CHAPTER 2

Existing Conditions

EXISTING BICYCLE AND INTERMODAL CONDITIONS

This chapter presents a description of the existing bicycle and intermodal access conditions in Alameda County. Data on existing bicycle use and mode share is presented to show the number of nonmotorized commuter trips and the potential for increase in nonmotorized trips under this plan. The major regional attractors and generators are described along with local bicycle policies. Bicycle planning efforts and the resulting infrastructure of bicycle facilities in each of the local jurisdictions including the East Bay Regional Park District (EBRPD) are described as well as a summary of bicycle collision data in Alameda County.

GEOGRAPHIC AND OTHER BARRIERS

The three dominant geographic features of Alameda County are the San Francisco Bay, the Berkeley/Oakland Hills and the Tri-Valley. The Bay contributes to temperate climates for the communities adjacent to the water, which is ideal for bicycling year-round. The County has dry summers with rainy weather primarily occurring during the months of November through April.

The Berkeley/Oakland Hills separate the bay front communities from eastern Contra Costa County and the Tri-Valley area of Alameda County. The topography near the water is relatively flat but gradually becomes hillier inland. The hill areas themselves are steep and have roads that are quite challenging for cycling, but nevertheless are heavily used by bicyclists. The Tri-Valley area is relatively flatter than the western county, but hotter in the summer.

When the older communities were developed in the late nineteenth and early twentieth century, many of the once-numerous creeks that drained to the Bay were culverted and paved over. The southern and eastern areas have (relatively) more natural creeks (and arroyos in the Tri-Valley) which provide both opportunities for pathways along the water corridor and constraints in terms of needing bridges over creeks where roadways do not cross.

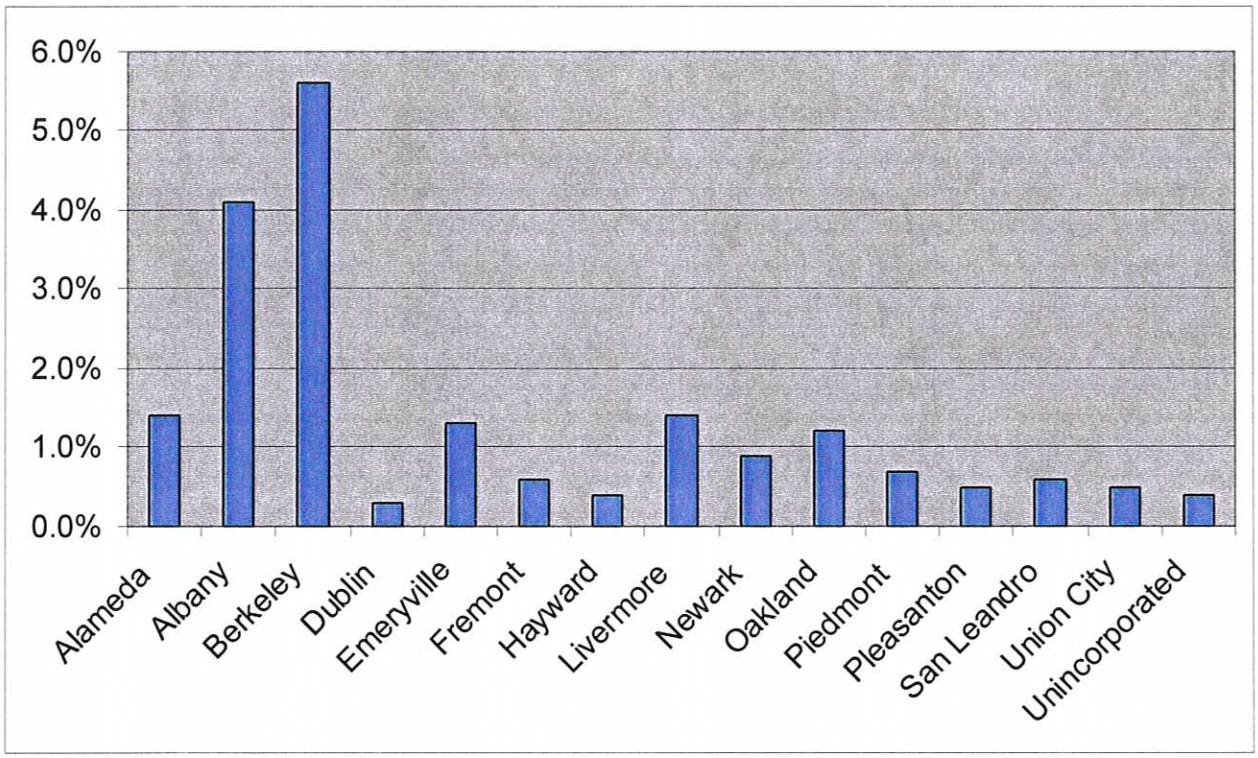
There are numerous other obstacles to bicycling as well, predominantly freeways and railroad tracks. The freeways (I-80, I-580, I-680, I-880, I-980, SR 13, SR 24 and I-238) cause two main problems: creating barriers to crossing the freeway that bicycles cannot travel unless a roadway or bike bridge has been built, and intimidating and dangerous ramps designed for high-speed merges. Railroads are barriers because at-grade crossings are few and far between and grade separations are extremely costly.

EXISTING BICYCLE AND WALKING COMMUTE SHARE

Census

According to the 2000 census, 1.2 percent of Alameda County residents bicycle to work. The bike mode share of work trips for each city in Alameda County is presented in Figure 2-1. The bicycle mode splits vary significantly from city to city, ranging from nearly 6 percent in the City of Berkeley to 0.3 percent in the City of Dublin.

Figure 2-1—Existing Bicycle Mode Share



REGIONAL TRAVEL CHARACTERISTIC SURVEYS

MTC Travel Survey

The Metropolitan Transportation Commission (MTC) conducted a survey of regional travel characteristics every 10 years starting 1980. The most recent survey was conducted in 2000. This survey revealed mode splits for all trip purposes. In 1990 for Alameda County, bicycle mode splits for trip purpose were fairly consistent, at one percent, for all trip purposes. However, this has changed in 2000 as follows:

- Non-home-based—2.0 percent
- School—1.6 percent
- Shopping—1.4 percent
- Social/Recreation—3.3 pecent
- Work—2.2 percent

Table 2-1 compares the duration of bicycle trips in the nine-county Bay Area between 1990 and 2000. In 1990, two-thirds of Bay Area bicycle trips were 15 minutes or less compared to 44 percent in 2000. While the percentage of shorter bicycle trips seems to have decreased, the percentage of bicyclists making trips that are 30 minutes or longer has increased since 1990. In 1990, about seven percent of bicycle trips were 30 minutes or longer. In 2000, the percentage increased to 23 percent. Similarly in 2000, 15 percent of the bicycle trips were 45 minutes or longer which is a threefold increase over 1990 conditions when about percent of bicycle trips were 45 minutes or longer. This excludes trips with unknown duration.

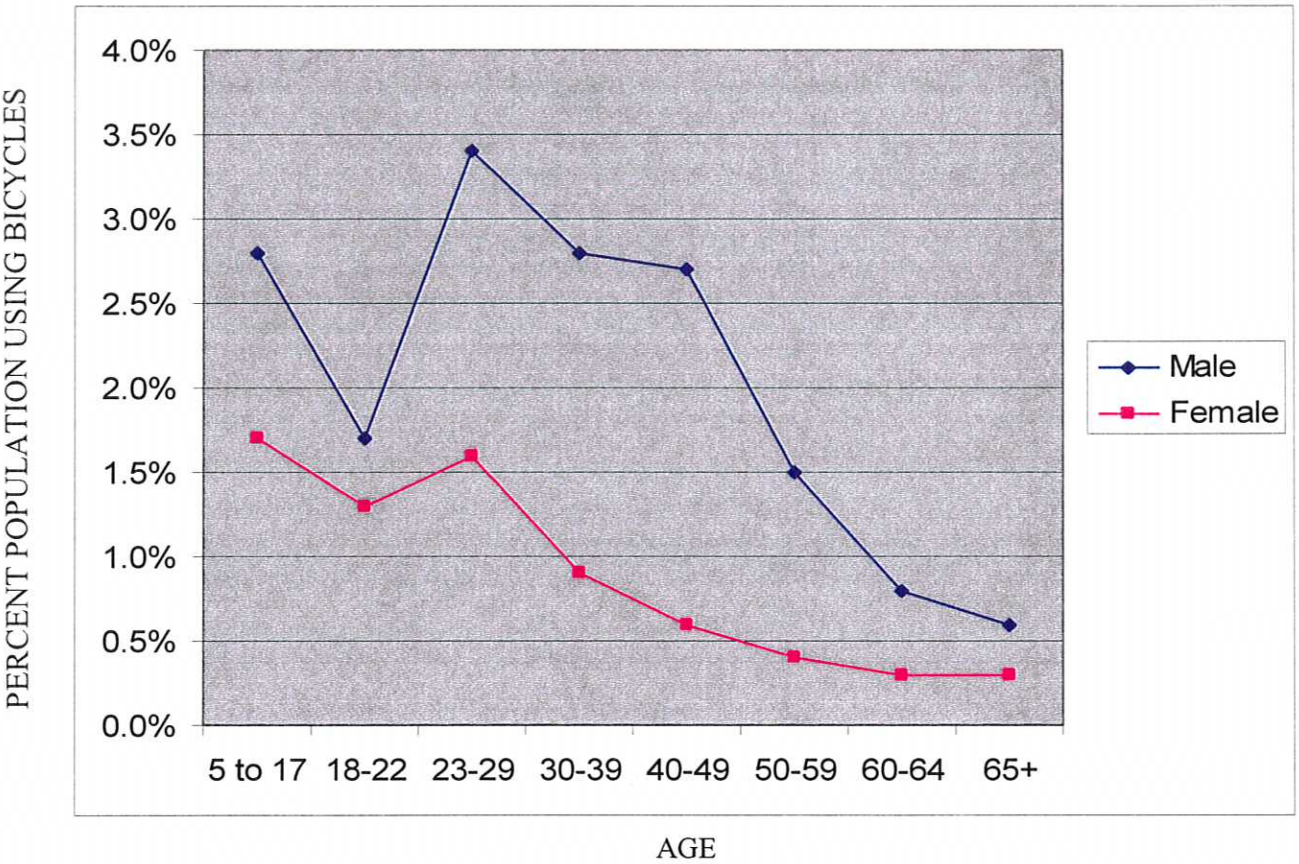
Table 2-1—Duration of Bicycle Trips, Bay Area

Minutes	1990 (%)	2000 (%)
0 – 5	19.5%	7.6
5.1 – 10	20.1%	16.0
10.1 – 15	28.0%	20.1
15.1 – 20	7.3%	9.8
20.1 – 25	5.8%	3.7
25.1 – 30	12.1%	11.8
30.1 – 45	2.5%	7.4
45.1 – 60	2.5%	5.9
> 60 (Unknown duration)	2.3%	17.7 (9.8)

Source: San Francisco Bay Area Travel Survey 2000, Regional Travel Characteristics Report

Age and gender are also significant variables in the use of bike modes. Figure 2-2 shows the 2000 bicycle mode split by age and gender in the nine-county Bay Area. Males bicycle more than females in all age groups. Males between the ages of 23 and 29 are the largest group of bicyclists followed by males between five to 17 years. For females, the largest group of cyclists are young females (five to 17 years) followed by females between 23 and 29 years.

Figure 2-2—2000 Bicycle Mode Split by Age and Gender (Nine-county Bay Area)



REGIONAL ATTRACTORS/GENERATORS

The regional attractors and generators in Alameda County were identified by reviewing information from standard sources such as the Thomas Brothers maps, city websites and the Alameda County Transportation Authority's (ACTIA's) Countywide Strategic Pedestrian Plan. The locations of the attractors depicted in Figure 2-3 were considered in determining the alignments of the countywide bicycle routes. They include all post-secondary educational institutions, hospitals and medical centers, major commercial districts, shopping centers, downtowns, major public venues, government buildings, regional parks and the San Francisco Bay Area (BART), AMTRAK, ACE stations and other major transit centers and interface areas.

EXISTING BICYCLE PLANS

The status of each of the Alameda County jurisdiction's bicycle planning efforts is summarized in Table 2-2. Nine of the 14 cities in Alameda County have adopted bicycle plans. One other city, Union City, is planning to adopt a Bike Plan in 2007. In addition, the County developed a bicycle plan for the western unincorporated areas of the County (San Lorenzo, Castro Valley, Fairview, and Ashland). Other cities have trails master plans and/or address bicycle issues in the Circulation Element of the General Plans. Alameda County and the City of Dublin are currently updating their plans with plans to adopt them in 2006. Six of the jurisdictions have plans to update them in the next two years.

FIGURE 2-3: MAP 1

Regional Attractors and Generators 2006

Albany - Berkeley - Emeryville Alameda - Oakland - Piedmont

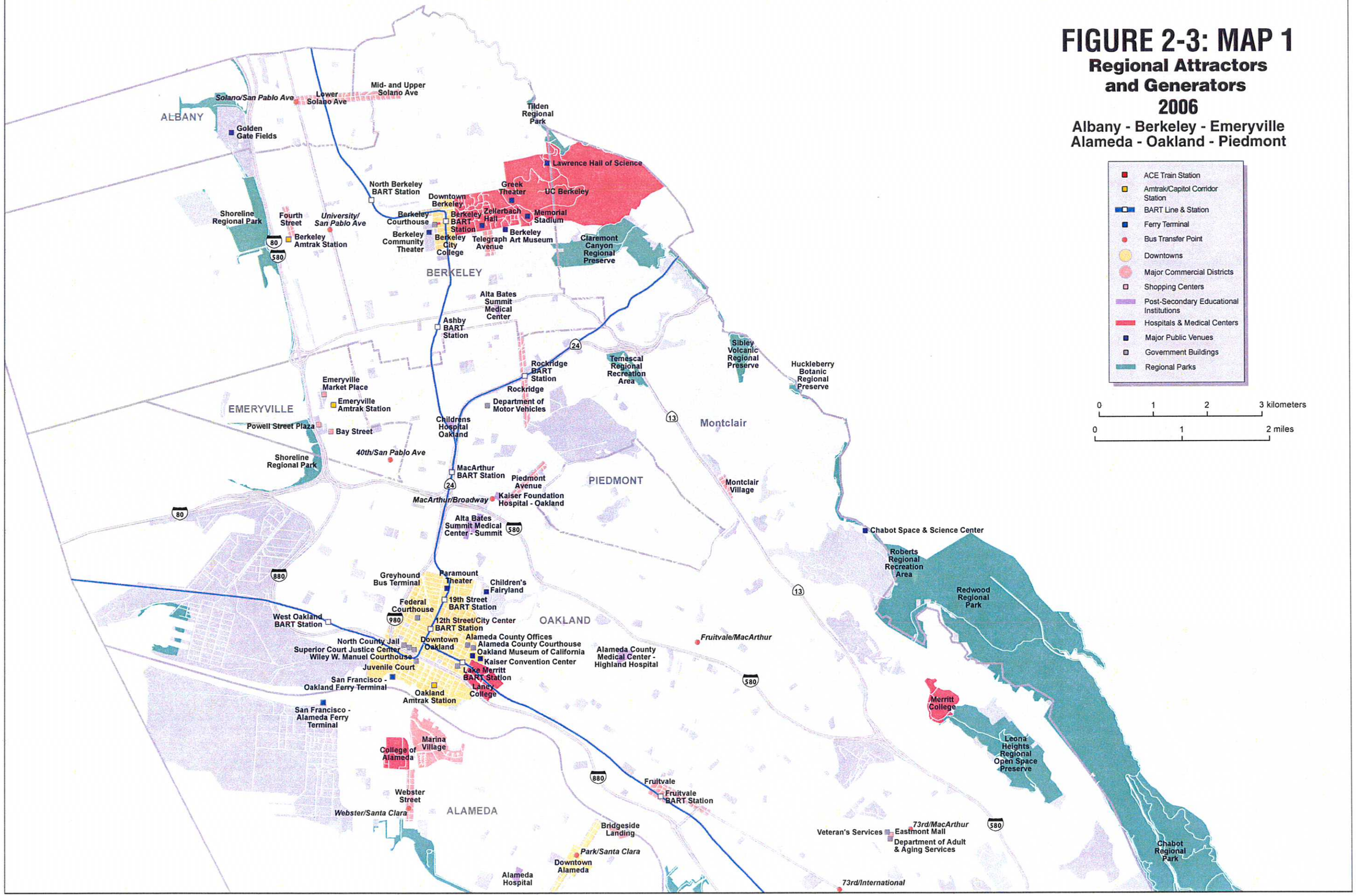


FIGURE 2-3: MAP 2

Regional Attractors and Generators 2006

Alameda - Oakland - San Leandro Castro Valley - Hayward

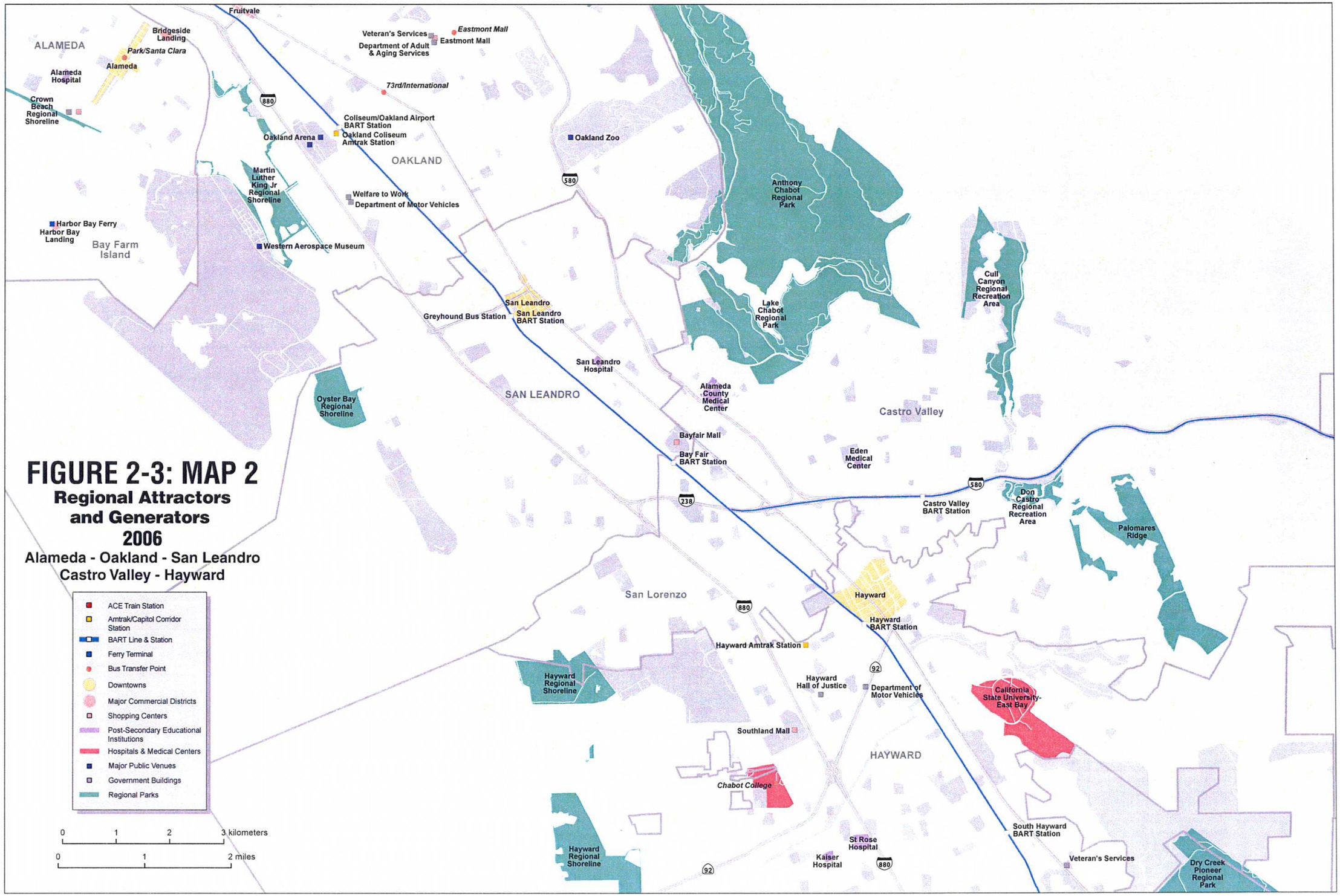


FIGURE 2-3: MAP 3

Regional Attractors and Generators 2006

San Leandro - Castro Valley Hayward - Union City - Fremont

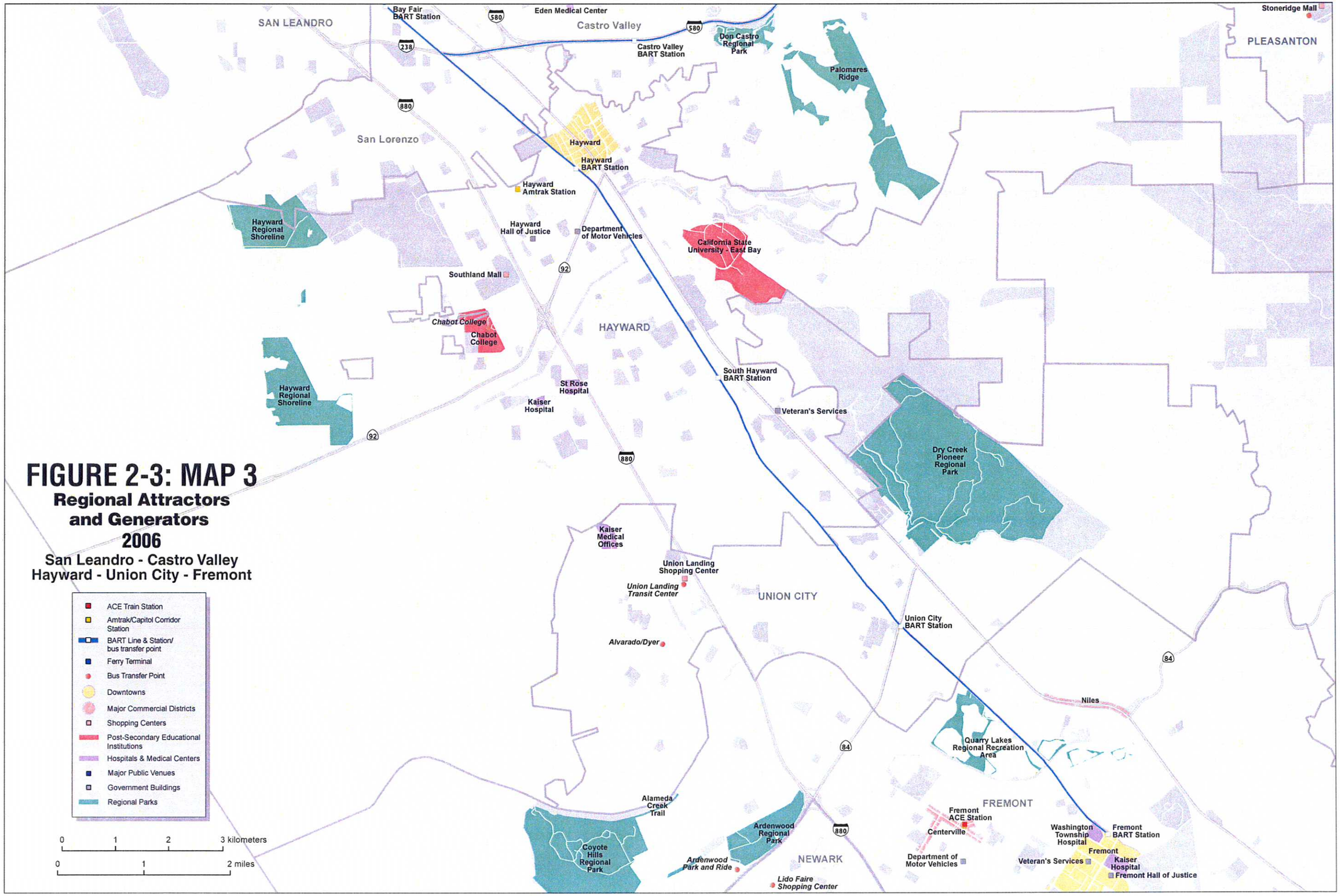
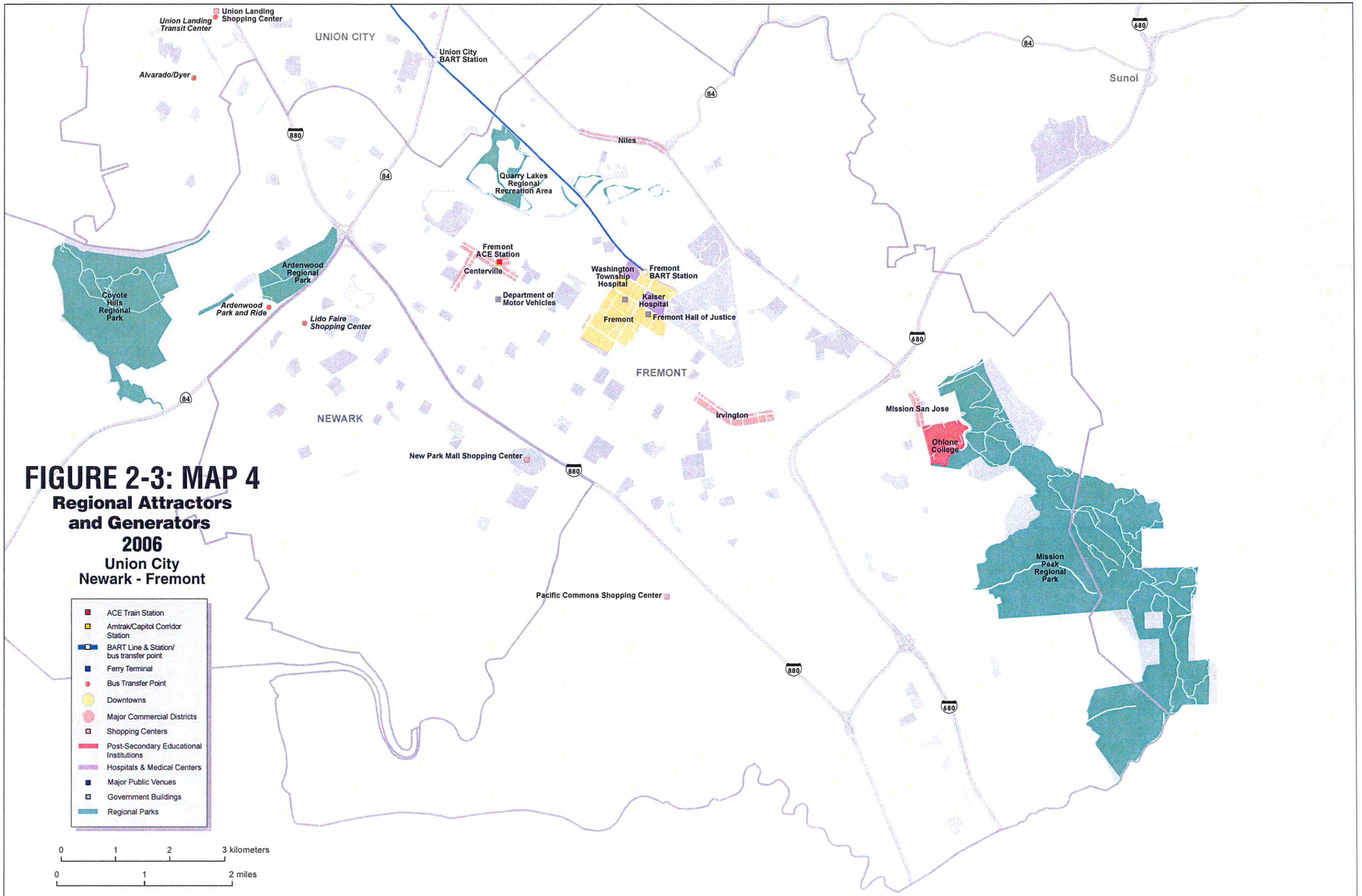


FIGURE 2-3: MAP 4

Regional Attractors and Generators 2006

Union City Newark - Fremont



- ACE Train Station
- Amtrak/Capitol Corridor Station
- BART Line & Station/ bus transfer point
- Ferry Terminal
- Bus Transfer Point
- Downtowns
- Major Commercial Districts
- Shopping Centers
- Post-Secondary Educational Institutions
- Hospitals & Medical Centers
- Major Public Venues
- Government Buildings
- Regional Parks

0 1 2 3 kilometers

0 1 2 miles

FIGURE 2-3: MAP 5

Regional Attractors and Generators 2006

Dublin - Pleasanton - Livermore

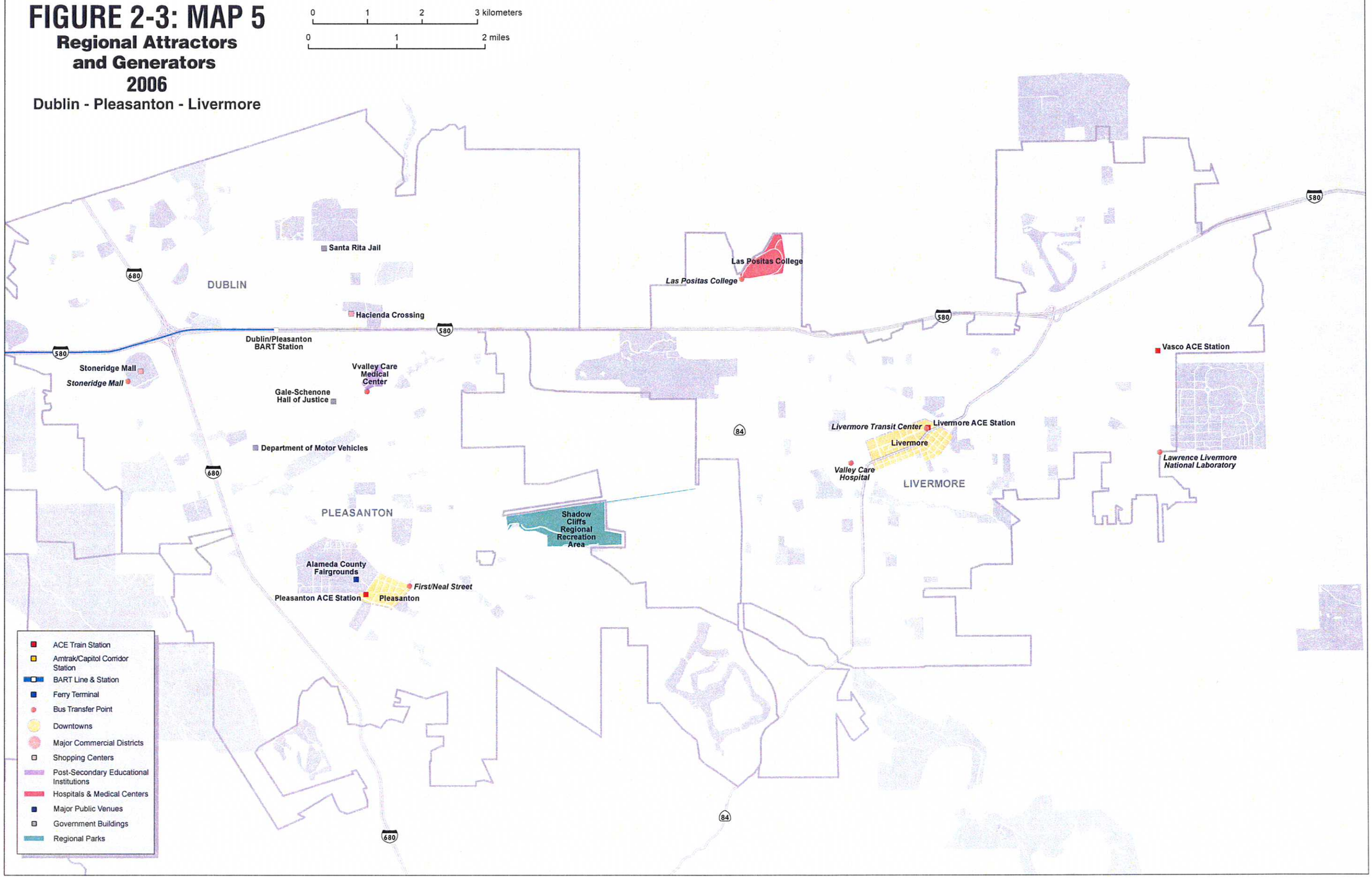


Table 2.2—Status of City/County Bicycle Plans

Jurisidiction	Bike Map	Bike Plan (date adopted)	If not, where are bicycle issues included?	Next Update	Published Map
County, Western Unincorporated areas	1999	Anticipated 2007	NA		
All other unincorporated area of the county		Anticipated 2007	NA		
East Bay Regional Park District	Yes	Trail Master Plan, 1997	NA		
Alameda	Yes	December 2002	NA	2007	In phone book and Bike Plan; map developed with Bike Alameda
Albany	Yes	February 2003	NA	Minor updates in 2004	Included in Berkley map
Berkeley	Yes	2000	NA	2008	Berkeley Biking and Walking Map (2006)
Dublin	1998 East Dublin, 1992 West Dublin	No	2002 General Plan (rec) routes from 1997 and a few policies	Anticipated adoption in 2006	
Emeryville	Yes	2000	NA	2008	City Economic Development Map Emeryville included in 2006 Berkeley Map
Fremont	Yes	September 2005	NA	2005	Fremont Bikeway Map
Hayward	Yes	2002	NA	Scheduled early 2007	In conjunction with bike plan update

Jurisidiction	Bike Map	Bike Plan (date adopted)	If not, where are bicycle issues included?	Next Update	Published Map
Newark	Yes	No	1992 General Plan addresses routes only- install as new dev/ roadway improvements occur	Possibly 2007	None available. Through Engineering Division only
Oakland	Yes	July 1999	NA	2007	Walk! Oakland & Bike Parking map
Livermore	Yes	December 2001	NA	Revisions in February 2004	August 2006
Piedmont	No	No	1996 General Plan- no recommended routes		
Pleasanton	Yes	No	Community Trails Master Plan 2002		Community Trails & Paths
San Leandro	Yes	November 2004	NA		
Union City	Yes	October 2006	NA	NA	In Plan

In addition to these jurisdictions, the EBRPD and the Association of Bay Area Governments (ABAG) have adopted trail plans. As of 2006, EBRPD manages and maintains 31 regional parklands and 40 miles of trails in over 51,000 acres of open space in Alameda County. These trails connect parks, residential areas, business parks, multi-modal transportation facilities and function as both recreation and non-motorized transportation corridors. The EBRPD also has a map of potential future trail alignments for planning purposes, (for hikers, bikers and equestrians). The EBRPD promotes the majority of these trails as non-motorized transportation corridors in addition to recreational opportunities.

The San Francisco Bay Trail Plan was adopted by the ABAG Executive Board in 1989 identifying the Bay Trail alignment around the entire Bay. Bay Trail is a planned recreational corridor that, when complete, will encircle San Francisco and San Pablo Bays with a continuous 400-mile network of bicycling and hiking trails. It will connect the shoreline of all nine Bay Area counties, link 47 cities, and cross the major toll bridges in the region. All jurisdictions within Alameda County passed resolutions in support of the trail. The Plan continues to guide the planning and development of the Bay Trail.

OTHER BICYCLE ROUTE MAPS

In addition to the local agency bicycle plans and EBRPD, three maps (two published by the East Bay Bicycle Coalition and one by Krebs Cycle Products) cover Alameda County. The suggested roadways on these maps are based on existing conditions, and are very useful for cyclists planning their travel routes under current roadway conditions.

CONNECTIONS TO ADJACENT COUNTIES

This section gives an overview of existing on-street bicycle lanes and off-street trails that provide a regional connection between Alameda County and adjacent counties. To date, the most extensive network of existing regional connections are components of the EBRPD multiuse trail system. Connections to adjacent counties are also possible via other on-street routes and pathways. Some counties adjacent to Alameda County have plans for bikeways that could connect into Alameda County, while in other counties, no planning efforts have been made to date. The status of inter-county bikeway connections is summarized below.

San Francisco Bay Trail

The San Francisco Bay Trail is planned to extend along the waterfront of Alameda County, continuing north into Contra Costa County and south into Santa Clara County, for a total of 400 miles of trail and on-street bikeways which will circle the entire San Francisco Bay. The Bay Trail also consists of spur trails. An existing segment of this trail currently stretches across the Alameda-Contra Costa border, linking Albany with El Cerrito and Richmond. When completed, the Bay Trail will link Alameda County to the adjacent counties of Santa Clara County, San Francisco County and San Mateo County.

San Mateo County

Access to all Bay Area bridges is part of the Bay Trail alignment. The San Mateo-Hayward Bridge and the Dumbarton Bridge provide the only roadway connections to San Mateo County from Alameda County. The Dumbarton Bridge has an eight foot bicycle path on the south side which is connected to the local roadways via bike paths. The existing signage to the Dumbarton bridge is poor from the major arterials and from the nearest BART stations.

The San Mateo-Hayward bridge currently does not have bicycle access. The high rise portion of the bridge has three lanes in each direction with no room for wide shoulders or bike lanes. The recent widening of the approach did not include access to the high rise section, thus a gap remains in inter-county bicycle commuting between Alameda County and San Mateo County.

San Francisco County

The San Francisco Bay Bridge is the only roadway connection between Alameda and San Francisco Counties. Access is possible via various transit providers. The Bay Bridge currently has five eleven-foot travel lanes on both the upper and the lower decks. There are no shoulders, sidewalks or pathways. When the eastern span is rebuilt, it may include shoulders on both sides of each direction of travel. Bicycle access would be provided via a separate path for both bikes and pedestrians. This would provide access between Alameda County and Treasure Island and Yerba Buena Island. Access to San Francisco would be contingent on the retrofit of the western span to include bicycle access.

Santa Clara County

The City of Milpitas updated their Bikeway Master Plan (2002) that includes an extensive proposed bicycle route system. Connections to Alameda County (Fremont) exist via Class II bicycle lanes on Warm Springs Boulevard/North Milpitas Boulevard. The City of Milpitas has existing bike lanes on North McCarthy Road which would connect to the proposed extension of Fremont Boulevard to the County Line. The City of Milpitas has also constructed the Coyote Creek Trail north to the Alameda County Line which is proposed to extend in Alameda County as part of the Bay Trail.

Contra Costa County to the Tri-Valley

Off-Street

The Iron Horse Trail is an existing north-south trail that generally follows I-680 extending from Concord in Contra Costa County to the Dublin-Pleasanton BART Station in Alameda County. The trail is planned to extend north to Solano County and south to Pleasanton with an eastward future connection to San Joaquin County. A one-mile segment of Tassajara Creek Trail is located along Tassajara Creek, near to Tassajara Road in Eastern Dublin south of the County line. A proposed extension northward would connect to Mt Diablo State Park. The southern end will connect with the Iron Horse Trail via a bicycle/pedestrian path along Dublin Boulevard. The City of Dublin also constructed a wide traffic lane along Dublin Boulevard (westbound and eastbound) between the creek and Iron Horse Trail wide enough to accommodate both vehicles and bicyclists. However, no bike lanes were provided.

On-Street

The City of San Ramon has several bikeways. An existing Class II bicycle lane on Norris Canyon Road ends east of the Alameda-Contra Costa County border. Norris Canyon Road extends west from Bollinger Canyon Road (and connects to the existing on-street network). Existing connections extending south of San Ramon include (west to east): a Class II bicycle lane on San Ramon Valley Boulevard, a Class III bicycle route on Davona Drive, a Class III bicycle route on Alcosta Boulevard, and a Class II bicycle lane on Village Parkway. Proposed connections include Class II bicycle lanes on Westside Drive, Stagecoach Road and Dougherty Road.

Contra Costa County to North Alameda County/Berkeley and Albany

Off-Street

The Ohlone Greenway provides an existing Class I bikeway connection from Central Berkeley, through Albany northward to the El Cerrito/Richmond border at Conlan Avenue, immediately north of the El Cerrito del Norte BART station. The greenway runs underneath the existing elevated BART track and was recently improved to include directional signage for cyclists.

Contra Costa County to Oakland

On-Street

A bicycle route currently extends through Orinda via bike lanes on Moraga Way to Camino Pablo Boulevard, continuing northbound. This route connects with Wildcat Canyon Road, a well-utilized roadway leading west to Grizzly Peak Boulevard in Alameda County. Fish Ranch Road is also used to access Orinda from Grizzly Peak Boulevard, via State Route 24.

San Joaquin County

On-Street

Several communities within San Joaquin County have bicycle networks in place, including the cities of Tracy, Stockton, Manteca and Escalon. Existing and proposed local and regional routes are cited in the San Joaquin County Regional Bicycle Master Plan, completed in 1994. However, few regional bicycle routes currently exist to link communities within San Joaquin County, or to provide a connection to Alameda County. The 1994 San Joaquin County Regional Bicycle Master Plan recommends an extension of the existing bicycle lane on Grant Line Road in the City of Tracy, to provide a regional rural connection to Alameda County.

Off-Street

The California Aqueduct Trail is a Class I, multiuse trail that extends from the Bethany Reservoir in Alameda County through San Joaquin County to its border with Stanislaus County (and beyond), following Interstate 580. From the Bethany Reservoir, this existing trail could potentially link to the Brushy Creek to Bethany Reservoir and DeAnza National Historic Trails proposed by the EBRPD, providing access to the network of planned and existing EBRPD trails throughout Alameda (and Contra Costa) County. The Iron Horse Trail would also connect to San Joaquin County.

BICYCLE COLLISIONS

The collision data on reported collisions between motor vehicles and bicycles was obtained from the California Highway Patrol (CHP) Statewide Integrated Traffic Records System (SWITRS) website for 2003 and 2004. Detailed data on collision on roadways by jurisdiction is found in Appendix B-1. SWITRS data includes reported collisions resulting in injury and most reported collisions involving

property damage above $500. (Local agencies are only required to submit fatal and injury collisions to the CHP). SWITRS does not include any collisions on private property such as parking lots or any collisions that were not investigated by a police officer.

Table 2-3 summarizes the number of motor vehicle and bicycle collisions by jurisdiction in Alameda County for 2003 and 2004. There were 1,014 bicycle collisions in Alameda County in the two year period. Berkeley and Oakland had the highest number of collisions in this period with 270 and 253 collisions respectively. Combined, this represents over 50 percent of the collisions in the county. Out of the five fatal collisions in 2003 and 2004, only one occurred in Oakland, which has high number of collisions, while the remaining four occurred in Emeryville, which reported no collisions for the two year period, and Fremont, Hayward, and Newark, which are cities with a low number of collisions.

Table 2-3 Bicycle Collisions by Jurisdiction

Jurisdiction	2003		2004	
	Fatal	Injury	Fatal	Injury
Alameda		19		32
Albany		9		4
Berkeley		138		132
Dublin		4		5
Emeryville	1	0		4
Fremont		58	1	47
Hayward	1	25		39
Livermore		23		29
Newark		10	1	8
Oakland	1	134		118
Piedmont		2		0
Pleasanton		16		23
San Leandro		17		23
Union City		13		9
Unincorporated		35		33
TOTAL	**3**	**503**	**2**	**506**

Source: California Highway Patrol Statewide Integrated Traffic Records System, 2003 and 2004.

Table 2-4 shows the number of motor vehicle and bicycle collisions for 2004 by whether safety equipment was used. Most striking is that both fatalities in 2004 reported not using safety equipment. For injury-only collisions, 27 percent reported using safety equipment.

Table 2-4 Collisions and Safety Equipment Usage by City in 2004

Jurisdiction	Killed			Injured		
	Safety Equipment Used	Safety Equipment not used	Total	Safety Equipment Used	Safety Equipment not used	Total
Alameda				14	18	32
Albany				1	3	4
Berkeley				42	87	129
Dublin				0	5	5
Emeryville				0	4	4
Fremont		1	1	14	33	47
Hayward				4	35	39
Livermore				12	17	29
Newark		1	1	3	5	8
Oakland				18	104	122
Piedmont				0	0	0
Pleasanton				14	10	24
San Leandro				5	18	23
Union City				0	9	9
Unincorporated				10	24	34
TOTAL		**2**	**2**	**137**	**372**	**509**

Source: California Highway Patrol Statewide Integrated Traffic Records System, 2003 and 2004. Note- there is a minor difference (3) in the total number of injuries reported by SWITRS for Table 2-3 and Table 2-4.

BICYCLE PARKING AND SUPPORT FACILITIES

This section describes existing bicycle parking, showers and locker facilities in Alameda County. Referred to as "support facilities," these are essential components of bicycle travel. Bicycle access to transit also is a crucial element of supporting bicycle transportation and is discussed following this section. Bicycle parking, showers and clothes storage and changing facilities encourage bicycling and in some cases, they may make the difference of the bike trip being made at all.

The following paragraphs describe how the demand for bicycle parking varies by time duration and how this affects the types of parking facilities that meet the demand.

Bicycle Parking Duration

Bicycle parking demand falls into three general duration categories:

- Short-term - 2 hours or less. Typical application is the shopping trip.
- Long-term - 3 hours to full day. Typical application is the work trip.
- Overnight - one night to two weeks or more. Typical application is the weekend or vacation trip, but also used by commuters who do not ride home the same day they rode to work.

Classes of Bicycle Parking

Bicycle parking facilities fall into three general categories. The following discussion describes the three classes of parking and which class meets the various parking demand categories.

Class I

This is defined as protecting the entire bicycle and its components from theft, vandalism, or inclement weather. It is appropriate for long-term bicycle parking such as at employment centers or transit stations. Examples are bike lockers, rooms with key access for regular bike commuters, guarded parking areas, and valet or check-in parking such as the BikeStation at the downtown Berkeley and Fruitvale BART stations. A common variation of guarded bike parking is at schools where racks are placed within a fenced compound to provide more security to discourage theft. The compound is either locked during the day or unofficially guarded by the activity within the school.

Class II

This is defined as a rack to which the frame and at least one wheel can be secured with a user-provided U-lock or padlock and cable. This type of parking is appropriate for short-term parking such as at shopping areas, libraries, and other places where the typical parking duration is about two hours. Examples of racks popular with bicyclists are the wave or ribbon racks and the inverted U-rack, or horse rail rack. Increasingly popular are higher security Class II racks.

Class III

These racks secure only one wheel to the rack and were quite popular in school yards. They are never recommended except in guarded areas or locked rooms, where they are used in Class I situations.

Bicycle Parking Policies and Ordinances

The status of each jurisdiction's bicycle parking programs is summarized in Table 2-5. Five cities have bicycle parking ordinances for new construction—Berkeley, Hayward, Emeryville, Livermore and Dublin and two cities are in the process of developing a new ordinance—Fremont and Oakland. The ideal ordinance would specify the types (e.g. Class I lockers or attended parking and Class II bike racks) and amounts of bicycle parking by land use as well as including showers and clothes lockers. Some ordinances tie the amount of bike parking to the amount of vehicle parking required. However, the amount of bike parking should be proportionate to the square footage rather than the number of vehicle spaces.

Table 2-5—Summary of Existing Bicycle Parking Programs and Ordinances

Jurisdiction	Parking Ordinance	Current Bike Rack Installation Program
County, Western Unincorporated areas	Recommended in 1996Bike Plan	No
Alameda	1 per 10 vehicle spaces	Bike parking recommended in the 1999 bike plan
Albany	Recommended in the 1997 bike plan	No current plan
Berkeley	1bike parking per 2000 sq. ft. of new construction	Current citywide bike rack program
Dublin	1 bike rack per 20 vehicle spaces	No
Emeryville	City ordinance allows Credit up to 1/40th of vehicle parking. As part of standard conditions of approval city requires bike racks for residents, visitors and employees	Yes, through the new citywide bike rack installation program
Fremont	Credit up to 1/8 of vehicle parking. New ordinance under development.	No
Hayward	Credit for two-wheeled vehicle spaces for more than 50 parking spaces are required –additional spaces for two-wheeled shall be provided: • One parking space for every 4 bicycle spaces provided • Total credits shall not exceed 5 percent of total required parking spaces.	Usually requested from applicants during development review process but no ordinance exists.

Jurisdiction	Parking Ordinance	Current Bike Rack Installation Program
Livermore	4 bicycle stall or a number equal to 20 percent of the required off-street auto parking stalls, whichever is greater (for industrial, warehouse, manufacturing uses, the ratio shall be 10 percent of the required off-street automobile or truck parking stalls), which shall be provided in accordance with these standards – For each 10 bicycle parking stalls provided, there shall be permitted reduction of one required automobile parking stall to a maximum of 15 percent of the required automobile parking stalls.	No
Newark	No	No
Oakland	None but an ordinance is under development	Current citywide bike rack program
Piedmont	No	No
Pleasanton	No	No
San Leandro	No	No
Union City	No	No

Shower and Locker Facilities and Programs

Showers and storage for clothing encourage bicycle commuting, and may make the difference as to whether biking to work is practical. Showers and lockers also provide benefits to all employees as they can be used by those who run, walk, or cycle during lunch breaks. Clothes storage facilities can be individual lockers or a closet shared by all employees.

Ordinances requiring or encouraging shower and locker facilities are typically less common than bike parking ordinances and none of the jurisdictions currently require showers as a component of new office and retail construction or renovations.

BICYCLE ACCESS AND TRANSIT

Many commuters live too far from transit to walk, and feeder buses may not be available, or may be inconvenient. Using bicycles to access transit stops can quadruple the 5-minute catchment area. In 5 minutes, a person can walk about one-quarter mile or ride a bike over one mile. Bringing bicycles on board transit vehicles is another way to combine bicycles and transit to extend the feasible length of the commute trip. This section discusses bicycle access to transit services and parking at transit stations. It includes policies governing on-board bicycle access to trains, ferries, buses and paratransit, as well as bike storage facilities, including racks and lockers at train stations and ferry terminals. Where available, access mode split data show the percentage of transit patrons who use these facilities.

RAIL TRANSIT PROVIDERS

Alameda County has three providers of rail transit: the Altamont Commuter Express (ACE) Train, Capitol Corridor, and Bay Area Rapid Transit (BART). The ACE Train brings residents of San Joaquin County and the Tri-Valley area of Alameda County to the job centers in southern Alameda County and Santa Clara County. BART connects both Alameda and Contra Costa Counties to San Francisco. Capital Corridor provides inter-regional rail service, traveling along the western edge of Alameda County north towards Sacramento and south to San Jose.

Altamont Commuter Express Train

The Altamont Commuter Express (ACE) is a commuter train service that started in October 1998. It provides two morning and two afternoon trains between Stockton and San Jose, with additional stops in Lathrop/Manteca, Tracy, Vasco Road (in Livermore), Livermore, Pleasanton, Fremont and Santa Clara.

Bicycle Access

Spaces are available on a first-come, first-served basis. When demand exceeds capacity of bicycle spaces on the trains, bicyclists are encouraged to use the lockers at the stations.

Bicycle Storage

Bicycle lockers are provided at three of the four ACE stations in Alameda County, while bicycle racks are available at two at the time of this report preparation. Lockers are available on a first-come, first-served basis to ACE riders. When assigning lockers, preference is given to Monthly Pass holders. As shown in Table 2-6, the Vasco, Livermore and Pleasanton stations each have six lockers and, except for the Vasco Road station, most of them are rented out. Passengers must register and pay a $30 key deposit to use the lockers. ACE is currently in the process of procuring additional shelters for the following locations: Vasco Road, Livermore, Pleasanton, Each setup will have capacity for an additional 12 bikes at each of the listed facilities. It is anticipated that this project will be completed by December 2006.

Table 2-6—Bicycle Storage at ACE Stations

	Lockers				Rack			
Station	#	Filled	Avail-ability	Waiting List	#	Type	Covered	Prox-imity
Vasco	6	0	6	N/A	0	-	-	-
Livermore	6	5	1	4	12	A	Yes	Near
Pleasanton	6	6	0	yes	0	-	-	-
Fremont	0	-	-	N/A	6	A	No	Near
Total	**18**	**11**	7		**18**			

Type: A = wave, B = inverted U, C = "Coat Hanger" style, D = BART style racks with heavy chains, E = Bike Route, F = Bike Hitch, G = Post and Chain , H = "Schoolyard"

Proximity: Near (within 50 feet of station entrance) or Far (greater than 50 feet of station entrance.

Source: Altamont Commuter Express

Mode Split

According to ACE staff, roughly ten patrons per day board with bicycles. If another approximately 12 patrons park their bicycles at the stations, as indicated by Table 2-7, this implies a bicycle access mode split of roughly two percent (given approximately 1,200 daily boardings).

Capitol Corridor

The Capitol Corridor is an intercity passenger train system that provides a convenient alternative to traveling along the congested I-80, I-680 and I-880 freeway corridors. It operates fast, reliable and affordable intercity rail service to 16 stations in eight Northern California counties: Placer, Sacramento, Yolo, Solano, Contra Costa, Alameda, San Francisco, and Santa Clara, a 170-mile rail corridor. An extensive, dedicated motorcoach network provides bus connections to serve the second-largest urban service area in the Western United States.

The Capitol Corridor service is operated by the Capital Corridor Joint Powers Authority (CCJPA). The CCJPA is a partnership among the six local transit agencies in the eight county service area that shares the administration and management of the Capitol Corridor. The BART provides day-to-day management support to the CCJPA. On August 28, 2006, the CCJPA will be expanding the Capitol Corridor train service to 32 weekday trains between Oakland and Sacramento with 14 daily trains serving San Jose. The stops between San Jose and Sacramento are Santa Clara, Fremont, Hayward, Oakland, Emeryville, Berkeley, Richmond, Martinez, Suisun/Fairfield, Davis, Sacramento and Roseville.

Bicycle Access

The original Cab and Coach Cars and newly acquired California Cars have bicycle storage units that hold three bicycles on the lower level of the train car. The newly acquired Cab Cars have storage space for up to 13 bicycles on the lower level.

Mode Split

A most recent survey conducted by Capital Corridor in June 2006 showed that systemwide 7% of all passengers access the trains via bicycle. The following is the percentage mode split for bike access to the Alameda County stations from the June 2005 survey.

- Berkeley—21 percent
- Emeryville—4 percent
- Oakland Jack London—7 percent
- Oakland Coliseum—50 percent (Note: low sample; may be not statistically significant or acceptable)
- Hayward—5 percent
- Fremont-Centerville—0 percent

Bay Area Rapid Transit

BART provides rail service in the San Francisco Bay Area including the East Bay. All lines run through Alameda County. The San Francisco to Fremont and Dublin/Pleasanton lines serve southern Alameda County to Oakland, the San Francisco - Pittsburg/Bay Point line serves downtown and north Oakland; and the Richmond- Fremont line serves the western County from Berkeley to Fremont. In order to provide BART with the strategies necessary to enhance the attractiveness of the bicycle as an access mode and thereby increase the bicycle mode share, BART adopted the BART Bicycle Access and Parking Plan as a component of the Station Access Plans in 2002.

Bicycle Access

Bicycles are generally allowed on BART trains, with some exceptions. They are not allowed on the first car of the train, or on any crowded cars. Passengers with bicycles must use the elevator or stairs (not escalators), and are required to always walk bikes. Bicyclists must yield priority seating to seniors and people with disabilities. They must also yield to other passengers and hold bikes while on the trains.

During commute hours, bikes have limited access to BART in the peak direction. Bikes are allowed in the Embarcadero Station in San Francisco only for trips to the East Bay. During evening commute hours, bicyclists traveling from the East Bay towards San Francisco must exit at the Embarcadero Station.

Folded bikes are allowed on the trains at all times. During commute times, bikes must be folded before entering the paid area at the Embarcadero, Montgomery, Powell, and Civic Center San Francisco stations, and the 12th and 19th Street Oakland stations. At all other stations, they may be folded on the platform, but must be folded before boarding a train.

Bicycle Storage

Table 2-7 summarizes bicycle storage facilities at BART stations. Bicycle storage is available at all BART station, but the type of storage varies by style and capacity at each station.

Table 2-7—Bicycle Storage at BART Stations

	Lockers	Racks				Bikestation (Capacity)
Station	#	#	Type	Covered	Proximity	
North Berkeley	58	53	A24, B24, E5	Yes (48)	Near	No
Berkeley	0	20[1]	A	No	Near	(75)
Ashby	32	20	A	Yes	Near	No
Rockridge	56	26	D	No	Near	No
MacArthur	18	8	A	No	Near	No
19th Street	0	9[2]	A	No	Near	No
12th Street	0	12[3]	A	No	Near	No
West Oakland	8	28	D	No	Near	No

Station	Lockers #	Racks #	Type	Covered	Proximity	Bikestation (Capacity)
Lake Merritt	32	0				No
Fruitvale	14	32	D	No	Near	Planned (250)
Coliseum	2	40	D	No	Far	No
San Leandro	28	48	D	No	Near	No
Bayfair	16	32	D	Yes	Near	No
Castro Valley	20	20	B	No	Near	No24
Dublin/ Pleasanton	24	66	B	20Y, 44N	54N, 12F	No
Hayward	20	41	21D, 20G	Yes	Near	No
South Hayward	30	50	D	No	Near	No
Union City	20	66	48D, 18G	No	Near	No
Fremont	34	0				No
Totals	**400**	**671**				

Type: A = wave, B = inverted U, C = "Coat Hanger" style, D = BART style racks with heavy chains, E = Bike Route, F = Bike Hitch, G = Post and Chain , H = "Schoolyard"
Covered: Yes or No
Proximity: Near (within 50 feet of station entrance) or Far (greater than 50 feet of station entrance).
Occupancy: The number of bikes parked during a weekday site visit; because of data collection limitations, this information is not available for all stations.

[1] The rack is inside the station next to the bikestation and serves people that need parking outside the hours of operation.
[2] See footnote 1; these racks may be provided by the City of Oakland.
[3] There is ample bike parking in downtown Oakland. A rack with a capacity of twelve bikes is located at the 14th and Broadway entrance to BART.

Notes:

- Fruitvale—The BikeStation was built to store 250 bikes, but currently only a portion is being used. Because Fruitvale now has attended bike parking, the lockers are being phased out and will be removed.
- Lake Merritt—Has 32 metal lockers - the plastic lockers are no longer in use and are being removed.

Source: San Francisco Bay Area Rapid Transit District

Bike Lockers

BART currently has approximately 1000 bicycle lockers at its stations with 426 in Alameda County. Many of the stations have older style, plastic bicycle lockers that need to be replaced because they have been identified as safety hazards due to their flammability. On a regular basis, BART applies for funding from various sources to replace the plastic lockers with new electronic bicycle lockers.

Electronic bicycle lockers are not assigned to individuals. Someone wishing to use the locker can use either a prepaid "smart" card or credit card to access the locker (a demonstration project at the Concord Station will allow a user to check out a locker using a prepaid account and cellular phone). The lockers can be reserved in advance and will allow us to track usage. One electronic locker, used only when needed, can accommodate the demand of 3-5 of the traditional lockers that are assigned to individuals.

As of August 2006, there were approximately 260 people on the wait list for bicycle lockers in Alameda County. Alameda County stations with the highest wait list count include:

Dublin/Pleasanton..... 53
Lake Merritt 44
San Leandro..... 42
North Berkeley 32
Fremont 23
West Oakland 20
MacArthur 16
Ashby..... 17

Note: Wait lists are not kept for the Oakland Downtown stations 12th/City Center and 19th Street which have no street level space for lockesr or at Fruitvale and Downtown Berkeley which have Bike Stations.

Grant funding has been recently approved that will allow BART to place new and retrofited electronic bicycle lockers at the following stations:

San Leandro 20
North Berkeley 46
Dublin/Pleasanton 12
MacArthur 38
Ashby 12
West Oakland 6
Rockridge 32
Lake Merritt 32
12th Street/City Center 8*
19th Street 8*

* These lockers are being installed on the street level by the City of Oakland and are funded through a TFCA grant.

The selection of these stations was based on a combination of demand (usage and waitlist), and potential growth, as measured in the BART Bicycle Plan. The funding comes from the Measure B program, the Safe Routes to Transit program, and the Transportation Fund for Clean Air (TFCA). Some of the stations were selected to be funded from the TFCA program based on the TFCA funding available from that local jurisdiction.

Bike Racks

BART currently has over 2,700 spaces for parking on bicycle racks at its stations, with 1,290 in Alameda County. The racks provide a location for patrons to lock their bicycles, but offer a degree of security less than that of a bike station or bicycle locker.

Recently, BART has begun to place bicycle racks within the paid area at some stations, and currently these are in many San Francisco stations. Since they are located within the paid area, the bicycles are not accessible to non-paying patrons, which seems to provide a higher degree of security than bicycles rack outside the fare gates.

Bike Stations

BART operates three "Bike Stations" at the Embarcadero, Fruitvale, and Downtown Berkeley Stations, the later two in Alameda County. An attendant is available to park bicycles in a secure storage area during prescribed hours. Usage at each of the Bike Stations has been steadily increasing. Following is a brief summary of the stations and their usage (from August 2005).

	Downtown Berkeley	Fruitvale
Capacity	90 (stack up to 100)	200
Hours of Operation	Weekdays 7:00am-9:00pm	Weekdays 6:00am-8:00pm
Amenities	Minor bicycle repair and limited retail	Full bicycle repair and limited retail
Average Weekday usage (High)	59 – (92)	50 – (68)
Bike Parked Monthly	1307	743
Operator	Bicycle Friendly Berkeley	Alameda Bike

There has been consistently good feedback from users and the bicycle community, with no major incidents or problems with the operations.

Mode Split

According to a 1998 Station Profile Survey, the percentage of morning peak riders who use bicycles to access BART stations in Alameda County varies between one and eight percent depending on the station. The stations with the highest percentage of bicycle access are Ashby (eight percent) and North Berkeley (seven percent). Stations where only one percent of passengers arrive on bicycle include 12th Street

Oakland, Coliseum, South Hayward, Fremont, West Oakland, and Castro Valley. These figures reflect morning peak ridership only; since bicycle access onboard is restricted during peak periods, the overall (daily average) percentages of bicycle access may be slightly higher.

BICYCLE ACCESS AND FERRY TRANSIT

Alameda County is served by two ferry providers. The Alameda/Oakland ferry connects the cities of Alameda and Oakland with San Francisco. The Harbor Bay Ferry connects the southern portion of the City of Alameda with San Francisco.

Alameda/Oakland Ferry

The Alameda/Oakland Ferry provides service between Main Street in Alameda, Jack London Square in Oakland and San Francisco.

Bicycle Access

The ferry allows bicycles; they must be stored on the first deck fantail. Passengers with bicycles must allow the other passengers to disembark first.

Bicycle Storage

As shown in Table 2-8, both Alameda/Oakland Ferry terminals have bike lockers and racks.

Table 2-8—Storage at Alameda/Oakland Ferry Terminals

	Lockers				Rack			
Station	#	Filled	Avail-ability	Waiting List	#	Type	Covered	Prox-imity
Jack London Sq.	8	7	1	0	4	B	N	N
Alameda Main Street	8	8	0	N/A	16	H	Y	N

Type: A = wave, B = inverted U, C = "Coat Hanger" style, D = BART style racks with heavy chains, E = Bike Route, F = Bike Hitch, G = Post and Chain , H = "Schoolyard"
Covered: Yes or No
Proximity: Near (within 50 feet of station entrance) or Far
N/A: Not available
Source: Alameda/Oakland Ferry

Mode Split

According to Alameda/Oakland Ferry staff, probably 85 to 90 percent of passengers access the ferry by automobile, with the remaining 10 to 15 percent split between walking, bicycle, transit, and drop-off by other drivers. It was also noted that the number of on-board bicycle commuters appears to be growing, with 10 to 15 bicyclists a day boarding during the morning peak.

Harbor Bay Ferry

The Harbor Bay Ferry provides ferry service from the San Francisco Ferry Building to Bay Farm Island (part of the City of Alameda) in the East Bay.

Bicycle Access

Bicycles are allowed on the ferries.

Bicycle Storage

There are no bike lockers or bike racks at Harbor Bay on Bay Farm Island.

Mode Split

According to ferry staff, the majority of riders access the ferry terminal by automobile.

BICYCLE ACCESS AND BUS TRANSIT

Six agencies provide bus service to Alameda County: AC Transit, County Connection, Dumbarton Express, Santa Clara Valley Transportation Authority (VTA), Union City Transit, and WHEELS (LAVTA). In general, buses provide shorter distance trips and stop more frequently than trains and ferries. AC Transit provides comprehensive service within the urban, western East Bay and TransBay service to San Francisco; the other five serve limited areas of Alameda County.

AC Transit

The Alameda-Contra Costa Transit District (AC Transit) serves western Alameda and Contra Costa Counties from Richmond and El Sobrante to Milpitas and Warm Springs. It provides service throughout Alameda County with the exception of the Tri-Valley and Union City. In addition, AC Transit provides TransBay service to San Francisco.

Bicycle Access

All of AC Transit buses are equipped with front-mounted bike racks. Passengers must load and unload their own bicycles without assistance from the bus driver. Generally, bikes are not allowed on buses. AC Transit Board policy allows bike on buses at the discretion of the drivers between midnight and 5.00 a.m. The entire AC Transit Bus Fleet is equipped with bike racks. In addition, the District has a program to repair and replace damaged bicycle racks.

Mode Split

AC Transit passenger survey shows that approximately 2% of passengers used bikes to get to and from bus stops.

Dumbarton Express

The Dumbarton Express provides weekday express bus service across the Dumbarton Bridge, connecting Union City (BART), Fremont, Newark, Menlo Park and Palo Alto. Dumbarton Express buses have a rack to hold two bikes; bikes are not allowed on the buses when the racks are full.

Santa Clara Valley Transportation Authority

Santa Clara Valley Transportation Authority (VTA) provides bus and light rail service in Santa Clara County and Fremont. All VTA buses are equipped with exterior bike racks. Except for the Dumbarton and Highway 17 Express, when the racks are full, passengers are permitted to bring their bikes on to the bus.

Union City Transit

Union City Transit operates within the city limits. Routes are coordinated with BART trains, AC Transit and the Dumbarton Express. All Union City Transit buses have bike racks.

WHEELS

WHEELS is a service of the Livermore Amador Valley Transit Authority (LAVTA) and serves the communities of Dublin, Livermore, and Pleasanton. WHEELS service is centered around the BART station and the Livermore Transit Center. All WHEELS vehicles have front loading bike racks that carry 2 bikes. More than 50 percent of the fleet has capacity for 3 bikes on front loading bike racks.

PARK AND RIDE LOTS

Alameda County has 13 public park and ride lots. Individuals use these lots to access transit or ridesharing opportunities. Two of them include bicycle lockers. These two are located in the City of Fremont at Route 84 and Ardenwood Boulevard and in Livermore at East Airway and Rutan Drive.

BICYCLE EDUCATION AND PROMOTION PROGRAMS

A summary of existing bicycle safety education programs available in Alameda County is presented in Table 2-9. A general overview of bicycle education is presented in Appendix D-1 and discussed in more detail in Chapter 4.

Table 2-9—Summary of Bicycle and Pedestrian Safety Education

Program Type	Audience	City/Agency
In-school bike safety presentations	C	Alameda PD, Castro Valley (County Sheriff), Dublin PD, Fremont PD (pedestrian safety) & Safe Moves, Livermore USD, Piedmont PD, Pleasanton PD, San Leandro (Safe Moves), Union City (PD),Berkeley (HHS), Newark PD
Presentations to other groups (neighborhood, scouts, day care, seniors)	A, C, M	Fremont PD & Safe Moves, San Leandro (Safe Moves)
Bike Rodeos or Derbies	C	Alameda PD, Berkeley HHS, Dublin PD, Emeryville PD, Livermore PD, Piedmont PD, Pleasanton PD, San Lorenzo (CHP), Union City PD, Newark PD
"Safety Town" simulation	C	Alameda USD, San Leandro Safe Moves, Berkeley Safe Moves, Oakland PD (for Children)
Education alternatives to citation, including "Bicycle Traffic Schools"	C	Dublin PD, Livermore PD, Pleasanton PD
Police bike patrol	A, C, M	Alameda PD, Albany PD, Berkeley PD, Dublin PD, Emeryville PD, Livermore PD, Piedmont PD, Hayward PD, San Leandro PD, Union City PD, Pleasanton PD, Oakland PD, and EBRPD Public Safety, Newark PD
Bike equipment trailer (agency-provided bicycles and helmets for events)	C	Dublin PD
Helmet sales to parents and children	A, C	Oakland PD (Children)
Helmet promotion and fitting for low-income residents	A, C	Berkeley, Fremont (Safe Moves-Children)
Helmet-use reward coupon	C	Livermore PD
After-school supervised rides	C	Youth Bike Adventures (countywide), Cycles of Change
Multi-lesson Traffic Safety Curriculum	C	Berkeley (6^{th} grade)
Banners in high-collision areas	M	City of Berkeley
Youth "Earn A Bike" Program	C	Cycles of Change ,Oakland Parks and Recreation
Effective Cycling	A, C	Effective Cycling Instructors available through the League of American Bicyclists (www.bikeleague.org)

Key:

HHS	Health and Human Services
PD	Police Department
Safe Moves	Contract provider of safety education programs and events
USD	Unified School Districts

Audiences:

A	Adult cyclists
C	Child cyclists
M	Motorists
L	Law Enforcement

SUMMARY OF EXISTING CONDITIONS

- According to the 2000 Census, 1.2 percent of Alameda County residents commute to work on bicycle.
- Forty-four percent of existing bicycle trips are 15 minutes or less.
- A lack of systematic data collection on bicycle trips and discontinuous routes in Alameda County point to the need for more cooperation between planning entities.
- Most general plans for jurisdictions in Alameda County encourage the use of nonmotorized transit.
- Ten of 15 jurisdictions in Alameda County have adopted bicycle plans and the EBRPD has an adopted plan.
- Intercounty connections exist in the eastern part of the County through the EBRPD multiuse trail network and existing roadways, in Northern Alameda County via the Ohlone and Bay Trails and existing roadways and in Southern Alameda County via the bike path on the Dumbarton bridge and bike lanes on Warm Springs Boulevard.
- Bicycle parking and facilities such as showers and lockers are essential components of bike transportation, though few ordinances exist to encourage these "support facilities."
- Bicycle facilities and access enhance air quality and congestion mitigation benefits of transit.
- Most transit providers in the county offer bicycle parking facilities.
- During peak commute hours, bicycles have limited access to BART and are especially limited on runs going to San Francisco.
- The first Bike Station in Alameda County was installed at the Downtown Berkeley BART station in 1999 and at the Fruitvale BART station in Oakland in 2004.