

# Chapter 2 Existing Conditions







Shellmound Way

FREEWAY  
← WEST 80 EAST →  
San Francisco Berkeley  
580 WEST 880 SOUTH  
Oakland San Jose



EVERYDAY  
Marketplace  
A STADIUM 10  
ORDERS  
DRUGS • MUSIC • CAFE  
BlueSky  
BROKEN RACK

BOOKS & MUSIC



SPEED  
LIMIT  
25



## CHAPTER 2. EXISTING CONDITIONS

This chapter summarizes important background elements that are essential information for the development of the Emeryville Sustainable Transportation Plan. This information includes Emeryville's demographic composition, existing land use conditions and planned land uses in Emeryville and their relationship to transportation. It also discusses existing elements of the city's circulation network, transit connections, and transportation demand programs that are currently in place. The information found in this chapter serves as the basis for understanding the existing environment within Emeryville.

### Demographics and Land Use

#### Population, Housing, and Employment

Emeryville has experienced dramatic growth in population, housing and jobs over the past several decades, as industrial uses gave way to retail, employment, and housing development. Demographics such as age distribution, auto ownership, and the travel behavior of residents, employees, and visitors is important information to support the design of

**Emeryville has one of the highest jobs to employed resident ratios in the Bay Area, with 4.2 jobs per employed resident in 2005.**

a transportation system that best meets the needs of residents, employees and visitors, especially one that enables and encourages use of alternative modes.



As of 2010, the City of Emeryville is estimated to have a population of 10,100, a 47% increase since 2000. Employment declined slightly during the same time period, from 19,860 jobs in 2000 to 18,610 jobs in 2010.<sup>1</sup> This decline may be attributed to the recent economic slowdown in the nation's economy. Population, housing and jobs are all expected to continue to grow steadily throughout the General Plan buildout period as shown in Figure 2-1.

<sup>1</sup> The sources for all data in this chapter, except as otherwise indicated, are the 2000 US Census, 2000 Census Transportation Planning Package (CTPP), and Association of Bay Area Governments (ABAG), "Projections 2009"

Emeryville has one of the highest jobs to employed resident ratios in the Bay Area, with 4.2 jobs per employed resident in 2005. In the future, the City is planning to focus more development on housing compared to job growth, and as a result is expected to have 2.6 jobs per employed resident by the year 2030.<sup>2</sup> The percentage of households renting versus owning did not change significantly between 1990 and 2000, with 37% of housing units being owner-occupied and 62% being renter-occupied.

**Figure 2-1 Population, Housing and Job Growth**

	2000	2010	Build-out	Percent Change	
			2030	2000-2010	2010-2030
Population	6,882	10,100	15,500	47%	53%
Housing Units	3,975	5,770	9,755	45%	69%
Jobs	19,860	18,610	30,000	-6%	61%

Source: Department of Finance 2008, ABAG Projections 2009, City of Emeryville, Dyett & Bhatia 2008.

### Age Distribution

In 1990, 13% of the total population was 18 years or under and just under 9% of the population was 65 years or over. In 2000, the number of people age 18 or younger dropped to 11%, whereas the number of people age 65 and over increased to 10%. These trends continue the Association of Bay Area Government's (ABAG) age projections for years 2010 and 2030. The projected number of people 19 years and under in 2010 is 23% of the total population, but this number drops in the 2030 projections to 20% of the population. The difference between the Census data and ABAG's projections may reflect a large number of 19 year-olds as well as an increase in the number of people under 20. The number of people who are 65 years and over will continue to increase according to ABAG's predictions from 11% in 2010 to 21% in 2030. Expectations that nearly one quarter of the population will be over the age of 65 by 2030 indicate that a re-evaluation of transportation needs and services in the longer term will be necessary. Figure 2-2 summarizes the age distribution in 1990 and 2000, and projected by ABAG in 2010 and 2030.

<sup>2</sup> Department of Finance 2008, ABAG Projections 2009, City of Emeryville, Dyett & Bhatia 2008

**Figure 2-2 Age Distribution as Percentage of Total Population**

Age Distribution	US Census		ABAG Projections	
	1990	2000	2010	2030
18 years old and under*	13%	11%	23%	20%
65 years and over	9%	10%	11%	21%
Total:	22%	21%	34%	41%

\* ABAG Projections for youth are defined as 19 years and under

### Disability Status

In 2000, 21% of the civilian non-institutionalized population five years and over in Emeryville indicated having a disability (including temporary disability). Comparatively, 18% of the non-institutionalized population five years and over in the San Francisco-Oakland-San Jose, CA Metropolitan Area indicated having a disability.<sup>3</sup>

### Household Income and Auto Ownership

In 2000, the median household income in the City of Emeryville was \$45,359 with 28% of households having income less than \$25,000/year. 11% of the households in Emeryville did not have access to a vehicle in 2000, similar to the nine-county San Francisco Bay Area, of which 10% of households did not have access to a vehicle in 2000.

### Journey to Work

Employed residents of the City of Emeryville have a lower drive-alone rate (57%) compared to the San Francisco Bay Area (68%), especially if they also work in Emeryville (see Figures 2-3 and 2-4 below), whereas employees in Emeryville who live elsewhere have a higher-drive alone rate than the Bay Area average. The percent of resident commuters using public transit rose from 13% to 19% between 1990 and 2000, primarily because of the successful Emery Go-Round shuttle service.<sup>4</sup> Emery Go-Round ridership rose by approximately 70% during that time period. At the

<sup>3</sup> US Census Bureau, Census 2000, Table P119: Imputation of Disability Items for the Civilian Non-institutionalized Population 5-years and over.

<sup>4</sup> US Census Bureau, Census 1990, Table P049: Means of Transportation to Work: Workers 16 years and over (STF-3); Census 2000, Table P30: Means of Transportation to Work: Workers 16 years and over (SF-3)



same time, the number of residents who commute to work in a carpool decreased from 17% to 9%, a drop of eight percentage points between 2000 and 2010.<sup>5</sup> Commute times for Emeryville residents increased by almost 20% between 1990 and 2000. The average travel time to work in 1990 was 22 minutes; by 2000 it had increased to 26 minutes.

**Figure 2-3 Work Commute Mode - Employed**

Mode	Emeryville		SF Bay Area
	1990	2000	2000
Drove alone	58%	57%	68%
Carpooled	17%	9%	13%
Public transportation	13%	19%	10%
Walked	4%	6%	4%
Other means	3%	3%	2%
Worked at home	5%	6%	3%



Image from Nelson\Nygaard

In 2000, 22% of Emeryville residents also worked in Emeryville, but the most common job location for employed residents was the City of San Francisco (26%), and another 17% worked in Oakland. The most common residential locations of Emeryville employees were San Francisco (27%) and Contra Costa County (24%). Overall, of all jobs in Emeryville, 95% are occupied by employees living elsewhere.

A large proportion – 28% – of residents who worked in Emeryville walked to work in 2000 (as compared to only 3.2% of all Bay Area commuters) and another 4% rode a bicycle. Only 37% of Emeryville residents who worked in Emeryville drove alone, compared to 60% of residents who worked outside Emeryville. A significant number of Emeryville residents working elsewhere carpooled (10%) or used public transit (28%). Of Emeryville workers living elsewhere, 77% drove alone and 13% carpooled. 21.9% of Emeryville residents take transit to work, while only 6.2% of Emeryville workers take transit to access their place of work in Emeryville.

**Commute times for Emeryville residents increased by almost 20% between 1990 and 2000. The average travel time to work in 1990 was 22 minutes; by 2000 it had increased to 26 minutes.**

In 2000, 6% of workers in Emeryville who lived elsewhere rode transit to work. However, in the last eight years, Emery Go-Round ridership has increased significantly, with almost half of MacArthur BART patrons transferring to or from the Emery Go-Round (see this chapter's section on transit), suggesting that a larger proportion of workers are using

transit to come from other locations to work in Emeryville. Figure 2-4 summarizes the travel mode of commuters working or living in Emeryville.

<sup>5</sup> The most recent journey-to-work data for the City of Emeryville is from the 2000 Census Transportation Planning Package (CTPP).



**Figure 2-4 Travel Mode of Commuters in 2000**

Emeryville Residents	Travel Mode of Commuters						Work at Home	Total Population
	Drive Alone	Carpool	Transit	Bicycle	Walk	Other		
Work in Emeryville	37%	5.3%	25%	3.8%	28%	1.1%	25%	1,000
Work Elsewhere	60%	10%	28%	0.7%	0.1%	2.0%	n/a	4,000
Emeryville Workers								
Live Elsewhere	77%	13%	6.4%	1.3%	1.4%	0.7%	n/a	17,000

Source: 2000 US Census Transportation Planning Package

## Planning Context

Several important planning efforts have recently been completed or are currently underway that will have a significant impact on the transportation system and its relationship with the built environment. The following section provides brief descriptions of these plans.

### General Plan Update

In October 2009, the City of Emeryville adopted a new General Plan, which serves as the blueprint for the future growth and development of the City. The General Plan is based on a set of guiding principles expressing a vision for Emeryville. These principles include the following:

- The City is comprised of distinct neighborhoods and districts that are connected to each other and the region by a variety of modes, without need for an automobile for travel
- A diverse and inclusive community providing increased economic opportunity, education, and support for a variety of individuals, households, and families
- Strongly supportive of public health, environmental sustainability, and economic growth and stability

Transportation is recognized in the General Plan as fundamental and pivotal to achieve these goals. The Plan states that “a confluence of demographic, economic, and environmental trends are converging toward the necessity of creating a multi-modal transportation network in Emeryville.”<sup>6</sup> Reasons cited include an aging population, increasing fuel costs, and

concerns about climate change, with a wide range of other motivating factors expressed by stakeholders and the community, including opportunities to improve public and personal health; reducing environmental impacts of transportation; reducing housing and business transportation costs, while increasing access to jobs, education, and markets; and increasing social connectivity within the community.

The General Plan, as currently written, represents a shift in the City’s approach to transportation. An emphasis is placed on not just automobiles and mobility, but rather access by all modes. Attention is given to the relative costs and benefits of policy decisions impacting transportation and their potential to support achievement of the goals of the Plan.

Fundamental transportation-related strategies in the General Plan include:

- Investments in transportation infrastructure and services to move towards a more equitable and efficient multi-modal transportation system
- Land use policies to encourage more compact, mixed-use development providing many amenities within walking distance and supportive of longer-distance travel by bicycle and public transit, rather than reliance on an automobile
- Design strategies for streets and public spaces to encourage more walking, by making it safer, more comfortable and convenient, and universally accessible to all

Several policy directives are proposed to support these strategies, including a street typology defining priority mode of access on various city streets, an expanded methodology to measure the impacts of proposed projects on all modes of transportation, a revised transportation impact

<sup>6</sup> City of Emeryville General Plan, Transportation Element



fee providing funding for projects supporting alternative transportation, a commitment to better accommodate all modes of transportation on city streets through a “complete streets” policy, and further exploration of the potential for the City to implement transportation demand management policies and programs citywide. This plan is at <http://ca-emeryville.civicplus.com/index.aspx?NID=307>.

## Design Guidelines

City-wide design guidelines adopted in December 2010 address the design of sidewalks with their landscaping and the design of streets by street type. These guidelines are at <http://ca-emeryville.civicplus.com/index.aspx?NID=1193>.

## Bicycle and Pedestrian Master Plan Update

In July 2010, the City of Emeryville initiated an effort to update its Bicycle and Pedestrian Master Plan. The existing plan was adopted by the City in July of 1998 and included guidelines for pedestrian and bicycle facilities and a list of priority projects. The Bicycle and Pedestrian Master Plan Update process officially began in September 2010 and is scheduled to be completed in approximately one year’s time. The strategies noted in the Sustainable Transportation Plan related to bicycle and pedestrian projects and programs are intended to complement improvements and programs that will be presented in the forthcoming Bicycle and Pedestrian Master Plan.

## Parks and Recreation Strategic Plan

The Emeryville General Plan includes goals and policies for a parks and open space system. It also includes a map of parks, open space, and public services. The map identifies three sites for major parks and several generalized locations of other park opportunities. This plan is relevant to transportation as it includes projects such as trails and paths for pedestrians and bicycles that serve a recreational and a functional purpose. In 2010, MIG consultants were retained to help the City prepare a Parks and Recreation Strategic Plan to decide how to implement the General Plan goals and policies related to parks and recreation. The strategic plan was adopted in January 2011. This plan is at <http://ca-emeryville.civicplus.com/index.aspx?NID=1438>.

## Other Relevant Studies and Plans

### Climate Action Plan

In November 2008, Emeryville adopted a Climate Action Plan. It includes two government operations measures and five community-scale measures that directly address transit. These measures are listed below.

- Increase Emery Go-Round and AC Transit ridership – 10 daily City employees switch to bus
- Increase BART and Amtrak ridership – 10 daily City employees switch to rail
- Allow bicycles on trains and buses – 50 additional daily bicycle-transit trips
- Expand Emery Go-Round service in range and/or frequency – 1,000 additional daily passengers
- Implement bus rapid transit or shuttle programs – 1,000 additional daily passengers
- Increase AC Transit ridership – 500 additional daily passengers
- Increase BART/Amtrak ridership – 500 additional daily passengers

This plan is at <http://ca-emeryville.civicplus.com/index.aspx?NID=332>.

### MacArthur BART Station

#### Safe Routes to Transit Bicycle Feasibility Study

This study was conducted to “identify the optimal means for providing bicycle access to the MacArthur BART Station in the 40<sup>th</sup> Street/MacArthur corridor in Oakland, California.” It was completed in June 2008.

The goal of the study was to provide improved bicycle and pedestrian access, while maintaining an acceptable level of vehicle operations and high-quality service by AC Transit and the Emery Go-Round along this corridor.

Bicycle lanes exist on 40<sup>th</sup> Street and other streets in the vicinity of MacArthur BART Station, but do not connect to the station itself. Bicycling is desirable as a significant mode of access to the station to reduce vehicle trips and increase overall patronage, especially as new development may occur at the station site and in its vicinity.



The primary conclusions and recommendations of the study were as follows:

- A reduction in number of vehicle lanes would result in unacceptable delays for both automobiles and transit vehicles
- Dedicated (Class II) bicycle lanes were recommended along the wider portions of West MacArthur Boulevard and 40<sup>th</sup> Street, and 41<sup>st</sup> Street in Oakland.
- The narrower segments of these streets, including the segments of 40<sup>th</sup> Street in Emeryville, were recommended for designation as Class III Arterial Bicycle Routes and a segment of 41<sup>st</sup> Street was recommended for designation as a Class III Bicycle Boulevard.

## Major Developments Study

Formerly referred to as the “Big 4 Traffic Study,” Fehr & Peers (F&P) and Kimley-Horn Associates (K-H) performed an evaluation of the expected traffic impacts of four major development proposals in Emeryville,<sup>7</sup> as well as already-permitted potential expansion of the Novartis site. These studies were supplemented by an independent evaluation by Nelson\Nygaard Consulting Associates and focused especially on opportunities to reduce vehicle trips produced by proposed developments through transportation demand management strategies such as those currently proposed for the Marketplace Redevelopment project.

The initial studies by F&P and K-H suggested a significant increase in automobile traffic in Emeryville over time, but the contribution from these specific projects would be a relatively small proportion of overall growth in automobile traffic. The K-H study also explored several potential traffic mitigation strategies, including changes to vehicle circulation patterns, increases in auto capacity, especially at certain intersections, changes to pedestrian signal activation, and a pedestrian/bicycle path on the Powell Street Bridge over the railroad tracks (through a widened bridge).

The Nelson\Nygaard evaluation focused on the relative costs and benefits of proposed changes to the circulation network. The analysis included consideration of the potential for increased roadway capacity to induce additional vehicle traffic, as well as opportunities for transportation

demand management strategies (TDM), such as free bus passes and market-rate pricing for parking, to reduce the total vehicle trips generated by the proposed projects and possible expansion of Novartis. Overall, they found that the proposed changes would have a highly detrimental effect on pedestrians, bicyclists, and public transit in an area that is already heavily auto-oriented.

The evaluation’s final recommendation was for the City to pursue TDM programs and strategies throughout the City, and identify other opportunities to reduce overall demand to enable existing roadway capacity to best serve both automobiles and other modes, without any expansion of vehicle capacity necessary.

After review of these various studies, and subsequent discussion with consultants and City staff, the City Council elected to proceed with vehicle capacity enhancements to maintain and increase automobile access to regional retail in the southwest area of the City, the area along Shellmound and 40<sup>th</sup> Streets between Powell Street and San Pablo Avenue. Other changes, such as adding additional lanes for turning vehicles, in areas with more residential and office employment uses, were not approved. A commitment, in principle, was made by City Council to further explore opportunities to reduce vehicle trips from these developments, and citywide, as is being pursued through the Sustainable Transportation Plan.

## North Hollis Parking Plan

The City of Emeryville, with the support of Wilbur Smith Associates, developed a parking plan for the North Hollis area of Emeryville. The plan was initiated due to concerns expressed by the community about a shortage of on-street parking for local residents and off-street parking for local employees. The goals of the plan were to reduce solo driving and parking demand, coordinate and better manage the parking supply, and increase parking efficiency.

The Existing Conditions Report examined parking supply and availability in the North Hollis area, including both on and off-street facilities, as well as changes to parking demand expected in the near future, with a focus on weekday parking when employee demand is highest.

**More than 75% of those surveyed as part of the North Hollis Parking Plan believe that both cost and availability are important. 41% were willing to pay a small fee per hour for on-street parking.**

<sup>7</sup> Projects are: Emeryville Marketplace Redevelopment, Transit Center, Bay Street Site B, and Gateway at Emeryville.



**Figure 2-5 Emeryville Parking Management Plan**

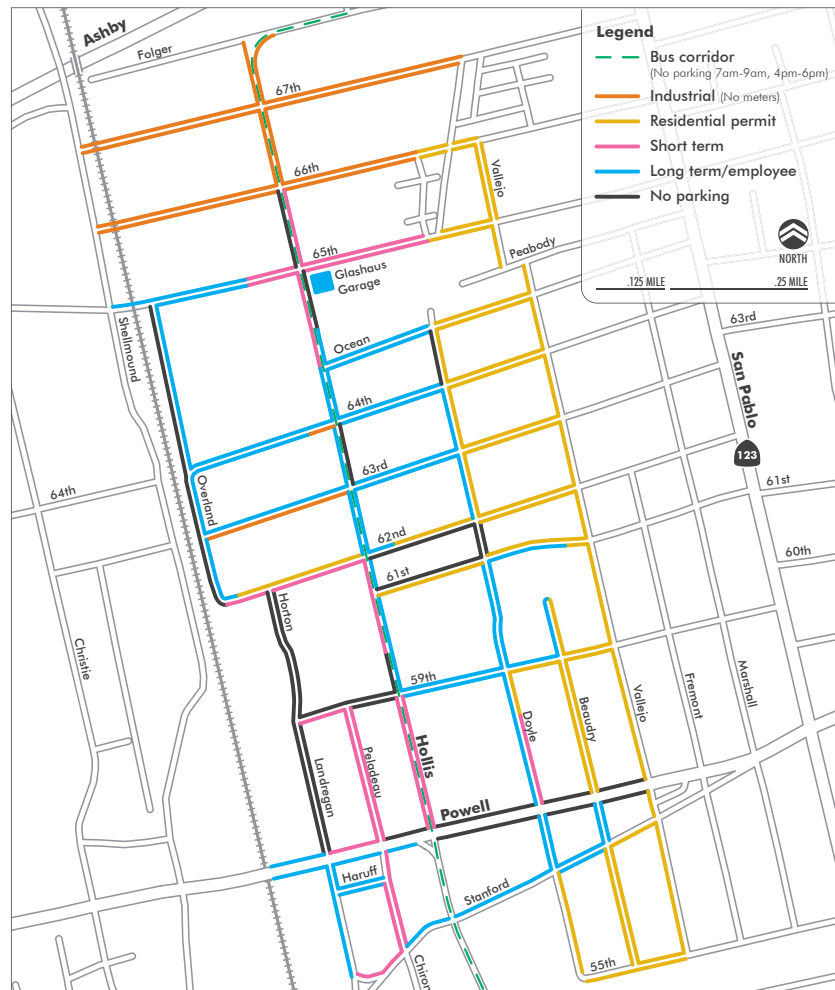


Image from Wilbur Smith Associates, North Hollis Parking Study

#### Key findings of the North Hollis Parking Plan:

- On-street parking occupancy peaks in late morning at almost 90% in Areas 1 and 2 and at 71% in the Residential Area (southwest corner). About 40% of vehicles remained parked for more than 6 hours.
- There are clusters of parking hotspots in high employment areas, but significantly lower occupancy a block or two away. Residential area hot spots appear during the midday and late afternoon.

- There is a perceived and seemingly real lack of public off-street parking in the northern study area, but there is significant variation in occupancy rates between lots in the full study area. There is ample off-street parking capacity, but mostly in lots which are restricted to certain buildings.
- Drivers spent significant time looking for parking while occupancy levels were at their peaks (from around 11:00 AM until 1:00 PM). About one-half of drivers surveyed believe on-street parking is difficult to find.
- More than 75% of those surveyed believe that both cost and availability are important. 41% were willing to pay a small fee per hour for on-street parking.
- In December 2008, when the North Hollis Parking Plan was presented, the City Council decided to expand the study to the rest of the city. The new analysis covered the area south of Powell Street, the Triangle Neighborhood and North Bayfront. Data from areas of high parking demand were examined to see if there were areas that would be suitable for a parking management plan. The only such area was the area immediately south of the North Hollis area; therefore, the North Hollis area was expanded.
- The parking management plan prepared by Wilbur Smith and Associates and presented to the City Council in August of 2010, recommends active management of parking in the area north of 55<sup>th</sup> and Stanford, between the railroad tracks and the eastern city limit, including use of the following tools:
  - Variable on-street pricing,
  - Short-term parking near retail,
  - Long-term parking near office uses,
  - No meters in the industrial areas,
  - A residential permit parking program, and
  - Restricted parking in the Hollis Street transit corridor.
- On September 7, 2010, the City Council approved the plan. The City Council directed staff to paint curbs for short-term parking immediately and defer other actions until office occupancy and retail sales increase.

This Plan is at <http://ca-emeryville.civicplus.com/index.aspx?NID=586>

## Powell Street Urban Design Plan

The City hired a consultant team led by WRT Inc. to explore design solutions for the segment of Powell Street extending from the bridge over the railroad tracks, the intersection of Powell with Christie Avenue, and through to the west side of the freeway interchange. Key issues the plan seeks to address include:

- High volumes of vehicle traffic experiencing significant delay, including turning movements between Christie Avenue and Powell Street, to and from the freeway.
- Pedestrian and bicycle issues – potential conflicts with high traffic volumes, difficulty crossing wide intersections, especially for people moving more slowly due to age, disability, strollers or luggage, etc.
- Public transit (Emery Go-Round and AC Transit) vehicles experiencing significant delay due to mixed-flow travel with automobiles. Poor conditions for pedestrians here also make it more difficult to access transit stops.
- Proposed development in the vicinity of this segment of Powell and elsewhere is expected to exacerbate these issues as more vehicle, pedestrian, and trips by other modes are made along or across Powell Street.
- The goal was to develop design concepts that optimize conditions for all modes, maintaining or improving automobile traffic flow, while also improving conditions for pedestrians, bicyclists, and public transit.

The plan was presented to the Planning Commission in October 2010. A portion of that plan can be found in Figure 2-6.

## Senior and Disabled- Transportation Needs Assessment

The City and Douglas J. Cross Transportation Consulting studied transportation for senior and disabled residents in Emeryville. The resulting report included recommendations regarding operation of the Senior Center Measure B transportation program, the Senior Center helping senior and disabled residents to use transportation resources, and City policies and improvements that would support transportation options for seniors and disabled residents.

## 3-Ds of Travel Behavior

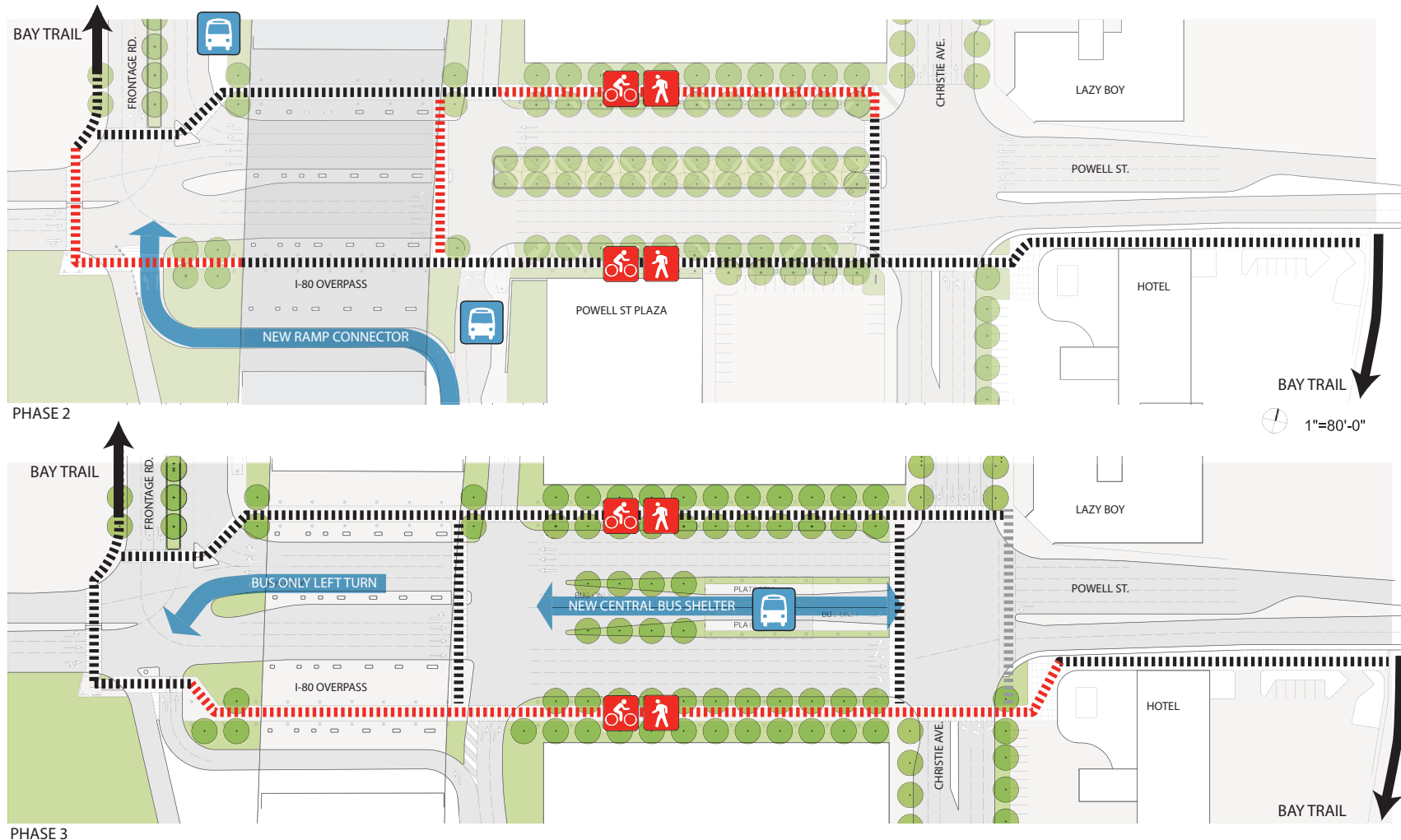
Several factors related to land use can have a dramatic influence on travel behavior. Often referred to as the “3-Ds”, these principles will be important to ensure the urban environment in Emeryville evolves to be highly walkable, bicycle-friendly and supportive of public transit as an alternative to longer-distance travel by automobile. More than 40% of all trips in the U.S. are less than two miles – an ideal distance for biking, or taking public transit – and approximately 50% of commuters travel less than 5 miles to work.<sup>8</sup> A brief description of the “3-Ds” follows:

- **Density** – Locate as many potential riders within close proximity of a transit station as possible. Most people will not be willing or able to walk more than a half mile, some even a quarter mile. Structures should be built at relatively high densities, but with attentive design and construction that maintains privacy and reduces their perceived mass. Though not the only factor, the number of people within walking or biking distance of a transit station, or having direct access via transit, is a primary determinant of its patronage.
- **Design** – Pedestrians should be given highest priority in the station area, especially along primary paths of travel and in areas of potential conflict with automobiles, transit vehicles, and even bicyclists. Walkways should be wide and well taken care of and all crosswalks, especially at major intersections, should be designed following principles of universal access. Waiting areas should provide shelter and places to sit, and maps and information about transit services should be available. Sensitive and creative design will help place bus stops and rail stations within the community, and ensure that patrons feel welcome, comfortable, and safe. Providing these amenities is critical to developing and maintaining a strong ridership base and relationship with the surrounding community.
- **Diversity** – Perhaps the biggest factor in reducing automobile trips is a diversity of key amenities locally, within walking distance of an individual’s home, especially if they are able to stop by on their way to or from work. Amenities may include a corner store or larger grocer, child-care, post office, restaurants and cafes, etc. Programming diversity into the landscape also reduces the geographic impact if a particular market sector is not financially strong.

<sup>8</sup> Schiedeman, Jake (October 4, 2007), “Take it out for a ride,” Napa Valley Register: [http://www.napavalleyregister.com/articles/2007/10/04/go\\_green/doc470592efb06d3928890672.txt](http://www.napavalleyregister.com/articles/2007/10/04/go_green/doc470592efb06d3928890672.txt)



Figure 2-6 Proposed Pedestrian Improvements at Powell Street and Interstate 80



## PHASE 2 AND 3 DIAGRAM

POWELL STREETSCAPE DESIGN: FRONTAGE ROAD TO CHRISTIE AVENUE

10

DRAFT City of Emeryville  
Wallace Roberts & Todd, LLC.

March 2010

## Land Use Principles to Support a Sustainable Transportation Plan

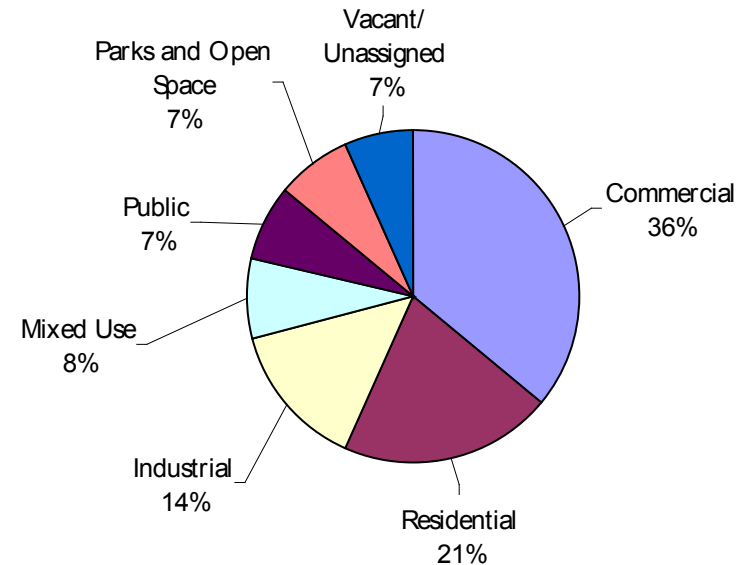
The City, through the update to the General Plan, has evaluated areas that are expected to redevelop and those that are expected to remain the same between now and 2030. Emeryville is already “built-out,” with minimal vacant land. Older residential areas will be protected and demolition of architecturally significant buildings requires Planning Commission approval, but most former industrial land south of 65<sup>th</sup> Street is now considered underutilized and presents prime opportunities for redevelopment. The General Plan projects significant increases in the number of residents, new households, and jobs in the next 20 years. How the existing and new residents and employees will get from home to work, or to child care, or buy groceries, will be highly dependent on the way the City rebuilds itself.

### Examples of Potential Achievement of 3-D’s Land Use Principles

The commitments being made for the proposed Emeryville Marketplace Redevelopment exhibit a commitment to the 3-D principles defined on the previous page, including:

- Enhanced pedestrian connectivity to the site from surrounding streets and across the railroad tracks from the Emeryville Amtrak Station, as well as within the site
- Short-term bicycle parking near retail and other amenities and long-term bicycle parking for employees and residents
- Attractive bus shelters and other public transit amenities
- Reduced parking supply through shared parking, unbundled and market-price parking, and additional support for travel by other modes
- High-density development to support increased use of public transit for local and regional travel
- Mixing of uses on site and in combination with other proposed developments nearby to develop synergy and an urban “core” district providing many daily needs within walking distance

**Figure 2-7 Proportional Area of Existing Land Uses**



### Existing and Future Development

The City of Emeryville was once primarily an industrial city, especially adjacent to the railroad tracks. The City has evolved over time with increasing employment in other sectors, including research and development and general office. It has also become a major regional retail destination, with stores such as IKEA and Home Depot and the Bay Street Center. Significant new housing development continues to occur – in 1980 there were 3,714 people living in Emeryville, whereas in 2010 the population was estimated to be 10,227. Nonetheless, compared to most Bay Area cities, the proportion of land in Emeryville used for residences is quite small.

Figure 2-7 shows the relative amounts of land in Emeryville dedicated to various primary land uses as of 2008; some of the vacant sites are now residential.<sup>9</sup>

The General Plan defines land use primarily by two categories: its use (e.g. residential, office, retail, industrial) and intensity (amount of building per unit of land area, e.g. how many dwelling units per acre will there be or what floor area ratio non-residential development will have). A third variable is whether – and to what extent – mixing of uses is allowed or

<sup>9</sup> Emeryville General Plan, Chapter 2: Land Use (November 2008).



**Figure 2-8 General Plan Development Potential at 2030, by Land Use**

	Residential	Non-Residential (square feet)			
	(Dwelling units)	Retail	Hotel	Office*	Industrial
Approved Development	907	34,461	0	1,313,000	0
Gross New Development	2,930	1,075,400	324,600	1,569,700	76,200
Existing Lost Due to Redevelopment	- 70	- 468,598	- 14,375	- 509,740	- 855,377
Net New Development (A+B-C)	3,767	641,263	310,225	2,372,960	- 779,177
Existing Development	5,988	2,441,660	464,500	4,852,118	4,132,675
City at 2030 (D+E)	9,755	3,082,923	774,725	7,225,078	3,353,499
Percent change	63%	26%	67%	49%	-19%

\* Office includes R&D development.

Source: Land Use Element – General Plan (November 2008)



New developments will continue to place increasing demands on the City's Transportation System

encouraged in a particular area. For example, a few corner markets are considered acceptable in the General Plan in older residential neighborhoods, but new residential complexes have many stories and may be able to support a stronger retail base.

These variables help define the physical form and massing of new development and, to a certain extent, their ambient impacts (noise, vehicle traffic, etc.). As shown in Figure 2-8, the City expects a dramatic increase in housing, significant increases in hotel and office development, and a decline in land dedicated to industrial uses in the next 20 years. Since the City is already “built-out,” change will occur through the redevelopment of existing land uses considered underutilized. More redevelopment is expected to occur over time, as land values rise. Through the General Plan process, areas which are expected to change in the next General Plan period have been identified and mapped, in Figure 2-9. The development potential of these areas was then combined with existing development in other areas to estimate the development potential for the City by 2030, under the General Plan.

A preliminary analysis of expected development intensities, mix of uses and multi-modal access strategies at “build-out” in 2030 suggests significantly increased support for local and regional travel by sustainable transportation modes (walking, bicycling, and public transit). It will be important to ensure that proposed development is firm in its commitments and contributes its fair share of funding to invest in alternative modes of transportation. The updated traffic impact fee will do this.

The City of Emeryville appears to be developing land use policies and strategies through its General Plan and its review of proposals for individual development projects that will support these principles for a more balanced transportation network in Emeryville. Increased density centralized around key transit hubs, such as the Emeryville Amtrak Station and the San Pablo Avenue/40<sup>th</sup> Street bus hub, will have the most effective impact on travel behavior.

An additional challenge is to identify opportunities to enhance existing and already-approved development (such as at the Novartis site) so that it also enhances and encourages access by other modes. Existing development is at a relatively low density, compared to proposed development, and if considered a “non-change” area, is currently expected to remain at these densities.

Significant parking is dedicated to existing development, and required of new development (currently almost one space per employee and a high level for retail development, especially regional retail). Although this maintains sufficient availability of parking to ensure support for these vital economic contributions to the City, construction costs for parking are high, especially for multi-level garages. If less parking were required, this money could be used to implement sustainable transportation strategies.

## Implications, Challenges, and Opportunities

The Emeryville General Plan includes, as one of its guiding principles, a commitment to foster and provide “incentives for alternative transportation modes, including transit, car/vanpooling, bicycling, and walking. Residents will be able to access stores, offices, the waterfront, or regional transit network without needing a car.”

An important question, therefore, is whether this increase in development and expected density will be sufficient and located in the appropriate locations to support use of public transportation as an alternative to the automobile. Furthermore, the design of adjacent streets and public space will influence the level of pedestrian and bicycle travel.

The following estimates of future land use intensity are available:

- The expected citywide density of residential uses is expected to increase dramatically, from 7.8 dwelling units per acre in 2008 to 13 dwelling units per acre in 2030, as measured by the gross residential density for all land in the city, a 67% increase.
- The expected citywide density of employment is expected to increase from 27 jobs per acre in 2008 to 39 jobs per acre in 2030, a 44% increase.<sup>10</sup> Here again the densities in employment areas are higher, though not nearly as high as residential areas given the larger percentage of employment land.

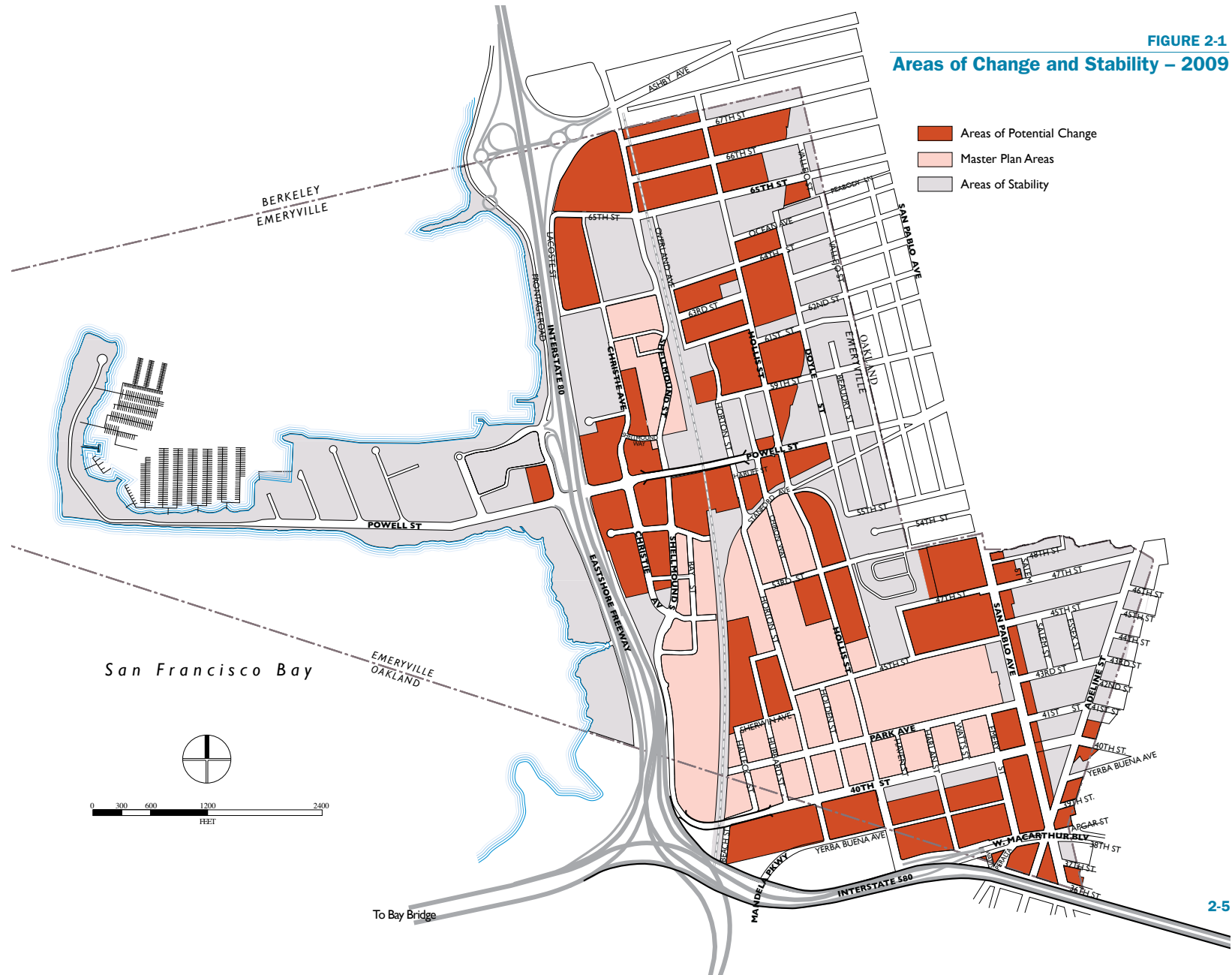
This represents a substantial increase in the intensity of urban development in Emeryville, as industrial uses convert to residential and commercial uses. The mixing of uses and location of focused efforts to increase density around transit nodes suggests that this will strongly support the provision of high-quality transit service both locally and regionally, as well as provide funding for additional infrastructure, programs and services to support alternative modes of transportation. Developing and implementing these

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<sup>10</sup> Calculated from data provided by Dyett & Bhatia Consulting Associates, December 2008.



**Figure 2-9 Emeryville “Change” Areas per Emeryville General Plan**



programs and services, through city policies and funding strategies, will be critical to achieving desired travel behavior in Emeryville.

## Circulation and Parking Network

This section reviews the design, operation, and performance of streets in Emeryville. It also reviews current city policies and proposed new policies in the recent update to the General Plan. Conditions and performance of city streets for each primary mode are also reviewed. At the conclusion of this section is a brief discussion on parking.

### Street Network

The network of streets in Emeryville is based somewhat on an orthogonal grid, with several strongly defined corridors meeting at large intersections. With the exception of older residential developments in the Doyle and Triangle areas of the City, blocks tend to be long and wide with limited connectivity, especially east-west (see Figure 2-9). The following are the primary travel corridors for automobiles and transit vehicles:

- **North-South:** San Pablo Avenue, Hollis Street, Horton Street (at Amtrak), Shellmound Street, and the I-80 freeway
- **East-West:** 40<sup>th</sup> Street, Powell Street, and 65<sup>th</sup> Street

The railroad tracks and freeway limit east-west travel – only a few streets cross the railroad tracks, and Powell is the only street providing direct access to the freeway. The next freeway access point to the north is Ashby Avenue in Berkeley. South of Powell Street, the next access point is MacArthur Boulevard in Oakland.

### Street Design and Operations

The streets of a city serve multiple purposes. They allow local property access, accommodate public utilities, and allow for people to move throughout the city and region. In addition, they are part of the neighborhoods and districts through which they pass, and provide open space for social interactions, recreation, sunlight, and fresh air. Travel can be via a variety of modes, including private automobiles, public transit, bicycles, and on foot.

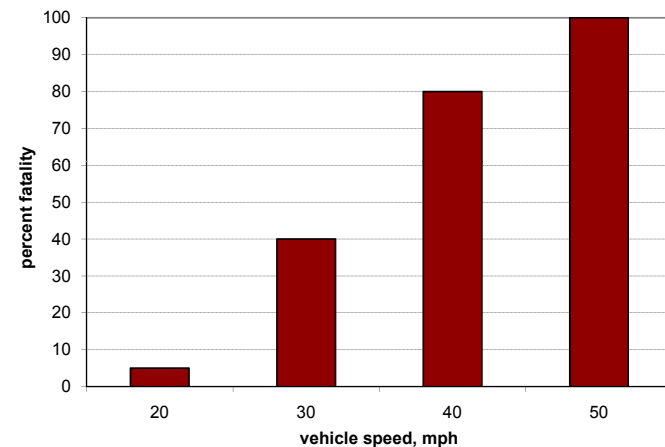
### Current Practice

Historically in Emeryville, as in most other locales in the United States, the design and operation of streets has been defined primarily by their role and function in the circulation of automobiles. This street classification scheme, based on guidelines published in the AASHTO “Green Book,” includes the following categories, with guidelines for the effective implementation of each:

- **Arterial** – Provides the highest level of service at the greatest speed for the longest uninterrupted distance, with some degree of access control.
- **Collector** – Provides 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** – Consists of all roads not defined as arterials or collectors; primarily provides access to land with little or no through movement.

The emphasis on the efficient movement of automobiles has led to the design and operation of streets optimized for travel by automobile and not necessarily people, often with significant consequences for pedestrians and bicyclists. Speed limits are high to minimize travel times for automobiles, and lane widths are designed for travel at these higher speeds.

**Figure 2-10 Impact of Vehicle Speed on Pedestrian Injury Severity**



Source: Leaf, W. and Preusser, D. Literature Review on Vehicle Travel Speeds and Pedestrian Injuries, US DOT NHTSA (DOT HS 809 021), 1999, p.4.



Figure 2-10 demonstrates that the risk of fatality for a pedestrian hit by a car increases dramatically with the speed of the car. In addition to these safety considerations, the focus on vehicle throughput also reduces the overall efficiency of the circulation network for other modes with increased travel time and cost and decreased safety and comfort levels.

We see the impact of this approach in Emeryville, with wide streets able to carry large volumes of traffic but considered hazardous for pedestrians to cross or bicyclists to ride along. Street corners have wide turn radii to facilitate high speed right-turn movements by vehicles, leading to long crossing distances and reducing the visibility of pedestrians. Signals are timed for the movement of vehicles, often at the expense of public transit vehicles, which also become stuck in traffic though they are much more efficient at carrying people along the same corridor.

### Alternative Approach

The 2009 General Plan addresses this issue by defining a street typology more inclusive of other modes of transportation. Streets, or segments thereof, would be designated based on which mode will receive priority treatment. Most streets would allow all modes, but they would each be designed and operated to optimize performance for the priority mode (or modes). For example, for a transit priority street, the following description is given:

*“Transit Street – These are primary routes for AC Transit, Emery Go-Round, and other public transit providers. Signal preemption for transit vehicles, bus stops, and, where appropriate, bus lanes, are provided. Other travel modes, including automobiles, bicycles, and trucks, are accommodated in the roadway, but if there are conflicts, transit has priority. These streets accommodate moderate to high volumes of through traffic within and beyond the city. Pedestrians are accommodated with ample sidewalks on both sides of the street, and pedestrian amenities are enhanced around bus stops (e.g. shelters, benches, lighting, etc).”*

The General Plan also includes a commitment to “complete streets,” whereby streets would always be designed in consideration of all modes that will use them. The proposed street typology and complete streets policy represent important first steps towards the design and evaluation of city streets from a multi-modal perspective that focuses on movement of people – and how it impacts them individually and the community – not

just on movement of vehicles. This approach more firmly supports the goals of the Sustainable Transportation Plan as well as the broader goals of the General Plan. Appendix A provides a summary of each street type and the current language of the Complete Streets policy in the General Plan.

### Street Performance

Overall, the streets of Emeryville are designed well for the movement of motor vehicles, but at a cost to pedestrians, bicycles, and public transit. Long blocks and ample right-of-way dedicated to vehicles result in relatively high vehicle speeds, long crossing distances for pedestrians, and minimal space reserved for bicyclists, who must travel in mixed-flow traffic on most city streets. Streets have minimal amenities for pedestrians such as lack of shelters and other amenities at bus stops. Long blocks and barriers such as the railroad tracks and freeway place strong limits on connectivity for all modes, especially for pedestrians who are less able to travel longer distances to crossing points. Compliance with the Americans with Disabilities Act (ADA) is limited – some street segments do not have complete sidewalks on both sides, curb ramps at crosswalks, or other basic elements of street design for universal access. The impact of these conditions on pedestrians, and therefore, connectivity to transit, is discussed in detail later in this section.

High levels of vehicle traffic on major travel corridors limit the functionality of these streets for automobiles and public transit alike. Currently, the



**Some streets in Emeryville provide difficult conditions for pedestrians and bicyclists due to high traffic volumes and limited amenity for non-motorized modes.**

Emery Go-Round experiences variations in travel times of up to 30% due to traffic congestion during peak travel periods.<sup>11</sup> Three intersections currently operate at a level considered substandard by the City, and conditions are expected to worsen if housing and job growth continues to generate new vehicle trips at a rate comparable to existing development.

**The Emery Go-Round experiences variations in travel times of up to 30% due to traffic congestion during peak travel periods.**

### *Methodology for Analysis*

There are various ways to analyze the performance of the transportation system for automobiles. The methodology historically in use in Emeryville was based primarily on an estimate of the delay experienced at an intersection. The LOS grading system ranges from LOS A, indicating free-flow conditions with little or no delay, to LOS F where traffic flows exceed design capacity, resulting in long queues and delays. LOS E represents the point where traffic volumes are at or near design capacity and where substantial delays begin to occur. LOS D or better is considered acceptable according to the standard methodology used by the City. The Major Developments Traffic Study found that current traffic conditions meet or exceed the City standard at that time of LOS D, except for three intersections. Anticipated future growth in the City and region is expected to lead to substandard traffic conditions along significantly more corridors and at intersections. This analysis determined that these conditions would exist even if Emeryville does not approve the major development proposals. It also, however, did not fully consider the potential to reduce vehicle trips from existing and proposed development by increasing levels of transit service and various transportation demand management strategies.

The City's General Plan mandates that the City develop an updated methodology that evaluates the performance of streets for multiple modes of transportation, including automobiles, transit, bicycles, and pedestrians. Instead of LOS, Quality of Service (QOS) would be determined, based on both a quantitative and qualitative analysis. For example, automobile quality of service might not include intersection delay, but instead would include average travel speed point-to-point and variation in travel speed, to indicate how often a car must stop and go. Likewise, pedestrian quality of service might include presence of sidewalks on both sides of streets, accessibility to transit stops and key amenities desirable within a neighborhood, and the design of crosswalks and intersections to increase

pedestrian safety. Thus, a multi-modal methodology will enable the City to consider the appropriate balance between modes and identify opportunities to achieve mutual benefits for all modes of travel.

### *Bicycles*

According to the U.S. Department of Transportation, one quarter of all trips are less than one mile in length, and 40% are less than two miles. Especially with the flat topography in Emeryville, bicycles could be a convenient, healthy, and enjoyable alternative to driving. Furthermore, bicycles offer faster access to regional transit at locations such as MacArthur BART Station and the Emeryville Amtrak Station, compared to walking. In addition to the need for secure parking and other amenities, a well-connected network of streets and paths designed to accommodate bicycles is needed, especially to provide access to jobs, schools, and transit hubs.

The General Plan and existing Bicycle and Pedestrian Plan for the City of Emeryville includes an overarching goal to establish a network of continuous north-south and east-west bikeways to provide access to the major features and attractions of the City, provide recreational benefits, and reduce dependence on automobiles. The update to the General Plan affirms this commitment and includes an update to the bicycle network.



<sup>11</sup> Presentation by Emeryville Transportation Management Association in October 2008.



Class II bicycle lanes are currently provided on 40<sup>th</sup> Street, Shellmound Street, portions of Horton Street, 59<sup>th</sup> Street, Stanford Avenue, and 65<sup>th</sup> Street. Regional bike facilities include the San Francisco Bay Trail, included in the 2006 Alameda Countywide Bicycle Plan. The Bay Trail turns east at Powell Street, and cyclists must travel inland through busy intersections to reach Shellmound Street before traveling south to Mandela Parkway in Oakland. Access to the Bay Trail is constrained and compromises safety conditions due to heavy traffic on Powell Street. Planned pedestrian street improvements will increase safety of pedestrians crossing Powell.

A key issue to address for bicycle circulation is increased connectivity across the railroad tracks and freeway. Currently there is only one crossing of the freeway, on Powell Street, which is considered an unsafe route for bicyclists due to high volumes of traffic making turns on and off the freeway. Planned improvements will increase safety of cyclists and pedestrians crossing the bases of freeway ramps that intersect Powell Street. A second crossing is indicated in the General Plan at 65<sup>th</sup> Street. Emeryville is currently working with Caltrans to complete studies required for funding. There are five crossings over the railroad tracks – the 40<sup>th</sup> Street Bridge, the Amtrak pedestrian-bicycle elevator crossing, and at-grade crossings at 65<sup>th</sup>, 66<sup>th</sup> and 67<sup>th</sup> streets. A pedestrian-bicycle bridge over the railroad tracks between Bay Street Center and Horton Street is funded and in the design stage.

Connections to regional transit are also important. The General Plan does not distinguish between Class II dedicated bike lanes and Class III bike routes, but it indicates routes to MacArthur BART Station, West Oakland BART Station, and Emeryville Amtrak Station. The updated bicycle plan (currently underway) will need to determine which streets are appropriate for dedicated bicycle lanes. On high-volume or high-speed streets, bicycle lanes are safer and attract more cyclists than streets simply designated as bicycle routes. Bicycle routes without lanes that are designed as bicycle boulevards, however, are also attractive if carrying relatively low traffic volumes and having limited stops along their route. Horton Street is currently designated as a bicycle boulevard, improving access to the Emeryville Amtrak Station, but several blocks are also planned as a primary transit route. Addressing potential conflicts between buses and bicycles will therefore be important along these segments of Horton Street.

### *Public Transit*

Public transit vehicles currently travel in mixed-flow traffic with other vehicles. Though primary corridors in Emeryville have significant capacity, transit vehicles are impeded by the high volumes of automobile traffic, especially during peak travel times. As noted earlier, the Emery Go-Round experiences variations in travel time of up to 30% during peak hours. Transit ridership is diminished when walking to bus stops seems to be difficult and dangerous on wide or fast streets. Transit services and their operations are discussed in detail in the next section.

### *Automobile Traffic*

Congestion-related delays on the streets and highways in Emeryville impact public transit and automobiles, reducing the overall functionality of the transportation system. The City of Emeryville is perceived to have significant traffic congestion issues along primary transportation corridors and at key intersections, especially the western section of Powell Street including the intersection with Christie Avenue and the freeway interchange. As noted earlier, the LOS methodology to evaluate traffic conditions indicates that future conditions will be significantly worse, independent of the level of infill and redevelopment that occurs, due to overall population and job growth in the Bay Area. Opportunities to sup-



port this growth in travel demand, through increased transit service and other transportation demand management strategies, are not yet fully included in the evaluation. The proposal for a multi-modal transportation impact analysis is expected to help the city do this more effectively. The updated traffic impact fee study is likely to measure development impact on all modes in terms of motor vehicle trips generated. Fees will be used for improvements for all modes.

Congestion accumulates in Emeryville in predictable ways and locations throughout the City. Each area is described below:

- **Freeway on-ramps.** Much of Emeryville's local congestion originates with the freeway.
- **Freeway off-ramps.** Even when the freeways are free-flowing, congestion also accumulates at the freeway off-ramps, as the one large pipe of a freeway ramp meets the many small pipes of city streets, and motorists make many turning movements to sort themselves out into the grid.
- **North-south through streets.** While Emeryville generally has a fine grid of inter-connected streets, the grid breaks down in several places, particularly in the north-south direction.
- **East-west boulevards.** Emeryville's east-west boulevards were better designed to carry traffic flows than the north-south streets, but these get congested, too, largely due to motorists trying to get over the Bay Bridge.
- **Employment.** Emeryville is a significant regional employment center, with many commute trips, coming from outside the City, being made by automobile.

### *Traffic Origins and Destinations*

Limited information exists about the origins of vehicle traffic in Emeryville, currently. The most recent U.S. Census journey-to-work data is from 2000, and is discussed in this chapter. In addition, the Major Investments Transportation Study conducted for the City of Emeryville included an analysis of the percentage of traffic that is local or regional (the latter defined as being carried by major freeways away from the city). The study estimated that only 30% of traffic is local, with the remaining being regional. It did not distinguish, however, regional "pass-thru" trips not having a local origin or destination.

## Parking

Though automobile parking supports an important mode of transportation, it is itself a type of land use, occupying space whether or not the space itself is occupied by a vehicle. Parking lots sometimes are built upon but often remain for long periods of time, just like a structure. Multi-level parking garages have a lifespan of several decades and then are often replaced with a new garage.

There is a significant opportunity cost for the use of land for parking, especially with real estate as valuable as in Emeryville (more than \$4.2 million an acre). Even as Emeryville attempts to increase density and increase travel by more sustainable modes of transportation, there is a perceived necessity to provide parking – free to the user – to enable employees to go to work, shoppers to go to the store, students to get an education. Current city policy requires at least one space per dwelling unit, plus guest spaces, and approximately one for every teacher, office or industrial worker at their place of employment, and even more for retail uses.

These policies enforce a development pattern that is heavily auto-oriented, since most employees have access to a free or heavily subsidized parking space. A typical office worker occupies about the same amount of space in the building as does his or her car in the lot outside. This will double the land rent for a business and can increase housing prices dramatically. Furthermore, the dedication of so much space to the auto-



Emeryville retains a high supply of surface parking as a percentage of land area

mobile can result in population densities too low to support high quality public transit, even if employees want to opt out of their parking space and choose transit.<sup>12</sup> In addition, large areas of parking (“seas of parking”) create an urban form which is inhospitable for pedestrians to use.

About 75% of employees in Emeryville who live outside of the City drove alone to work in 2000, the most recent year for which this data is available. This is higher than the Bay Area average of less than 70%. Free parking is cited as one of the primary reasons for the high drive-alone rate cited in the Opportunities & Challenges Report for the General Plan Update.

<sup>12</sup> Donald Shoup, “The High Cost of Free Parking,” American Planning Association (March 2005)

## Parking Requirements

As noted earlier and shown in Figure 2-11, the City’s off-street parking requirements for new development result in approximately one parking space per employee and somewhat less per resident, though multi-unit residential developments must also provide shared guest parking. These requirements are much higher than some other cities. For example, Portland, Oregon has set the maximums for new office and retail development to 1 space per 1000 square feet. Berkeley has lower parking requirements in most if not all categories, and Oakland has lower requirements in high density zones. These cities have rapid rail stations.

**Figure 2-11 Off-Street Parking Requirements**

Land Use	Parking Requirement
Residential: Single dwelling unit (detached)	Two covered parking spaces per unit
Residential: Multi-unit buildings (studios and one bedroom units)	One space per unit, plus one guest space for each four dwelling units for buildings with five or more units for a total of 1.2 per unit
Residential: Multi-unit buildings (two or more bedrooms per unit)	One and one half spaces per unit
Commercial: Administrative, business and professional offices (including offices within a mixed-use complex)	Three spaces for every 1,000 square feet
Commercial: Financial institutions	Four spaces for every 1,000 square feet
Commercial: Retail serving primarily local customers	Three spaces for every 1,000 square feet
Commercial: Retail serving primarily regional customers	Four spaces for every 1,000 square feet
Commercial: Multiple tenant structure	Four spaces for every 1,000 square feet
Commercial: Lodging: Hotels & motels	One space for each guest unit, plus two for a manager’s unit and one-half space for each employee
Commercial: Eating/drinking establishment*	One space for every 125 square feet
Schools	One space for each classroom; plus one space for every 35 square feet of non-fixed seating in the auditorium
Libraries/cultural facilities	One space for every 300 square feet
Industrial: All types, except those listed below	One space for every 1,000 square feet
Industrial: Warehouses/storage facilities	One space for every 1,000 square, plus one space for every 333 square feet of office or sales area
Industrial: Wholesaling/distribution facilities	Three spaces for every 1,000 square feet of gross floor area

\* For commercial uses, “fronting on San Pablo Avenue with existing building coverage of at least fifty percent (50%), the Planning Commission may waive a like percentage of the required off-street parking spaces for a commercial use if the proposed commercial use will not in the Commission’s determination, significantly increase the demand for parking over the previous use. If that part of the lot not covered by a building or structure is less than two thousand (2,000) square feet, then, regardless of building coverage, the commission may waive all or a portion of the required off-street parking spaces.” (Emeryville Code: Commercial Use Types, Section 9-4.55.5)



### *In-Lieu Fees*

The requirement for parking or an in-lieu fee is based on the assumption that more parking is needed and the only question is where, rather than whether the added parking is needed at all. The fact that parking variances have been granted leads to the question of whether parking requirements are too high or too rigid. Variances have generally been granted when the use is changing in an existing building, the business moving in has fewer employees than assumed in trip generation manuals, and there is ample on-street parking.

**Free parking is cited as one of the primary reasons for the high drive-alone rate cited in the Opportunities & Challenges Report for the General Plan Update**

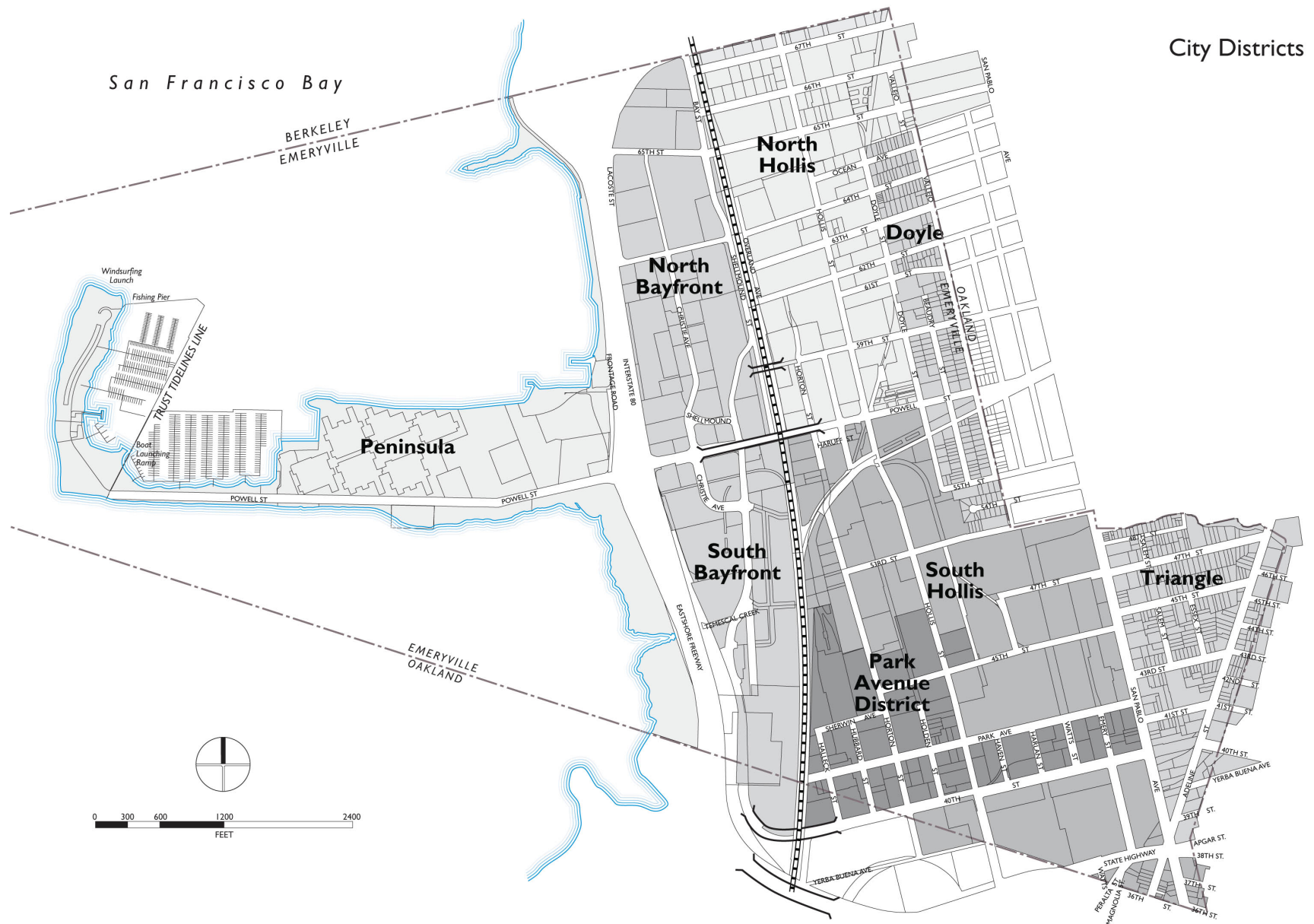
### *Parking Supply vs. Availability*

Currently, much of Emeryville's existing parking supply exists in off-street parking facilities. Most facilities operate under private ownership and are inaccessible to the general public. Moreover, the few public facilities that do exist (Amtrak and Glashaus) are located within the same area. This spatial arrangement is problematic because it makes access for many patrons difficult. Occupancy data collected for the North Hollis Parking Study found significant variation in occupancy of off-street facilities, with some being significantly underutilized throughout much of the day. Anecdotal information suggests that employees are not aware of parking availability somewhat further from their place of work, or are concerned about personal safety walking the further distance, especially after dark.





Figure 2-12 City Blocks in Emeryville



## Existing Transit Services

This section provides an overview of existing transit services in the City of Emeryville and the surrounding area. A description of each service follows. Existing transit services are summarized in Figure 2-17 at the end of this section, on page 2-31. A map of the transit services in the City of Emeryville is provided as Figure 2-18.

Although there is not a BART station in Emeryville, there is frequent local and regional bus service, with service to six BART stations. Many Transbay buses go through Emeryville, including AC Transit's only reverse commute line. Transit thus connects to the three largest employment centers in the area—Downtown San Francisco, Downtown Oakland and UC/ Downtown Berkeley, although these connections could be more direct between downtowns.

Most addresses in Emeryville are within one-fourth mile of a bus stop, and improvements to pedestrian connectivity could expand this level of access. Emery Go-Round and AC Transit in combination provide a high level of local transit service, especially on weekdays. Amtrak provides a direct connection to Sacramento and San Jose and national destinations served by the Amtrak network. Additional information on these existing transit services may be found in Chapter 4 Sustainable Transportation Strategies, under the Transit header.



## Public Fixed-Route Transit

### Emery Go-Round

The Emery Go-Round is a free fixed-route shuttle service funded by commercial property owners in Emeryville. The service is administered by the Emeryville Transportation Management Association (ETMA), a non-profit organization whose purpose is to increase access and mobility to and from Emeryville businesses. The ETMA is funded through a property-based business improvement district, with all commercial, industrial, and rental residential property owners in the City paying a fee to the ETMA to support services.

The Emery Go-Round (EGR) is free to all passengers and provides service throughout Emeryville, with stops at the Emeryville Amtrak Station, Bay Street Center, and major employers such as Pixar and Novartis. The MacArthur BART

Station in Oakland is a key transfer point for connections to regional transit and all routes stop at this BART station. The Emery Go-Round routes are summarized in Figure 2-13 on page 2-24.

**Approximately 80% of all Emery Go-Round trips begin or end at MacArthur BART Station, supporting a significant increase in patronage at the station and a shift in primary mode of access.**

Weekday service runs from 5:45 AM to 10:30 PM, Saturday service is provided from 9:25 AM to 10:40 PM and Sunday service is available from 10:20 AM to 7:15 PM. Headways range from 12 to 15 minutes during weekday peak hours to 20 to 60 minutes on weekends depending on route. Real time arrival information for all routes is provided by NextBus. Riders can get arrival times either online or by calling a phone number and entering the code associated with a particular bus stop.

The Emery Go-Round has 13 buses in its fleet that have between 24 and 36 seats, and one van with nine seats. The ETMA owns seven of these buses and leases the other six. Labor for the shuttle is provided through a contract with SFO Shuttle Bus Company. Maintenance is provided through full operating leases and contract maintenance with Idealease and Penske Truck Leasing. During the peak hour 10 buses are in operation. Operating expenses in 2009 were \$2.1 million, and the cost per passenger trip was \$1.52. Operating revenue for 2010 is budgeted at \$2.4 million.<sup>13</sup>

<sup>13</sup> Emeryville Transportation Management Association. Email Correspondence July 16 2010.





**Emery Go-Round stopping at MacArthur BART station**

Ridership on the Emery Go-Round has grown steadily since service began in 1997. Ridership in 2003 was 775,392, with an anticipated 1.3 million passenger trips in FY 2008. The largest percent increase occurred between 2007 and 2008, with an 18% growth in ridership. In 2008, through September, the shuttle has carried about 5,000 passengers a day, with an additional 1,000 passengers each Saturday and 500 each Sunday. Approximately 80% of all Emery Go-Round trips begin or end at MacArthur BART Station, supporting a significant increase in patronage at the station and a shift in primary mode of access.<sup>14</sup>

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<sup>14</sup> 2005 BayCap BART Shuttle Rider Survey, Bay Area Air Quality Management District (2005).

**Figure 2-13 Summary of Emery Go-Round Routes**

Route	Days and Hours of Operation		Frequency of Service		Key Stops
			Peak Hour	Mid-Day	
Shellmound/Powell	Mon-Fri:	5:47 AM – 10:30 PM	15 min.	15 min.	Bay Street Ikea East Bay Bridge Emeryville Public Market MacArthur BART Powell Street Plaza Woodfin and Sheraton Hotels Watergate
	Sat:	9:24 AM - 10:40 PM	15 min.	15 min.	
	Sun:	10:04 AM - 7:17 PM	15 min.	15 min.	
Watergate Express	Mon – Fri:	7:10 AM – 10:03 AM 3:15 PM – 7:00 PM	15 min.	15 min.	MacArthur BART Hilton Garden Inn Watergate
Hollis	Mon – Fri:	5:45 AM – 10:18 PM	10 min.	20 min.	East Bay Bridge MacArthur BART Pixar Courtyards at 65 <sup>th</sup> Apts. Emery Station Novartis Emeryville Amtrak Glashaus Heritage Square Hollis Business Center Hollis Street and 65 <sup>th</sup> Street National Holistic Institute

### 2006 and 2008 Passenger Surveys

The Emery Go-Round conducted a survey of its passengers in 2006 and again in 2008, providing insight into trip purpose and how often individuals use the service. A summary of the data is provided in Figure 2-14. Data were collected over the course of one week, sampling passengers at BART during one or two time periods each day. During the peak hours, a majority of passengers are going to or from work. Mid-day travel still carries a significant percentage of commuters, but half of the passengers have other trip purposes including shopping and school.

Most passengers who use the shuttle during the peak hours use it at least once a week, with many using it daily. Mid-day travelers do not use it quite as frequently, but most still are frequent passengers.

During the AM peak, in 2006, most passengers came from either San Francisco or Contra Costa County (32% each). Depending on time of day, a significant number of passengers also live in Oakland, Berkeley, El Cerrito, and Richmond. The 2008 survey indicated changes in where most passengers came from, with more passengers living closer to Emeryville than in 2006. It is also worth noting, however, that the surveys were only conducted of passengers getting on the shuttle at MacArthur BART Station in morning or mid-day. Passengers traveling the opposite direction were not surveyed in 2006.

The surveys report that the vast majority of passengers find it easy to use, appreciate courteous drivers and overall are very or extremely satisfied with the service.

**Figure 2-14 Summary – Emery Go-Round Passenger Surveys**

Destination	2006		2008
	Peak Hours	Mid-Day	
Work	90% or more	51%	65%
Shopping	Less than 1%	23%	12%
School	6% (AM only)	15%	9%
Frequency of Use			
Daily	53-61%	41%	51%
Up to 4 times per week	27-34%	33%	31%
Occasional	n/a	n/a	11%

### AC Transit

AC Transit provides fixed-route bus service throughout western Alameda and Contra Costa Counties and Transbay service to downtown San Francisco. Some level of service is available 24 hours a day, seven days a week, ranging from ten minutes to one hour. Annual ridership in FY 2007 was about 67 million passengers.

#### *AC Transit Routes Serving Emeryville*

Five of AC Transit's local bus routes run through Emeryville, connecting the City to Oakland, Berkeley, Alameda, and Richmond. In addition, four AC Transit Transbay routes connect Emeryville to San Francisco. There are 53 trips per weekday between Emeryville and San Francisco. The transfer point in Emeryville is the intersection of 40<sup>th</sup> Street and San Pablo Avenue. The eight AC Transit routes that directly serve Emeryville are summarized in Figure 2-15 on the following page. Transbay lines cross the San Francisco – Oakland Bay Bridge to connect with the Transbay Terminal in San Francisco. There are several Transbay routes that pass through on the I-80 or I-580 freeways but do not stop in Emeryville, including lines FS, G,H, L, LA, B,E, NX, P and V. These lines originate in nearby cities, such as Piedmont, El Cerrito, and Berkeley, and take the San Francisco – Oakland Bay Bridge to the Transbay Terminal in San Francisco.



**Figure 2-15 Summary of AC Transit Bus Routes Serving Emeryville**

Line	Service Area	Key Connections / Destinations	Service Hours	Headways	Key Emeryville Stops
<b>Local Service</b>					
<b>72R</b> San Pablo Ave  <b>72 / 72M</b> San Pablo Ave	Oakland	12 <sup>th</sup> , 19 <sup>th</sup> St BART, Jack London Sq	72R	Peak & Off-Peak:	40 <sup>th</sup> St.
	Emeryville	40 <sup>th</sup> St, Powell/Stanford	Mon-Fri: 6:03 AM - 7:19 PM	72R: 12 min	Powell/Stanford
	Berkeley	Ashby Ave, University Ave, Marin (Albany)	72 / 72M* Sat-Sun: 5:09 AM - 1:16 AM	72 / 72M: 20-30 min combined	Alcatraz Ave
	El Cerrito	El Cerrito, El Cerrito Del Norte BART	Mon-Fri: 4:46 AM - 12:23 AM		
<b>57</b> 40 <sup>th</sup> St	Richmond	Richmond BART			
	Emeryville	40 <sup>th</sup> St at San Pablo	Mon-Fri: 5:06 AM - 12:40 AM	Peak: 15 min Off-Peak: 15-30 min	40 <sup>th</sup> Street/San Pablo
<b>31</b> Shellmound St	Oakland	MacArthur BART, Piedmont and MacArthur Blvd	Sat-Sun: 5:06 AM - 12:58 AM		
	Emeryville Oakland Alameda	West Oakland BART, 12 <sup>th</sup> St BART, Jack London Sq, Bay Street Center, Marina Village Center,	Mon-Fri: 6:00 AM - 10:47 PM (No weekend Emeryville service)	30 min	Emeryville Amtrak Station, Bay Street Center, 40 <sup>th</sup> and Hollis, East Bay Bridge Center,
<b>26</b> 40 <sup>th</sup> Street	Emeryville	San Pablo Ave at 40 <sup>th</sup> , MacArthur BART,	Mon-Fri: 5:57 AM - 10:42 PM	Peak: 20 min Off-Peak: 20-30 min	40 <sup>th</sup> St and San Pablo,
	Oakland	West Oakland BART, 12 <sup>th</sup> St BART, Lake Merritt BART	Sat-Sun: 5:51 AM - 10:47 PM		40 <sup>th</sup> St and Hollis
<b>Transbay Service to San Francisco</b>					
<b>C</b> 40 <sup>th</sup> St, Shellmound, Powell, I-80	San Francisco, Emeryville, Oakland, Piedmont	Transbay Terminal in San Francisco for Muni, SamTrans, Golden Gate Transit services	Mon-Fri: 5:56 AM - 8:22 AM 6:06 PM - 6:48 PM 4:34 PM - 7:21 PM	25-86 min	40 <sup>th</sup> St & San Pablo, 40 <sup>th</sup> & Hollis, Powell Plaza, MacArthur BART
<b>F</b> 40 <sup>th</sup> St, Shellmound, Powell, I-80	Berkeley, Oakland, Emeryville, San Francisco	Transbay Terminal in San Francisco for Muni, SamTrans, Golden Gate Transit services, Ashby BART	Mon-Fri: 5:32 AM - 12:29 AM Sat-Sun: 5:36 AM - 12:10 AM	30 min	40 <sup>th</sup> & San Pablo, 40 <sup>th</sup> & Hollis St and Shellmound & Bay St (westbound)
<b>J</b> 40 <sup>th</sup> St, Shellmound, Powell, I-80	Berkeley, Emeryville, San Francisco	Transbay Terminal in San Francisco for Muni, SamTrans, Golden Gate Transit services	Mon-Fri: 6:05 AM- 9:09 AM (to SF) 4:45 PM-7:32 PM (from SF)	20-36 min	40 <sup>th</sup> St & Hollis, Powell Plaza, 65 <sup>th</sup> St & Hollis
<b>Z</b> Christie, 65 <sup>th</sup> , Hollis	San Francisco, Emeryville, Berkeley, Albany	<i>Weekday Reverse Commute:</i> Transbay Terminal for Muni, SamTrans, Golden Gate Transit	Eastbound: 7:26 AM, 8:26 AM Westbound: 4:45 PM, 5:45PM	Two trips each direction	Emeryville Public Market (64 <sup>th</sup> & Christie), 65 <sup>th</sup> St. and Hollis St.

\* Line 802 runs 12:07 AM - 5:21 AM along San Pablo Ave from 14<sup>th</sup> St and Broadway in Oakland, through Emeryville, to Third St and University Ave in Berkeley.

## Fares

The local cash fare on AC Transit local or transbay buses is \$2.10, and a transfer can be purchased for \$0.25. A discount fare of \$1.05 is provided for youth (5-17), seniors (65+), and people with disabilities. Using a Clipper Card, AC Transit offers a 10-ride fare as a convenience but without a discount compared to cash fares. A 31-day rolling fare provides unlimited rides and is available for \$80.00. Youth can get a 31-day rolling fare for \$20.00, and a similar fare is available for seniors for \$20.00.

The adult cash fare for a Transbay trip is \$4.20, with a 50% discount available for youth, seniors, and people with disabilities (\$2.10). A 31-day rolling fare is also available for \$151.20, with no discounted fares available. Transfers from Transbay buses to local buses are free. With a transfer ticket obtained inside a BART station, the local AC Transit adult cash fare is \$1.85 and \$0.80 for youth, seniors, and people with disabilities. Figure 2-16 summarizes fares on AC Transit.

AC Transit also offers an annual transit fare called the EasyPass at a steep discount if purchased in bulk quantities by a sponsoring organization such as an employer, school, housing complex, government agency, etc. The cost per annual pass ranges from \$41 to \$115, depending on the number of passes purchased by the organization and the level of service AC Transit provides the recipients. Please refer to the TDM section of this chapter for additional information.



Image from Nelson\Nygaard

Figure 2-16 Fares on AC Transit

	Cash	31-Day Fare
<b>Local Service to all locations in East Bay</b>		
Adult (18-64)	\$2.10	\$80.00
Youth (5-17)	\$1.05	\$20.00
Senior (65+) & Disabled	\$1.05	\$20.00 calendar-month
<b>Transbay Service to Downtown San Francisco</b>		
Adult (18-64)	\$4.20	\$151.20
Youth (5-17)	\$2.10	Not Offered
Senior (65+) & Disabled	\$2.10	Not Offered
<b>Transfers*</b>		
Local Bus-to-Bus	\$0.25	\$0.25
Local BART-to-Bus (with transfer issued at BART)	Add \$1.85	Add \$0.80
Transbay-to-Local Bus-to-Bus**	Free	Free

\* All transfers are issued at the time a fare is paid. Good for one use and 1½ hours.

\*\* Also good for local-to-Transbay transfers with payment of Transbay fare on the first bus.

## BART

Bay Area Rapid Transit (BART) is a regional rail service that spans Alameda, Contra Costa, San Francisco, and San Mateo Counties. In the East Bay, BART service extends south to Fremont, southeast to Dublin/Pleasanton, northeast to Pittsburg/Bay Point and north to Richmond. BART also runs to San Francisco and then south to Millbrae and the San Francisco International Airport. BART has five lines, with three running through MacArthur station and four running through West Oakland. The only stations requiring a transfer from MacArthur BART are Castro Valley and Dublin/Pleasanton. One-seat service is available from West Oakland BART to all stations. The West Oakland BART station has more frequent service to San Francisco than the MacArthur BART station, because more lines traverse the West Oakland station. In FY 2007 the annual ridership for BART was over 100 million passengers. MacArthur BART has about 7,000 weekday boardings and West Oakland has about 5,000 weekday boardings.

On weekdays BART trains run from 4:00 AM to 12:00 AM. Weekend service begins between 6:00 AM and 8:00 AM and runs through 12:00 AM. Headways range from 5 to 20 minutes. While there are no BART stations in Emeryville, MacArthur and West Oakland stations are nearby. MacArthur Station is 0.7 mile east of Adeline Street (the eastern border of Emeryville) along 40<sup>th</sup> Street, and West Oakland BART is two miles south of Emeryville along Mandela Parkway.

MacArthur Station has connections to Emeryville via both AC Transit and the Emery Go-Round. The AC Transit Line 57 and Line 26 buses both provide service between Emeryville and MacArthur BART Station, with peak service having headways of 12 and 15 minutes. All Emery Go-Round routes serve MacArthur BART, with most having 12-15 minute peak hour headways. A 2006 intercept survey found that 39% of BART patrons entering or exiting at MacArthur Station used transit to access the station, with about half of those patrons using the Emery Go-Round.<sup>15</sup>

Comparatively, there are also two transit connections between Emeryville and the West Oakland BART station. The AC Transit Line 26 travels there from Emeryville, with 30 minute headways from 5:00 AM to 10:30 PM seven days a week. Line 31 also serves Emeryville and the West Oakland BART Station daily with 30 minute headways.

BART fares are distance-based with one-way fares out of MacArthur ranging from \$1.75 to \$8.45. Transfer coupons can be obtained at BART stations providing a \$0.25 discount on AC Transit.

## Amtrak

Amtrak is a nationwide passenger rail service. In FY 2007 annual ridership for Amtrak was 25.8 million passengers. The Amtrak station in Emeryville serves nationwide and California-based routes. California routes include the Zephyr, Coast Starlight, San Joaquin, and Capitol Corridor. The Capitol Corridor commuter train, running from Sacramento to San Jose, with stops including Berkeley and Oakland, has the third highest ridership of all lines in the Amtrak system. Since August 28, 2006, the Capitol Corridor route has run 32 trains per day (16 in each direction) on weekdays, reflecting a substantial increase over the prior service frequency. Ridership on the Capitol Corridor trains tripled between 1998 and 2005. Emeryville is the 5<sup>th</sup> most trafficked Amtrak station in California, with more

than 482,777 passengers for FY 2007.<sup>16</sup> Most passengers at Emeryville originate from San Francisco, taking an Amtrak bus to or from the city.

Fares vary based on distance and date purchased. Fares out of the Emeryville station can range from \$7.50 to \$300 for a one-way ticket. The typical cost for a patron traveling between Emeryville and Sacramento is \$25.00 for a one-way ticket. Monthly passes and discounted trip tickets are available. Routes passing through the Emeryville station vary from one train per day up to 16 trains per day, arriving as early as 4:40 AM and departing as late as 10:50 PM. Emeryville is the transfer point for passengers going to San Francisco. Amtrak buses transport passengers between San Francisco and Emeryville. Passengers must be connecting to or from an Amtrak train in order to use the Amtrak bus. Tickets for just the bus portion between Emeryville and San Francisco are not available. This could be because the Amtrak station is within a quarter-mile of AC Transit's transbay bus stop on Shellmound Street near Shellmound Way.

A Capitol Corridor rider from Sacramento can transfer to BART within the station at Richmond BART. A Capitol Corridor passenger from San Jose can transfer to BART at Coliseum, where the Capitol Corridor station is one block from BART.

The Amtrak station is on a Bicycle Boulevard and has bicycle lockers. Bicycles are allowed on the trains.



**Emeryville Amtrak station.**

Image from Nelson\Nygaard

<sup>15</sup> Draft MacArthur BART Access Feasibility Study, March 2008 (available online at [http://www.bart.gov/docs/planning/MacArthur\\_BART\\_Access\\_Feasibility\\_Study.pdf](http://www.bart.gov/docs/planning/MacArthur_BART_Access_Feasibility_Study.pdf))

<sup>16</sup> Amtrak Fact Sheet, Fiscal Year 2007. State of California.



## ADA Paratransit Services and Shuttle Services

### 8-to-Go Senior Shuttle

A senior shuttle service named “8-to-Go” commenced in December 2008 and is funded by a LIFT grant from the Alameda County Transportation Improvement Authority (ACTIA). The service provides free door-to-door, shared ride transportation service for individuals living in the 94608 zip code to destinations in the 94608 zip code. Funding for this service is through ACTIA's Paratransit Measure B Gap Grant Funds.

The 8-to-Go shuttle typically operates between 9:00 AM and 5:00 PM with specific service hours based on customer demand. The shuttle service is for those age 60 years and above or persons between 18 and 59 that are ADA qualified. The van can carry four passengers at a time or three with one wheelchair.

### East Bay Paratransit

East Bay Paratransit is a demand-response service for people who are unable to use AC Transit buses or BART trains because of a disability. East Bay Paratransit is sponsored by AC Transit and BART to meet the requirements of the Americans with Disabilities Act (ADA). Service is available within a 1½ mile corridor of all AC Transit routes in the East Bay, as well as to San Francisco. Sedans and wheelchair accessible vans are used to provide shared-ride service from a passenger's origin to their destination. Service is available during the hours when AC Transit buses or BART trains are running in each particular area. Fares are distance-based and range from \$3.00 to \$7.00 per one-way trip. Passengers must be certified as eligible for paratransit under the rules of the ADA before using the service.

### Medical Shuttles

Kaiser and Alta Bates operate two shuttles between the MacArthur BART Station and Kaiser Hospital in Oakland and the Alta Bates Summit Medical Center – Summit Campus in Oakland. However, neither shuttle serves Emeryville.

### Lawrence Berkeley Lab Shuttle

Lawrence Berkeley Lab runs an hourly, weekday shuttle from Joint BioEnergy Institute at 5885 Hollis Street (at Powell Street in Emery Station East) to downtown Berkeley and Gayley Road.

## Private Taxi Service

Numerous taxi services operate in Emeryville. Several are located within Emeryville, and many are located in nearby cities such as Oakland and Berkeley. Taxi services operate 24 hours a day, seven days a week. Fares are based on distance traveled. Many taxi services specialize in airport service, transporting passengers to the Oakland International Airport, the San Francisco International Airport, and even as far as the San Jose International Airport.

Four taxi companies participate in a free taxi voucher program, providing services to disabled and senior residents of Emeryville. The participating taxi companies are: Yellow Cab of the East Bay, Friendly Cab Company, Metro Yellow Taxi Cab, and Veterans Cab Company. Emeryville's taxi voucher program is open to all Emeryville residents over age 18 who are ADA certified. Program participants receive a certain number of vouchers per year, based on their transportation needs. Each voucher is worth \$5, and most rides require more than one voucher. Wheelchair accessible van taxis are available to those who need them, but must be requested at least 24 hours in advance.



Image from Nelson\Nygaard

## Access to Transit

Transportation analysts universally agree that when it comes to the traveler's experience, "the last mile is the longest mile." This creed especially rings true for travel by mass transit, where every transit trip begins and ends with a different mode – from the origin of the trip to a transit stop and from another transit stop to the destination.

Trips to and from transit are most commonly made as a pedestrian for at least one leg of the trip. Bicycles are also commonly used, or desirable, because of their low cost, health and recreation benefits, and the increased distance one can travel to and/or from a transit stop. The experience of these connecting trips can have a fundamental impact on whether an individual uses transit to make that trip, or makes the trip at all. Important factors include distance, safety (and perception of safety), comfort levels, and the presence of a clear path of travel. For individuals without access to a vehicle, transit may be their only option for longer-distance trips. For persons with a disability affecting their mobility, certain barriers may make it extremely unsafe or uncomfortable, or even physically impossible, for them to access fixed route transit.

The quality of connections has a strong influence on one's decision whether or not to use transit. If people have other options, such as access to a private automobile, then their tolerance for negative factors such as no sidewalks or lack of connectivity to a bus stop will be especially low and may discourage transit use. Investment in a safe, comfortable, convenient environment for pedestrians and bicyclists, along with the provision of key amenities, can achieve significant reductions in dependence on automobile travel. Moudon, et al (1996)<sup>1</sup> found that walking is three times more common in a community with pedestrian friendly streets than in otherwise comparable communities that are less conducive to foot travel. According to Cervero and Radisch (1995) residents in a pedestrian friendly community walk, bicycle, or ride transit for 49% of work trips and 15% of their non-work trips, compared to 31% and 4% for residents of a similar automobile oriented community.<sup>2</sup> Additional information about factors affecting access to transit can be found in the Appendix.



Image from Nelson\Nygaard

1 Moudon, et al. (2003) Effects of Site Design on Pedestrian Travel in Mixed Use, Medium-Density Environments, Washington State Transportation Center, Document WA-RD 432.1.

2 Cervero, R. & Radisch, C (1995) Travel Choices in Pedestrian Versus Automobile Oriented Neighborhoods, UC Transportation Center, UCTC 281.

**Figure 2-17 Summary of Existing Transit Service**

Service Provider	Service Area	System Service Hours	Frequency	Key Transfer Points	Annual Ridership	Fare Structure	Transfer Policy
<b>Emery Go-Round Fixed-Route Bus Transit</b>	City of Emeryville MacArthur BART Station	Weekdays: 5:45 AM-10:00 PM, Saturdays: 9:30 AM-9:30 PM, Sundays: 10:20 AM-6:40 PM	12-15 min (weekday peak) to 20-60 min (weekends)	MacArthur BART, Amtrak Station, 65 <sup>th</sup> St and Hollis St	1.1 million (1)	Free	No transfer discounts between systems
<b>AC Transit Fixed-Route Bus Transit</b>	Western Alameda and Contra Costa Counties  Transbay service to downtown San Francisco	24 hours per day	Varies by time and route, from 10 minutes to 1 hour	40 <sup>th</sup> St. and San Pablo Ave, MacArthur BART	69 million (2)	Local fare: \$2.10 Transbay: \$4.20 31-day pass available.  Youth, seniors, disabled: 50% discount or more (most fare types)	Local bus to bus transfer: \$0.25
<b>BART Regional Rail</b>	Alameda Contra Costa San Francisco San Mateo Counties	Weekday: 4 AM-12 AM, Saturday: 6 AM-12 AM, Sunday: 8 AM-12 AM	Varies from 5 to 20 minutes	MacArthur BART, West Oakland BART	92.8 million (3)	Distance based: \$1.75-\$8.45, no passes available.	\$0.25 discount to or from BART to AC Transit
<b>Amtrak Heavy Rail</b>	Nationwide and statewide, Capital Corridor Commuter Rail	4:40 AM - 10:50 PM (Emeryville station)	Routes going through Emeryville range from 2 trains per day to 32 trains per day	Emeryville Amtrak Station	25.8 million (4)	Varies based on distance and advance purchase: \$7.50-\$300	Must have valid Amtrak ticket to use Amtrak bus between Emeryville and San Francisco
<b>East Bay Paratransit Demand Response</b>	Alameda and Contra Costa Counties	During hours of AC Transit and BART service in the area	On demand	To travel beyond the service area, passengers may transfer to other paratransit services	689,000 (5)	Distance based: \$3-\$7	No transfer discounts between services
<b>8-to-Go Senior Shuttle Demand Response</b>	Riders in the 94608 Zip Code	Weekdays: 9:00 AM-5:00 PM	On demand	To travel beyond the service area, passengers may transfer to other paratransit services	N/A	Free	No transfer discounts between services

(1) 2007

(2) FY2009

(3) FY2005

(4) FY2007

(5) FY2009



Figure 2-18 Map of Transit Routes



Figure 2-19 Map of Bus Stops



August 2010

adopted 3.15.2005 reso. no. 05-46

**Figure 2-20 Bus Stop Amenities and Ridership**

Map No.	Stop	Direction	Has Shelter	Has Bench	Has Trash Bin	Combined Est. Daily Riders	EGR Est. Daily Riders	AC Transit Daily Riders
1	40th at Horton	Eastbound	No	No	No	53	40	13
2	Hollis at 40th - Yerba Buena / Home Depot	Southbound	No	No	Yes	46	0	46
3	Hollis at 40th - Yerba Buena / Home Depot	Northbound	Yes	Yes	Yes	65	0	65
4	40th at Hollis	Eastbound	No	No	No	136	72	64
5	40th at Harlan	Eastbound	No	No	No	16	0	16
6	40th at Harlan	Westbound	No	No	Yes	44	0	44
7	40th at Emery	Westbound	Yes	Yes	Yes	184	115	69
8	40th at Emery	Eastbound	No	No	Yes	215	141	74
9	San Pablo at 40th	Southbound	Yes	Yes	Yes	700	0	700
10A	40th at San Pablo	Eastbound	No	Yes	Yes	788	160	628
10B			Yes	Yes	No			
10C			No	No	Yes			
11A	40th at San Pablo	Westbound	No	Yes	Yes	403	217	186
11B			No	Yes	No			
12	San Pablo at 40th	Northbound	Yes	Yes	Yes	527	0	527
13	Park at Watts / Pixar	Eastbound	No	Yes	No	27	27	0
14	Emery at 40th	Southbound	No	No	No	19	19	0
15	Park at San Pablo / IHOP	Northbound	No	No	No	78	78	0
16	Hollis at 45th	Southbound	No	No	No	59	59	0
17	Hollis at 45th	Northbound	No	No	No	67	67	0
18	Hollis at 53rd	Southbound	Yes	No	Yes	133	133	0
19	Hollis at 53rd	Northbound	No	No	No	88	88	0
20	Hollis at 59th / Emery Station	Southbound	No	Yes	Yes	256	256	0
21	Horton at 59th / Amtrak	Northbound	No	No	Yes	268	268	0
22	Horton at 59th / Amtrak	Southbound	No	No	No	0	0	0
23	Hollis at 59th	Northbound	No	No	No	92	92	0
24	40th at Hollis	Westbound	No	No	Yes	110	85	25
25	Hollis at 64th	Northbound	No	No	No	85	85	0
26	Hollis at 65th	Northbound	No	No	No	171	171	0
27	Vallejo at 66th	Southbound	No	No	No	87	87	0
28	65th at Hollis	Westbound	No	No	Yes	26	26	0
29	65th at Shellmound	Westbound	No	No	Yes	215	202	13



Map No.	Stop	Direction	Has Shelter	Has Bench	Has Trash Bin	Combined Est. Daily Riders	EGR Est. Daily Riders	AC Transit Daily Riders
30	Christie between 64th and 65th	Northbound	No	No	No	0	0	0
31	Christie at 64th	Southbound	No	No	No	146	100	46
32	Christie between 64th and Marketplace	Northbound	No	No	Yes	128	0	128
33	Christie / Public Market / Pacific Park Plaza	Southbound	No	No	Yes	195	175	20
34	Christie at Shellmound / FedEx Kinko	Southbound	No	No	No	83	83	0
35	Shellmound at Marketplace / Ped Bridge	Southbound	No	No	No	0	0	0
36	Shellmound / Woodfin	Northbound	No	No	Yes	155	70	85
37	Shellmound at Christie / Bay St. Site B	Northbound	Yes	Yes	No	130	130	0
38	Christie / Trader Joe's / Powell St. Plaza	Southbound	No		Yes	155	155	0
39	Hollis at 63rd	Southbound	Yes	Yes	No	71	71	0
40	Shellmound / Bay Street / IKEA	Northbound	Yes	Yes	No	574	379	195
41	Shellmound / Bay Street / Marriot	Southbound	Yes	Yes	Yes	495	345	150
42	40th at Horton	Westbound	No	No	No	82	49	33
43	Powell / Police and Fire Station	Eastbound	Yes	Yes	Yes	97	97	0
44	Powell / Watergate Market / Condos	Westbound	No	Yes	Yes	86	86	0
45	Powell / Hilton Garden Inn	Westbound	No	No	No	86	86	0
46	Powell / Watergate Towers	Westbound	Yes	Yes	No	396	396	0
47	Christie at 65th	Northbound	No	No	No	26	0	26
48	Christie at 65th	Southbound	No	No	No	60	53	7
49	San Pablo at 37th	Northbound	No	Yes	No	58	0	58
50	40th at Adeline	Eastbound	No	No	No	48	0	48
51	40th at Adeline	Westbound	No	Yes	Yes	53	0	53
52	San Pablo at 45th	Northbound	No	Yes	Yes	53	0	53
53	San Pablo at 45th	Southbound	No	No	No	51	0	51
54	San Pablo at 47th	Northbound	No	Yes	No	25	0	25
55	San Pablo at 47th	Southbound	No	Yes	Yes	40	0	40
56	Hollis at 67th	Northbound	No	No	Yes	3	0	3
57	Hollis at 67th	Southbound	No	No	No	2	0	2
58	Park at Pixar / Watts	Westbound	No	No	No	25	25	0
59	Stanford at Horton / Novartis	Southbound	No	No	No	25	25	0
60	Powell at Admiral / Watergate (Unofficial)	Eastbound	No	No	No	24	24	0
61	65th at Hollis	Southbound	No	No	No	34	0	34
62	65th at Shellmound	Eastbound	No	No	No	-	-	-

## Transportation Demand Management

There are several programs and services available in Emeryville that are designed to manage transportation demand by providing alternatives to the single occupant automobile. This section reviews these programs – their background and objectives, a description of the services provided, and their funding sources and costs. The specific services reviewed are:

- The Emeryville Transportation Management Association (ETMA), which funds and administers the Emery Go-Round and several other services
- The AC Transit EasyPass program, offering annual passes allowing unlimited rides on all AC Transit bus routes at a discount when purchased in bulk quantities
- NextBus – a service providing estimated time of arrival for the next bus along a particular route of the Emery Go-Round.
- Carsharing service
- Casual carpool
- 511 program of MTC, providing Information about transportation conditions and services throughout the Bay Area via the telephone and online

Additional information on these existing TDM services can be found in Chapter 4 Sustainable Transportation Strategies, under the TDM header.

## Emeryville Transportation Management Association

Formed in 1997, the Emeryville Transportation Management Association (ETMA) is a non-profit organization “whose primary purpose is to increase access and mobility to, from, and within Emeryville while alleviating congestion through operation of the Emery Go-Round shuttle program.”<sup>17</sup>

The ETMA began as a two year demonstration project, funded by a Congestion Mitigation and Air Quality (CMAQ) grant. In 2000, the ETMA began to be funded through a citywide Property-based Business Improvement District (PBID), which was renewed in 2006. Fees are assessed on all commercial and industrial property (including rental apartments), based on total square footage and use. Property owners pay the assessment through their property tax bills twice a year. The County of Alameda transfers the funds to the City, which in turn, transfers funds to the ETMA. Rates may be adjusted a maximum of 5% annually by the ETMA Board of Directors and subject to final approval by the City Council, on a calendar year basis. Rates as of November 2008 are as follows:

- Commercial/Retail Use    \$0.21    per square foot per year
- Industrial Use    \$0.10    per square foot per year
- Residential (For Rent)    \$105.00    per unit per year

For-sale residential units are not subject to the PBID; however, several new properties are mandated to participate in the ETMA through their Conditions of Approval for their Conditional Use Permits and pay equivalent rates.

The ETMA is governed by a Board of Directors, comprised of the seven largest commercial property owners in the City, one at-large property owner, one representative from the Chamber of Commerce, and one residential representative. The at-large and residential members are elected by the membership. The City of Emeryville has an ex-officio (non-voting) representative on the Board. The Board determines the tax rates for the PBID as well as makes decisions about the Emery Go-Round and other services of the ETMA.

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<sup>17</sup> <http://www.emerygoround.com>, accessed on November 11, 2008

## Emery Go-Round

The ETMA operates the Emery Go-Round, a private, publicly-accessible and free fixed-route shuttle service that has been in operation since about 1996. It began with two routes running during peak commute hours, and has subsequently added midday-weekday and Saturday service. Ridership on the Emery Go-Round has grown steadily over time, with 1.3 million passenger trips estimated in 2008.<sup>18</sup>

## Guaranteed Ride Home

The Guaranteed Ride Home program (GRH) provides commuters who regularly vanpool, carpool, bike, walk, or take transit with a reliable ride home when one of life's unexpected emergencies arises. A common reason given by commuters for driving alone to work is that a vehicle is needed in case of an emergency. The GRH program allows commuters to take an alternative form of transportation to work but gives them the peace of mind that if an unexpected circumstance arises, they will have a reliable transportation option available.

Once an employer is enrolled in the program, its employees may individually enroll. Each enrolled employee receives a voucher good for either a free car rental or a free taxi ride. The employee may use the voucher on any day that they do not drive to work and have an emergency. After the voucher is used, the employee returns a copy of the voucher and a completed questionnaire in order to receive a subsequent voucher. A program participant may receive up to six vouchers per year.

The GRH program is free for both employers and employees. The program is funded through a Transportation Funds for Clean Air (TFCA) grant through the Bay Area Quality Management District (BAAQMD). The Alameda County Congestion Management Agency (ACCMA) administers the program in Alameda County, which includes the City of Emeryville. The GRH program has been operating in Alameda County for thirteen years.

In 2008 GRH formed an informal partnership with the ETMA in order to initiate a pilot program. There was no cost to the ETMA. Typically, businesses located within Alameda County must have 75 or more employees in order to register for the GRH program. However, through the pilot program in Emeryville, this requirement was waived, so that any business

located within the boundaries of the City of Emeryville could register for the program.

Although the GRH program operates in seven of the nine Bay Area counties, a common issue is low program membership. This is typically due to limited marketing efforts. The pilot program in Emeryville was an effective solution to this problem by partnering with a local entity in order to spread the word about the program and encourage membership. The ETMA's GRH unit was one of the fastest growing units of the GRH program.

## AC Transit EasyPass

In the fourth quarter of 2008, AC Transit initiated a program offering annual passes at a bulk discount, good on all local and Transbay routes. The passes are available to aggregate organizations that purchase 100 or more passes for their employees, residents, students, etc. As of November 2008, one multi-unit residential complex in Emeryville was participating in the new program. Passes were given to the residents for free, subsidized by a grant from MTC.

The price of the annual pass varies from \$41 to \$115 per participant. This is 3-7% of the equivalent cost for a year of 31-day rolling passes. The EasyPass program follows the same principles as group health insurance: not all those offered the pass will use them often, and an increase in use due to the availability of the pass does not necessarily lead to an increase in operating costs for the service provider.

The price varies based on the number of eligible recipients as well as the level of service available in the vicinity of the location of the participating organization. AC Transit requires that a pass be purchased for each eligible recipient. An eligible recipient is someone who lives within the AC Transit service area. An option is available to purchase one pass for each eligible household in a housing complex, rather than individual residents.

The EasyPass program is expected to support a variety of benefits:

- A reduction in vehicle trips, vehicle miles traveled, and traffic congestion
- A reduction in parking demand and automobile ownership costs
- Reductions in environmental impacts and overall transportation costs
- A tax-free benefit for the sponsoring organization and/or recipients of the pass

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<sup>18</sup> Data provided by the Emeryville Transportation Management Association on November 11, 2008.



- An amenity attractive to home buyers or renters seeking a more urban lifestyle
- An increase in transit ridership, with a resultant decrease in cost-per-rider and ability to provide increased service without increased operating costs

## NextBus

Both the ETMA and AC Transit contract with a private company named NextBus to provide real-time estimates of the arrival time of the next bus along all Emery Go-Round routes and many AC Transit routes, including the 31, 26 and F routes, which have stops in Emeryville, as well as the 72-Rapid route along San Pablo Avenue. Someone wishing to ride either Emery Go-Round or AC Transit can either call a phone number or go online to view estimates of the arrival time of a bus along the route they choose. The AC Transit Rapid Bus stop on San Pablo Avenue has a NextBus display.

NextBus offers several benefits to encourage use of public transit:

- Increased knowledge of the potential to take a trip by transit, especially on short notice
- Reduced waiting times at stops for the next bus or train
- Improved service through the tracking of vehicle locations and travel times between points

No recent audit of NextBus technology has been conducted for the Emery Go-Round or AC Transit services. Potential operational issues include the reliability of vehicle tracking technology and ability to accurately predict arrival times, as well as the ability to provide information to potential transit riders. Many transit stops in San Francisco now have information posted within the bus shelter, available to all waiting passengers.

## CarSharing

Carsharing is a rental car service that offers vehicles for rent by the hour or a similar shorter time period than conventional rental car services. The service reduces the need for businesses or households to own their own vehicles, or as many of them, reducing transportation costs and vehicle miles traveled (VMT). Carshare vehicles available near a person's place of work (or school) can enable them to commute to work via other means, and use a car during the day only as needed. According to the Transportation Research Board, each carsharing vehicle takes nearly 15 private cars off the road. Carshare members have been found to make fewer trips and their total mileage driven decreases substantially, compared to their travel behavior before joining. A UC Berkeley study of San Francisco's City CarShare found that members drive nearly 50% less after signing up with City CarShare. This reduces the associated negative impacts of travel by automobile significantly and allows for reductions in parking requirements for commercial and residential development.<sup>19</sup>

There are two carsharing providers in the San Francisco Bay Area: City CarShare, a local non-profit organization that opened for business in 2001, and Zipcar, a for-profit business that began operation in 2005. A third provider, Flexcar, was purchased by Zipcar in 2007 due to financial difficulties.

In early 2008, the ETMA negotiated with Zipcar to initiate and help fund carsharing services at several locations throughout Emeryville. The ETMA was under a license fee agreement with Zipcar to provide free membership and corporate rates to ETMA members, and helps advertise the services to employees at commercial properties near the Zipcar Pods. Any business that paid into the ETMA (including residential complexes) can join Zipcar for free. At first, users received a discount on the standard usage rate (subsidized by the ETMA). Other residents of Emeryville could join Zipcar and use the cars at the Emeryville pods at the regular Zipcar rates. All members of Zipcar can also use their services elsewhere at the standard rate.

The ETMA is no longer subsidizing carsharing pods. Zipcar has expressed appreciation for the support the ETMA has provided in helping them expand their market. Further information on carsharing can be

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<sup>19</sup> TCRP (2005) Car-Sharing: Where and How it Succeeds, TCRP Report 108. 2005. Accessed on August 25, 2006 at [http://www.nelsonnygaard.com/articles/article\\_carsharing.htm](http://www.nelsonnygaard.com/articles/article_carsharing.htm)

found in Chapter 4 under the Transportation Demand Management Section.

The following are locations of Zipcars in Emeryville:

- Shellmound Street, in front of the Emeryville Public Market
- 59<sup>th</sup> Street & Horton Street (Emeryville Amtrak Station)
- 53<sup>rd</sup> Street & Hollis Street (Novartis)
- 45<sup>th</sup> Street & Doyle Street (Pixar)
- Powell Street & Captain Drive (Watergate Office Towers)
- Courtyards at 65<sup>th</sup> Apartments

## Casual Carpooling

Casual carpool is an informal arrangement where people with access to an automobile pick up passengers from a common location, typically individuals who do not know each other or do not know each other well. The advantage for the driver and passenger is that they are then able to use carpool lanes to reduce travel time, and the process is completely flexible and convenient. Sometimes the parties share the cost of gas and tolls. In the San Francisco Bay Area, carpools are charged a \$2.50 toll during commute hours. Most casual carpool users travel one-way – from the East Bay to San Francisco in the morning – and then take public transit home in the evening. Emeryville has two established casual carpool locations: at Christie Ave and 64<sup>th</sup> Street (in front of Pacific Park Plaza at 6363 Christie Ave), and at the Emeryville Marina (on Powell Street between Admiral Drive and Commodore Drive). No information is currently available on the number of people using casual carpool each day. Potential casual carpooling enhancements are discussed later in Chapter 4.

## 511

511 is a free phone and internet service providing information about transportation for all modes in the San Francisco Bay Area. Real-time traffic information is available, as well as scheduling and trip planning for transit. The site also has an online service to help people find rides via carpool and vanpool and a link to casual carpool sites in the East Bay including Emeryville locations. For some transit systems, real-time information about transit arrival times using NextBus technology is also available.

511 is funded by the Metropolitan Transportation Commission, the regional planning organization for the Bay Area.

## Pedestrian Connectivity and Safety

Walking is a fundamental building block of transportation and is a mode that nearly every individual uses at some point of the day regardless of their primary mode of transport. Emeryville's mild climate, recreational facilities, flat topography, and numerous other factors make it an attractive place for walking for purposes of either business or pleasure.

In many sections of Emeryville, particularly its residential neighborhoods, Emeryville's street network includes complete sidewalks and appropriate traffic calming devices to help create a pedestrian-friendly environment for locals and visitors. Yet, there are several areas of specific focus where pedestrian conditions could be improved. Examples include the Powell and I-80 intersection and the challenges in crossing major arterials such as Shellmound south of Powell. A 2005 study conducted on four of the major arterial intersections in Emeryville included a survey of pedestrians crossing at these locations. Among those surveyed, 47% indicated that they did not feel safe when crossing the intersection in question and 41% stated that they encountered a "near miss" with a vehicle at the respective intersection. There were 13 reported pedestrian-related collisions in 2008 in Emeryville.

## Bicycling Connectivity and Safety

Many portions of Emeryville offer pleasant places to bicycle for both recreational and utilitarian purposes. Separated facilities such as the Bay Trail and Greenway provide an opportunity for cyclists to be removed from the hazards of vehicle traffic, and numerous streets with bicycle lanes provide adequate space for riders to feel safe while traversing the city. Despite these high-quality facilities, there remain numerous places in Emeryville where challenging roadway configurations and high traffic volumes make cycling difficult. While these types of conditions may not affect some cyclists, others may be deterred from using their bike.

## Wayfinding

Currently, Emeryville has some wayfinding signage to direct the public to specific destinations although there are some signs that are not well coordinated. For example, there are a few signs at the start of the Bay Trail that are intended to guide users to the continuation of the trail, bicycle signage along Horton Street that is consistent with Berkeley's purple bicycle boulevard scheme, signs for the local Amtrak Station, and signs on San Pablo Avenue for the Emeryville Senior Center.

One of Emeryville's greatest challenges is the numerous barriers that divide the city. These include Interstate 80, the UP/Amtrak railroad tracks, and several high-volume arterial roadways. Although some signage does exist, directing users to bridges and points of access to cross these barriers, it is often only at the point of crossing. Thus, finding the route to safe points of crossing/access points is a considerable challenge.

Accessing public transit can be difficult for first time users who are unfamiliar with the services because there are no signs directing individuals to transit stops. AC Transit stops are identified with either shelters or bus stop signs and Emery Go-Round stops are also identifiable with many sharing the same bus stop location. Bus stop signs and/or shelters are typically the most highly visible means of finding transit although transit vehicles themselves, if properly marked, are also often an effective way to market the service. However, many bus stops in Emeryville lack bus shelters.

