

Existing Conditions Report – WORKING DRAFT

Downtown Oakland Specific Plan: Transportation Analysis

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Last revised: July 21, 2017

This report provides an overview of the existing transportation conditions in Downtown Oakland. It builds on the first phase of work for the Downtown Oakland Specific Plan, and draws on several current and past studies and plans, including:

- Downtown Oakland Plan Alternatives Report (March 2016)
- Comprehensive Circulation Study for Downtown Oakland and Access to/from West Alameda (October 2015)
- Oakland Walks! 2017 Draft Pedestrian Master Plan Update
- Downtown Parking Management Report (June 2016)
- Alameda County Goods Movement Plan (February 2016)

This report contains the following sections:

- **Section 1: Who is Traveling to Downtown Oakland, and How?**
Overall trip characteristics to, from, and within Downtown Oakland.
- **Section 2: Getting Around by Foot, Bike, and Transit**
Walking, biking, transit conditions, and the public realm.
- **Section 3: Getting Around by Motor Vehicle**
Driving and parking conditions.
- **Section 4: Management of Goods**
Movement of goods throughout Downtown Oakland and existing curb management in regards to the loading/unloading of goods.

Section 1: Who is Traveling in Downtown Oakland and How?

Downtown Oakland is a regional center and employment hub that draws people throughout the region. It is also home to many neighborhoods with more than 17,000 residents who travel around, to, and from Downtown Oakland. This section provides a snapshot of who is traveling in Downtown Oakland and what modes of transportation they use to get around. It also compares these trends to other communities in the region.

Modes of Transportation

Commute and Non-Commute Trips

Driving represents about half of all trips (commute and non-commute). Forty-five percent (45%) of all trips are made by walking or by transit, as shown in Figure 1.

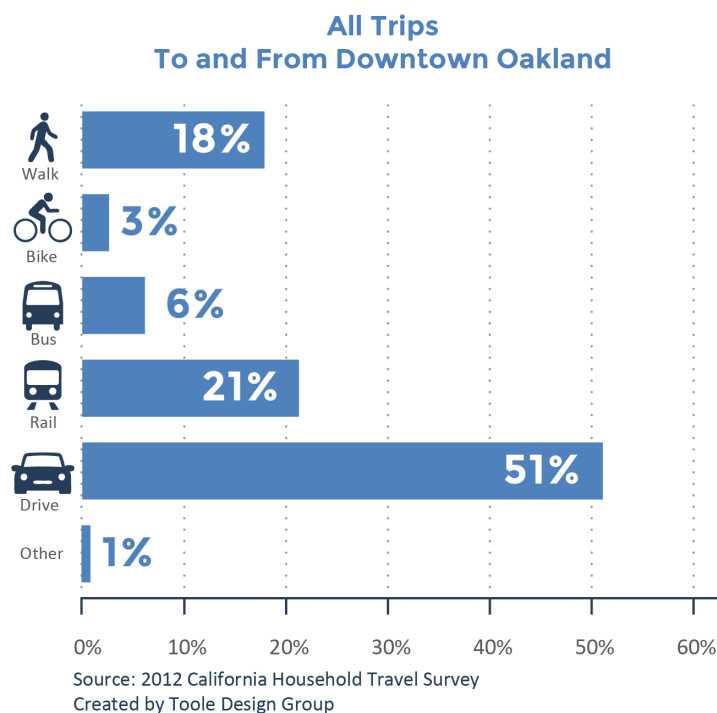


Figure 1. All Trips to and from Downtown

For non-commute trips, a little over 50 percent (50%) of trips to and from Downtown are by car, and a quarter of trips are made on foot and 12 percent (12%) by rail; bus and bike are less commonly used.

For commute trips, half are made by rail (48%) to Downtown Oakland. Driving is the second most common mode of travel (40%). While only 1% of commute trips are made on foot, 6% are made by bike. A comparison of commute and non-commute trips is shown in Figure 2.

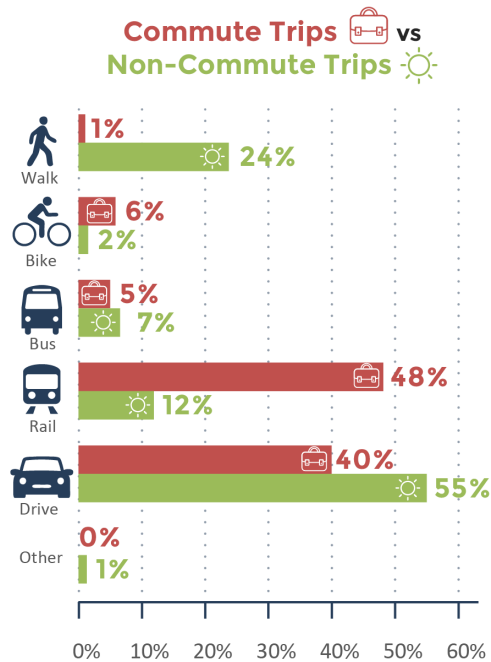
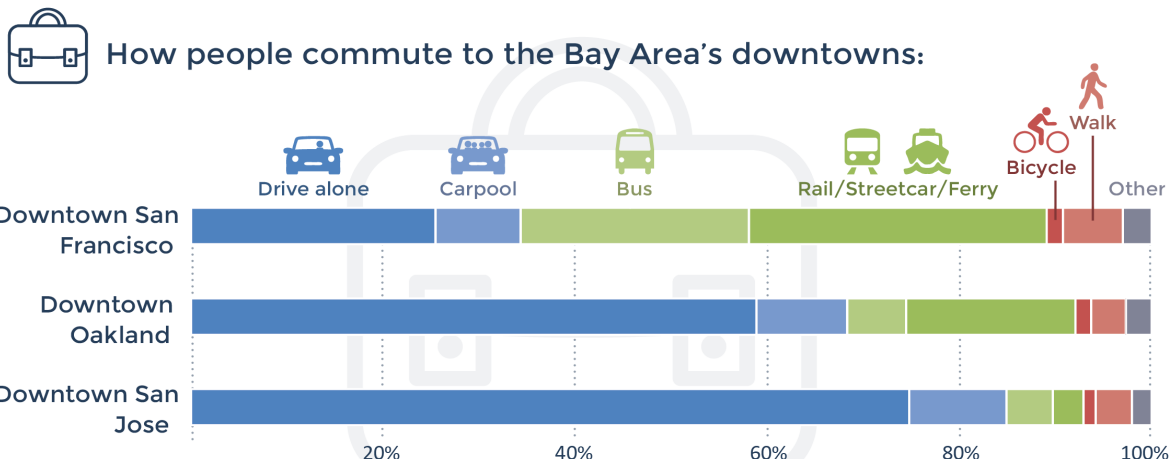


Figure 2. Commute and Non-Commute Trips to Downtown

Commute Comparisons

Figure 3 compares commute trips to Downtown Oakland to those of Downtown San Francisco, and Downtown San Jose, other major employment hubs in the region. Compared to San Francisco commuters, Downtown Oakland commuters drive more and use public transit and active transportation less. Compared to Downtown San Jose commuters, Downtown Oakland commuters drive less and use transit and active transportation more.



Source: U.S. Census Bureau, American Community Survey 2006-2010 5-Year Estimates, Special Tabulation: Census Transportation Planning; SPUR, 2015.
Created by Toole Design Group

Figure 3. Means of Transportation to Work – Comparison between Downtown San Francisco, Downtown Oakland, and Downtown San Jose

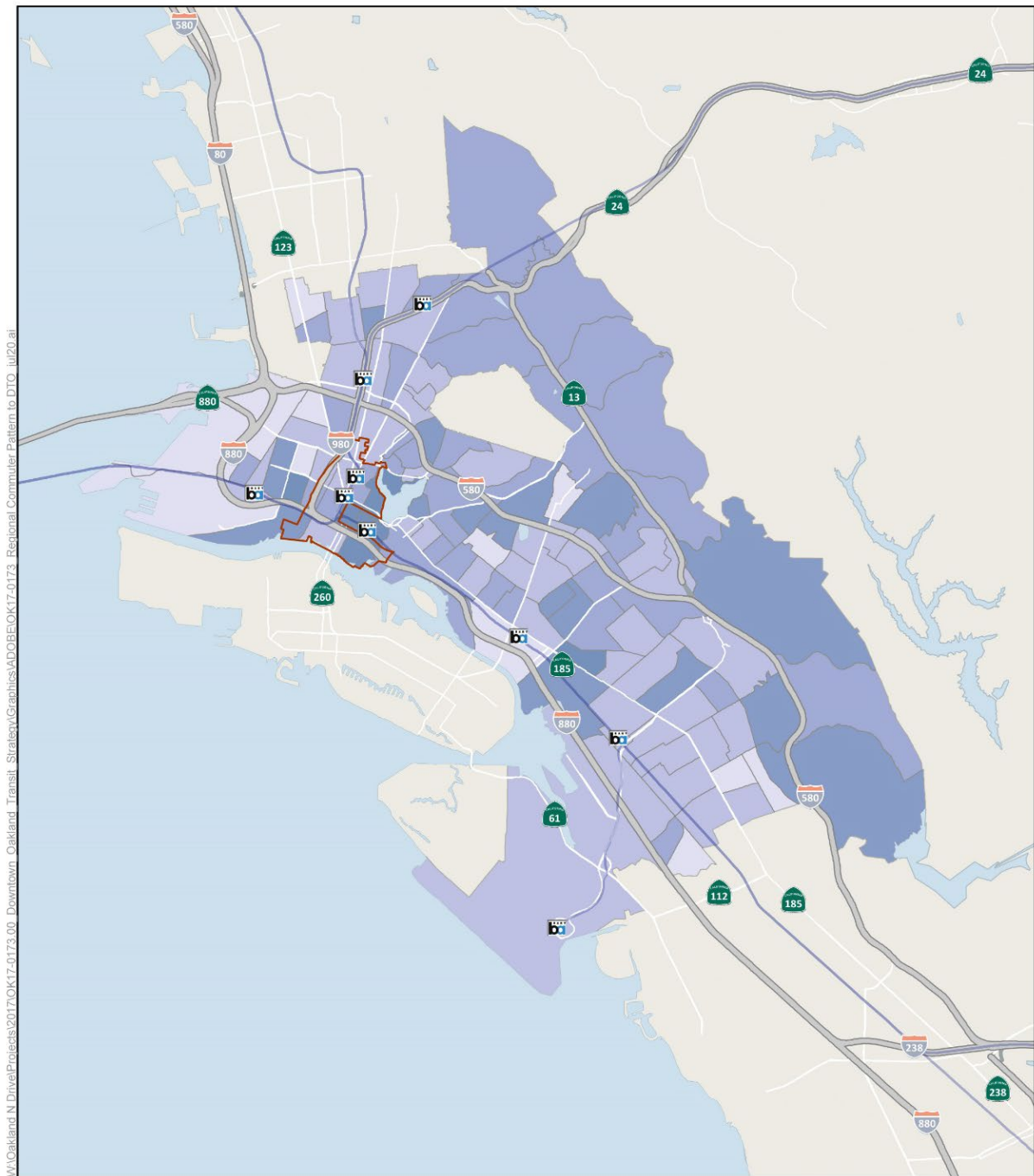
Where Travelers in Downtown Oakland Come From

Downtown Oakland is the largest and most densely-concentrated employment center in the East Bay, and one of the largest in the Bay Area.¹ Commuters come to Downtown Oakland primarily from communities along the I-80 and I-880 corridor, San Francisco, and eastern Contra Costa County. Approximately 20% of downtown workers live in Downtown Oakland; 10% come from San Francisco; and significant cross-commuting occurs between Downtown Oakland and Downtown San Francisco.

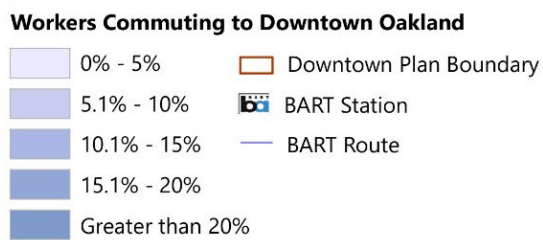
Nearly 40% of employed Oakland residents work in Oakland, and 31% of those who work in Oakland (or about 12% of all employed Oakland residents) work in Downtown. Another 26% of employed Oakland residents work in other East Bay cities, and 17% work in San Francisco. Figure 4 shows the percentage (%) of workers within each Oakland census tract who work in Downtown.

As expected, Oakland residents who walk or bike to work in Downtown Oakland are concentrated in the census tracts within and adjacent to Downtown. Those who take transit to jobs in Downtown Oakland are concentrated in those census tracts that are near BART stations or major AC Transit lines. Downtown Oakland workers who live in the Oakland hills primarily drive to work. Figure 5, Figure 6, and Figure 7 show the proportions of Downtown workers living in Oakland who walk or bike, take transit, or drive alone to work in Downtown.

¹ Downtown Oakland Specific Plan – Plans Alternative Report, Existing Conditions Chapter (March 2016).

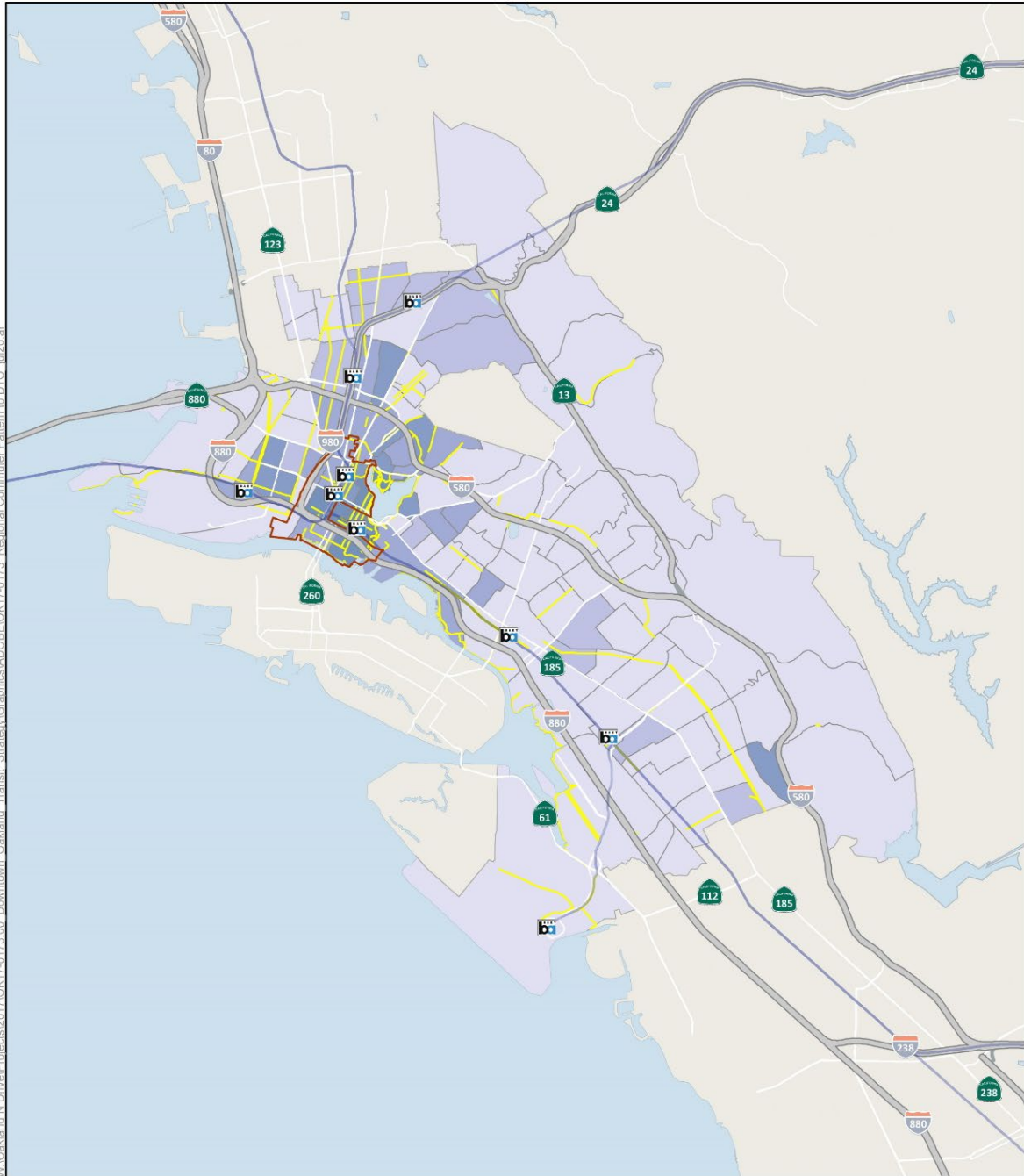


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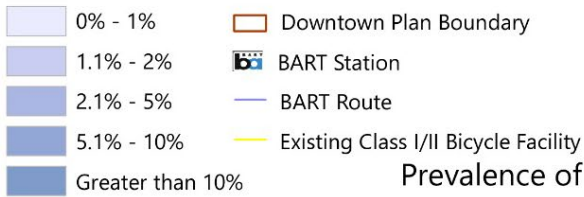


Prevalence of Downtown Oakland Commuters

Figure 4. Prevalence of Downtown Oakland Commuters

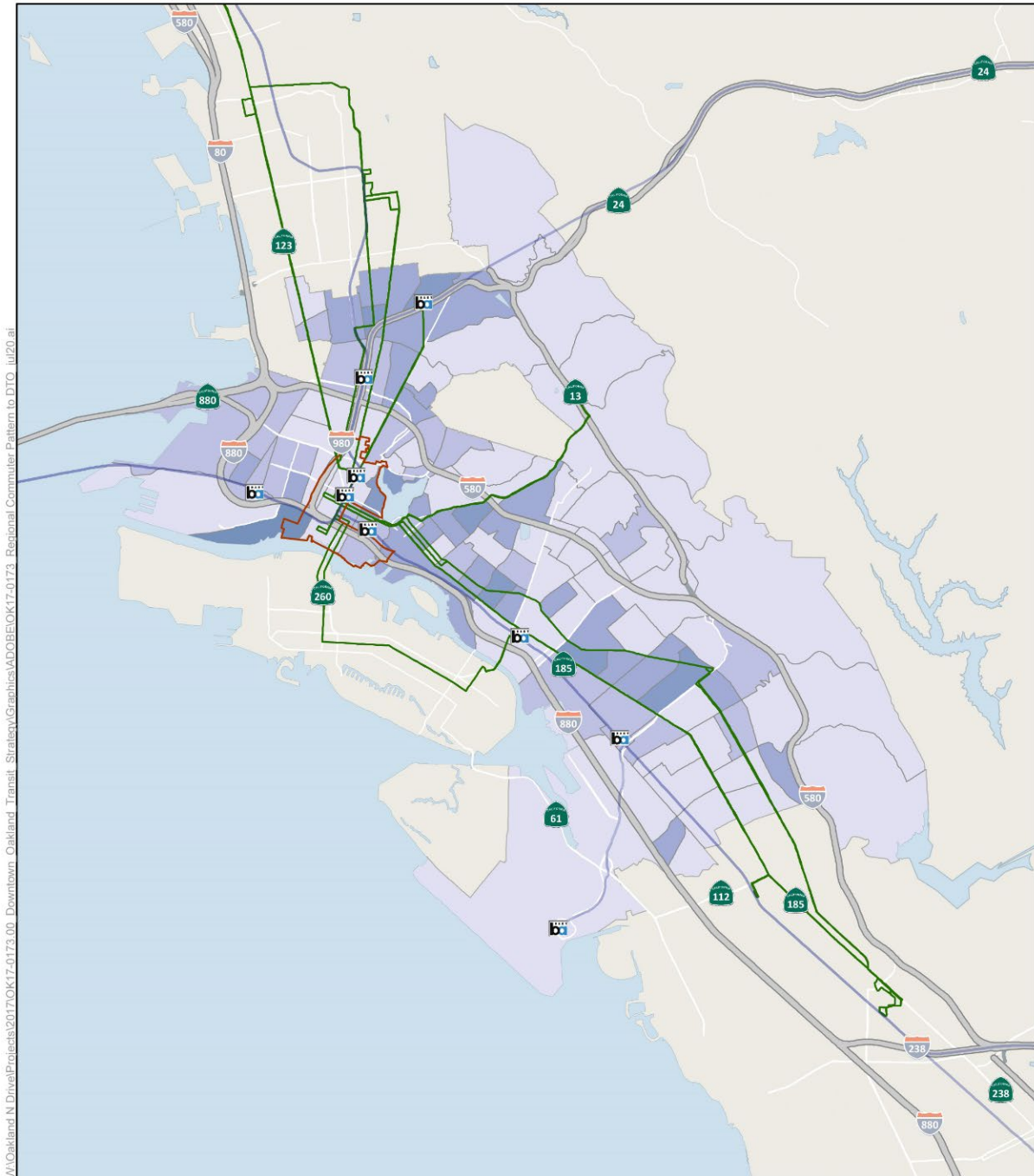


Workers Commuting by Walk/Bike to Downtown Oakland



Prevalence of Downtown Oakland Walk/Bike Commuters

Figure 5. Prevalence of Downtown Oakland Walk/Bike Commuters



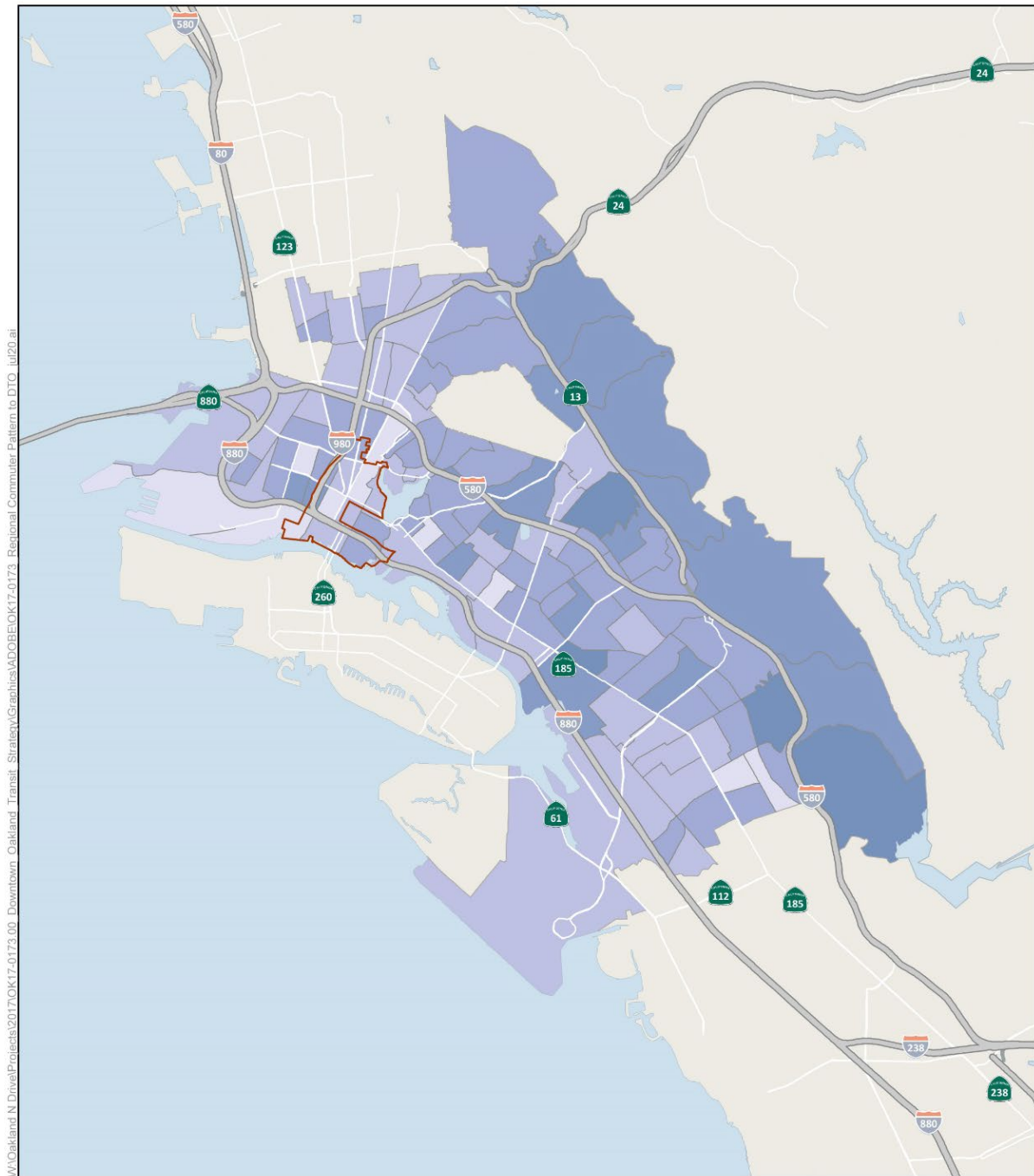
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Workers Commuting by Transit to Downtown Oakland



Prevalence of Downtown Oakland Transit Commuters

Figure 6. Prevalence of Downtown Oakland Transit Commuters



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Workers Commuting by Drive Alone to Downtown Oakland



Prevalence of Downtown Oakland Drive Alone Commuters

Figure 7. Prevalence of Downtown Oakland Drive Alone Commuters

BART Ridership

Figure 8 shows the origin of BART riders exiting in Downtown Oakland. Over half of average weekday BART trips ending in Downtown Oakland originate from San Francisco and the Peninsula. Riders traveling from Richmond and Fremont represent 16% and 17% of average weekday exits. Those traveling from stations along the Pittsburg/ Bay Point line represent 11% of exits. Only 4% of riders come from Dublin/Pleasanton and only 1% enter at another Downtown BART station.

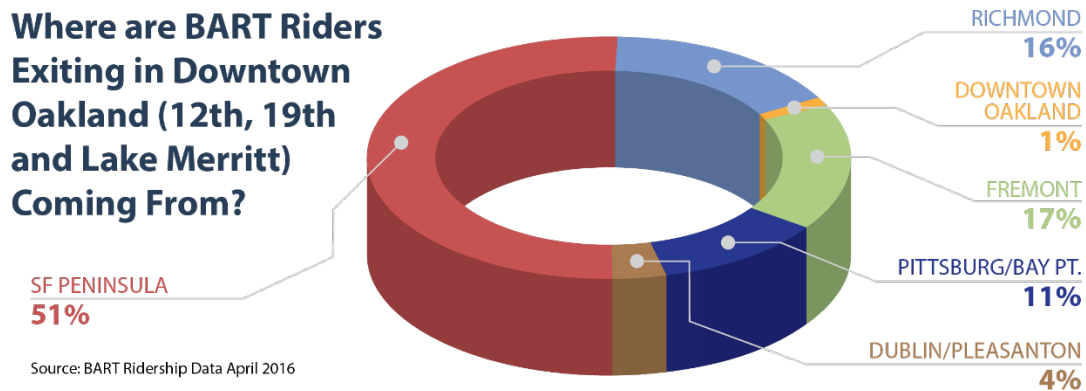
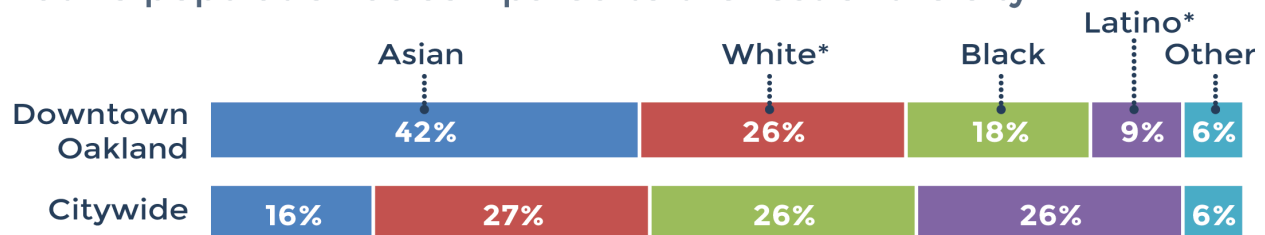


Figure 8: Origins for BART Passengers Exiting in Downtown Oakland (12th, 19th and Lake Merritt)

Downtown Oakland Demographics and Equity

Oakland is a city of great racial diversity, and Downtown Oakland is no exception. More than 40% of Downtown residents are Asian (compared to 16% in the city of Oakland). Downtown Oakland includes substantial black, white, and Latino populations; however, these populations are proportionately smaller in Downtown when compared Citywide (Figure 9).

Downtown Oakland has a much larger Asian and a smaller Latino population as compared to the rest of the city



Source: American Community Survey 2015 5-year estimates, as compiled by Oakland Walks! 2017 Draft Pedestrian Master Plan Update.

*The Latino category includes Hispanic or Latino people of any race.

Created by Toole Design Group

Figure 9. Who Lives in Downtown Oakland?

Downtown Oakland has the oldest population of any neighborhood in Oakland; 20% of people are over the age of 65 compared to 12% citywide. Downtown Oakland also has significantly more residents who have mobility or visual impairments than any other Oakland neighborhood (see Figure 10).

Downtown Oakland has fewer children than other Oakland neighborhoods. During the Plan Alternatives Report community engagement process (Fall 2015-2016), youth-serving organizations shared that students and their parents who live outside Downtown do not feel safe traveling to or on the streets of Downtown Oakland. This points to a need to make Downtown Oakland's transportation network more family-friendly, to attract younger people to the Downtown core.

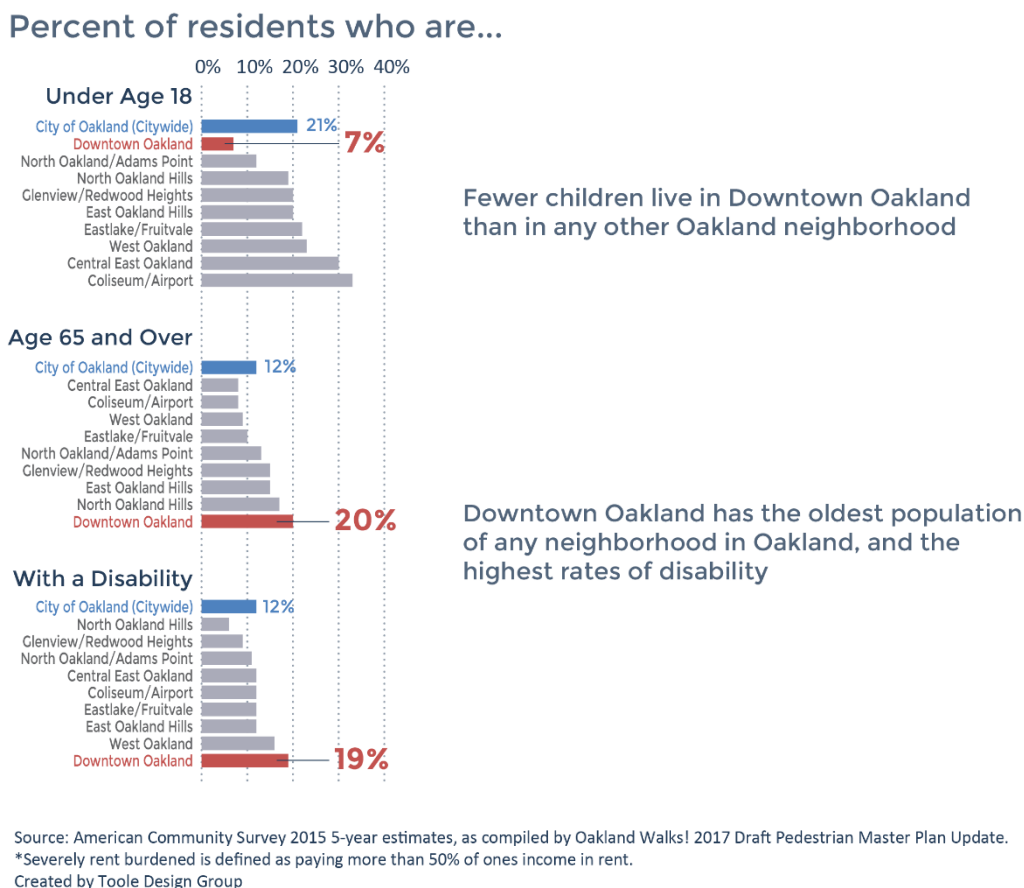


Figure 10. Downtown Oakland Population

Socioeconomic Characteristics of Transit Riders

As illustrated in Figure 11, the income profiles of AC Transit and BART riders are similar. 70% of BART households earn above \$50,000 and 82% of AC Transit riders earn below \$50,000. A majority of AC Transit riders have a household income below \$25,000. These figures are not a perfect comparison as AC Transit's income data comes from the 2012 On-Board Survey (in green) and represents ridership system wide, while BART's income data comes from the 2015 Station Profile Survey for the 12th, 19th and Lake Merritt BART Stations (in blue). While it is possible that AC Transit passengers traveling to and from Downtown Oakland have a somewhat different income profile than AC Transit riders system wide, these

data indicate that there are significant socioeconomic differences between AC Transit and BART passengers generally.

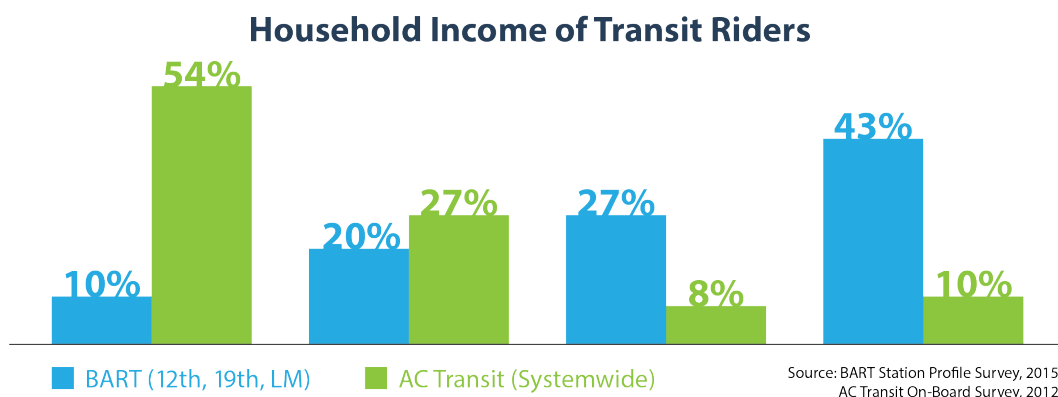


Figure 11. Household Income of AC Transit and BART Riders

There are also differences in the race/ethnicity of those riding BART and AC Transit. Systemwide, a greater percentage of AC Transit riders are black, while BART has higher percentages of both white and Asian riders. There are also differences between riders entering Downtown Oakland’s BART stations. Figures 12 and 13 show the race/ethnicity of BART and AC Transit riders.

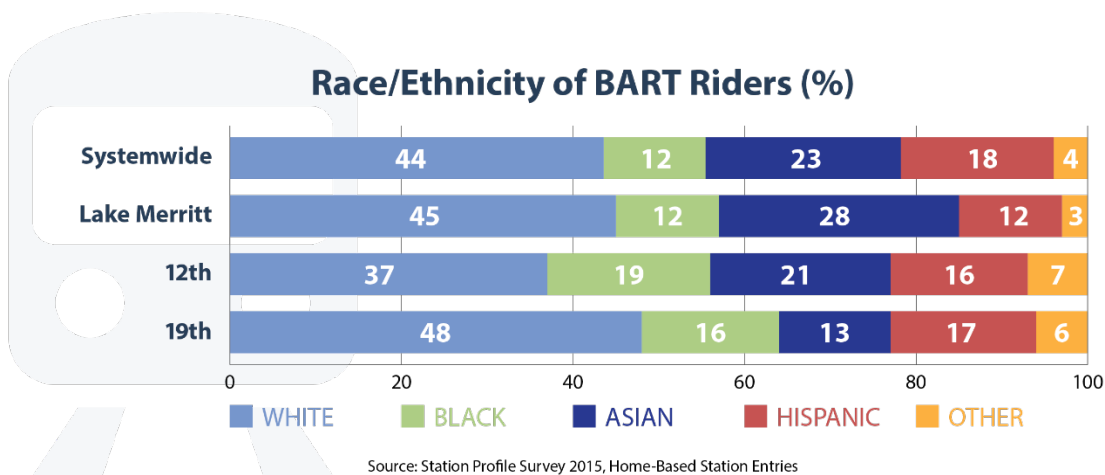


Figure 12. Race/Ethnicity of BART Riders

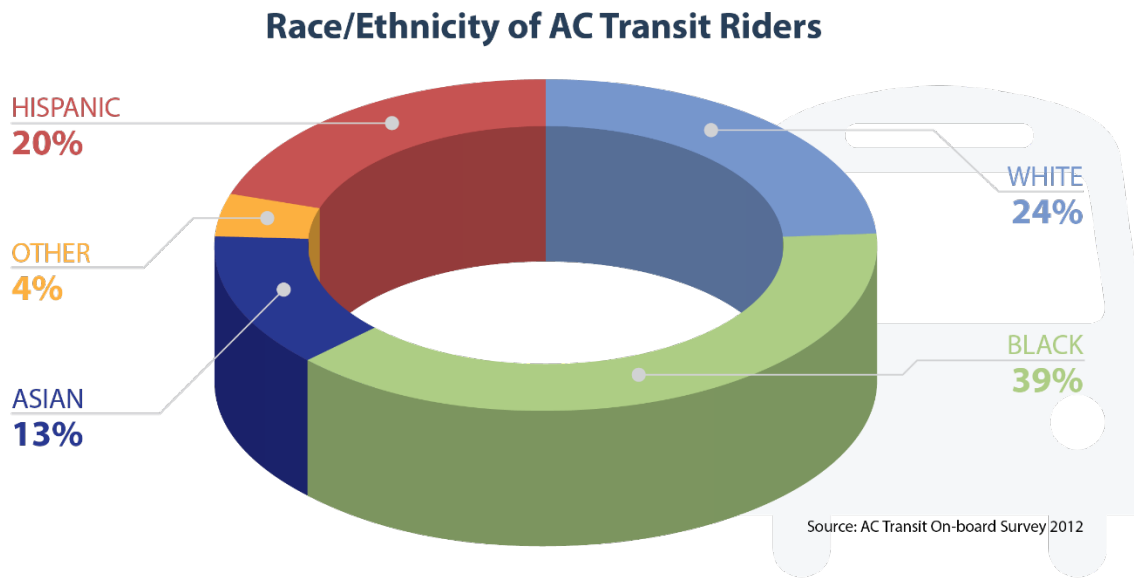


Figure 13. Race/Ethnicity of AC Transit Riders

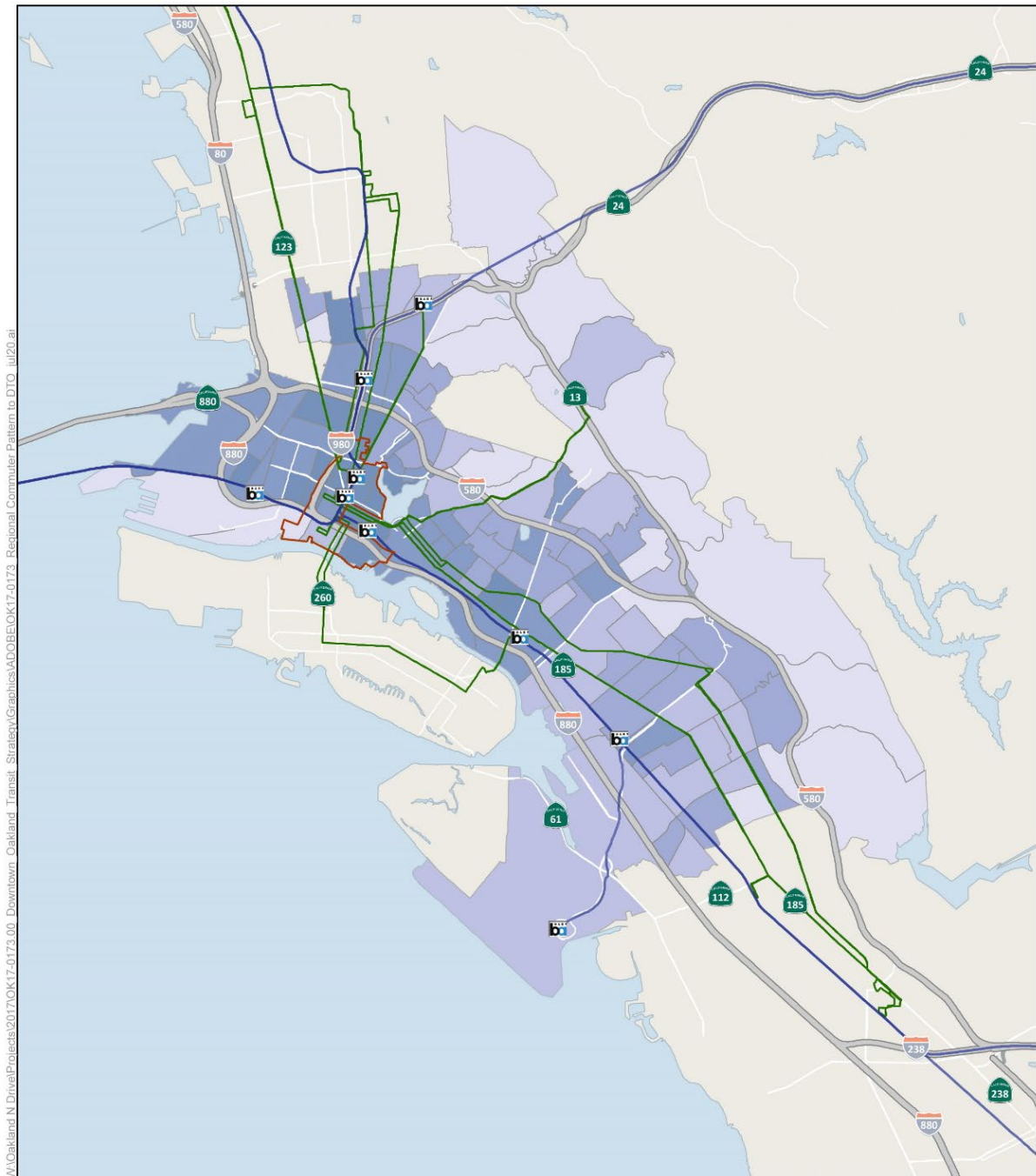
Vehicle Ownership

Downtown Oakland has the lowest rate of household vehicle ownership per household for any Oakland neighborhood. Approximately 23% of Downtown Oakland households do not own a vehicle, compared with only 8% of households citywide. Figure 14 shows the percentage of Oakland households by census tract that do not have a vehicle. The census tracts within Downtown, West and East Oakland have some of the highest percentages of zero-vehicle households, as seen in Table 1.

| | Mean Vehicles Available per Household |
|-------------------------------|--|
| Downtown Oakland | 1.06 |
| West Oakland/Longfellow | 1.58 |
| North Oakland/Adam's Point | 1.47 |
| Oakland Hills | 2.22 |
| Eastlake/San Antonio | 1.76 |
| Fruitvale | 1.76 |
| Central East Oakland/Coliseum | 2.11 |
| Elmhurst | 2.24 |
| City of Oakland Total | 1.83 |

Sources: 2011-2015 ACS 5-Year Estimates, Tables B1001 and B08014; CTPP 2006-2010 ACS 5-Year Estimates, Tables B306200 and B306201

Table 1: Mean Vehicles Available Per Household by Neighborhood and Citywide



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Households with Zero Vehicles

- | | |
|------------------|--|
| 0% - 2% | Downtown Plan Boundary |
| 2% - 5% | BART Station |
| 5% - 10% | BART Route |
| 10% - 15% | Major AC Transit Route to Downtown Oakland |
| Greater than 15% | |

Oakland Households with Zero Vehicles at Home

Figure 14. Oakland Households with Zero Vehicles



Key Findings

A wide range of people spend time in Downtown Oakland. It is a regional employment center to which residents throughout the Bay Area commute to and from for work. Downtown Oakland is also home to a diverse population and has more older adults and people with visual or mobility impairments than any other neighborhood in the city of Oakland. People also visit Downtown Oakland to enjoy the entertainment, cultural, and commercial activities.

Issues and opportunities to better serve people traveling to and from Downtown Oakland:

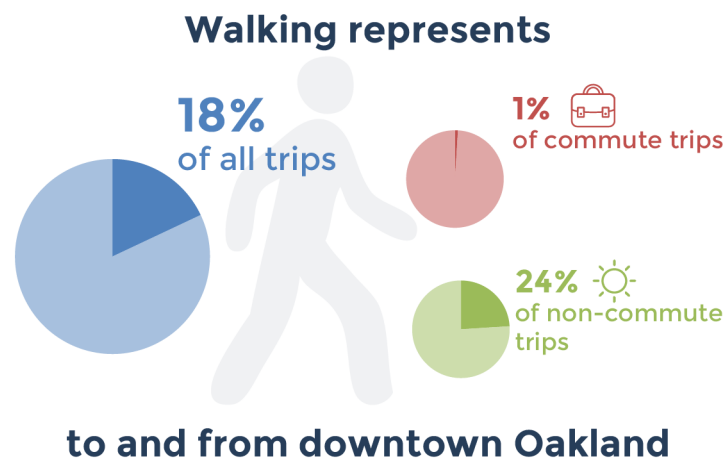
- Based on national research, older adults and those with disabilities are less likely to drive; therefore, it is critical that Downtown Oakland offers other mobility choices to driving, such as well-designed public transit, and a comprehensive and safe walking network.
- Family- and teen-friendly transportation options should be provided so that everyone in the community is comfortable visiting and living in Downtown Oakland. Data shows that fewer families live in Downtown Oakland than other neighborhoods. Also, community input indicates that parents and young people do not always feel safe traveling in Downtown Oakland.
- AC Transit and BART serve somewhat different populations, based on the socio-demographic profiles for their riders. In general, AC Transit riders are more likely to be non-white and to have lower household incomes. Consequently, improvements in AC Transit service could provide significant benefit to disadvantaged populations within the City of Oakland.
- The commute choices of Oakland residents who work in Downtown are correlated with where they live and the types of transportation facilities and services that are available to them. Those workers who live in the hills primarily drive, while those living near major transit lines use transit to commute Downtown. A higher percentage of workers living within or immediately adjacent to Downtown walk or bike.
- Downtown Oakland and the adjacent communities have some of the lowest rates of household vehicle ownership in the city, including relatively high percentages of households with no vehicles at all. Connecting these communities to Downtown Oakland via transit and safe and direct bicycle facilities will improve their access to services, jobs and social/recreational opportunities in Downtown Oakland.

Section 2: Getting Around by Foot, Bike, and Transit

Half of all trips to Downtown Oakland are made by means other than a motor vehicle – by walking, biking, or transit. These three modes are distinct, each with a different set of facilities, usage patterns, considerations, and requirements. This section provides information on walking, biking, and taking transit Downtown Oakland.

Walking in Downtown

In many ways, Downtown Oakland has an ideal walking environment. There is a well-connected sidewalk network in most areas, a mix of land uses, density of destinations, and a lot of eyes and activity on the street. People chose to walk for 18% of the total trips they take. Of commute trips, 1% is made by walking; of non-commute trips, 24% are made by walking as shown in Figure 15.



Source: 2012 California Household Travel Survey
Created by Toole Design Group

Figure 15. Walking Trips in Downtown

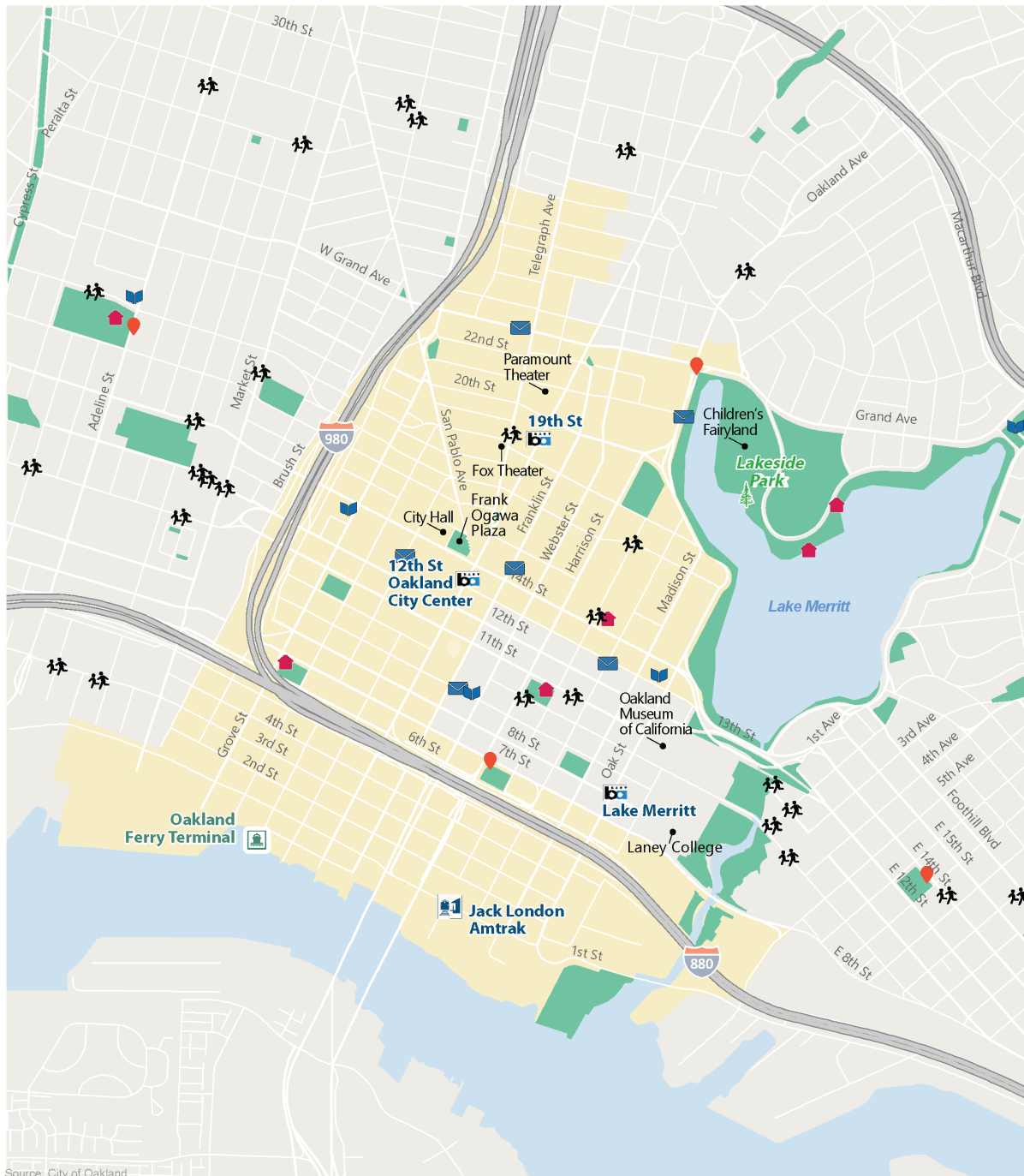
Pedestrian Destinations

Pedestrian activity in Downtown Oakland is driven by its wealth of densely concentrated destinations, which includes:








- Public services such as Oakland Public Library and Oakland City Hall;
- Cultural destinations such as the Oakland Museum of California, the Malonga Center for the Arts, and the African American Museum and Library.
- Entertainment venues such as the Fox Theater and Paramount Theater;
- Jack London Square and waterfront
- Lake Merritt
- Laney College
- Elementary, middle, and high schools

In addition, transit hubs such as the three BART stations, Amtrak station, and bus stops are key areas with significant pedestrian activity.

Figure 15 indicates popular destinations in Downtown Oakland.



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-  Recreation Center
-  School
-  Senior Center
-  Library
-  Post Office
-  Park
-  Downtown Plan Area

Pedestrian Destinations

Figure 15. Pedestrian Destinations

Pedestrian Demand

Downtown Oakland has the highest concentration of walking in the city. A study of Downtown Oakland pedestrian activity from the Alameda County Transportation Commission found that there is “heavy foot traffic on most streets despite the challenges that pedestrians face with respect to long crossing distances and varying sidewalk conditions.”

As shown on the heat map in Figure 16, the heaviest pedestrian concentrations are around the three Downtown BART stations, the employment and commercial corridors along 20th and 12th Streets, and in Chinatown.

This map also indicates areas of lower pedestrian activity, such as near freeway corridors and the edges of Jack London Square; these areas also have less pedestrian amenities such as continuous sidewalks.

Figure 17 shows the BART station walksheds and destinations in downtown that can be reached within a 5- or 10-minute walk. Most of Downtown Oakland is accessible by BART, especially the areas near Broadway and Lake Merritt.

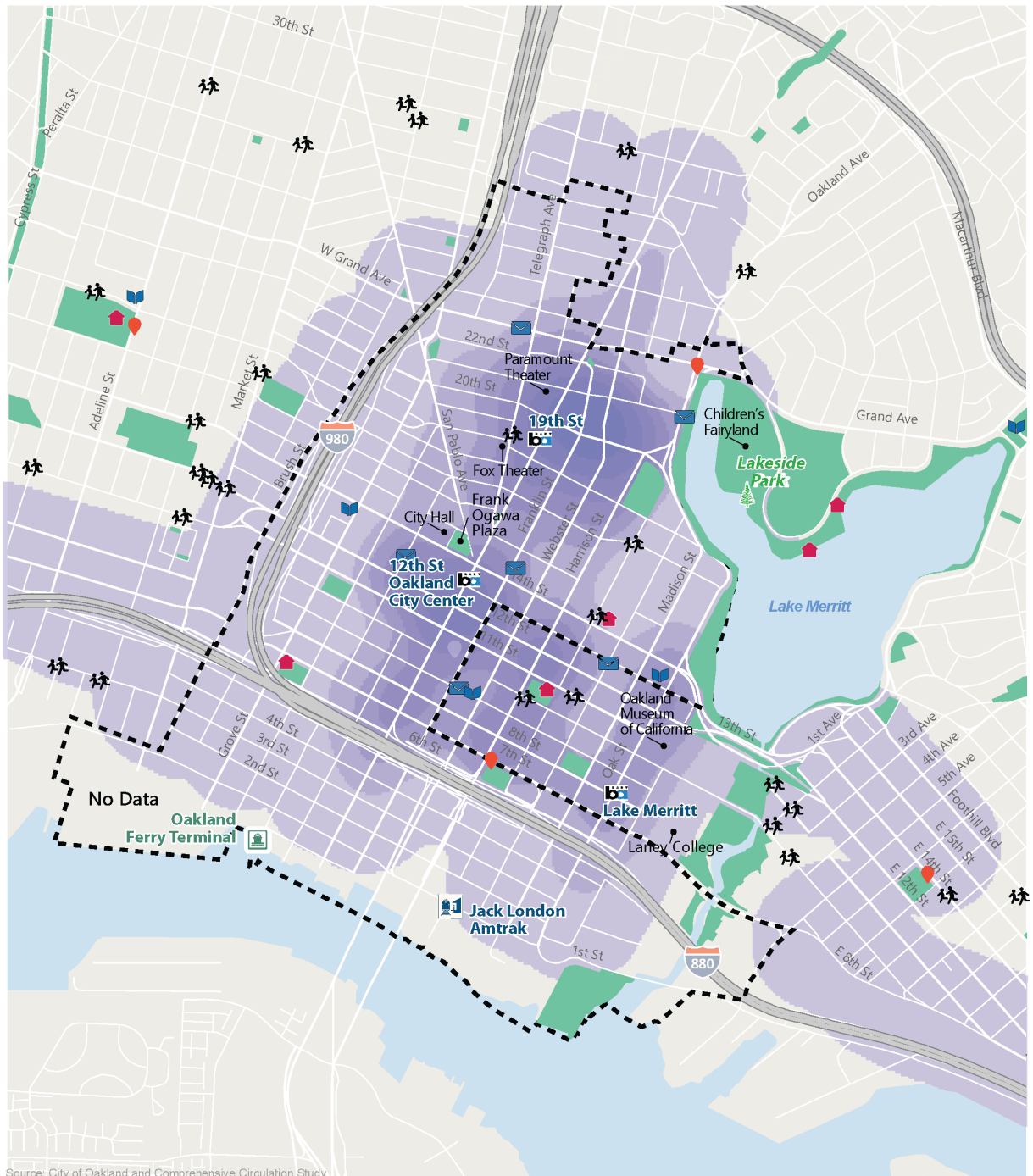
Other areas, especially Uptown, Adams Point, the southwest section of Old Oakland, and most of Jack London Square are beyond reach of BART. Reliable and frequent bus service is important for people to access destinations in these areas.








Walk Score

A useful tool for understanding the walkability of an area is Walk Score. Walk Score scores streets on a scale of 0 – 100 based on how many destinations are located within walking distance. While it is important to assess the quality of the walking environment separately, Walk Score is a simple way of gauging how rich an area is in destinations.

Most of Downtown Oakland scores in the 90s, defined as a “Walker’s Paradise,” where daily errands do not require a car. Virtually all the rest scores in the 80s defined as “Very Walkable,” where most errands can be accomplished on foot, as illustrated by Figure 18.

Downtown Oakland’s dense set of destinations is a great base for a walkable downtown; ensuring that there are safe and convenient connections to these destinations is an important aspect of a strong transportation network.



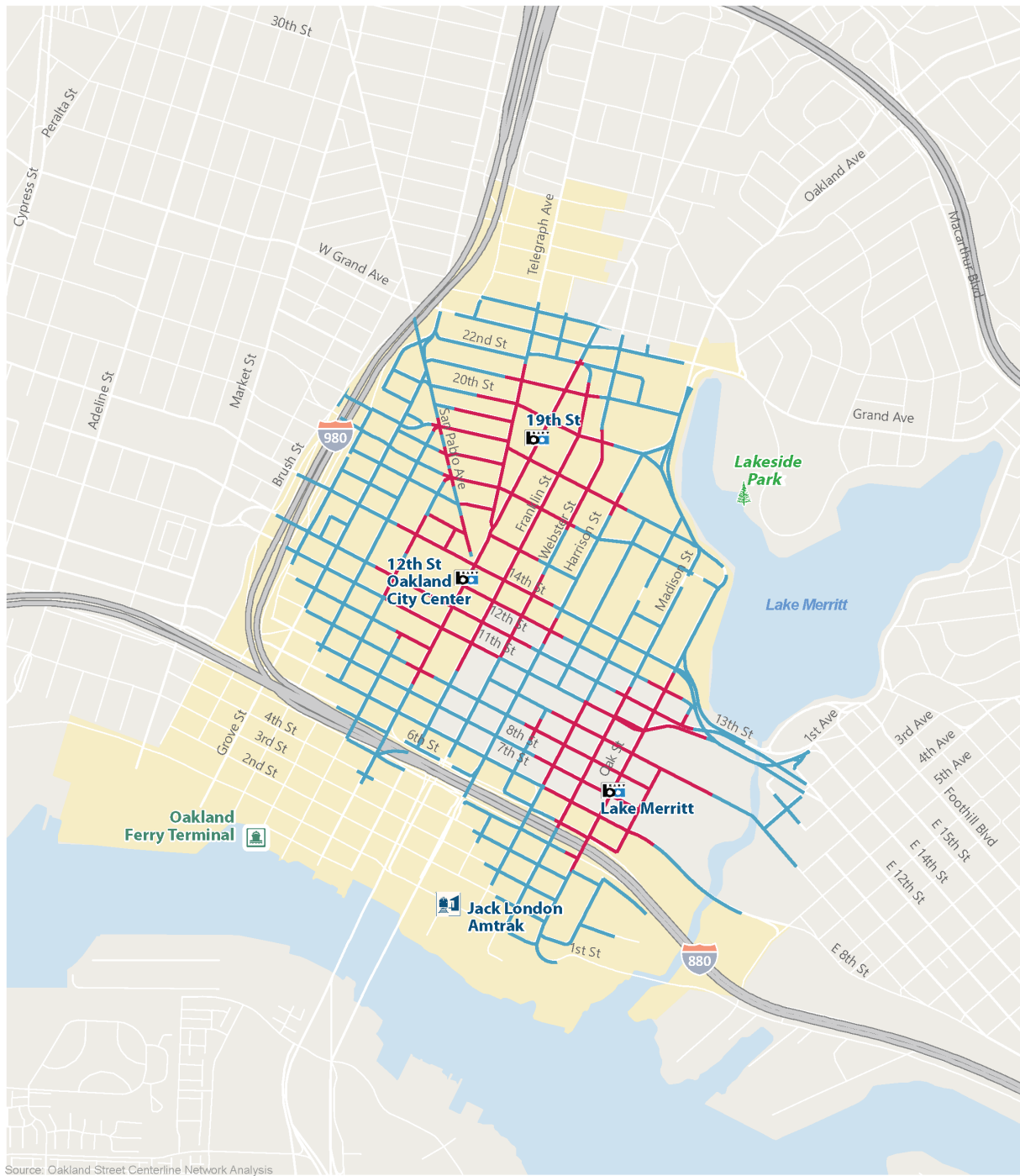
-  Recreation Center
-  School
-  Senior Center
-  Library
-  Post Office
-  Park
-  Downtown Plan Area

Low

High

Pedestrian Activity Heat Map with Destinations

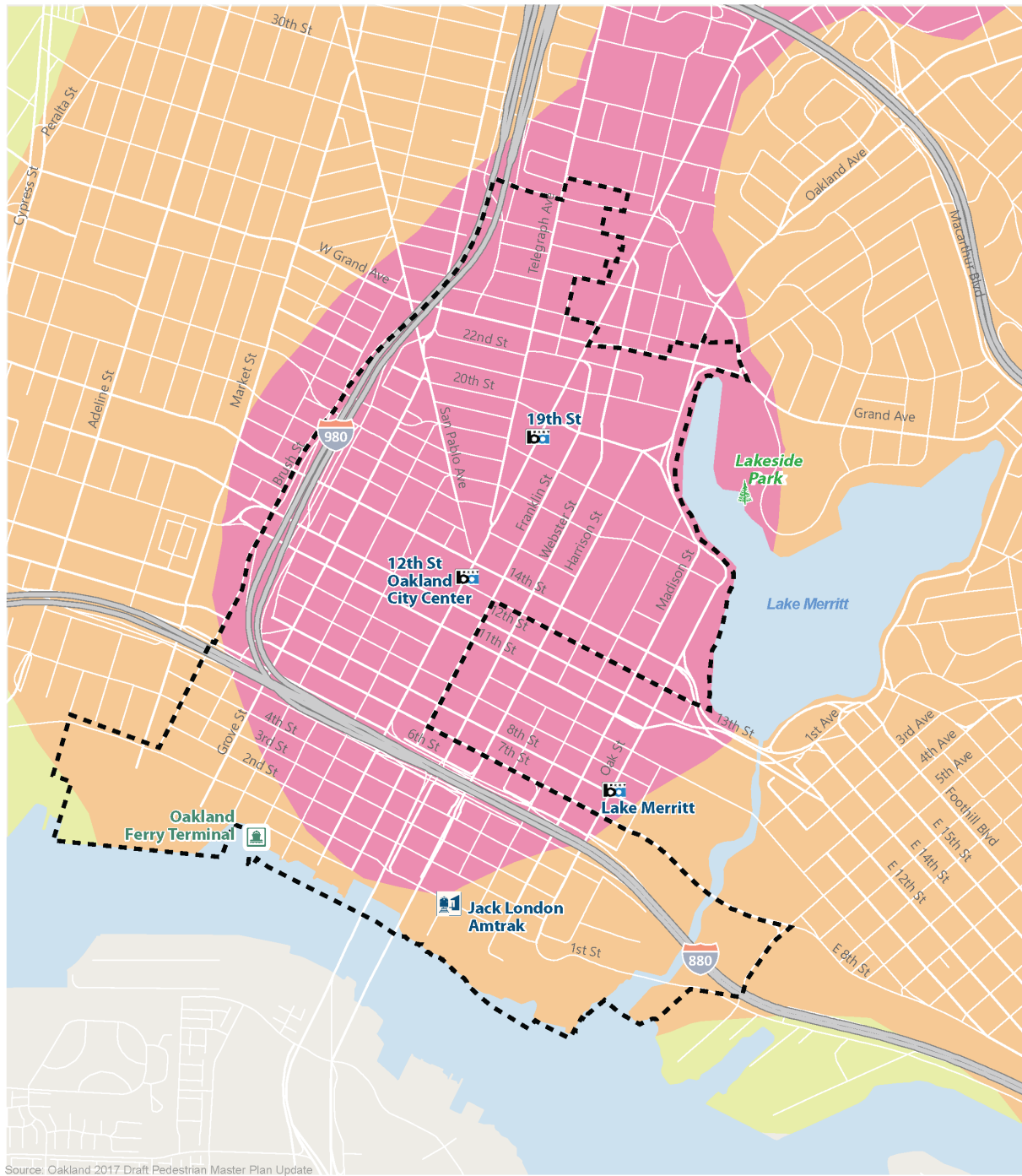
Figure 16. Pedestrian Activity Heat Map



- 5 Minute Walkshed
- 10 Minute Walkshed
- Downtown Plan Area

BART Station Walkshed

Figure 17. Walksheds from BART Stations



- 90-100
- 70-90
- 50-70
- Downtown Plan Area

Walk Score

Figure 18. Walk Score

Existing Pedestrian Network

Downtown Oakland has a dense street and sidewalk network; 4% of the City's streets and sidewalks are in Downtown Oakland even though it is only 2% of the City's land area.² Some sections of the network are aging or out-of-date and are in need of repair to be fully functional. The Comprehensive Circulation Study for Downtown Oakland identified the following as substantial issues in Downtown Oakland's pedestrian environment:

- Long crossing distances at intersections
- Lack of pedestrian countdown signals
- Long signal cycle lengths
- Barriers presented by the three freeways that run through Downtown Oakland

Streets are a key part of the public realm, and yet in Downtown they often function more like fast-moving on-ramps for the adjacent highways, rather than vibrant, safe places for people. The one-way streets in Downtown Oakland are fast and excessively wide, which compromises comfort and safety for pedestrians and bicyclists. This is particularly true along the streets that lead directly to an on-ramp to Interstate 880 or the Webster Tube, including but not limited to Broadway, Webster, Jackson, Madison, 5th and 7th Streets.

Many of the streets in Downtown Oakland are multi-lane, which creates long crossing distances for pedestrians. Additionally, traffic signal cycle lengths for motor vehicles result in delay for pedestrians. Because motor vehicle volumes are low and the signal timing prioritizes motor vehicle throughput, pedestrians often cross the street when opportunity arises, rather than waiting for a green pedestrian phase.

Oakland residents indicate that pedestrian connectivity between different parts of downtown is lacking, in part due to the freeways.³ The ramps and frontage roads near I-880, I-980, and the Webster/Posey Tubes are major barriers for pedestrians. In particular, the heart of Downtown needs better connections across I-880 to the Jack London District and the waterfront. A City-led project called "Walk This Way" is currently underway to address the Broadway and Webster Street freeway underpasses in this area to make them more inviting and safe.

Freeways can also act as a barrier which can disconnect neighborhoods; in this case, neighborhoods to the west and south have difficulty accessing Downtown Oakland by foot. This presents a problem since many support services, and cultural and educational resources are located in Downtown Oakland. Also, business and other activities may be less likely to locate in areas that are perceived as not walkable or bike-friendly.

² Pedestrian facility data is for Downtown Oakland as defined in the 2017 Draft Oakland Pedestrian Plan, bounded by the waterfront to the south, the lake and channel to the east, Grand Avenue to the North, and M.L.K. Jr. Way to the west.

³ This feedback was shared during the community engagement process for the Downtown Oakland Specific Plan – Plan Alternatives Report. This process was held from fall 2015-2016.

Sidewalks

The downtown core has a relatively continuous sidewalk system, with the exception of some gaps on and around Grand Avenue near Lake Merritt and missing and incomplete sidewalks in the Jack London District, as shown in Figure 20. In some locations, the quality of the sidewalk environment is poor. For example in some areas, the sidewalk is wide, yet lacks street trees, benches, and other amenities. In other areas, bus shelters restrict the width of the sidewalk which can create difficulties for people with disabilities. 17% of Downtown Oakland's sidewalks are identified as damaged.⁴

Downtown Oakland has...

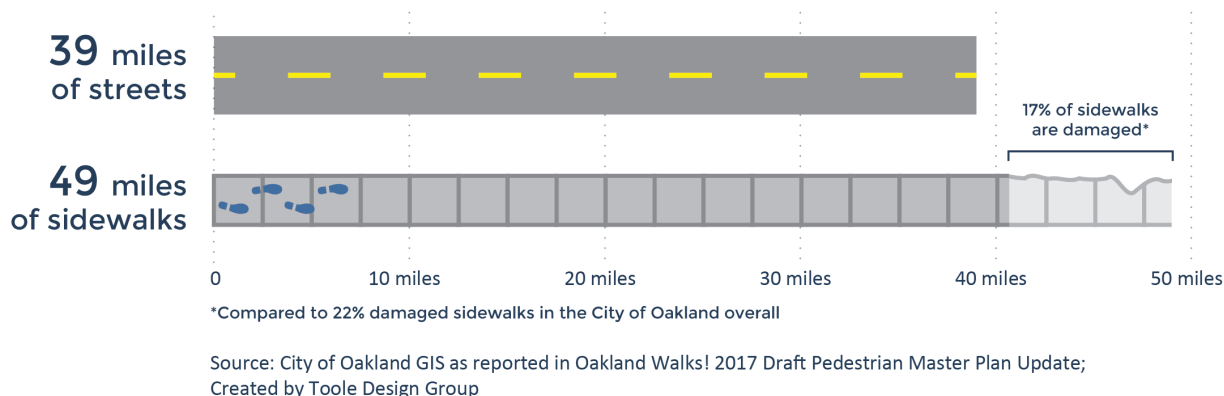


Figure 19. Streets and Sidewalks in Downtown

Even short gaps in sidewalks are a major issue for the safety and mobility of pedestrians, and prevent pedestrians from easily moving through and between neighborhoods. Gaps reduce accessibility by causing pedestrians to walk out of their way, and compromise safety by encouraging pedestrians to walk on the shoulder or in the street.

⁴ The draft 2017 Oakland Pedestrian Plan notes that in 2006, the City of Oakland surveyed all sidewalks in Oakland and documented sidewalk gaps and damage. The draft Plan notes that although this data is dated, it is the most complete source of information about sidewalk conditions.



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- Pedestrian Signal Head
- Existing Sidewalk
- Identified Sidewalk Gap
- Downtown Plan Area

Pedestrian Network Facilities

Figure 20. Existing Pedestrian Facility Network

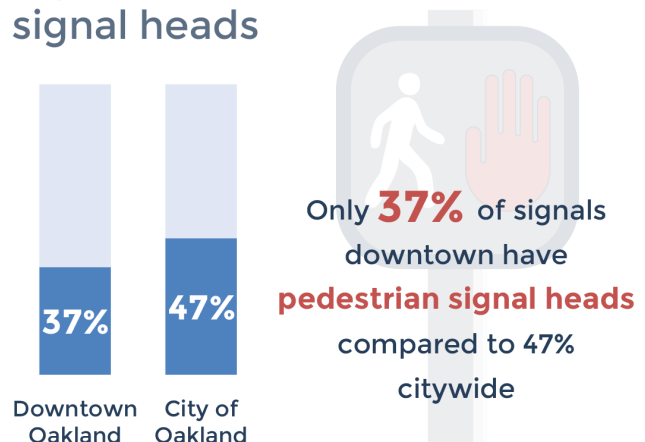
Pedestrian Signal Heads

Many pedestrian signal heads in Downtown Oakland are aging and only about a third of signals have pedestrian signal heads, compared to 47% Citywide (Figure 21). See Figure 16 for the location of pedestrian signal heads in Downtown Oakland

Downtown Oakland has the highest concentration of corners with curb ramps of any neighborhood in the City. However, only 59% of corners have ADA-compliant curb ramps (Figure 22). Also, diagonal curb ramps are common throughout Downtown Oakland. Diagonal curb ramps guide can be dangerous as they guide people with mobility and visual disabilities into the intersection, rather than the crosswalk.

The City's 2009 ADA Transition Plan is scheduled to be updated in 2017; the scope of work includes a curb ramp inventory and a timeline for curb ramp improvements.

Signals with pedestrian signal heads

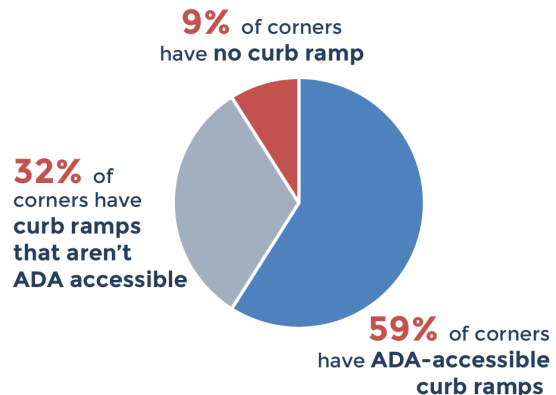


Source: City of Oakland GIS as reported in Oakland Walks! 2017 Draft Pedestrian Master Plan Update; Created by Toole Design Group

Figure 21. Pedestrian Signal Heads in Downtown Oakland

Curb ramps

In downtown Oakland:



Source: City of Oakland GIS as reported in Oakland Walks! 2017 Draft Pedestrian Master Plan Update; Created by Toole Design Group

Figure 22. Curb Ramps in Downtown Oakland

Table 2 provides a comparison between the pedestrian facilities in Downtown Oakland, other neighborhoods, and citywide.

| Facilities | Sidewalks (miles) | Streets (miles) | Sidewalk network Completion (%) | Sidewalk damaged (%) | Curb ramps ADA (%) | Curb Ramps Non- ADA* (%) | No curb ramp (%) | Signals w/ ped heads (%) |
|---------------------------|----------------------|--------------------|--|----------------------------|-----------------------------|-----------------------------------|---------------------------|-----------------------------------|
| Downtown | 49 | 39 | 63% | 17% | 59% | 32% | 9% | 37% |
| Glenview/Redwood Heights | 118 | 86 | 69% | 23% | 35% | 4% | 62% | 33% |
| Coliseum/Airport | 25 | 47 | 27% | 16% | 41% | 5% | 54% | 33% |
| West Oakland | 102 | 98 | 52% | 15% | 49% | 28% | 23% | 49% |
| Eastlake/Fruitvale | 219 | 145 | 76% | 22% | 43% | 12% | 45% | 44% |
| North Oakland/Adams Point | 225 | 139 | 81% | 24% | 51% | 14% | 34% | 53% |
| Central East Oakland | 272 | 176 | 77% | 26% | 38% | 12% | 50% | 61% |
| North Oakland Hills | 17 | 131 | 6% | 17% | 12% | 7% | 80% | 79% |
| East Oakland Hills | 93 | 143 | 33% | 16% | 27% | 4% | 69% | 81% |
| Citywide | 1,120 | 1,002 | 56% | 22% | 42% | 13% | 45% | 47% |

Source: City of Oakland GIS, as reported in Oakland Walks! 2017 Draft Pedestrian Master Plan Update

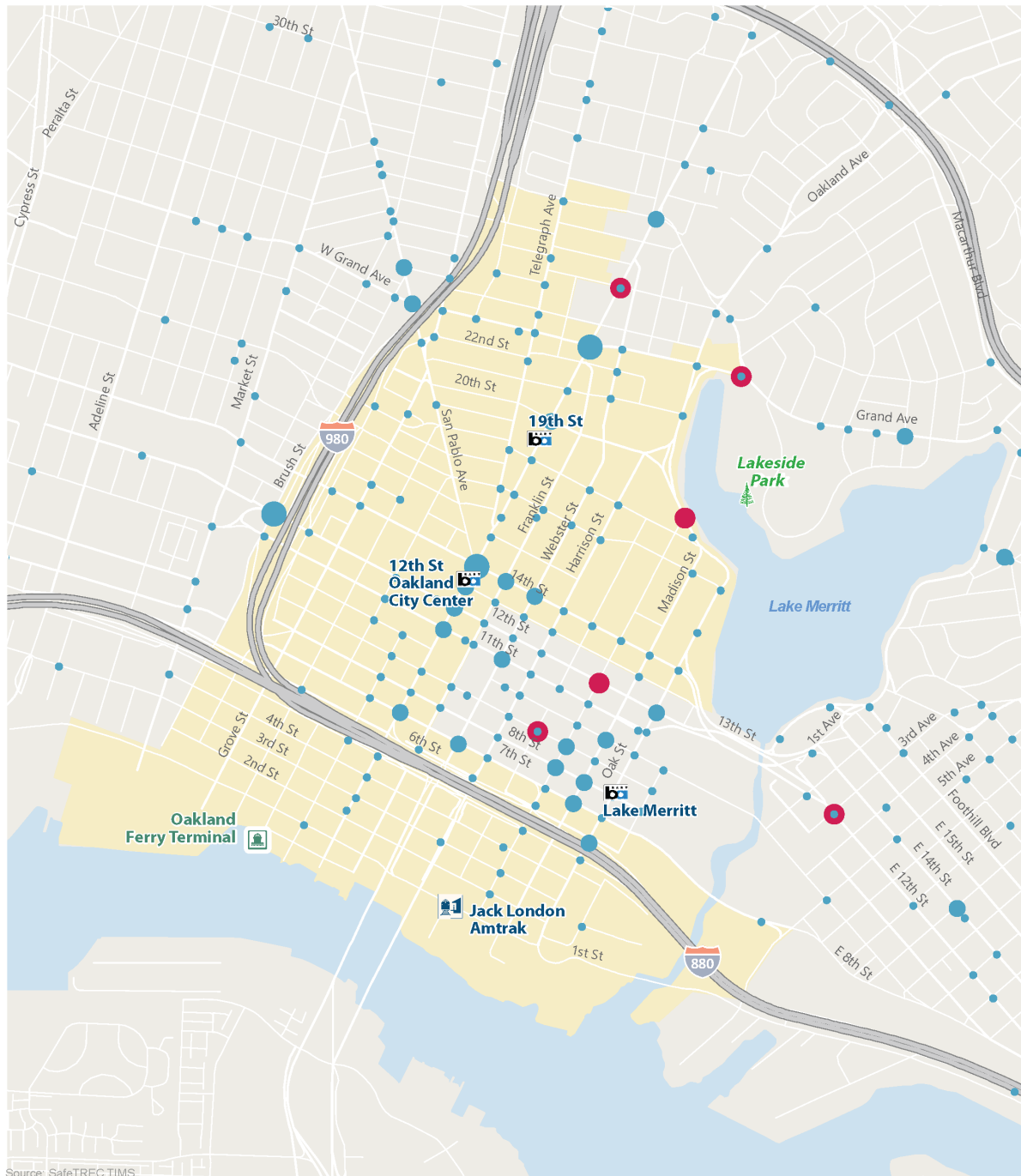
Table 2. Comparing Pedestrian Facilities in Oakland Neighborhoods

Pedestrian Safety

People walking are at greater risk of being seriously injured in a collision with a motor vehicle than as an occupant in a car or other motor vehicles. Pedestrians are the most vulnerable users of our road system. Data describing the location and nature of crashes involving pedestrians helps to identify locations for improvements and identify ways that other policies and programs could help improve safety for people walking and biking. See Figure 4 for the location of injuries and fatalities in Downtown Oakland from 2011-2014.

For Oakland Walks! 2017 Draft Pedestrian Master Plan Update, an analysis was undertaken which shows that 36% of Oakland's pedestrian injuries and fatalities occur on just 2% of its streets; these streets are referred to as Oakland's "High Injury Network" in the 2017 Draft Pedestrian Master Plan Update. See Figure 25 for the location of the corridors and intersections that form the "High-Injury Network."

In Downtown Oakland, these streets include parts of Broadway, Telegraph and Grand Avenues, and parts of 7th, 8th, 9th, 12th, and 14th Streets. "High Injury Intersections" in Downtown Oakland include 12th & Brush, 7th & Harrison, 9th & Madison, and Grand & Lakeside Drive. Addressing safety issues on these corridors through engineering countermeasures, education, and enforcement can help reduce the incidences of injuries and fatalities and create a Downtown Oakland that encourages active transportation.



Source: SafeTREC TIMS

Produced by Toole Design Group

Injuries

- 1-2
- 3-5
- 6-10

Fatalities

- 1

Downtown Plan Area

Pedestrian Injuries & Fatalities (2011-2014)

Figure 24. Pedestrian Injuries and Fatalities (2011-2014)



- Intersection
- Corridors
- Downtown Plan Area

Pedestrian High Injury Network Through Downtown Oakland

Figure 25. Pedestrian High Injury Network

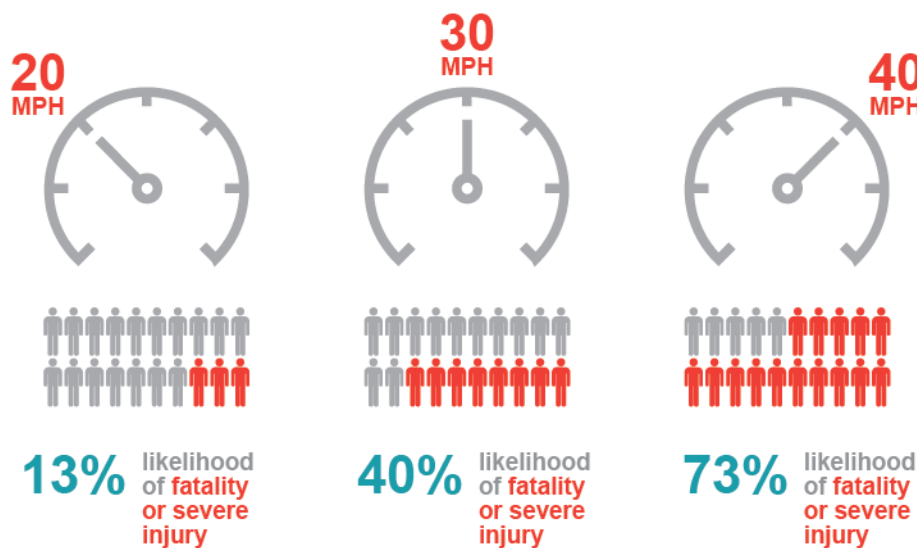
Crash Factors

There are several different infrastructure and behavioral factors that can contribute to a crash involving a pedestrian. A few of the most common factors associated with crashes are drivers turning right or left; walking or driving while under the influence of alcohol; drivers failing to yield or traveling at unsafe speeds; and pedestrians or drivers disobeying traffic signals.

According to the Oakland Walks! 2017 Draft Pedestrian Master Plan Update, police reports identified the following as the most common factors in severe and fatal crashes with pedestrians over the last five years:

- Speeding (a factor in 19% of fatal or severe collisions)
- Driving under the influence of alcohol or drugs (a factor in 14% of fatal or severe collisions)
- Driver violating a pedestrian's right-of-way (a factor in 46% of collisions with pedestrians)
- Careless driving, unsafe speed, and improper turning (a factor in 16% of reported crashes)

Speed reduction is especially important to pedestrian safety, since the risk of severe injury or death to the pedestrian rises sharply as speeds increase, as shown in Figure 26.



Source: Tefft, B. C. *Impact speed and a pedestrian's risk of severe injury or death. Accident Analysis & Prevention*. 50. 2013.

Figure 26. Impact Speeds and Risk of Severe Injury or Death



Key Findings

Overall, Downtown Oakland has a strong pedestrian infrastructure with a robust sidewalk network that connects to the area's many popular destinations. Some areas have elements that need to

be upgraded, repaired, or have new infrastructure installed which will provide an even safer and more pleasant environment for pedestrian, especially for more vulnerable users such as older adults, people with disabilities, and young children.

Issues and opportunities for Downtown Oakland's walking environment:

- In order to serve pedestrians, all sidewalks in Downtown Oakland should be level, in good condition, and have pathways that are unobstructed and wide enough to accommodate pedestrian volumes in a given area. A complete sidewalk network has continuous sidewalks on both sides of the street.
- Gaps in the sidewalk, such as in the Jack London District, should be repaired to provide a continuous walking environment.
- Some stretches of sidewalk lack amenities, such as street trees and benches, or are constricted by bus shelters. Improving the sidewalk environment will strengthen the backbone of Downtown Oakland's pedestrian network.
- To serve all residents, especially older adults and people with mobility or visual impairments, Universal Design enhancements should be implemented throughout Downtown Oakland. Universal Design is a pedestrian design approach that allows pedestrians of all ages and abilities to travel throughout a community. Common facilities that support Universal Design include curb ramps, warning strips, pedestrian signal heads, audible pedestrian traffic signals, and complete sidewalk networks. The implementation of these facilities in a continuous and complete network ensures that all pedestrians can safely travel to their destinations without having to negotiate obstacles or gaps in infrastructure.
- I-880, I-980, and the Webster/Posey Tubes ramps and frontage roads present barriers for pedestrians. Stressful and unsafe conditions exist at on- and off-ramp crossings (which often lack sidewalks or only have sidewalks on one side of the street). The freeways and on-ramps also disconnect Downtown Oakland with the neighborhoods to the west and south.
- Many streets have long crossing distances for pedestrians. Infrastructure improvements (such as bulb-outs, road diets, or other treatments) could create shorter crossing distances.
- Long traffic light cycle lengths create a delay for pedestrians which sometimes leads to pedestrians crossing against the light.
- Jack London District poses particular pedestrian challenges due to the lack of infrastructure and transit access and the presence of freeway-related barriers.

Bicycling in Downtown

Downtown Oakland has the potential to be a great place to bike. Destinations in Downtown Oakland are short distances apart, the area is flat, and the City has made a lot of progress in developing the bikeway network. Many roads have excess capacity, providing the opportunity to add separated bike lanes and other high-quality biking infrastructure. Robust bicycling infrastructure would be an asset to Downtown by offering residents and visitors additional transportation options and providing a connection between the first and last mile connection to transit.

The upcoming update to the citywide Bicycle Master Plan will continue to upgrade and expand the bicycling network; this will serve as an update to the City's 2007 Bicycle Master Plan. Also, the recent launch of bike share will generate more bike trips by locals and visitors to Downtown Oakland and surrounding areas.

People choose to bike for 3% of the trips they take. Of commute trips, 6% is made by biking; of non-commute trips, 2% are made by biking as shown in Figure 27.

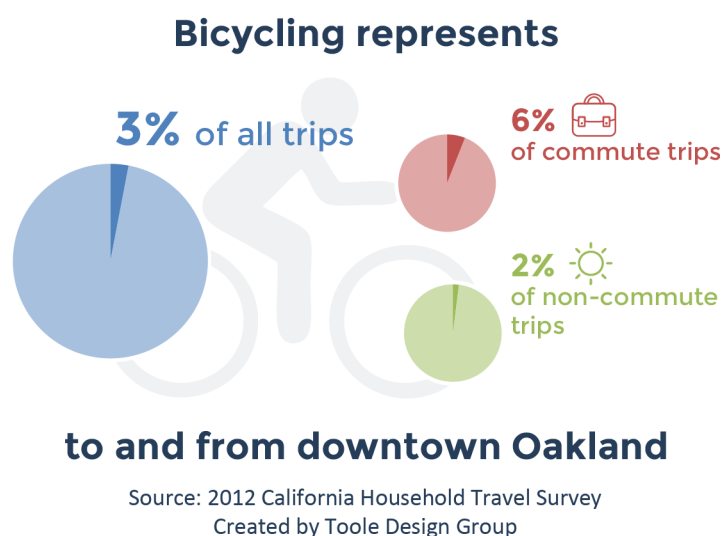


Figure 27. Biking Trips to and from Downtown Oakland

Existing Bikeway Network

Successful bike networks require continuous, dedicated bike facilities that provide bicyclists both perceived and real safety from motor vehicles, and that take people where they want to go directly and efficiently. Greater separation between bicyclists and motor vehicles creates greater safety and comfort for bicyclists. Even small gaps in the network discourage bicycling and expose people to challenging road conditions as they travel along their route.

Currently, Downtown Oakland's bicycle network is relatively dense but has few continuous, dedicated bike facilities. The network is composed primarily of bike routes and bike lanes, with a protected bike lane on Telegraph Avenue and bike paths around Lake Merritt and along the Embarcadero. Even where

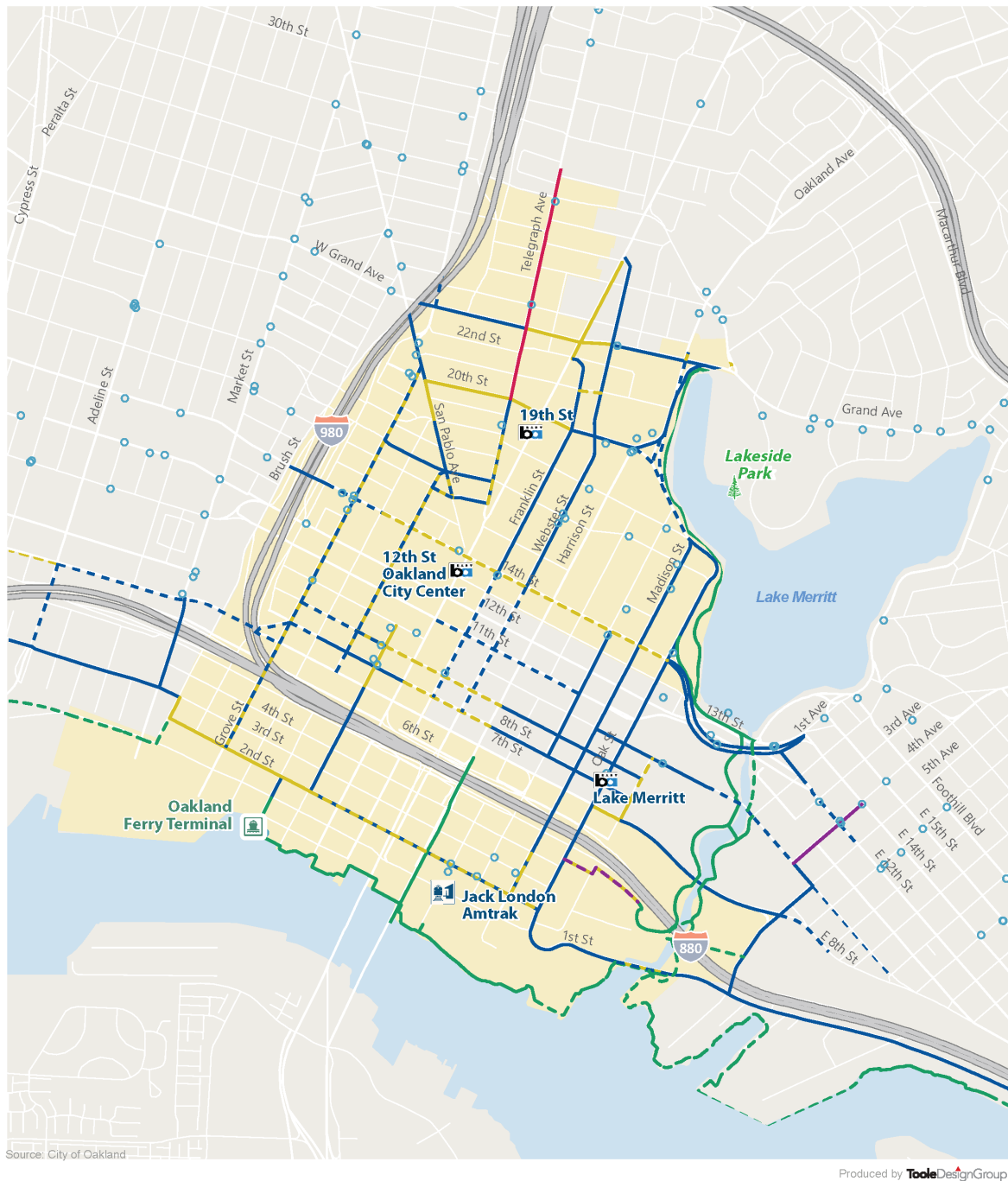
there is adequate biking infrastructure, the streets are dominated by buses and fast-moving cars. Large intersections and freeway interchanges also pose a challenge to making cycling feel safe and convenient.

As identified by the 2015 Comprehensive Circulation Study, signals are timed for vehicle speeds, not for bicyclists who travel at slower speeds. As a result, bicyclists are frequently delayed at red lights.

Also identified by the 2015 Comprehensive Circulation Study, in the Jack London District, many streets have perpendicular or angled parking and loading areas that are located along bicycle routes. This creates conflicts between motorists and bicyclists since motorists may not be able to properly see bicyclists when backing out of parking or loading zones.

Figure 28 identifies the existing and proposed bicycle network. *[note: the bike network shown on map should be extended beyond study area to surrounding neighborhoods]*

- **Paths** or shared-use paths provide for bicycle and pedestrian travel and recreation on a right-of-way that is completely separate from the street.
Paths in Downtown Oakland are along the waterfront, estuary, and Lake Merritt.
- **Bike Lanes** provide an exclusive space for bicyclists in the roadway. Bike lanes are for one-way travel and are normally provided in both directions on two-way streets. They are marked along couplets on several of Oakland's one-way streets. Bike lanes may be delineated by a single white stripe, dashed lines (for advisory lanes), or be painted green.
Bike lanes in Downtown Oakland: Oak and Madison streets, Webster and Franklin streets, 17th, Grand Avenue, 18th & 9th streets, 17th Street, and 20th Street, among others. Though there are many streets with bike lanes, only the lanes on Madison and Oak streets run continuously through the length of Downtown Oakland.
- **Bike Routes** are signed bike routes in which bicyclists ride in lanes shared with motor vehicles. They are typically used to bridge gaps in the network of dedicated bike facilities. They are placed on roads that are more suitable for sharing with motor vehicles and provide better connectivity than other streets.
Bike routes in Downtown Oakland appear throughout downtown to fill gaps in the network that have not been given dedicated bicycle facilities; examples include 14th, 8th and 9th streets, and Washington Street.
- **Bike Boulevards** designate preferred streets for bicycle travel using lanes shared with motor vehicles on residential streets that prioritize through trips for bicyclists. The routes should appeal to people of varied bicycling skill levels by providing direct connections on streets with low traffic volumes.
There are no bike boulevards in Downtown Oakland; however, one is planned on a portion of 4th Street.
- **Separated Bike Lanes** provide an exclusive space for bicyclists in the roadway that is separated from vehicle traffic, often by concrete barriers, planters, bollards, or on-street parking.
There is one parking-protected bike lane on Telegraph Avenue from 20th to 29th; installed in 2017.



| Existing | | Proposed | |
|---|--------------------------------|---|--------------------|
| — | Class I - Path | - - - | |
| — | Class II - Bike Lane | - - - | |
| — | Class III - Bike Route | - - - | |
| — | Class III B - Bike Boulevard | - - - | |
| — | Class IV - Separated Bike Lane | - - - | |
| | Downtown Plan Area | ● | Bike Share Station |

Bicycle Facilities - June 2017

Figure 28. Existing and Proposed Bikeway Facilities (June 2017)

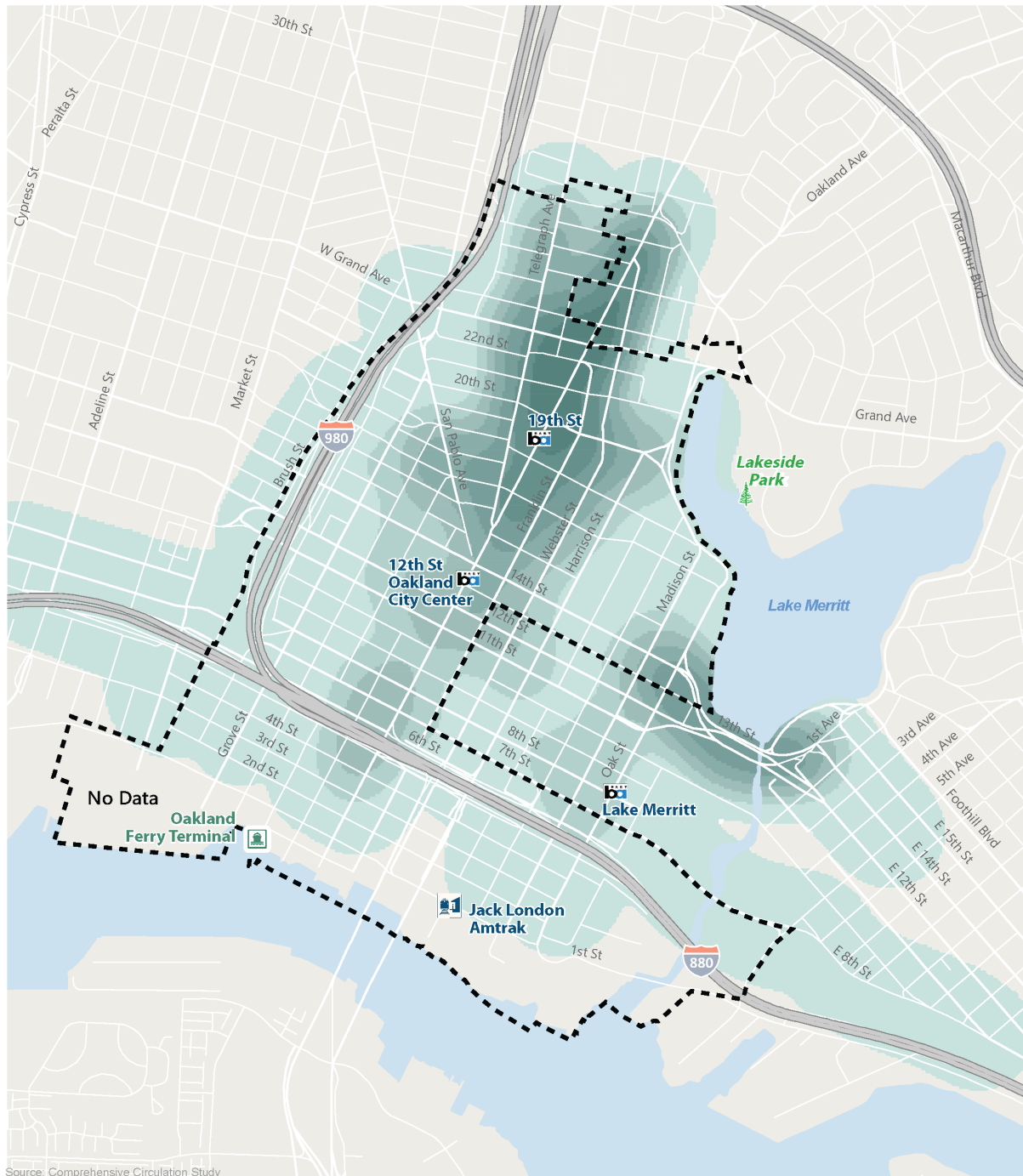
Bicycle Demand

Despite its high-stress network and lack of separated facilities, Downtown Oakland has relatively robust levels of bicycling. Notably, 6% of Downtown Oakland workers commute by bike, compared to 3% of all Oakland workers that commute by bike.⁵ Figure 29 shows areas where heaviest bicyclist concentrations have been observed, ranging from a low of one bicyclist per hour to a high of 120 per hour.⁶

The highest volumes of bicyclists in Downtown Oakland are observed along Telegraph Avenue, Broadway, and the Franklin/Webster streets couplet; this indicates possible priority locations for separated bike lanes in the future, to supplement the Telegraph Avenue separated bike lane between 20th and 29th Street.

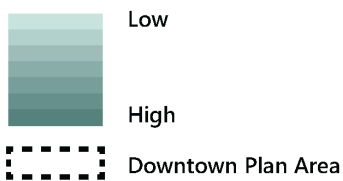
⁵ Downtown Oakland data from the 2012 California Household Travel Survey. Overall Oakland data from American Community Survey 2015 5-Year Estimates.

⁶ This data is included in the Alameda County Transportation Commission's Comprehensive Circulation Study for Downtown Oakland and Access to/from West Alameda (dated October 2015) and is based on available bicycle intersection counts taken between 2012 and 2015. No data is available in certain areas, such as west of Broadway, between 14th and 15th Streets and the Jack London District.



Source: Comprehensive Circulation Study

Produced by **Toole Design Group**



Bicyclist Heat Map

Figure 29. Bicyclist Heat Map

Level of Traffic Stress

Research shows that many people feel safer and more comfortable riding on slower-speed streets, with less traffic and fewer travel lanes; bicycling in more spacious facilities with greater separation from traffic; and using smaller intersections that have been designed with attention to bicycle safety.

Level of Traffic Stress (LTS) is a way to measure routes that are comfortable for different groups and is a simple indicator that rates a bicycle route as high or low stress depending on these factors. Bicycle riders and the level of stress they can bear are often categorized as shown in Table 3.

| Level of Stress | Rider Description | Percentage of Riders in this Category |
|-----------------|---|---------------------------------------|
| Low Stress | Children and Elderly* - Users from 8 (children) to 80 (seniors) | * |
| Low Stress | "Interested but concerned" - Mainstream Population | 51% |
| High Stress | "Enthused and confident" - Adults that are comfortable in shared traffic but may prefer some separation | 5% |
| High Stress | "Strong and fearless" - Adults that are comfortable in shared traffic with no separation | 7% |
| Not applicable | Not able or interested | 37% |

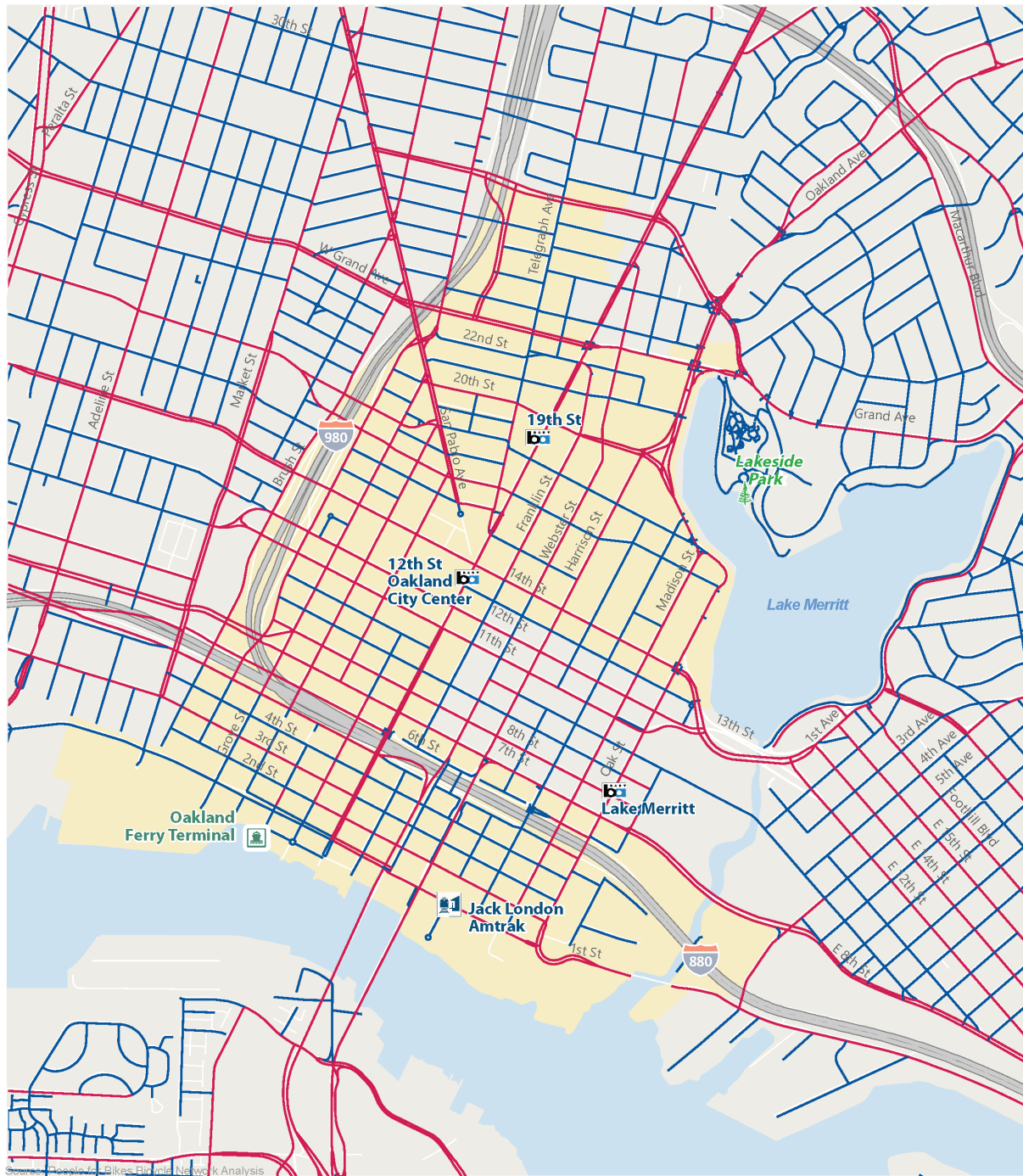
Source: Dill, J. McNeil, N. "Revisiting the Four Types of Cyclists: Findings from a National Survey" Transportation Research Board 95th Annual Meeting, 2016.

Table 3: Level of Traffic Stress and Bicycle Riders

In cases of limited funding opportunities, bicycle infrastructure improvements should serve "Interested but concerned" users since this represents over half of the population (51%).

Factors that contribute to a high-stress rating include facilities on higher-speed roads, on roadways with more vehicle travel lanes, the absence of on-street parking, narrower bike facilities, and little or no separation from vehicle traffic. Arterial streets with high traffic volumes, large intersections, and freeway interchanges are especially stressful for cyclists and difficult to navigate. Factors that contribute to a low-stress rating include lower vehicle speeds, fewer travel lanes, the presence of on-street parking, wider bike facilities, and facilities with greater separation from vehicle traffic.

Figure 30 illustrates Downtown Oakland's high- and low-stress routes. As the map illustrates, most of Downtown Oakland's arterials are considered high stress, and this indicates that these facilities do not provide high levels of comfort for bicyclists. The streets that are considered low-stress are lower-volume streets, many of which have no bicycle facilities. This data suggests an opportunity to make the bike network more accessible by replacing existing high-stress bicycle infrastructure, like bike lanes and routes, with lower-stress infrastructure, such as separated bike lanes. Adding bike lanes or routes to currently low-stress streets may not be an ideal prioritization of infrastructure or funding.



- Low Stress
- High Stress
- Downtown Plan Area

Bicycle Level of Traffic Stress

Figure 30. Bicycle Level of Traffic Stress

Bike Share

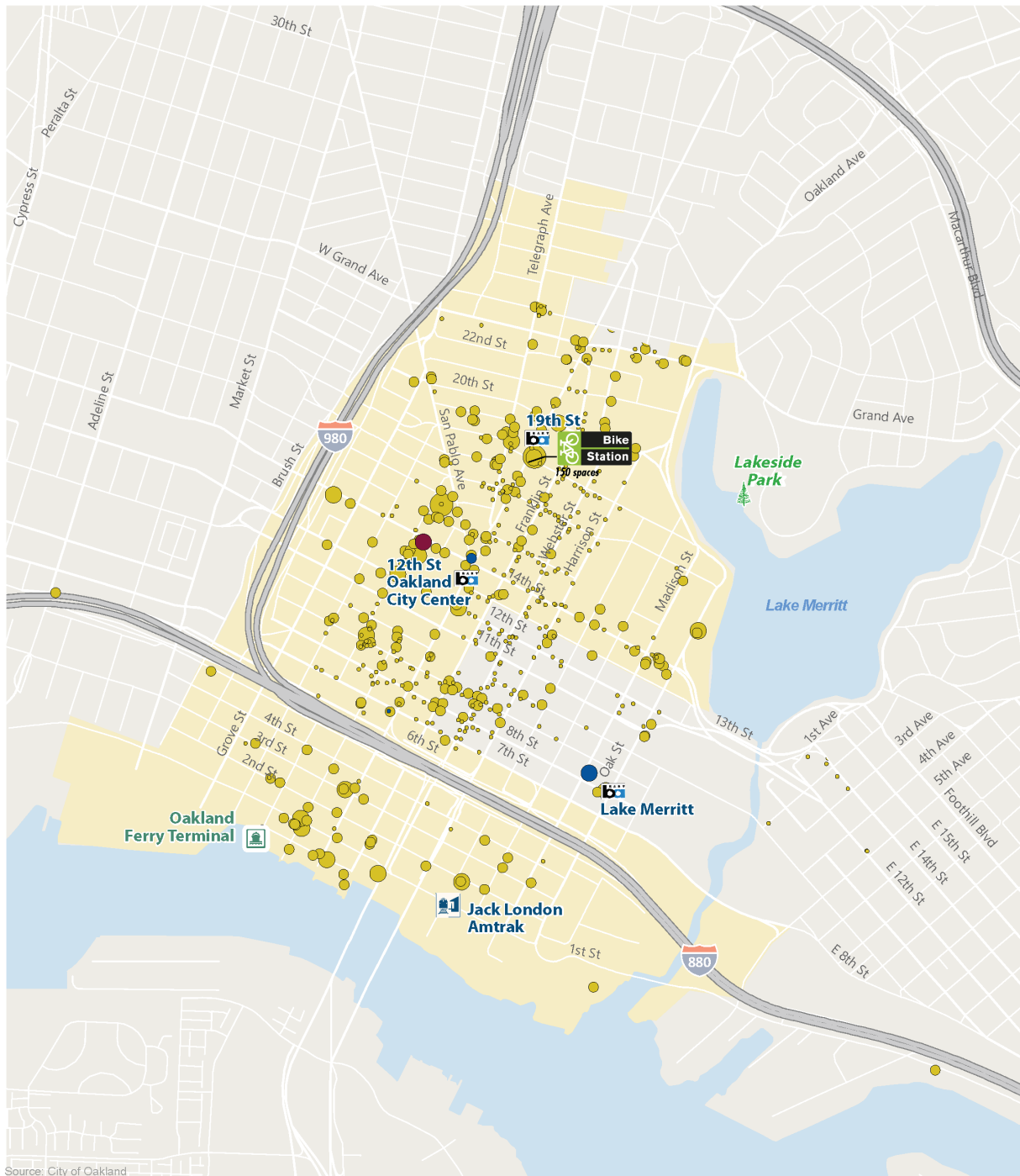
Ford GoBike, the Bay Area's new bike share program, opened in Oakland on July 11, 2017. By the end of 2017, the city of Oakland will have 70 bike share stations and 850 bikes, spread through Downtown Oakland, West and North Oakland, and parts of East Oakland. Nineteen stations will be in Downtown Oakland.

Bike share is intended for getting from place-to-place conveniently and quickly and is typically for trips of less than 30 minutes. Bike share provides flexibility by allowing members and one-time users to pick up a bike at any station and return the bike to any other station. Oakland's bike share stations are part of a Bay Area network that includes locations in Emeryville, Berkeley, San Francisco and San Jose.

Bike Parking and Amenities

In addition to safe and continuous bicycle facilities, bicycle amenities such as short and long-term bicycle parking, bicycle shops and repair stations are also important components of a city's bicycle environment. These amenities help bicyclists repair flat tires and address other common bicycle maintenance issues, and ensure that bicyclists have a place to lock their bicycle when they reach a destination.

Figure 31 shows a map of publicly available bike parking in Downtown Oakland. In general, short-term bike parking (typically bike racks) is relatively abundant, though there are gaps west of San Pablo Avenue, in Chinatown, in parts of Jack London District, and near Lake Merritt. There are limited long-term bike parking options (cages, lockers, and bike stations) in Downtown Oakland, and more are needed to encourage workers to commute by bike. The free bike station at 19th and Broadway is an excellent long-term bike parking facility, providing 130 spaces; however, it is at capacity. This bike station can serve as a model for other bike parking stations, one of which is already planned.



Produced by **Toolbox** Design Group



Bicycle Parking 2013

Figure 31. Bike Parking

Bicycle Safety

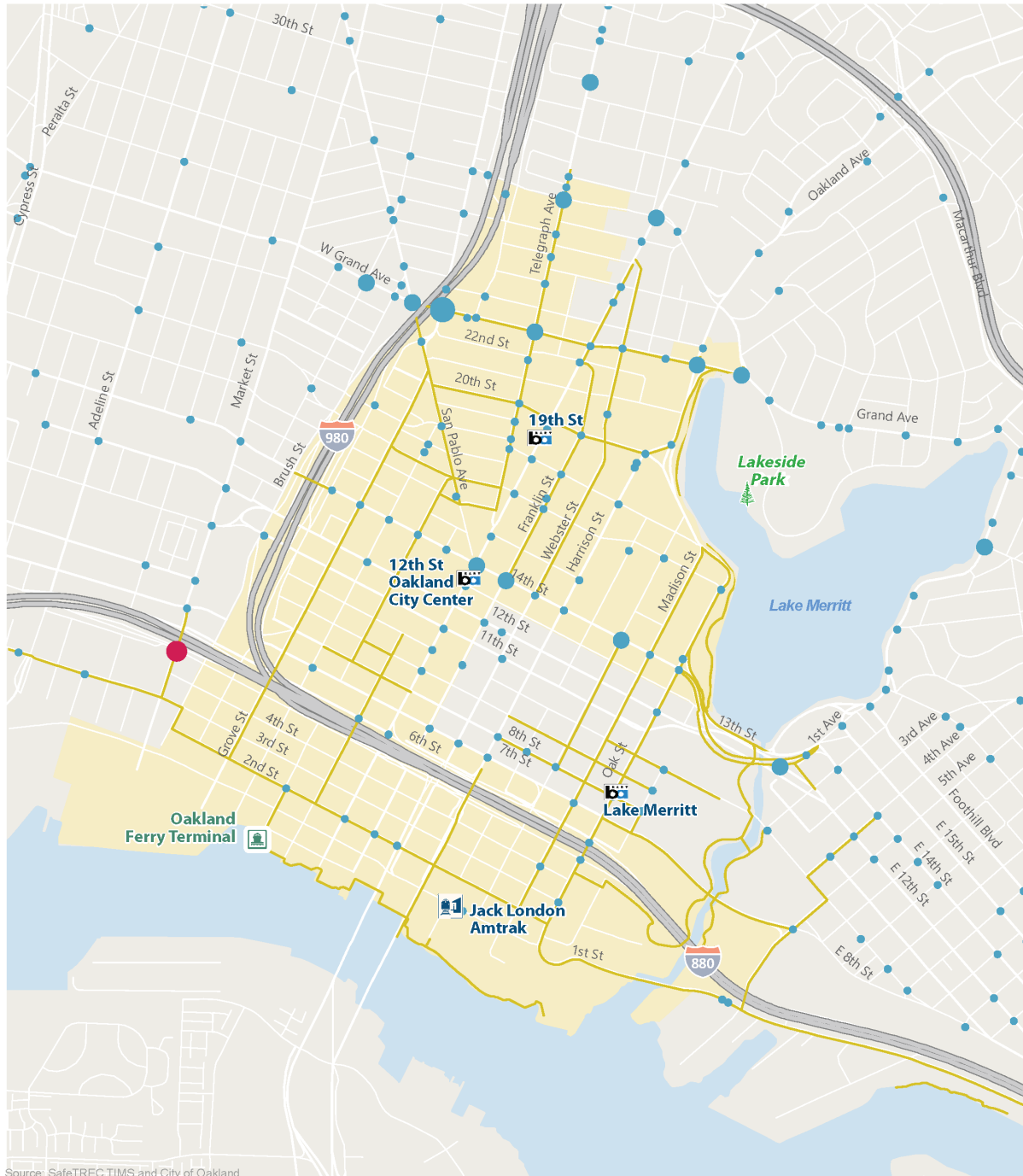
Similar to pedestrians, bicyclists are considered vulnerable road users because they are at greater risk of being seriously injured in a collision with a motor vehicle. Understanding the locations and nature of crashes can help identify and prioritize possible locations for infrastructure improvements.

Figure 32 illustrates the locations of injury-causing and fatal bicycle crashes in and near Downtown Oakland from 2011 to 2014.

Identifying the exact cause of a bicycle-vehicle crash is often difficult; however, a few specific factors are frequently associated with bicycle-vehicle crashes. These contributing factors and common pre-crash movements include:

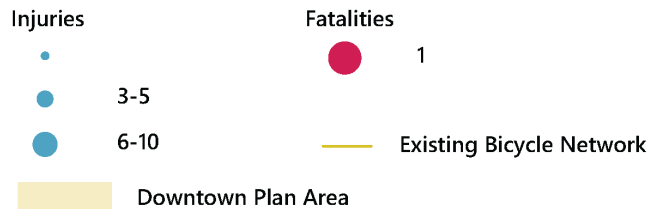
- Driving or bicycling under the influence of alcohol
- Driving while distracted (e.g., cellphone, passenger, or radio)
- Drivers or bicyclists failing to yield
- Drivers traveling at unsafe speeds
- Drivers or bicyclists disobeying traffic signals
- Drivers making right or left turns

Installing more protected facilities, such as infrastructure that provides separation between motor vehicles and bicyclists, can create safer and more enjoyable experiences for all users.



Source: SafeTREC TIMS and City of Oakland

Produced by **Toolbox** Design Group



Bicyclist Injuries & Fatalities (2011-2014)

Figure 32. Bicycle Injuries and Fatalities (from 2011-2014)



Key Findings

Downtown Oakland has many valuable assets for a strong bicycling network such as flat terrain, accessible destinations, and wide streets with spaces for new facilities. Providing bicycle facilities for all types of riders can increase options both for commuting and recreation. Also, bicycling can provide first and last mile connections to transit and other destinations. Bicycling can serve those who are not able or interested in owning cars. The following are themes that have emerged from detailed data collections on bicycling conditions in Downtown Oakland.

The following are key findings that present issues and opportunities for Downtown Oakland's bicycle network.

- Existing bicycle facilities (mainly bicycle lanes and routes) are not comfortable for most people, especially those who may be “Interested but concerned.” Low-stress facilities, such as separated bike lanes, are critical to the future of safe, robust cycling in Downtown Oakland.
- Given the low volumes of vehicles relative to roadway capacity, there are opportunities to install protected bikeways and expand the bike network throughout downtown without impacting traffic circulation and bus speeds.
- Similar to the pedestrian network, freeway on-ramps and large intersections pose safety and access issues and are uncomfortable and stressful bicycling environments, which limits connectivity to destinations.
- Publicly-accessible, short-term bicycle parking is ample in most areas of Downtown Oakland; however, long-term parking is very limited. More plentiful, secure parking options will support commute trips by bike.
- Traffic light signal timing is programmed for vehicle speeds, which are faster than bikes. As a result, bicyclists are often delayed at red lights.
- Many streets in Downtown Oakland are one-way, which is often inconvenient for bicyclists who then must travel longer, more circuitous distances to reach their destinations. Considering two-way facilities for bicyclists on one-way streets will be a part of the recommendation chapter.

Riding Transit in Downtown

Downtown Oakland is the center of the East Bay's transit network and is served well by both regional and local transit. This section describes both local and regional transit serving Downtown Oakland, including transit accessibility within as well as to and from Downtown, and transit ridership characteristics.

General Trends

Downtown Oakland is a transit hub for the City of Oakland as well as a regional destination and transfer point for those traveling along and across the Bay. On a typical weekday, AC Transit and the B Shuttle serves approximately 18,000 unlinked boardings in Downtown Oakland and BART serves another 35,000 boardings across its three stations: Lake Merritt, 12th Street/City Center and 19th Street. AC Transit and BART services are particularly vital to people with lower incomes, youth, seniors, and people with disabilities.

Broadway is the transit spine for Downtown; most AC Transit lines serving Downtown travel along Broadway at some point in their route, and both the 12th and 19th Street BART station entrances are located on Broadway. Sharing Broadway between all modes of travel, however, poses a challenge for Downtown Oakland given the high-demand for transit services and lack of two-way, north-south streets. Intercity rail service and ferry service to San Francisco is located in Jack London District and is connected to the center of Downtown Oakland via several AC Transit bus lines.

Transit Service and Access

Bus Service

AC Transit operates bus service throughout Alameda and Contra Costa Counties, serving 13 cities and adjacent unincorporated areas as well as Transbay routes to San Francisco and the Peninsula. AC transit operates 68 local lines, 31 Transbay lines, six all-nighter lines, and 47 school bus lines. Eighteen AC Transit local lines, one Transbay line, and six all-nighter lines pass through or terminate in Downtown Oakland, including five designated as Major Corridors. These bus lines are summarized in Table 4 below.

| AC Transit Lines | Primary Downtown Streets Served | BART Stations Served | Peak Period Frequency (min) |
|--|--|--------------------------------|-----------------------------|
| Broadway Shuttle | Broadway | 19 th St., 12th St. | 12 |
| 6 - Telegraph ^M | Broadway, 20 th , Telegraph | 19 th St., 12th St. | 10 |
| 12 - Grand | Broadway, Grand | 19 th St., 12th St. | 20 |
| 18 – Martin Luther King/ Shattuck ^M | Broadway, 20 th , 7 th | 19 th St., 12th St. | 15 |
| 51A – Broadway/College ^M | Broadway, 7th/8 th | 19 th St., 12th St. | 10 |
| 72/72M/72R – San Pablo ^M | Broadway, San Pablo, 20 th | 19 th St., 12th St. | 7.5 (72/72M) 12 (72R) |
| 1 ^M - International | Broadway, 11th/12 th , 20 th | 12th St. | 7.5 |

| AC Transit Lines | Primary Downtown Streets Served | BART Stations Served | Peak Period Frequency (min) |
|---|---|--------------------------------|-----------------------------|
| 33 – Oakland/Park | Broadway, 11 th /12 th , 20 th | 19 th St., 12th St. | 15 |
| 19 – Buena Vista | 11 th /12 th | 12th St. | 20 |
| 20 – Webster/Park ^M | 11 th /12 th | 12th St. | 30 |
| 29 – Lakeshore/Peralta/Hollis | 11 th /12 th | 12th St. | 20 |
| 88 – Market | 11 th /12 th | 12th St., Lake Merritt | 15 |
| 96 – Alameda Point | 11 th /12 th | 12th St. | 30 |
| 62 – 7 th /23 rd | 7 th | Lake Merritt | 15 |
| 14 – 14 th /E 18 th | 14 th | 12th St. | 15 |
| NL – Grand/MacArthur ^M | 20th | 19 th St. | 15 |

Table 4: AC Transit Major Corridor Routes through Downtown

^M = Major Corridor

The Broadway “B” Shuttle, administered by the City of Oakland and operated by AC Transit, runs from Jack London District to Uptown. The B Shuttle runs every 10 to 15 minutes from 7am-10pm on Weekdays, and as a nighttime shuttle (until 1pm) on Friday and Saturday.

Rail Service

BART (Bay Area Rapid Transit) provides rail service between San Francisco, northern San Mateo county, and the East Bay. The average weekday ridership in 2016 was approximately 433,000 systemwide. The Downtown Study Area includes 12th Street Station and 19th Street Station, which are served by Richmond and Pittsburg/Bay Point lines. Lake Merritt Station, which also in Downtown, is served by the Warm Springs and Dublin/Pleasanton lines. During the evening peak period, all stations are served by 20 trains per hour, per direction. Approximately 13,000, 14,500, and 7,500 average weekday exits occurred in 2016 at 19th Street, 12th Street, and Lake Merritt Stations, respectively. Lake Merritt Station has a small parking lot with 207 spaces, while 12th Street and 19th Street Stations have no parking.

Regional rail connecting to Downtown Oakland includes Capitol Corridor, an intercity heavy rail service operated between the Sierra Foothills, Sacramento, the East Bay, and San Jose. Amtrak operates two additional routes that stop at the Jack London Station: the San Joaquin, which runs between the San Francisco Bay Area, Sacramento, and Bakersfield and the Coast Starlight, which runs between Los Angeles, the San Francisco Bay Area, Portland, and Seattle. Average weekday ridership at Jack London Station was about 600 boardings per day in 2016.

Ferry Service

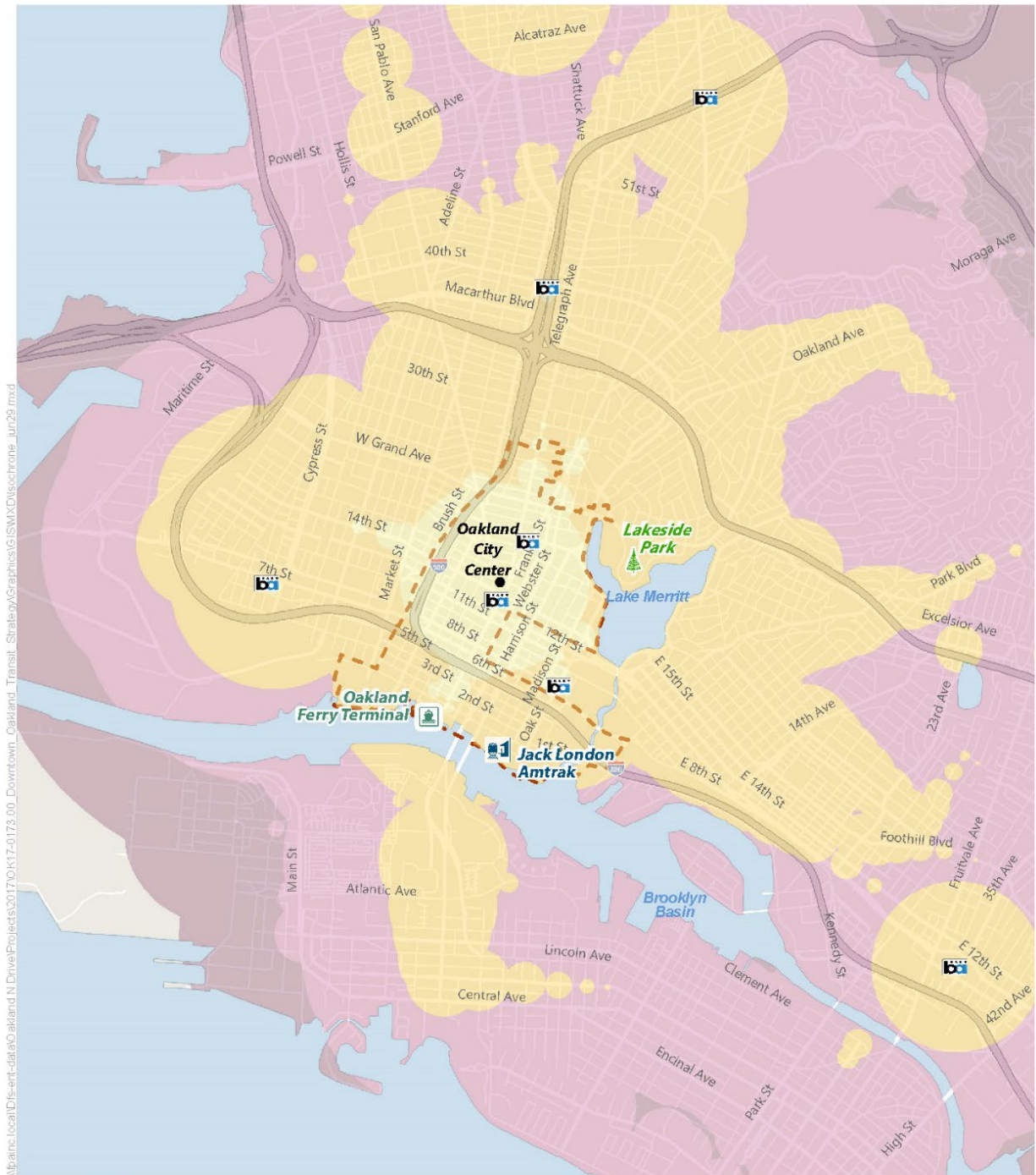
The Jack London Square Ferry Terminal provides connections to all San Francisco terminals. In 2016, the average weekday ridership for the Oakland Terminal was approximately 1,700 passengers. Ferry riders can transfer for free to AC transit buses and are eligible for free parking in the 101 Washington parking garage.

Transit Sheds for Downtown Oakland

Downtown Oakland is among the most transit-accessible locations within the Bay Area; however, some neighborhoods are more accessible than others. Weekday travel shed isochrones maps depict the average distance that someone can travel in 15, 30, 45, or 60 minutes from City Hall near the 12th Street BART Station (Figure 33), the Lakeside Residential district (Figure 34), and Jack London District (Figure 35). Figure 36 shows regional transit access to Downtown and includes locations of Communities of Concern within the region.⁷

City Hall is accessible to all of Downtown Oakland within 15 minutes and much of West, North, and East Oakland within 30 minutes. In contrast, Jack London District is much less accessible, with most of Downtown more than 15 minutes away and most of Oakland more than 30 minutes away. Travelers starting at City Hall can get farther north, west, and east in thirty minutes than travelers starting at either Lakeside or Jack London District. The regional map highlights the significance of BART as a regional transit service which helps to move travelers from Downtown Oakland to Richmond, Concord, Fremont, and South San Francisco all in 45 minutes to an hour. BART, AC Transit, and Muni service combines to make most of the East Bay and western San Francisco accessible within 45 minutes.

⁷ Communities of Concern have been defined by the Metropolitan Transportation Commission as part of the Equity Analysis for Plan Bay Area 2040. The definition of Communities of Concern is intended to represent a diverse cross-section of populations and communities that could be considered disadvantaged or vulnerable in terms of both current conditions and potential impacts of future growth. More information, including a detailed definition, is available at <http://www.planbayarea.org/2040-plan/plan-details/equity-analysis>.



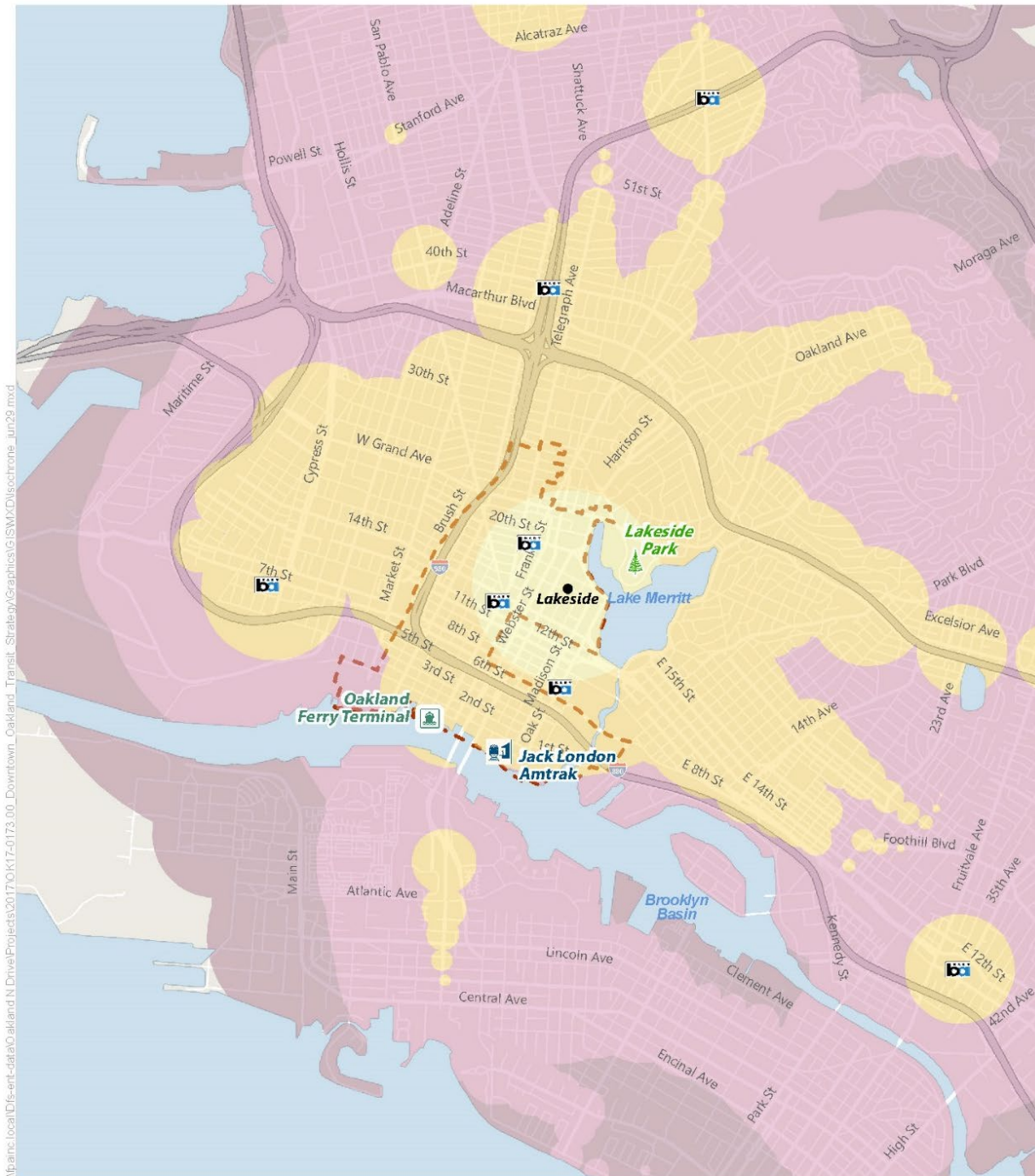
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- Trip Origin
- Downtown Plan Boundary

Transit Travel Times from Oakland City Center

Figure 33. Transit Travel Times from Oakland City Center



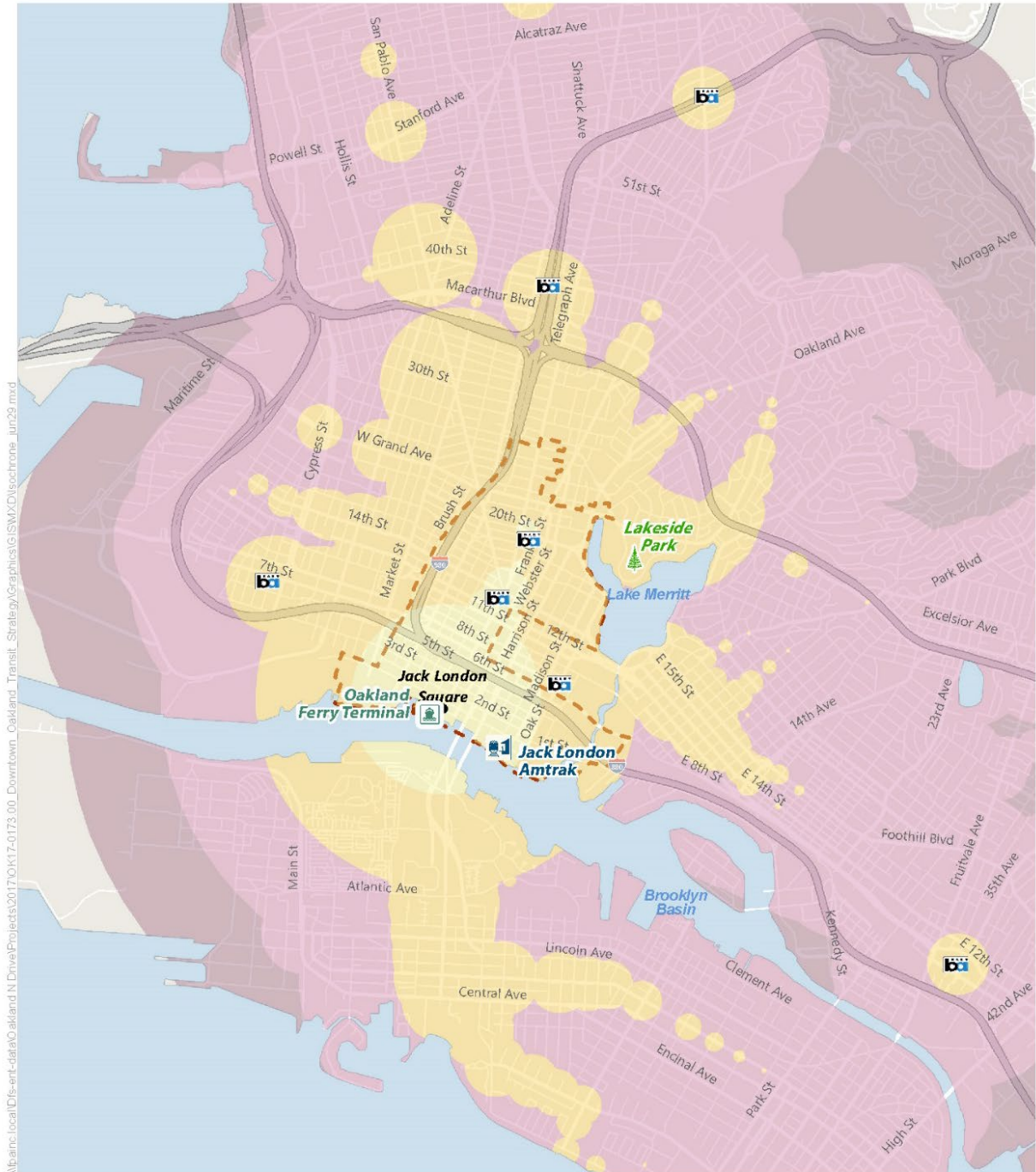
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- Trip Origin
- Downtown Plan Boundary

Transit Travel Times from Lakeside

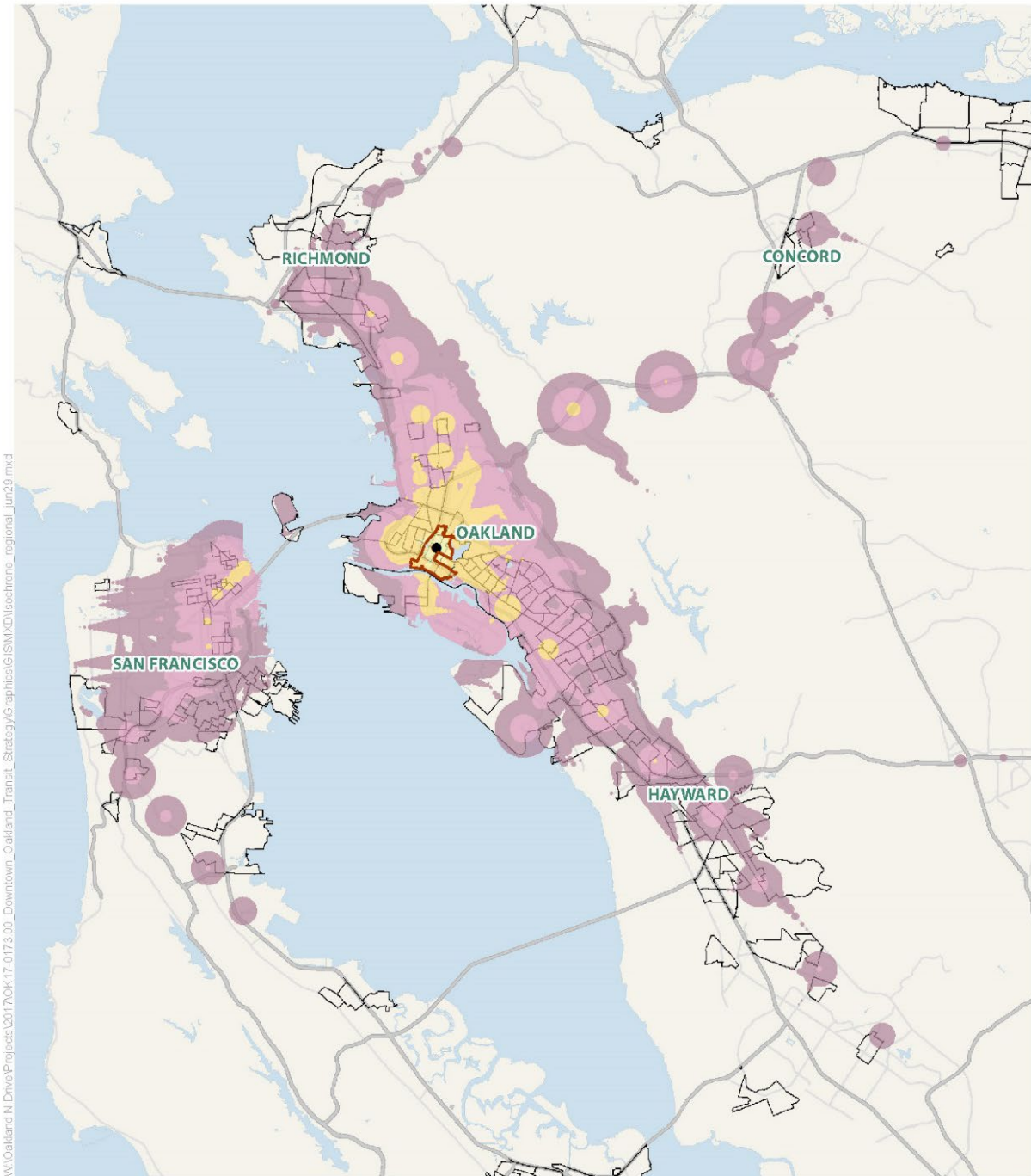
Figure 34. Transit Travel Times from Lakeside



- Trip Origin
- Downtown Plan Boundary

Transit Travel Times from Jack London Square

Figure 35. Transit Travel Times from Jack London Square



- Trip Origin
- Downtown Plan Boundary
- Communities of Concern

Transit Travel Times Regionally

Title

Figure 36. Transit Travel Times Regionally

Ridership Data

Bus Ridership

On a typical weekday, AC Transit and the B Shuttle serve approximately 18,000 unlinked boardings in Downtown Oakland. Eight lines (1, 6, 40, 51A, 72/72M/72R, and the B Shuttle) experience greater than 1,000 daily boardings and account for approximately 72% of ridership, as shown in Figure 37. Four additional lines (12, 18, 33, and NL) serve greater than 500 daily boardings and account for approximately 17% of ridership.

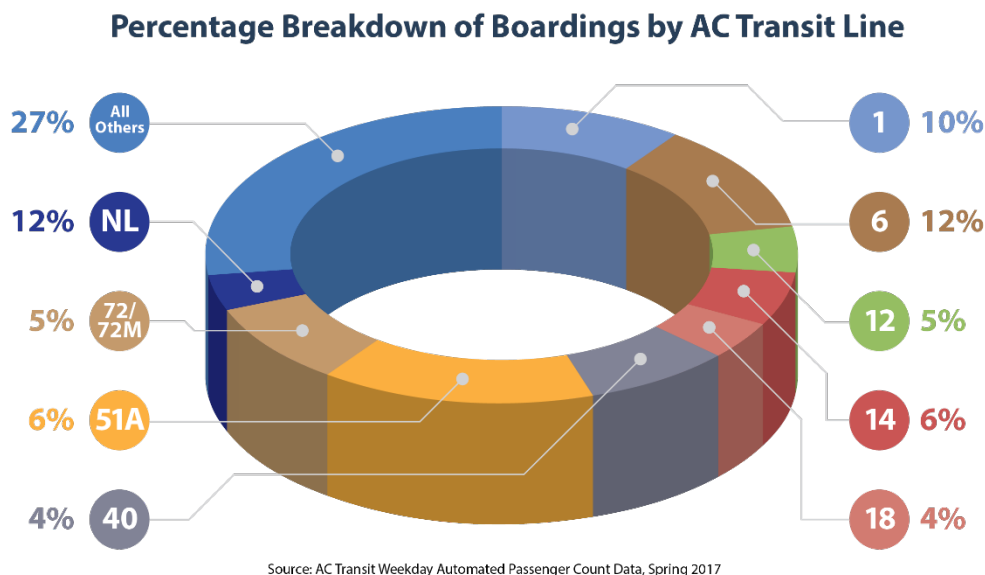


Figure 37. AC Transit Weekday Boardings by Line in Downtown Oakland

Nearly half of all ridership (8,100 daily boardings) occurs on Broadway, as shown in Figure 38. 11th and 12th Streets also experience high ridership, serving 21% of all boardings (3,700 daily boardings). 7th and 8th Streets, 14th Street, and 20th Street each serve over 1,000 boardings per day.

AC Transit On-Boardings by Street in Downtown

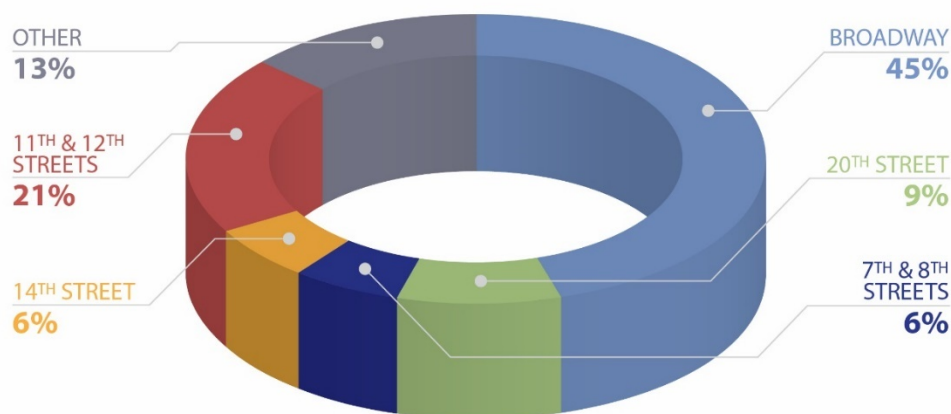
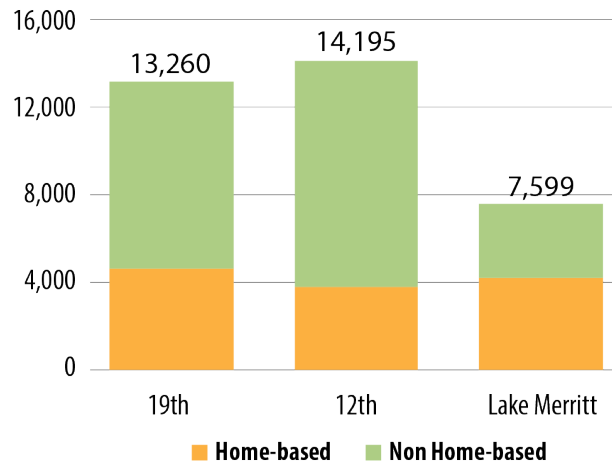


Figure 38. AC Transit Weekday Boardings by Street in Downtown Oakland

Rail Ridership

Downtown Oakland is home to two of the ten busiest stations in the BART system. 12th Street Station serves approximately 14,000 boardings per day, while 19th Street Station serves approximately 13,000 boardings per day. BART weekday entry averages for the three Downtown Oakland stations—19th Street, 12th Street, and Lake Merritt—can be seen in Figure 39. According to BART’s 2015 Station Profile Survey, two-thirds of 19th Street entries and three-quarters of 12th Street entries are non-home based, meaning that riders boarding are arriving from somewhere other than their home (such as work). Lake Merritt Station experiences substantially lower ridership – about 7,600 boardings per day, about half of which are home-based and half non-home based (including work and students at Laney College).

Downtown BART Stations: Average Weekday Entries by Trip Type

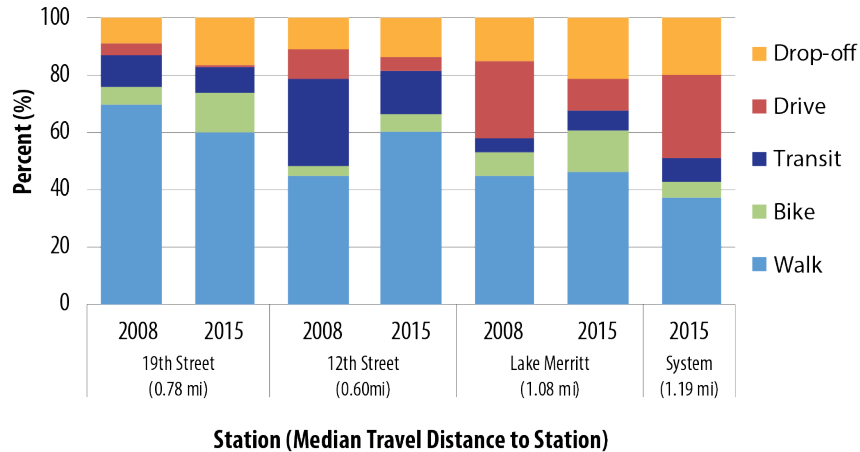


Source: Station Profile Survey 2015

Figure 39. Downtown BART Stations: Average Weekday Entries by Trip Type

As shown in Figure 40, in 2015, about 60% of riders walked from home to the 12th and 19th Street BART stations. Compared to results from the 2008 Station-Profile Survey, this is a higher walk share for 12th Street Station, but a decrease in the walk share for 19th Street Station. Lake Merritt BART Station is a transition urban station and still has a much lower share of riders who walk, reflecting the less dense and more auto-oriented land uses. Even still, Lake Merritt Station saw an increase in walking, biking, and transit use between 2008 and 2015. The 19th and 12th Street Station also saw an increase in biking, but a decrease in transit use for riders traveling from home. The 12th Street Station, in particular, saw a dramatic decline in the share of users traveling by transit. This was likely due to the huge increase in walking trips made to the station. At all three stations, the share of riders driving decreased, while the share of riders being dropped-off increased. This increase likely reflects increased usage of Transportation Network Company (TNC) services such as Uber and Lyft. Compared to the system as a whole, the downtown stations have a higher share of walkers and bikers, but a lower share of drivers and transit users. Drop-off rates at downtown stations are similar to the system-wide rate.

How do Riders Travel to BART from Home?



Source: Station Profile Survey, 2008 and 2015

Figure 40. Downtown BART Stations: Average Weekday Entries by Trip Type

Downtown BART stations experience two ridership peaks during the day, as shown in Figure 41. In the morning between approximately 7:00 AM and 9:30 AM, the 12th and 19th Street BART Stations experience approximately 250-350 boardings and 500-700 alightings per 15 minutes. Lake Merritt Station experiences a comparatively smaller peak of about 200-250 boardings and 100-200 alightings per 15 minutes. In the afternoon between about 3:00 PM and 7:00 PM, the 12th and 19th Street Stations experience approximately 400-900 boardings and 200-300 alightings per 15 minutes, while the Lake Merritt BART Station experiences about 100-250 boardings and 100-250 alightings per 15 minutes. The substantial peaking of afternoon BART trains at 12th and 19th Street Stations is exacerbated by capacity constraints on BART trains and queueing of northbound passengers transferring between the Pittsburg/Bay Point and Richmond lines.

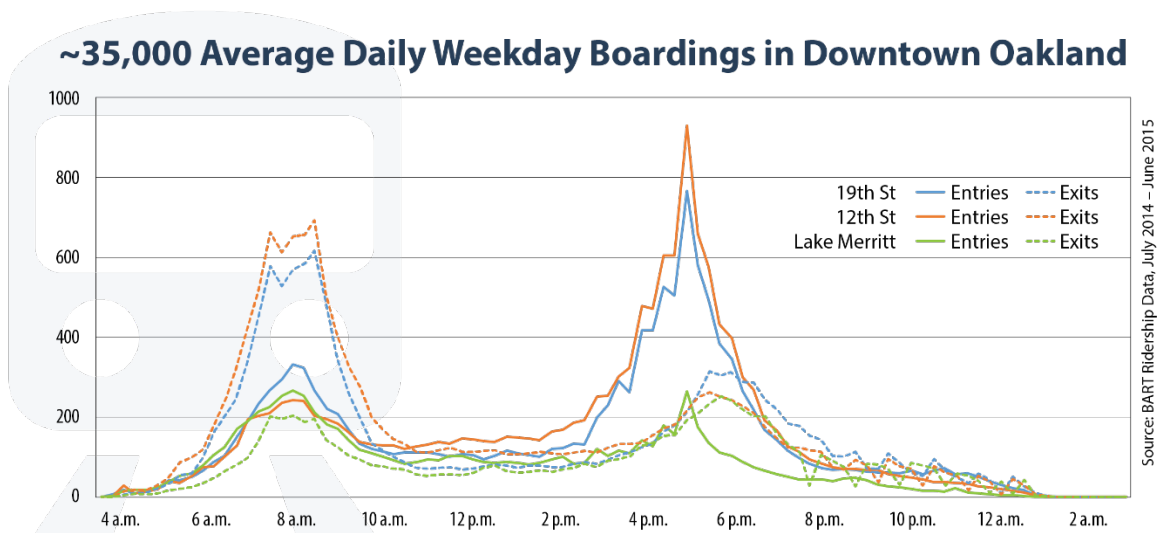


Figure 41. Average Weekday Entries and Exits to Downtown BART Stations by Time of Day



Key Findings

Overall, Downtown Oakland is a well-connected transit hub. The concentration of BART stations provides excellent regional access to jobs, schools, residences, and social activities in Downtown Oakland. There is still room to improve, however, as the transit network is concentrated on a few major corridors in Downtown (Broadway, Telegraph, 11th/12th, 7th/8th, 14th, and 20th). Without access to frequent bus service or BART, some neighborhoods—particularly Jack London, Lakeside, Koreatown/Northgate (KONO), and the western portion of Old Oakland—lack strong transit options. Similarly, a number of Communities of Concern within Oakland and the East Bay are not well connected to Downtown Oakland via transit.

The following are key findings that present issues and opportunities for Downtown Oakland's transit network.

- Recent shifts in mode share access to BART stations indicate that travelers in Downtown are increasingly moving away from driving to transit and are increasing their use of biking, walking and drop-off services.
- The share of biking trips to BART increased at all Downtown stations and in 2015, Lake Merritt station had the highest bike access share of any BART station in the system. Certainly one key factor in this increase was the increased provision of bike lanes near and bike parking at all Downtown stations between 2008 and 2015.
- As the share of biking, walking and drop-offs increased, the share of transit to transit trips decreased indicating a decrease in transfers between local bus services and regional rail service.
- Coordination between AC Transit and BART service, as well as the ferry and heavy rail service will continue to be an important focus for Downtown in the coming decades.

Public Realm in Downtown

The public realm refers to a city's network of parks, plazas, parklets, streets, and sidewalks. A well-maintained public realm with amenities invites residents and visitors to enjoy these public spaces and fosters neighborhood character and culture. A safe, beautiful, and well-designed public realm can also encourage multimodal travel and help transform a street or plaza into a thriving community destination.

Streets represent one of the largest public realm resources in Downtown Oakland. Their design and function should enhance the public realm and create multifunctional places that attract people and commerce. The amenities that support a vibrant public realm and streetscape often include lighting, street trees, public seating, parklets, and plazas. Other amenities could include public art and signs for wayfinding, as well as programming and encouragement of adjacent uses that support active use of the space

Downtown Oakland's public realm has many assets such as the many historic and iconic buildings, areas with mature street canopy, murals and public art, and vibrant open spaces such as Frank Ogawa Plaza. Streets in Old Oakland and Chinatown in particular have a distinctive and successful urban identity.

Open Space, Parks, and Plazas

Open space, parks, and plazas provide places to sit, linger, and interact, as well as being sources of greenery and beauty which are particularly important in a fast-paced, dense downtown environment. Successful open spaces, parks and plazas activate downtown spaces and support public life.

- A **park** is a public green space designated for recreation.
- A **plaza** is a public square or other open space that is often surrounded by buildings.
- A **parklet** is a small green space or seating area that is often created as part of a sidewalk extension after the removal of on-street parking.

Lake Merritt is one of Oakland's great public spaces and an essential downtown asset; it is one of the most iconic and well-maintained locations for recreation and local events in Oakland for both residents and visitors. However, the streets connecting to the lake, such as 14th and 20th Streets, could be more inviting to draw people towards the lake and surrounding open space.

In addition to Lake Merritt, Downtown Oakland provides a range of spaces for recreation and activity, though many of these are in need of improved maintenance or revitalization. Oakland residents would like to see more parks and open spaces near Downtown residences, particularly west of San Pablo Avenue, north of Grand Avenue, and in Chinatown, so that families have a nearby place for recreation and leisure. Small-scale plazas, pocket parks, or parklets are especially well suited to fill these needs. The community also wants more cultural gathering spaces in all Downtown neighborhoods with improved streets and new plazas that encourage cultural activities or events.

Downtown Oakland's historic waterfront is also underutilized and could become a regional destination connecting to regional trails, Lake Merritt, and bicycle paths. Appropriate dining, living, entertainment, civic and other uses could take advantage of a recreational waterfront to provide services and drive economic development in the waterfront and Jack London District areas. The idea for the "Webster

Green”, a linear park that would connect Chinatown to the waterfront through Jack London Square, and the “Downtown Walk”, a walking and biking loop that would connect the Lake Merritt, Channel, and Estuary waterfront paths to improved “green” street treatments for MLK and 20th Streets, would provide a set of much-needed greenway corridors and create a more inviting experience, connecting the City Center to the waterfront.

Figure 42 illustrates the location of Downtown’s parks, plazas, and open spaces.

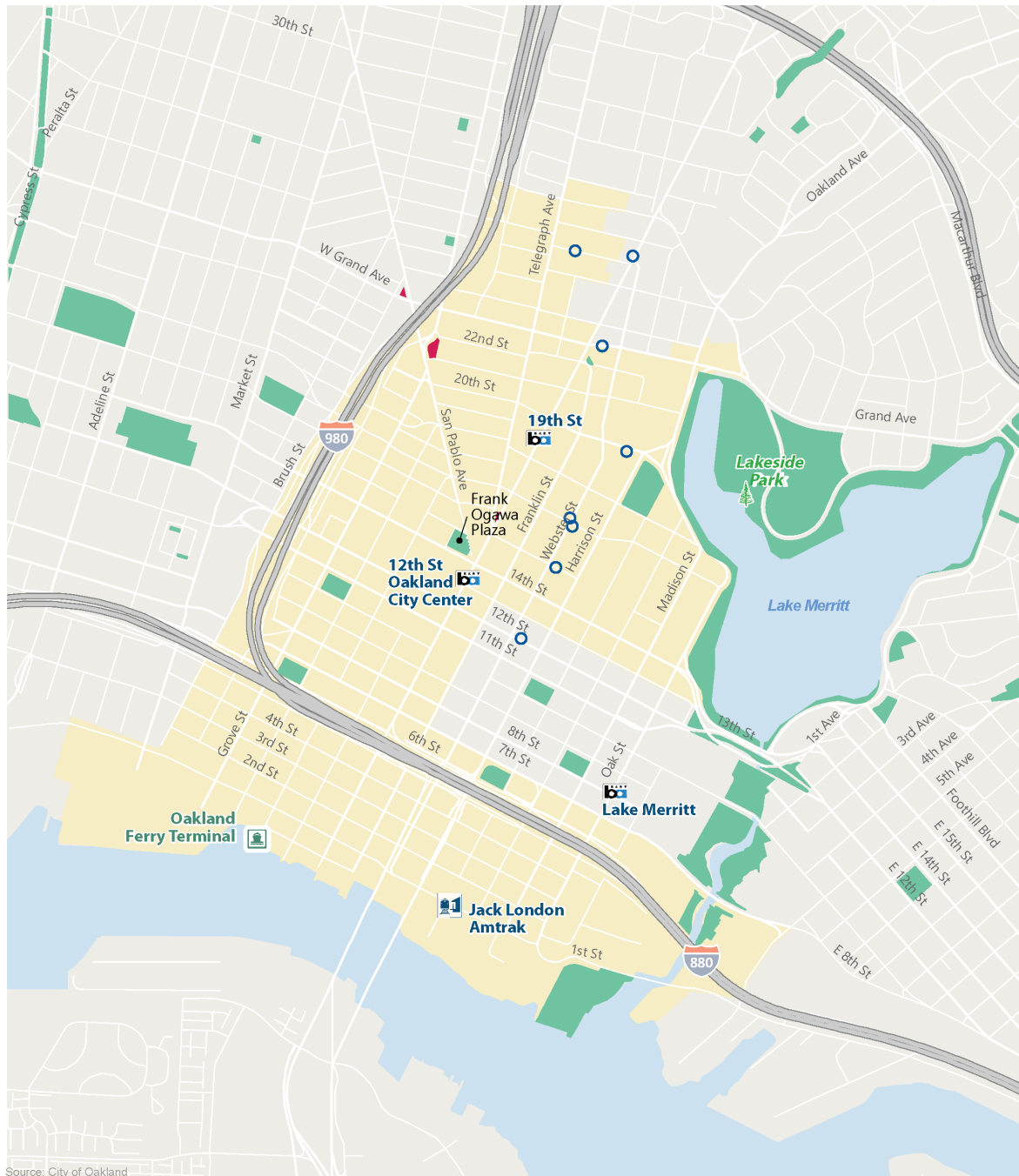
Wayfinding & Signage

Downtown Oakland could benefit from a cohesive wayfinding and signage system. Easily-understood, visible signage directs both visitors and residents to where they need to go in the city and directs them to notable destinations and transportation options. Attractively-designed and consistent signage helps create a cohesive sense of identity and urban life in Downtown’s public realm.

The City’s recent Uptown Wayfinding Signage Program developed a draft signage family of proposed designs for pedestrian and vehicular wayfinding signage in the Uptown area. The designs were developed by the City in conjunction with local business districts and other stakeholders. This program can serve as a model for signage throughout Downtown Oakland.

Public Realm Opportunities

The Comprehensive Circulation Study for Downtown Oakland identified a number of opportunities for enhancement of Downtown Oakland’s public realm, as shown in Figure 43.



Source: City of Oakland

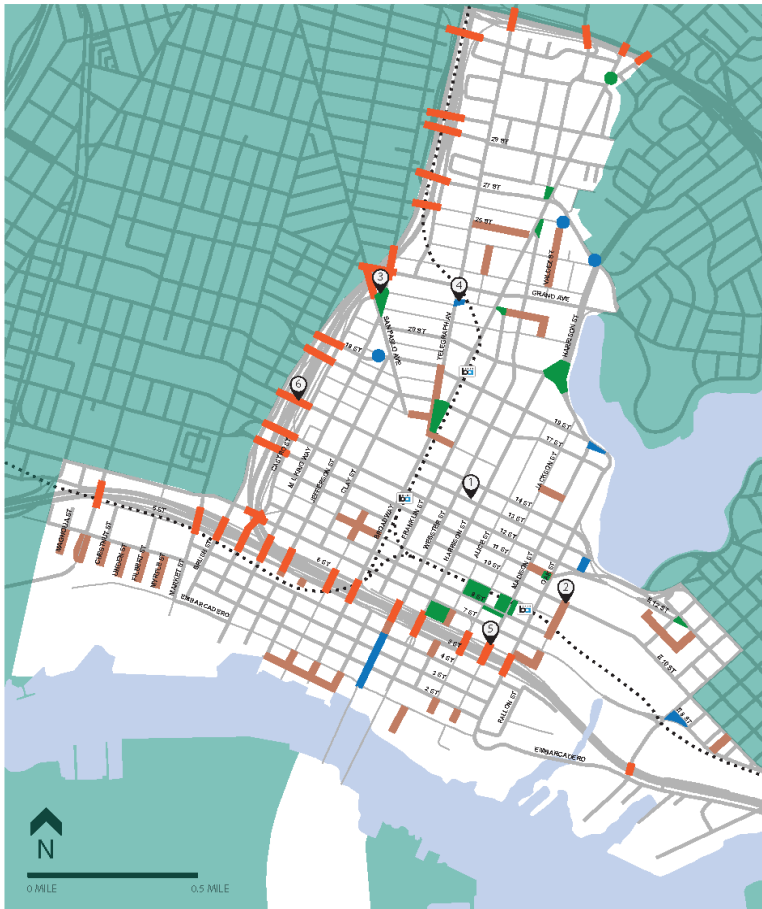
Produced by **Tools** Design Group

- Parklet
- Park
- Plaza
- Downtown Plan Area

Open Space

Figure 42. Open Space, Parks and Plazas

Using Space within Streets to Support Vitality of Downtown Oakland



PUBLIC REALM IMPROVEMENT OPPORTUNITIES

Oakland's Downtown has been a focus of new growth in entertainment, housing and employment over the past decade guided by the General Plan's goal to make it a premier location in the region for urban residential living.

Improvements to access for all modes and users, and creation of safe and attractive streets needs to occur hand-in-hand with private investment in Downtown to enhance the overall quality of life in Downtown.

The map to the left identifies some of the range of possible opportunities for improving public life in Downtown's streets and open spaces. Five types of opportunities are identified and the numbers relate to example opportunity sites that are discussed on the attached sheets.

Some streets and open spaces already build a strong sense of public life and could be further enhanced, such as Frank Ogawa Plaza, several streets in Old Oakland and Chinatown. Also, improvements have recently or are currently happening along Lake Merritt and at Latham Square to enhance public life in Downtown Oakland.

SIDEWALK AND PARKING ENHANCEMENT

The streets throughout Downtown provide opportunities for landscape, lighting, bicycle and vehicle parking, parklets, seating, and a myriad of other improvements that will be identified by this Plan.

SHARED STREET

Redesign of a street that slows traffic, creates safer space for all modes, allows for street to function as flexible open space for a range of activities, while maintaining vehicle access to uses along the street.

PLAZA AND PARK ENHANCEMENT

Several of the existing parks and plazas in the Downtown are in disrepair or could otherwise be enhanced to improve their use, maintainability, and safety; much like the improvements that have been made around Lake Merritt and those being made to Latham Square.

PAVEMENT TO PARKS

Improvements to reclaim underused space between the curbs of a street or intersection. These are typically quick and inexpensive investments to create new public space and could include either the full or partial width of the space within the curbs.

LINKS ACROSS FREEWAYS

Three freeways traverse Downtown creating physical and psychological barriers that fragment Downtown. Improvements to streets crossing the freeways can improve access for people walking and cycling, as well as benefit Downtown's image and public life.

Figure 43. Public Realm Improvement Opportunities⁸

⁸ This Figure is reproduced from the 2015 Comprehensive Circulation Study for Downtown Oakland and Access to/from West Alameda, published by the Alameda County Transportation Commission.



Key Findings

Downtown Oakland is a vibrant, active neighborhood, and the public realm, replete with historic buildings, plazas and open spaces, street trees, murals and public area, create a true sense of place and character. As Downtown Oakland's transportation network continue to evolve and mature, investing in the public realm will provide residents and visitors with comfortable and enjoyable places to walk, bike, and be.

The following are key findings that present issues and opportunities for Downtown Oakland's public realm.

- Some areas of Downtown Oakland could be better enhanced to provide a more cohesive identity and to better celebrate the vibrancy of Downtown Oakland. Downtown Oakland has assets to build upon such as buildings with blank walls that could become home to murals and other public arts.
- Some buildings have gaps in the street wall, which are unpleasant, discouraging people from lingering, or from walking or bicycling from place to place; these could become home to new plazas or parks.
- Develop a comprehensive and unified wayfinding program. The Uptown's Wayfinding Signage Pilot could be a model for downtown and/or the rest of the City. See Parking in Downtown section for further information.

Notes: We really want to focus on streets as the public realm as a significant piece of the specific plan, since (as you've called out) there's so much unused capacity. This overlaps with a few other topic areas (particularly arts & culture and safety) of the plan, but could also include information about:

- Safety, crime, sense of belonging and connection with the land uses and businesses bordering the public realm
- Use of the public realm as space for cultural celebration and political expression
- Leveraging the waterfront and lake with new connections, including paths but also open space and built environment
- How homelessness and homeless encampments impact the experience and sense of welcome or safety
- How homeless (and also mentally ill or disabled street residents) are treated in the space
- Public art, programming, activating the public realm, cultural expression, events

Section 3: Getting Around by Motor Vehicle

Driving in Downtown

This section describes the street network that serves motor vehicle travel, and summarizes key motor vehicle characteristics and travel patterns within Downtown Oakland.

General Trends

Prior to the 1950's, Downtown Oakland's street network provided both local and regional transportation routes within the East Bay. To accommodate the growth in both local and regional traffic, a number of Downtown streets were converted from two-way operation to one-way couplets in the early 1950's. However, with the construction of the regional freeway system beginning in the 1960's, the need for local streets to accommodate regional traffic decreased significantly, and only those streets providing access to and from regional freeways continue to see heavy volumes of motor vehicle traffic. Consequently, the great majority of streets in Downtown Oakland have excess vehicle capacity, and space on those streets could be reallocated to better serve other road users by reconfiguring roadways to better serve the needs of pedestrians, bicyclists, and transit users, or to create additional public open space.

Street Network

As shown in Figure 44, the Downtown street network is a grid consisting of multiple one-way couplets as well as streets with two-way traffic. San Pablo and Telegraph Avenues cut across the grid diagonally and provide a direct connection between Downtown Oakland and communities to the north. Regional freeways (I-980, I-880 and I-580) carry traffic outside the Downtown Oakland street network while concentrating traffic flows on streets that connect with freeway interchanges, including Oak, Harrison, Broadway and Jefferson.

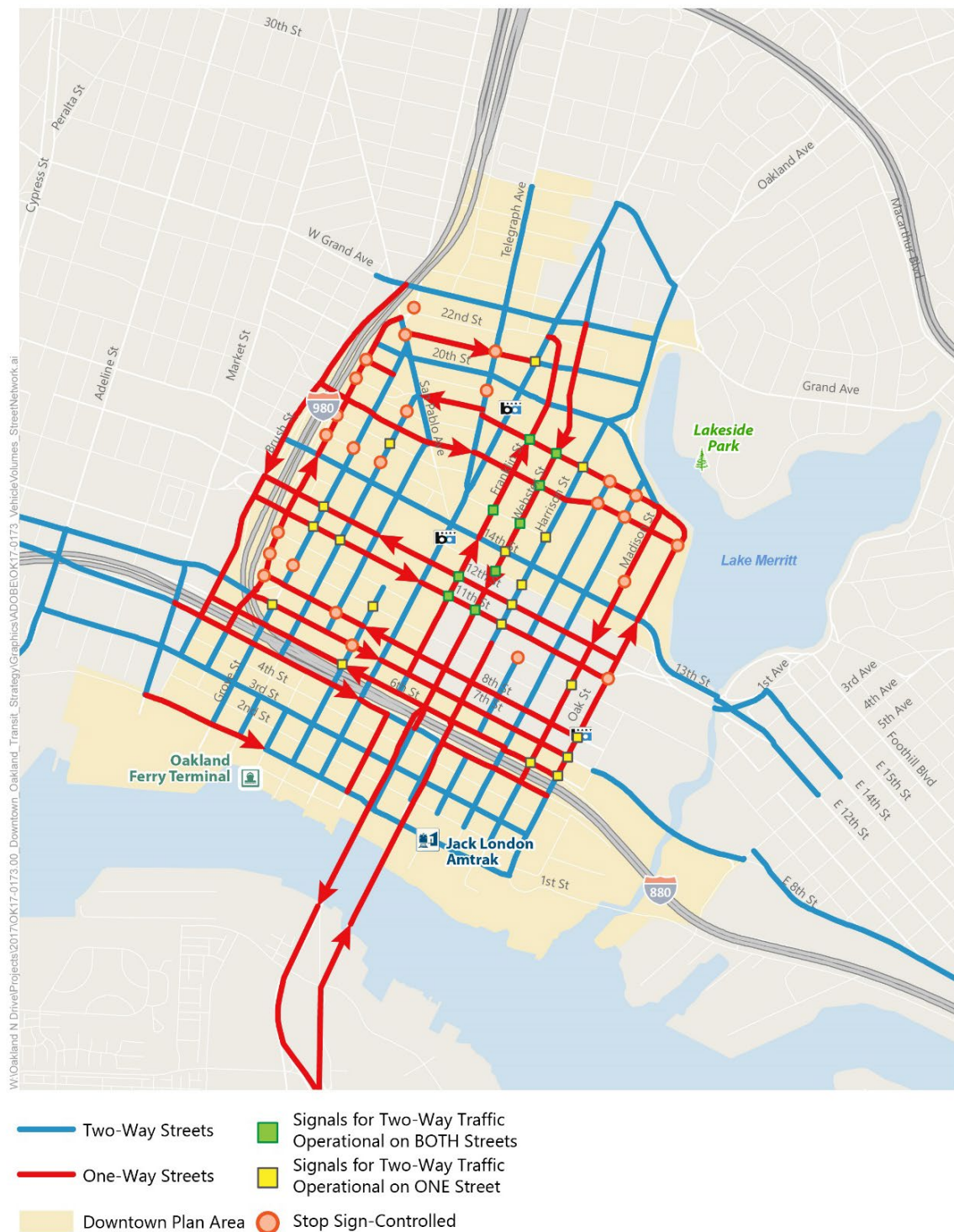
Motor Vehicle Volumes and Street Capacity

Generally, vehicular traffic volumes are relatively low in both the morning and evening peak hours, as shown in Figure 45 and Figure 46.⁹ 6th and Brush Streets carry relatively higher vehicle volumes in the morning peak hour since they serve as connecting frontage streets to I-880 and I-980, respectively. In the evening peak hour, motor vehicle traffic volumes are somewhat higher and similar to the morning peak hour conditions, streets connecting to or adjacent to I-980 and I-880 carry the highest volumes. These include 5th, 6th, 7th and Streets, and Brush Street, Castro Street and Grand Avenue.

When looking at roadway volume-to-capacity, a comparison of roadway demand (vehicle volume) with roadway supply (carrying capacity) shows that the great majority (more than 80%) of streets in Downtown Oakland have unused vehicle capacity. Right-of-way could be reassigned to other road users without compromising access and circulation for emergency vehicles, transit, and personal vehicles. However, there are several roadways where volume exceeds capacity, including 6th Street and the Webster and Posey Tubes that connect the City of Alameda with the regional freeway network and

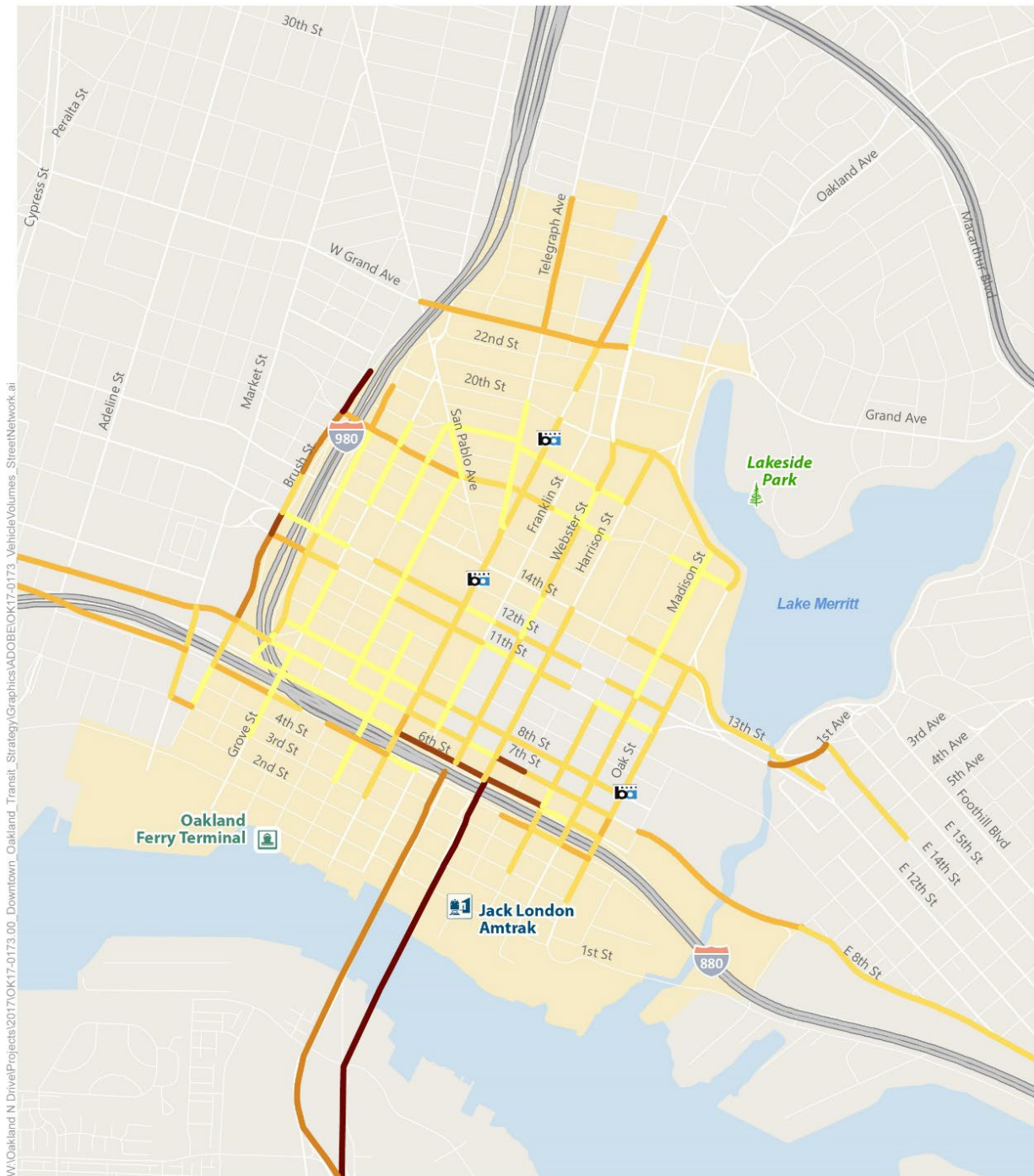
⁹ Volume data derived from traffic counts collected in 2011, 2012, 2013, 2014, and 2015.

Downtown Oakland. Figure 47 and Figure 48 show the roadway volume-to-capacity for the morning and evening weekday peak periods, respectively.



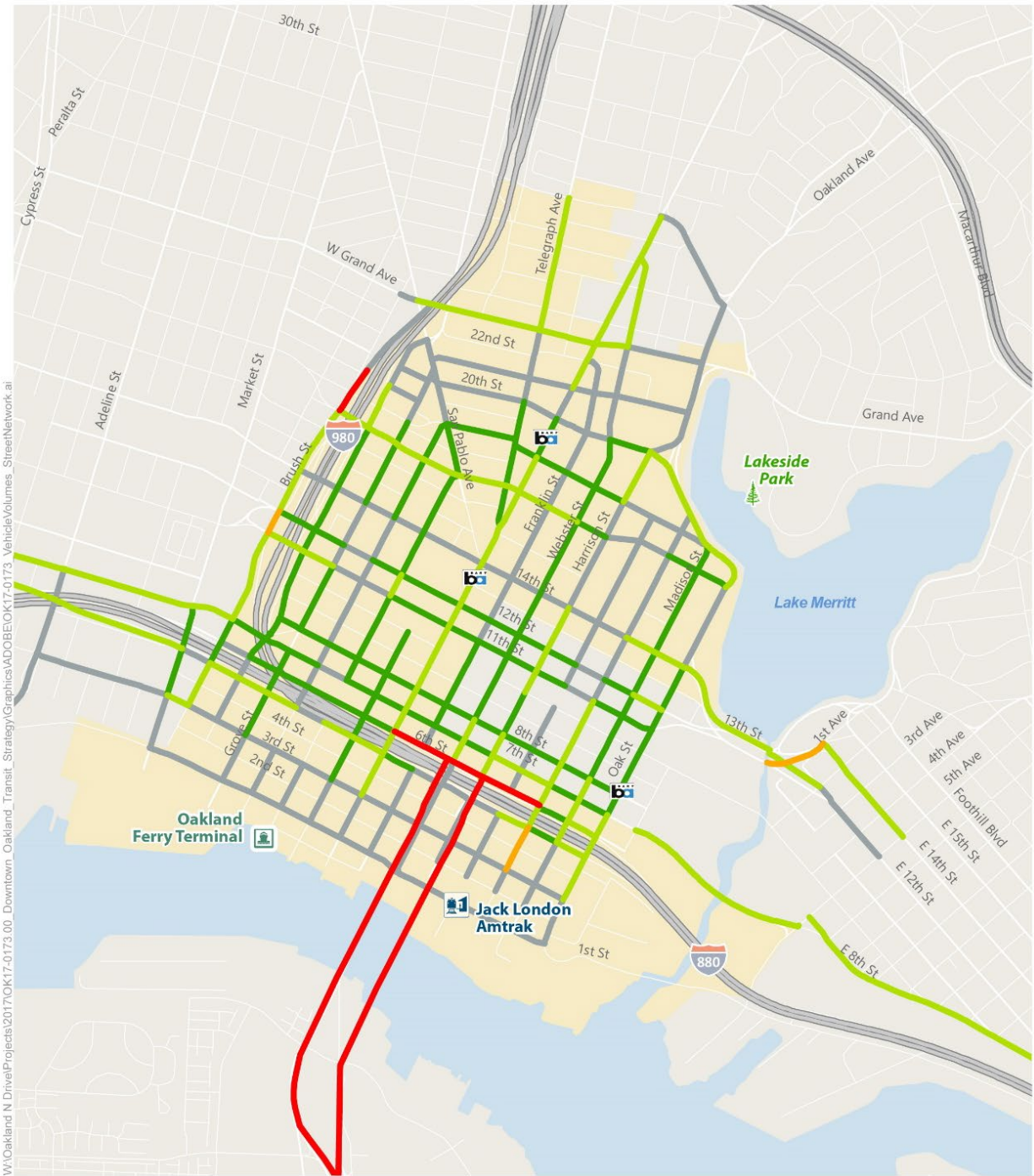
Street Network

Figure 44. Street Network



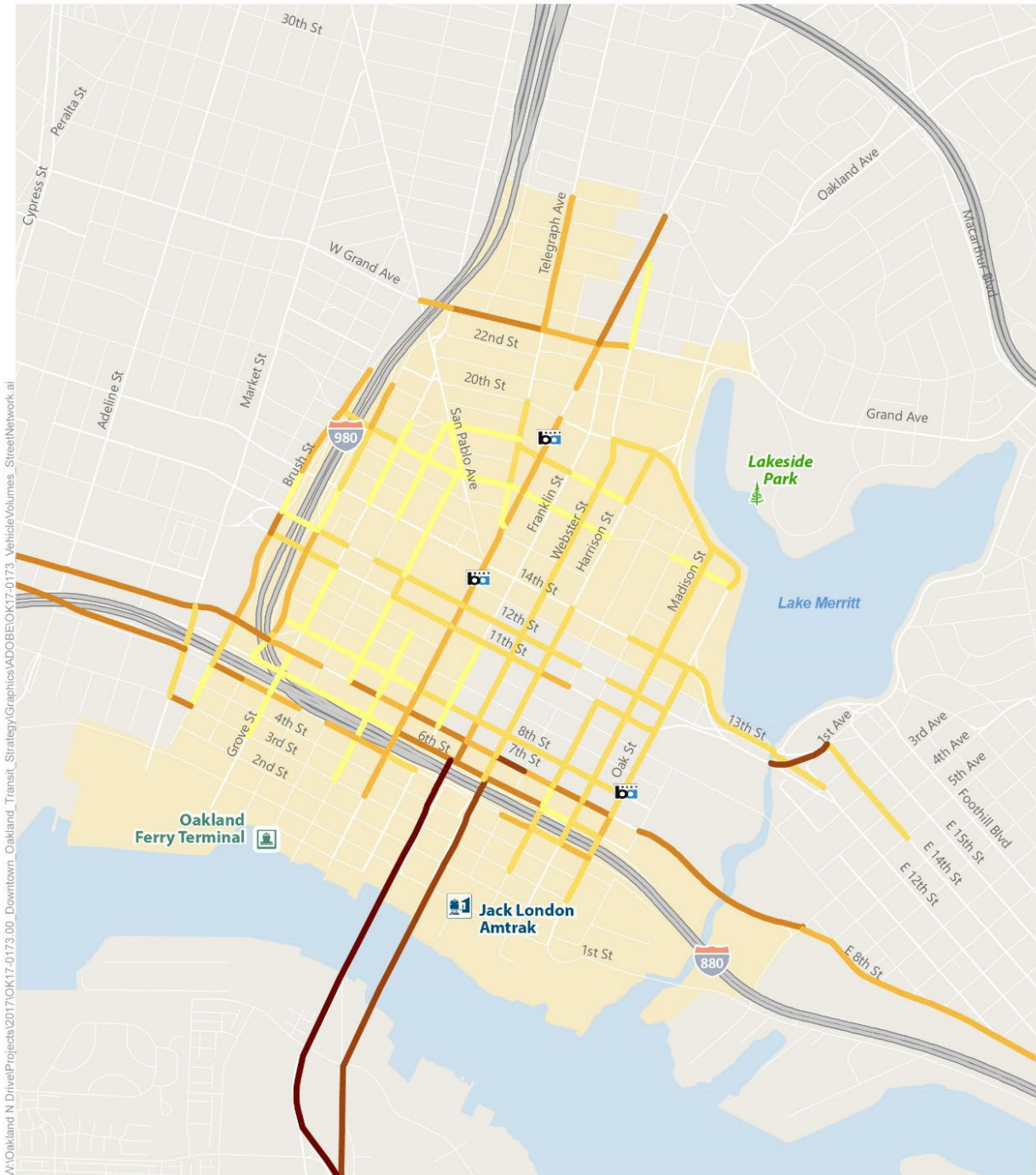
Weekday AM Peak Hour Vehicle Volumes

Figure 45. Weekday AM Peak Hour Vehicle Volumes



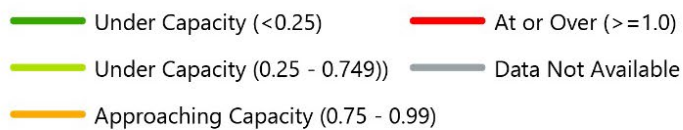
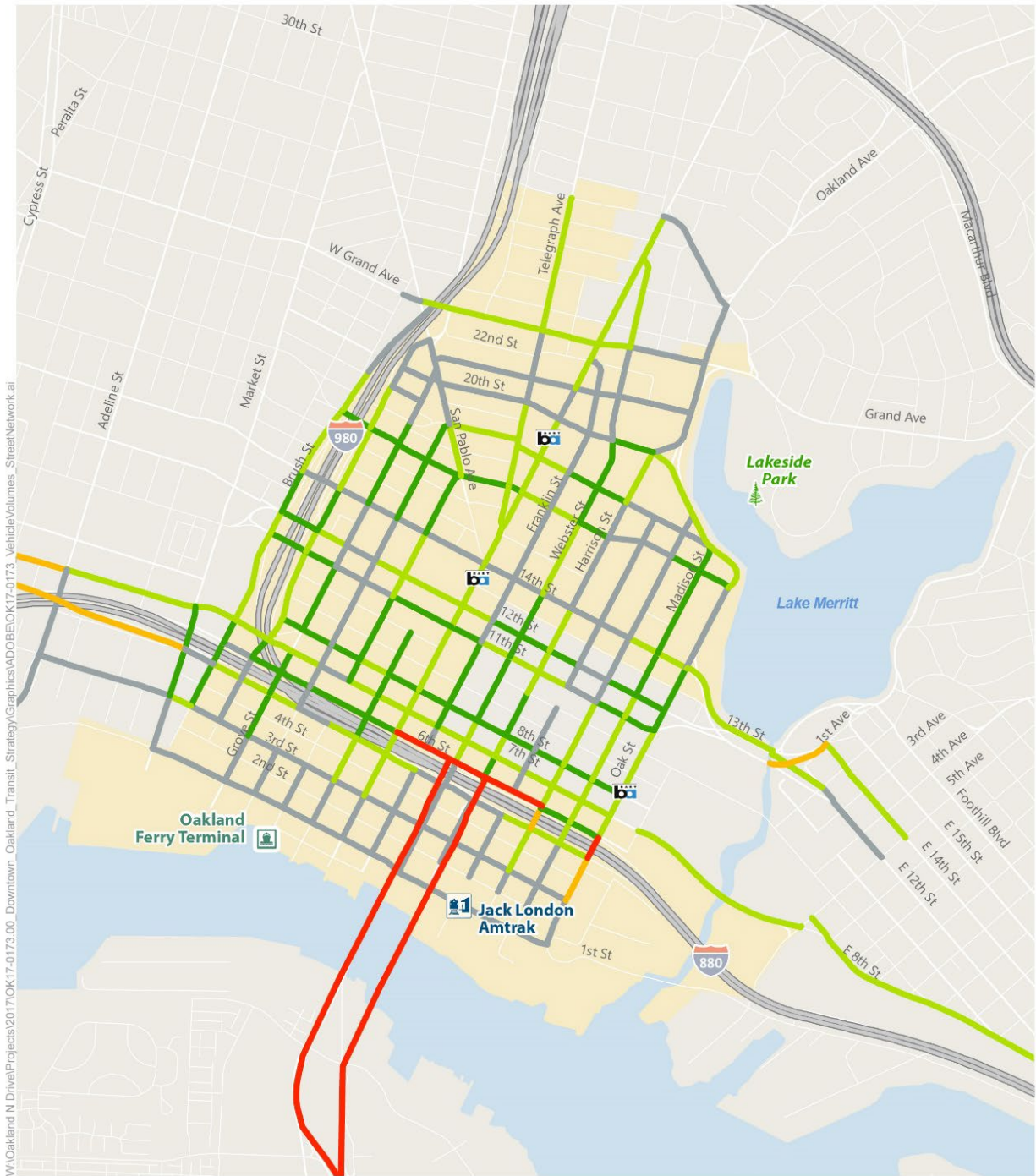
Weekday AM Peak Hour &
Peak Direction Vehicle Volume to Capacity (v/c)

Figure 46. Weekday AM Peak Hour & Peak Direction Vehicle Volume to Capacity



Weekday PM Peak Hour Vehicle Volumes

Figure 47. Weekday PM Peak Hour Vehicle Volumes



Weekday PM Peak Hour &
Peak Direction Vehicle Volume to Capacity (v/c)

Figure 48. Weekday PM Peak Hour & Peak Direction Vehicle Volume to Capacity

Motor Vehicle Travel Patterns

A 2015 study of personal and commercial vehicle travel patterns into and out of Downtown Oakland (completed as part of the Comprehensive Circulation Study for Downtown Oakland) made the following key findings:

Finding 1: Even with a robust transit system in Downtown Oakland, there continues to be substantial personal vehicle travel within Downtown and between Downtown Oakland and the local neighborhoods adjacent to downtown.

Finding 2: Personal vehicle travel from the Posey and Webster Tubes contributes to vehicle congestion in Downtown Oakland primarily in the Chinatown and Lake Merritt neighborhoods. While most of this travel is oriented to the freeway system, about one-third of the traffic has either an origin or destination in downtown Oakland.

Finding 3: Motorists using the I-880 freeway south of Downtown generally stay on the freeway, as opposed to diverting through Downtown Oakland to reach their destination. Motorists in Downtown and the local area adjacent to Downtown generally use the nearest on-ramp to access the freeway, minimizing the impact that traffic destined for I-880 has on Downtown streets. The one exception is travel between Downtown, north of 14th Avenue, and I-880. Most motorists travel through the Chinatown and Lake Merritt neighborhoods to access I-880 rather than accessing the freeway system at I-980 because the route is more direct and there is a perceived travel time benefit.

Finding 4: Motorists using westbound I-980 are generally traveling to destinations in Downtown and West Oakland as well as the Webster Tube. As a result, traffic congestion (queues) often extend onto I-980. Almost half of the eastbound I-980 traffic originates south of Downtown on I-880, contributing to freeway traffic congestion on I-880 approaching the I-980 interchange. Motorists in Downtown and the local area adjacent to Downtown generally use the nearest on- and off-ramp to access I-880 and I-980 minimizing the impact freeway-destined traffic has on Downtown streets. The exception to this is travel between the Posey Tube and eastbound I-980, where motorists must travel through Downtown to access I-980.



Key Findings

The number of lanes allocated to vehicle travel within downtown Oakland is greater than what is needed to serve existing vehicle traffic volumes. More than 80% of the streets in Downtown Oakland have excess vehicle capacity, meaning that space on those streets could be reallocated to better serve other road users by reducing vehicle lanes and widths and creating dedicated bicycling facilities, wider sidewalks, and/or transit-only lanes. The space could also be reallocated for other uses such as public space or loading/unloading for local business.

Several streets within Downtown do experience heavy motor vehicle volumes and significant congestion. These include the Webster and Posey Tubes, 6th Street, and streets connecting to or adjacent to I-980 and I-880. These locations will require particular attention as transportation network concepts are developed.

Issues and opportunities for Downtown Oakland's vehicle network:

- Given the significant number of relatively short-distance motor vehicle trips occurring within Downtown Oakland, transportation projects that enhance non-automobile travel via surface transit, bike share and bicycling, and walking are candidate projects to provide more options to personal vehicle travel within downtown Oakland. Parking pricing and other park once policies support a reduction in these types of trips.
- Transportation projects that provide higher frequency and more reliable bus service, such as that proposed for the East Bay BRT Project on International Boulevard, as well as a comprehensive bike network are candidate projects to provide a competitive alternative to vehicle travel on local streets serving downtown Oakland.
- For the Posey Tube, a well-functioning freeway system and downtown street network that can efficiently redirect freeway-oriented traffic away from Downtown streets is needed, especially south of the 14th Street corridor between I-980 and Oak Street.
- For the Webster Tube, local street connectivity and street context is a critical need given that about one-third of the PM peak period traffic originates in Downtown. Discontinuous and one-way streets limit route choice for motorists, and the tube itself has insufficient capacity to handle the demands, resulting in recurring congestion at the portal.
- Transportation projects that incentivize and facilitate mode shift such as higher frequency, faster and more reliable bus service, are candidate projects to provide a competitive alternative to vehicle travel through the tubes.
- The local street context (and connectivity) should be revised so Downtown traffic traveling through the Chinatown and Lake Merritt neighborhoods to access I-880 does not detract from the local context (e.g., hinder local businesses, degrade experience for walking and biking or other neighborhood uses).

What's the headway threshold at which many more people are likely to shift to transit? 5 minutes? 10 minutes?

Vehicle Parking in Downtown

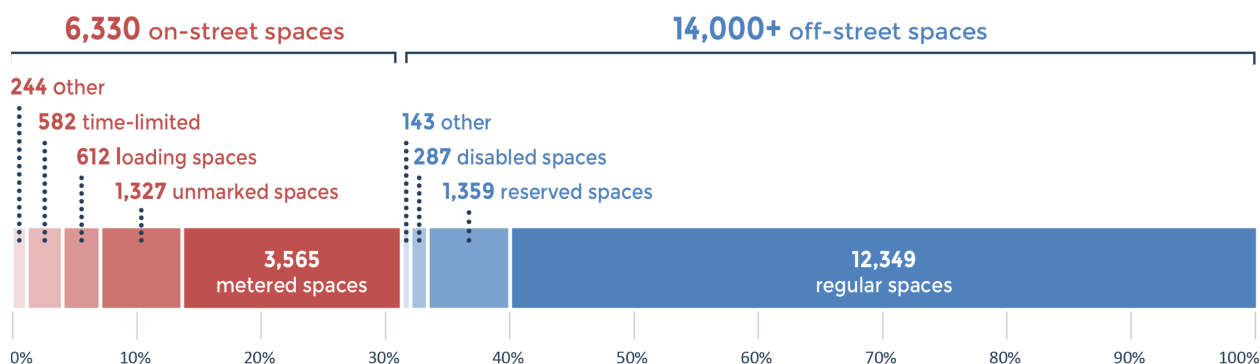
Parking in Downtown Oakland serves many users including residents, workers, tourists, shoppers, and those accessing services. To better understand the number of parking spaces and utilization rates, the City of Oakland conducted a Downtown Parking Study in June 2016. The study area covered most of Downtown Oakland from I-980 to the West, Oak Street to the East (with a few exceptions), Grand Avenue to the North, and I-880 to the South. The parking study also presented strategies for improving the parking system (see “Key Findings” below).

Parking Supply

Downtown Oakland has many different types of parking resources, including publicly-owned on-street spaces and off-street parking garages or lots. Overall, approximately 30,000 parking spaces are located in or near the downtown area, including over 20,000 spaces within the Downtown Parking Study Area (as shown in Figure 49), over 4,000 in the Jack London District (south of the Downtown Parking Study area), and over 5,000 in the Broadway-Valdez area (north of the Downtown Parking Study Area).

Parking Spaces Counted in the Downtown Oakland Parking Study*

20,000+ public parking spaces



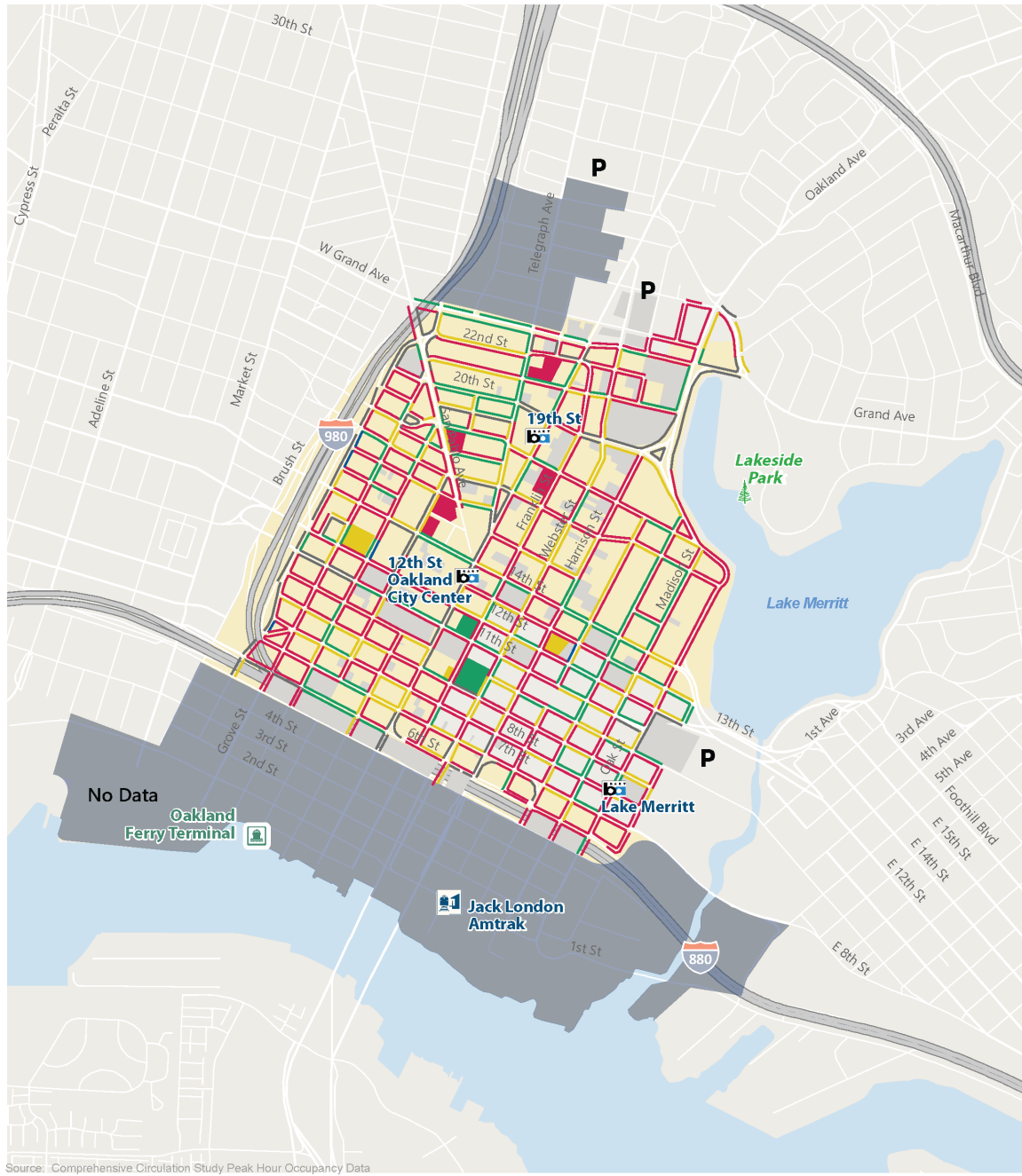
Sources: Downtown Oakland Parking Study Tech Memo #1: Context Analysis (2015) & Tech Memo #2: Existing Conditions (Draft, 2015)

*The parking study does not include Jack London Square, which has an additional ~4,000 parking spaces.

Created by Toole Design Group

Figure 49. Downtown Oakland Public Parking Spaces

Figure 50 illustrates the location of public and private parking facilities, including on-street spaces and in garages, and also identifies the occupancy rates of these facilities.



On-Street Spaces

- 0%-65%
- 66%-85%
- 85%+
- Closed for Construction
- No Parking

Downtown Plan Area

City-Owned Off-Street Spaces

- 0%-65%
- 66%-85%
- 85%+

P Other city-owned garage or lot; occupancy data not available

Privately-owned garage or lot; occupancy data not available

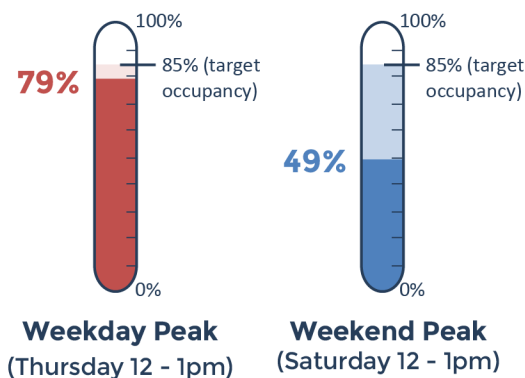
Parking Facilities

Figure 50. Parking Facilities and Occupancy

Parking Demand

The City of Oakland has a goal of 85% parking occupancy at peak times. On average, Downtown Oakland's parking occupancy never exceeds that level, particularly on weekends, as shown in Figure 51.

Parking Occupancy in the Downtown Oakland Parking Study Area



Sources: Downtown Oakland Parking Study Tech Memo #1: Context Analysis (2015) & Tech Memo #2: Existing Conditions (Draft, 2015)
Created by Toole Design Group

Figure 51. Occupancy of Downtown Oakland Parking Spaces

The 2016 Downtown Parking Study found that there is a surplus of parking and that parking demand is uneven throughout Downtown Oakland. Parking in areas such as Chinatown and the City Center are often full, particularly on weekdays, while other areas of Downtown Oakland have low parking utilization. While there is excess parking supply in Downtown Oakland, this may change over time as existing surface and structured parking is redeveloped and population/employment Downtown increases.

On-street curbside parking is challenging in Downtown Oakland on all days. In Chinatown, this is further exacerbated by merchants using parking spaces for long-term storage of vehicles; and parking in loading and no-parking zones, double parking, and street loading. Downtown public parking, at \$0 - \$4/hour, is priced under the market rate for Downtown Oakland's private garages, which is \$4 - \$8/hour.

Parking Signage

Parking signage is an important part of Downtown's overall wayfinding and signage system. Well-designed parking signage can direct motorists to underused parking facilities and alleviate perceived (but not actual) parking shortages, in addition to contributing to Downtown Oakland's identity and legibility.



Key Findings

Downtown Oakland has many parking resources located throughout the downtown area, including on-street spaces and off-street facilities. While overall, a parking supply exists, demand is uneven and localized parking shortages exist in some areas (such as Chinatown and City Center) while parking in other areas is underused.

The 2016 Downtown Oakland Parking Study presented the following strategies to improve the parking system:

- Implement performance-based pricing. Use appropriate pricing rather than time limits to manage parking demand block-by-block, garage-by-garage, and throughout the day.
- Implement real-time parking signage to display parking availability and/or pricing.
- Adopt the Sensor Independent Rate Adjustment (SIRA) methodology developed for San Francisco's SFpark to monitor parking occupancy in real time.
- Establish Downtown parking benefit districts in order to give a portion of parking revenues back to the neighborhoods it was collected in for neighborhood improvements.
- Remove minimum parking requirements and establish maximum parking requirements in the Zoning Code.
- Establish and fund Transit Demand Management (TDM) programs to increase the number of people that use transit, walking, bicycling, and carpooling to access Downtown.

Emergency Vehicle Access in Downtown

General Trends

TBD

Key Findings

TBD

Section 4: Management of Goods

Goods movement is an important part of Oakland's economy due to the convergence of maritime, rail, truck, and air infrastructure in the city. The Port of Oakland, Oakland International Airport, Oakland International Gateway, and major truck routes all contribute to Alameda County serving as the origin, destination, or international gateway for 32% of all goods movement by weight in the nine-county Bay Area region.¹⁰ Much of this regional freight traffic passes through or is adjacent to Downtown Oakland. In addition, Downtown Oakland is home to several active commercial districts with significant curbside loading and unloading needs. This section describes both regional and local goods movement activities within Downtown Oakland.

Moving Goods In and Through Downtown

While the major freight hubs of Oakland are outside of Downtown, truck traffic to and from those hubs can use Downtown streets to access freeways or reach final destinations. Goods movement for commercial areas in Downtown use local streets to access their destinations as well.

General Trends

The majority of regional goods movement via large vehicles occurs on 7th Street, 8th Street, 5th Street, and Jackson Street, as shown in Figure 52. Each of these streets provides some degree of connection to the regional freeways I-880 and I-980, and the east-west streets correspond to designated truck routes shown in Figure 53. The greatest share of truck traffic occurs near industrial areas such as the Port of Oakland.

¹⁰ Alameda County Goods Movement Plan, February 2016



Figure 52. Regional Goods Movement Through Downtown



Figure 53. Truck Routes through Downtown

A 2015 study of personal and commercial vehicle travel patterns into and out of Downtown Oakland found that commercial vehicle travel follows similar patterns as personal motor vehicle travel, except that about 20% of the weekday (and 13% of the weekend) commercial vehicle activity generated by Downtown stays within Downtown, and another 32% (37% for the weekend) represent commercial activity on local streets serving downtown. The I-880 freeway to and from the south represents a primary regional connection for commercial vehicles: about a quarter of commercial vehicle activity is concentrated along I-880.



Key Findings

Downtown Oakland has excess road capacity during most hours of the day, so there has not been a historic need for goods movement management strategies. As the City allocates road space for surface transit and active transportation such as bicycles, goods movement should be an ongoing consideration to ensure that reallocations of road space reasonably accommodate local goods movement needs and demands.

Unloading and Loading of Deliveries in Downtown

The concentration of commercial activities in Downtown results in a high demand for unloading and loading of deliveries in certain areas. These activities are primarily regulated through parking and loading zone restrictions. The City Traffic Engineer is authorized to determine and mark loading zones, and may authorize additional loading zone signs for additional hours, if necessary.¹¹ In the longer term, zoning code requirements affect the availability of loading docks and other infrastructure. Off-street loading requirements are codified in the City of Oakland Planning Code, Chapter 17.116, Article III.

General Trends

Some of the primary commercial areas in Downtown include the Broadway corridor, Chinatown, and Jack London District, shown in Figure 54. Broadway is a main thoroughfare through Downtown, and includes two BART stations along with a number of storefronts. Chinatown has vibrant local businesses that rely on storefront unloading/loading and sales activities. Jack London District has large amount of loading/unloading activity associated with the Produce Market between 12 a.m. and 11 a.m. daily.

Designated goods loading and unloading spaces (yellow curbs) comprise slightly less than 7% of on-street parking spaces. Yellow curbs permit 30 minutes of commercial loading or unloading between 7 a.m. and 6 p.m. There are yellow curbs throughout Downtown, with high concentrations along roads such as Broadway and 14th Street, and in Chinatown.



Key Findings

Loading and unloading spaces are integral to commercial and retail businesses, and also serve office and residential buildings. Dedicated space for loading and unloading is important for a well-functioning downtown, and Downtown Oakland is no exception. As the City reallocates roadway space, it may need to consider goods movement management strategies such as off-hours deliveries or new parking regulations to meet loading and unloading demands in commercial areas.

¹¹ Comprehensive Circulation Study for Downtown Oakland and Access to/from West Alameda: Baseline Assessment Observations of Existing Transportation Characteristics. October 22, 2015.

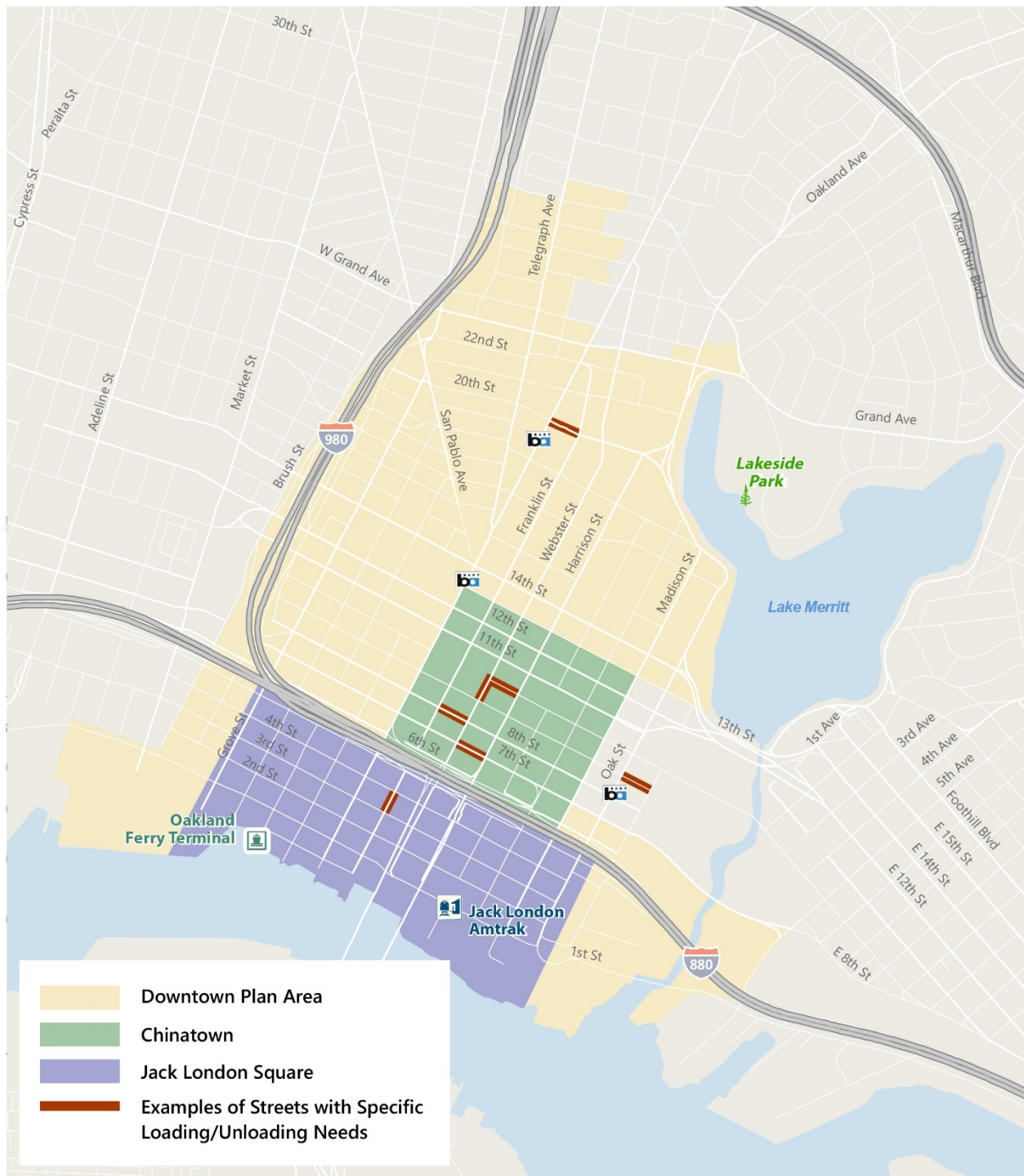


Figure 54. Areas with Reported High Loading/Unloading Activity *[need source]*