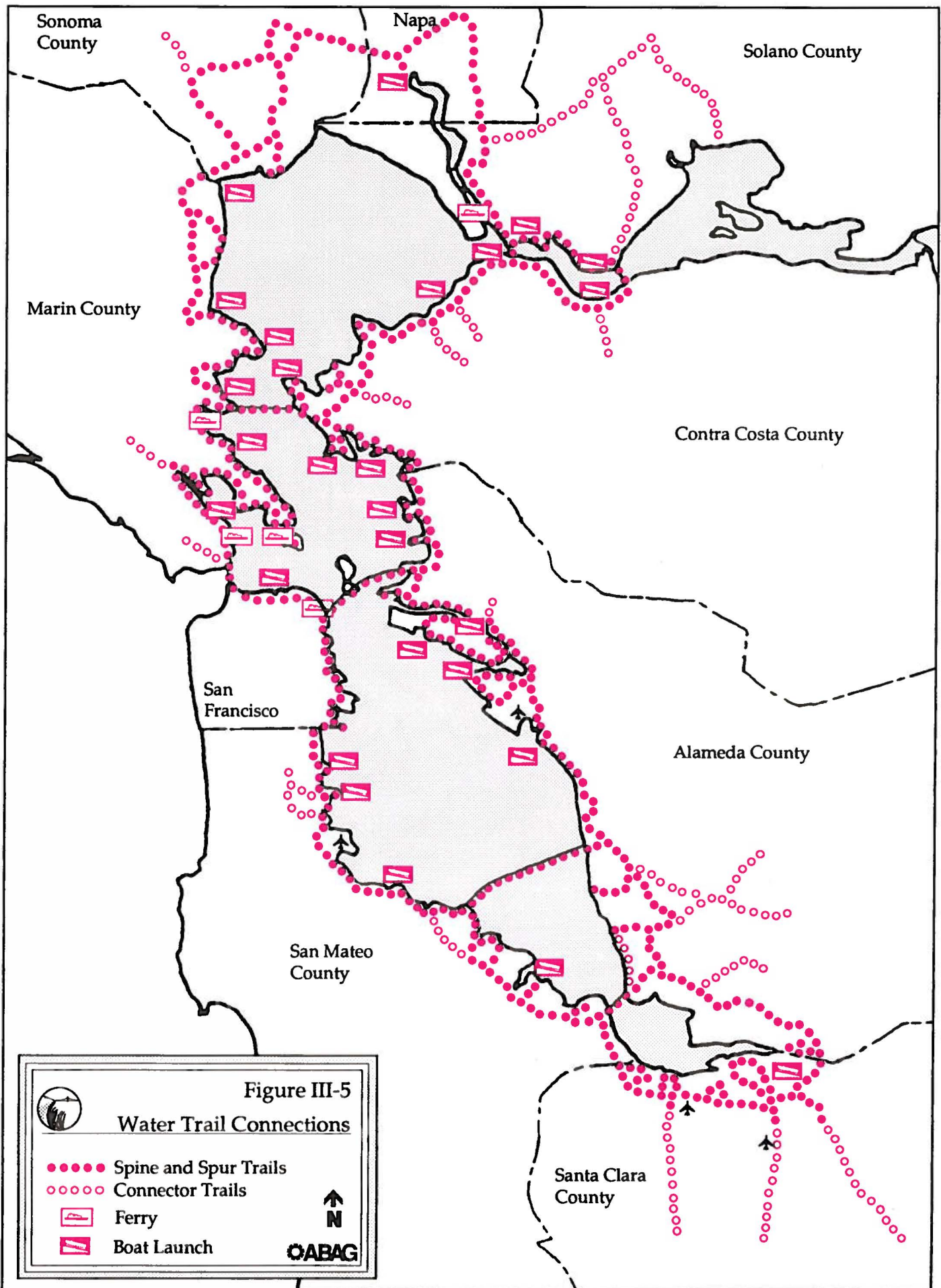
County	Marinas		Boat Launches	Fishing Piers
	Public	Private		
Alameda	15	15	9	5
Contra Costa	3	11	6	1
Marin	1	15	12	2
Napa	0	2	2	2
San Francisco	4	5	1	1
San Mateo	4	4	5	1
Santa Clara	2	0	1	0
Solano	1	4	3	2
Sonoma	1	2	0	0
Total	31	58	39	14

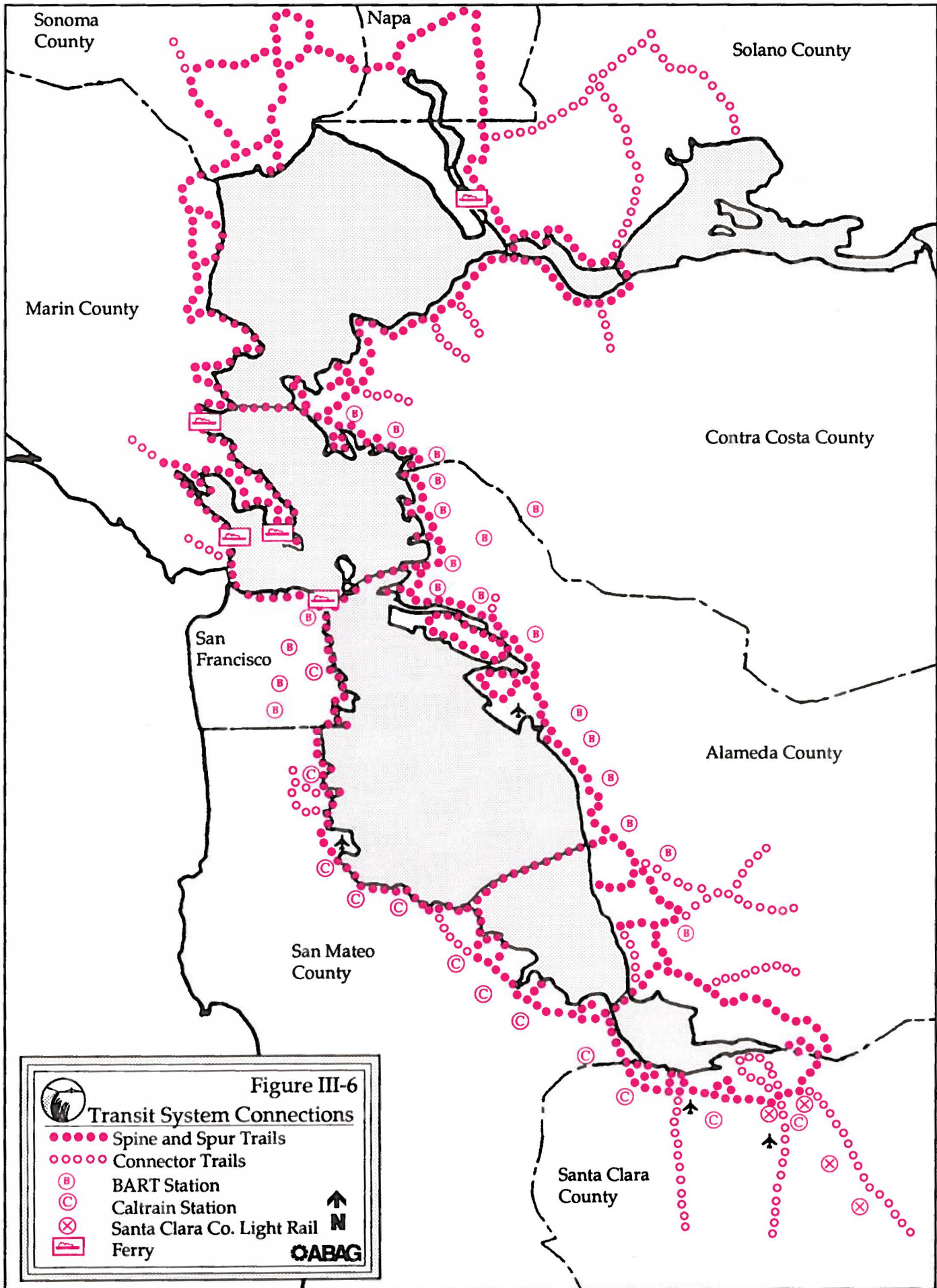
Sources: State of California, Dept. of Boating and Waterways. Inventory of California Boating Facilities.1986
Bay Planning Coalition. The Saved Bay: A Catalogue of the Protected Areas of the San Francisco Bay.1987

Providing Links to Existing and Proposed Transportation Facilities

Creation of a continuous trail around the Bay focuses attention on the importance of the Bay Area’s toll bridges as regional connectors. Completion of a recreational “ring around the Bay” requires trail connections between San Francisco and Marin, where the Golden Gate Bridge already provides bicycle and pedestrian paths, as well as across the Carquinez Strait, where no trail access currently exists. The Bay Trail alignment proposes connections across all seven of the Bay Area’s toll bridges; this will create a series of trail “loops” which will provide shorter, non-repetitive excursions for hikers and bicyclists of varying abilities.

In planning the Bay Trail alignment, great care was taken to provide connections to local and regional transit. The relationship between the Bay Trail and fixed-guideway transit systems is illustrated in Figure III-6. Although at present these facilities are not widely used for recreational access, service on such carriers as BART, Santa Clara County’s light rail trolley system, and Caltrain have enormous potential for serving recreational, as well as commute purposes. BART and the Santa Clara County trolley system currently allow bicycles on board. Bicycle advocates continue to work for expanded opportunities on other transit systems as well.





Bay Trail Recommendations

The importance of incorporating transit facilities into the trail system will become more apparent as staging areas (primarily parking facilities) for shoreline recreation facilities become more and more crowded. Creating convenient alternatives for reaching shoreline trails and recreation areas will reduce the burden on existing facilities and will suppress the need to build costly new ones. Another long-term benefit may be that new populations are introduced to local transit service, furthering regional efforts to encourage public transit as a commute alternative.

Finally, the trail alignment has been designed to utilize existing and planned local bikeway systems. Most local jurisdictions plan on-street bicycle lanes (Class II bikeways) or bicycle routes (Class III bikeways) through urban areas to encourage bicyclists to use safer cycling routes. The Bay Trail alignment has, where possible, incorporated these local systems into on-street segments of the Trail. Where this was not possible, the alignment attempts to provide connections to local bicycle facilities, creating a bikeway grid that will be useful not only for recreational cyclists, but for commute cyclists as well.

Protecting Sensitive Natural Environments

Many of the Bay Trail policies were designed specifically to address the need to protect sensitive natural environments. No new solid Bay fill has been proposed to accommodate the Trail. In one location—the Moffett Field Naval Air Station “gap” between existing shoreline trails in Mountain View and Sunnyvale—pier-supported fill in the form of a boardwalk trail has been proposed as one of two alternate alignments. This was done because the boardwalk alternative appears to provide wildlife greater protection from disturbance than a levee trail in that location. In all other cases, the Plan proposes trails only on existing fill (e.g., levees around salt ponds).

The use of a trail system which includes spine, spur and connector trails serves to protect natural areas, by routing the majority of trail users along the spine trail. In this way, existing bayland trails in environmentally-sensitive areas are reserved for trail users who specifically intend to pursue a more interpretive, as opposed to recreational, trail experience.

As the proposed design guidelines indicate, the trail design is intended to vary according to the terrain and the nature of the natural or built environment through which it passes. This means that trails in more natural environments will reflect by design, as well as by regulation, the need to respect more natural areas and preserve them from urban-scale use.

Finally, Bay Trail policies and design guidelines are intended to complement, rather than supplant adopted regulations and design specifications used by local managing agencies. Restrictions on the appropriate use of trails (e.g., hiking only, no pets) which serve to protect natural areas in which trails currently exist, will not be weakened through implementation of the Bay Trail.

Section IV

A Framework for Implementation

- **Implementation Strategy**
- **Financing Challenges**



Section IV

A Framework for Implementation

- **Implementation Strategy**
- **Financing Challenges**

Implementation Strategy

Creating a Regional Context for Implementation

Making the Bay Trail a reality will require ongoing, coordinated local and regional action. Responsibility for promoting and implementing the Trail must be shared by the hundreds of independent jurisdictions, agencies, foundations and organizations which currently operate in the realm of recreation and open space provision in the Bay Area. The framework for implementing the Bay Trail must, therefore, be one which encourages widespread, active participation by agencies, organizations and individuals throughout the San Francisco Bay region. Successful implementation of the Bay Trail will require many things:

- advocacy of the trail;
- outreach to encourage widespread participation in the Bay Trail;
- coordination between the multitude of agencies and organizations with an interest in the Bay Trail;
- facilitation and technical assistance to make trail implementation as easy as possible for local agencies,
- grantsmanship to pursue trail financing as vigorously as necessary to ensure timely completion of the Bay Trail system; and
- oversight, as required by SB100, to ensure that progress is achieved in implementing the Trail, and that implementation is consistent with the adopted Bay Trail Plan.

The administrative structure selected to frame Bay Trail implementation activities must do more than create a framework for accomplishing these things. It must also develop a stable administrative structure for the Bay Trail project during the difficult first stages of trail implementation, when early achievements will be crucial to long-term success. Stability will ensure continuity in working relationships between the many agencies, organizations and individuals involved in implementing the Trail.

In the short term, public agencies must be persuaded to designate existing trails as segments in the Bay Trail system and to incorporate the Bay Trail into relevant plans and codes (e.g., general plans, bikeway or trail plans, zoning codes) in order to facilitate future trail development. The San Francisco Bay Conservation and Development Commission (BCDC) must be convinced to require Bay Trail signage (in addition to existing public access signage) for future public access trails, and property owners must be persuaded to designate existing public access trails required by BCDC as Bay Trail links.

Additional tasks will require continuing attention and effort. Effective working relationships with local agency staff and elected officials must be developed and maintained to ensure that trail implementation is not hampered by lack of communication, missed opportunities or agencies working at cross-purposes. Existing non-profit organizations, as well as public and private agencies, must be encouraged to take an active role in implementing the Trail, and should be encouraged to suggest ways in which they would like to become involved. Local, regional and national promotion of the Trail must be pursued to generate support, encourage local volunteerism and enhance funding opportunities. An up-to-date information base regarding progress on trail system implementation needs and issues must be developed and maintained. Local agencies must be apprised of Bay Trail funding opportunities. Cooperative funding should be pursued, possibly with the aid of a grant-writing revolving fund to support

A Framework for Implementation

preparation of joint grant applications for high-priority segments of the Trail. Development proposals and environmental impact reports must be reviewed for consistency with the Bay Trail Plan. Assessments of effects on the Bay Trail must be communicated to local Bay Trail advocates, so that local advocacy in support of the Trail can be effective.

Structure for Implementing the Bay Trail

Figure IV-1 illustrates the structure of the Bay Trail Project. The Bay Trail Project will be jointly sponsored by a group of organizations and agencies committed to implementation of the Bay Trail Plan. The program would be known as "the Bay Trail Project, sponsored by A,B,C,D,E...Z." In this way, credit and responsibility for implementing the trail would be widely shared by the full array of Bay Trail advocates.

The Bay Trail Committee will serve as the policy body for the Bay Trail Project. It will be a large committee (with 25-30 members) in order to promote widespread "ownership" of and support for the Bay Trail. Its principal function will be to support and advocate Bay Trail implementation. The Committee will oversee the Bay Trail Project, exercising broad responsibilities for promoting the trail, revising the Bay Trail Plan as necessary to reflect progress already achieved, setting priorities for Bay Trail implementation, administering a Bay Trail fund, coordinating the activities of Friends of the Bay Trail, and preparing and adopting an annual Bay Trail monitoring report. Because a large committee is an unwieldy framework for conducting business, a smaller steering committee will meet monthly to provide regular oversight of the project operations.

Outreach to the wider Bay Area community will be vital to create and maintain community-wide support for the Trail. Because the expertise of existing community-based non-profit groups will be extremely valuable in developing and carrying out the outreach effort, the assistance of three or four non-profit organization sponsors of the Bay Trail project should be incorporated into the workings of the Bay Trail Committee. One way to achieve this would be for staff representatives of these organizations to work with the Bay Trail Coordinator to develop and carry out an effective outreach program, designed to develop a broad base of Bay Trail support throughout the region and to inform and involve the many interested individuals and organizations about Bay Trail issues, activities and events. Recognizing that non-profit budgets are constrained, grant funding should be found to reimburse, through consulting contracts with the non-profit organizations, the staff time devoted to the outreach effort.

A technical committee will be created to work with the Bay Trail Committee and Project Coordinator to provide advice and expertise regarding the range of technical issues which are likely to arise during design and implementation.

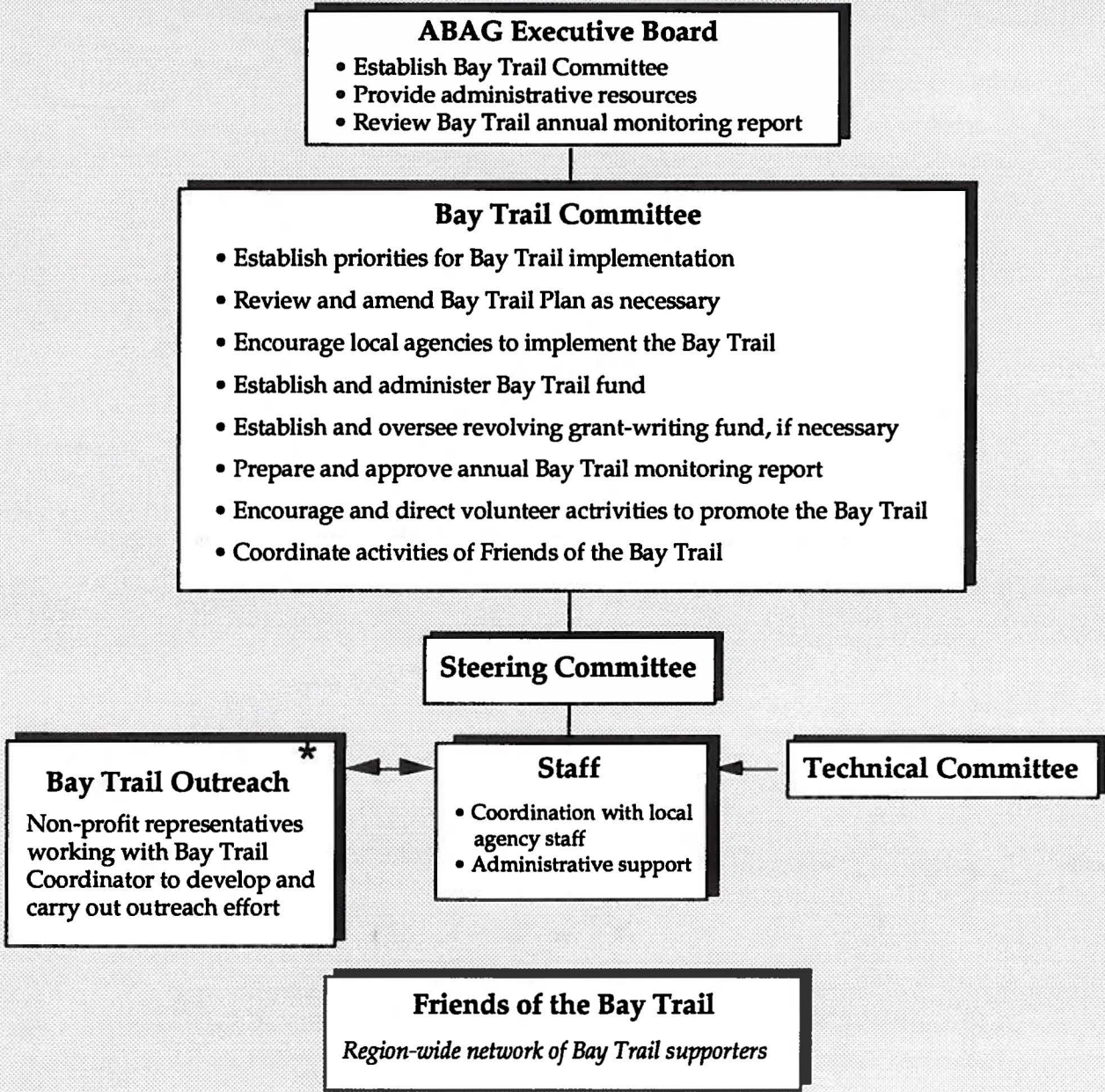
The Bay Trail Coordinator will be the principal project staff, hired by ABAG to provide staff support to the Bay Trail Committee and to coordinate ongoing close communication with local agencies. Additional staff or consultants may be hired to fulfill specific project needs. To ensure clear lines of communication and accountability, all staff employed to assist in the project will be supervised by, and consultants will report to and their work will be reviewed by, the Bay Trail Coordinator. Except for consultants, Bay Trail staff will be housed in ABAG, which will secure funds for the project's administrative support.

Friends of the Bay Trail will create a regional network of organizations and individuals committed to promoting the Trail at the local level. Friends of the Bay Trail will involve a broad range of Bay Trail supporters—from those who want to devote time and energy as active volunteers in the project to those who want to show support for the effort but who wish only to be informed of progress in realizing the Trail.

As a practical matter, this organizational framework will be established as follows: the ABAG Executive Board will establish the Bay Trail Committee as an inter-organizational standing committee of the Executive Board. ABAG will be responsible for securing administrative support (staffing, facilities) for the Bay Trail Project. Subsequent to establishing the Committee, the Executive Board will review the project's annual monitoring report, prepared and adopted by the Bay Trail Committee.

Bay Trail Project Structure

Figure IV-1



* Details of the Bay Trail outreach process will be refined. Nonprofits will be invited to participate in the design of this activity during the summer of 1989, when interested parties meet with the Bay Trail Coordinator in order to prepare a recommendation for Bay Trail Committee consideration in September, 1989. Questions addressed will include:

- What role do existing nonprofits want to play?
- What tasks need to be performed for successful outreach?
- How should the outreach activity be structured to accomplish the tasks and accommodate nonprofit needs?
- What are the staffing and funding implications of outreach recommendations?
- How can Friends of the Bay Trail be worked into the program most effectively?

Bay Trail Committee

- Role:** Advocate and facilitate implementation of the Bay Trail
- Mechanics:**
- Quarterly meetings
 - Membership: up to 30 members representing Bay Trail Project sponsor organizations and agencies
- Regional:** ABAG President
California State Coastal Conservancy
Metropolitan Transportation Commission
S.F. Bay Conservation and Development Commission
- Local Government:** (4) Representatives of Cities and Counties (These should be the four local officials appointed to BCDC by ABAG's Executive Board.)
- Recreation:** California State Parks Department
East Bay Regional Park District
Hayward Area Shoreline Planning Agency
Marin Open Space District
Midpeninsula Regional Open Space District
Napa Land Trust
National Parks Service, Western Region
Peninsula Open Space Trust
(2) Regional Bicycle Advisory Committee
Sonoma County Land Trust
- Environmental:*** Audubon Society
(2) North Bay Wetlands Coalition
San Francisco Bay National Wildlife Refuge
Save San Francisco Bay Association
Sierra Club
(2) South Bay Wetlands Coalition
- Public:** League of Women Voters
- Private:** Bay Planning Coalition
- Responsibilities:**
1. Establish priorities for Bay Trail implementation
 2. Review and amend Bay Trail Plan as necessary
 3. Encourage local agencies to implement the Bay Trail.
 4. Establish and administer the Bay Trail Fund.
 5. Establish and oversee revolving grant-writing fund, if necessary.
 6. Prepare and approve annual Bay Trail monitoring report.
 7. Encourage and direct volunteer activities to promote the Bay Trail.
 8. Coordinate activities of Friends of the Bay Trail.

*SB100 requires that ABAG establish a policy committee, which includes members of appropriate environmental organizations, to oversee development and implementation of the Trail. If sufficient representation by environmental organizations as Bay Trail Project sponsors cannot be achieved, two representatives of environmental organizations which are not sponsors should also be included on the Bay Trail Committee.

Bay Trail Technical Committee

Role: Provide technical assistance to Bay Trail Project

- Mechanics:**
- Meet as necessary
 - Membership:

Bay Area Ridge Trail Director
California State Dept. of Transportation
East Bay Regional Park District
Midpeninsula Regional Open Space District
Regional Bicycle Advisory Committee

Friends of the Bay Trail

Role: Provide local advocacy and support for the Bay Trail and local Bay Trail projects

- Mechanics:**
- Region-wide network of Bay Trail supporters, including existing organizations, active volunteers and casual supporters
 - County-level committees

- Responsibilities:**
1. Advocate and promote the Bay Trail before local decision-making bodies (park and recreation commissions, planning commissions, City Councils, Boards of Supervisors), service organizations and other local groups.
 2. Plan and conduct events to promote the Bay Trail.
 3. Identify important local Bay Trail projects; organize fundraising programs to support these projects.

ABAG Executive Board

Role: Provide administrative support

- Mechanics:**
- Annual consideration of Bay Trail Progress

- Responsibilities:**
1. Establish Bay Trail Committee as an inter-organizational committee of the Executive Board.
 2. Provide administrative resources for the Bay Trail Project.
 3. Review annual Bay Trail monitoring report.

Financing Challenges

While the Bay Trail is a regionally-shared vision, most trail implementation will be focused at the local level. Existing public agencies will likely implement the bulk of the Bay Trail through local recreation or bikeway plans which incorporate Bay Trail segments, or as a requirement of development (e.g., BCDC public access requirements, conditions on development approvals). While acquisition and construction funds will come largely from traditional funding sources (grants, bonds, tax revenues), greater coordination among existing agencies and more vigorous pursuit of these funds will be necessary if the Bay Trail is to compete successfully with other worthy programs.

Trail maintenance and management issues, particularly funding and liability coverage, represent potential barriers to successful implementation of the Bay Trail. Where feasible, responsibility for maintaining and managing local segments of the Trail should fall to existing agencies, either as part of existing programs, or through cooperative agreements with trail and open space management agencies. In some areas, no existing agency may be able to willing to take responsibility for maintaining and managing the trail. To bridge this gap, a Bay Trail management authority (established as a separate organization or as a function within an existing agency) may be needed to serve as the "manager of last resort" for these orphan segments of the Bay Trail system. Trail management assistance can be valuable in facilitating cooperative agreements between jurisdictions for trail maintenance and patrolling, contracting for enforcement of trail maintenance requirements placed on private landowners as conditions of development approvals (e.g., through BCDC enforcement programs), or providing a trail management alternative for agencies which are unable to commit to long-term trail management.

Development of promotional materials for Bay Trail activities for use by local agencies and Bay Trail volunteer groups will be necessary to keep visibility of the trail high. These materials will include brochures, tour maps, slide shows, posters, press releases, and public information packets, as well as special materials developed for specific trail events.

All of this will, of course, require funds. New funding sources must be explored and more effective pursuit of existing funds must be initiated. Information regarding the availability of funds should be disseminated to local agencies and joint grant applications by local agencies should be encouraged. Fundraising by Bay Trail volunteers will be needed to support specific projects of local interest, such as upgrading existing facilities (e.g., providing benches, signs, drinking fountains, buffer plantings, access improvements for trail users with mobility limitations) and to create dedicated or memorial trail segments. Creation of a tax-exempt Bay Trail Fund will be necessary to allow deductible contributions of money, materials, services or other donations to support trail implementation activities.

Construction Cost Estimates

Roughly one-third of the Bay Trail is already in place, as Class I paths or Class II bicycle lanes along streets and roads. The remaining 270 miles along the proposed alignment remain to be developed. Using the construction cost estimates for class I and class II facilities listed in Table IV-1, the construction costs alone for completing the Bay Trail range from \$5 million (if the remaining trail were to be developed entirely as Class II bicycle lanes) to \$34 million (the high-end estimate for Class I trails). Neither of these figures is likely to be the Bay Trail financing target. The remaining 270 miles of unbuilt trail will not be developed entirely as Class I trails or as Class II facilities; as the Bay Trail policies outline, there will necessarily be a mix of trail types, determined by local needs and conditions.

These rough cost estimates are provided merely to suggest the financing challenge facing the Bay Trail. These figures do not include:

- the cost of acquiring land or easements for publicly-built segments of the Trail,
- the cost of road widening to accommodate Class II bicycle lanes (if necessary),
- additional costs associated with preparing the site for trail construction (e.g., grading),
- periodic maintenance costs (e.g., levee reconstruction),
- costs associated with routine trail maintenance, and
- costs for ongoing trail management (e.g., patrolling, liability costs).

Table IV-1

Trail Construction Cost Estimates

Trail Feature	Specifications	Unit	Cost of Material & Labor	
			Low	High
Class I (Path): 8' wide				
Asphalt path	2" on 4" asphalt base	per mile	\$ 95,000	\$ 126,700
Decomposed granite path	without headers	per mile	\$ 42,240	\$ 63,360
	with headers	per mile	\$ 75,000	\$ 90,000
Bridge	without installation	60' long	\$ 6,000	\$ 21,500
	with installation	60' long	\$ 14,000	\$ 36,500
Class II (Bike Lane): 8' wide				
Signing, striping, and legends • Traffic post and sign • 4" solid white line • Legend	-	per mile	\$ 19,000.	
	-	each	\$ 160.	
	2 coats	linear foot	\$.30	
	2 coats	each	\$ 30.	
Grate modification	-	per mile	\$ 1,900	
Sources: Cities of Martinez and Sacramento; Contra Costa County; Shoreline at Mountain View; Continental Bridge, Inc.				

Financing Options

No single source of funds will be sufficient, no single regulatory technique will be adequate to implement the Bay Trail. Development of the trail will rely on many different sources of funding, and the judicious use of a wide variety of techniques to realize the dream of a "ring around the Bay."

If the physical scope of the Bay Trail program weren't daunting enough, the complexities of the Trail's political and geographic setting, and the various phases of the Trail building program, dictate that a wide range of techniques need to be explored and applied by implementing agencies. Because the trail program will be implemented over a several-year period by a diverse group of agencies and organizations, it is essential that funding mechanisms be appropriate to the timing of construction and to each particular funding situation.

A range of financing and regulatory techniques which might be employed by implementing agencies is reviewed below. They are grouped into three categories: *Government Revenues* (local, state, and federal grants and appropriations), *Regulatory Measures* (actions taken through the exercise of agency or governmental powers) and *Partnership Tools* (innovative approaches or fundraising activities which require interaction of private, public and non-profit sectors). Table IV-2 compares the applicability of each technique for the three phases of Bay Trail implementation—acquisition, development and management.

Table IV-2

**Financing Options for the Bay Trail
Potential Application to Bay Trail Acquisition/Development/Operation**

Financing Tool Category	Financing Mechanism	Phases/Rating		
		Acquisition	Development	Management
Government Revenue	State Coastal Conservancy Grants <i>(restoration and access grants)</i>	1	1	-
	Proposition 70 <i>(1988 Park Bond Act - State block grants)</i>	2	1	-
	Transportation Development Act, Article 3 <i>(pedestrian/bicycle project block grants)</i>	3	1	3
	CalTrans Corridor Improvement Mitigation Funds <i>(bike lane construction to mitigate highway expansion)</i>	-	1	-
	Federal, State and Local Recreation Budgets <i>(line items from annual budgets)</i>	2	1	1
	Revolving Local Funds/User Fees <i>(State revolving loans coupled with facility use fees)</i>	-	-	2
	Revenue Dedications <i>(earmarked taxes or State fees, e.g. environmental license plate fees)</i>	2	2	-
	Local/State Bonds and Initiatives <i>(locally applied bond measures)</i>	2	2	-
	Trust Funds <i>("permanent" State funds or set asides, e.g. Cigarette Tax Fees)</i>	-	2	2
Offshore Oil Lease Funds (SAFECO) <i>(Federal oil tax revenues returned to State)</i>	2	2	-	

LEGEND:

Acquisition: Land acquisition, dedication, or easement.

Development: Trail and facilities construction.

Management: Maintenance and patrolling.

- Ratings:**
1. Most likely and/or readily available funding and regulatory tools.
 2. Conditional likelihood (sources that will take more effort to secure but are worth it).
 3. Long shots (unpredictable, difficult to obtain, or inappropriate).

Table IV-2, cont'd

**Financing Options for the Bay Trail
Potential Application to Bay Trail Acquisition/Development/Operation**

Financing Tool Category	Financing Mechanism	Phases/Rating		
		Acquisition	Development	Management
Government Revenue	Bicycle Lane Account <i>(Caltrans sponsored grants for bicycle projects)</i>	3	2	-
	Federal Highway Trust Funds <i>(construction of bicycle path in conjunction with Federal Project)</i>	-	3	-
	Community Development Block Grants (CDBG) <i>(U.S. HUD grants to municipalities for financing public benefits)</i>	3	3	-
	Land and Water Conservation Funds <i>(U.S. Department of the Interior sponsored grant program)</i>	3	3	-
	Federal Water Pollution Control Act <i>(funds available as part of EPA grants for treatment plants)</i>	3	3	-
Regulatory/Fee	Development Dedications <i>(land or fee dedications)</i>	1	1	-
	Development or Impact Fees <i>(exactions for recreational facilities)</i>	1	1	-
	Flexible Zoning <i>(cluster, incentive zoning)</i>	1	2	-
	State Lands Commission - Mitigation Funds <i>(public trust easements in boundary line agreements)</i>	1	1	-
	Assessment Districts <i>(property tax assessment for public goods)</i>	-	2	2

LEGEND:**Acquisition:** Land acquisition, dedication, or easement.**Development:** Trail and facilities construction.**Management:** Maintenance and patrolling.**Ratings:** 1. Most likely and/or readily available funding and regulatory tools.

2. Conditional likelihood (sources that will take more effort to secure but are worth it)

3. Long shots (unpredictable, difficult to obtain, or inappropriate).

Table IV-2, cont'd

Financing Options for the Bay Trail
Potential Application to Bay Trail Acquisition/Development/Operation

Financing Tool Category	Financing Mechanism	Phases/Rating		
		Acquisition	Development	Management
Regulatory/Fee Partnerships	Cooperative Agreements With Flood Control Districts & Other Agencies <i>(long term lease arrangements for recreational use)</i>	2	-	-
	Establish a Non-profit Advocacy Organization <i>(create a Bay Trail Fund or "Friends of the Bay Trail")</i>	2	1	2
	In-kind Donations <i>(materials donations and volunteer labor)</i>	-	1	1
	Foundation Support <i>(grant awards from foundations and funds)</i>	2	2	-
	Corporate Grants <i>(business support)</i>	-	2	-
	Easement Leasing <i>(leasing unused portions of alignment, e.g. utility corridor)</i>	-	-	2
	Redevelopment Agencies <i>(link trail with local economic development plans)</i>	-	2	-
	Public/Private Enterprise <i>(joint financing as part of commercial development)</i>	-	2	-

LEGEND:**Acquisition:** Land acquisition, dedication, or easement.**Development:** Trail and facilities construction.**Management:** Maintenance and patrolling.**Ratings:** 1. Most likely and/or readily available funding and regulatory tools.

2. Conditional likelihood (sources that will take more effort to secure but are worth it).

3. Long shots (unpredictable, difficult to obtain, or inappropriate).

GOVERNMENT REVENUES

Local Sources

1. **General Revenues.** Such funds are typically line items in the annual budgets of City and County parks and recreation programs. Drawn largely from property taxes, they are generally applied to operational and maintenance costs, rather than capital financing.
2. **Local/Regional Bonds and Initiatives.** Local or regional bond acts can be used for open space, park and trail development. One example of a successful initiative is Measure AA (1988), a parkland acquisition bond issue initiated by the East Bay Regional Park District and approved by voters in Alameda and Contra Costa Counties in November, 1988. Measure AA allocates \$4.3 million for acquisition and construction of trail projects which will be links in the Bay Trail, including a five-mile segment of the Carquinez Strait Trail, a connection between Point Isabel and Miller/Knox Regional Shoreline, a six-mile trail from Point Pinole to Lone Tree Point, and a three-mile link from San Leandro Bay Regional Shoreline to Oyster Bay. A bond act to support implementation of the Bay Trail could be initiated as a separate measure, or one could be incorporated into a larger bond act for statewide parks and trail development.

State Sources

3. **Proposition 70.** Formally known as the California Wildlife, Coastal, and Park Land Conservation Act of 1988, Proposition 70 is a \$776 million bond act approved by California voters in June, 1988. It earmarks a major share of its funding for specified park and open space acquisition projects. In the Bay Area, there are 19 stipulated projects, with a total funding base of \$115,600,000. Four categories of funding are available through Proposition 70: Per Capital Grants, Roberti-Z'Berg-Harris Funds, Specified Local Agency Grants, and Competitive Statewide Programs. The first three represent block grant programs to specific cities, counties and agencies. The fourth is a thematically-based competitive grant process. Possible sources of funding for the Trail include the following grant categories:
 - *Per Capita Grants* represent \$120 million available to designated cities, counties and recreation and park districts throughout the state. Funds may be used for acquisition, development, rehabilitation or restoration of land for parks, beaches, wildlife habitat and/or recreation.
 - *Robert-Z'Berg-Harris Funds* contain \$20 million in block grants available to urbanized areas for acquisition and development of park and recreation lands. This is a matching grant program (70% State, 30% local funding), with a one-year funding horizon, beginning July 1989.
 - *State Coastal Conservancy* has \$30 million to award as grants to agencies and non-profit organizations. Grant funds can be used to acquire natural lands on the coast and in the San Francisco Bay, to provide public access, and to restore or enhance these resources.
 - *East Bay Regional Park District* has been allocated \$10 million. Both the Urban Shoreline Acquisition Project and the Carquinez Strait Project components are relevant to the Bay Trail.
 - *State Park Development and Acquisition Funds* are available. The Bay Trail alignment as proposed connects to Candlestick Point State Recreation Area, China Camp State Park and Angel Island.
 - *East Shore State Park* received an allocation of \$25 million to acquire and develop a shoreline park between Emeryville and Richmond.
 - *Trails Grant Program* consists of \$5 million to be allocated over a two-year period for the acquisition and development of trails. Half has already been allocated; the remaining \$2.5 million will be available in fiscal year 1990/91.

A Framework for Implementation

4. **State Coastal Conservancy Grants.** The Coastal Conservancy is a State agency which awards block grants annually to public agencies and non-profit organizations to enhance coastal/bay access and to restore wetland resources. Coastal Restoration Projects, Coastal Resource Enhancement Projects, Urban Waterfront Restoration and Public Accessways programs relate to the Bay Trail. The implementation of the Bay Trail is emerging as one of the Conservancy's major funding interests; funding priority in the Bay Area will be given to projects that will serve as links in the Bay Trail. For this purpose, \$1.1 million has been allocated for 1989. Additional funds administered by the Conservancy include Propositions 18 (1984) and 19 (1986) which allocated \$15 million and \$5 million respectively for San Francisco Bayshore enhancement, access and waterfront restoration projects. Roughly two-thirds of Proposition 18 funds are still available, with over \$3 million to be spent on San Francisco Bay urban waterfront projects. While legislative restrictions discourage allocations of these proposition funds for development of waterfront parks per se, the Bay Trail's potential for enhancing urban waterfront projects make these connections a focal point for unspent monies.
5. **Transportation Development Act (TDA) Article 3.** These are state block grants awarded annually to local jurisdictions for the implementation of pedestrian and bicycle projects; they are administered by the Metropolitan Transportation Commission for all Cities and Counties in the Bay Area. These block grants represent the major funding source for bicycle lane projects. Local agencies apply for TDA Article 3 grants through the Counties. Last year, roughly \$2.7 millions was awarded to the Bay Area Counties. In the 1988-1989 fiscal year, \$3,635,724 has been allocated to the San Francisco Bay Region.
6. **Revenue Dedications.** These represent earmarked taxes or state fees. Two pertinent sources for the Bay Trail are the recently-passed Proposition 99 (Cigarette Tax Initiative) and the Environmental License Plate Fund. Proposition 99 requires that 5% of the collected tax revenues be set aside for as yet unspecified environmental projects. The Planning and Conservation League estimates that the 2.5% available for parks and recreation purposes represents \$15 million annually. A portion of these funds could be tapped for Bay Trail development through sponsoring state legislation or via the Robert-Z'berg-Harris Program. Other states have created special funds to buy and develop parklands from such sources as a soft drink tax (Illinois, 1984), a cigarette tax (Nebraska, 1984), a parks and soils tax (Missouri, 1984) and a lottery (Colorado, 1983).
7. **General Funds from the State Budget.** A line item could be inserted in the annual State budget for Bay Trail implementation. This device has occasionally been used in the past for specific land acquisitions by the East Bay Regional Park District and other special districts. As a one-time source of funds, it could be applied to acquisition and development, but would be inappropriate for funding operational costs.
8. **Offshore Oil Lease Funds.** Otherwise referred to as Outer Continental Shelf Funds or Special Account for Capital Outlay (SAFECO), these are Federal tax revenues that are returned to the State. There are no established allocation criteria; availability depends on individual legislative approvals. These, like the "General Funds from the State Budget," should be seen as strictly acquisition and development tools, not for operations and management. Both are unpredictable and highly political funding sources.
9. **Bicycle Lane Account (BLA).** The California State Department of Transportation (Caltrans) annually sets aside \$360,000 - \$500,000 for bicycle projects throughout the state. Available as grants to those cities or counties which currently have bike plans, the emphasis tends to be on projects which benefit bicycling for commute purposes. The criteria for projects is somewhat flexible, and monies have been appropriated for bicycle education, as well as lane construction. This would be a marginal source of funds for the Bay Trail, not only for the relatively small appropriations, but for its commute purpose priority. The Bay Trail, while it could serve bicycle commuters in some areas, has a primarily recreational orientation.
10. **CalTrans Corridor Improvement Mitigation Funds.** The California Transportation Commission can appropriate up to 10 percent of the budget for a CalTrans freeway or highway improvement project for facilities to mitigate the impacts of road construction. These funds are not applicable for all CalTrans projects, but where they are applicable, they are intended to support actions that will help relieve congestion during the construction period. If bicycle facilities, particularly lanes, can be demonstrated to be cost-effective solutions to mitigating traffic delays and related impacts, then CalTrans can incorporate them at

the design stage of the freeway project. Mitigations funds will likely be allocated for bicycle lanes in conjunction with the Interstate 80 expansion within the Richmond to Emeryville Corridor. The lanes, to be built on some parallel surface roads, could become components of the Bay Trail.

11. **Revolving Local Funds (RLFs)/Local User Fees.** RLFs provide state-sponsored, long-term, low-interest loans to localities for major capital investments. In addition, they may provide other forms of financial assistance such as credit enhancements or, to a limited extent, grants. In a state revolving fund, a state agency receives an initial infusion of capital, typically appropriations from general revenue, federal grants, or the proceeds from a bond issue. Local user fees would be set to cover operation and maintenance costs and to repay the loan. These tools may have a narrow application to the Bay Trail, but could be derived from a percentage of revenues collected from user fees associated with shoreline recreation, such as marinas, launches and fishing piers. Establishing a user fee for trail access itself does have precedent, but would be difficult to administer. Parking fees could be charged at selected staging areas along the Trail.
12. **Trust Funds.** Trust funds are similar to revenue dedications, but represent a permanent account or "set-aside" for a program. If they are created from sources other than user fees, they generally require the establishment of a nexus between the source of revenue and the proposed expenditures (i.e., a set-aside from property taxes in areas affected by intensive growth pressures; cigarette taxes to mitigate environment harm). The State Legislature would formally determine the source(s) and the level of the trust fund. A trust fund, once established could provide a secure base upon which officials could plan and invest in the Bay Trail corridor for years to come.

A Bay Trail maintenance trust fund could be established using revenues collected from a fraction of license fees derived from horse racing at Bay Meadows and Golden Gate Fields. (License fees are based on a percentage of the pari-mutuel pool wagers at each race track, the breakage of winning ticket amounts and the unclaimed pari-mutuel tickets). Currently, \$750,000 in race track revenues are set aside annually to the Wildlife Conservation Board for the Wildlife Restoration Fund.

Federal Sources

13. **Federal Water Pollution Control Act.** Under Sections 201 and 208 of this law, also known as Clean Water Act grants, the Environmental Protection Agency (EPA) allows the inclusion of trail development in conjunction with the planning of federally-funded grants for the construction of sewage treatment plants and transport/storage facilities. Many of these plants lie along the Bayshore. The proposed design of San Francisco's Sunnydale project includes a Bay Trail segment.
14. **Land and Water Conservation Funds.** A U.S. Department of the Interior-administered grant program for outdoor recreation facilities development and open space acquisition, these funds pass through the State Department of Parks and Recreation. Once a \$25 million per year revenue source for the State from Federal offshore oil leasing fees, it is currently a minor funding instrument, with only \$1.2 million available for all California last year. This year there is \$222,000 available for Northern California. Grant money in the program is primarily designated for projects that stress multi-use and have high use potential. It may include development of bicycle trails, particularly where there are few developed trails or where a trail could be built to connect several parks. Congress is considering establishment of a Heritage Trust, which would be established from the interest on the LWCF, to support greenway acquisition. The Bay Trail as envisioned already matches many of the LWCF funding criteria. However, to help ensure future LWCF funds, it would be valuable for the Bay Trail to be designated as a "National Recreational Trail" within the National Trails System.
15. **Federal Highway Trust Funds.** Two alternatives are available here for funding bicycling facilities: 1) constructing bicycle and pedestrian facilities as part of any Federal Highway Aid project, as long as they are within the public right-of-way; and 2) constructing such facilities independently of highway projects, but serving the highway corridors. These funds are difficult to obtain, as they are very limited and the applicant must clearly show that the proposed bicycle facilities provide a viable commute alternative for automobile commuters.

A Framework for Implementation

16. **Community Development Block Grants (CDBGs).** Administered by the U.S. Department of Housing and Urban Development, CDBGs are competitive, broad-purpose grants available to municipalities for projects of community-wide benefit. They can be used in a variety of ways, from financing new infrastructure or assisting in urban redevelopment, to supporting community non-profit organizations. The Bay Trail could be eligible for development funds from CDBGs where there is potential for incorporating the Trail into the local grantmaking process as a cultural amenity, or where the project can be linked with urban renewal or economic development programs. Several rail-trails have documented economic, historic and/or cultural merit and have been awarded CDBG funding. These include Seattle's Burke-Gilman Trail and a portion of the Baltimore and Annapolis Trail.

REGULATORY MEASURES

1. **Development or Impact Fees.** These exactions are assessed against developers and are paid prior to construction of land improvements. They can be a significant source of local revenues for development of recreational facilities which are ordinarily within or adjacent to the candidate site. While they would be valuable means of tying private commitments to the Trail and would relieve local governments of front-end financing pressure, they would be a one-time revenue source and are only pertinent for new trail development.
2. **Development Dedications.** A substitute for impact fees, mandatory land dedications are enabled under the Quimby Act to be used by cities and counties to secure park and recreation benefits associated with development. For either development fees or dedications to be used for Bay Trail acquisition or development, amendments incorporating the Bay Trail into local general plans and other planning documents would be necessary. Here, the Bay Conservation and Development Commission could play a major role in administering an access program as part of their permit-granting process for all Bay shoreline development.
3. **Subdivision Map Act.** The Subdivision Map Act requires local agencies to require reasonable public access to ocean and bay shorelines as part of the tentative map and final map approval process for subdivisions which front on the coastline or bay shoreline.
4. **Flexible Zoning.** This technique can work with development dedications to provide a trail corridor for Class I segments of the Bay Trail. It could also be used for protecting wetland and open space resources in relation to development projects near the Bay. Flexible zoning may include: 1) cluster zoning, which would group units in one portion of the site and allow for the remainder to be used as common open space; 2) planned unit development; and 3) incentive zoning which allows an increase in density of development greater than would normally be permitted in exchange for the provision of public recreation lands and the retention of the scenic or environmental values. This package of regulatory techniques would be best used in conjunction with dedications for securing public rights to traverse the property were the Trail to cross the parcel in question.
5. **State Lands Commission, Public Trust Easements and Mitigation Funds.** The Commission governs state lands, including present and historic tidelands and submerged areas. This source is relatively unknown, but could be a great potential resource for enabling the establishment of Class I trail easements for the Bay Trail, particularly within its scope of interest over filled tidelands. The State retains a public trust interest across all tidelands, including those that have been filled (with the exception of tidelands sold through the defunct Bay Tidelands Commission). Thus, whenever the Commission settles a boundary line agreement with any owner of bayfill lands, it has the right to require public access as a way of fulfilling the public trust. Since 1973, the Commission has been negotiating trail easements as part of its public trust settlements, it has negotiated trail easements on the Bayshore already, including one at Redwood Shores in Redwood City. The Commission's Kapiloff Land Bank (established in 1983 to create a pool of mitigation funds) could be used for obtaining use easements from private owners or buying fee interest in shoreline trails. While the State would generally retain title to such easements, public agencies could obtain free, 66-year leases on them.

6. **Assessment Districts.** An assessment district is created within a municipality when infrastructure improvements or recreational facilities are needed within the bounds of a specified area. Residents within an assessment district are annually assessed for a fee that is attached to their property taxes. Assessment Districts can be set up by city councils to finance most public improvements, including trails, so long as they provide a benefit to the affected property owners. They can incorporate both commercial (e.g., office parks and marinas) and residential areas. Arrangements for establishing and financing an assessment district can be flexible, and afford opportunities for multi-jurisdictional projects. Roads are the typical example of this, but the concept could be extended to the Bay Trail.
7. **Cooperative Agreements with Flood Control Districts and Other Agencies.** These are excellent tools for realizing multiple public benefits. Agreements are negotiated between public agencies to determine the scope and extent of joint land use. Examples along the Bay Trail include Alameda Creek Trail and sections of the Hayward Area Shoreline, representing a cooperative agreement between the owner of the land (Alameda Flood Control District) and the East Bay Regional Park District for recreational use. No annual fee is paid, and the lease is a ten-year, renewable lease. The major issues that need to be settled in advance are trail maintenance and liability; these responsibilities are generally assumed by the agency receiving the recreation license. Numerous opportunities may exist along the Bay Trail for other cooperative agreements.

PARTNERSHIP TOOLS

1. **Corporate Grants.** Corporate grants can assist in financing community-oriented projects. Grant requests should be targeted to those companies whose operation is near the proposed corridor of the Trail and whose employees could benefit from Bay Trail access for recreation and physical conditioning.
2. **Establishing a Non-profit Advocacy Organization.** A nonprofit (501(C)3) Bay Trail Fund or Friends of the Bay Trail can be established to support the Trail and solicit donations for trail development and management. Related models are the Sempervirens Fund which supports Big Basin State Park, Save Mount Diablo in association with Mount Diablo State Park, Golden Gate National Park Association for the Golden Gate National Recreation Area, and the Alameda-Contra Costa Regional Parks Foundation for the East Bay Regional Park District.
3. **Foundation Support.** Selected foundations have shown increasing interest over the last decade in supporting the acquisition and development of recreational facilities and programs. Awards are given to both governments and non-profit groups; grants are best sought to fund development of a particular segment of the trail, rather than for operation or management programs.
4. **In-kind Donations.** Service, community and fraternal organizations can offer volunteer workers for trail construction and maintenance. They can also solicit free or wholesale materials and construction equipment for trail construction. Trail adoption programs can be established to enable service, hiking and bicycling clubs to maintain particular reaches of the Trail. Given the proximity of the Bay Trail alignment to many Bay Area businesses, considerable opportunities for soliciting in-kind support for the Trail's construction and maintenance are possible.
5. **Easement Leasing.** The leasing of unused or underground portions of a trail corridor for storage or utilities may have potential for helping to meet operational revenue requirements for the Bay Trail. A prime example of creative and lucrative easement leasing is that of fiber optics lines beneath a trail alignment. Administrators of a number of trails, particularly rail-trails, have negotiated leases with communication companies for fiber optics installation along their trail corridors. For example, AT&T pays the Northern Virginia Regional Park Authority \$250,000 per year for an easement of 35 miles beneath the Washington and Old Dominion Trail.

A Framework for Implementation

6. **Redevelopment Agencies.** Redevelopment agencies can offer a variety of government assistance and incentive programs to facilitate commercial and economic development in designated areas. Urban sections of the trail which lie within a redevelopment area may be eligible for special consideration not available elsewhere, if the trail can be linked with redevelopment plans. In such instances, that portion of the Trail may also be eligible for Community Development Block Grant (CDBG) assistance.

7. **Public/Private Enterprise.** The joint financing of trail facilities using public and private capital would be appropriate where the Trail can be integrated with proposed or existing waterfront and marina plans. Again, a nexus must be shown between regional trail use and the attraction or benefit it would provide for associated commercial ventures, such as restaurants and stores. The tourism-associated benefits of some portions of the Bay Trail is worth examining for leveraging private capital.

Section V
References



Section V References

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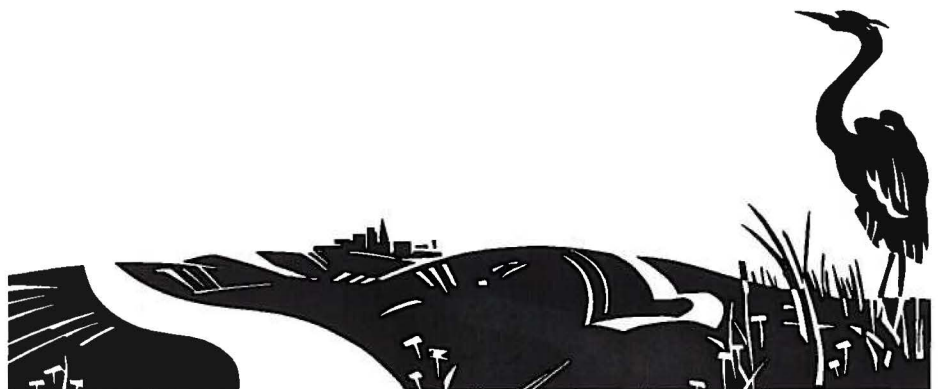
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Section VI

Appendices

- **Senate Bill 100**
- **Bay Trail Committees**
 - **ABAG Executive Board**
 - **ABAG Regional Planning Committee**
 - **Bay Trail Advisory Committee**
 - **Bay Trail Technical Committee**



Section VI Appendices

- **Senate Bill 100**
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Senate Bill No. 100

Introduced by Senators Lockyer, Boatwright, Keene, Kopp, Marks, McCorquodale, Morgan, Nielsen, and Petris. (Coauthors: Assembly Members Agnos, Baker, Bates, Willie Brown, Campbell, Cortese, Duplissea, Eastin, Filante, Hannigan, Hansen, Harris, Isenberg, Klehs, Quackenbush, Speier, and Vasconcellos.)

The people of the State of California do enact as follows:

SECTION 1. Chapter 11 (commencing with Section 5850) is added to Division 5 of the Public Resources Code, to read:

Chapter 11. SAN FRANCISCO BAY AREA BIKEWAY SYSTEM

5850 The Association of Bay Area Governments shall develop and adopt a plan and implementation program, including a financing plan, for a continuous recreational corridor which will extend around the perimeter of San Francisco and San Pablo Bays. The plan shall include a specific route of a bicycling and hiking trail, the relationship of the route to existing park and recreational facilities, and links to existing and proposed public transportation facilities.

The plan shall do all of the following:

- (a) Provide that designated environmentally sensitive areas, including wildlife habitats and wetlands, shall not be adversely affected by the trail.
- (b) Provide for appropriate buffer zones along those portions of the bikeway system adjacent to designated environmentally sensitive areas.
- (c) Provide that the land and funds used for trail construction and planning are not considered mitigation for wetlands losses.
- (d) Provide alternative routes to avoid impingement on environmentally sensitive areas.
- (e) Provide that no motorized vehicles, except to the extent necessary for emergency services, be allowed on the trail.

The association shall submit the plan to the Legislature not later than January 1, 1989.

5851. The Association of Bay Area Governments shall establish a policy committee, which includes members of appropriate environmental organizations, to oversee development and implementation of the trail.

A cooperative working relationship shall be established with the San Francisco Bay Conservation and Development Commission, the Metropolitan Transportation Commission, state and federal agencies, and all other cities, counties, and districts, including school districts, which are affected by the proposed trail.

The association shall establish an advisory committee representing groups concerned with environmental and ecological protection of the bay and groups representing bicycling and other relevant recreational activities.

SEC. 2. Section 99234 of the Public Utilities Code is amended to read:

99234: (a) Claims for facilities provided for the exclusive use of pedestrians and bicycles or for bicycle safety education programs shall be filed according to the rules and regulations adopted by the transportation planning agency.

(b) The money shall be allocated for the construction, including related engineering expenses, of those facilities pursuant to procedures or criteria established by the transportation planning agency for the area within its jurisdiction, or for bicycle safety education programs.

(c) The money may be allocated for the maintenance of bicycling trails which are closed to motorized traffic pursuant to procedures or criteria established by the transportation planning agency for the area within its jurisdiction.

(d) The money may be allocated without respect to Section 99231 and shall not be included in determining the apportionments to a city or county for purposes of Sections 99233.7 to 99233.9, inclusive.

(e) Facilities provided for the use of bicycles may include projects that serve the needs of commuting bicyclists, including, but not limited to, new trails serving major transportation corridors, secure bicycle parking at employment centers, park and ride lots, and transit terminals where other funds are unavailable.

(f) Notwithstanding any other provision of this section, a planning agency established in Title 7.1 (commencing with Section 66500) of the Government Code may allocate the money to the Association of Bay Area Governments for activities required by Chapter 11 (commencing with Section 5850) of Division 5 of the Public Resources Code.

(g) Within 30 days after receiving a request for a review from any city or county, the transportation planning agency shall review its allocations made pursuant to Section 99233.3.

SEC. 3. No reimbursement is required by the act pursuant to Section 6 of Article XIII B of the California Constitution because this act is in accordance with the request of a local agency or school district which desired legislative authority to carry out the program specified in this act.

SEC. 4. This act is an urgency statute necessary for the immediate preservation of the public peace, health or safety within the meaning of Article IV of the Constitution and shall go into immediate effect. The facts constituting the necessity are:

In order to permit the development of a continuous recreational corridor around the perimeter of San Francisco and San Pablo Bays and to thereby provide urgently needed recreational facilities at the earliest possible time, it is necessary that this act take effect immediately.

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