



7 CIRCULATION – BART, STREETS, BUS, BIKE, AND PEDESTRIAN

This section discusses background studies and plans, the roadway network, transit network, and bicycle and pedestrian conditions, and discusses key transportation issues relevant to the Planning Area.

7.1 Background Studies – BART Stations

BART Station Profile Study (2008)

The BART Station Profile Study provides a system-wide profile of weekday customers at each individual BART station and for the overall system based on a 2008 survey of BART customers. The main purposes of the study were to better understand how customers use and access BART, to track changes that have occurred since the last study, and to anticipate customers' future requirements. Topics covered include detailed trip information and customer demographics. The following Table 7.1 shows data for riders using the Lake Merritt Station.

On an average weekday, 6,021 riders enter Lake Merritt Station. Of these riders, 2,987 riders (nearly half) are coming from home (origin). Most riders access BART by walking, and are from the City of Oakland. While the Planning Area is 65% Asian, only 27-30% of riders are Asian. The largest demographic for riders is white and ages 25 to 44 and 45 to 64, different than area's population.

Data indicate that the median distance to the Lake Merritt Station from home origins by all modes is 0.91 miles. The median walking distance is 0.5 miles while the median car distance is 1.83 miles. Data is not available for median transit distance.

Data indicate that destinations for users of the Lake Merritt BART Station are largely work and school. School visits are likely largely Laney students. Destinations are shown in Table 7.1. The median walking distance to destinations is 0.18 miles. Data is not available for median car and transit distance.

Table 7.2 compares travel modes to and from the Lake Merritt Station. As shown, the Lake Merritt station has the highest percentage of walk mode for both riders coming from home (origins) and from places other than home (non-home, usually destinations).

When compared to the 1998 passenger survey results in the BART 1998 Station Profile Report, the 2008 results found several changes at the Lake Merritt BART station, including:

- An increase by 10% in the share of people walking from home to the station.
- A decline of 10% in the share of people taking transit from home to the station.
- More walk trips from the Jack London District, which experienced a dramatic increase in residential development during the past ten years.
- A 50% increase in bicycle mode share at Lake Merritt BART, which is the sixth highest bicycle mode share station in the BART system.
- The absolute number of bicyclists accessing the station increased by 115%, making it the eighth highest in the BART system.

Figures 7.1 through 7.6 show the origins and destinations, by mode of access, of BART riders using the Lake Merritt Station, 12th Street Station, and 19th Street Station. These maps reflect the degree of activity generated by BART use in the Planning Area.

TABLE 7.1: CHARACTERISTICS OF LAKE MERRITT STATION RIDERS

TRAVEL MODE		
MODE	ORIGIN	DESTINATION
Walk (only)	45%	80%
Bus/Transit	5%	8%
Drive Along	23%	3%
Carpool	4%	<1%
Dropped Off	15%	6%
Bicycle	8%	3%
ORIGINS AND DESTINATIONS		
PLACE	ORIGIN	DESTINATION
Work	73%	52%
School	9%	29%
Work Related Activity	4%	5%
Visit Friends/Family	3%	2%
Personal Errands	3%	6%
Medical/Dental	2%	2%
Shopping	2%	-
Other	6%	3%
ETHNICITY		
	ORIGIN	DESTINATION
Non-Hispanic		
White	43%	35%
Black/African American	14%	16%
Asian or Pacific Islander	27%	30%
American Indian or Alaska Native	<1%	1%
Other, including 2 or more races	4%	5%
Hispanic (any race)	12%	13%
AGE		
	ORIGIN	DESTINATION
13 to 17 Years	1%	1%
18 to 24 Years	11%	20%
25 to 44 Years	60%	44%
45 to 64 Years	25%	30%
65 Years and Over	3%	5%

HOUSEHOLD INCOME		
	ORIGIN	DESTINATION
Under \$25,000	16%	21%
\$25,000 to \$49,999	22%	19%
\$50,000 to \$74,999	20%	19%
\$75,000 to \$99,999	12%	13%
\$100,000 to \$149,999	19%	17%
\$150,000 and Over	11%	11%
CITY OF HOME ORIGIN		
Oakland	85%	
Alameda	9%	
Other	6%	

Source: BART, 2008 BART Station Profile Study, 2008.

TABLE 7.2: TRAVEL MODE TO LAKE MERRITT STATION

TRAVEL MODE	PERCENTAGE TO LAKE MERRITT STATION (ORIGINS)	PERCENTAGE FROM LAKE MERRITT STATION (DESTINATIONS)
Walk (only)	45%	80%
Bus/Transit	5%	8%
Drive Alone	23%	3%
Carpool	4%	<1%
Dropped Off	15%	6%
Bicycle	8%	3%

Source: BART, 2008 Station Profile Report.

Lake Merritt BART Station Final Summary Report (2006)

The Lake Merritt BART Station Final Summary Report was prepared for the Bay Area Rapid Transit District (BART) through a grant funded by the California Department of Transportation (Caltrans). The purpose of the Report was to develop a community vision for the station area with input from community members and analysis of existing conditions, including a market analysis, station access survey, and land use conceptual design study. The Report laid the foundation for future planning efforts. The Report includes three main sections: the Existing Conditions, Focus Group Key Findings and the Better Streets Concept Study.

The Existing Conditions section contains information regarding the context of the study area, land uses, the built form, transportation, demographics, economic characteristics and market analysis, existing plans and projects nearby, and opportunity sites. This section also includes results of a BART patron survey, conducted May 25-26, 2005 by Corey, Canapary & Galanis. This survey gathered information about patrons who use the Lake Merritt BART Station and their mode of access to the station. Survey results are discussed in both the Demographics and Local Transportation subsections.

The Focus Group Key Findings section summarizes comments received from four community meetings held in winter 2005 on future development and access improvements and issues at the Lake Merritt BART Station. These groups were led by the Oakland Chinatown Chamber of Commerce and Asian Health Services, respectively reaching out to local business owners, local residents and employees, and users of the BART Plaza. The Better Streets Concept Study section includes a review of existing studies and plans near the station, a detailed assessment of street dimensions and infrastructure and traffic flow, and identifies opportunities for streetscape improvements. It also included discussions on conversion from one-way to two-way traffic flow operation (i.e. Chinatown One-Way Street Conversion Study).

The Report recommends that future planning efforts should focus on improving pedestrian and bicycle access to the station area to help increase access to the Station, and notes that new development and streetscape improvements could contribute to a stronger neighborhood identity for the area around the Station. Several key opportunity sites were identified in the Report, including publicly owned city blocks adjacent to the Lake Merritt BART station, areas fronting Fallon Street near the station, areas within freeway underpasses, and at the Laney College parking lot.

Lake Merritt BART Station Access Inventory (2004)

According to the November 2004 report¹ prepared by BART, the Lake Merritt BART Station mostly serves the local neighborhoods of Lakeside, Clinton Park, Loft District near Jack London Square, and Chinatown and key destinations within a half-mile radius, such as the Oakland Museum, Alameda County Administrative Complex, and Laney College. Given this function and the small surface parking lot, walk and bike access are high, while access by transit and driving are low at the Lake Merritt station relative to BART systemwide.

This report identified specific deficiencies that discourage walking and biking to the BART station, specifically:

- The inability to cross 12th and 14th Streets between Oak Street and Lakeshore Avenue; and
- The uninviting underpass areas created by I-880.

The report recommendations include the following:

- Promote TOD and placemaking improvements at the station;
- Create a network of safe walking routes and bikeways between the station and surrounding neighborhoods (e.g., Oak/Madison Street and 8th/9th Streets);
- Support the recommendations identified in the Lake Merritt Park Master Plan (particularly the proposed pedestrian and bike links across the 12th Street dam);
- Support the recommendations identified in the Revive Chinatown Community Transportation Plan;
- Create a bikeway between the station and the Oak to Ninth development (Oak Street and Embarcadero);
- Provide security improvements at the station;
- Explore neighborhood serving shuttle service opportunities;
- Develop a plan to address the BART Administrative Building Closure impact on station elevator; and
- Expand the passenger drop-off area.

¹ Bay Area Rapid Transit, Planning Department. Lake Merritt BART Station Access Plan, November 2004.

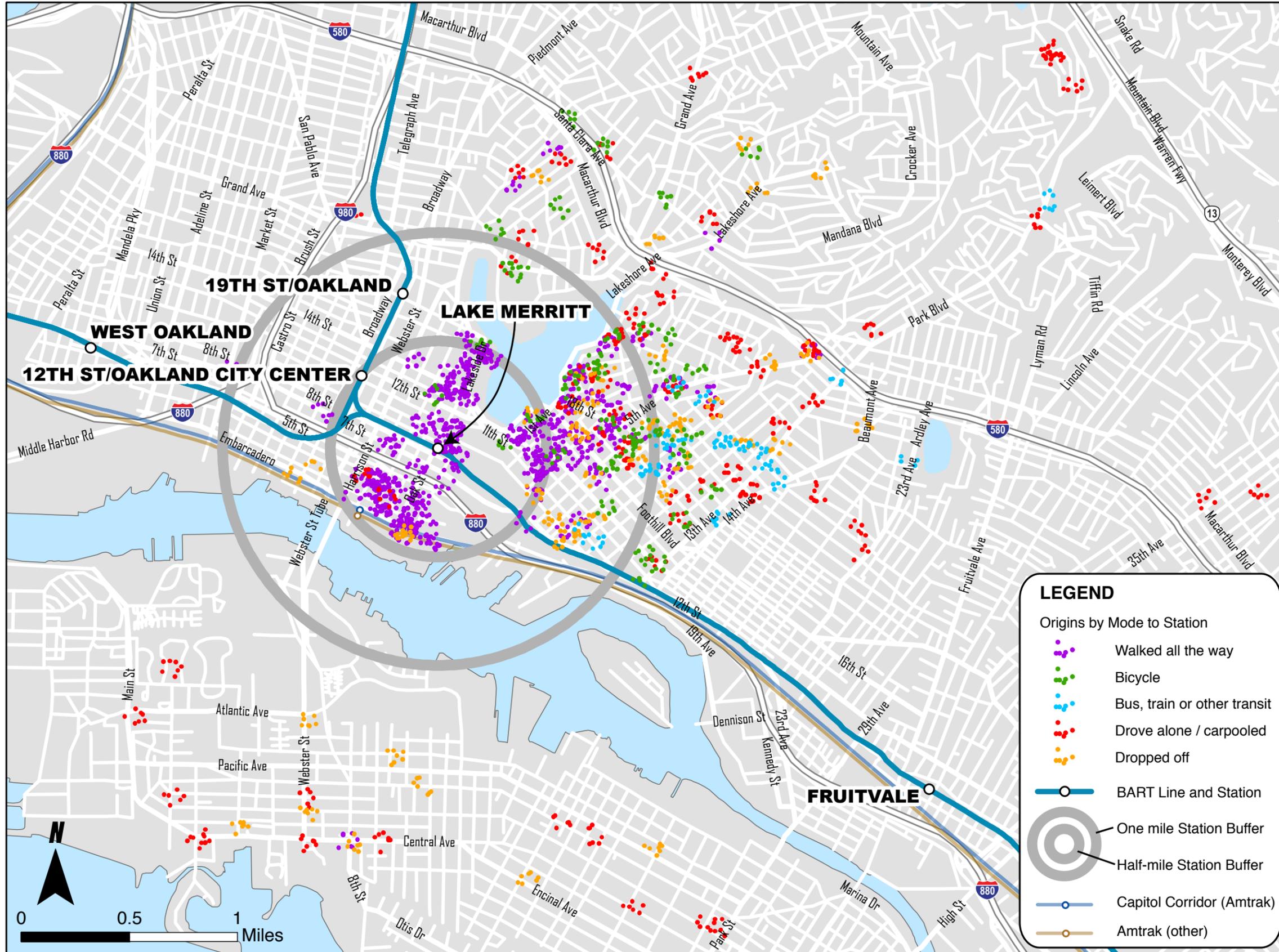
Jack London Square BART Feasibility Study (2004)

In 2001, the City of Oakland requested that BART study the feasibility of an infill station in the vicinity of Jack London Square on the existing train line to address the need to connect Jack London Square to downtown. The feasibility study, which began in 2003, included four conceptual alternatives: the BART Infill Station, an Underground BART shuttle, an electric streetcar, and Group Rapid Transit (GRT).

The feasibility study determined that an infill station and the GRT alternative were infeasible. The alternative of a single-tracked underground BART shuttle that terminated at Jack London Square was undesirable, but the extension of BART to Alameda, that would connect Downtown Oakland to Alameda through Jack London Square, had the potential to be studied by the City of Alameda.

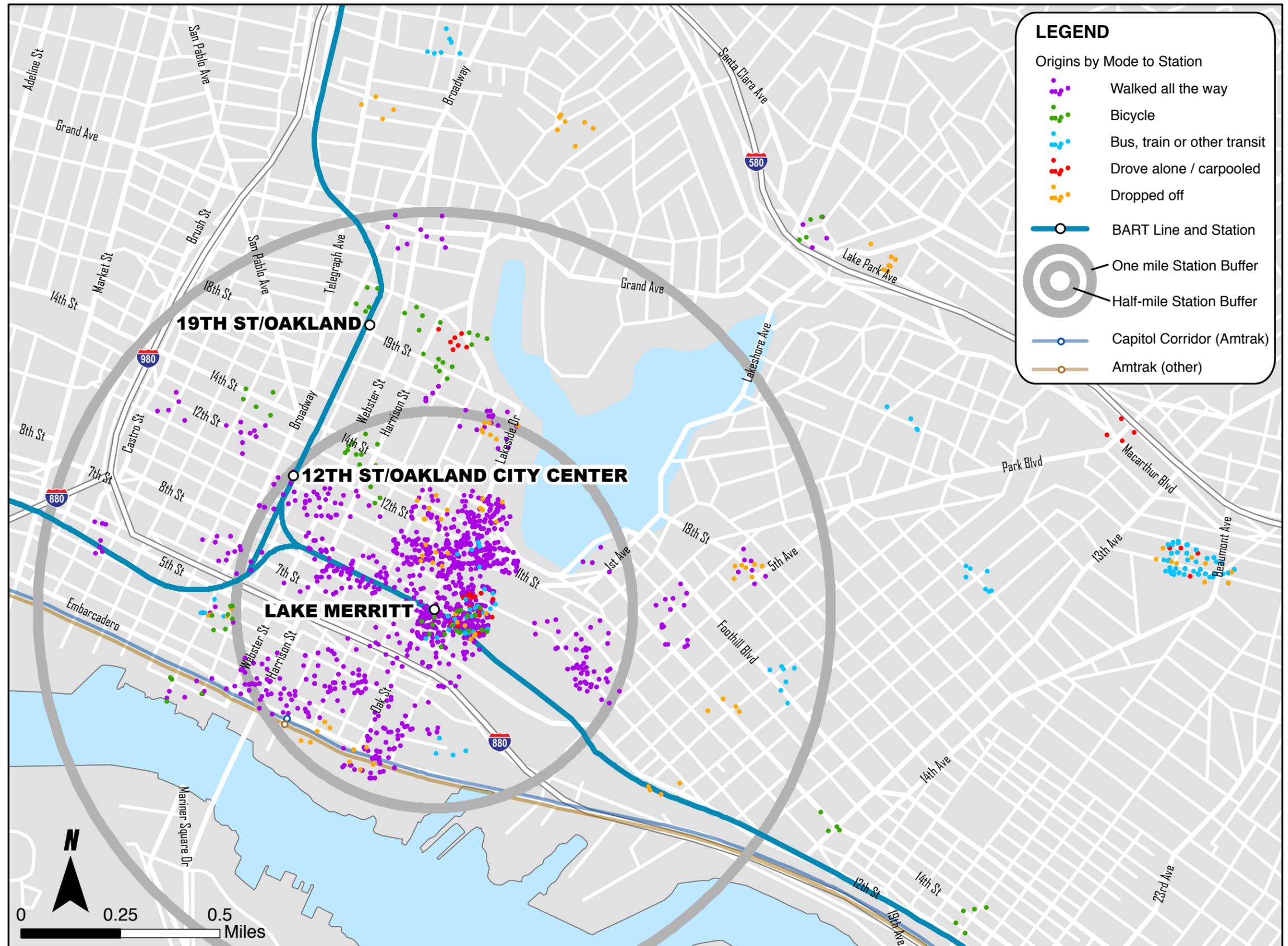
The streetcar concept was further studied and the Feasibility Study presents conceptual plans and different alignment options for a streetcar system. There currently is planned shuttle service for the Jack London Square area.

Figure 7.1:
LAKE MERRITT STATION: ORIGIN LOCATIONS OF BART RIDERS BY MODE



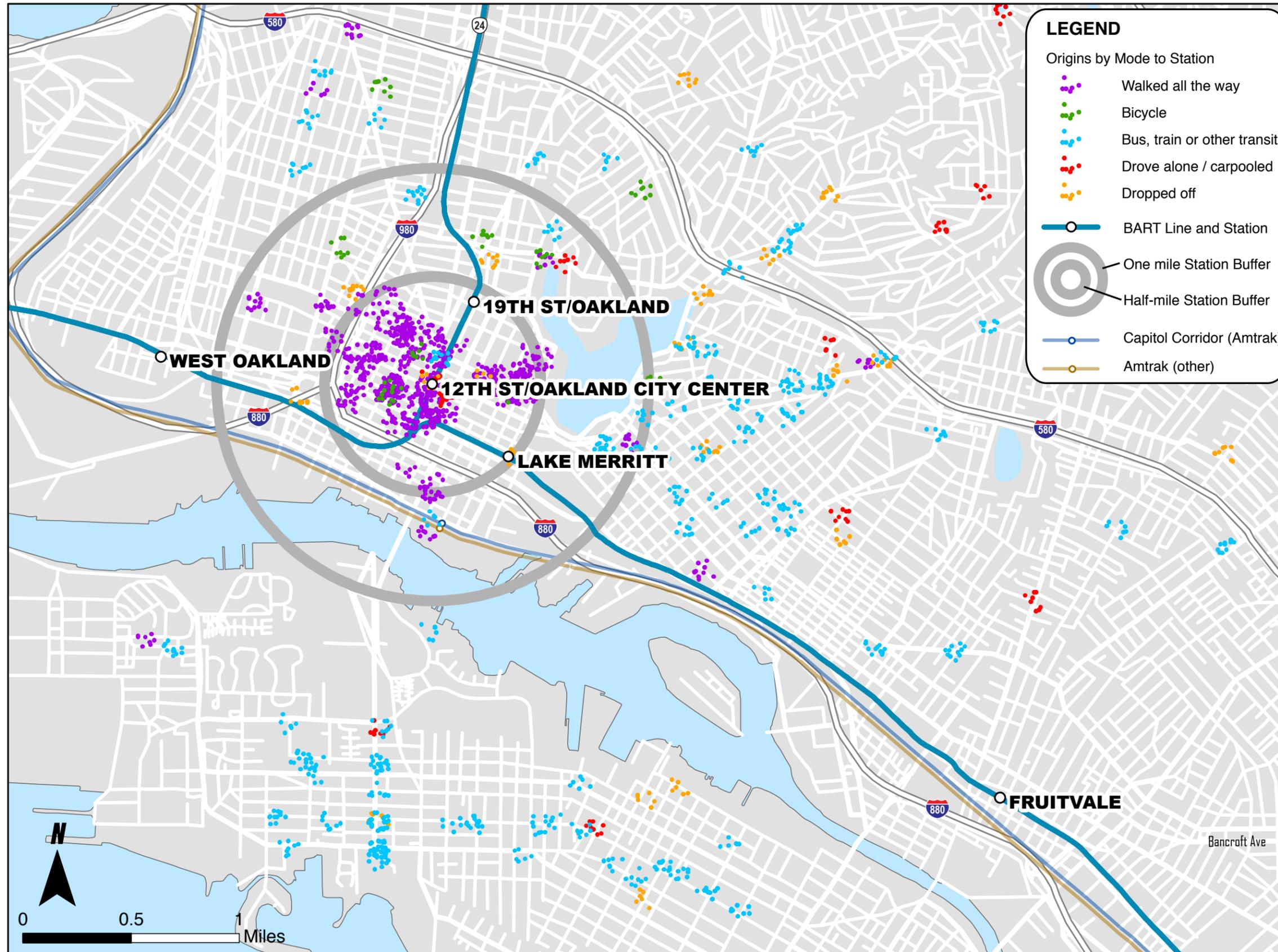
Data Sources: ESRI, 2008 BART Station Profile Study (weekday only; data are weighted from survey sample to represent average weekday ridership)

Figure 7.2:
LAKE MERRITT STATION: DESTINATION LOCATIONS OF BART RIDERS BY MODE



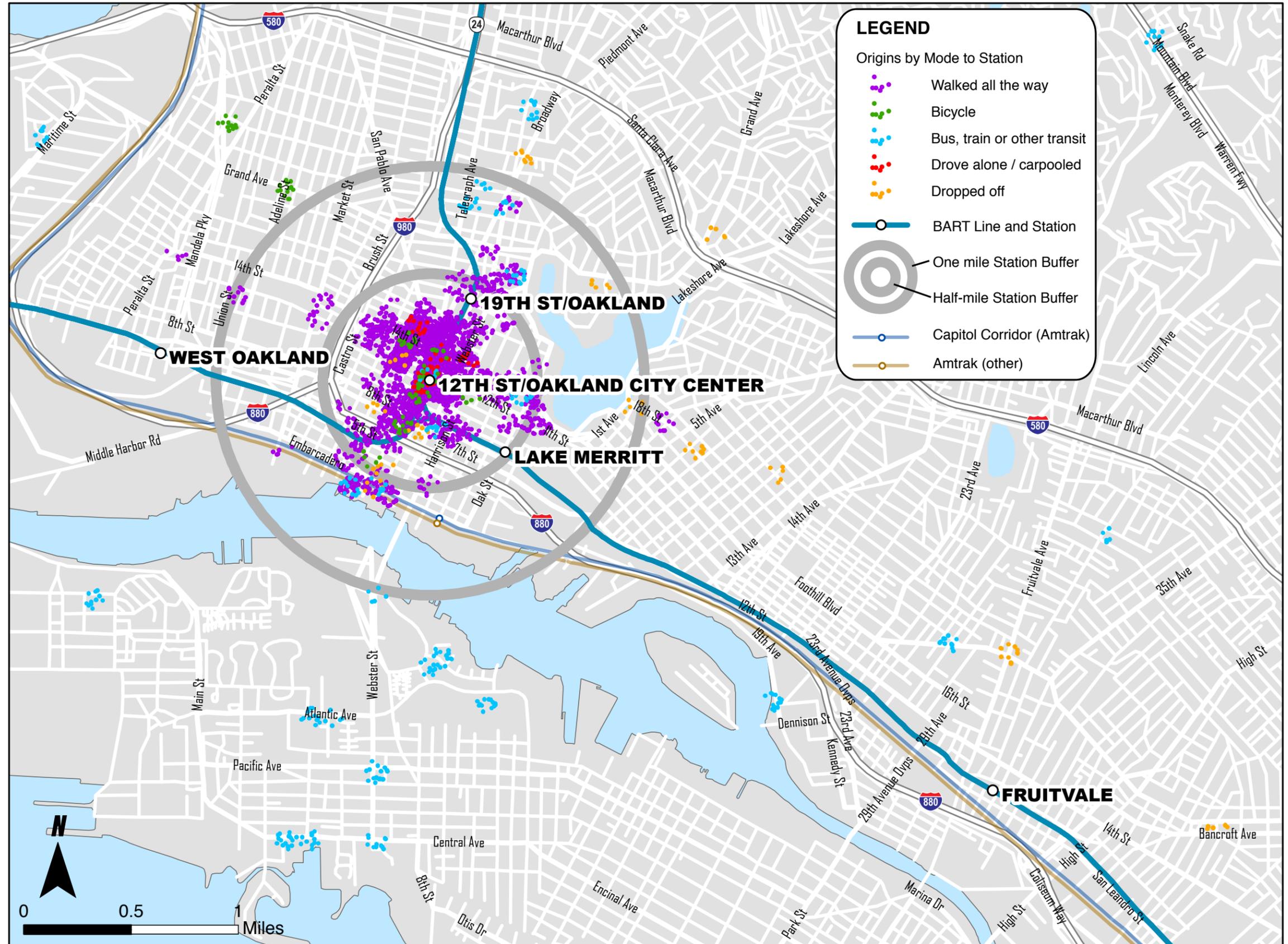
Data Sources: ESRI, 2008 BART Station Profile Study (weekday only; data are weighted from survey sample to represent average weekday ridership)

Figure 7.3:
12TH STREET STATION: ORIGIN LOCATIONS OF BART RIDERS BY MODE



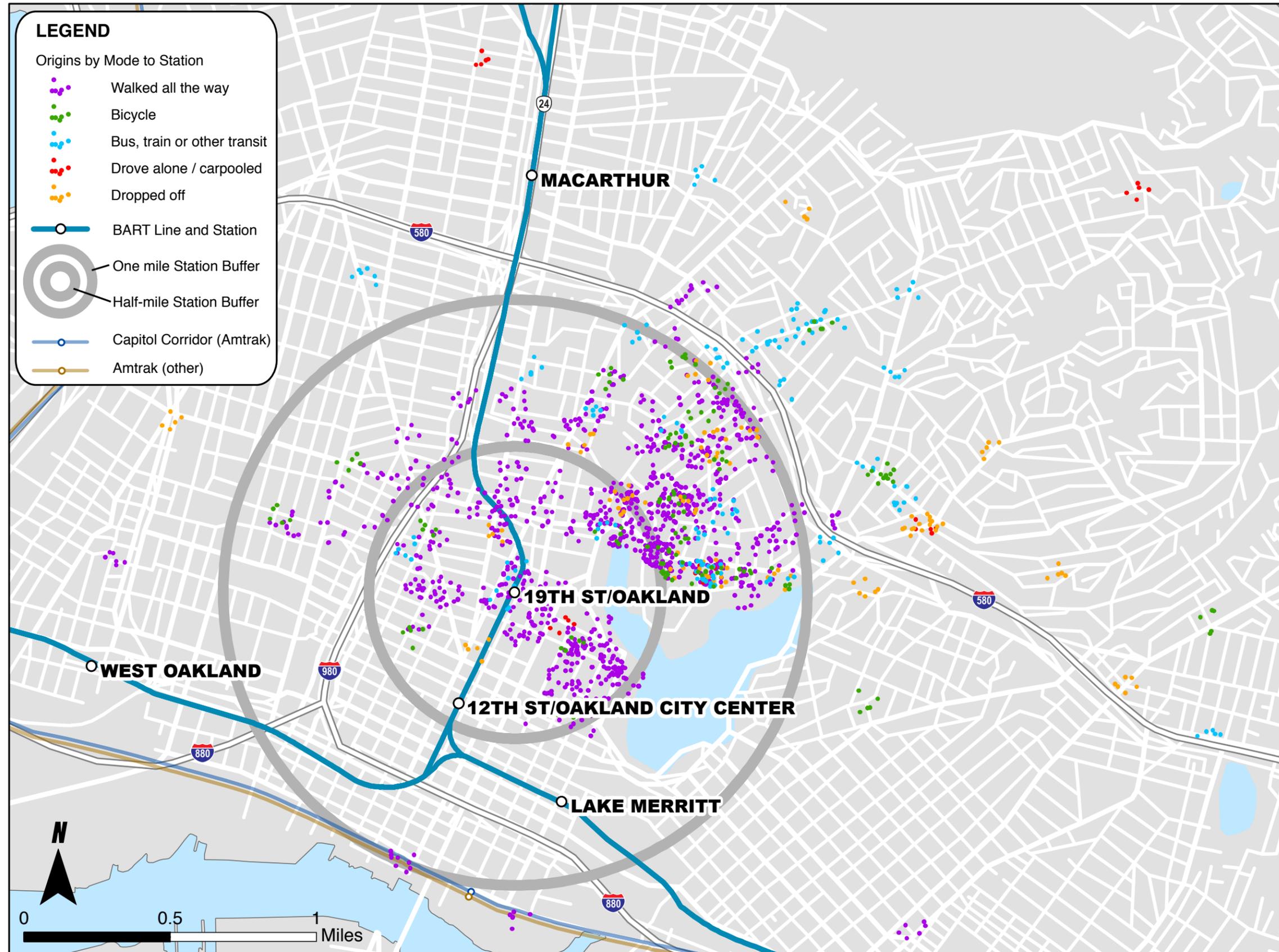
Data Sources: ESRI, 2008 BART Station Profile Study (weekday only; data are weighted from survey sample to represent average weekday ridership)

Figure 7.4:
12TH STREET STATION: DESTINATION LOCATIONS OF BART RIDERS BY MODE



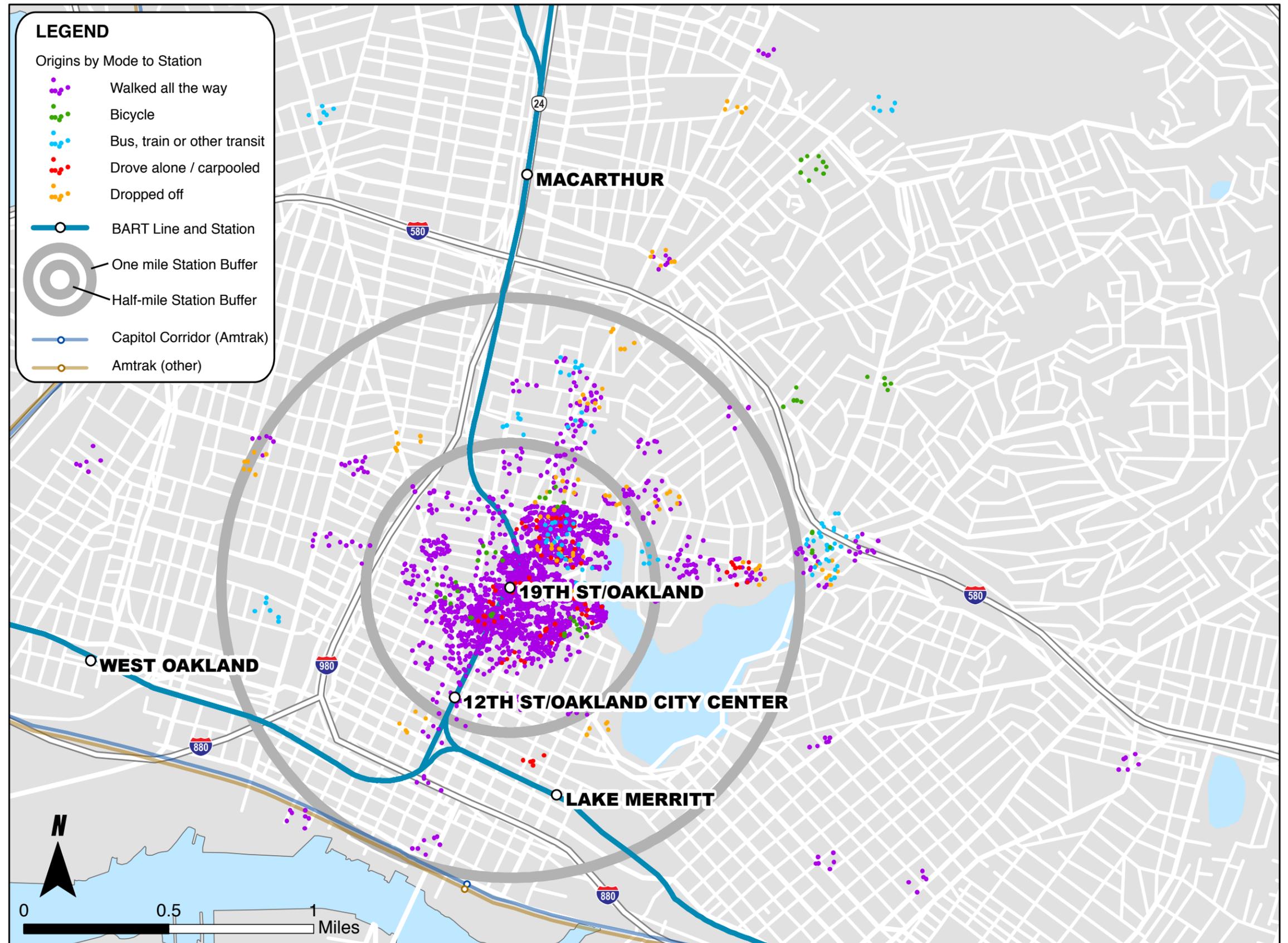
Data Sources: ESRI, 2008 BART Station Profile Study (weekday only; data are weighted from survey sample to represent average weekday ridership)

Figure 7.5:
19TH STREET STATION: ORIGIN LOCATIONS OF BART RIDERS BY MODE



Data Sources: ESRI, 2008 BART Station Profile Study (weekday only; data are weighted from survey sample to represent average weekday ridership)

Figure 7.6:
19TH STREET STATION: DESTINATION LOCATIONS OF BART RIDERS BY MODE



Data Sources: ESRI, 2008 BART Station Profile Study (weekday only; data are weighted from survey sample to represent average weekday ridership)

7.2 Background Studies – Chinatown

Revive Chinatown Community Transportation Plan (2004)

This plan addresses the core of Oakland’s Chinatown, bounded by 7th Street to the south, 10th Street to the north, Franklin Street to the west, and Harrison Street to the east. The Plan’s goals include creating a safe and accessible pedestrian environment, expanding transportation choices for community members and visitors, improving the attractiveness of Chinatown’s commercial district, and involving community members in the planning process.

The Plan identified four key issues in Oakland Chinatown: pedestrian safety and access, traffic issues, parking issues, and the appearance of Chinatown. The Plan recommends pedestrian, streetscape, traffic circulation improvement projects. In addition, the Plan also proposes a Parking Management Program and identifies current projects underway.

Revive Chinatown recommends several projects, grouped into short-term, mid-term, and long-term projects, described in Table 7.3.

TABLE 7.3: RECOMMENDED PROJECTS FROM REVIVED CHINATOWN COMMUNITY TRANSPORTATION PLAN

IMPROVEMENT PROJECTS	PEDESTRIAN	STREETScape	TRAFFIC CIRCULATION	PARKING MANAGEMENT
Short Term	<p>Install four scramble intersections at 8th/Franklin, 9th/Franklin, 9th/Webster, and 10th/Webster, including bilingual signage, and upgrade the signage at the existing scramble at 8th/Webster.</p> <p>Install bulb-outs at the five intersections with scramble signals.</p> <p>Increase the visibility of the scramble intersections with high-visibility or decorative crosswalks.</p> <p>Install pedestrian countdown signal heads at all intersections in the Chinatown core. Enhance the visibility of pedestrian crossings by installing continental-style crosswalks with advanced limit lanes.</p> <p>Remove the pedestrian barrier at Webster and 10th Streets. The installation of the scramble signal would ensure pedestrian safety at this location.</p>	<p>Install pedestrian-scale lighting along 8th Street between Franklin and Harrison Streets. This project is a near-term improvement to show the impact of installing pedestrian-scale lighting throughout the Chinatown core</p>	<p>Optimize traffic signal timing to reduce traffic congestion and improve traffic flow.</p> <p>Install a traffic signal at Franklin/7th. The City of Oakland has funded this project and the signal should be installed in the near future.</p> <p>Install signs along Brush Street, the I-980 frontage road, directing Alameda traffic to 5th and 7th Streets and thereby avoiding the Chinatown core.</p> <p>Convert 10th Street from one-way to two-way traffic flow. This change would reduce traffic on Webster Street.</p>	<p>Modify on-street parking/loading spaces to reduce double parking:</p> <p>Create truck loading zones in the core of Oakland Chinatown. These spaces would be for active truck loading only.</p> <p>Install meters on truck loading zones with 30-minute time limits.</p> <p>Designate the majority of on-street parking/loading spaces as truck loading zones for the morning hours. After that time, they would become short-term parking spaces (30-minute and one-hour meters) with some on-street loading spaces, depending on the needs of each block.</p> <p>Create diagonal parking on Franklin Street between 6th and 7th Streets and on 10th Street between Harrison and Madison Streets.</p> <p>Improve parking enforcement in Oakland Chinatown.</p> <p>Use walking beats to police parking and double parking violations.</p> <p>Give multiple tickets to vehicles parking in the same spots for long periods.</p>
Mid-Term	<p>Eliminate sidewalk obstacles by replacing parking meters with central pay booths and by consolidating newspaper boxes in the core area.</p> <p>Through merchant education and city enforcement, ensure that sidewalk vendor stands leave a minimum of 7 feet of unobstructed sidewalk for pedestrian traffic.</p>	<p>Add pedestrian amenities including banners, street trees, and street furniture and extend the pedestrian-scale lighting to additional blocks.</p>	<p>Consider converting the current one-way streets to two-way circulation in the area bounded by 14th Street, Broadway, I-880, and Oak Street. This project would reduce traffic congestion in Chinatown by better balancing traffic flow.</p>	<p>To increase parking supply, consider the addition of diagonal parking on streets just outside of the Chinatown core.</p> <p>Provide better pedestrian linkages to the parking spaces under I-880 with improved signage, sidewalks, and lighting along Webster Street. Create a weekend park-and-ride shuttle bus, linking Oakland Chinatown with the 13th/Franklin parking garage.</p> <p>Create a parking signage program, similar to that in San Francisco along Kearny Street, using overhead signs to inform motorists where parking is available.</p>
Long-Term	<p>Consider sidewalk widening on the less congested streets in the core like 9th and 10th Streets. For busier streets, sidewalk widening proposals would require additional study and discussion of the impacts to motor vehicle traffic.</p> <p>Long-term solutions to Webster Street’s traffic congestion require a direct connection between I-880 and the Webster and Posey tubes. A subsequent study, the “I-880 Broadway/Jackson Interchange Improvement Project”, will address regional access issues at this location.</p> <p>Consider the expansion of the proposed recommendations to areas east of the Chinatown core. This part of Oakland Chinatown is primarily a mix of residential and institutional uses. This area has same street width as the core but with lower traffic volumes. Diagonal parking could be expanded into this area to increase parking supply and calm traffic.</p>			

Source: City of Oakland, Revive Chinatown Community Transportation Plan, 2004.

The following projects are underway or completed:

- Traffic signal at 7th and Franklin Streets. The signals are installed and operating.
- BART bilingual wayfinding signage: BART received a grant that, in collaboration with the City of Oakland and community stakeholders, allowed for the development of a City of Oakland wayfinding template that could be installed in Chinatown. The purpose of the wayfinding signage was to provide bilingual pedestrian signage to guide residents and visitors to major Chinatown destinations, including connections to the Lake Merritt and 12th Street BART stations. The City of Oakland installed the signs with TLC grant monies.
- 10th Street two-way conversion and diagonal parking: The City of Oakland is studying the feasibility of converting 10th Street between Webster and Madison Streets to two-way traffic flow. This project will also include the installation of diagonal parking on multiple blocks. The conversion has been studied, but not implemented. Study results are described below.
- Transportation for Livable Communities (TLC) application: In July 2004, the City of Oakland submitted a TLC application for approximately \$3 million to fund the near-term pedestrian improvements in the Chinatown core. The money was received and projects were completed in January 2009. Projects completed with the TLC grant include:
 - Scramble intersections – completed at 8th/Franklin, 9th/Franklin, 9th/Webster, upgraded at 8th/Webster; 10th/Webster has not been done
 - Bulb-outs – only done at the 4 intersections where the scrambles are installed
 - High visibility or decorative crosswalks – completed at 4 scramble intersections
 - Pedestrian countdown signal heads – 30 signal heads were part of the grant located at intersections in the Chinatown core

The study estimates the cost of the recommendations at two levels, with the premium estimate at \$10,607,000 and the low cost estimate at \$9,671,000. The study also recommends the following additional planning efforts:

- Schools and senior centers: Additional planning is needed to formulate pedestrian safety improvements around Chinatown's schools and senior citizen facilities, including Lincoln Elementary School, the Hotel Oakland, and the Hong Lok Senior Center.

- Madison Square Park: This park is underused open space and may contribute to people's sense of insecurity when walking to and from the Lake Merritt BART station. Improvements to this park and the surrounding streetscape are an opportunity for better connecting the Chinatown core to the Lake Merritt BART station area.
- Interstate 880 underpass improvements: I-880 creates a barrier for pedestrians between Jack London District and Oakland Chinatown. The two districts could be better connected with pedestrian improvements at the underpasses between Broadway and Oak Street. Opening Franklin Street under the freeway is another opportunity for connecting these districts.

Chinatown One-Way Street Conversion Study (2009)

The Chinatown One-Way Street Conversion Study addressed the feasibility of converting Harrison Street, from 8th to 10th streets and 10th Street, from Madison to Webster streets, from one-way traffic operations to two-way operations. The study addressed the impacts to motor vehicle, transit, bike and pedestrian operations. The report concluded that the conversion of Harrison Street from one-way to two-way operations is considered to be feasible based on an assessment of many factors. Harrison Street currently has the available capacity to be converted to two-way operations without causing any significant traffic operational problems.

This action would create a challenge of providing an adequate radius for traffic to flow from westbound 10th Street to southbound Harrison Street. This challenge may be resolved by pushing the stop line for the northbound Harrison Street traffic southward or by converting 10th Street to two-way operations.

Converting 10th Street to two-way operations between Harrison and Webster Streets would require modifications to the lanes and traffic controls on 10th Street as far east as Madison Street in order to transition between the four-lane one-way section on the east end to the three-lane, two-way section at the west end. The City has concluded that the benefits may not be worth the costs of at least \$750,000.



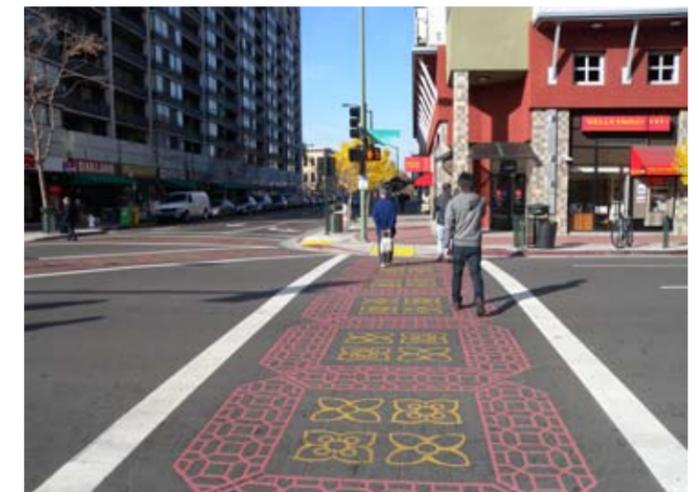
Businesses in Chinatown often spill out onto the sidewalks.



Groups of school children are often seen walking in the Planning Area.



Chinatown is made up of busy pedestrian streets.



New paving marks street crossings on a few key intersections of Chinatown.



The Pedestrian condition in the Chinatown Residential sub-area.



Recent pedestrian oriented streetscape improvements.

7.3 Circulation in the Planning Area

Community Goals

According to the AHS Community Engagement Process Report, the community identified pedestrian and bicycle safety as priority needs for the area. Community goals in regards to circulation include:

- Preserve and strengthen the neighborhood’s good public transit and walkability.
- Reduce truck and car traffic in order to reduce noise and greenhouse gas emissions.
- Expand modes of transportation serving the neighborhood. Ensure pedestrian safety with improved sidewalks and intersection crossings.
- Ensure compatibility of pedestrians, cyclists, and autos with street improvements that reduce traffic volume and speed.
- Improve parking serving Chinatown and the BART station.

Existing Commute Patterns

Table 7.4 reflects the commute patterns in the Planning Area and the City of Oakland. When compared to the City, the Planning Area typically has less vehicle ownership and uses alternative modes of transportation more often (public transportation, walk, and bike). Travel time to work is also generally shorter, though about 20% of commuters travel for over 45 minutes to work.

TABLE 7.4: SUMMARY OF COMMUTE CHARACTERISTICS (2009)

	PLANNING AREA		OAKLAND	
	TOTAL	% OF TOTAL	TOTAL	% OF TOTAL
NUMBER OF VEHICLES PER HOUSEHOLD				
No Vehicles	3,045	49.4%	30,389	19.9%
1 Vehicle	2,342	38.0%	63,962	41.9%
2 Vehicles	619	10.1%	41,396	27.1%
3 Vehicles+	152	2.5%	16,969	11.1%
Average Number of Vehicles	0.66		1.35	
TRANSPORTATION TO WORK¹				
Drove Alone	1,699	33.7%	97,585	55.2%
Car Pooled	538	10.7%	29,705	16.8%
Public Transportation	1,266	25.1%	30,930	17.5%
Walked	1,226	24.3%	6,731	3.8%
Bicycle	74	1.5%	2,090	1.2%
Other	239	4.7%	9,813	5.5%
TRAVEL TIME TO WORK¹				
Less than 15 Minutes	1,358	27.8%	30,765	18.1%
15 - 29 Minutes	1,409	28.8%	58,975	34.7%
30 - 44 Minutes	1,122	23.0%	39,399	23.2%
45 - 59 Minutes	562	11.5%	18,398	10.8%
60 Minutes +	436	8.9%	22,247	13.1%
Average Travel Time to Work in Minutes	29.8			33.6
¹ Workers Age 16+				

Source: Claritas Inc., 2009; Dyett & Bhatia, 2009.

7.4 Pedestrian Plans and Conditions

Pedestrian Master Plan (2002)

The Pedestrian Master Plan was adopted in November 2002, opening with the following vision statement: “To promote a pedestrian friendly environment; where public spaces, including streets and off-street paths, will offer a level of convenience, safety and attractiveness to the pedestrian that will encourage and reward the choice to walk.”

The plan establishes routes, including streets, walkways, and trails that connect schools, libraries, parks, neighborhoods, and commercial districts throughout the City. Goals of the master plan include ensuring pedestrian safety, developing pedestrian access, provision of pedestrian amenities through streetscaping and land use, education, and implementation.

Existing constraints on walking are identified as pedestrian and motor vehicle conflicts on busy streets and freeways as physical barriers. A specific list of pedestrian improvements is included in the Pedestrian Master Plan.

Several prioritized projects fall within the Lake Merritt Station Area Plan Planning Area, including:

Priority Projects, 1-5 Years:

- Pedestrian and Crosswalk Improvements:
- Candidate Streets (based on highest collisions):
 - 12th Street (10th Avenue to Brush Street)
 - Franklin Street (22nd Street to Embarcadero)
- Candidate Intersections (based on highest collisions):
 - 7th Street and Franklin Street
 - 14th Street and Madison Street
- Highest collision sites near schools
- Highest collision sites near senior centers

Downtown Streetscape Master Plan Projects:

- Oak Street Sidewalks from 2nd to 14th streets
- Webster Street Sidewalks from 6th to 11th streets
- Chinatown Streetscape Project
- Street Re-Striping (approved as per Bicycle Master Plan and Measure B Priority list submitted to City Council on June 11, 2002)

Priority Projects, 6-20 Years:

Pedestrian and Crosswalk Improvements:

- 12th Street Corridor (Oak to International)
- Pedestrian/bike and multi-use path; and Lake Merritt connection, crosswalks and pedestrian signals

Lake Merritt Channel Park Connection

Lake Merritt Multi-Use Path Widening

Street Re-Striping

- Broadway Corridor (25th Street to Embarcadero)
- Oak Street /Madison Corridor (Lakeside Drive to 2nd Street)

Existing Conditions

Field observations demonstrate strong pedestrian and bicycle activity within the Planning Area. The primary pedestrian area is the Chinatown Commercial District, where local residents walk to shop, eat out at restaurants, take children to schools, and attend many cultural facilities. Other major pedestrian destinations include: the County government center, Laney College, Lake Merritt BART station, and the Jack London Residential neighborhood. Residents, students, and workers use bus stations and the Lake Merritt BART station, ranging from young community college students to elderly residents.

Sidewalk Conditions

Generally, the street grid creates pedestrian-scale city blocks with continuous sidewalks on both sides of the street. Sidewalks in the study area are in fair to good condition. In the Chinatown Commercial area, crosswalks are striped where crossings are allowed and signals include pedestrian signal heads on most approaches. Pedestrian scramble signals, which provide an exclusive all-red phase for pedestrians to cross, are located at the intersections of 8th and Webster streets, 8th and Franklin streets, 9th and Webster streets, and 9th and Franklin streets. Sidewalk conditions are generally in good condition and mostly twelve feet wide throughout the Chinatown Commercial area.² Sidewalks in close proximity to the I-880 freeway are generally

² Revive Chinatown Community Transportation Plan: Final Report, September 2004, Figure 2.

narrower and shared with utilities that create four-foot wide chokepoints. They are also uneven and aged. The sidewalk conditions in other sub-areas in the Planning Area are generally in fair to poor condition. Pedestrian way-finding signs are located at various locations between the Chinatown Commercial and BART-ABAG sub-areas. Pedestrian-scaled lighting is not generally found in the study area, except for a couple in the Chinatown Commercial area.

Most intersections in the Chinatown Commercial area are equipped with updated curb ramps complete with detectable warnings, marked sidewalks, and allow crossings at all legs. One exception is the intersection at 10th and Webster streets, where pedestrians are prohibited from crossing the south leg due to the heavy volumes of westbound left-turning traffic. Numerous curb ramps outside of the Chinatown Commercial and BART Station areas need to be redesigned for proper crosswalk alignment and updated to reflect current ADA standards. Some corners lack curb ramps altogether, particularly in the area of Laney College and near the freeway around 5th Street.

Furthermore, many sidewalks within the Chinatown neighborhood are difficult to negotiate as merchant displays encroach onto the pedestrian right-of-way. These displays minimize sidewalk width and inhibit pedestrian access, mainly for the disabled and elderly population.



Pedestrian conditions near the I-880/ Broadway - Jackson Interchange are poor.



The entrance to the Webster Street tube to access Alameda.



Street crossing in the Planning Area.

Major Pedestrian Activity Patterns

Pedestrian activity and patterns in the study area were determined through field observation and review of previous studies. The field observations were focused on the activity centers that were most likely to generate walking trips.³ As shown in Figure 7.7, the key pedestrian activity areas include Chinatown Commercial area, Lincoln Park, Laney College, Jack London District, and major employers in the area, such as the County offices and BART/ABAG. In addition, the Lake Merritt BART station is a major destination for walk trips in the planning area.

In the Chinatown retail area, the sidewalks in front of shops are used for displaying produce and other merchandise, which in some cases encroaches upon the width available to pedestrians to pass. As noted in the Revive Chinatown study, peak pedestrian activity in Chinatown, specifically Webster Street between 7th and 10th streets, Franklin Street between 8th and 9th streets, and 8th Street between Webster and Franklin streets, occurs between 11 am and 2 pm, especially on Sundays. This sidewalk activity creates a vibrant feel in the Chinatown Commercial sub-area.

Pedestrian activity around the Lake Merritt BART Station is fairly heavy. Most pedestrians were seen accessing the BART station to and from the Government sub-area to the north, the East Lake Gateway sub-area to the northeast, Laney College to the east and the Jack London District to the south. BART station pedestrian activity was lightest to and from the west, as that area is also served by the 12th Street BART station. The heaviest pedestrian volumes for BART station access were found on Oak Street and 10th Street. Pedestrians seemed to favor Oak Street under the I-880 freeway.

Pedestrian Collisions

Collisions involving pedestrian injuries or fatalities from 1996 to 2009 are shown in Figure 7.8. This collision data may be limited as it only includes collisions that were reported and it does not include fatalities that occur after the collision. As shown, intersections with high numbers of collisions include 7th and Franklin streets, 9th and Webster streets, 12th and Webster streets, 12th and Harrison streets, and 14th and Madison streets. According to the Oakland Pedestrian Master Plan, the 7th and Franklin street intersection had the 4th highest number of collisions citywide, with nine collisions between 1996 and 2000.

³ The observations were made during the evening hours between 3:00 PM and 6:00 PM on January 7, 2010.

Rates of pedestrian collisions per 100,000 population in most parts of the Planning Area exceed the Healthy People 2010 target of 20 or fewer pedestrian injuries per 10,000 people.⁴ Rates are especially high in the Chinatown commercial area.

Revive Chinatown Collision Data

The Revive Chinatown Transportation Plan reviewed vehicle and pedestrian collision data for a five-year period between 1998 and 2002 for the intersections within the Chinatown Commercial Core area.

The greatest number of collisions in the Chinatown Commercial Core area occurred during the PM peak traffic period between 4:00 PM and 6:00 PM. Over 50 percent of all pedestrian/vehicle collisions in the Chinatown Commercial Core area involved pedestrians 50 years and older and 40 percent of all pedestrian collisions involved pedestrians 61 years and older. Table 7.5 shows the collision breakdown of collisions from 1998 to 2002 by age group.

⁴ US Department of Health and Human Services. Healthy People 2010; Understanding and Improving Health, 2nd ed Washington, DC: US Government Printing office, November 2000. Based on the HP 2010 targets of 10 nonfatal pedestrian injuries + 1 pedestrian death per year per 100,000 population.

TABLE 7.5: PEDESTRIAN COLLISIONS BY AGE GROUP IN CHINATOWN COMMERCIAL CORE

AGE GROUP	NUMBER OF PEDESTRIAN/VEHICLE COLLISIONS (1998 TO 2000)	PERCENT OF TOTAL
0 – 10 years	2	4
11 – 20 years	1	2
21 – 30 years	4	8
31 – 40 years	5	10
41 – 50 years	8	16
51 – 60 years	6	12
61 – 70 years	10	20
Over 71 years	10	20
Unknown	4	8
TOTAL	50	100

Source: SWITRS data; Revive Chinatown Transportation Plan (2004).

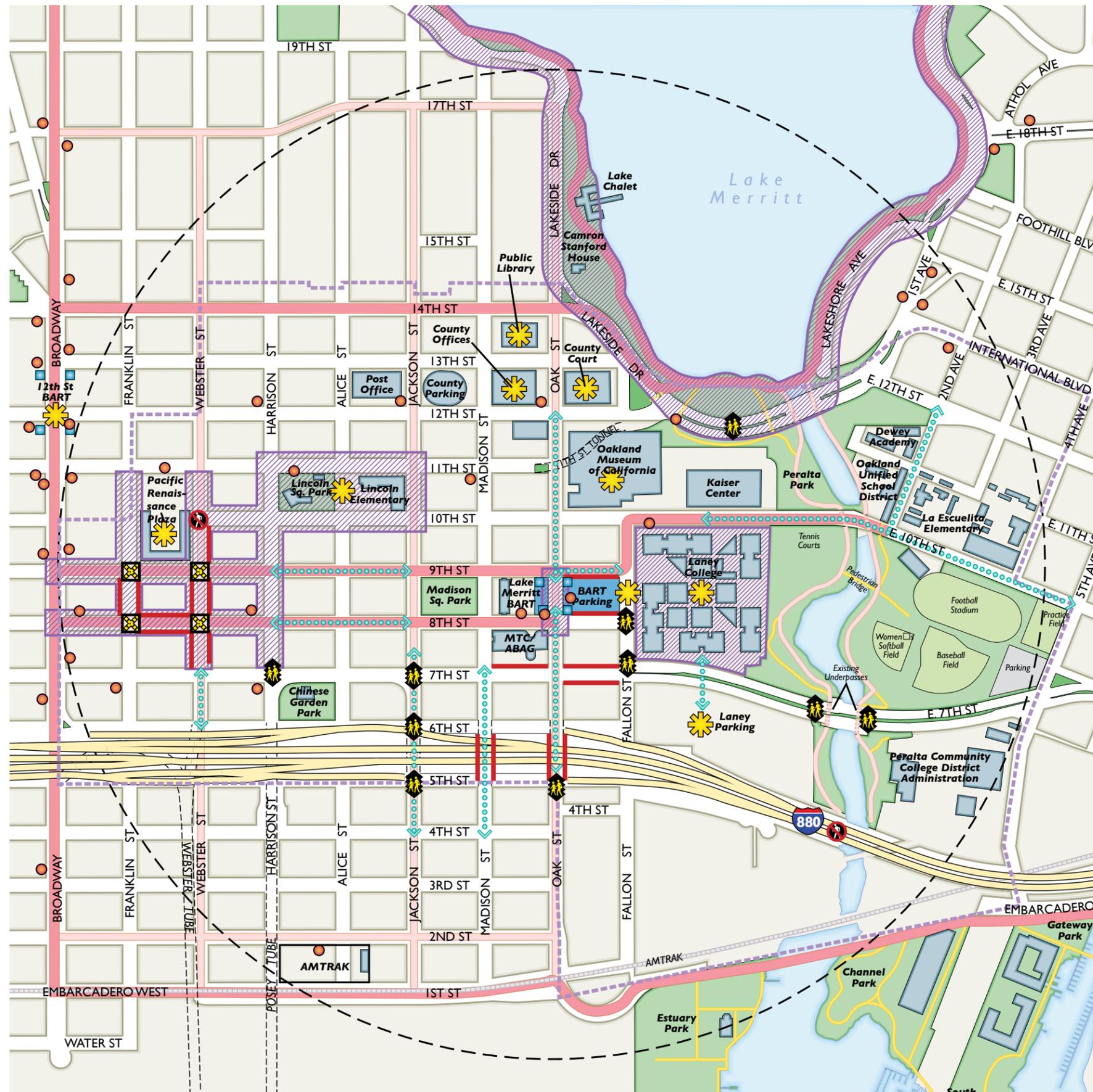


Figure 7.7:
PEDESTRIAN ACTIVITY

-  Key Destinations
-  Primary Pedestrian Activity Nodes
-  Primary Pedestrian Circulation Patterns
-  Primary Pedestrian Route (Master Plan)
-  Secondary Pedestrian Route (Master Plan)
-  Pedestrian Scramble
-  Pedestrian Crossing Prohibited
-  Difficult Crossing
-  Primary Bus Stop (ridership over 100 on/off per weekday)
-  Narrow/Obstructed Sidewalk
-  Lake Merritt BART Station
-  BART Station Entrance
-  Park
-  City Right-of-Way
-  Pedestrian/Bike Path
-  Focus Area
-  Planning Area - 1/2 Mile Radius
-  Amtrak

Figure 7.8:
PEDESTRIAN COLLISIONS 1996-2009

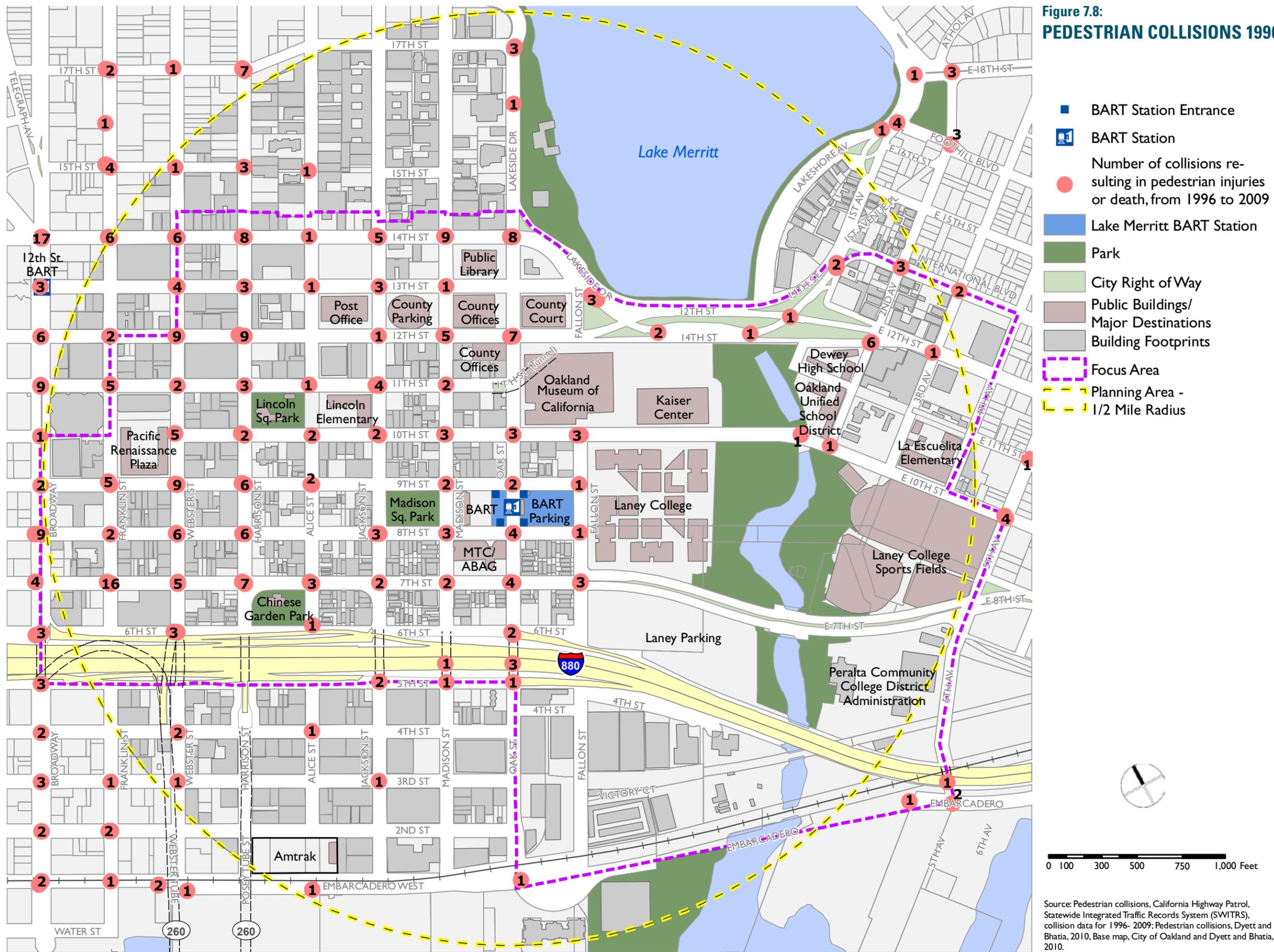


Figure 7.9: CROSSINGS NEAR LINCOLN ELEMENTARY SCHOOL

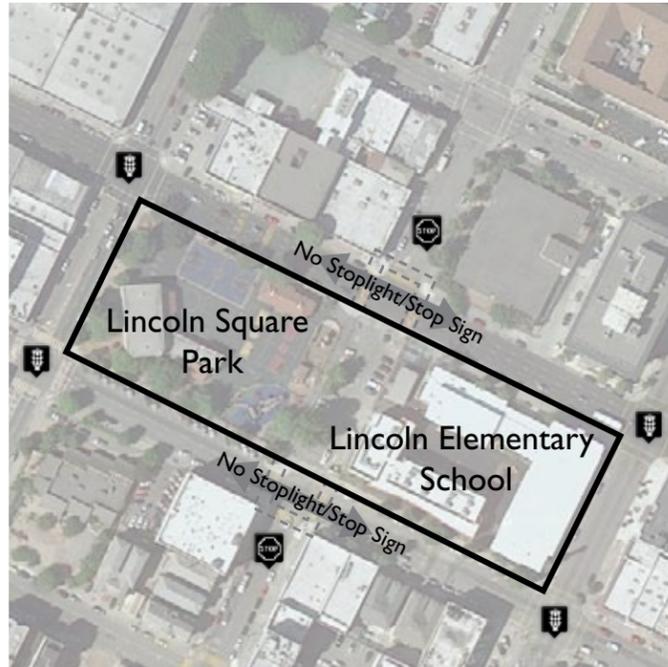
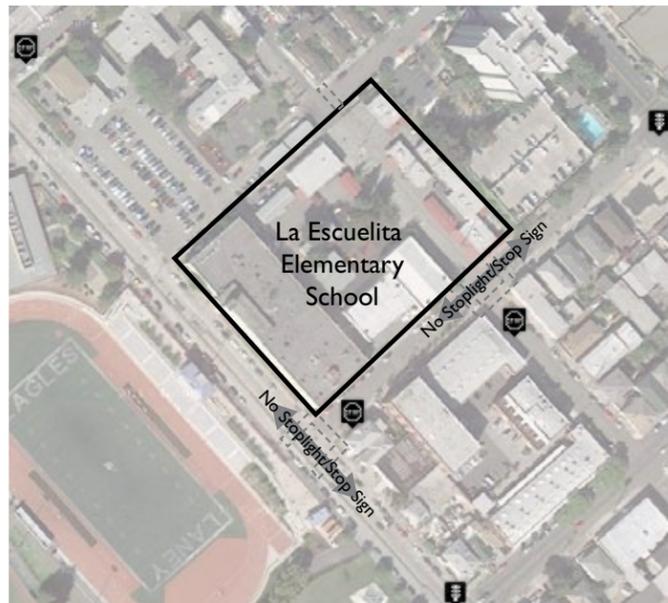


Figure 7.10: CROSSINGS NEAR LA ESCUELITA ELEMENTARY SCHOOL



Safe Routes to School

Safe Routes to Schools (SR2S) is a comprehensive approach to getting more kids walking and biking safely to school. The approach involves students, parents, teachers, and community members. The program includes five components:

1. Encouragement,
2. Education,
3. Engineering,
4. Enforcements, and
5. Evaluation.

The program can include maps of safe routes for walking and biking to school as well as walking audits to identify needed improvements for safer walking and biking routes to school. Neither Lincoln Elementary School nor La Esquelita Elementary School currently participates in the Safe Routes to Schools Alameda County Partnership.

Recommended Pedestrian Improvements

As described above, recommendations from the Revive Chinatown study include many additional improvements, including:

- Another pedestrian scramble signal at 10th and Webster street (with removal of pedestrian barrier),
- Bilingual way-finding signs,
- High visibility or decorative pedestrian crosswalks and street corner bulb-outs at scramble signals,
- Continental-style crosswalks with advance limit lines,
- Pedestrian countdown signal heads at all intersections in Chinatown core,
- Sidewalk clearance and widening, and
- Streetscape improvements, including pedestrian scale lighting on 8th Street.

While some of these elements have been added in the core of Chinatown, not all have been implemented and some pedestrian amenities could be expanded upon.

As part of its Educational Master Plan, Laney College intends to improve its campus entry points to better connect with the Station and community. Its primary focus has been on the barrier of East 7th Street, disconnecting Laney College from its parking facility. As outlined in Chapter 3, Scenario A of the Educational Master Plan proposes the following:

- Connect East 6th Street with 5th Avenue (crossing over existing Laney Parking Lot, Lake Merritt Channel, and Peralta Community College District stockyard)
- Redevelop East 7th Street (between Fallon Street and 5th Avenue) to unite all of Laney College real estate. Build a pedestrian bridge in place of the East 7th Street Bridge (redirecting East 7th Street traffic to the new East 6th Street from either Fallon or Oak streets)
- Construct a large multi-use parking structure on a portion of the existing parking lot and the potentially acquired E. 7th Street footprint.

In addition to exploring the above scenarios, Laney College would like to examine the possibilities of considering Fallon Street as an opportunity site for creating a plaza area that would merge the station with the campus.

Connections from the Jack London District under I-880 are limited. The walking experience includes poorly lit sidewalks under I-880 and high-volume and high-speed traffic on the adjacent streets due to the on- and off-ramps at Oak and Jackson streets. Pedestrian-friendly streetscape improvements along Oak and Madison streets from the Loft District to Lake Merritt station are recommended as part of the Jack London BART Station Feasibility Study.⁵

Opportunities and Constraints

Pedestrian access around or under I-880 is constricted by the freeway itself and is daunting due to the heavy right-turning vehicle traffic on city streets for ramp access. This is particularly true at the intersections at 7th and Jackson streets and 6th and Jackson streets, which are uncontrolled for pedestrian crossings, as well as the intersection at 7th and Harrison streets, which has a pedestrian-actuated signal. Many of the lights at the freeway underpass are not in working order, creating a dark, uninviting place for pedestrians. Pedestrian paths under the freeway are often perceived to be unsafe due to potential conflicts with vehicles, poor lighting, and lack of pedestrian traffic.

Access to Lake Merritt is hampered by multi-grade roadway of 12th and 14th Streets, which are due to be reconstructed to improve, in part, non-motorized access to and from Lake Merritt. The pedestrian underpass located in the Henry J. Kaiser auditorium parking lot between Oak Street and 2nd Avenue is currently closed, creating a long distance between access points to Lake Merritt along the southern shore.

Laney College, while providing non-motorized access through the campus, faces challenges to promoting safe and unlimited pedestrian and bicycle access. 7th Street between Fallon Street and 5th Avenue, which separates the main campus from the surface parking lot, is a very long, moderately trafficked segment with fenced median. A signalized pedestrian crossing is located midblock on 7th Street to connect Laney's parking lot to the campus. The pedestrian under-crossing along the Lake Merritt Channel is often flooded and lacks lighting. The intersection at 7th and Fallon streets is wide and subject to heavy vehicle turns with no pedestrian crossing aids on the north leg. The intersection at 8th and Fallon streets provides no pedestrian crossing aids at all, despite its location between Laney College and Lake Merritt BART. The crossing at 9th and Fallon streets provides the main pedestrian access to the campus from the BART station.

Additionally, per Policy T4.10 of the City's General Plan (Land Use & Transportation Element), the City strives to "take advantage of existing transportation infrastructure and capacity that is underutilized..." The study shall identify underutilized roadways to visit opportunities to convert travel lanes into bicycle lanes or pedestrian paths to improve intermodal access and circulation within the plan area.

⁵ Jack London BART Station Feasibility Study, December 2004.

7.5 Bicycle Plans and Activity Analysis

Bicycle Master Plan (2007)

The Bicycle Master Plan is the citywide, long-range policy document for promoting bicycling in Oakland. The Plan includes existing conditions, policy recommendations, recommendations for bikeways and support facilities, and an implementation program. The Bicycle Master Plan identifies a bikeway network that is comprised of the following five types of bikeways:

- Bicycle Paths (Class 1): Paved right-of-way that is completely separated from the street.
- Bicycle Lanes (Class 2): Striped lanes on streets that are designated with specific signage and stencils for the use of bicyclists.
- Bicycle Routes (Class 3): Designated preferred streets for bicycle travel using lanes shared with other motor vehicles. Signage is the only required treatment, but Oakland has variations:
 - Arterial Bicycle Routes (Class 3A): Bicycle routes on arterials where bicycle lanes are not feasible and parallel streets do not provide adequate connectivity.
 - Bicycle Boulevards (Class 3B): Bicycle routes on residential streets that prioritize through trips for bicyclists.
 - Neighborhood Connectors: Streets that provide good connections within neighborhoods (rather than between neighborhoods) are designated on the map only to improve their visibility without installing the standard bicycle route signage.

Several prioritized projects fall within the Lake Merritt Station Area Plan Planning Area, including:

- Lane conversion as part of the 12th Street reconstruction between Lakeside Drive and Foothill Blvd
- Lane conversion on 14th Avenue between MacArthur Boulevard and East 12th Street
- Signing and striping on 2nd Street between Brush Street and Oak Street
- Lane conversion on the 8th/ 9th Street couplet from MLK Jr Way to Oak Street
- Lane conversion on East 12th Street from 1st Avenue to Fruitvale Avenue

- Bicycle path along the Lake Merritt Channel Path from Lake Merritt to the Waterfront Trail
- Bicycle path along the Lake Merritt Path
- Lane conversion on Madison Street, Oak Street/ Lakeside Drive between 2nd Street and Grand Ave
- Webster/Franklin Street couplet from 8th Street to 25th Street as Class 2 and 3A

The Bicycle Master Plan identifies several bikeways as part of the proposed bikeway network. Future Class 2 (striped) bicycle lanes include Oak, Madison, 8th and 9th streets, as shown in Figure 7.11. Based on the proposed cross-sections, many of these proposed bicycle lanes would require reducing the number of travel lanes to accommodate the bicycle lane. The feasibility of these bicycle lanes would need to consider the effects on traffic and circulation. In addition, the 12th Street Reconstruction improvement will improve bicycle circulation in the planning area.

The MTC Regional Bike Plan identifies a regional bikeway network for the entire San Francisco Bay Area. In the planning area, 12th Street and East 12th Street are part of the Oakland I-880 Corridor (ALA-7). The Bay Trail along the waterfront is also part of the regional bikeway network. Transportation 2035, the regional transportation plan, programs \$1 billion for the regional bike network over the next 25-year period.

Revive Chinatown Recommendations

The recommendations from the Revive Chinatown study include traffic circulation improvements, such as the conversion of 10th Street from a one-way to two-way street, which would also affect bicycle travel. The study also expressed concern over the proposed bikeway on 8th Street due to intense commercial activity.

Existing Bicycle Activity

The flat terrain and grid street network in the planning area provide ample opportunity for bicycling. The existing bikeways in the planning area are limited. A Class 3 (signed) bicycle route runs on Oak Street from Embarcadero to 4th Street, 4th Street from Oak to Fallon, and picks up the path along the Lake Merritt Channel to 10th Street. The Lake Merritt BART station is the only downtown Oakland station allowing bikes during all

hours (12th and 19th Street stations restrict bicycles from the station during the peak hours). Based on field observations, 10th Street appears to have the highest volume of bicyclist activity. There was no discernible pattern for the north-south streets in the study area. Lake Merritt has a large number of commute and recreational bicyclists. Approximately 8.2% of Lake Merritt BART patrons travel on bicycle to access the station.⁶ This figure is significantly higher than the system average.

Per the City of Oakland's Bicycle Master Plan, Class 2 bicycle lanes are proposed along Madison Street, Oak Street, and the 8th Street-9th Street couplet. These dedicated facilities would improve bicycle access in the station area and likely result in an increase in BART ridership at the Lake Merritt BART station when combined with additional bicycle parking.

Bicycle Collisions

Figure 7.12 shows bicycle collisions from 1996 to 2009. No collisions were fatal.

Bicycle Parking Facilities

In addition to bikeways, bicycle facilities include bicycle parking. Bicycle parking ranges from parking meters that are used for locking bicycles and U-racks along the street to bike racks and bike lockers located on the street level of the Lake Merritt BART station along Oak Street. There are 32 pay-to-use bicycle lockers located at the Lake Merritt BART Station, of which roughly half were occupied on a weekday in early January. Bicycle racks at the BART station were fully occupied, as were parking meters on 9th Street near Lake Merritt BART. In some cases, bicycles are locked to street trees, reflecting the shortage of free bike parking. Laney College has a number of bike racks on campus. Chinatown Commercial has bike racks on nearly every corner, about half of which were occupied.

Opportunities and Constraints

The Bicycle Master Plan identifies several priority projects in proximity to Lake Merritt BART station and within the Planning Area. In addition, the Plan identifies several bikeways to be proposed as part of the bikeway network. The Plan also identi-

fies several constraints to bicycling in Oakland which exist in the Planning Area:

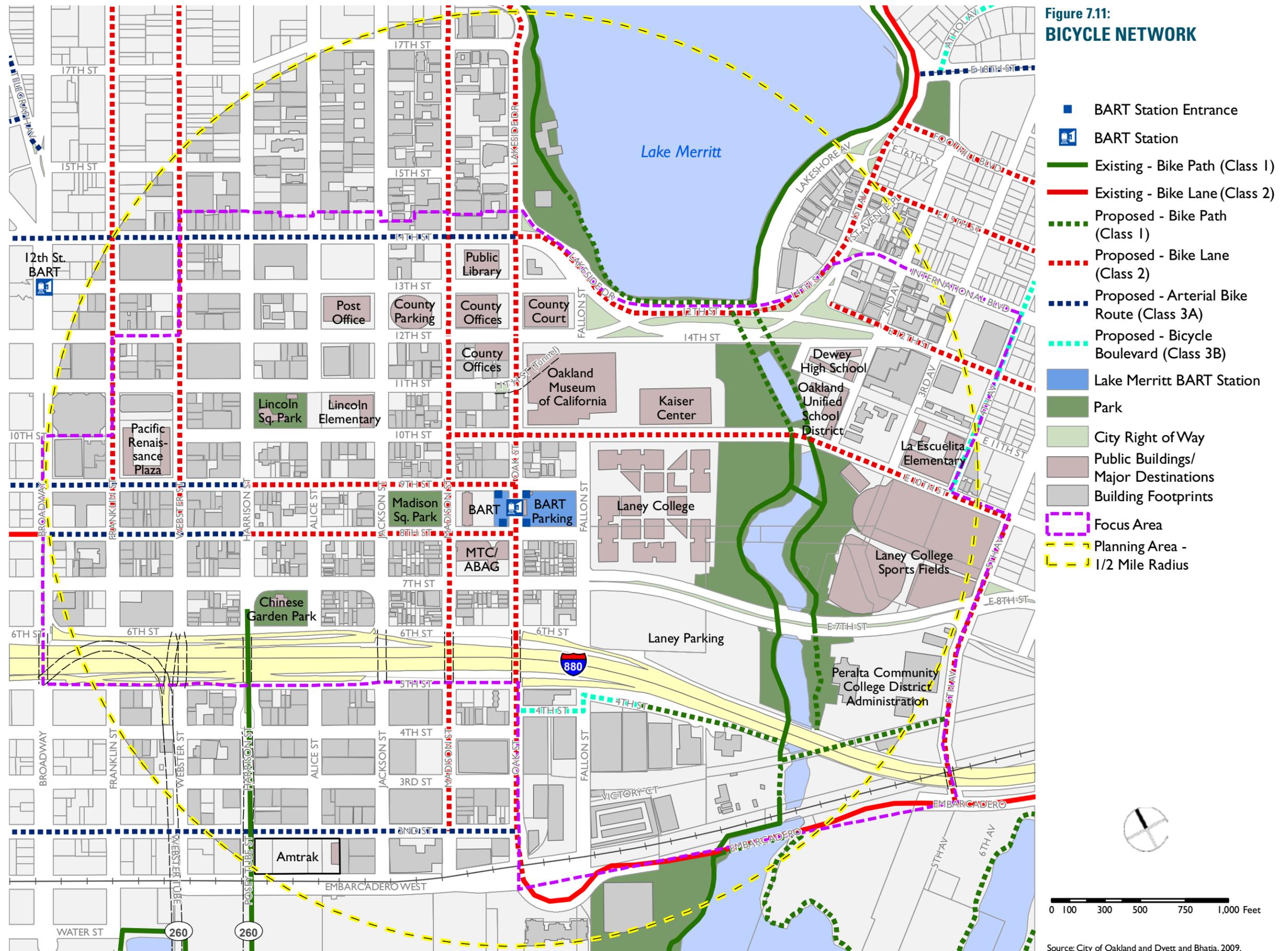
- Streets with motor vehicle volumes and speeds that create undesirable conditions.
- Freeways, interchanges, and the Oakland Estuary are significant obstacles to bicycle travel.
- Uneven street surfaces caused by railroad tracks, utility covers, drainage grates, rough pavement, and debris are hazardous to bicyclists.
- Concerns over personal security deter some people from riding on residential streets in neighborhoods that are perceived as unsafe.
- Bicycle theft and a lack of secure parking deter people from leaving their bicycles unattended and from using high quality bikes for utilitarian trips.
- Many drivers and bicyclists are unaware of the rights and responsibilities of cyclists on city streets.



Bicyclists in Chinatown.

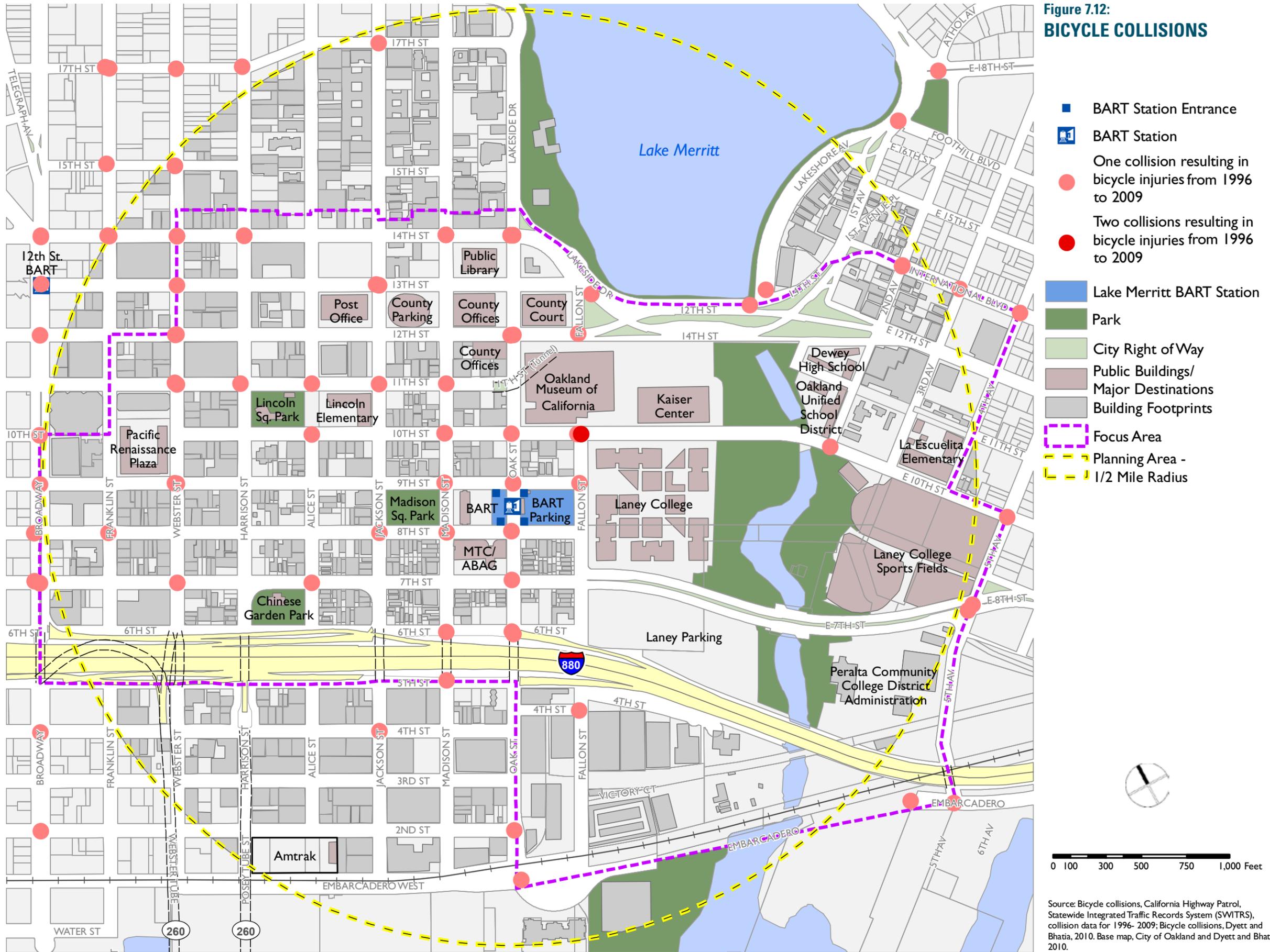
⁶ Lake Merritt BART Station Final Summary Report, MIG, March 2006.

Figure 7.11:
BICYCLE NETWORK



Source: City of Oakland and Dyett and Bhatia, 2009.

Figure 7.12:
BICYCLE COLLISIONS



7.6 Transit Network

The transit services in the project vicinity include bus service, BART service, rail service via Amtrak, and ferry service. These services are described below.

Bay Area Rapid Transit (BART)

BART trains provide regional transit connections throughout the San Francisco Bay Area. The Lake Merritt BART station, which is located at the center of the project area at northwest corner of the Oak Street/8th Street intersection, is served by the Richmond-Fremont, Fremont-Daly City/Millbrae, and Daly City/Millbrae-Dublin/Pleasanton lines.

The Richmond-Fremont line operates from 4:00 AM to 1:30 AM on weekdays, with 15-minute headways during the peak periods. During the weekend, this line operates from 5:50 AM to 1:30 AM with 20-minute headways.

The Fremont-Daly City/Millbrae line operates from 5:00 AM to 8:00 PM on weekdays, with 15-minute headways during peak periods. During the weekend, this line operates from 8:50 AM to 8:00 PM with 20-minute headways.

The Daly City/Millbrae-Dublin/Pleasanton line operates from 4:00 AM to 1:30 AM on weekdays with 15-minute headways during peak periods. During the weekend, this line operates from 6:00 AM to 1:30 AM with 20-minute headways.

According to October 2009 ridership information provided by BART, during the AM peak hour, which represents the periods with the greatest activity, there are 622 entries and 768 exits at the Lake Merritt BART station. The load factor at this station during the AM peak hour is 95 passengers per car, which is below the BART fleet planning standard of 107 passengers per car.

There are two bus loading zones serving the Lake Merritt BART station, one along Oak Street and the other along 8th Street. The bus loading zone along Oak Street is at the north leg of the Oak Street/8th Street intersection and serves northbound buses. A concrete shelter is provided at this bus stop. The bus loading zone along 8th Street is at the west leg of the Oak Street/8th Street intersection and serves westbound buses. BART police parking and a drop-off/pick-up zone are provided along the west side of Oak Street, just north of 8th Street. Because the streets surrounding the BART station are one-way streets, vehicles trav-

eling southbound along Madison Street and Fallon Street must loop around to access the passenger drop-off/pick-up zones on Oak Street.

There are five entrances to the underground station, including an elevator. The entrances are located on both sides of Oak Street, between 8th Street and 9th Street. Bike parking is provided at the southeast corner of the Oak Street and 9th Street intersection. The Lake Merritt BART Station allows bikes on trains during commute hours, while the 12th and 19th Street stations do not.

The 12th Street Oakland City Center BART Station, which is located in the heart of Downtown Oakland, is just outside the western fringe of the Planning Area. It is served by the Pittsburg/Bay Point-SFO, Richmond-Fremont, and Richmond-Daly City/Millbrae lines. The 12th Street Oakland City Center station offers greater rider choice as compared to the Lake Merritt BART station. It serves as a major transfer point and is a more attractive station for BART patrons destined for Richmond or Pittsburg/Bay Point. Furthermore, the 12th Street Oakland City Center BART station provides connectivity to more AC Transit bus routes as compared to the Lake Merritt BART station.

The 19th Street Oakland BART Station, which is located at Broadway/19th Street in Oakland's Uptown Entertainment District, is north of the plan area. Similar to the 12th Street Oakland City Center BART Station, it is served by the Pittsburg/Bay Point-SFO, Richmond-Fremont, and Richmond-Daly City/Millbrae lines. It provides access to many AC Transit bus lines at the nearby 20th Street transit hub.

Efforts to expand the existing BART system to the South Bay is currently underway. The BART Silicon Valley Project is an extension of the existing system to Milpitas, San Jose, and Santa Clara. This project will ultimately construct six new BART stations. Construction for the Warm Springs Extension from Fremont has already begun, and is expected to be completed by 2014. The later phases, which includes the ultimate extension to Santa Clara, is anticipated to be completed in 2025.

The BART fare when traveling within Oakland from Lake Merritt is \$1.75 one way. Traveling between the Lake Merritt BART Station and the San Francisco Downtown Area (Embarcadero/Montgomery stations) is \$3.10 one-way. BART also offers discount tickets:

- BART Blue High Value Ticket: A 6.25% discount in two denominations: a \$48 ticket for \$45; a \$64 ticket for \$60.
- BART Green Ticket: A 62.5% discount for seniors 65 years and older: \$24 ticket for only \$9.
- BART Orange Ticket: Students age 13 to 18 who are enrolled in middle or secondary school. The orange ticket may be used only for trips to and from school or school-sponsored events, Monday through Friday only. 50% of full fare. Orange tickets with a \$32 value are sold for \$16. Orange tickets are sold by participating schools only. Schools collect payment in advance from students and place ticket orders directly with BART.
- BART Red Ticket: A 62.5% discount for persons with disabilities, Medicare cardholders and children 5-12 years old: \$24 ticket for \$9.

Bus Service

Local bus service in the project area and throughout Alameda County is provided by AC Transit. The Lake Merritt BART station and rest of the project area is served by multiple AC Transit bus routes, including Routes 1, 1R, 11, 13, 14, 19, 40, 51, 59, 62, 63, 72, 72R, 72M, and 88. Additionally, AC Transit Routes O, OX, and W provide service to the San Francisco Transbay Terminal. Figure 7.13 shows AC transit routes within the Planning Area. AC Transit has also been working on a future Bus Rapid Transit Route for years; the route is shown on the map as well. The Lake Merritt BART Station is served by AC Transit Routes 11, 59, 59A, 62 and 88.

Route 11 runs from Fruitvale Avenue/Montana Street to Highland Avenue/Highland Way in Piedmont. This route operates from 6:00 AM to 8:00 PM on weekdays with 20-minute headways during the peak periods. During the weekend, this route operates from 7:00 AM to 8:00 PM with one hour headways. Average daily weekday ridership is estimated to be approximately 1,900.

Route 59 runs from the Lake Merritt BART station to 41st Street/Piedmont Avenue. This route provides service from 6:00 AM to 7:50 PM on weekdays with one hour headways. Route 59A extends Route 59 from 41st Street/Piedmont Avenue to the Rockridge BART station. This extended route is in service from 8:30 AM to 3:50 PM on weekdays with one hour headways. During the weekend, Routes 59 and 59A operate from 8:00 AM

to 6:50 PM with one hour headways. Average daily weekday ridership is estimated to be approximately 314.

Route 62 runs from the Fruitvale BART station to the West Oakland BART station. This route operates from 5:30 AM to 12:50 AM on weekdays with 20-minute headways during the peak periods. During the weekend, this route also operates from 5:30 AM to 12:50 AM with 30-minute headways. Average daily weekday ridership is estimated to be approximately 3,800.

Route 88 runs from the Lake Merritt BART station to the North Berkeley BART station. This route operates from 5:30 AM to 12:20 AM on weekdays with 20-minute headways during the peak periods. During the weekend, this route also operates from 5:30 AM to 12:20 AM with 20-minute headways. Average daily weekday ridership is estimated to be approximately 2,600.

Figure 7.13 also shows the AC Transit weekday ridership (on & off) at bus stops in the Planning area. Ridership at the Lake Merritt BART station is relatively low (in the hundreds) while stops in the Chinatown Commercial Core area is relatively high (in the thousands). Ridership in the Chinatown Commercial Core area is similar to ridership along Broadway, which is a major thoroughfare.

Local AC Transit adult fare is \$2.00 one-way while a transbay fare is \$4.00 one-way. Fares for youth and seniors is half of the adult fare. AC Transit also offers 31-Day Ticket passes. They are \$80.00 for adults, \$15.00 for youth, and \$20.00 for seniors. The cost of a local bus-to-bus transfer is \$.25. A local BART-to-Bus transfer with a transfer issued at BART is \$1.75 for adults and \$.75 for youth and seniors. A local to Transbay Bus-to-Bus transfer is free.

Amtrak

Amtrak trains provide passenger rail service throughout the western United States. The Oakland station at Jack London Square is in the Planning Area at the southern edge. This station is served by the Coast Starlight, San Joaquin, and Capitol Corridor routes.

The Coast Starlight route connects Seattle, Washington to the north and Los Angeles, California to the south. This route operates two trains per day, with one southbound train in the morning peak and one northbound train in the southbound peak.

The San Joaquin route connects the California cities of Sacramento, Oakland, and Bakersfield. This route operates 24 hours a day, with 2-3 hour headways during peak periods.

The Capitol Corridor route connects the Northern California cities of Auburn, Sacramento, Oakland, and San Jose. This route operates from 4:30 AM to 11:55 PM on weekdays, with 50-75 minute headways during peak periods. The Capitol Corridor route provides frequent service for many commuters between the Sacramento region and the Bay Area.

Ferry Service

Ferry service is provided at the Oakland Ferry Terminal in Jack London Square, which is outside the half mile Planning Area. The ferry provides service to Alameda, Angel Island State Park, and San Francisco destinations at AT&T Park, San Francisco Ferry Building, and Pier 41. The ferry operates from 6:00 AM to 9:00 PM on weekdays, with headways ranging from 30 minutes to an hour during the peak periods. During the weekend, the ferry operates from 9:00 AM to 7:00 PM. Additional ferry service is provided to AT&T Park on days/nights when there are San Francisco Giants home games.

Shuttle Services

Several shuttle services are provided throughout the Planning Area, including:

Non-profit and Social Services

Several non-profit services provide shuttle services for clients in the Planning Area. These include:

- Family Bridges
- Center for Elders Independence
- Lifelong

Alameda County

- Serves Superior Court and Alameda County employees
- Free service among the County Administration building and the 12th Street and Lake Merritt BART stations during morning and evening commute hours
- Every 15 minutes from 7 and 10 AM and 3:45 and 6:45 PM⁷

Executive Inn & Suites Shuttle

- Courtesy shuttle service for hotel guests
- 6:30 AM – 10:30 PM
- Offers service to all Downtown Oakland and Jack London Square attractions and to transit destinations including Lake Merritt BART station and Jack London Ferry Terminal

Alameda County Medical Center Shuttle

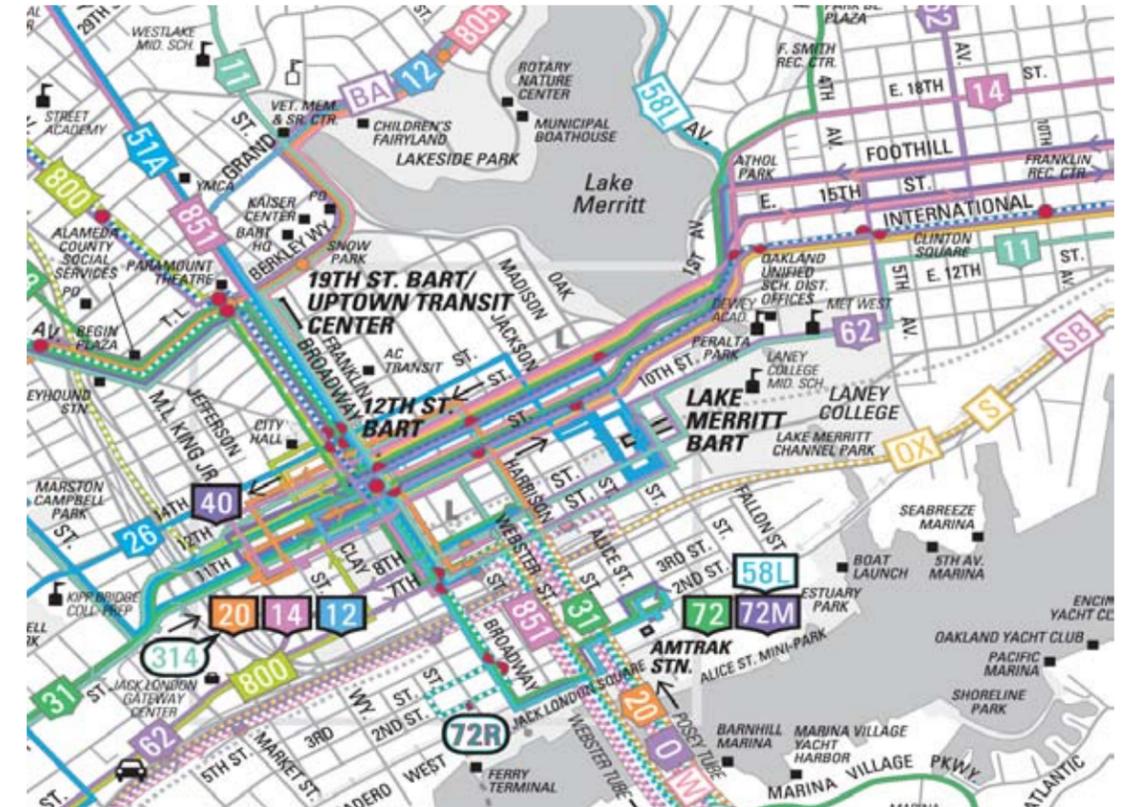
- Free BART shuttle service for Highland Hospital employees, patients, and residents living in the surrounding Bella Vista neighborhood of Oakland
- Loops between Highland Hospital and Lake Merritt BART station
- Operates from 6:00 AM to 8:00 PM with 12 minute headways

Broadway Streetcar

- Free shuttle service Monday through Friday, from 7:00 AM to 7:00 PM.
- 10 minute headways during the peak periods and 15 minute headways during the non-peak periods
- This service will operate between Jack London Square and the Uptown Entertainment District in Oakland, providing connections to public transit at 12th and 19th Street BART stations, Jack London Ferry Terminal, Jack London Amtrak station, and the Uptown 20th Street transit hub.

Highland Hospital

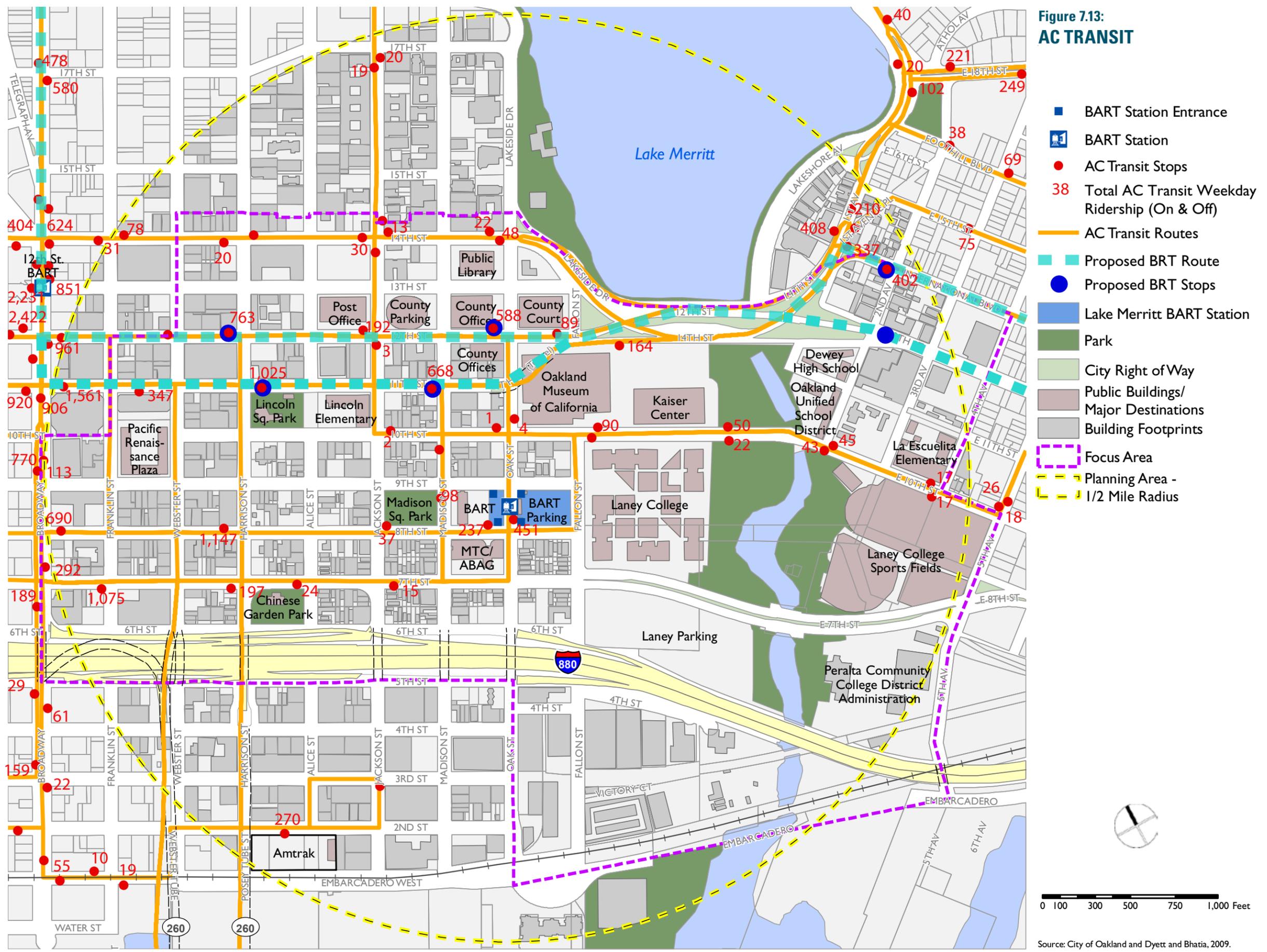
- Runs from BART to hospital.



AC Transit Bus Map.

⁷ Wasserberger, Lindsay. Oakland North, online, published October 16, 2009, accessed February 16, 2010. <http://oaklandnorth.net/2009/10/16/free-bart-to-work-bus-for-downtown-county-workers/>

Figure 7.13:
AC TRANSIT



Opportunities and Constraints

BART is a key component of the Bay Area's regional transportation system as it serves approximately 310,000 riders per day. BART is aiming to increase ridership by encouraging Transit Oriented Development (TOD) near its stations. TOD strategies aspire to promote high density land uses surrounding transit stations, creating a neighborhood that is less reliant on automobile travel. The Lake Merritt BART Station Plan provides opportunities to enrich the area by encouraging TOD.

Development within the Planning Area and from adjacent neighborhoods and destinations (such as Oakland Museum and County buildings) will increase the ridership demand at the Lake Merritt BART station.

The AC Transit BRT project will improve transit access to the study area and throughout the region by combining the best features of rail with the flexibility and cost advantages of roadway transit. BRT service would reduce travel times along the corridor between Berkeley and San Leandro, and likely result in increased transit ridership.

As previously mentioned, the Lake Merritt BART station is served by AC Transit bus routes 11, 59, 62, and 88. Routes 11, 62, and 88 operate with 20 minute headways during the peak periods. Route 59, which currently runs from the Lake Merritt BART station to 41st Street/Piedmont Avenue, is scheduled to be eliminated from the system. The elimination of this route would reduce transit access to areas in North Oakland and Piedmont.

At times there is more than one bus present at the same bus zone adjacent to the Lake Merritt BART station along Oak Street. Because both bus zones can only accommodate one bus at a time, this results in blockage of Oak Street at the 8th Street intersection and creates a safety hazard. Increased dedicated bus zones could improve intersection and roadway operations along the streets in the immediate vicinity of the Lake Merritt BART station.

The before mentioned Broadway Streetcar service will improve the City's public transportation system by offering service between Jack London Square and the Uptown Entertainment District. This service would connect the BART stations within the Planning Area to the Oakland Ferry Terminal and Amtrak station at Jack London Square. To further enhance connectivity throughout the Downtown area and to the Lake Merritt BART station, shuttle service to key destinations (including City of Alameda) or employment centers should be considered. Space for shuttle loading zones should also be provided at the Lake Merritt and 12th Street Oakland City Center BART stations.

The bus stop along the east side of Oak Street provides a concrete shelter but lacks benches for transit patrons. Conversely, the bus stop along the north side of 8th Street provides a bench but no shelter. The sidewalk along 8th Street appears to be inadequate in width, as the bus boarding area is in the pedestrian sidewalk.

Improved bus stop facilities and amenities (i.e. benches, shelters, Trash Receptacles, lighting, landscaping) could improve the passenger experience and promote higher transit usage.



People use the Lake Merritt BART Station as a gathering place.



AC Transit serves the Lake Merritt BART Station.



Bike racks at the Lake Merritt BART Station.



Transit service serves the elderly.



Escalators exiting the Lake Merritt BART Station.



A bus stop near Laney College.

7.7 Existing Roadway Network

The Planning Area includes a wide mix of circulation routes, including a regional freeway, connections to the Alameda tunnel, arterial streets, collectors, pedestrian commercial streets, and small residential streets. All of these different streets are within the ½ mile radius of the Lake Merritt BART station. Currently, most of the streets have ample capacity. However there are a few key regional junctions that have heavy traffic during peak hours, specifically the I-880 freeway and the streets that connect to the Alameda Tunnel. A description of key regional and local roadways in the vicinity of the plan area is described below.

Streets by Functional Classification

Figure 7.14 shows streets in the Planning Area by functional classification, as defined by the Federal Highway Administration (FHA) with input from local jurisdictions. This information is maintained by CalTrans in California, and local jurisdictions may suggest changes to the current classifications. Functional classifications are presented in contrast to the current existing use, shown in figure 7.15, which shows traffic volumes.

The FHA classifications are defined by the services provided:

Arterial streets provide the highest level of service at the greatest speed for the longest uninterrupted distance, with some degree of access control.

Collector streets provide a less highly developed level of service at a lower speed for shorter distances by collecting traffic from local roads and connecting them with arterials.

Local streets consist of all roads not defined as arterials or collectors and primarily provide access to land with little or no through movement.

These functional classifications are used by the FHA to help determine the appropriate allowable range of design speed.

Streets by Existing Use

Figure 7.15 illustrates roadways classified by existing traffic volumes, shows the number of lanes, and the travel direction, since most streets are one way. The following classifications are shown in Figure 7.14.

- Arterial: 2400+ peak hour vehicles per hour
- Collector: 1200 to 1400 peak hour vehicles per hour
- Local: Less than 1200 peak hour vehicles per hour

In certain cases it should be noted that roadways classified by the FHA do not necessarily correspond with the existing traffic volumes. For instance, some streets classified by the FHA as arterials, indicating the highest level of service, such as 10th Street, currently serve lower volumes of traffic. Similarly, some streets classified as local streets by the FHA, such as Jackson, currently serve higher traffic volumes.

Regional Access

Interstate 580 (I-580), which is also known as the MacArthur Freeway, is an east-west freeway that is located north of the project area. I-580 connects the US-101 Interchange in Marin County to the west and the Interstate 5 (I-5) Interchange in San Joaquin County to the east. In the vicinity of the project area, I-580 provides eight travel lanes and serves approximately 181,000 vehicles per day (vdp).⁸ Access to the project area is provided via interchanges at Broadway, Harrison Street, and Grand Avenue.

Interstate 880 (I-880), which is also known as the Nimitz Freeway, is a north-south freeway that borders the southern boundary of the Focus Area. I-880 connects the Interstate 80 (I-80)/I-580 Interchange (the “MacArthur Maze”) in Oakland to the north and the Interstate 280 (I-280) Interchange in San Jose to the south. In the project area, I-880 provides eight travel lanes and serves approximately 200,000 vdp. Interchanges with Broadway/Jackson Street and Oak Street provide access to and from the Planning Area.

Interstate 980 (I-980) is a north-south freeway that is located west of the project area. I-980 connects the I-580 Interchange to the north, where it becomes State Route 24 (SR-24), and the I-880 Interchange to the south. In the vicinity of the project area, I-980 provides six travel lanes and serves approximately 75,000 vdp. Bay Area Rapid Transit (BART) tracks are located in the center median of the I-980 freeway. Access to the project area is provided via 11th and 12th Street.

⁸ Caltrans Traffic and Vehicle Data Systems Unit, <http://traffic-counts.dot.ca.gov/2008all.htm>.

Arterial Streets

14th Street is an east-west arterial roadway that runs through the northern portion of the Planning Area. In the project area, 14th Street is a bi-directional, four-lane roadway. The FHA classifies 14th Street as a principal arterial. 14th Street connects Maritime Street at the Oakland Naval Supply Center to the west and Lakeside Drive/Oak Street near Lake Merritt to the east. South of Lake Merritt, eastbound 14th Street traffic merges onto 11th Street to access areas east of the lake. Furthermore, westbound traffic on 12th Street can merge onto 14th Street at Lakeside Drive/Oak Street. East of Lake Merritt, 14th Street is renamed as International Boulevard, which later becomes Mission Boulevard in Hayward to the south. South of 42nd Avenue in Oakland, International Boulevard is also designated as State Route 185 (SR-185).

5th Avenue is a north-south arterial roadway that is located at the eastern end of the Planning Area. The FHA classifies 5th Avenue as a minor arterial. In the project area, 5th Avenue is a bi-directional, two-lane roadway. 5th Avenue connects Park Avenue to the north and Embarcadero at the marina to the south.

7th Street is an east-west arterial roadway that runs through the project area, and changes to a collector roadway east of Oak Street, based on lower traffic volumes. The FHA classifies 7th Street as a minor arterial throughout the Planning Area. In the project area, west of Fallon Street, 7th Street is a one-way roadway with four eastbound lanes. East of Fallon Street, 7th Street is a bi-directional, four-lane divided roadway, with a posted speed limit of 30 miles per hour. 7th Street connects Middle Harbor Road at the Oakland Naval Supply Center to the west. East of 5th Avenue, 7th Street transitions to 8th Street.

8th Street is an east-west arterial roadway that runs through the project area. The FHA classifies 8th Street as a minor arterial. In the project area, 8th Street is a one-way roadway with four westbound lanes. East of Lake Merritt Channel, 8th Street is a bi-directional, six lane divided roadway. The Lake Merritt BART station is located on the north side of 8th Street, west of its intersection with Oak Street.

11th Street is an east-west arterial roadway that runs through the project area. The FHA classifies 11th Street as a minor arterial west of the Oakland Museum of California and a local street east of the Channel. In the project area, 11th Street is a one-way roadway with four eastbound lanes. 11th Street connects Mari-



5th Avenue.



One way streets are common throughout the Planning Area.



7th Street.

time Street at the Oakland Naval Supply Center to the west and East 8th Street to the east. There is an underground section of 11th Street at the southern end of Lake Merritt, which provides vehicular access to 1st Avenue and 12th Street east of the lake. 11th Street is also a major bus route. 11th Street is discontinuous where it merges with 12th Street and picks up near Dewey High School. 11th Street has a posted speed limit of 25 miles per hour.

Broadway is a north-south arterial roadway that is located at the western end of the Planning Area. The FHA classifies Broadway as a principal arterial. In the project area, Broadway is a bi-directional, four-lane divided roadway. Broadway is a major city arterial that connects from Highway 24, through Downtown, and then goes south to the Embarcadero West street next to the waterfront. Broadway is also a major bus route.

Oak Street is a north-south arterial roadway that provides access to the Lake Merritt BART station just north of 8th Street. The FHA classifies Oak Street as a minor arterial. Oak Street is a one-way roadway with four northbound lanes north of I-880. South of I-880, Oak Street is a bi-directional, two-lane undivided roadway. Oak Street provides a connection from 14th Street to the north and Embarcadero to the south. At 14th Street Oak becomes Lakeside Drive, which continues north along the edge of Lake Merritt. Lakeside Drive has a posted speed limit of 25 miles per hour.

Collector Streets

12th Street is an east-west roadway that runs through the project area. 12th Street acts as a collector in the majority of the Planning Area west of the County Courthouse, as an arterial just south of Lake Merritt, and as a local street east of 1st Avenue. The FHA classifies 12th Street as a minor arterial, and as a primarily arterial just south of Lake Merritt. In the project area, 12th Street is a one-way roadway with four westbound lanes. 12th Street connects Maritime Street at the Oakland Naval Supply Center to the west and 54th Avenue to the east. East 12th Street has a posted speed limit of 25 miles per hour.

Embarcadero West is an east-west arterial roadway that is located at the southern end of the Planning Area. The FHA classifies Embarcadero West as a collector. In the project area, Embarcadero is a bi-directional, two-lane roadway and provides access to Jack London Square and the Oakland/Alameda Ferry. East of Oak Street, a Class II bike lane is provided. Embarcadero parallels I-880 to the south and connects the Port of Oakland to the west and 23rd Avenue to the east. Embarcadero provides an on-ramp to I-880 southbound at its intersection with 10th Avenue.

Webster and Harrison Streets are two north-south collector roads that become arterials around 8th Street as they provide access to the project area from the City of Alameda. The FHA classifies both streets as minor arterials north of I-880. North of 7th Street, Webster Street is a one-way roadway and provides four southbound lanes. In the Planning Area south of I-880 Webster and Harrison Streets are both local, bidirectional, two lane roads. In the Webster Street tube, two southbound lanes are provided. South of the tube section, Webster Street is a four-lane undivided roadway in Alameda. North of 10th Street, Harrison Street is a bi-directional, four-lane undivided roadway. Between 10th Street and I-880, Harrison Street is a one-way roadway with four northbound lanes. In the Posey Tube, Harrison Street provides two northbound lanes. North of 8th Street, both Webster Street and Harrison Street become collector roads, with a posted speed limit of 25 miles per hour.

Franklin Street is a north-south collector roadway that is located at the western end of the Planning Area. The FHA classifies Franklin Street as a minor arterial. In the project area, north of 7th Street, Franklin Street is a one-way roadway with four northbound lanes. South of 5th Street, it is a one-way local street with one southbound lane. Franklin Street connects 22nd Street to the north and Embarcadero at Lack London Square to the south.

Jackson Street is a north-south collector roadway that runs through the project area. The FHA classifies Jackson Street as a local street. In the project area, Jackson Street is a bi-directional, two-lane roadway. Jackson Street connects Lakeside Drive to the north and Embarcadero adjacent to the Jack London Square Amtrak station to the south.

Madison Street is a north-south collector roadway that provides access to the Lake Merritt BART station. The FHA classifies Madison Street as a minor arterial north of I-880. Madison Street is a one-way roadway with three southbound lanes north of 4th Street. Madison Street connects Lakeside Drive to the north and Embarcadero to the south.

Local Streets

9th Street is an east-west local roadway that runs through the Planning Area. The FHA classifies 9th Street as a local street. 9th Street is a one-way roadway with three eastbound lanes. 9th Street connects Maritime Street at the Oakland Naval Supply Center to the west and Fallon Street at the Laney College campus to the east. The Lake Merritt BART station is located at the 9th Street/Oak Street intersection. Furthermore, access to the BART station's Permit Lot is provided along 9th Street. 9th Street acts as a collector through the Chinatown Commercial area.

10th Street is an east-west local roadway that runs through the Planning Area. The FHA classifies 10th Street as a collector. In the project area, 10th Street is a one-way roadway with four westbound lanes. 10th Street connects Maritime Street at the Oakland Naval Supply Center to the west and Fruitvale Avenue to the east. There is a break in the roadway between Broadway and Webster Street in Chinatown. 10th Street has a posted speed limit of 25 miles per hour east of Fallon Street.

13th Street is an east-west local roadway that runs through the Planning Area. The FHA classifies 14th Street as a collector. 13th Street is a one-way roadway with four eastbound lanes. 13th Street connects Maritime Street at the Oakland Naval Supply Center to the west and Oak Street to the east. South of Lake Merritt, eastbound 13th Street traffic merges onto 11th Street to access areas east of the lake.

15th Street is an east-west local roadway that is located at the northern end of the Planning Area. The FHA classifies 15th Street as a local street. In the project area, between Broadway and Harrison Street, 15th Street is a one-way roadway with two westbound lanes. The segment between Jackson Street and Madison Street is a bi-directional, two-lane roadway. 15th Street connects Maritime Street at the Oakland Naval Supply Center to the west and Fruitvale Avenue to the east.

Alice Street is a north-south local roadway that runs through the Planning Area. The FHA classifies Alice Street as a local street. In the project area, Alice Street is a bi-directional, two-lane roadway. Alice Street connects 19th Street to the north and Embarcadero at the Jack London Square Amtrak station to the south. There is a break in the roadway between 10th Street and 11th Street, where Lincoln Park and the Lincoln Elementary School campus is located.

Fallon Street is a north-south local roadway that fronts the Laney College campus. The FHA classifies Fallon Street as a local street, except between 8th and 7th streets where it is identified as a minor arterial. Between 10th Street and 9th Street, it is a bi-directional, three lane roadway with two northbound lanes and one southbound lane. Between 9th Street and 8th Street, it is a bi-directional, two-lane roadway. Between 8th Street and 7th Street, it is a one-way roadway with three northbound lanes. South of 7th Street, Fallon Street is a bi-directional, two-lane roadway and provides access to the Laney College parking lot.

5th and 6th Streets are east-west roadways that parallel either side of I-880. These one way roads provide access to and from I-880 within the southern end of the Planning Area. These streets also provide access to local businesses; however, a continuous roadway connection through the Plan Area is not provided.

Figure 7.14:
STREET CLASSIFICATIONS (FHA)

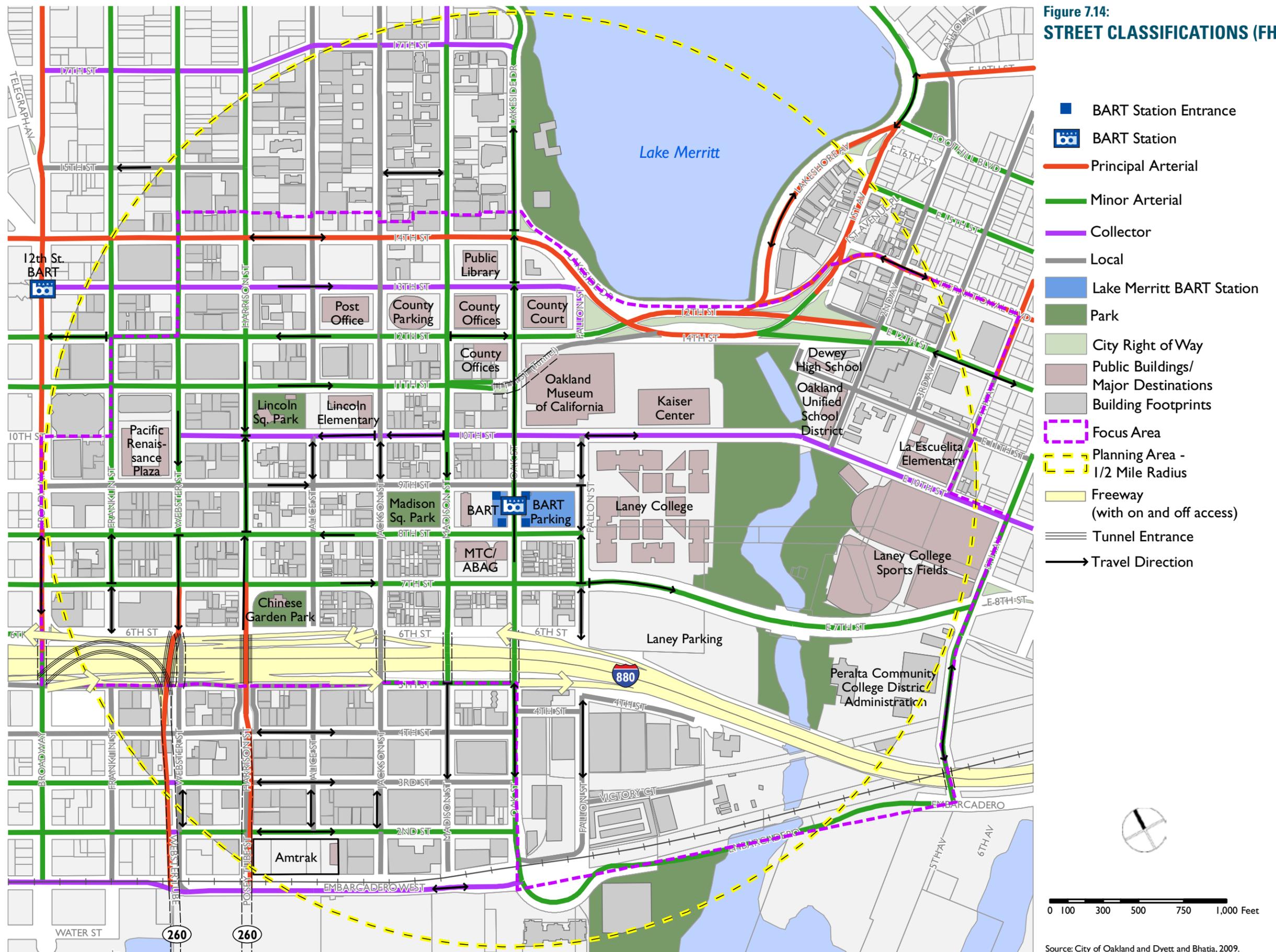
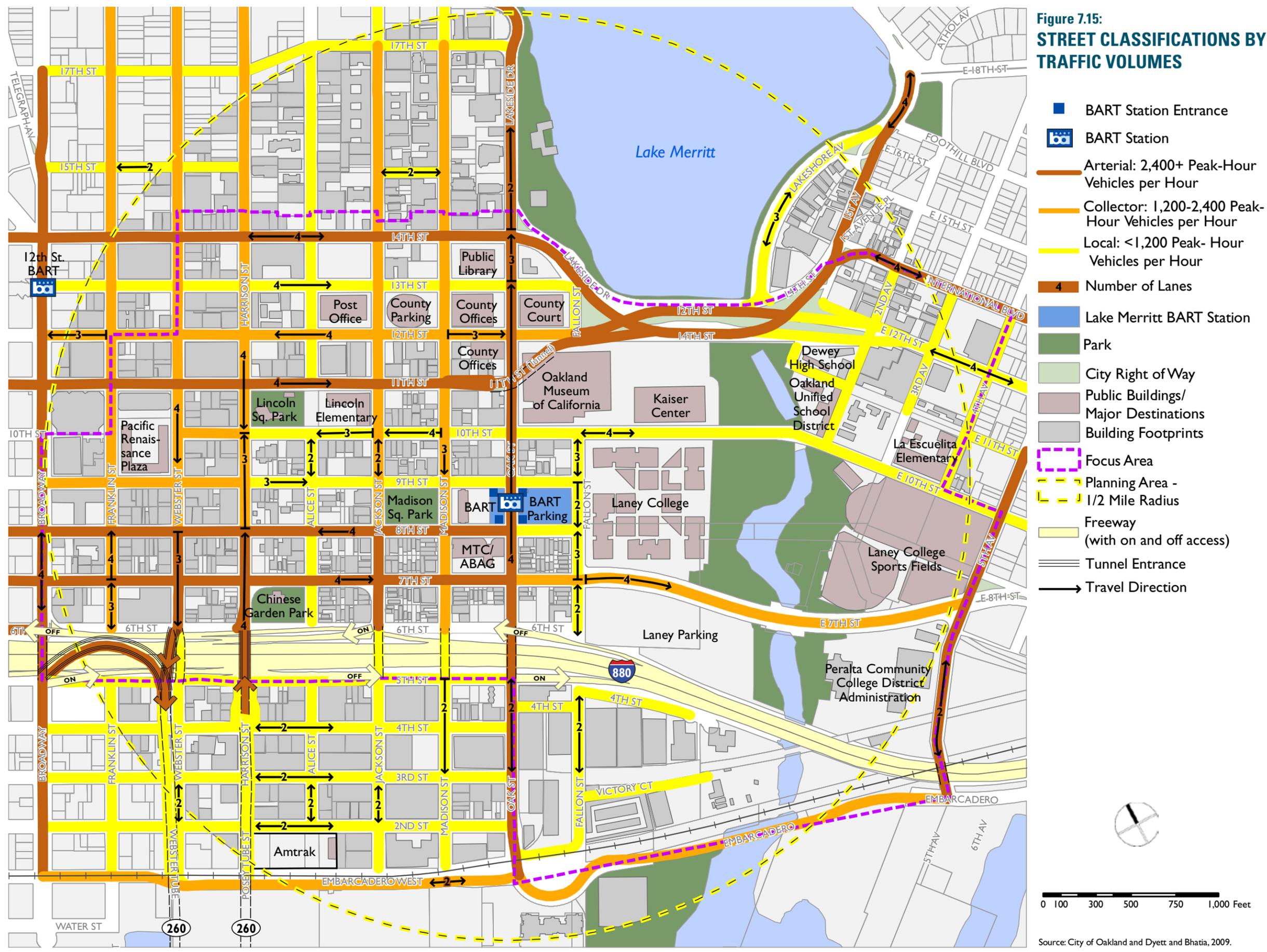


Figure 7.15:
STREET CLASSIFICATIONS BY EXISTING TRAFFIC VOLUMES



Source: City of Oakland and Dyett and Bhatia, 2009.

7.8 Existing Traffic Conditions

Level of Service Methodology

Analysis of significant environmental impacts at intersections and roadway segments is based on the concept of Level of Service (LOS). The LOS of an intersection is a qualitative measure used to describe operational conditions. LOS ranges from A (best), which represents minimal delay, to F (worst), which represents heavy delay and a facility that is operating at or near its functional capacity. Intersection LOS for this study were determined using methods defined in the Highway Capacity Manual, 2000 (HCM) and appropriate traffic analysis software.

The HCM includes procedures for analyzing two-way stop controlled (TWSC), all-way stop controlled (AWSC), and signalized intersections. Consistent with other traffic studies prepared in the city, LOS is reported as a function of average control delay for the intersection as a whole. Table 7.6 relates the operational characteristics associated with each LOS category for signalized and unsignalized intersections. The LOS standard for City of Oakland signalized intersections is LOS D outside of the Downtown area and LOS E within the Downtown area.

Existing Traffic Operating Conditions

Multiple intersections within the project’s study area have been analyzed as part of previous traffic studies including the Oak to Ninth Avenue Draft EIR, Jack London Square Redevelopment EIR, I-880/Broadway-Jackson PSR, Kaiser Center EIR, and Chinatown One-Way Street Conversion study. Table 7.7 summarizes the LOS ratings at the previously studied intersections within the study area. The vast majority of the intersections work very well and some intersections have far more than enough capacity. The intersections immediately adjacent to the Lake Merritt BART station are operating at acceptable levels.

However a few key intersections within the Planning Area are operating below the City’s minimum acceptable level of service standard of LOS E within the Downtown area. The poor level of service at Harrison Street/7th Street, Jackson Street/6th Street, and Oak Street/5th Street intersections are primarily due to the operational deficiencies along I-880, which often results in I-880 on-ramp queues extending onto the City streets. Due to lack of direct connections from Alameda to I-880, vehicles destined for westbound I-880 from the Posey Tube must make right-turns at 7th Street, Jackson Street, and 6th Street before entering the freeway. Furthermore, vehicles destined for east-

bound I-880 from the Posey Tube must loop around similarly and make a left-turn at 5th Street before entering the freeway. All intersections shown as operating at Level of Service F are highlighted. It is also important to note that conditions may have changed since the completion of the previous studies.

Opportunities and Constraints

The local street network in the immediate vicinity of the Lake Merritt BART Station generally provides adequate capacity to accommodate automobile traffic, even during the weekday peak hours. Deficiencies are noted at several key intersections that provide regional access to and from the area, specifically intersections located near the freeway entrances/exits and locations that provide connections to the City of Alameda. As shown in Table 7.7, most of the intersections within the Planning Area are operating at acceptable levels of service (LOS E or better in Downtown area). The minimal delay experienced at these intersections indicates that there is an opportunity to accommodate future growth in the area.

Parking for BART patrons is provided at the two surface lots, with a total of 206 spaces. Among the Lake Merritt, 12th Street and 19th Street BART stations, the Lake Merritt Station is the only station that provides BART parking. The vast majority of patrons are expected to continue to arrive at the station via drop-offs/pick-ups.

The white curb drop-off/pick-up zone appears to be inadequate as it only provides sufficient space for one vehicle. Given that the station is conveniently located close to Downtown Oakland, I-880, and the Webster and Posey tubes to Alameda, a larger area for drop-off and pick-up activity for BART patrons should be provided. Enhanced drop-off/pick-up facilities, such as “kiss and ride” areas which typically provide numerous stalls for drivers to temporarily park when dropping off or picking up transit patrons, should be considered.

There are also many physical barriers inhibiting access within the station area and to surrounding street network. Access to areas east of Lake Merritt and the Estuary are limited due to the lack of east-west vehicular connections. In addition, I-880 limits vehicular access to areas south of the Estuary, such as the Fallon Street Industrial area. Roadway projects in the vicinity of the station area such as the improvements along 12th Street as part of the Measure DD Implementation Project will improve

vehicular and pedestrian mobility and access to areas east of Lake Merritt.

Upon construction of the future Class 2 bicycle lanes along streets within the Planning Area as proposed by the City’s Bicycle Master Plan, removal of travel lanes to accommodate the bicycle lanes would be required at some locations. The feasibility of these bicycle lanes would need to consider the potential effects on traffic and circulation.

TABLE 7.6: INTERSECTION LEVEL OF SERVICE DEFINITIONS

LEVEL OF SERVICE	SIGNALIZED (AVG. CONTROL DELAY PER VEHICLE SEC. / VEH.)	UNSIGNALIZED (AVG. CONTROL DELAY PER VEHICLE SEC. / VEH.)	DESCRIPTION
A	≤ 10	≤ 10	Free flow with no delays. Users are virtually unaffected by others in the traffic stream.
B	> 10 and ≤ 20	> 10 and ≤ 15	Stable traffic. Traffic flows smoothly with few delays.
C	> 20 and ≤ 35	> 15 and ≤ 25	Stable flow but the operation of individual users becomes affected by other vehicles. Modest delays.
D	> 35 and ≤ 55	> 25 and ≤ 35	Approaching unstable flow. Operation of individual users becomes significantly affected by other vehicles. Delays may be more than one cycle during peak hours.
E	> 55 and ≤ 80	> 35 and ≤ 50	Unstable flow with operating conditions at or near the capacity level. Long delays and vehicle queuing.
F	> 80	> 50	Forced or breakdown flow that causes reduced capacity. Stop and go traffic conditions. Excessive long delays and vehicle queuing.

Source: Transportation Research Board, Highway Capacity Manual 2000, National Research Council, 2000.

TABLE 7.7: EXISTING INTERSECTION LEVEL OF SERVICE SUMMARY

INTERSECTION	AM PEAK	PM PEAK	SOURCE (ANALYSIS EXISTING YEAR)
Broadway / Embarcadero	A	A	Oak to Ninth Avenue DEIR (2004)
Broadway / 2nd Street	B	C	Jack London Square Redevelopment EIR (2002)
Broadway / 3rd Street	B	B	Jack London Square Redevelopment EIR (2002)
Broadway / 5th Street	D	D	I-880/Broadway-Jackson
Broadway / 6th Street	C	B	Oak to Ninth (2004)
Broadway / 7th Street	B	B	I-880/Broadway-Jackson
Broadway / 8th Street	B	B	I-880/Broadway-Jackson
Broadway / 11th Street	B	B	AC Transit BRT (2009)
Broadway / 12th Street	A	B	AC Transit BRT (2009)
Broadway / 14th Street	B	B	AC Transit BRT (2009)
Franklin Street / 2nd Street	F	B	Jack London Square Redevelopment EIR (2002)
Franklin Street / 3rd Street	F	B	Jack London Square Redevelopment EIR (2002)
Franklin Street / 8th Street	B	A	I-880/Broadway-Jackson
Franklin Street / 11th Street	B	B	Kaiser Center EIR (2008)
Franklin Street / 12th Street	B	B	DMJM Harris
Webster Street / 5th Street	A	A	Oak to Ninth (2004)
Webster Street / 6th Street	A	A	Oak to Ninth (2004)
Webster Street / 7th Street	B	B	I-880/Broadway-Jackson
Webster Street / 8th Street	C	C	I-880/Broadway-Jackson
Webster Street / 9th Street	C	C	Chinatown Conversion (2008)
Webster Street / 10th Street	A	A	Chinatown Conversion (2008)
Webster Street / 11th Street	B	B	Chinatown Conversion (2008)
Harrison Street / 7th Street	F	F	I-880/Broadway-Jackson
Harrison Street / 8th Street	A	A	Chinatown Conversion (2008)
Harrison Street / 9th Street	A	A	Chinatown Conversion (2008)
Harrison Street / 10th Street	A	A	Chinatown Conversion (2008)
Harrison Street / 11th Street	B	B	Chinatown Conversion (2008)
Harrison Street / 14th Street	A	A	Kaiser Center EIR (2008)
Jackson Street / 5th Street	B	B	I-880/Broadway-Jackson
Jackson Street / 6th Street	F	F	Kaiser Center EIR (2008)
Jackson Street / 7th Street	B	A	I-880/Broadway-Jackson
Jackson Street / 8th Street	B	B	Oak to Ninth (2004)
Madison Street / 5th Street	C	C	I-880/Broadway-Jackson
Madison Street / 6th Street	A	B	Jack London Square Redevelopment EIR (2002)
Madison Street / 7th Street	B	A	I-880/Broadway-Jackson
Madison Street / 8th Street	A	A	Oak to Ninth (2004)
Madison Street / 9th Street	A	A	Lake Merritt BART (2006)
Madison Street / 10th Street	A		EIP LSA
Madison Street / 11th Street	A	A	EIP LSA
Madison Street / 12th Street	A	A	Kaiser Center EIR (2008)

INTERSECTION	AM PEAK	PM PEAK	SOURCE (ANALYSIS EXISTING YEAR)
Madison Street / 14th Street	A	B	Kaiser Center EIR (2008)
Oak Street / Embarcadero	B	C	Oak to Ninth (2004)
Oak Street / 3rd Street	A	B	Jack London Square Redevelopment EIR (2002)
Oak Street / 5th Street	E	F	Kaiser Center EIR (2008)
Oak Street / 6th Street	B	B	Kaiser Center EIR (2008)
Oak Street / 7th Street	A	B	Kaiser Center EIR (2008)
Oak Street / 8th Street	B	B	Oak to Ninth (2004)
Oak Street / 10th Street	A	A	Oak to Ninth (2004)
Oak Street / 11th Street	B	B	Kaiser Center EIR (2008)
Oak Street / 12th Street	B	B	Kaiser Center EIR (2008)
Oak Street / 14th Street	B	C	Kaiser Center EIR (2008)
Fallon Street / 7th Street	C	C	Lake Merritt BART (2006)
Fallon Street / 10th Street	A	A	Lake Merritt BART (2006)
1st Avenue / International Boulevard	B	B	AC Transit BRT FEIS/R (2009)
2nd Avenue / 12th Street	A	A	AC Transit BRT FEIS/R (2009)
2nd Avenue / International Boulevard	A	A	AC Transit BRT FEIS/R (2009)
4th Avenue / 12th Street	C	D	AC Transit BRT FEIS/R (2009)
4th Avenue / International Boulevard	B	A	AC Transit BRT FEIS/R (2009)
5th Avenue / Embarcadero	F	F	Oak to Ninth (2004)
5th Avenue / 7th Street-8th Street	B	B	Oak to Ninth (2004)
5th Avenue / 12th Street	B	B	AC Transit BRT FEIS/R (2009)
5th Avenue / International Boulevard	B	B	AC Transit BRT FEIS/R (2009)

Note: Intersections operating at Level of Service F shown in BOLD.

7.9 Parking

Street Parking

On-street metered and non-metered parking is available along many streets throughout the Planning Area. Most metered street parking costs approximately \$2 per hour and the hours of enforcement are from 8:00 a.m. to 6:00 p.m.

According to the Revive Chinatown Community Transportation Plan, in general, on-street parking in the Chinatown core area is fully occupied throughout the day, both on weekdays and weekends. Table 7.8 presents a summary of parking survey data. According to the Revive Chinatown Plan, drivers generally adhere to on-street parking time limits on weekdays. However, on Sundays when there is no on-street parking enforcement, there are more “long-term” parkers and average parking durations are much longer. The lack of on-street parking enforcement also results in parking violations in no parking white zones. On Sundays, the number of vehicles parking in red zones is 60% higher than on weekdays.

Red zones are often installed for safety reasons. Red curbs are often adjacent to traffic signals, stop signs, yield signs and left-turn pocket lanes. Greater lengths of red zones may be at marked crosswalks without traffic signals, along curved roadways, and occasionally on approaches to stop signs or other warning signs where additional visibility of the sign is necessary. Cars parked in red zones often decrease visibility of pedestrians at intersections. Therefore, Sunday violations pose a greater threat to public safety due to the increased number of pedestrians and vehicles in the area.

Commercial loading zones, or yellow zones, are scattered throughout the area, usually in front of grocery stores and restaurants (Figure 7.16). Table 7.8 shows the behavior of vehicles in yellow zones. Although non-commercial vehicles are prohibited from parking in the yellow zones, about 85% of the vehicles using yellow zones on weekdays are non-commercial vehicles. And of the total time yellow zones are occupied, 82% is by a non-commercial vehicle. Almost all vehicles observed in yellow zones on Sundays were non-commercial vehicles.

Double parking by commercial and noncommercial vehicles is a major problem in the Chinatown Commercial Core area, as shown in Table 7.9. Double parking by non-commercial vehicles is high on Sundays when the lack of parking enforcement leads to vehicles parking all day long in on-street spaces. The Califor-

nia Vehicle Code allows commercial vehicles to double park for active delivery if there is no yellow zone available. Commercial vehicle double parking is generally limited to weekdays. Field observations for the Revive Chinatown Plan showed that there were few commercial vehicles in the Chinatown Commercial Core area on Sundays.

While weekday commercial vehicle double parking occurs throughout the day, it is heaviest during morning hours. Field observations for the Revive Chinatown Plan showed an extremely high incidence of commercial vehicle double parking in the early morning hours (8:00 AM to 9:30 AM).

In addition, some blocks with high concentrations of retail uses do not have yellow zones, which leads to a high level of commercial double parking. These street sections include the east side of Webster Street between 9th and 10th streets, the south side of 9th Street between Webster and Harrison streets, and the north side of 7th Street between Webster and Harrison streets. Other areas with heavy double parking included the south side of 10th Street between Webster and Harrison streets, the north side of 8th Street between Franklin and Webster streets, and the west side of Webster Street between 7th and 8th streets. Double parking by commercial vehicles is further exacerbated by yellow zones being occupied by non-commercial vehicles during the day.

TABLE 7.8: WEEKDAY AND SUNDAY PARKING SUPPLY AND USAGE IN CHINATOWN COMMERCIAL CORE

TYPE	SUPPLY	OCCUPANCY		AVERAGE PARKING DURATION ¹		LONG-TERM OCCUPANCY ²	
		WEEKDAY	SUNDAY	WEEKDAY	SUNDAY	WEEKDAY	SUNDAY
Metered							
30-Minute	35	93%	98%	0:32	1:38	6%	34%
1-Hour	119	92%	99%	0:41	1:50	6%	50%
2-Hour	21	94%	100%	0:45	3:36	19%	76%
Yellow (Commercial Loading)	42	77%	97%	0:38	1:31	19%	36%
White (Passenger Loading)	9	47%	86%	0:09	0:46	0%	14%
Red (Clear Zone)	-	13%	27%	0:11	0:17	-	-
Blue (Handicapped Parking)	1	87%	97%	0:45	1:27	-	-
Police	1	6%	57%	0:06	0:16	-	-
No Restriction	3	99%	99%	4:48	2:32	66%	66%

¹ Format of duration is in hours:minutes.

² Spaces occupied by one car for more than 5 out of the 6 hours surveyed.

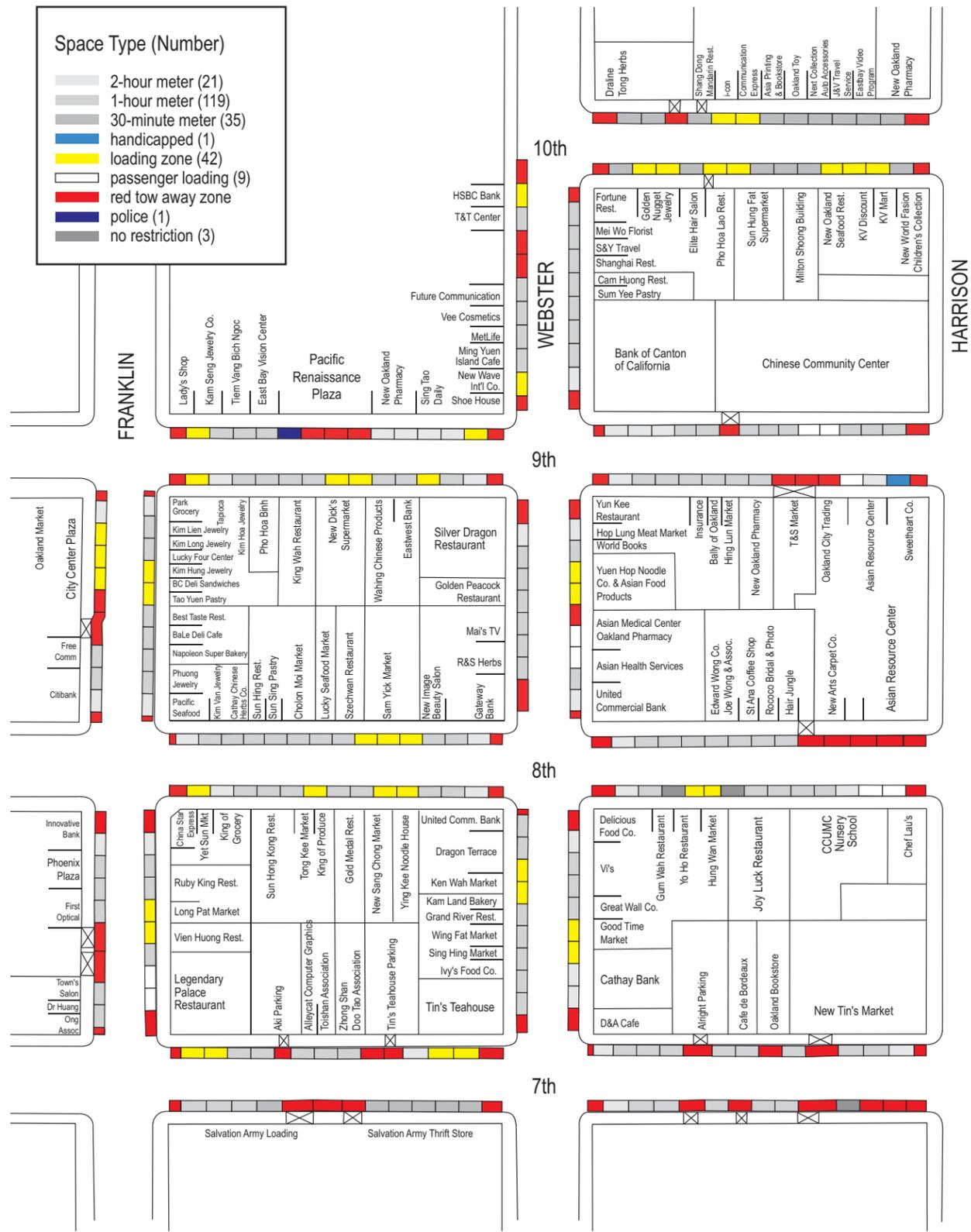
Source: CHS Consulting; Revive Chinatown Transportation Plan (2004).

TABLE 7.9: WEEKDAY AND SUNDAY DOUBLE PARKING BY VEHICLE TYPE IN CHINATOWN COMMERCIAL CORE

VEHICLE TYPE	DOUBLE PARKED VEHICLES (% OF TOTAL OBSERVED)		% OF ALL DOUBLE PARKED VEHICLES		% OF TOTAL DOUBLE PARKING TIME		AVERAGE DURATION	
	WEEKDAY	SUNDAY	WEEKDAY	SUNDAY	WEEKDAY	SUNDAY	WEEKDAY	SUNDAY
Commercial	66%	64%	18%	2%	39%	4%	10 min	9 min
Non-Commercial	27%	59%	82%	98%	61%	96%	3 min	4 min
Total	33%	59%	100%	100%	100%	100%	4 min	4 min

Source: CHS Consulting; Revive Chinatown Transportation Plan (2004).

Figure 7.16: ON-STREET PARKING SUPPLY BY TYPE IN CHINATOWN COMMERCIAL CORE



Off-Street Parking

Laney College

Student parking for Laney College is provided at a surface lot located southeast of the intersection at 7th and Fallon streets. This large lot provides over 900 parking spaces for students. Parking costs \$1 per day and students must obtain a student decal. Students may also purchase a semester parking pass.

Lake Merritt BART Station

Parking at the Lake Merritt BART station is provided at two surface lots, providing 206 total parking spaces. The larger parking lot, which is a Permit Lot, is located next to the Station, bound by 9th Street to the north, 8th Street to the south, Fallon Street to the east, and Oak Street to the west. Access to this lot is provided at 9th Street for eastbound traffic and 8th Street for westbound traffic. This lot provides guaranteed space for patrons who have purchased a monthly permit. The smaller lot, which is a Fee Lot, is located directly behind the Joseph P. Bort MetroCenter building, north of 7th Street between Madison Street and Oak Street. Access to this lot is provided at 7th Street for eastbound traffic. This lot provides daily parking for a \$1 fee, required Monday through Friday from 4:00 a.m. to 3:00 p.m. The Fee Lot typically fills around 6:30 AM on weekdays. Metered on-street parking is available along many of the nearby streets, but only allow for short term parking. Figure 7.18 shows the location of the Permit Lot (16) and the Fee Lot (49).

The Lake Merritt BART station is the only station in proximity to downtown that provides parking. Other BART stations within central business districts, such as the nearby 12th Street/Oakland City Center and 19th Street stations in Oakland and the Embarcadero and Montgomery Street stations in San Francisco, do not provide parking.

Chinatown Commercial Core Area

According to the Revive Chinatown Community Transportation Plan, There are 34 off-street parking garages and lots in the Chinatown Commercial Core area, as shown in Figure 7.17, of which 17 are publicly accessible. There are a total of 665 public parking spaces in Chinatown Commercial Core area.

Facilities reserved for residential parking and employee parking are noted on Figure 7.17, but not included in the total counts. However, facilities reserved for specific businesses were included.

According to the Revive Chinatown Plan, within the core, facilities were about 50% full on weekdays and 85% percent full on

Sundays. It should be noted that the Pacific Renaissance Plaza garage accounts for 87% of core spaces. Facilities outside of the core are primarily used by downtown employees; on weekdays, occupancy rates were around 70% while Sunday occupancy rates were only 12%. Regardless of the cheaper parking fees and relatively low occupancy rates at Renaissance Plaza garage during weekdays, the high incidence of double parking and people circulating blocks to find on-street parking suggests that people are looking for free and/or convenient parking near their destinations.

Planning Area

Figure 7.18 shows the parking available in the greater Planning Area. Corresponding Table 7.10 shows information regarding costs and number of spaces for each parking lot. This data, provided by the City of Oakland Community & Economic Development Agency, slightly differs from the Revive Chinatown Community Transportation Plan. The discrepancy may be attributed to different source data, the inclusion of facilities reserved for specific businesses in the Revive Chinatown Plan, and development changes within the Planning Area. However, Figure 7.18 and Table 7.10 are useful in that they shows parking outside of the Chinatown Commercial Core as well as the cost of parking in the Planning Area.

Figure 7.17: EXISTING OFF-STREET PARKING LOCATIONS AND OCCUPANCY IN CHINATOWN COMMERCIAL CORE

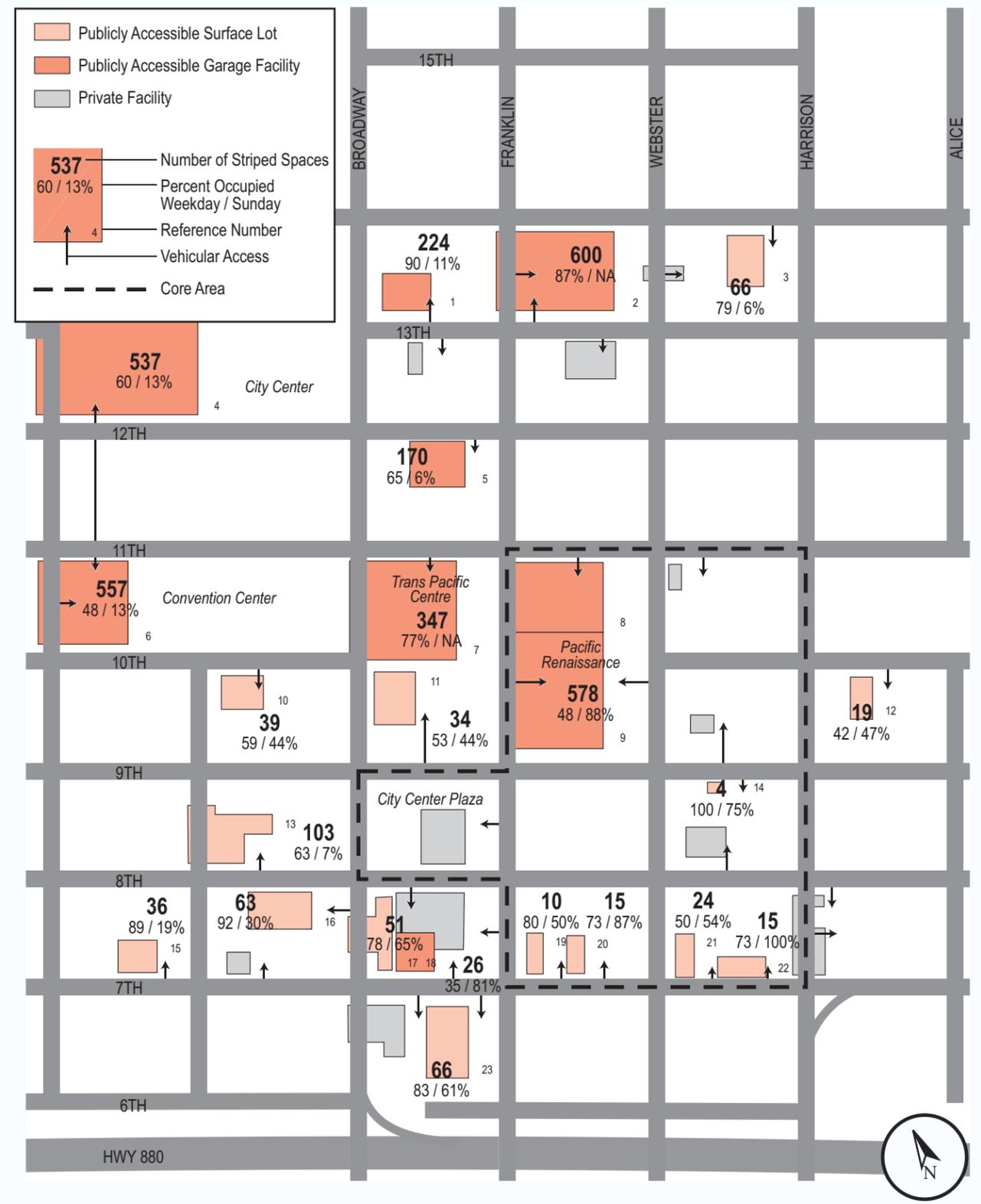


Figure 7.18: OFF-STREET PUBLIC PARKING



TABLE 7.10: OFF-STREET PUBLIC PARKING FACILITIES (2008)

#	GARAGE NAME	ADDRESS	OPERATOR	COSTS	TYPE	SPACES
1	1200 Harrison Garage	1200 Harrison	Bay Area Parking	\$1.25/hour; \$10/day; \$4/overnight; \$75 –\$90/month	Structure	207
2	1314 Franklin	1314 Franklin	Downtown Merchants	\$1.25/30 minutes; \$12(M-F) or \$6(S)/day; \$5/overnight	Structure	520
6	Alco Park Garage	1220 Jackson/13th	Alameda County	\$1.25/hour; \$6/day	Structure	767
11	Franklin 88	989 Franklin	Parking Concept Inc	\$1/ 30 minutes; \$8.50/day or \$22/day (after 10 hrs); \$4 –\$5/Evening or overnight; \$145 –\$165/month	Structure	250
15	Ken’s Garage	420 13th	Douglas Parking	\$1/20 minutes; \$13 – \$16 (M-F) or \$4(S)/day	Structure	170
16	Lake Merritt Fee Lot (See 49 for monthly lot)	Oak/7th	BART	\$1/day; \$4/month	Structure	100
19	Morgue	1428 Harrison St	Central Parking	\$8 (M-F) or \$3 (S&S)/day; \$3/evening	Structure	233
20	Museum	Oak/11th	Douglas Parking	Visitors:: \$1/hour; \$8/daily; \$3 / overnight Public:: \$2.50/hr; \$16/daily; \$3.30/overnight	Structure	171
21	Oakland Convention Center Garage	550 Clay St	Not Available	\$1.50/20 minutes ; \$4.50/hour ; \$22/day; \$12/early bird special; \$10/motorcycle	Structure	585
22	Pacific Renaissance Plaza 988 Franklin	Pacific Renaissance	Not Available	\$1.25/hour; \$14/day; \$20/overnight; \$8/motorcycle	Structure	578
24	Trans Pacific Center	1000 Broadway	Ampco System Parking	\$1.25/30 minutes; \$14/day; \$175/month	Structure	330
25	UC Garage	409 12th	Douglas Parking	\$1/30 minutes; \$13/day;	Structure	145
26	Webster & 11th	1116 Webster/11th	Star Park Corp	\$7 –\$10/day	Structure	80
34	1424 Franklin St	1424 Franklin St	Ampco System Parking	\$195/month	Surface	80
35	1427 Franklin	1427 Franklin	Ampco System Parking	n/a	Surface	72
47	Jade	Broadway/8th	Central Parking	\$5/2 hours; \$9/day; \$5/after 4pm	Structure	63
49	Lake Merritt Permit Lot	Fallon/8th	BART	\$84/month	Surface	108
50	Madison & 13th	Madison/13th	California Parking	\$109.50/month	Surface	75
51	Post	226 13th St	Central Parking	\$4.50/hour; \$9/day (M-F);; \$3 after 4pm/Sat/Sun	Surface	233
Total						4,767

Source: City of Oakland, 2008.

7.10 Planned Developments and Improvements

Planned Developments

There are a number of planned developments located in the vicinity of the project area that will impact circulation in the Planning Area. A brief description of the major planned development projects are discussed below.

Oak to Ninth Avenue

The proposed project would redevelop a 64.2-acre site along the Oakland Estuary and the Embarcadero, east of Jack London Square and south of Interstate 880 (I-880), along the City of Oakland's southern boundary. A continuous public pedestrian trail and Class 1 bicycle path along the entirety of the project's waterfront would also be created as segment of the Bay Trail.

Mitigation measures identified in the project's Draft EIR⁹ include signalization of Embarcadero intersections at Broadway, 5th Street, and Oak Street, as well as widening of Embarcadero along the project's frontage to provide two-lanes in each direction. Additionally, the project applicant would have to provide a private shuttle service to support the development.

Alameda Point Redevelopment

The Alameda Point project proposes to redevelop the Alameda Point neighborhood, which was previously home to the Alameda Naval Air Station. This development is expected to generate a significant amount of new trips, which will exacerbate traffic conditions in the surrounding area and through the Webster and Posey tubes connecting Oakland and Alameda. A transportation strategy was developed to identify ways to accommodate the added traffic demand due to the Alameda Point redevelopment.

The Alameda Point Draft Redevelopment Master Plan was published in December 2008. California Environmental Quality Act (CEQA) documentation to identify environmental impacts and necessary mitigation measures has not yet been completed.

⁹ Oak to Ninth Avenue Project Draft EIR, ESA Associates, Inc., August 2005.

Roadway Improvements

A number of planned roadway improvements have been identified. Environmental studies are currently being prepared for several of these projects.

I-880/Broadway-Jackson Interchange

This project is proposed to reconfigure the I-880/Broadway-Jackson Interchange to improve access between Alameda, Oakland, and I-880/I-980. The project intends to relieve both the current and projected traffic congestion due to the existing operational deficiencies and the pending adjacent developments. Two alternatives have been examined: No Build Alternative and the Recommended Alternative Package. A design alternative has not been chosen, and various alignment alternatives are still under consideration and will be further studied in the Project Report (PR) phase.

The Recommended Alternative Package is not supported by the community. It proposes to provide an additional route from the Posey Tube to westbound I-880 by constructing a left-turn lane from northbound Harrison Street to westbound 6th Street. Additionally, a new I-880 Westbound on-ramp is proposed along 6th Street at its intersection with Market Street, which would alleviate some of the on-ramp queuing deficiencies caused by the weaving section along the I-880 segment. The Recommended Alternative Package is estimated to cost approximately \$81.5M in construction and right-of-way acquisition. The project would be funded by local, state, and federal funds. The project's Project Study Report (PSR) was submitted and is currently being reviewed.

A third alternative, which also proposes to provide an additional route from the Posey Tube to westbound 6th Street, is currently under consideration. This alternative, which is commonly referred to as the "horseshoe alternative" proposes to allow right-turns from Harrison Street out of the Posey Tube to eastbound 5th Street. Vehicles destined for westbound I-880 could then make left-turns on Jackson Street and 6th Street before taking the entering the freeway at the existing on-ramp.

Oakland Measure DD Implementation Project

Measure DD is a municipal bond measure passed by Oakland voters in 2002. As stated on the 2002 ballot measure, the purpose is to "acquire and construct water quality improvements for

and related to Lake Merritt, Lake Merritt Channel, the Estuary and creeks in Oakland; to improve, renovate and construct youth and public recreational facilities including the East Oakland Sports Center, Studio One and Fairyland; to rehabilitate and acquire parks, open space and other recreational safety and maintenance facilities; and to provide safe public access to Lake Merritt, Lake Merritt Channel, and the Estuary." This project aims to construct four groups of improvements:

- Lake Merritt and Lake Merritt Channel Improvements (Group 1);
- Oakland Waterfront Trail and Access Improvements (Group 2);
- North and East Oakland Recreational Facilities (Group 3); and
- City-wide Creeks Restoration, Preservation and Acquisition (Group 4).

As part of the Group 1 phase of this project, 12th Street is proposed to be reconstructed between Oak Street and 3rd Avenue. The new 12th Street bridge alignment will provide three travel lanes in each direction with a separate pedestrian bridge to the north. The design for the 12th Street improvements is complete and the project broke ground in May, 2010. Additionally, enhancements to pedestrian and bike facilities are proposed around the perimeter of Lake Merritt.

Transit Improvements

AC Transit East Bay Bus Rapid Transit (BRT)

The proposed BRT project will provide express bus service from Downtown Berkeley through Downtown Oakland and San Leandro. BRT provides enhanced bus service, typically involving Intelligent Transportation Systems (ITS) elements, transit signal priority (TSP), more efficient fare collection, dedicated bus lanes, queue jump ability, and other elements. The proposed BRT route will travel along 11th Street and 12th Street within the plan area, and will have dedicated lanes. However, along Broadway, the proposed BRT route will be in mixed flow lanes. The closest BRT stops will be located at the Madison Street intersections at 11th and 12th Streets, which are within three blocks of the Lake Merritt BART station.

The process to identify a Locally Preferred Alternative (LPA) for the analysis is currently underway, and will be included as part of the FEIS/R, which will assess the environmental impacts of the proposed project.

Broadway Shuttle

In October 2009, the Bay Area Air Quality Management District awarded the City of Oakland a grant to operate a Broadway Shuttle system. This free service will operate between Jack London Square and the Uptown Entertainment District in Downtown Oakland. This shuttle will provide greater connectivity to Downtown and Jack London Square via public transportation connections at the 12th and 19th Street BART stations, the Oakland-Alameda Ferry terminal, the Jack London Amtrak station, and the Uptown Transit Center. The Broadway Shuttle is planned to operate Monday through Friday from 7:00 AM to 7:00 PM. It will operate with 10 minute headways during the peak periods and 15 minute headways during the non-peak periods.

Broadway Phase II Streetscape Project

This streetscape project is along the east side of Broadway segments from 11th Street to 13th Street and 15th Street to 17th Street. Additionally, it is along the west side of Broadway segments from 14th Street to 15th Street and 16th Street to 17th Street. The improvements include replacement of existing sidewalks with new paving, addition of pedestrian amenities including benches, bus shelters, and trees. Sidewalk design work will take into account necessary work relating to utilities, basement elevators, sidewalk vaults, waterproofing, and other issues.

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