

Wilmington EMPOWER Mobility Plan & Action Plan



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Prepared For:



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1. INTRODUCTION

The City of Los Angeles has prepared the Environmental Justice Mobility Plan and Opportunities for Wilmington Employees and Residents (EMPOWER). The study consists of two components: development of an Environmental Justice Mobility Plan to serve the Wilmington Community and Advocacy Training. The study area for this effort is the Wilmington community, which is within the Wilmington-Harbor City Community Plan area and is generally bounded by Normandie Avenue/Gaffey Street to the west, Lomita Boulevard to the north, the Terminal Island Freeway to the east, and Harry Bridges Boulevard to the south. The existing base year information was compiled from a variety of sources including the Los Angeles Department of Transportation (LADOT), the Los Angeles Department of City Planning (DCP), and field observations.

The EMPOWER Mobility Plan focuses on active modes of travel to address the transportation needs of the Wilmington Community. The Mobility Plan was developed based on a review of existing travel conditions, planned local improvements, and stakeholder input. The recommendations fall in two categories: general recommendations that can be applied throughout the community and specific corridor improvements. In addition, a priority list of mobility improvement projects was developed as part of an Action Plan targeted for near-term implementation.

The advocacy training component of the study includes the development of bilingual educational material for the use of active transportation modes in Wilmington. The educational materials will be complemented by training for local residents that will be aimed at helping residents advocate for improvements in the area, such as increasing transit service or improving pedestrian infrastructure, to identify measures that can be taken to create infrastructure that supports non-motorized travel, balancing the need to serve automobile, transit, and non-motorized modes. The EMPOWER, Educate & Advocate workshop will be hosted in February 2014, and the educational brochure will be provided as a separate deliverable.





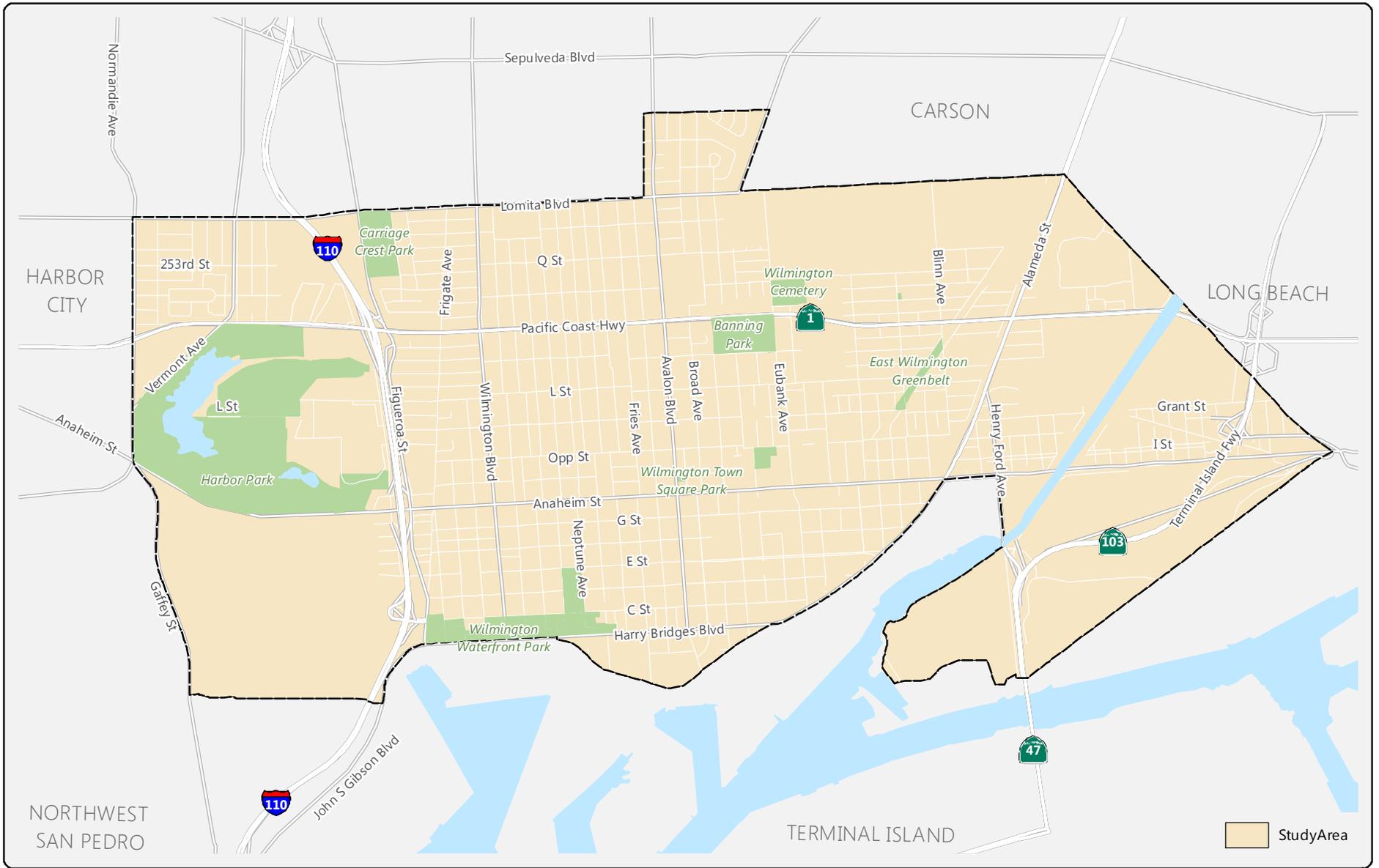
This report documents:

- Introduction and background to the study area existing conditions, such as:
 - land use and demographics
 - the existing transportation system serving the Wilmington study area including an inventory of the roadway system, public transit, bicycle and pedestrian facilities, regional travel patterns, rail and truck traffic, and public parking facilities
 - the existing roadway operating conditions and peak hour segment levels of service (LOS)
- Stakeholder outreach and input efforts, including a community survey and a variety community events
- The Wilmington EMPOWER Mobility Plan and Action Plan

STUDY AREA

The Wilmington study area is located in the southern portion of the City of Los Angeles and is bordered by the Ports of Los Angeles and Long Beach to the south, Long Beach to the east, the City of Carson to the north, and Harbor City (City of Los Angeles) to the west. Figure 1-1 provides a map of the Wilmington study area.





Not to Scale

2. STAKEHOLDER INVOLVEMENT

A series of public workshops and Working Group meetings were hosted throughout the study, and a survey was developed as part of the Mobility Needs and Opportunities Assessment phase of the EMPOWER Project to solicit input from community groups such as residents, employees, visitors, and business owners with respect to the mobility challenges they face when traveling to, from, or within the Wilmington community.

The goal of this section is to communicate the input provided by numerous stakeholders to identify the mobility issues facing the local community based on current travel patterns and the transportation infrastructure that is currently serving the area. The survey allows for an assessment of the challenges and opportunities currently experienced by local stakeholders that provided valuable input into the development of the Mobility Plan. The survey was designed with an emphasis on the pedestrian, bicycle, transit, and vehicular travel modes.

SURVEY DEVELOPMENT AND FORMAT

The project team was tasked with developing a survey targeting Wilmington residents and business owners. The purpose of the survey was to solicit input from Wilmington stakeholders regarding key mobility concerns in the area. For example, truck circulation and parking are mobility issues that have historically been of importance in the community or the subject of recent city actions.

With an overall emphasis on the pedestrian, bicycle, transit, and vehicular travel modes, the survey was developed to include open-ended questions that required stakeholders to engage in a process of prioritizing the improvements, outcomes, and facilities that were most important to them in the context of mobility in Wilmington. The topics and questions were developed based on a review of a variety of sources, including:





- Input from City staff
- Local knowledge
- Field observations
- Zoning and land use
- Demographics
- Regional travel characteristics
- Public transit providers
- Collision review
- Wilmington-Harbor City Community Plan
- Los Angeles Bike Plan

The survey was divided into four main sections:

1. Personal information
2. Desired outcomes
3. Facility preferences
4. Staying involved

These sections were then incorporated into an on-line survey tool called Metroquest along with paper surveys. The electronic and paper versions of the survey were made available in English and Spanish. Figure 2-1 and Figure 2-2 show screen shots of the "Welcome Screen" and "Desired Outcomes" portion of the on-line survey, respectively. The complete English on-line survey is available in Appendix A. The complete English and Spanish paper surveys are available in Appendix B.



Figure 2-1 – Wilmington EMPOWER Survey Screen



Figure 2-2 – Wilmington EMPOWER Desired Outcomes Screen

Wilmington EMPOWER Project Progress ? [Compare Yourself](#)

1 WELCOME

2 SURVEY

3 DESIRED OUTCOMES

3 **Priorities** What is important to you?

Higher Priority ↑

Drag your 5 highest priorities above this line.

- Less Through Truck Traffic
- Pedestrian-Safety and Comfort
- Reduced Auto Speeds
- More Transit Service
- Reduced Auto Congestion
- Increased Off-Street Parking
- Bicycle-Safety and Comfort
- Increased Foot Traffic
- Increased On-Street Parking
- Improved Streetscape

[+ Suggest another priority](#)



Reduced Auto Speeds

Implement traffic calming such as speed bumps, traffic circles and curb extensions.

This priority is not above the line.
Would you like to add a comment?

Add comment on a map

Add a comment about this priority

4 FACILITY PREFERENCES

5 STAY INVOLVED

Share



Survey Contents

The focus of the survey is on the “Desired Outcomes” and “Facility Preferences” sections, which asked residents to identify the five improvements that were most important for that individual, in order of importance. Figure 2-2 displays the “Desired Outcomes” screen that presented the following improvement options:

- Less through truck traffic
- Pedestrian safety and comfort
- Reduced auto speeds
- More transit service
- Reduced auto congestion
- Increased off-street parking
- Bicycle safety and comfort
- Increased foot traffic
- Increased on-street parking
- Improved streetscape

The “Facility Preferences” screen presented the following improvement options:

- More transit service
- Amenities at bus stops
- Separated bicycle lanes
- On-street bicycle lanes/routes
- More parking in retail areas
- Bicycle parking racks
- Pedestrian security/safety
- Wayfinding and signage
- Improved/wider sidewalks
- Vehicular improvements
- Improved streetscape





Survey Distribution

Survey development was followed by survey distribution to various civic and community organizations and individuals. A minimum of 12 groups were contacted to introduce the project and request assistance in disseminating project information to local stakeholders. The groups contacted include:

- Council District 15
- Wilmington Neighborhood Council
- Wilmington Chamber of Commerce
- Wilmington Recreation Center
- Wilmington Boys & Girls Club
- Wilmington Farmers Market
- The Southbay Center for Counseling (SBCC)
- I Heart Wilmington Organization
- Banning High School Staff
- St. Peter and St. Paul Catholic Church
- Holy Family Church

Through discussions with local stakeholders and community organizations a mailing list of approximately 280 individuals was developed. This group of individuals received numerous eblasts that provided background on the Wilmington EMPOWER project, community meeting times and locations, survey information, and survey intercept times and locations. Council District 15 also assisted in distributing fliers with project and meeting details throughout the community to increase awareness of the project effort and community survey.



In an effort to further promote the Wilmington EMPOWER project, the project team presented at meetings of various community groups listed above and conducted surveys in the Wilmington area. Table 2-1 lists the events at which project team staff attended to present the project, conduct in-person surveys, and distribute hard copies of the EMPOWER survey or other project materials.

In addition to conducting in-person electronic surveys, the project team also returned to the local community groups to collect hard-copy surveys that were distributed among neighborhood groups. The paper surveys were entered electronically by the project team to allow for tabulation and review of results between all surveys received through Metroquest’s survey reports. At the conclusion of the survey period, which lasted approximately 5 weeks, 208 surveys were completed by Wilmington stakeholders.

TABLE 2-1 – SUMMARY OF WILMINGTON EMPOWER OUTREACH EVENTS ATTENDED

EVENT	DATE/TIME	LOCATION
Wilmington Neighborhood Council Meeting with presentation by Wilmington EMPOWER Team	Wednesday, November 14,2012	Wilmington Senior Center, 1371 Eubank Avenue, Wilmington, CA 90744
EMPOWER Community Meeting	Thursday, November 15,2012	Wilmington Recreation Center, 325 N. Neptune Avenue, Wilmington, CA 90744





Wilmington Resident Groups Presentation	Monday November 26, 2012	626 N. Avalon Boulevard Wilmington, CA 90744
Wilmington Farmers Market	Thursday, November 29, 2012	Wilmington Farmers Market, 544 Avalon Boulevard, Wilmington, CA 90744
Wilmington Boys & Girls Club	Thursday, November 29, 2012	Wilmington Boys & Girls Club, 1444 W. Q Street, Wilmington, CA 90744
Port of Los Angeles Wilmington Winter Wonderland	Saturday, December 1, 2012	604 W. C Street Wilmington, CA 90744
Wilmington Chamber of Commerce Heart of the Harbor Holidays Parade	Sunday, December 9, 2012	Avalon Boulevard
Wilmington Chamber of Commerce Business Mixer	Thursday, December 13, 2012	Crowne Plaza Harbor Hotel, 601 S. Palos Verdes Street Wilmington, CA 90731



SURVEY RESULTS

The feedback from the survey can be categorized in three areas:

1. Desired Outcomes
2. Facility Preferences
3. Additional Comments

Desired Outcomes

The survey process of selecting and prioritizing “Desired Outcomes” for mobility in the Wilmington community concluded with three main results:

- The number of times an improvement option was ranked
- The combined average ranking of that improvement (1 being most prioritized and 5 least prioritized)
- Specific responses submitted by survey respondents

Table 2-2 displays the number of times an improvement option was ranked and the combined average ranking of each improvement. Responses that were added by respondents will be discussed in a later section of this chapter.





TABLE 2-2 – WILMINGTON EMPOWER SURVEY DESIRED OUTCOMES RESULTS

Desired Outcomes	Times Ranked	Combined Average
Increased On-Street Parking	44	2.39
Reduced Auto Speeds	53	2.43
Pedestrian Safety and Comfort	100	2.57
More Transit Service	74	2.79
Reduced Auto Congestion	50	2.80
Increased Foot Traffic	39	2.87
Less Through Truck Traffic	55	2.87
Improved Streetscape	83	3.03
Increased Off-Street Parking	33	3.12
Bicycle Safety and Comfort	67	3.27

Table 2-2 lists the Desired Outcomes options in ascending order of the combined average, which shows the improvements that were most highly ranked by respondents. As shown, the outcomes that were most often ranked do not correspond to the outcomes that were ranked by the most number of survey respondents. The most ranked outcome was for pedestrian safety and comfort (ranked 100 times) and the least ranked outcome was for increased off-street parking (ranked 33 times). The outcome with the lowest combined average (highest priority) was increased on-street parking and the outcome with the highest combined average (least priority) was bicycle safety and comfort. Figure 2-3 displays the “Desired Outcomes” results in order of the lowest combined average.





1
Increased On-Street Parking Supply in Business/Retail Areas
(parallel, perpendicular or angled)
Aumentar Estacionamiento en la Calle en Áreas Comerciales (es-
tacionamiento perpendicular, paralelo, o en ángulo en la calle)



2
Reduced Auto Speeds
Reducción de la Velocidad de Autos



3
Improved Pedestrian-Safety and Comfort
Mejorar Seguridad Y Comodidad Peatonal



4
More Transit Service (such as new routes
or more frequent buses)
Más Servicio de Tránsito (como nuevas rutas
o servicio más frecuente)



5
Reduced Auto Congestion
Reducción de la Congestión de Autos



6
Increased Foot Traffic in Business/Retail Areas
El Aumento de Peatones en Áreas Comerciales



7
Less "through" Truck Traffic
Menos Tráfico de Camiones



8
Improved Streetscape (such as trees and landscaping)
Mejorar Diseño de Calles (como árboles y paisajismo)



9
Increased Off-Street Parking Supply in Business/Retail Areas
(parking lots, structures or garages)
Aumentar Estacionamiento Fuera de la Calle en Áreas
Comerciales (en estructura, aparcadero, o garaje)



10
Improved Bicycle-Safety and Comfort
Mejorar Seguridad Y Comodidad Para Bicicleta



Facility Preferences

The survey process of selecting and prioritizing “Facility Preferences” for mobility in Wilmington was identical to the process discussed above for “Desired Outcomes.”

TABLE 2-3 – WILMINGTON EMPOWER SURVEY FACILITY PREFERENCES RESULTS

Facility Preference	Times Ranked	Combined Average
Improved Streetscape	72	2.36
Pedestrian Security and Safety	89	2.43
More Parking in Retail Areas	40	2.68
Vehicular Improvements	38	2.76
Separated Bicycle Lanes	40	2.78
On-Street Bicycle Lanes/Routes	36	2.78
Amenities at Bus Stops	56	2.79
More Transit Service	57	3.04
Wayfinding and Signage	47	3.19
Improved/Wider Sidewalks	69	3.26
Bicycle Parking/Racks	47	3.28



Table 2-3 lists the Facility Preferences options in ascending order of the combined average, which shows the improvements that were most highly ranked by respondents. As can be seen, the outcomes that were most often ranked do not necessarily correspond to the outcomes that were ranked by the most number of survey respondents. The most ranked outcome was for pedestrian safety and security (ranked 89 times) and the least ranked outcome was for on-street bicycle lanes/routes (ranked 36 times). The outcome with the lowest combined average (highest priority) was improved streetscape and the outcome with the highest combined average (least priority) was bicycle parking/racks. Figure 2-4 displays the "Facility Preferences" results in order of the lowest combined average.

Wilmington EMPOWER Survey Comments

In addition to ranking the options listed in the survey, respondents also had the flexibility of identifying priorities most important to them that may not have been listed in the improvement options. When collecting and reviewing the comments submitted by survey respondents, an attempt was made to categorize the individual comments within the improvement categories included in the survey; however, new categories or comments were noted as necessary. For example, many of the comments fall within the listed categories and respondents are commenting to identify specific locations where this type of improvement is needed. Table 2-4 identifies the compiled improvement comments submitted through the Wilmington EMPOWER survey (approximately 140 write-in comments received).

The survey comments received generally fell under an existing topic area and added detail to the comment. A new category labeled "Placemaking/Livability/Other" was created based on the additional write-in comments received; however, several of these comments were very general or outside the context of mobility. The single comment that appeared the most (11 times) fell under this general category and stated that all of the topics included in the survey are a priority for the Wilmington community. Locations along Figueroa Street, Pacific Coast Highway, Anaheim Street, Wilmington Boulevard, L Street, and Avalon Boulevard were mentioned in multiple comments.





1 Improved Streetscape (such as trees and landscaping)
Mejorar Diseño de Calles (como árboles y paisajismo)



2 Pedestrian Security/Safety
Seguridad de Peatones



3 More Parking in Retail Areas
Aumentar Estacionamiento en Áreas Comerciales



4 Vehicular Improvements
Mejoras Para Vehículos



5 Separated Bicycle Lanes
Carriles para Bicicletas Separados de Tráfico



6 On-Street Bicycle Lane
Instalaciones para Bicicleta en la Calle



7 Amenities at Bus Stops (such as benches, bus shelters,
trash cans, and/or bicycle parking)
Comodidades en Paradas de Tránsito (como sombra, asientos,
estacionamiento para bicicletas, y/o botes de basura)



8 More Transit Service
Más Servicio de Tránsito



9 Wayfinding and Signage
Letreros de Orientación



10 Improved/Wider Sidewalks
Banquetas Mejoradas/Más Amplias



11 Bicycle Parking/Racks
Estacionamiento de Bicicletas

TABLE 2-4 – COMMENTS SUBMITTED THROUGH WILMINGTON EMPOWER SURVEY

TOPIC	COMMENT/LOCATION	TIMES MENTIONED IN SURVEY
Improved Pedestrian Infrastructure		Total: 15
	Install/Enhance Pedestrian Crossings:	1
	-At offset intersections	1
	-Crossings along Anaheim Boulevard	1
	-Near Food-4-Less	1
	Install/Enhance Sidewalks:	1
	-Figueroa Street	1
	-Pacific Coast Highway	2
	-All major streets	1
	-L Street	1
	-Widen sidewalks for wheelchairs	2
	Walking Paths for Errands/Exercise	1





TABLE 2-4 – COMMENTS SUBMITTED THROUGH WILMINGTON EMPOWER SURVEY

TOPIC	COMMENT/LOCATION	TIMES MENTIONED IN SURVEY
	Pedestrian Lighting	1
	General Improvements at Avalon Bl/Harry Bridges Bl	1
Traffic Calming/Pedestrian Safety		Total: 27
	Speed of Traffic:	4
	-Avalon/PCH	2
	-Avalon/Lomita	1
	-Avalon/Anaheim	1
	-Wilmington/Anaheim	1
	Traffic Calming:	2
	-Near schools/school zones	5
	-Banning Wrigley Historic District (Lakme, M Street, L Street)	1
	-Figueroa/F Street	1



TABLE 2-4 – COMMENTS SUBMITTED THROUGH WILMINGTON EMPOWER SURVEY

TOPIC	COMMENT/LOCATION	TIMES MENTIONED IN SURVEY
	Pedestrian Issues:	1
	-Avalon/Anaheim	1
	Increase Foot Traffic Near Avalon/L Street	1
	Enforcement:	1
	-Security/police bicycle patrol	1
	-Enhance visibility of STOP signs	1
	-Vehicles do not yield to pedestrians	3
Improved Bicycle Infrastructure/Safety		Total: 12
	Lack of Bicycle Lanes:	2
	-Leading to recreation opportunities	1
	-Anaheim	1
	-PCH	2





TABLE 2-4 – COMMENTS SUBMITTED THROUGH WILMINGTON EMPOWER SURVEY

TOPIC	COMMENT/LOCATION	TIMES MENTIONED IN SURVEY
	-Avalon	1
	-Wilmington	1
	-Broad/Lakme	1
	Lack of Bicycle Parking:	1
	-Bike theft an issue	1
	-Near commercial destinations	1
Enhance Transit Service		Total: 32
	Improve DASH/Metro Bus Service:	3
	-Beach cities to LAX along PCH	1
	-Driver etiquette/improve customer service	2
	-Route to/from San Pedro	1
	-Buses too crowded	2
	-Buses are not clean	1



TABLE 2-4 – COMMENTS SUBMITTED THROUGH WILMINGTON EMPOWER SURVEY

TOPIC	COMMENT/LOCATION	TIMES MENTIONED IN SURVEY
	-Provide more frequent bus service or bigger buses	3
	-Line 232 inconsistent	1
	Improve Rail Connections:	3
	-Wilmington to downtown Los Angeles	3
	-Monorail	1
	-Less bus and more mass transit	1
	Bus Stops:	
	-Provide more amenities (i.e., trash, shade, benches)	3
	-Cleaner bus stops	1
	-Bilingual maps at stops that are more user-friendly	1
	-Bus stops on Anaheim need attention	1
	Important Service for Community	1





TABLE 2-4 – COMMENTS SUBMITTED THROUGH WILMINGTON EMPOWER SURVEY

TOPIC	COMMENT/LOCATION	TIMES MENTIONED IN SURVEY
	Make it Easier To Carry Items On Bus (i.e. groceries)	1
	Enhance Security on Bus	1
	Enhance Security at Bus Stops	1
Truck Traffic		Total: 3
	Limit Circulation on Residential Streets	2
	Trucks off PCH onto Harry Bridges Bl	1
Wayfinding/Signage		Total: 4
	Wayfinding on Anaheim Bl	1



TABLE 2-4 – COMMENTS SUBMITTED THROUGH WILMINGTON EMPOWER SURVEY

TOPIC	COMMENT/LOCATION	TIMES MENTIONED IN SURVEY
	Remove Sign Clutter	1
	Wayfinding/Signage for Historic Landmarks	1
	Old Signage Sometimes Illegible	1
Improved Streetscape		Total: 22
	Recycling and Trash Cans	1
	Landscaping:	
	-Hanging planters	2
	-Street trees	1
	-PCH	1
	-Broad Av	1
	-L St	1





TABLE 2-4 – COMMENTS SUBMITTED THROUGH WILMINGTON EMPOWER SURVEY

TOPIC	COMMENT/LOCATION	TIMES MENTIONED IN SURVEY
	Improved Street Maintenance:	1
	-Street sweeping	2
	-Underground utilities	1
	-Fix potholes	3
	-Commercial areas (i.e. Avalon/Anaheim)	1
	-Community beautification training	1
	Billboard and Commercial Sign Maintenance/Clutter	1
	Street Lighting	3
	Model Streetscape after Harry Bridges BI Improvements	1
	Crime Prevention Through Beautification	1
Vehicular Improvements		Total: 4
	Improve Signal Timing	3



TABLE 2-4 – COMMENTS SUBMITTED THROUGH WILMINGTON EMPOWER SURVEY

TOPIC	COMMENT/LOCATION	TIMES MENTIONED IN SURVEY
	Wilmington/PCH Is An Area of Concern	1
Parking		Total: 4
	Remove Meter Parking	1
	Insufficient Parking in Commercial Areas	3
Placemaking/Livability/Other		Total: 20
	Hold More Community Events	1
	More Enforcement and Less Crime	4
	More Homeless Services	1
	Educate People About Public Service Opportunities	1





TABLE 2-4 – COMMENTS SUBMITTED THROUGH WILMINGTON EMPOWER SURVEY

TOPIC	COMMENT/LOCATION	TIMES MENTIONED IN SURVEY
	All Survey Topics Are a Priority	11
	Less Pollution	1
	Create A More Vibrant and Beautiful Wilmington	1

A total of four topics received 20 or more write-in comments:

- Enhance Transit Service – 32 comments
- Traffic Calming/Pedestrian Safety – 27 comments
- Improved Streetscape – 22 comments
- Placemaking/Livability/Other – 20 comments



The topics of “Improved Pedestrian Infrastructure” and “Improved Bicycle Infrastructure and Safety” were the only other topics to receive more than four comments (15 and 12 comments, respectively). The summary of all comments received, raw results for the entire survey, and write-in comments received are shown in Appendix D.

Wilmington EMPOWER Survey Results Summary

The Wilmington EMPOWER survey was utilized to initiate a process of prioritizing and discussing the mobility needs and opportunities in the Wilmington community. The number of survey responses, number of times an improvement was ranked, combined ranking averages, and specific comments received can be used to identify the five improvement types prioritized by respondents of the Wilmington EMPOWER survey:

- Pedestrian safety and comfort/reduced auto speeds
- Increased parking supply
- Improved streetscape
- Enhanced transit service
- Reduced auto congestion

The data collected in the survey was used in conjunction with local transportation data and additional discussions with city staff and local stakeholders to identify improvement projects that facilitate mobility in the Wilmington community.



3. EXISTING CONDITIONS AND PLANNED IMPROVEMENTS

This section includes an introduction to the Wilmington EMPOWER study area and provides information on data sources used to review and present existing demographic, land use, and regional travel information for the study area.

DATA SOURCES

Summaries of the various data sources utilized for this effort are provided below:

- Zoning and land use information: City of Los Angeles General Plan, Wilmington/Harbor City Community Plan, Zone Information and Map Access System (ZIMAS)
- Demographic information: City of Los Angeles Travel Demand Forecasting Model, United States Census 2010
- Regional travel data: City of Los Angeles Travel Demand Forecasting Model
- Public transit information: Los Angeles County Metropolitan Transportation Authority
- Collision data: Statewide Integrated Traffic Records System (SWITRS)



- Segment counts: Prior studies conducted in the study area since 2008
- Field observations: Fehr & Peers study area visit

LAND USE AND ACTIVITY CENTERS

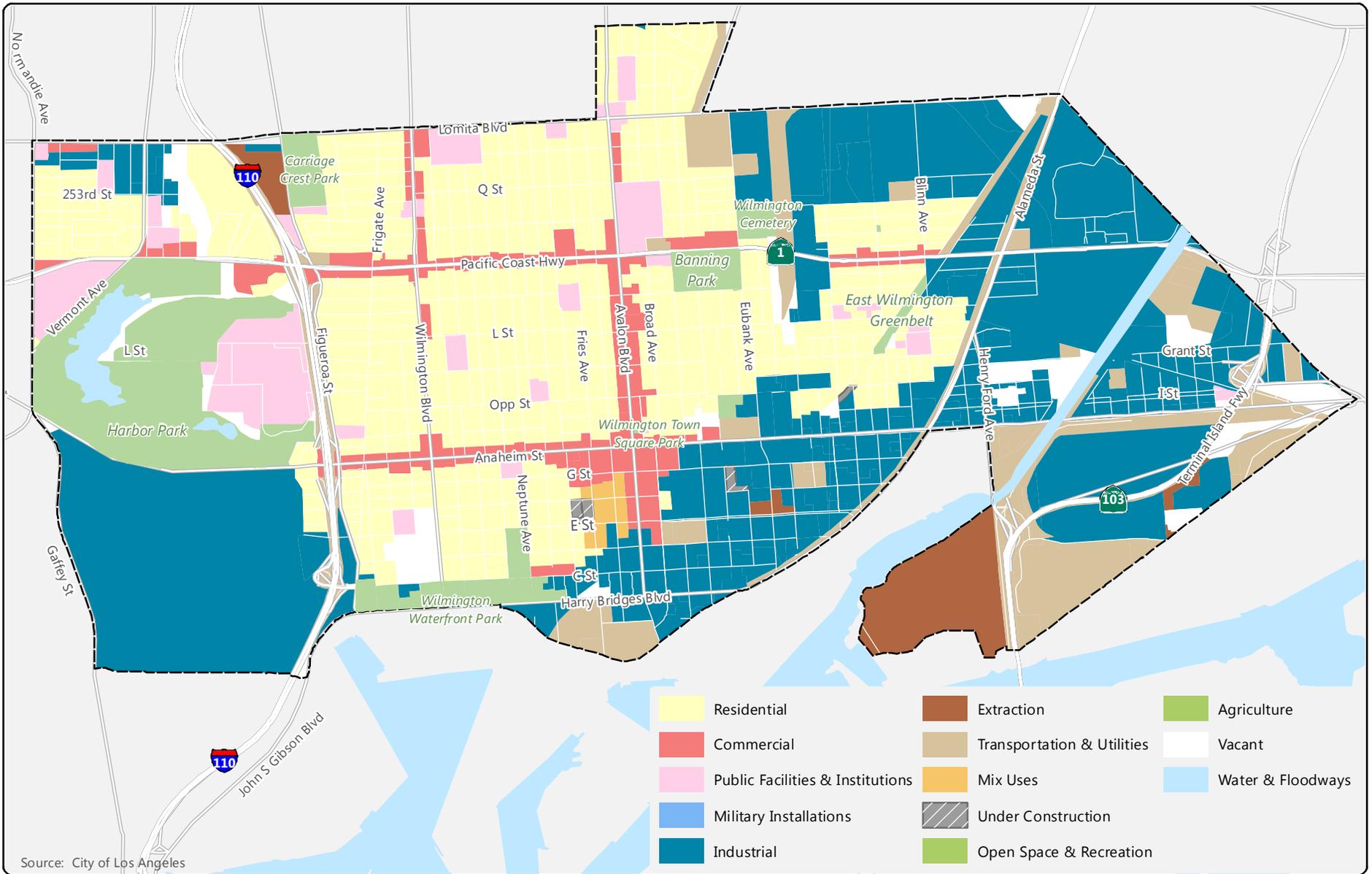
The land uses that make up the study area are shown in Figure 3-1. The largest share of land use by acreage within the Wilmington study area is occupied by single-family and multi-family residential housing, particularly in the area bounded by Figueroa Street to the west, Lomita Boulevard to the north, Eubank Avenue to the east, and Anaheim Street to the south. The land uses directly fronting Avalon Boulevard, Wilmington Boulevard, Pacific Coast Highway, and Anaheim Street are predominantly commercial uses serving the local community.



Following residential uses, industrial uses comprise the largest remaining land area and are located along the eastern portion of the study area. Many of the industrially zoned uses support the Ports of Los Angeles and Long Beach immediately south of the Wilmington community. Recent redevelopment efforts, known as the Wilmington Waterfront Project, have been focused along Harry Bridges Boulevard, providing over 11 acres of open space, street beautification, pedestrian linkages, water features, plazas and event spaces, and commercial opportunities. The Wilmington-Harbor City Community Plan identifies the following major opportunity sites:

- Avalon Boulevard and Anaheim Street commercial district (with approved merchant-based Business Improvement District [BID])
- Commercially zoned land on Avalon Boulevard south of Harry Bridges Boulevard
- Wilmington Industrial Park located east of Avalon Boulevard and south of Anaheim Street





Not to Scale



Public facilities and institutions make up a small fraction of the land use in the study area. The Wilmington Library on Avalon Boulevard is a branch of the Los Angeles Public Library system. Banning High School is located two blocks north of the library and includes public aquatic facilities. In addition to Banning High School and Harbor College, Wilmington has one middle school and four elementary schools, along with a number of private schools in the study area. A skate park and recreation center are located at the Wilmington Recreation Center, at Neptune Avenue & C Street, just north of the newly developed Wilmington Waterfront Park. Additional public facilities include Banning Park, Banning's Landing, the Drum Barracks, Camp Drum Powder Magazine, and East Wilmington Greenbelt Park.



DEMOGRAPHICS

A summary of the study area’s demographic characteristics based on data from the 2010 Census is provided below.

Population: The Wilmington community has approximately 58,500 residents. As illustrated in the adjacent exhibits, approximately 60% of the study area population is 34 years of age or younger, with 32% of the total area population 17 years or younger. Approximately nine percent of the Wilmington population is 62 years or older. In addition to age, population data was also summarized by ethnicity. By far, the Latino/Hispanic category accounts for the greatest proportion of the population at 82%. Three ethnic categories, White, African-American, and Asian, Hawaiian, and other Pacific Islander are close seconds, each with four to five percent of the study area population.

EXHIBIT 3.2 - WILMINGTON POPULATION BY ETHNICITY

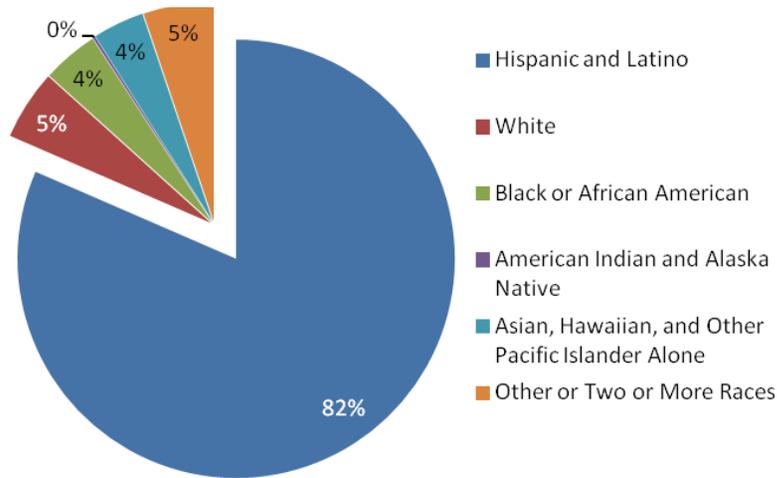
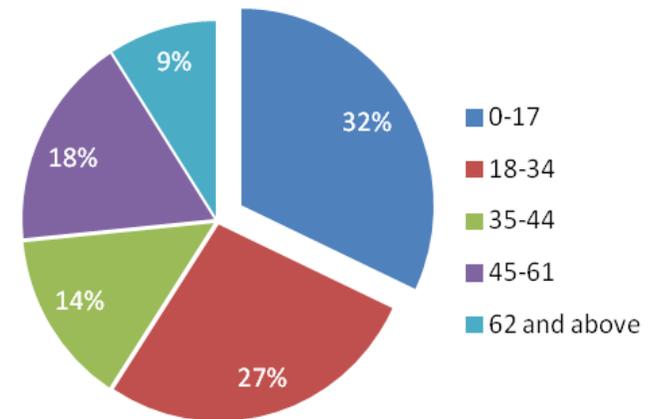


EXHIBIT 3.1 - WILMINGTON POPULATION BY AGE





Employment: According to the 2010 Census, approximately 28,700 Wilmington residents are in the labor force. Service industries represent the employment sector for the greatest proportion of Wilmington residents, accounting for about 43% of residents. Service industries include information, finance, real estate, waste management, educational, health, entertainment, food, hospitality, professional, scientific, and management services. Construction and manufacturing represent the second highest employment sector (19%) and wholesale and resale trade comprising the third highest sector (13%). Public administration and agriculture, forestry, fishing, hunting, and mining represent the lowest rate of employment by industry at two and one percent, respectively.

EXHIBIT 3.3 - WILMINGTON EMPLOYMENT BY INDUSTRY

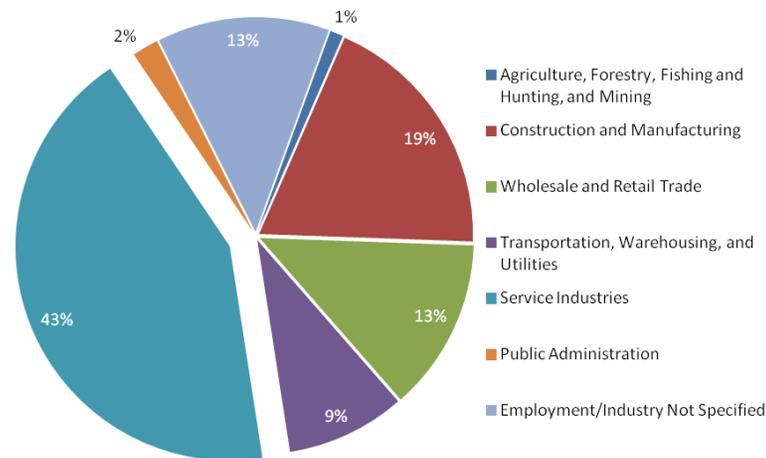
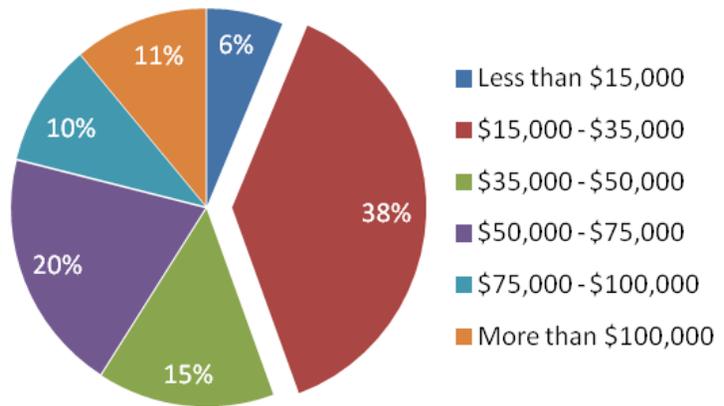


EXHIBIT 3.4 - WILMINGTON HOUSEHOLDS BY INCOME



Income: Approximately 38% of Wilmington households are in the income range of \$15,000 to \$35,000 per year. The second largest proportion of Wilmington households fall into the \$50,000 to \$75,000 per year at 20% and the third largest proportion falls in the \$35,000 to \$50,000 range with 15%. Together, these three income ranges account for nearly three-quarters of households. The income categories at the lowest and highest ends of the spectrum (i.e., less than \$15,000 and over \$100,000 of yearly income) each account for approximately 10% of households in the Wilmington study area.

Access to Vehicles: Data from the 2010 Census indicates that 88% of Wilmington households have access to a vehicle. Local statistics available from the Department of City Planning’s website based on the 2000 census indicate that 81% of residents drive alone (62%) or carpool (19%) and six percent utilize public transportation. Meanwhile, another 11% use unspecified means and two percent work at home.



HIGHWAY SYSTEM

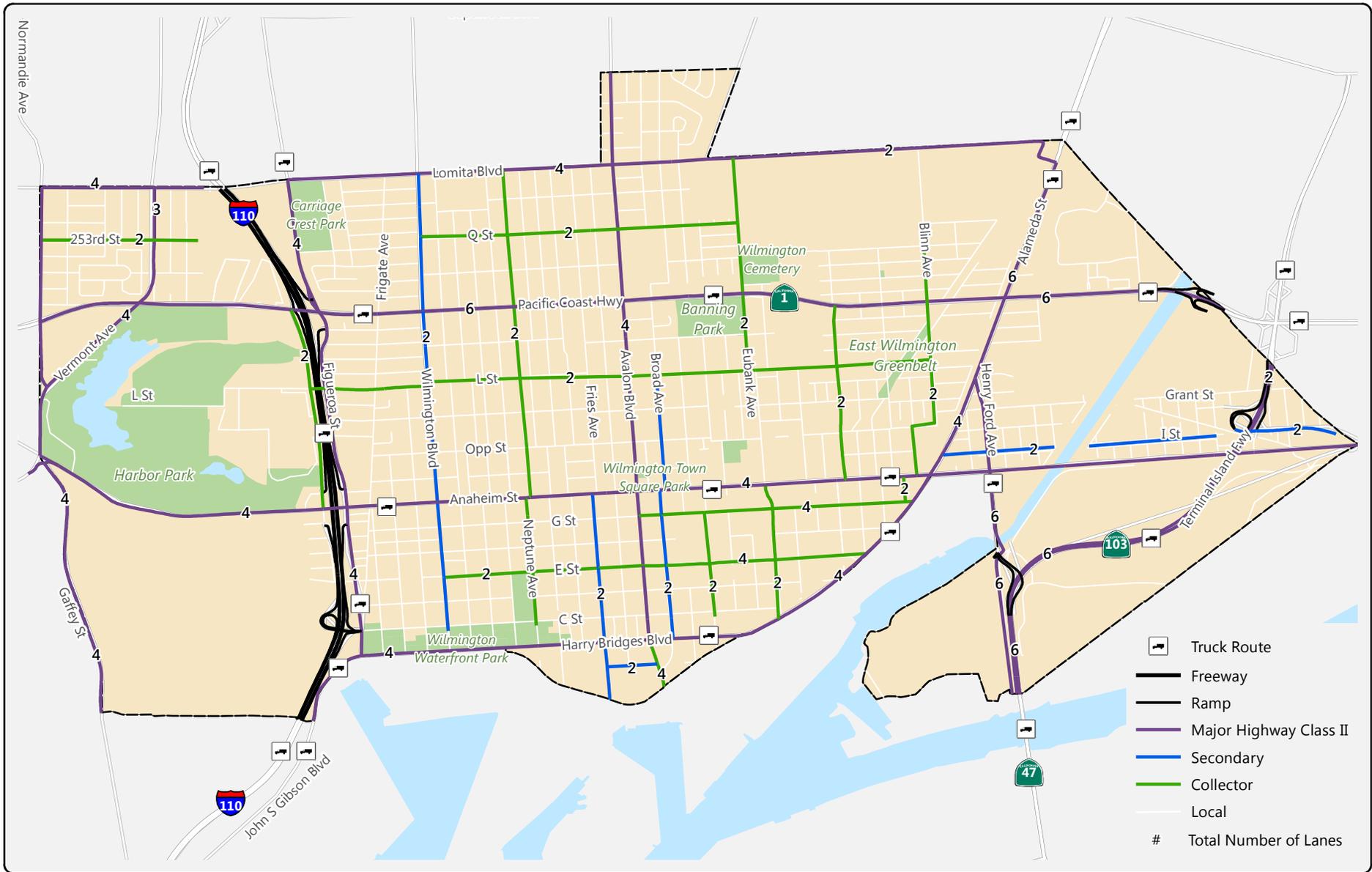
The Wilmington study area is transected by a series of roadways including major highways and a network of collector and local streets. The Wilmington community is also in close proximity to several major freeways. These roadway categories reflect the current classifications utilized by LADOT, as shown in Figure 3-2 for the Wilmington study areas.

The major streets in the study area, as classified by LADOT, are discussed below.

Freeways

Primary regional access to the project area is provided by the Harbor Freeway (I-110) near the western edge of the study area. The freeway runs from San Pedro to downtown Los Angeles, and has interchanges with the I-405, SR-91, and I-105 freeways. South of I-405, it generally provides four mainline lanes in each direction plus auxiliary lanes. North of SR-91 it provides one or two high occupancy vehicle (HOV) lanes in each direction. Access to the project area from I-110 is provided via the ramps at C Street, Anaheim Street, and Pacific Coast Highway. State Route 103, also known as the Terminal Island Freeway, connects Terminal Island to Wilmington.





Not to Scale

Major Highways

The Wilmington study area contains a network for major highways traveling both north-south and east-west. These major highways generally have four to six travel lanes and are designed to carry high volumes of traffic while providing some access to adjacent properties. These highways generally function as major arterial roadways, based on the standard classifications from the American Association of State Highway and Transportation Officials (AASHTO). Some of the major highways in the study area include Alameda Street, Anaheim Street, Avalon Boulevard, Figueroa Street, Harry Bridges Boulevard, John S. Gibson Boulevard, Lomita Boulevard, and Pacific Coast Highway. All of the major highways in the Wilmington study area are Class II Major Highways under the City's classification.



Secondary Highways

Secondary highways are generally two- to four-lane roadways that supplement the major highways. These roadways are designed to carry some level of traffic while also providing access to adjacent properties. These roadways would be classified as minor arterials in a standard roadway classification scheme. Some of the secondary roadways in the study area include Wilmington Boulevard, Fries Avenue south of Anaheim Street, and Broad Avenue south of L Street.

Collector & Local Streets

The network of Major and Secondary Highways is complemented by an extensive network of collector and local streets. Collector streets provide connections between the arterial system and local streets that generally provide direct access to adjacent properties. Example collector streets include L Street, E Street, G Street east of Avalon Boulevard, Neptune Avenue, and Eubank Avenue.

Automated Traffic Surveillance and Control/Adaptive Traffic Control System

Automated Traffic Surveillance and Control (ATSAC) and Adaptive Traffic Control System (ATCS) provide intelligent transportation system (ITS) management on signalized corridors in the City of Los Angeles. These systems are designed to improve signal coordination in response to real-time traffic conditions. Since October 2012, ATSAC and ATCS have been implemented at 62 intersections in Wilmington.



TRAVEL PATTERNS

The land use patterns and concentration of employment and distribution centers within the study area result in substantial trips in and out of the study area. As shown in Figure 3-3, based on estimates from the City of Los Angeles sub-area travel demand forecasting (TDF) model (derived from the 2008 SCAG RTP model), of all trips that start or end in Wilmington, approximately 40% of weekday trips that originate in the study area are destined for a location outside the study area. Another 40% of weekday trips originate outside of the study area and are destined for a location within the Wilmington study area. The remaining 20% of trips start and end within the study area.

Figure 3-3 - Regional Travel Patterns



TRUCK TRAFFIC, RAIL, AND FREIGHT

Wilmington's proximity to the Ports of Los Angeles and Long Beach results in a high volume of freight moving through the study area on a combination of trucks and rail lines. Trucks are intended to circulate through the area on a network of designated truck routes and freeways that facilitate access to the shipping yards and the movement of goods through the region. However, the local community has expressed concerns regarding issues with neighborhood intrusion of trucks and regional through traffic.

If the freight is not transported on trucks, it is likely moved along one of the two railroads, Union Pacific Railroad (UP) and Burlington Northern Santa Fe (BNSF) Railway that are maintained by Pacific Harbor Line (HPL) within the harbor area. The harbor freight moved by these railroads utilize the Alameda Corridor, a 20-mile rail line that provides a direct grade-separated connection from the ports to railroad lines near downtown Los Angeles. As shown in Figure 3-2, the designated truck routes in the Wilmington study area include:

- I-110 Freeway
- SR-47/SR-103 – Terminal Island Freeway
- Figueroa Street
- Alameda Street





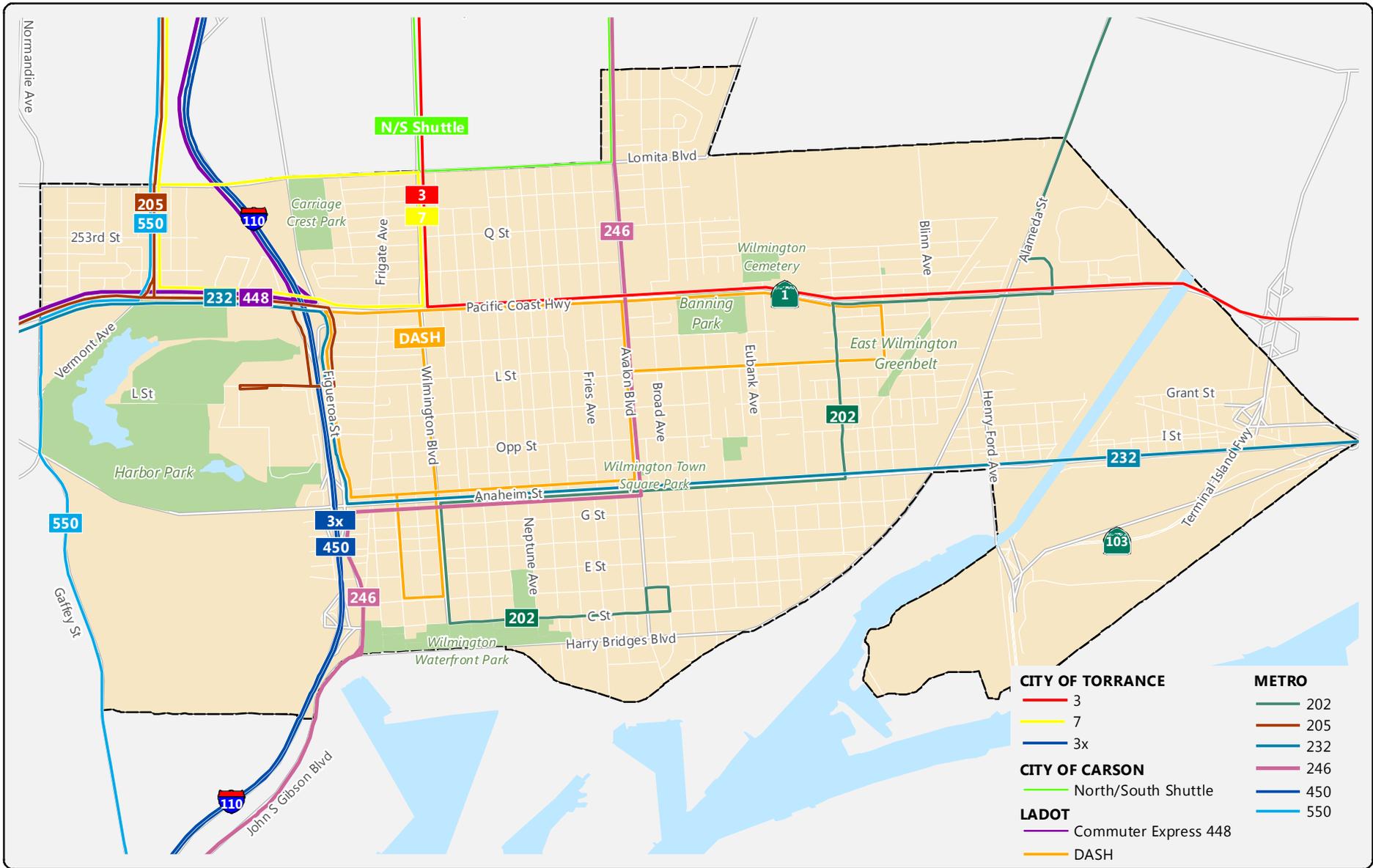
- Henry Ford Avenue between Anaheim Street and SR-103
- Harry Bridges Boulevard
- Pacific Coast Highway east of I-110
- Anaheim Street between I-110 and Alameda Street

PUBLIC TRANSIT SYSTEM

The study area is served by four transit agencies: the Los Angeles County Metropolitan Transportation Authority (Metro), LADOT, the City of Carson, and the City of Torrance. The bus transit lines in the project area are shown in Figure 3-4 and described below:

- Metro 246 – This transit line provides service between Point Fermin Park on Paseo del Mar in the Los Angeles (San Pedro) Harbor area and Artesia Transit Center in Gardena. In the study area, this line travels on John S. Gibson Boulevard, Anaheim Street, and Avalon Boulevard.
- Metro 202 – This transit line provides service between C Street in Wilmington and the Rosa Parks Station where the Metro Blue Line connects with the Metro Green Line near Imperial Highway in Willowbrook. In the study area, this line travels on C Street, D Street, Avalon Boulevard, Wilmington Boulevard, Anaheim Street, Sanford Avenue, Pacific Coast Highway and Alameda Street.
- Metro 232 – This transit line provides service between 1st Street in downtown Long Beach and the Mariposa/Nash Metro station in El Segundo via the LAX CityBus Center. In the study area, the line travels on Pacific Coast Highway, Figueroa Street, and Anaheim Boulevard.





Not to Scale

- DASH Wilmington – This transit line, operated by LADOT, circulates in the Wilmington area providing local and connector service to the regional Metro transit line at the Harbor Freeway Transit Station at Pacific Coast Highway. In the study area, the line circulates along Figueroa Street (north of Anaheim Street), Hawaiian Avenue, Wilmington Avenue, Avalon Boulevard (north of Anaheim Street), C Street, and Anaheim Street. It operates every 15 minutes on weekdays between 7:00 AM and 7:00 PM.
- City of Carson North/South Shuttle – This shuttle provides service between Artesia Transit Center in Gardena and the intersection of Lomita Boulevard and Avalon Boulevard. In the study area, the shuttle travels on Lomita Boulevard.
- Torrance Transit Route 3 – This transit line provides service between 1st Street in downtown Long Beach and the Redondo Beach Pier. In the study area, the line travels on Wilmington Boulevard and Pacific Coast Highway.
- Torrance Transit Route 7 – This transit line provides service between Pacific Coast Highway & Wilmington Avenue in Wilmington and the Redondo Beach Pier. In the study area, the line travels on Wilmington Boulevard, Pacific Coast Highway, and Vermont Avenue.
- Commuter Express 448 – This transit line provides service between Crest Road in Rancho Palos Verdes and Temple Street in downtown Los Angeles. In the study area, the line travels on Pacific Coast Highway.



- Municipal Area Express Line 3X – This transit line provides service between 25th/USAF Housing in San Pedro and the Aviation Green Line Station in Los Angeles. In the study area, the line travels on the Harbor Freeway.
- Metro 450 – This transit line provides service between Pacific/21st in San Pedro and 5th/Beaudry in downtown Los Angeles. In the study area, the line travels on I-110, also referred to as the Harbor Transitway when referring to Metro route 450. This transit route utilizes a freeway station stop on the Harbor Transitway at Pacific Coast Highway in the study area.
- Metro 550 – This transit line provides service between 7th/Patton in San Pedro and 32nd/Hoover in Exposition Park. In the study area, the line travels on Vermont Avenue, Pacific Coast Highway, and Normandie Ave/Gaffey Street.
- Metro 205 – This transit line provides services between 13th/Gaffey in San Pedro and the Imperial/Wilmington Station where the Metro Blue Line connects with the Metro Green Line near Imperial Highway in Willowbrook.
- Harbor Transitway – The Harbor Transitway is the name given to the transit-serving facilities implemented on I-110 to facilitate express transit between San Pedro and downtown Los Angeles. In the study area, the Harbor Transitway includes a stop on I-110 at Pacific Coast Highway and a park-n-ride lot on the northeast corner of Figueroa Street and Pacific Coast Highway. The bus boarding area is at freeway level so that the bus does not to exit the freeway to load or unload passengers.

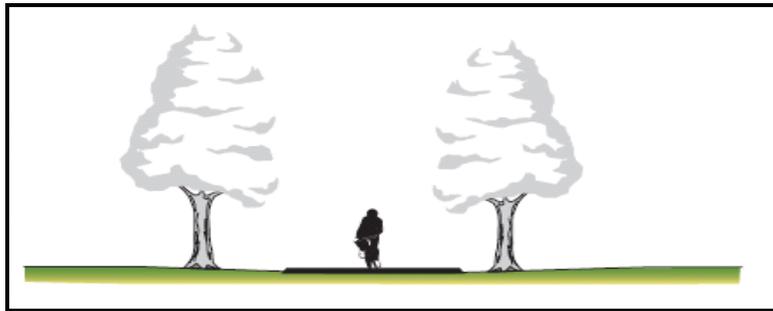
BICYCLE AND PEDESTRIAN SYSTEM

Non-motorized transportation includes biking and walking, and typically serves shorter trips than motorized travel. Bikeways facilitate and encourage this mode of non-motorized transportation. Class I bikeways are defined as separate off-street paths; Class II bikeways are defined as striped lanes within streets; and Class III bikeways are defined as signed bicycle routes. Pedestrian access at and near public transit and in local commercial and residential areas is facilitated by sidewalks, which are present on most streets.



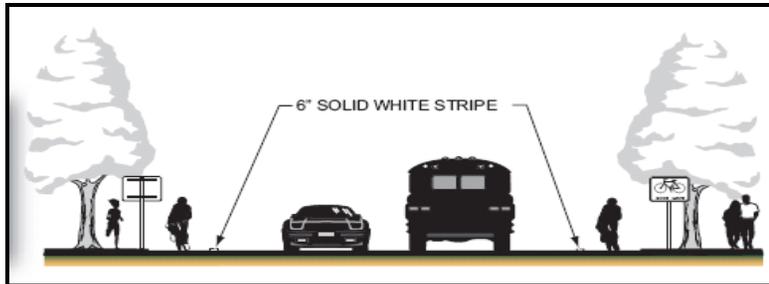
Bicycle facilities are described in further detail below.

- Class I Bikeway (Bike Path) provides a completely separate right-of-way and is designated for the exclusive use of bicycles and pedestrians with vehicle and pedestrian cross-flow minimized.

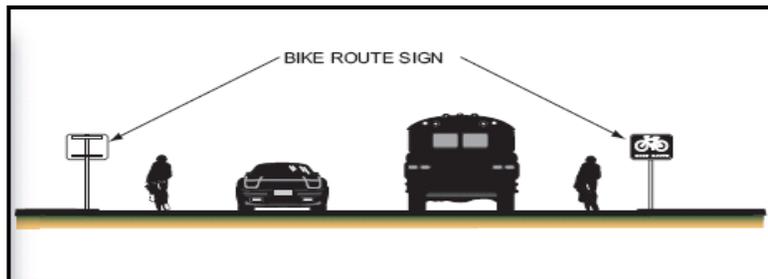


- Class II Bikeway (Bike Lane) provides a restricted right-of-way and is designated for the use of bicycles with a striped lane on a street or highway. Bicycle lanes are generally five feet wide. Vehicle parking and vehicle/pedestrian cross-flow are permitted.





- Class III Bikeway (Bike Route) provides for a right-of-way designated by signs or pavement markings, such as sharrows, for shared use with motor vehicles.



- Commuter Bikeway provides some of the benefits of the Class II Bikeways by restricting curbside vehicle parking during morning and evening peak hours. The minimum curb lane width is typically 14 feet.

The following designated bicycle facilities are within the project area, as shown in Figure 3-5:

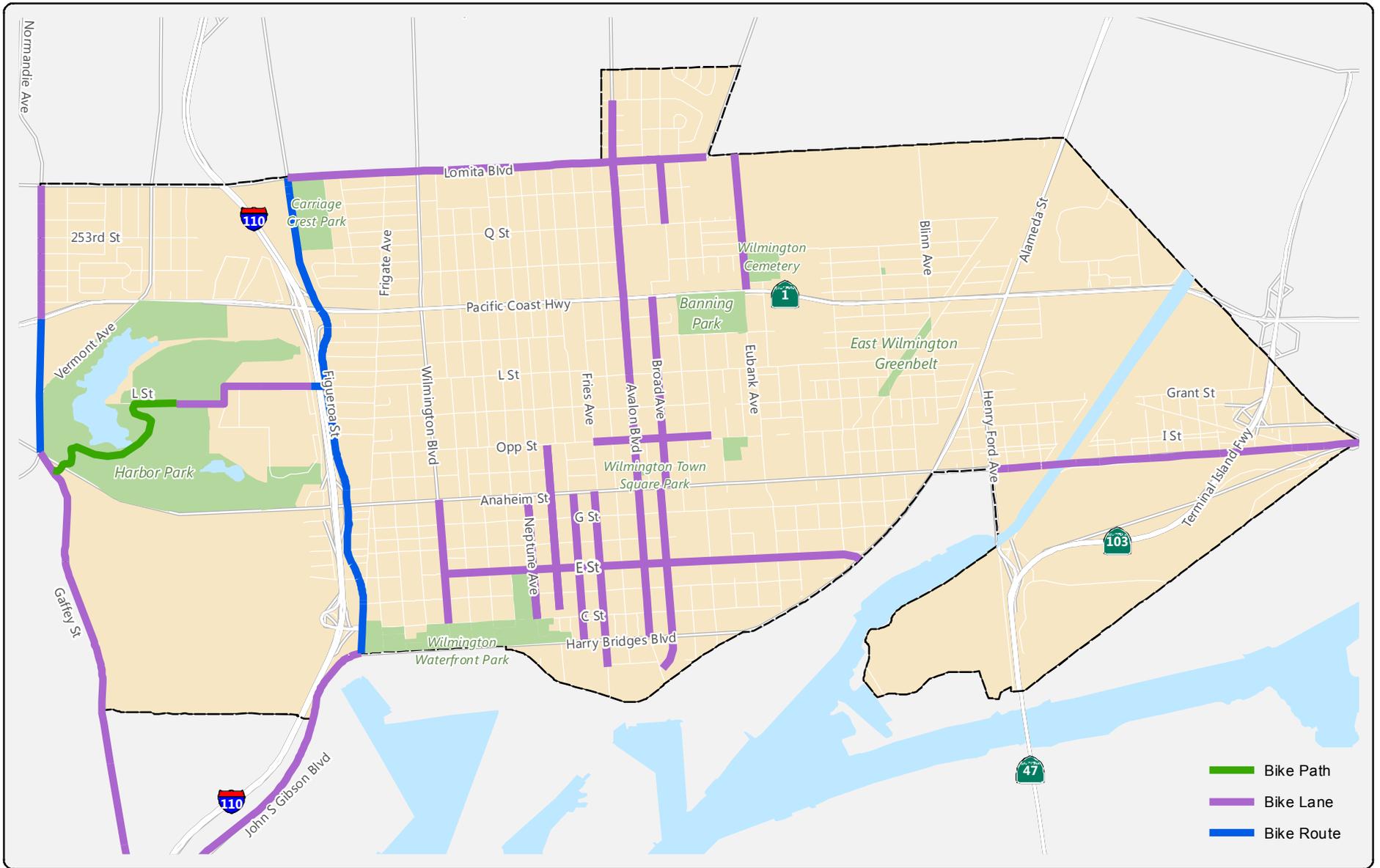
Class I Facilities (Bicycle Paths)

- Harbor Park bike path connecting Harbor College to Anaheim Street and Gaffey Street

Class II Facilities (Bicycle Lanes)

- Avalon Boulevard from Harry Bridges Boulevard to 246th Street
- Anaheim Street from Henry Ford Avenue to Wilmington's eastern limit
- Normandie Avenue from Lomita Boulevard to Pacific Coast Highway
- Gaffey Street from Anaheim Street beyond Wilmington's southern limit
- L Street from Figueroa Place to Harbor Golf Practice Center
- John S. Gibson Boulevard from Figueroa Street beyond Wilmington's southern border
- Lomita Boulevard from Figueroa Street to Wilmington Avenue (implemented 2013)
- Opp Street from Fries Avenue to Banning Boulevard (implemented 2013)
- E Street from Wilmington Boulevard to Alameda Street (implemented 2013)
- Wilmington Boulevard between Anaheim Street and C Street (implemented 2013)
- Neptune Avenue between Anaheim Street and C Street (implemented 2013)
- Fries Avenue from Anaheim Street to A Street (implemented 2013)
- Broad Avenue between Pacific Coast Highway and Avalon Boulevard (implemented 2013)





Not to Scale



Class III Facilities (Bicycle Routes)

- Figueroa Street from Lomita Boulevard to Harry Bridges Boulevard
- Normandie Avenue from Pacific Coast Highway to Anaheim Street

While sidewalks are generally provided in the study area, the quality of the pedestrian infrastructure varies throughout the area based on differing sidewalk widths, varying sidewalk conditions, and the provision of marked uncontrolled crossings along major and secondary highways. The following locations were observed to include sidewalks that reflect positive practices and can serve as examples of quality streetscape design for the Wilmington community:

- Wilmington Boulevard south of Pacific Coast Highway: wide (10'+) and clear sidewalks
- Anaheim Street & Avalon Boulevard: wide and clear sidewalks, decorative crosswalks, bus stops with amenities, signage and markings at uncontrolled crosswalks, pedestrian scale-lighting, and intermittent trees
- Harry Bridges Boulevard adjacent to Wilmington Waterfront Park: wide and clear sidewalks, bus stops with amenities, row of trees serving as buffer, landscaping along northern sidewalk, and a landscaped median



The following locations were observed to lack sidewalks, include sidewalks that are in need of significant repair, or represent an opportunity for significant improvements to the pedestrian environment:

- McFarland Avenue near E Street: lacks sidewalks and barriers from the on-street at-grade rail line
- Lomita Boulevard: missing sidewalks in the area of Wilmington Avenue
- Streets in industrial areas, such as Quay Avenue or Alameda Street, lack sidewalks or have very narrow sidewalks with utility poles that result in a clear sidewalk width less than four feet wide

The character of land uses tends to correlate to the quality of the pedestrian environment in Wilmington, where industrial zones have lacking or limited pedestrian infrastructure, while residential and commercial areas tend to have adequate pedestrian infrastructure. One street that exemplifies this condition is Eubank Avenue, where the provision of pedestrian facilities is adequate in the northern portion of the study area. However, as one travels south in the study area toward industrial uses, the quality or provision of sidewalks is diminished.

Collision Assessment

A review of the SWITRS collision data was conducted in an effort to draw on available collision data and provide a snapshot of roadway safety in Wilmington. The collision reports identify crash locations; however, many factors that influence collision rates are not location-specific, such as time of day, weather conditions, degree of sobriety, and age of parties involved. It should also be noted that the review below is based on the absolute number of collisions. A more accurate measure of evaluation would be collision rates based on the number of vehicles in the area. Locations with high numbers of collisions may also serve high number of vehicles such that the rate of accidents would be lower (safer) than a location with a comparable number of collisions that serves fewer vehicles.





The review included four years of data from 2008 through 2011. The following statistics were derived from the collision data:

- There were approximately 660 collisions in Wilmington during this period, which equates to approximately 165 accidents per year.
- The 660 collisions resulted in four fatalities and 443 injuries over the time period (multiple injuries were recorded for some collisions).
- Based on census population data and SWITRS collision data, the City of Los Angeles had a rate of approximately .03 accidents per person from 2008 to 2011 and Wilmington had a rate of approximately .01 collisions per person.
- Time of day: Approximately 53% of collisions occur during business hours (7:00 AM to 5:00 PM), with 20% occurring between 5:00 and 9:00 PM, and another 20% occurring between 9:00 PM and 3:00 AM. While visibility is generally adequate during business hours, this is the time period during which the greatest number of vehicle and pedestrian activity could reasonably be expected to occur, thus it is not unexpected that this time period includes the greatest share of area collisions.
- Approximately 6% of collisions involved a pedestrian. Two of the collisions involving pedestrians also involved bicycles and the rest were pedestrian-vehicle collisions.
- Approximately 4% of collisions involved a bicyclist (of which two involved a pedestrian as mentioned above). One bicycle collision involved a large truck and the rest were bicycle-vehicle collisions.
- Approximately 4% of collisions involved a large truck (of which one involved a bicyclist as mentioned above).

Collision data was evaluated in additional detail for the development of improvements along specific roadways, such as Avalon Boulevard, Anaheim Street, and Figueroa Street as part of the Wilmington Mobility Plan.



PUBLIC PARKING

Public on- and off-street parking is available in the Wilmington study area. On-street parking is allowed on most streets from arterial streets to local streets. LADOT also operates two free public off-street lots:

- Avalon Boulevard & I Street: 14 spaces
- Marine Street & I Street: 40 spaces

Most on-street parking in Wilmington is free of charge and time restrictions. Some locations near commercial uses or high parking demand have implemented parking meters at the cost of one dollar per hour. A combined total of 233 metered parking spaces could be found in Wilmington at the following locations as of August 1, 2012:

- Avalon Boulevard between F Street and Denni Street
- Marine Avenue between G Street and I Street
- Broad Avenue between G Street and I Street
- G Street between Marine Avenue and Broad Avenue
- Anaheim Street between Fries and Lakme Avenue
- L Street between Broad Avenue and the alley west of Avalon Boulevard
- Opp Street between the alley east of Avalon Boulevard and the alley west of Avalon Boulevard





In August 2012, approximately 105 parking meters were removed in Wilmington following an August 1 vote by City Council to remove parking meters in the area. The removal of parking meters was intended to promote visiting the Wilmington retail areas.

TRAFFIC VOLUMES AND LEVELS OF SERVICE

This section presents the analysis of the existing peak hour traffic volumes on each of the roadway segments in the study area and the analysis of the peak hour operating conditions on these roadways. The LOS analysis includes a description of the methodology utilized to analyze the traffic operating conditions on these facilities as well as the resulting LOS at each of the study locations.

Existing Traffic Volumes

Recent traffic count data for 25 of the 56 two-way street segments was collected from available resources and was supplemented by newer traffic counts conducted in late 2010 at the remaining 31 study segments. The traffic count sheets are provided in Appendix E.

An ambient growth rate of 1% per year was used to factor the traffic volumes conducted in 2008 and 2009 upward to represent existing (2010 baseline volume) conditions. This data was deemed adequate due to the planning nature of this study. In addition, recommended improvements will be based on existing as well as future Year 2035 traffic forecasts in the Wilmington Community.

Level of Service Methodology

LOS is a qualitative measure used to describe the condition of traffic flow, ranging from excellent conditions at LOS A to overloaded conditions at LOS F. LOS D is typically recognized as the minimum desirable LOS for urban areas. Approximately 37 of the 59 two-way study segments are classified as Major Highway Class II, seven are Secondary Streets, 13 are Collector Streets, and two are Local Streets.



The LOS along the analyzed roadway segments were determined based on the volume-to-capacity (V/C) ratio. Table 3-1 defines the ranges of V/C ratios and the corresponding LOS. To calculate roadway segment operations, it was necessary to define the peak hour roadway segment capacity of various roadway types. The capacities used for the analyzed segments are listed below in terms of vehicles per lane per hour (vplph):

Major Highway Class II	800 vphpl
Secondary	700 vphpl
Collector and Local	600 vphpl



Table 3-1 – Street Segment Level of Service Definitions

LOS	V/C	Definition
A	0.000 - 0.600	Describes primarily free-flow conditions at average travel speeds, usually about 90% of the free-flow speed. Vehicles are completely unimpeded in their ability to maneuver within the traffic stream. Control delay at intersections is minimal.
B	0.600 - 0.700	Describes reasonably unimpeded operations at average travel speeds, usually about 70% of free-flow speed. The ability to maneuver within the traffic stream is only slightly restricted, and control delays at intersections are not significant.
C	0.700 - 0.800	Describes stable operation; however, ability to maneuver and change lanes in mid-block locations may be more restricted than at LOS B, and longer queues, adverse signal coordination, or both may contribute to lower average travel speeds of about 50% of free-flow speed.
D	0.800 - 0.900	Borders on a range in which small increases in flow may cause substantial increases in delay and decreases in travel speed. LOS D may be due to adverse signal progression, inappropriate signal timing, high volumes or a combination of these factors. Average travel speeds are about 40% of free-flow speed.
E	0.900 - 1.000	Characterized by significant delays and average travel speeds of 33% or less of free-flow speed. Such operations are caused by a combination of adverse progression, high signal density, high volumes, extensive delays at critical intersections, and inappropriate signal timing.
F	> 1.000	Characterized by urban street flow at extremely low speeds, typically one-third to one-fourth of the free-flow speed. Intersection congestion is likely at critical signalized locations, with high delays, high volumes, and extensive queuing.

Source: *Highway Capacity Manual* (Transportation Research Board, 2000).



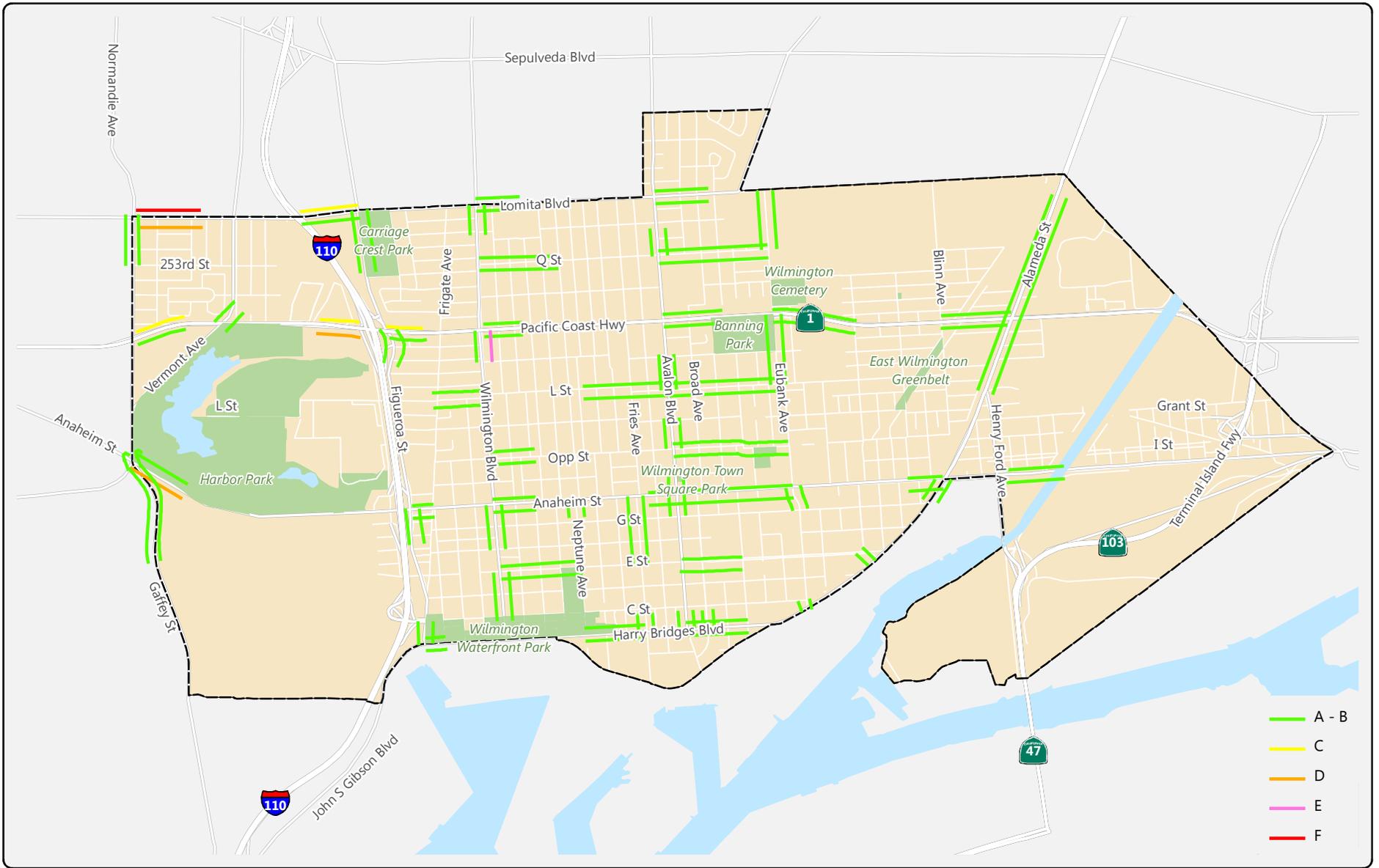
The weekday morning and afternoon peak hour V/C ratios and corresponding LOS under existing conditions at each of the analyzed street segments are included in Appendix F. The capacity values for the analyzed segments were obtained by multiplying the per lane capacity by facility type by the number of mid-block through lanes along the subject segments in each direction. Levels of service were determined by dividing demand volume by capacity, and the resulting V/C ratio was then used to obtain the corresponding LOS.

As summarized in Appendix F and Figures 3-6 and 3-7, three of the 112 directional study segments (approximately 3%), are currently operating at LOS E or F during one or both peak hours:

- Lomita Boulevard west of Figueroa Street (eastbound in the PM peak hour)
- Wilmington Boulevard south of Pacific Coast Highway (northbound in the AM peak hour)
- Lomita Boulevard east of Normandie Avenue (westbound in both peak hours and eastbound in the PM peak hour)

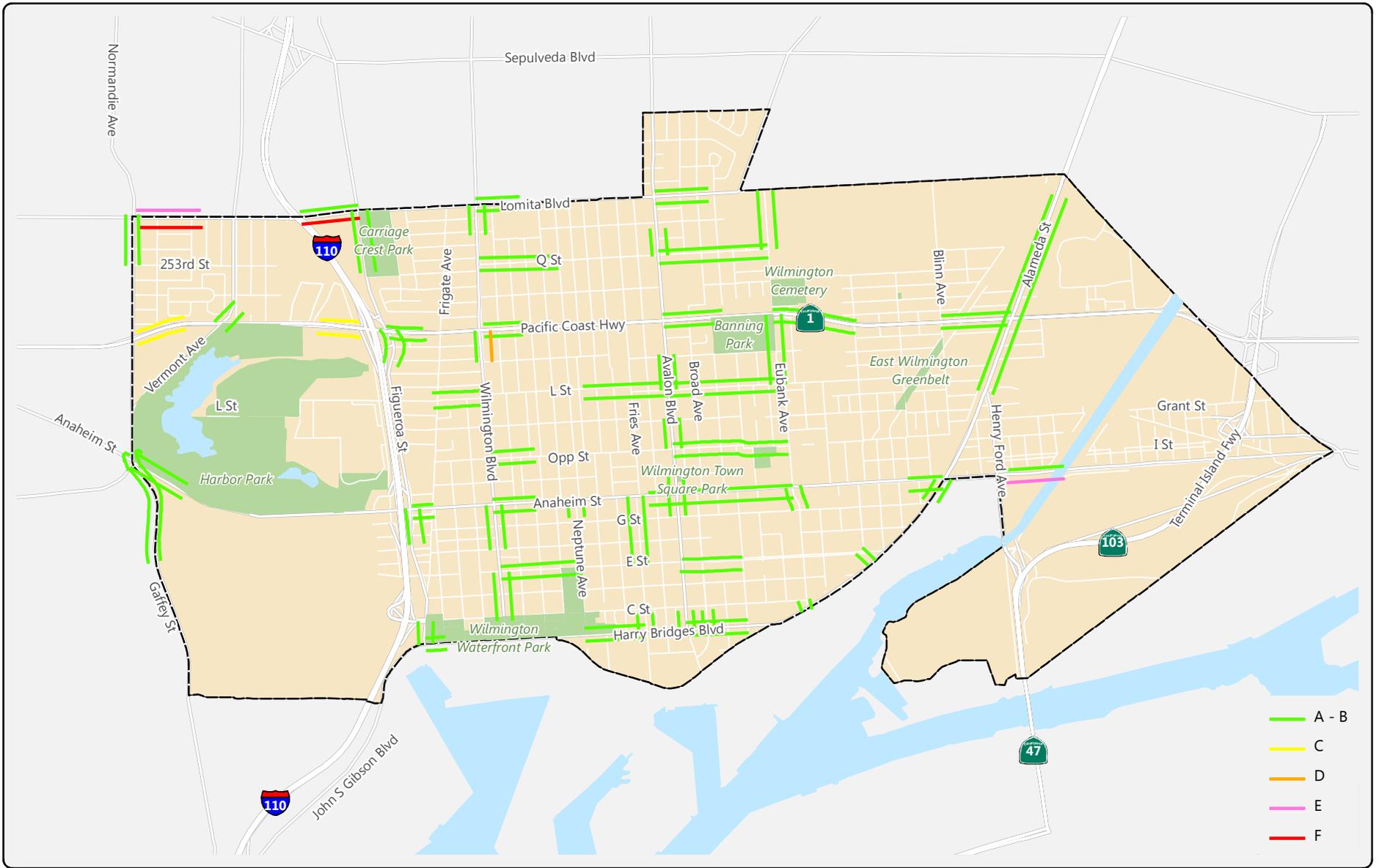
Roadway segment operations are illustrated on Figures 3-6 and 3-7 for the AM and PM peak hours, respectively.





Not to Scale

**MORNING PEAK HOUR
ROADWAY SEGMENT LEVEL OF SERVICE**



Not to Scale



PLANNED AREA IMPROVEMENTS

Several transportation projects are planned to be implemented in the Wilmington area. Based on regional capital improvement programs, mitigation for on-going or entitled projects, and short-term and long-term planning efforts, there are a number of planned improvements in the area, including:

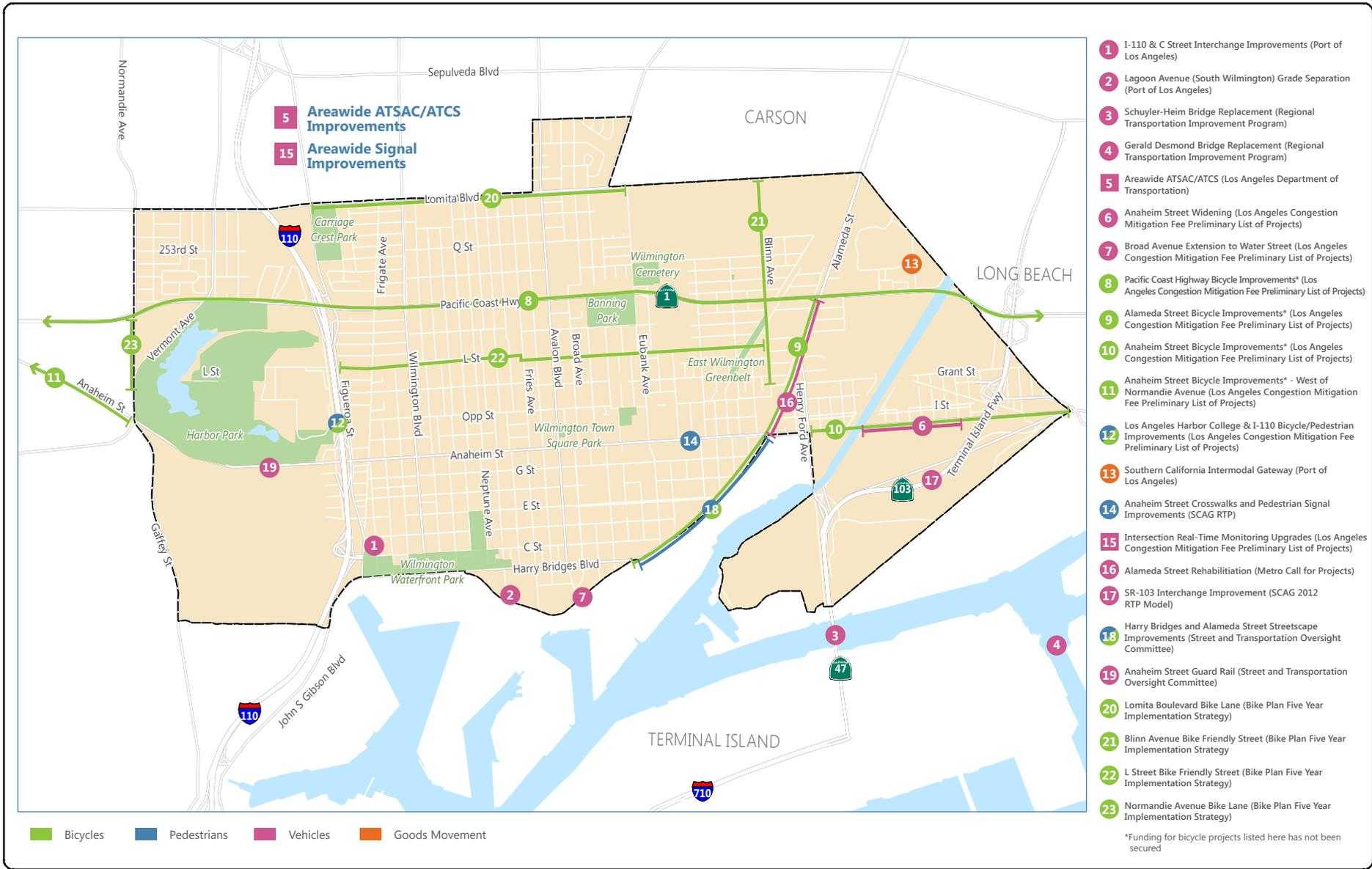
- I-110 and C Street Interchange Improvements – This project would improve the flow of traffic from the I-110 ramps at C Street by consolidating two closely-spaced intersections and facilitating heavy right-turn volumes with free-flowing turn lanes. As part of the improvement, C Street would be terminated in a cul-de-sac east of Figueroa Street and would no longer intersect with Figueroa Street. Harry Bridges Boulevard would be realigned to intersect with Figueroa Street across from the existing I-110 ramps. The improvement would also include the construction of a northbound I-110 off-ramp to eastbound Harry Bridges Boulevard that would be grade-separated over Figueroa Street/John S. Gibson Boulevard with eastbound Harry Bridges Boulevard east of the consolidated intersection. The existing TraPac Terminal gate aligned with Figueroa Street will be relocated and accessed from the South Wilmington Grade Separation.
- South Wilmington Grade Separation – The South Wilmington Grade Separation will provide access to all the facilities in the Port area south of Harry Bridges Boulevard, in addition to providing access to the relocated TraPac Terminal Gate. The purpose of this grade separation is to provide vehicular traffic with an alternative route that avoids existing at-grade railroad crossings on Fries Avenue, Broad Avenue and at the TraPac gate. It will consist of an elevated road extending near Lagoon Avenue, passing over the existing railroad tracks, and connecting to Pier A Street and Fries Avenue.
- Wilmington Waterfront Park – This project, completed in June 2011, provides a buffer area along the north side Harry Bridges Boulevard from Figueroa Street in the west to Lagoon Avenue in the east. The buffer provides open recreational space between the Wilmington community and the Port. This project resulted in the closure of all north-south streets between Harry Bridges Boulevard and C Street from Figueroa Street to Fries Avenue, except for King Avenue.



- Schuyler Heim Bridge Replacement and Extension – The existing bridge will be replaced and improvements made to the connection with Henry Ford Avenue north of the Cerritos Channel, referred to as the SR-47 Expressway. The new SR-47 Expressway is intended to provide a high-capacity route alternative along the Alameda Corridor for traffic traveling between Terminal Island and the intersection of Alameda Street & Pacific Coast Highway. This project also proposes the construction of a flyover that would divert eastbound Ocean Boulevard traffic onto northbound SR-47.
- Gerald Desmond Bridge Replacement Project – The existing bridge will be replaced with a six-lane facility (three lanes in each direction) and ramp connections at both ends of the bridge will be improved.
- Equipping all Signalized Intersections with the ATSAC/ATCS System – The current improvement plan is to equip all signalized intersections with ATSAC and install the state-of-the-art Adaptive Traffic Control System (ATCS) as an additional feature of the ATSAC system. ATCS is the latest enhancement to the ATSAC and uses a personal computer-based traffic signal control software program that provides fully traffic-adaptive signal control based on real-time traffic conditions. ATCS allows for the automatic adjustment to the traffic signal timing strategy and control pattern in response to current traffic demands by allowing ATCS to control all three critical components of traffic signal timing simultaneously, namely cycle length, phase split and offset. Each of these projects is expected to be completed by 2035 and therefore is proposed to be included under future conditions.

Additional potential improvements under consideration by various agencies in the study area are shown in Figure 3-8.





Not to Scale

4. Wilmington Mobility Plan

Based on a review of existing conditions, stakeholder input, and planned local improvements, a greater understanding of mobility challenges and local priorities was gained and was used to inform the recommended improvements and concepts put forth in this plan. The recommendations in this plan fall in two categories: general recommendations that can be applied throughout the community and specific corridor recommendations.

GENERAL IMPROVEMENT RECOMMENDATIONS

This section presents some of the general ideas and goals that have been developed for the Wilmington Mobility Plan based on the various sources of input for this project, such as stakeholder outreach, consultation with City staff, and ideas generated by the project team. The concepts and recommendations proposed have been considered in the context of feasibility, operations, and simultaneous planning efforts such as the Los Angeles Mobility Plan (LA2B) and Los Angeles Bike Plan.





Transit

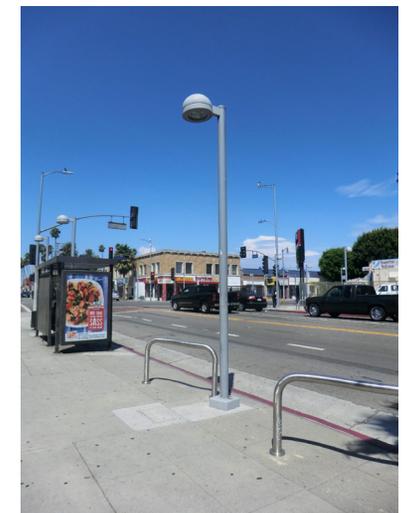
Recommended transit improvements in the study area focus on locations with bus stops having the highest number of daily riders, to serve current levels of activity and potentially attract additional riders. Examples include enhancing bus stop amenities and improvements near the park-n-ride lot at Pacific Coast Highway & Figueroa Street. As shown below, enhancements are recommended under two levels of treatment. Basic amenities should be provided at all transit stops. Enhanced treatments should be provided at those with the highest usage.

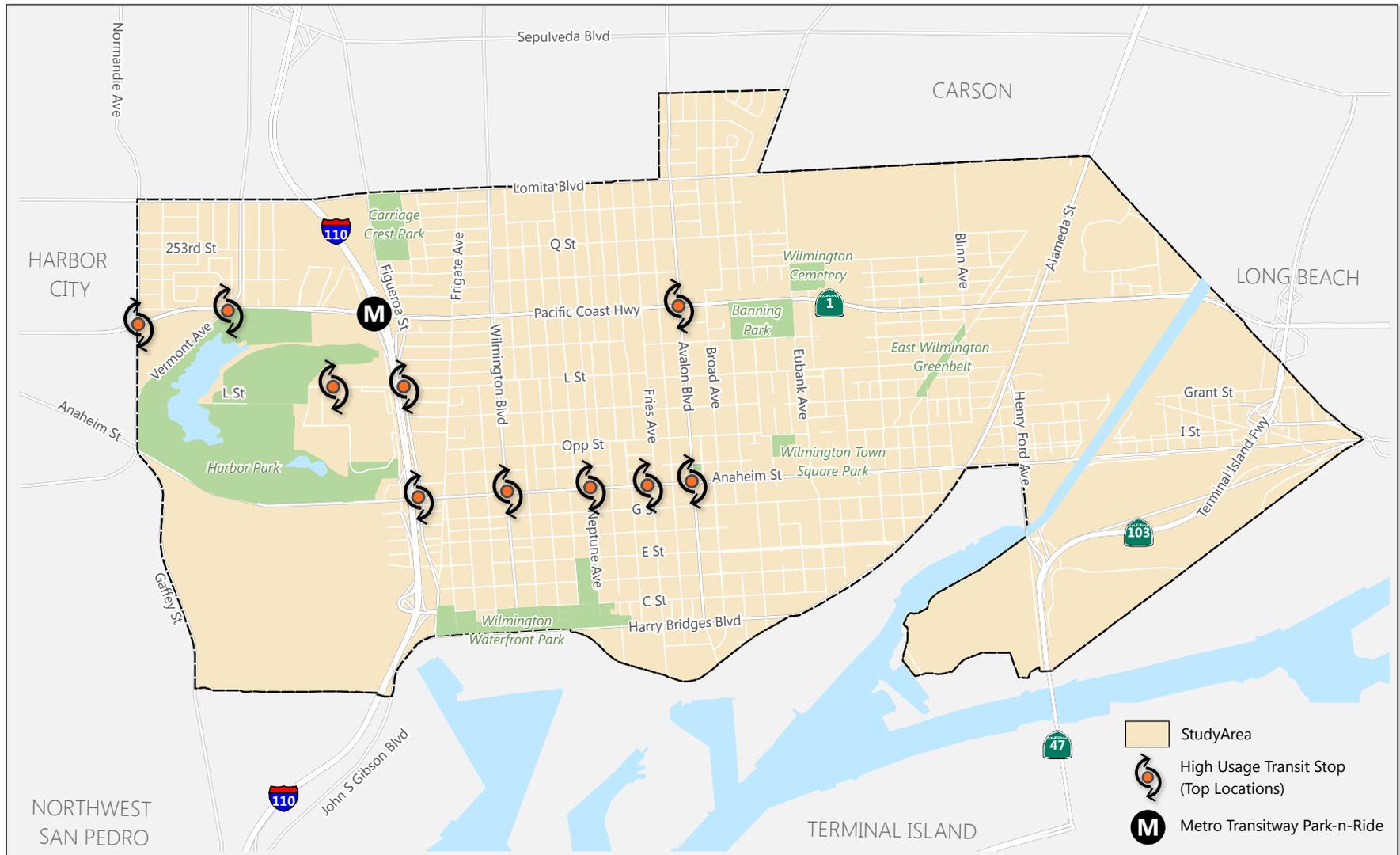
[Pictured]: Transit stops throughout the study area exhibit different levels of use and a variety of characteristics. Stops along Figueroa Street and under I-110 have a few basic amenities, while a stop at Anaheim Street and Avalon Boulevard, bottom right, exhibits enhanced amenities.



BASIC OR ENHANCED? TRANSIT STOP AMENITY CLASSIFICATION

LEVEL OF STOP TREATMENT	 COMFORT	 SAFETY	 MAINTENANCE	 INFORMATION
BASIC	Seating Shade	Location (visibility, land use, near-side/far-side) Lighting	Graffiti/litter removal	Static transit info
ENHANCED	Wide sidewalk or curb extension at stop Enhanced hardscape treatment	Enhanced lighting	Trash can	Real-time transit info QR code scanner/instant real-time transit info via mobile app



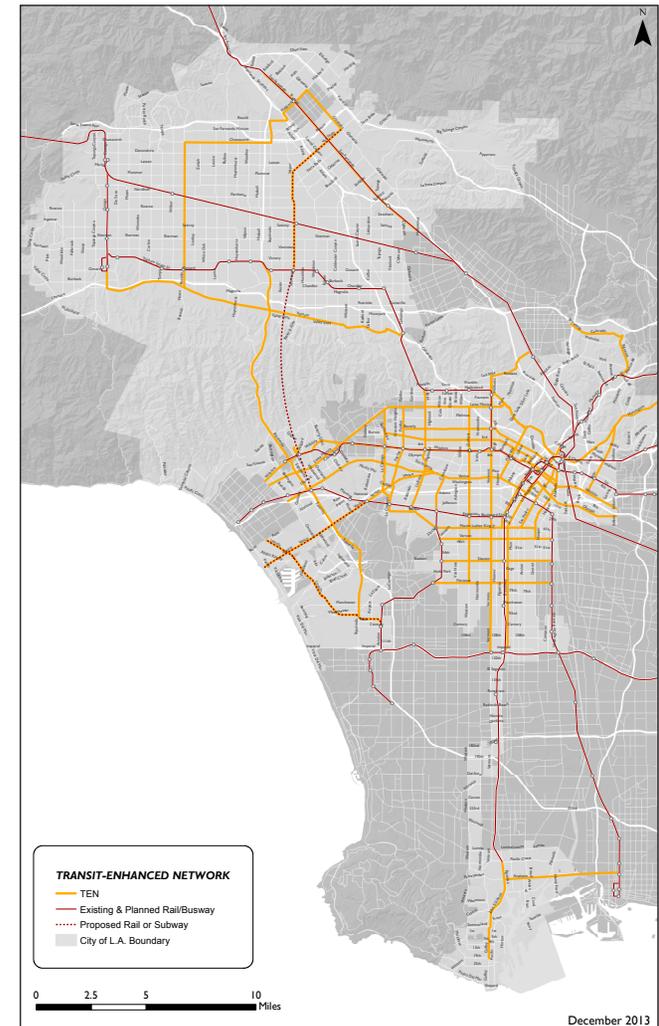


Regional Transit Continuity: Complementing LA2B's Transit-Enhanced Network (TEN)

What is the Transit-Enhanced Network?

The proposed Transit-Enhanced Network (TEN) will improve existing and future bus service on 237 miles of arterial streets by prioritizing improvements for transit riders relative to other roadway users.

The Transit-Enhanced streets aim to provide reliable and frequent transit service that is convenient and safe; increase transit mode share; reduce single-occupancy vehicle trips; and integrate transit infrastructure investments with the identity of the surrounding street. The transit on these streets will primarily be high-capacity buses. Bus service will be improved with infrastructure improvements in the right-of-way, signal timing and technology improvements, and stop enhancements.



Classification of Transit Enhancements

	MODERATE	MODERATE PLUS	COMPREHENSIVE
SERVICE			
<i>Off-Board Fare Collection</i>	Majority of all stations on route		
<i>Peak Hour Frequency</i>	7-10 minutes	5-7 minutes	< 3 minutes
<i>Off-Peak Frequency</i>	12-15 minutes	10-12 minutes	< 8 minutes
<i>Hours of Operation</i>	Late night and weekend service required		
INFRASTRUCTURE			
<i>Alignment</i>	Mixed flow curb adjacent lane	Curb adjacent exclusive part-time (peak period) lane	2-way center running or curb adjacent exclusive corridor OR physically protected and or separate ROW
<i>Priority Treatments at Intersections</i>	Signal priority across majority of busway intersections	Signal priority and turn prohibitions across the majority of busway intersections	
<i>Passing Lanes at Stations</i>			Majority of stations
<i>Clean Fuels</i>	Includes use of clean fuels		
STATION DESIGN			
<i>Level Boarding</i>		Majority of stations and vehicles	
<i>Multiple Door Boarding</i>		2+ doors on majority of buses	
<i>Enclosed Stations</i>			Sliding doors and multiple doors at high ridership locations (85th percentile)
INFORMATION AND QUALITY			
<i>Branding</i>	All buses, routes, signs, and stations provide unifying brand elements		
<i>Passenger Information</i>	Real time passenger information provided at stations, on vehicles, and via internet		
INTERCONNECTIVITY			
<i>Intermodal connections</i>	Integrated with physical design, fare payment, and information systems at intermodal hubs		
<i>Universal Access</i>	Full accessibility at stations and on all vehicles		
<i>Pedestrian Access</i>	Safe crossings within 300' of station at all locations		
<i>Secure Bicycle Parking</i>	Bicycle racks or lockers within 300' of all stations		
<i>Bicycle Sharing</i>		Bicycle sharing at majority of stations	



Bicycles

Recommended bicycle improvements in the study area build off existing infrastructure through the identification of bicycle lane treatments already implemented in Wilmington that can be replicated elsewhere. Examples include modifying roadway configurations such as “road diets,” utilizing excess right-of-way, or evaluating streets for opportunities to implement on-street bicycle facilities.



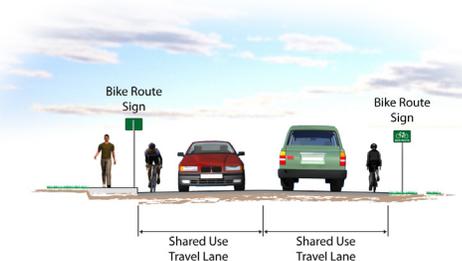
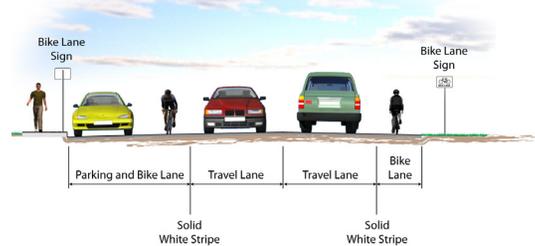
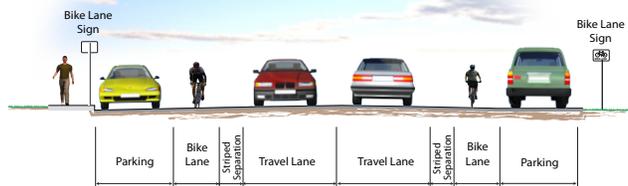
Class II Buffered Bike Lane

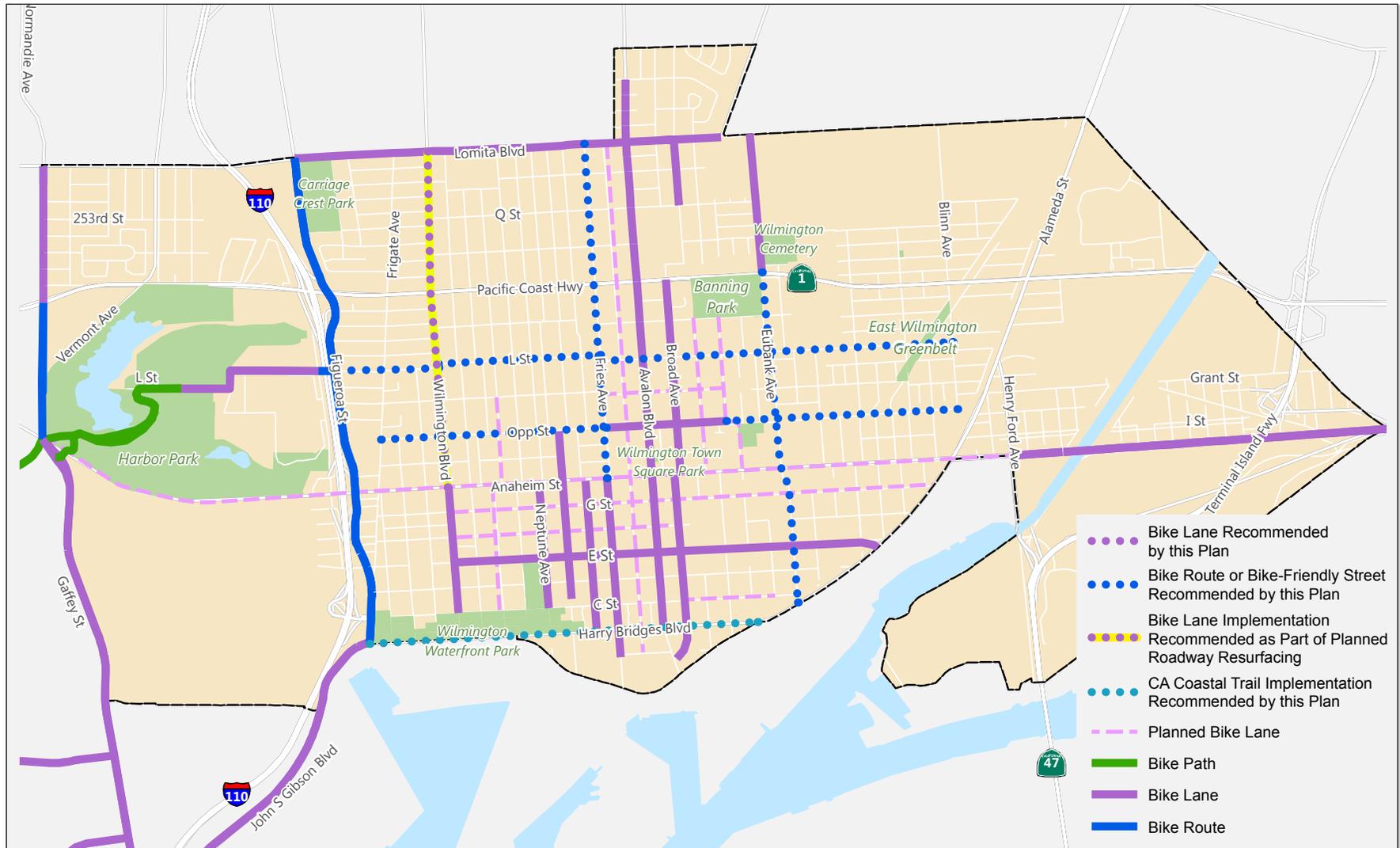


Class II Bike Lane



Class III Bike Route/Neighborhood-Friendly Street



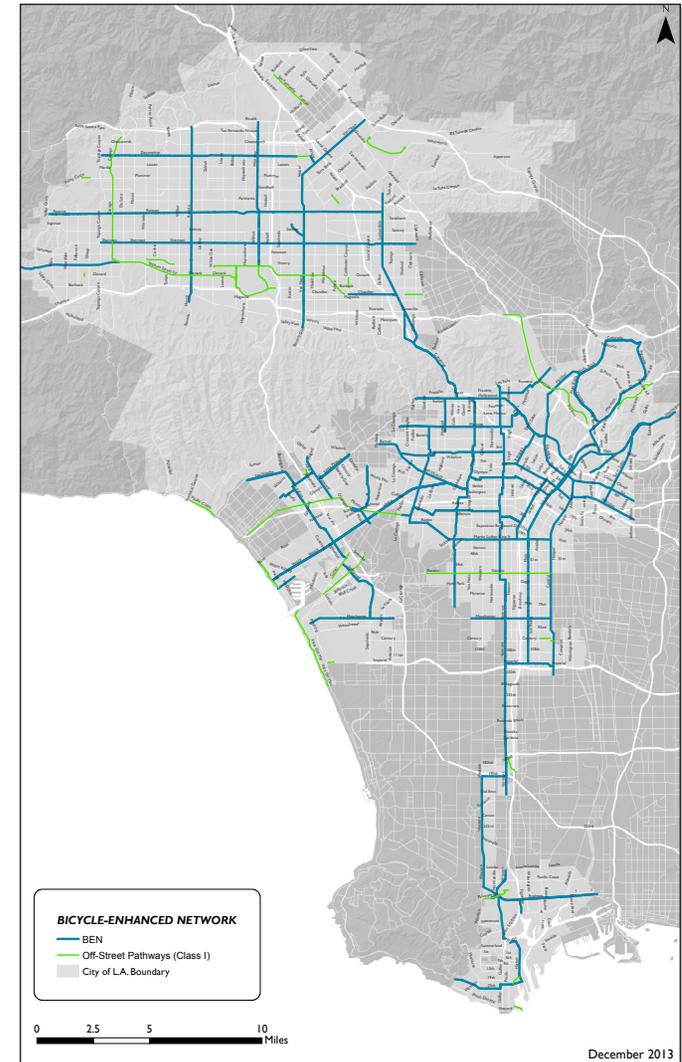


Regional Bicycle Continuity: Complementing LA2B's Bicycle-Enhanced Network (BEN)

What is the Bicycle-Enhanced Network?

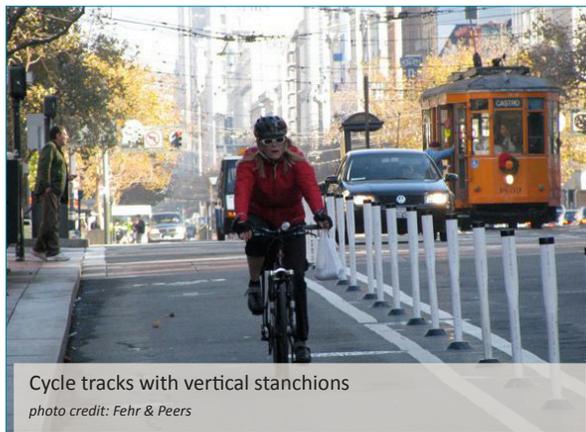
The proposed Bicycle-Enhanced Network (BEN) is a 180-mile subset of the larger Citywide Bikeway System identified in the 2010 Bike Plan. The Bicycle-Enhanced streets will work in conjunction with existing paths and lanes to provide a low-stress network of bikeways for all types of riders, utilizing select roadways from the Backbone (arterial) and Neighborhood (bicycle friendly streets) Networks.

While many bicycle facilities will be implemented as envisioned by the Bicycle Master Plan, streets on the Bicycle-Enhanced Network will receive treatments beyond a regular bicycle lane or shared lane marking such as buffered lanes, cycle tracks, and intersection enhancements, and will prioritize improvements for bicyclists relative to other roadway users.



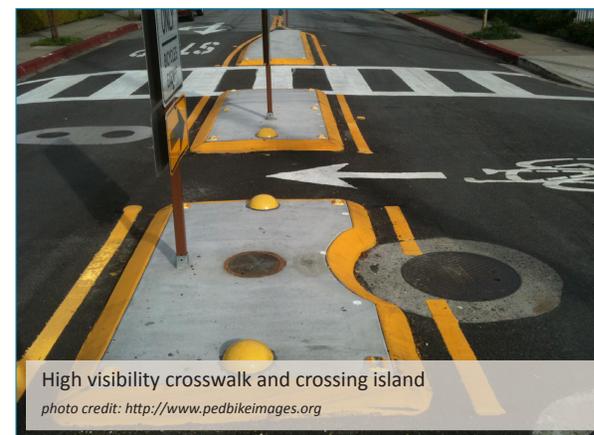
Backbone (Arterial) Network Streets Enhancements

- Wide bicycle lane with pavement markings
- Raised bicycle lanes
- Cycle tracks – protected bicycle lanes
- Colored bicycle lanes in conflict areas
- Colored bicycle lanes at interchanges
- Bicycle box
- Two-stage turn queue boxes



Neighborhood (BFS) Network Streets Enhancements

- Mini-roundabouts
- Stop signs on cross streets
- Curb bulbouts and high visibility crosswalks
- Diagonal diverter
- Bicycle signals at major intersection crossings
- Crossing islands
- Bicycle only left-turn pocket



Pedestrian

Recommended pedestrian improvements in the study area are intended to enhance existing infrastructure and replicate best practices throughout the study area. The toolbox below provides an overview of recommended treatments based on site-specific circumstances.



Uncontrolled Crossing Enhancements



City of Pasadena



tft.tamu.edu



CURB EXTENSIONS

[Geometrics]

Also known as a pedestrian bulb-out, this traffic-calming measure is meant to slow traffic, increase driver awareness of pedestrians, and shorten crossing distances. It consists of an extension of the curb into the street, making the pedestrian space (sidewalk) wider.

REFUGE ISLAND

[Geometrics]

Raised islands are placed in the center of the roadway, separating opposing lanes of traffic with cutouts or ramps for accessibility along the pedestrian path. Median refuge islands are recommended where right-of-way allows and conditions warrant.

FLASHING BEACONS

[Signal Treatment]

Flashing amber lights are installed on overhead or post-mounted signs, in advance of the crosswalk or at the entrance to the crosswalk.



Sidewalk Enhancements



www.ci.mil.wi.us



PEDESTRIAN-SCALE LIGHTING

[Streetscape]

Pedestrian-scale lighting improves motorists' visibility of pedestrians and enhances comfort during periods of low light.

LANDSCAPING

[Streetscape]

Trees provide shade and comfort for pedestrians of all ages and offer aesthetic benefits to the neighborhood.





Crosswalk Enhancements



ADA Compliance

walkinginfo.org/pedsafe/



MARKED CROSSWALK

[Striping]

Marked crosswalks should be installed to provide designated pedestrian crossings at signalized locations, on all feasible approaches. Exceptions for striping crosswalks on all four legs of a signalized intersection may be allowed due to operational and physical considerations.

City of Pasadena



ADVANCE YIELD LIMIT LINE

[Striping]

Yield limit lines (also referred to as "sharks' teeth") are placed in advance of marked, uncontrolled crosswalks.

mutcd.fhwa.dot.gov

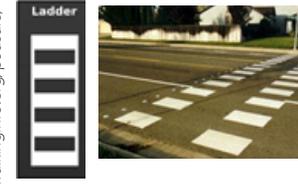


ADVANCED WARNING SIGNS

[Signage]

High-visibility fluorescent signs are made of the approved fluorescent yellow-green color and posted at crossings to increase the visibility of a pedestrian crossing.

walkinginfo.org/pedsafe/



HIGH-VISIBILITY MARKED CROSSWALK

[Striping]

High-visibility markings include a family of crosswalk striping styles such as the "ladder" and the "triple-four"

www.bikepedimages.org



CURB RAMP WITH TRUNCATED DOMES

[Geometrics]

Where right-of-way is available, directional curb ramps are installed at two per corner and guide pedestrians into the crosswalk they would utilize to cross the street. Truncated domes provide a tactile signal to the visually impaired that they are leaving the sidewalk area.

www.saferoutesinfo.org



ADA-COMPLIANT PLACEMENT OF PEDESTRIAN WALK SIGNAL BUTTON

[Signal Treatment]

Buttons to activate pedestrian walk phases should be located at places accessible all street users.

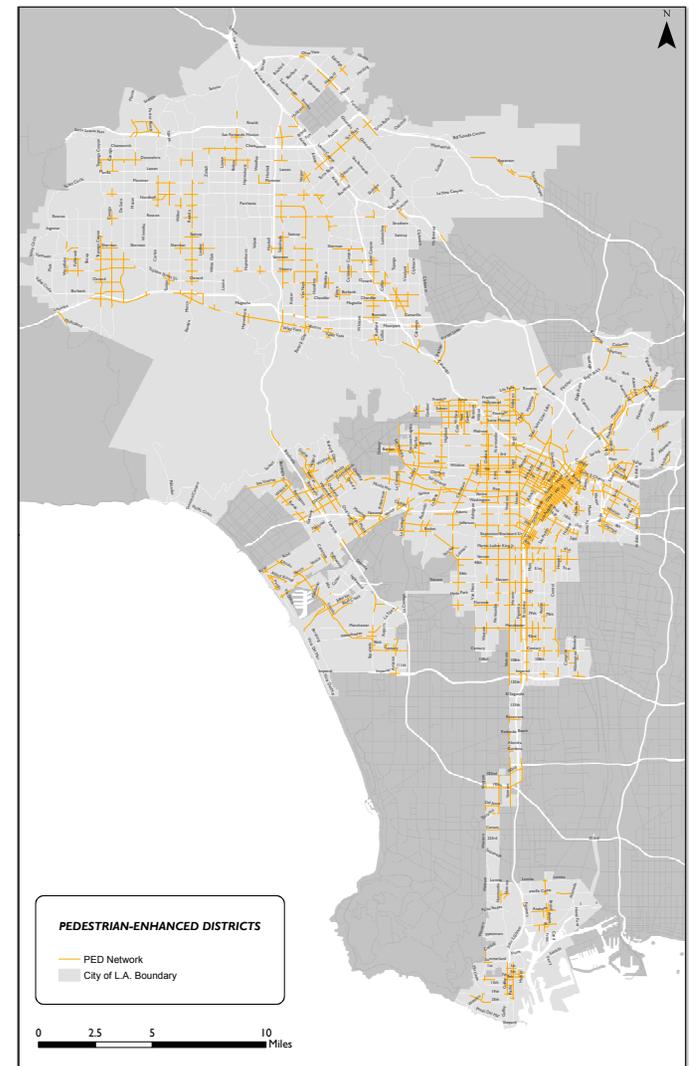


Regional Pedestrian Continuity: Complementing LA2B's Pedestrian-Enhanced Districts (PEDs)

What are Pedestrian-Enhanced Districts?

Every trip, regardless of mode, includes walking, and pedestrians are the most vulnerable roadway users. The proposed Pedestrian-Enhanced Districts (PEDs) will establish areas where improvements for pedestrians are prioritized relative to other roadway users. Pedestrian-Enhanced Districts may be located near schools, transit stations, areas of high pedestrian activity, areas with high collision frequency, or other placemaking opportunities.

Pedestrian needs are closely linked to the transit network because of the conditions encountered walking to or from transit services as well as waiting at stops and stations.



Classification of Pedestrian Enhancements

Improvements to areas identified within a Pedestrian-Enhanced District primarily consist of infrastructure improvements within the sidewalk and street right-of-way as well as pedestrian signal timing infrastructure improvements. Pedestrian Enhancements are classified as moderate or comprehensive based on their benefits and intensity of implementation.

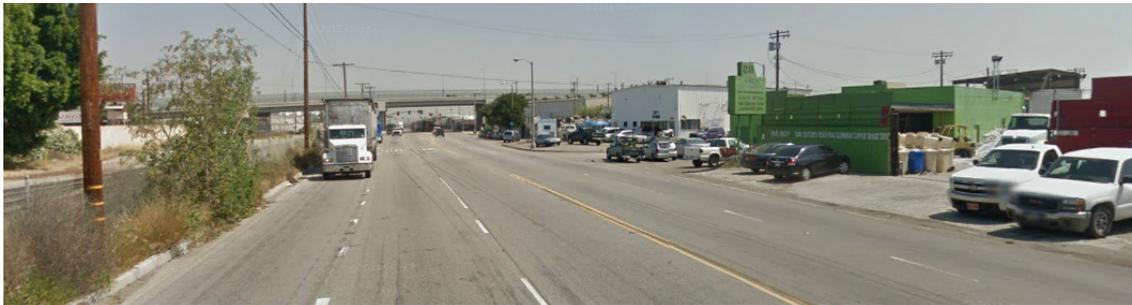
- Moderate enhancements typically include way-finding, street trees, pedestrian-scaled street lighting, enhanced crosswalks at all legs of the intersection, and automatic pedestrian signals.
- Comprehensive enhancements typically would add a reduced crossing length (bulb-outs, median pedestrian refuges), wider sidewalks (> than 15' where feasible), and specialty paving and seating areas where special maintenance funding exists.



Vehicles

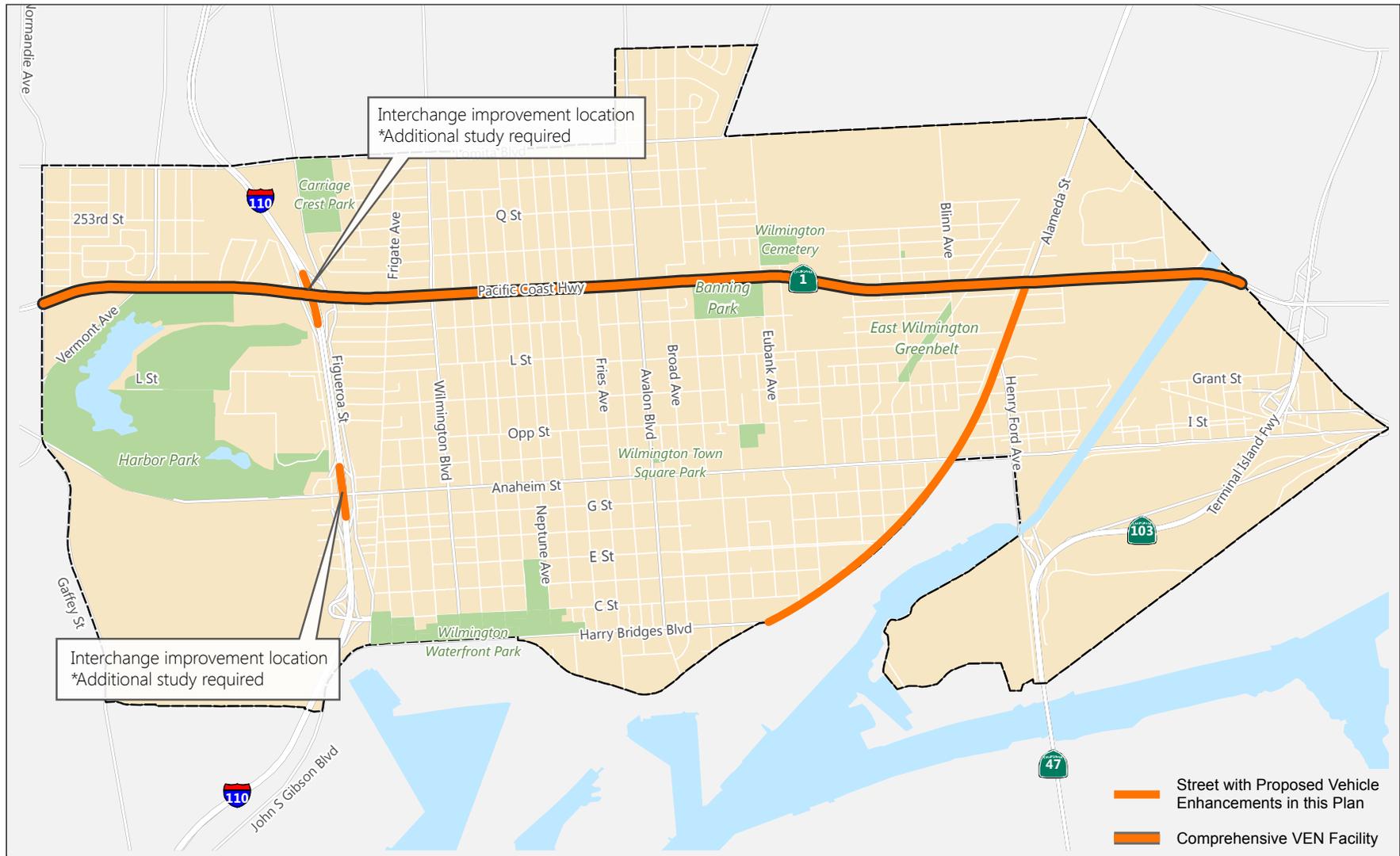
The study area is traversed by significant regional streets such as Pacific Coast Highway, Figueroa Street, and Anaheim Street. The area also has numerous residential streets that provide substantial connectivity in the area due to the grid street pattern and short block lengths. The I-110 freeway is within the study area, and freeway ramps can experience peak hour congestion. Recommendations focus on minimizing congestion bottlenecks, improving safety, and addressing conflicts with other travel modes. Exploration of South Bay Cities Council of Governments and associated funding mechanisms is recommended.

Additionally, emphasis is given to the resurfacing of Alameda Street, which is characterized by poor pavement condition. Currently, resurfacing is planned in two phases. Phase 1 will resurface the roadway from Harry Bridges Boulevard to Anaheim Street; Phase 2, extending from Anaheim Street to Pacific Coast Highway, incorporates roadway widening in addition to resurfacing. These improvements, as well as future efforts, should accommodate all roadway users and types of vehicles, including heavy vehicles (e.g., semi-trailer trucks), which use frequently use these roadways as connections to the port to the south.



[Pictured]: Streets with automobile-oriented features include Pacific Coast Highway (bottom) and Alameda Street (top).



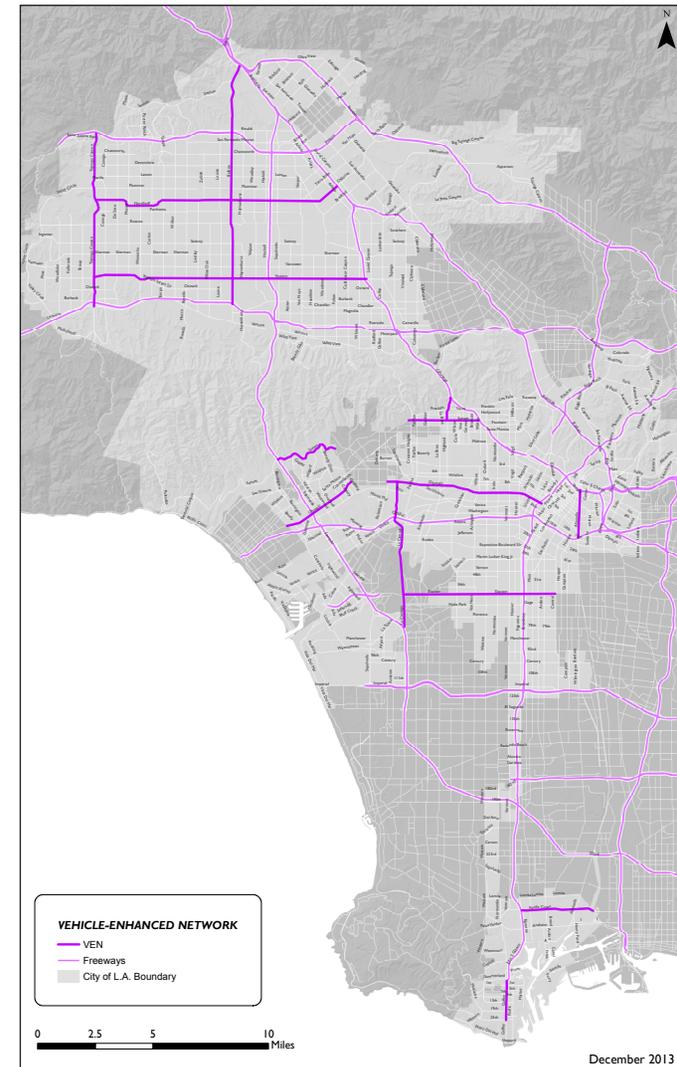


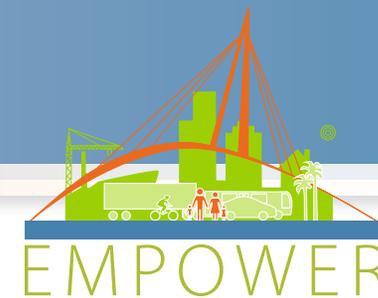
Regional Vehicle Continuity: Complementing LA2B's Vehicle-Enhanced Network (VEN)

What is the Vehicle-Enhanced Network?

The proposed Vehicle-Enhanced Network (VEN) will improve through movement of traffic on 79 miles of streets by prioritizing the efficient movement of motor vehicle occupants relative to other roadway users.

Potential enhancements include investments in intelligent transportation systems, access management and consolidation, parking restrictions and removal, improved signal timing, and turning restrictions.





Classification of Vehicle Enhancements

	MODERATE	COMPREHENSIVE
PARKING		
<i>Peak Period Restrictions</i>	uniform peak parking restrictions	
<i>Parking Lane Conversion</i>	added travel lanes through peak-period parking restrictions	
<i>Parking Removal</i>		strategic removal of on-street parking for added full-time lanes; may also need to provide centralized off-street parking program
<i>Management</i>	expand ExpressPark to parking meter districts to minimize “cruising” for parking	
ACCESS MANAGEMENT		
<i>Medians</i>		install raised medians (reduces left-turns in and out of driveways and or minor streets)
<i>Access Consolidation</i>	consolidate driveways; for new developments, restrict driveways where side street or alley access is available	
CAPACITY/FLOW		
<i>Intersection Treatments</i>	strategically install roundabouts	
	install left-turn arrows at intersections of major/major	
<i>Turn Restrictions</i>	restrict turns at strategic intersections	
<i>Technology</i>	provide directional signal priority	
	upgrade all traffic signals to the Adaptive Traffic Control System (ATCS)	
	implement event and incident management strategies; install dynamic roadside signs to alert drivers of conditions	
<i>Lane Conversions</i>		install reversible lanes



Corridor Improvement Recommendations

This section presents the recommended improvements for various corridors in the Wilmington Community. These corridors were selected based on stakeholder input, consultation with City staff, and relevant transportation data collected in the area. Corridors selected are as follows:

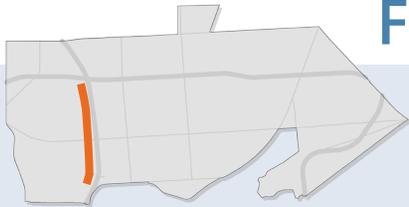
- Figueroa Place
- Figueroa Street
- Wilmington Boulevard
- Avalon Boulevard
- Alameda Street
- Lomita Boulevard
- Pacific Coast Highway
- Anaheim Street
- Harry Bridges Boulevard
- C Street adjacent to the Wilmington Waterfront Park
- Local streets (i.e. Fries Avenue, Eubank Avenue, Blinn Avenue, Opp Street, and L Street)
- Sandison Street





[Pictured]: Harry Bridges Boulevard south of Wilmington Waterfront Park.

Figueroa Place

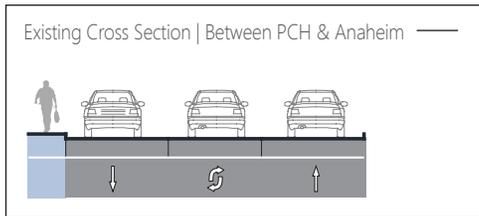


Current Roadway Classification: Collector
 Emphasis on People Walking, Bicycling, Taking Transit, and Driving
 Corridor Length: 1.1 miles

Existing Conditions

Figueroa Place is a north-south two-lane roadway with stop-controlled and signalized intersections, with turn pockets provided at some locations. The segment of Figueroa Place between Pacific Coast Highway and Anaheim Street abuts I-110 to the east and

Harbor College and recreational facilities to the west. The uses adjacent to Figueroa Place lack permeability, therefore the area west of I-110 does not have a grid street pattern and limited connections to the east and west.

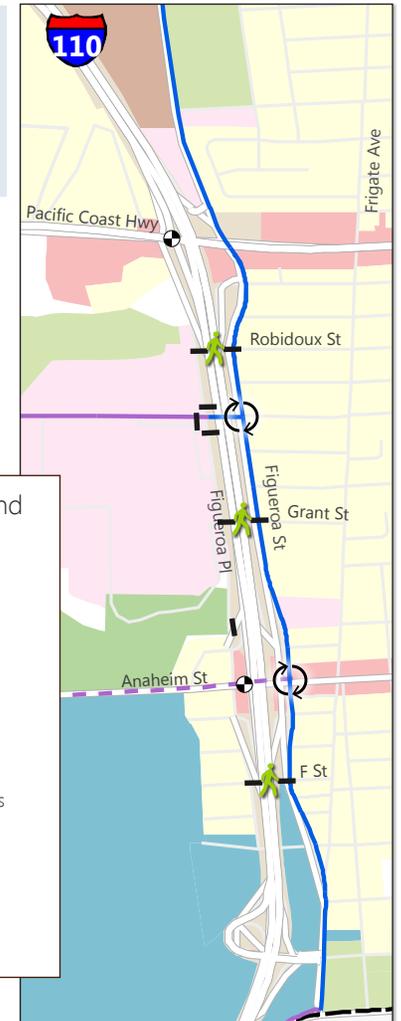


Existing Conditions Legend

- Signalized Intersection
- Marked Pedestrian Crossing
- Pedestrian Under/Overpass
- Existing Bike Lane
- Existing Bike Route
- High Usage Transit Stop (Top 10 Location)

Land Use

- Residential
- Commercial
- Public Facilities & Institutions
- Industrial
- Extraction
- Transportation & Utilities
- Mixed Use
- Under Construction
- Open Space & Recreation
- Vacant
- Water & Floodways



Recommended Improvements

- **Walking:** improving pedestrian access and connectivity between Los Angeles Harbor College, recreational facilities, and surrounding residential areas through improved pedestrian infrastructure, enhanced crossings and connections with east-west streets, and providing access across I-110 at pedestrian under crossings along Figueroa Place.
- **Public Art:** opportunities exist to improve conditions at I-110 under crossings via the incorporation of public art. Brighter lighting and artistic, colorful elements—examples of which are pictured to the right—could increase pedestrian comfort and accessibility. Improvements like these could be made by partnering with local organizations such as Harbor College or SBCC to create a public art or mural program. Other opportunities for pedestrian improvements include traffic light signal cabinets enlivened with artwork.

Crossing and Sidewalk Improvements:



[Pictured]: Pedestrian crossing on Figueroa Place at Harbor College.



[Pictured]: Well marked crossing on Figueroa Place at F Street can be replicated at other unsignalized crossings.



[Pictured]: Sidewalk improvements, such as those recently completed on Gaffey Street, significantly improve the pedestrian environment.

Undercrossing Improvements:



Signal Cabinet Art



[Pictured]: The existing pedestrian tunnels under the 110 are dark and have trash and debris.



[Pictured]: Examples of adding lighting and artistic elements to tunnels to improve pedestrian comfort. Consider partnering with Harbor College and SBCC to sponsor and lead a mural program.



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- **Bicycling:** improving bicycle access and connectivity between Los Angeles Harbor College, recreational facilities, and surrounding residential areas through improved bicycle infrastructure and connections with east-west streets providing access across I-110.



[Photo]: Create a low-stress, Neighborhood-Friendly Street along Figueroa Place by incorporating traffic calming measures, sharrows and wayfinding signs.

- **Transit:** improving the conditions and amenities provided at the area's busiest bus stops and near land uses and destinations that may attract transit riders. The bus stops adjacent to the intersection of Figueroa Place & L Street cumulatively represent the intersection with the seventh most daily bus boardings in the Wilmington area. Transit stop improvements require coordination with Metro.



[Photo]: Existing bus stop at Figueroa Place and L Street.



[Photo]: Example of high-quality transit stop in the area (Figueroa St at Pacific Coast Highway).

- **Driving:** traffic volumes are relatively low on Figueroa Place; however, there is a southbound, stop-controlled off-ramp for I-110 at the intersection of Figueroa Place & I Street (ramp forms east leg of intersection) that facilitates access to Anaheim Street and beyond. During peak hours this area can become congested. Opportunities for reducing vehicular delay at the off-ramp and the intersection of Figueroa Place & Anaheim Street, and opportunities for minimizing conflicts with pedestrians and bicyclists are recommended. A comprehensive study of the I-110 interchange and connecting streets is recommended to identify safety and operational improvements to accommodate existing and future vehicles, trucks, pedestrians, and bicyclists. This may be done in conjunction with district development plans and evaluation of potential land use changes.



[Photo]: Existing conditions where I-110 crosses Anaheim Street. Freeway ramps currently start and terminate on Figueroa Place and Figueroa Street. A study to determine appropriate operational improvements is recommended.

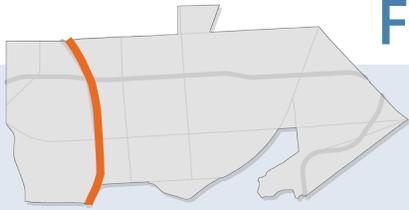




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Figueroa Street

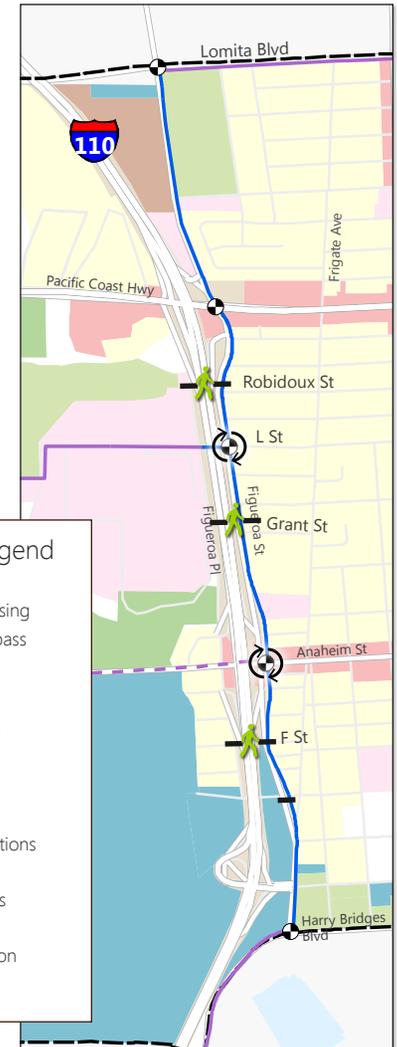
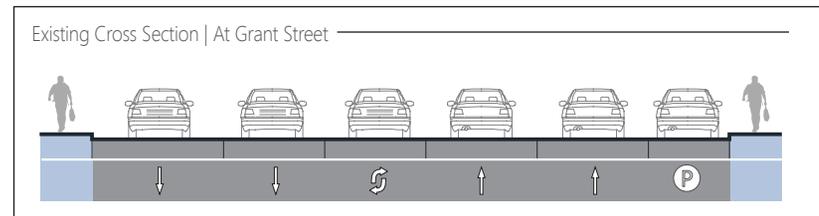


Current Roadway Classification: Major Highway Class II
 Emphasis on People Walking, Bicycling, & Taking Transit
 Corridor Length: 2.0 miles

Existing Conditions

Figueroa Street is a north-south four-lane roadway with stop-controlled and signalized intersections, and turn pockets provided at some locations. Figueroa Street spans the entire study area, including several uncontrolled marked crosswalks, numerous bus stops, a park-n-ride facility at Pacific Coast Highway, and provides access to the port to the south and to/from

I-110 at freeway on/off-ramps. The pedestrian under crossings mentioned in the discussion of Figueroa Place connect to Figueroa Street to the east. The freeway west of Figueroa Street results in limited connectivity; however, multi-modal access to the east is substantially improved due to the grid street network and short block lengths south of Pacific Coast Highway.



Existing Conditions Legend

- Signalized Intersection
- Marked Pedestrian Crossing
- Pedestrian Under/Overpass
- Existing Bike Lane
- Existing Bike Route
- ⊙ High Usage Transit Stop (Top 10 Location)

Land Use

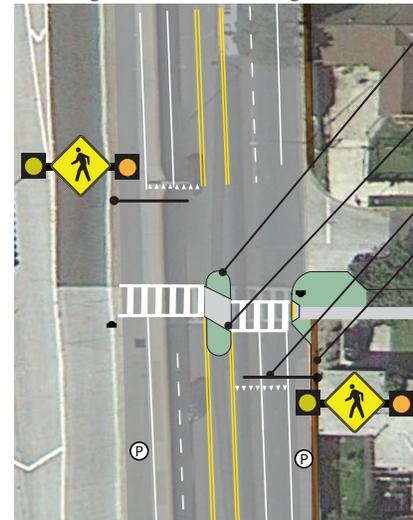
- Residential
- Commercial
- Public Facilities & Institutions
- Industrial
- Extraction
- Transportation & Utilities
- Mixed Use
- Under Construction
- Open Space & Recreation
- Vacant
- Water & Floodways



Recommended Improvements

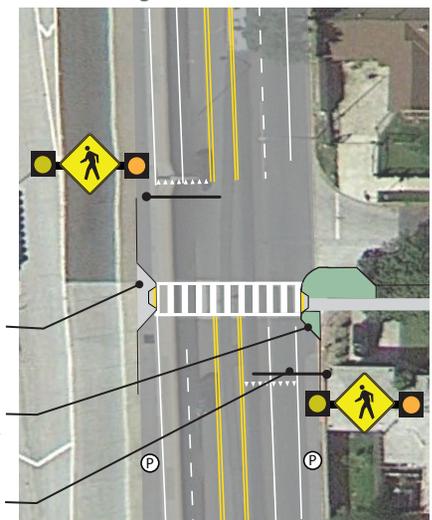
- **Walking:** improving pedestrian access and connectivity between Los Angeles Harbor College, recreational facilities, and surrounding residential areas through improved pedestrian infrastructure and enhanced crossings and connections with east-west streets providing access across I-110 and at pedestrian under crossings along Figueroa Street.
- Unsignalized crossings could be improved by shortening crossing distances through the use of a median refuge island in the center lane, or by adding curb extensions at the intersection as shown in the concepts to the right.
- Where sidewalks are currently narrow, widened sidewalks can allow improved pedestrian movement. New sidewalks or decomposed granite paths can be placed where there are currently gaps. Potential improvement locations include the east and west side of the street from Pacific Coast Highway to Papeete Street.
- Consider crosswalk enhancements and pedestrian-friendly intersection treatments at Figueroa St and PCH with study or redesign of I-110 ramps. This will help facilitate pedestrian access between the Figueroa/PCH park-n-ride and bus platforms on I-110.
- **Bicycling:** improving bicycle access and connectivity between Los Angeles Harbor College, recreational facilities, and surrounding

Crossing with Median Refuge Island

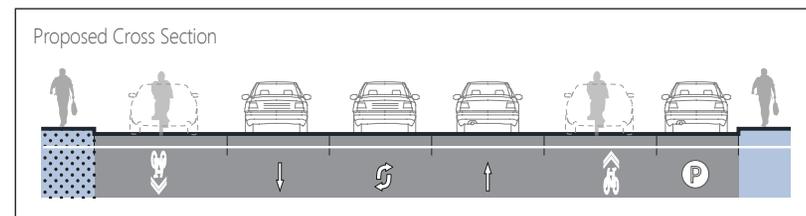


- Median refuge island shortens crossing distance and allows pedestrians to focus on each direction of traffic separately.
- A staggered refuge provides pedestrians with a better view of oncoming traffic as well as allowing drivers to see pedestrians more easily.
- Flashing beacons improve vehicular yielding rates.
- Decomposed granite paths can be used to close gaps along segments without existing sidewalks.

Crossing with Curb Extensions



- Curb extensions narrow the distance that a pedestrian has to cross and decreases pedestrian exposure time in the roadway.
- In addition to improving pedestrian visibility, provides opportunity to store and treat storm water runoff.
- Flashing beacons improve vehicular yielding rates.



[Pictured]: Sharrows can be added to existing outside travel lanes, which would provide improvements for more experienced cyclists. A lower-stress parallel bike route alternative can be Figueroa Place. A decomposed granite walkway would provide pedestrian connectivity where it is currently limited.



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residential areas through improved bicycle infrastructure and connections with east-west streets such as Lomita Boulevard, L Street and E Street, which already provide bicycle lanes.

- **Transit:** improving the conditions and amenities provided at the area's busiest bus stops and near land uses and destinations that may attract transit riders. Both Figueroa Street & L Street and Figueroa Street & Anaheim Street are in the top ten intersections of daily bus boardings in Wilmington. Additionally, improvements to the park-n-ride lot and associated access are recommended. Improvements could include revisions to surrounding land uses to maximize usage of space.



[Pictured]: Long-term bike parking, such as bike lockers, could be added to the park-n-ride lot for bicycle commuters.

- **Driving:** traffic volumes vary along Figueroa Street and tend to be greatest near freeway ramps and arterial streets, resulting in the potential for congestion and delay. For instance, the I-110 NB on-ramp at Figueroa Street & Pacific Coast Highway is unsignalized. Observations indicate this location can be challenging for motorists, bicyclists, and pedestrians, especially due to the high percentage of heavy vehicles. Furthermore, a review of collision data (January 2008 - June 2012) indicates that over this period 11 collisions have been reported between 125 and 400 feet north of the Figueroa Street & Pacific Coast Highway intersection. Dual left turn lanes north of Anaheim are considered with current Caltrans plans. Additional study of the interchange is recommended to address the operational and planning needs of the community. This may be done in conjunction with district development plans and evaluation of potential land use changes.



[Pictured Left]: Study ramps and Figueroa Street & PCH intersection configuration to improve traffic operations and safety for all modes.





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Wilmington Boulevard

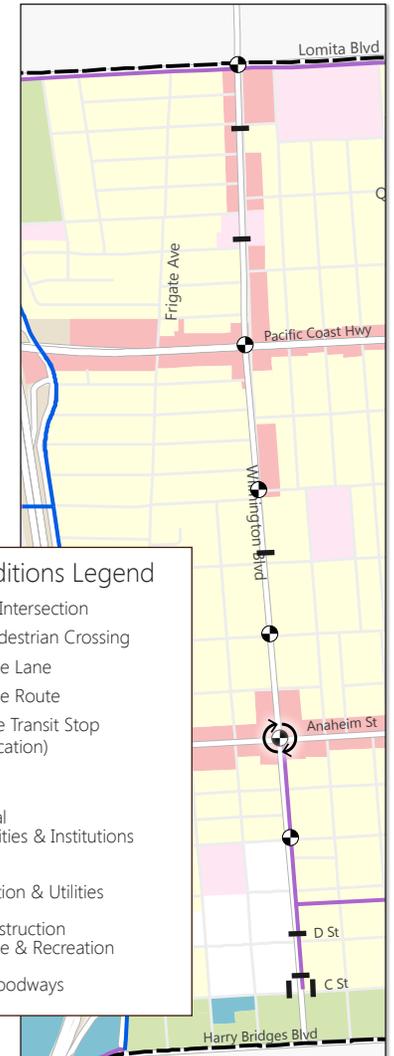
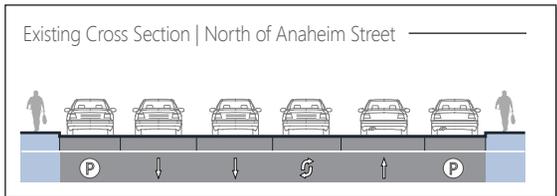
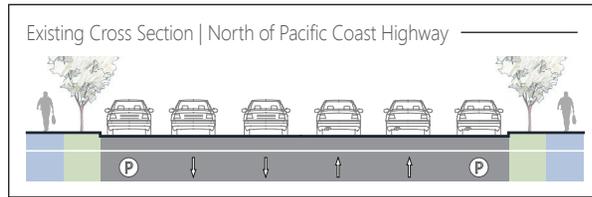
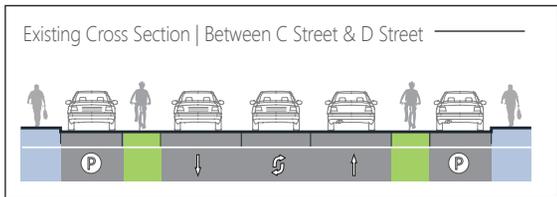


Current Roadway Classification: Secondary
 Emphasis on People Walking & Biking
 Corridor Length: 1.9 miles

Overview

Wilmington Boulevard is a north-south roadway with varying cross sections spanning the study area that range from two to four travel lanes, with minor-street stop-controlled and signalized intersections. The Wilmington Waterfront Park and residential uses between F Street and C Street were recently developed along Wilmington Boulevard and the roadway was

reconfigured south of Anaheim Street to include parking on both sides of the street, two travel lanes, a median turn lane, and bicycle lanes. Wilmington Boulevard includes infrastructure to serve various travel modes and has good connectivity with surrounding areas due to the grid street pattern and short block lengths.



Existing Conditions Legend

- Signalized Intersection
- Marked Pedestrian Crossing
- Existing Bike Lane
- Existing Bike Route
- High Usage Transit Stop (Top 10 Location)

Land Use

- Residential
- Commercial
- Public Facilities & Institutions
- Industrial
- Extraction
- Transportation & Utilities
- Mixed Use
- Under Construction
- Open Space & Recreation
- Vacant
- Water & Floodways



Recommended Improvements

- **Walking:** there are currently several well-designed, uncontrolled marked pedestrian crossings along Wilmington Boulevard, and recommendations strive to enhance and standardize crossing treatments based on roadway characteristics such as posted speed limits, traffic volumes, and number of travel lanes.
- **Bicycling:** replicating the roadway reconfiguration south of Anaheim Street northward to Lomita Boulevard will allow for the implementation of additional bike lanes. Pedestrians will also benefit from having fewer travel lanes to cross. Implementation of bike lanes could occur via coordination with current roadway resurfacing efforts.

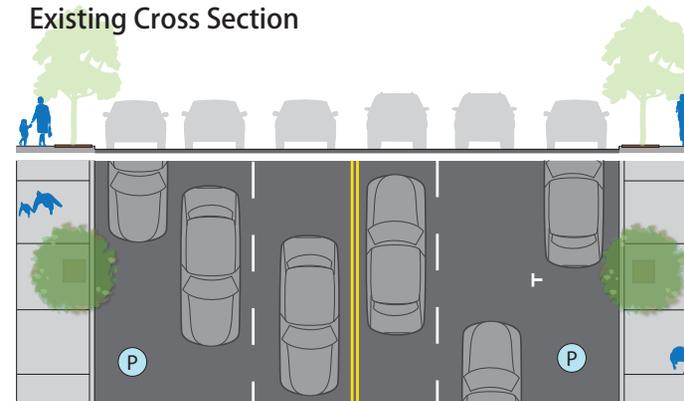


[Pictured]: Pedestrian crossing with yield line, pedestrian signage, high visibility crossing, and beacon.

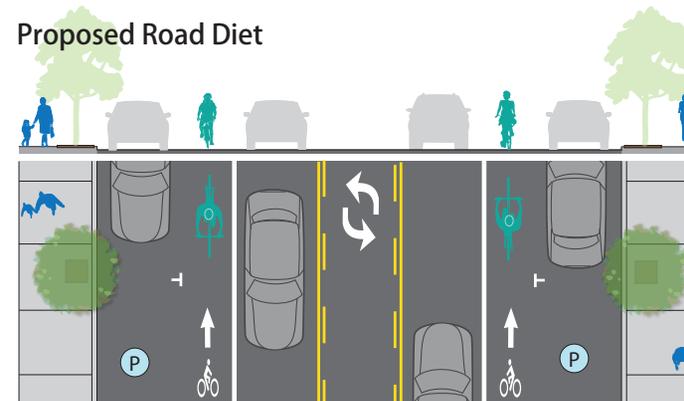


[Pictured]: Recent road diet on Wilmington Boulevard. Currently, this roadway configuration extends from C Street to Anaheim Street. This plan recommends extending this configuration northward to Lomita Boulevard.

Existing Cross Section



Proposed Road Diet



[Pictured]: In addition to reallocating roadway space for dedicated bicycle lanes, a road diet also provides traffic calming to improve pedestrian conditions on multi-lane roadways and improves vehicle flows by incorporating a center turn lane.

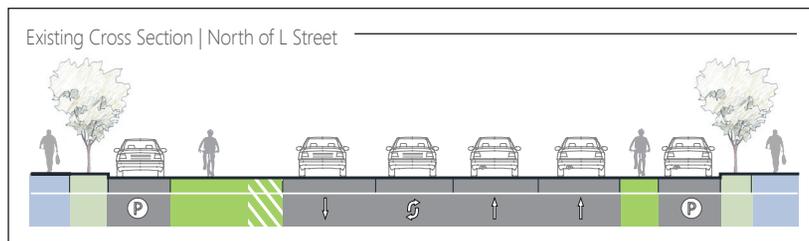
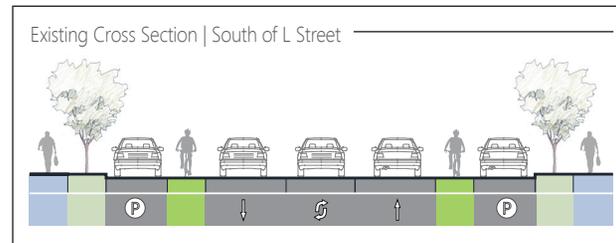
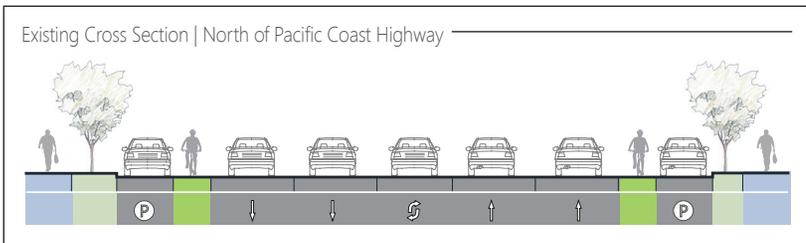
Avalon Boulevard



Current Roadway Classification: Major Highway Class II
 Emphasis on People Walking And Biking
 Corridor Length: 2.4 miles

Overview

Avalon Boulevard is a north-south roadway with varying cross-sections spanning the study area that range from two to four travel lanes, with minor-street stop controlled and signalized intersections. The cross-sections along most of Avalon Boulevard were recently reconfigured, resulting in the removal of traffic lanes and the implementation of bike lanes within the study area. Avalon Boulevard is a critical street in the community from a transportation and land use perspective, as it has several major destinations such as retail centers, civic uses, and schools. Avalon Boulevard includes infrastructure to serve various travel modes and has good connectivity with surrounding areas due to the grid street pattern and short block lengths; however, the level of activity on the street and conflicts between various modes can result in congestion at some locations.



Existing Conditions Legend

- Signalized Intersection
- Marked Pedestrian Crossing
- Existing Bike Lane
- Existing Bike Route
- High Usage Transit Stop (Top 10 Location)

Land Use

- Residential
- Commercial
- Public Facilities & Institutions
- Industrial
- Extraction
- Transportation & Utilities
- Mixed Use
- Under Construction
- Open Space & Recreation
- Vacant
- Water & Floodways



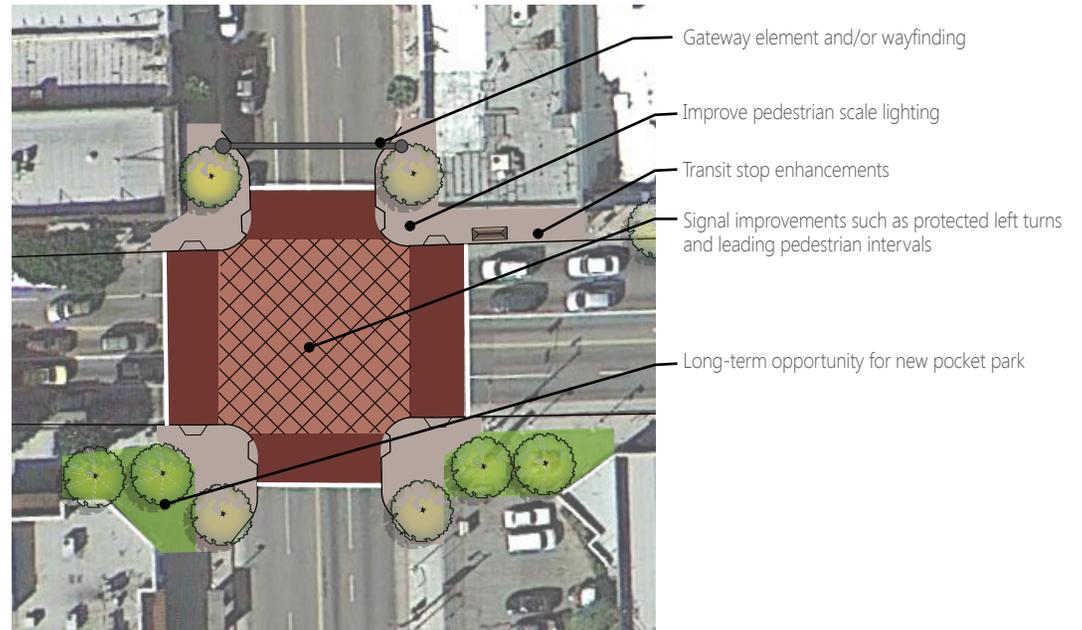
Recommended Improvements

- **Walking:** there are currently several well-designed uncontrolled marked pedestrian crossings along Avalon Boulevard and recommendations aim to enhance and standardize crossing treatments based on roadway characteristics such as posted speed limits, traffic volumes, and number of travel lanes.
- Opportunities at Avalon Boulevard & Anaheim Street, pictured to the right, include gateway/wayfinding elements, improved pedestrian scale lighting, enhanced transit stops at street corners, street art (including embellished signal cabinets) and, in the long term, pocket parks.



[Pictured]: Examples of murals painted on signal cabinet boxes in Los Angeles.

- **Biking:** bike lanes have been added to Avalon through the reconfiguration of the street, or a road diet, from two vehicle lanes in each direction to one vehicle lane in each direction with a center turn lane and bicycle lanes. Improved signage indicating presence of bike lanes would improve drivers' awareness of bicyclists.



[Pictured]: Avalon Boulevard road diet



- **Transit:** improving the conditions and amenities provided at the area’s busiest bus stops and near land uses and destinations that may attract transit riders. Both Anaheim Street & Avalon Boulevard and Pacific Coast Highway & Avalon Boulevard are in the top ten intersections of daily bus boardings in Wilmington, with Anaheim Street & Avalon Boulevard being the intersection in the Wilmington community with the most total bus boardings and alightings.



[Pictured]: A transit stop at Anaheim St & Avalon Blvd

- **Driving:** improving signal phasing and coordination to serve the vehicular activity, minimize delay, and reduce conflicts with other modes would enhance drivers’ mobility. Traffic signals are planned for installation at the nearby intersections of Anaheim & Bayview and Anaheim & Marine.



[Pictured]: A West Hollywood transit stop features basic and enhanced amenities, including ample shade, sidewalk space, and signage.



[Pictured]: Transit riders queue at a transit stop at Anaheim St & Avalon Blvd, which features basic amenities.



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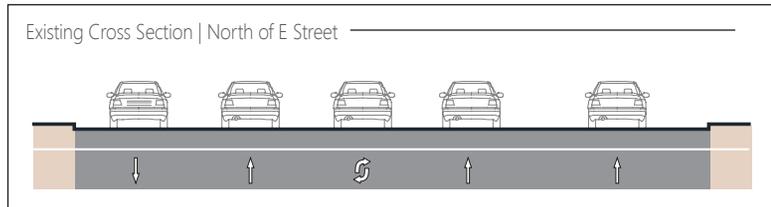
Alameda Street



Current Roadway Classification: Major Highway Class II
 Emphasis on People Driving
 Corridor Length: 2.4 miles

Overview

Alameda Street is a north-south roadway providing between four and six travel lanes, generally with signalized intersections and some side street stop-controlled locations. Most of the uses along Alameda Street are industrial and associated with port activities such as freight and goods movement. These land uses limit demand for pedestrian, bicycle, and transit infrastructure. They also tend to result in longer block lengths; therefore, Alameda Street has less east-west connectivity relative to other north-south arterials in the study area.

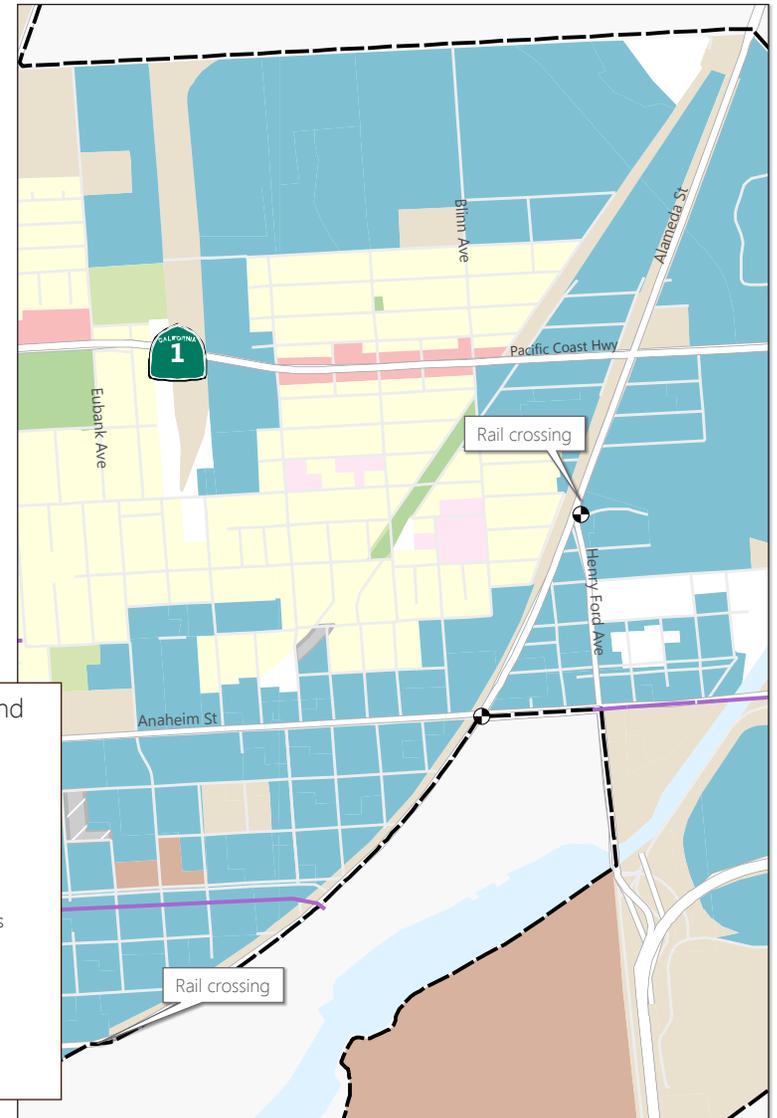


Existing Conditions Legend

- Signalized Intersection
- Marked Pedestrian Crossing
- Existing Bike Lane
- Existing Bike Route

Land Use

- Residential
- Commercial
- Public Facilities & Institutions
- Industrial
- Extraction
- Transportation & Utilities
- Mixed Use
- Under Construction
- Open Space & Recreation
- Vacant
- Water & Floodways



Recommended Improvements

- **Driving:** traffic along Alameda Street largely consists of trucks traveling to/from the port and associated industrial uses and heavy vehicle traffic has resulted in poor pavement quality and wear and tear on street striping. Improvements in this area aim at improving pavement condition and signing and striping. Emphasis is given to the resurfacing of Alameda Street. Current plans call for work to proceed in two phase. Phase 1 will resurface the roadway from Harry Bridges Boulevard to Anaheim Street. Phase 2, extending from Anaheim Street to Pacific Coast Highway, incorporates roadway widening in addition to resurfacing.
- Additionally, options to facilitate northbound traffic at Alameda Street & Grant Street, where vehicles must make several turns to resume northbound on Alameda Street, could be considered.
- The undergrounding of utilities may be accomplished in conjunction with roadway widening or other street improvements.

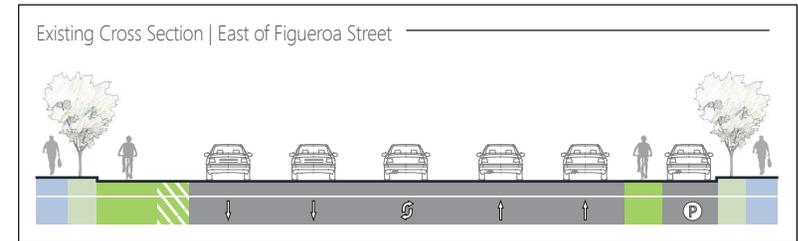


[Pictured]: Roadway surfaces in disrepair require maintenance, especially in locations such as this one along Alameda Street, a designated truck route.

Lomita Boulevard

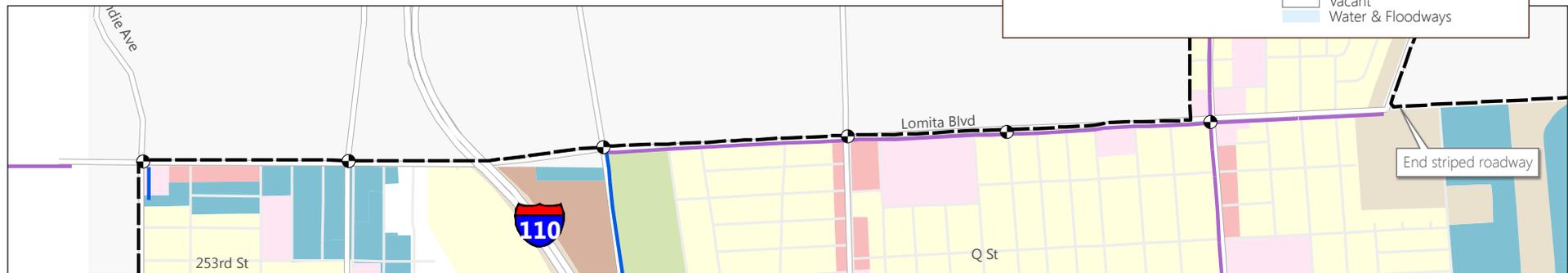


Current Roadway Classification: Major Highway Class II
 Emphasis on People Walking
 Corridor Length: 1.4 miles



Overview

Lomita Boulevard is an east-west roadway generally providing four lanes west of Wilmington Avenue and two lanes east of Wilmington Avenue. Lomita Boulevard generally abuts residential land uses and represents the border with the City of Carson. There are some commercial uses and Wilmington Middle school is located just east of Wilmington Boulevard. Buffered bike lanes were recently added to Lomita Boulevard west of Figueroa Street while preserving on-street parking and the four-lane cross-section. South of Lomita Boulevard the grid street pattern allows for multi-modal access and infrastructure serves various modes.



Existing Conditions Legend

- Signalized Intersection
- Marked Pedestrian Crossing
- Existing Bike Lane
- Existing Bike Route

Land Use

- Residential
- Commercial
- Public Facilities & Institutions
- Industrial
- Extraction
- Transportation & Utilities
- Mixed Use
- Under Construction
- Open Space & Recreation
- Vacant
- Water & Floodways



Recommended Improvements

- **Walking:** improving pedestrian access and connectivity near the school is recommended. Additionally, segments of Lomita Boulevard include an attractive streetscape with landscaping, tree canopy, adequate sidewalk width, and parking buffer. It is recommended to replicate these treatments elsewhere on Lomita Boulevard and other streets (Gaffey Street south of Anaheim serves as another example of a model streetscape in the area).



A high-quality streetscape creates a comfortable pedestrian environment along Lomita Boulevard.



[Pictured]: Improve crossings across local streets to connect with schools and improve signalized intersections

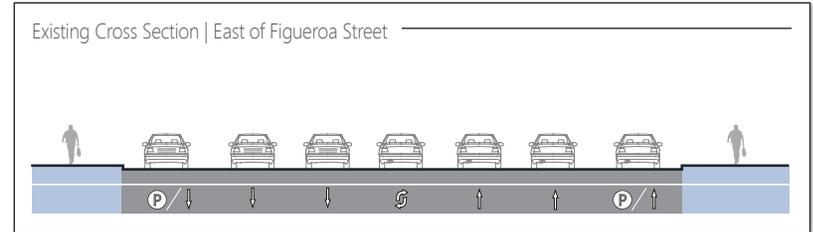


Example of curb extensions on a residential street creating a safer route to school

Pacific Coast Highway

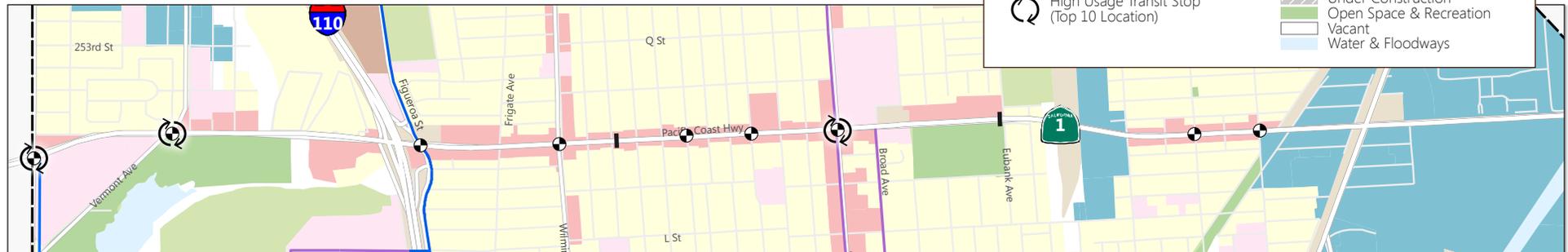


Current Roadway Classification: Major Highway Class II
 Emphasis on People Walking, Taking Transit, & Driving
 Corridor Length: 4.0 miles



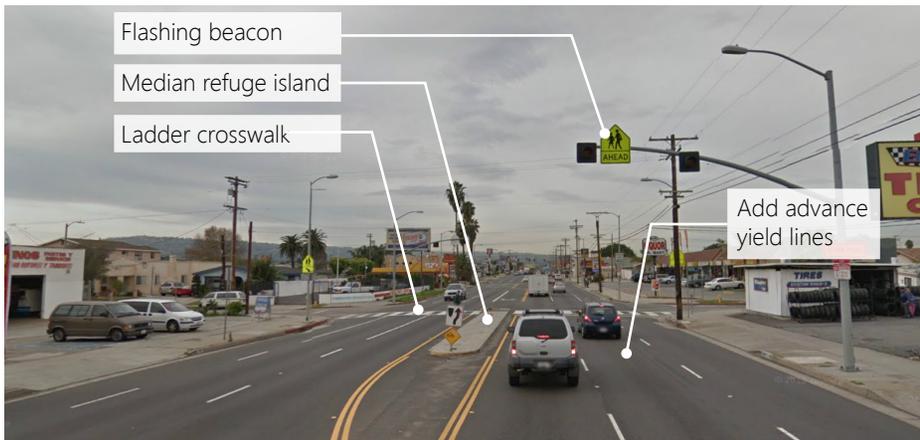
Overview

Pacific Coast Highway is an east-west corridor generally providing six travel lanes during peak hours (with parking restrictions) and four lanes during other times of the day. Pacific Coast Highway is a critical street in the community from a transportation and land use perspective as it has several major destinations such as retail centers, schools, and parks, and is a regionally significant corridor that serves a high number of vehicles, including a high percentage of trucks. Pacific Coast Highway includes infrastructure to serve various travel modes and has good connectivity with surrounding areas due to the grid street pattern and short block lengths; however, the level of activity on the street and conflicts between various modes can result in congestion.



Recommended Improvements

- **Walking:** Improving pedestrian access and connectivity across Pacific Coast Highway is challenging due to the number of travel lanes, high travel speeds, and high traffic volumes. Enhanced pedestrian crossings should be considered where great distances exist between crossings and where visibility and safety is optimal.



[Pictured]: Example of a well marked unsignalized crossing on PCH at Ronan Avenue. This design, which uses an overhead flashing beacon, median refuge island and ladder crosswalk is recommended, with the addition of advanced yield lines, for future unsignalized crossings.



[Pictured]: Seven total auto lanes characterize the portion of Pacific Coast Highway west of Figueroa Place. Enhanced sidewalks would improve the pedestrian experience.



[Pictured Left]: A signalized intersection at Eubank presents an opportunity for pedestrian improvement, since only three of its four crosswalk legs are striped with a crosswalk.



[Pictured Left]: High-visibility school crosswalks on PCH at Broad Avenue (signalized intersection).

environmental justice mobility plan & opportunities for wilmington employees & residents

- **Transit:** improving the conditions and amenities provided at the area’s busiest bus stops and near land uses and destinations that may attract transit riders. Several intersections along Pacific Coast Highway are among the ten locations with the most daily bus boardings in the Wilmington area. Additionally, improvements for the park-n-ride lot at Figueroa Street to improve connectivity with the bus platform on I-110 are recommended.

- **Driving:** traffic volumes are high on Pacific Coast Highway due to its significance as a regional corridor, land uses, and access to/from I-110 freeway ramps. Vehicular recommendations for Pacific Coast Highway include enhancements to freeway ramps such as improved signal coordination and other enhancements suggested in the Los Angeles Mobility Element’s Vehicle-Enhanced Network (VEN) to try and minimize delay and conflicts with other modes of travel.

Transit Access Improvements:



[Pictured]: The curbed right-turn pork chop acts as a barrier to comfortable pedestrian crossings from the park-n-ride lot to the Harbor Transitway BRT. Removing the free right-turn lane, pork chop island and installing a curb extension will improve the pedestrian crossing. The recommendation to further study reconfiguration to improve both driving and pedestrian conditions was made in the Figueroa Street section. See page 4-27.



[Pictured]: Trash in the park-n-ride lot and adjacent sidewalks diminish the streetscape and perception of safety.





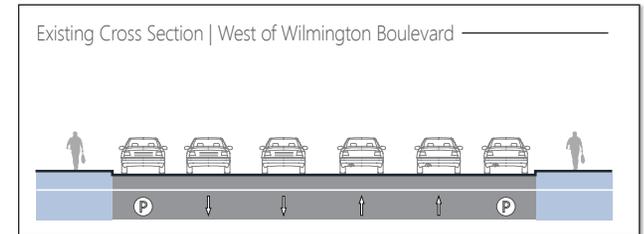
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Anaheim Street



Current Roadway Classification: Major Highway Class II
 Emphasis on People Walking, Taking Transit, & Driving
 Corridor Length: 4.5 miles



Overview

Anaheim Street is an east-west four-lane roadway with a median turn lane and side street stop-controlled and signalized intersections. The segment of Anaheim Street west of I-110, which abuts open space and industrial uses, has a different character than the segment east of I-110, which primarily fronts commercial uses. In addition to different land uses, the street pattern also differs, with a typical street grid pattern east of I-110. Anaheim Street is a critical street in the community from a transportation and land use perspective as it has several major destinations such as retail centers, schools, and parks, and is a regionally significant corridor that serves a high number of vehicles. There are several uncontrolled marked pedestrian crossings across Anaheim Street that include high-visibility crosswalk markings and pedestrian signage that are an indication of the level of multi-modal activity and demand for active transportation infrastructure within the local community. East of

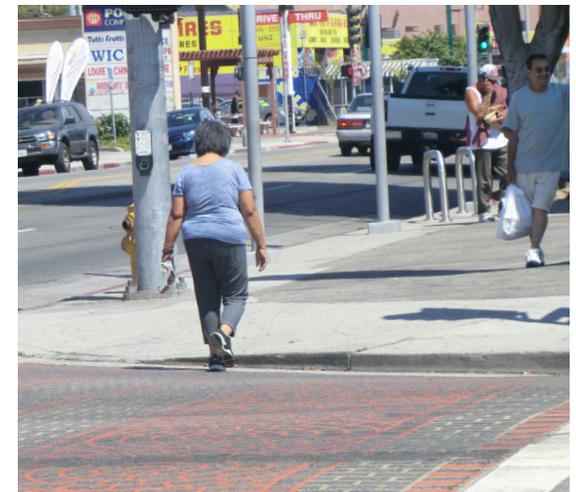
I-110, Anaheim Street includes infrastructure to serve various travel modes and has good connectivity with surrounding areas; however, the level of activity on the street and conflicts between various modes provides opportunities for enhancements. The street sees high transit usage; five out of the top ten most used transit stops occur on Anaheim Street between Figueroa Street and Avalon Boulevard.



Existing Conditions Legend		Land Use	
	Signalized Intersection		Residential
	Marked Pedestrian Crossing		Commercial
	Existing Bike Lane		Public Facilities & Institutions
	Existing Bike Route		Industrial
	High Usage Transit Stop (Top 10 Location)		Extraction
			Transportation & Utilities
			Mixed Use
			Under Construction
			Open Space & Recreation
			Vacant
			Water & Floodways

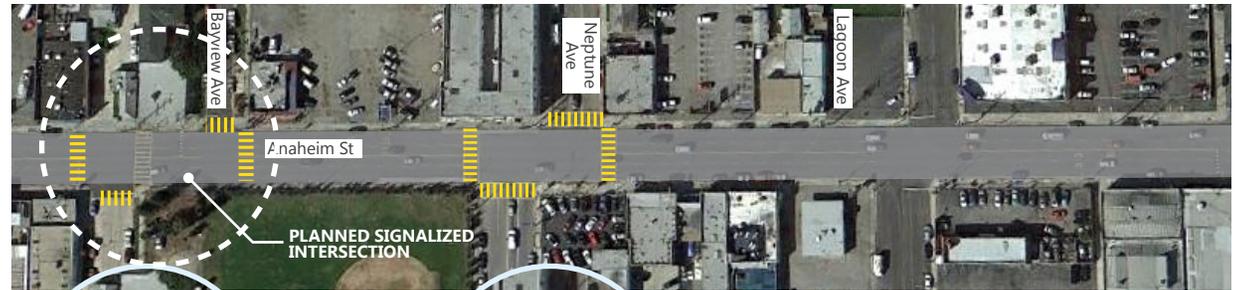


Existing Conditions Photos



Recommended Improvements

- **Walking:** building off the existing pedestrian infrastructure, this plan aims to enhance pedestrian access and connectivity along Anaheim Street, particularly between residential and commercial areas through improved streetscape and crossings. Existing planned crossing signalizations at Anaheim/Bayview and Anaheim/Marine should be implemented to reduce pedestrian conflicts near schools and areas with high pedestrian activity.
- The proposed Anaheim road diet (discussed below) will enhance pedestrian safety by reducing the number of travel lanes that must be crossed on Anaheim Street.
- As improvements are implemented on Anaheim and parcels are redeveloped, substandard and missing sidewalks should be improved to meet or exceed existing standards. Examples include the segment west of Eubank.
- **Intersection of Anaheim Street & Avalon Street:** this intersection is a node of pedestrian, transit, vehicular, and commercial activity. A review of collision data indicates that between 2008 and 2010 there were 15 reported collisions at the intersection, three of which involved a pedestrian and one involved a bicyclist. Additional streetscape improvements such as wayfinding signage and trash receptacles can help improve the pedestrian experience in this area (see page 4-32).
- **Biking:** East of I-110, reconfiguration of the existing four-lane travel section to include three lanes and a bike lane in each direction will provide dedicated bicycle facilities on Anaheim Street. West of I-110, bike lanes are planned following the completion of additional roadway improvements. In total, bike lanes will be provided on Anaheim Street between Gaffey Street and Henry Ford Avenue.



Stripe continental crosswalks at intersections with new traffic signals and high pedestrian activity.



Stripe continental crosswalks at intersections with high volumes of pedestrian crossings.

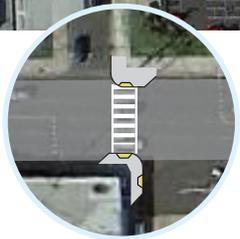


[Pictured]: Implementation of an enhanced bus stop, such as the one shown to the right in West Hollywood, would provide transit users additional amenities before getting on and after getting off the bus.





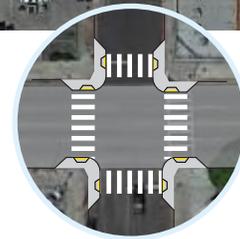
- **Transit:** improving the conditions and amenities provided at the area's busiest bus stops and near land uses and destinations that may attract transit riders. Five intersections along Anaheim Street are among the top ten locations with the most daily bus ons and offs in the Wilmington area.
- **Driving:** traffic volumes are high on Anaheim Street due to its status as a regional corridor, land uses, and access to/from I-110 freeway ramps. Vehicular recommendations for the street include further study of potential interchange improvements at I-110 and the aforementioned signalization of intersections at Bayview and Marine.



Add curb extension at unsignalized intersection to improve pedestrian crossings to major destinations such as grocery stores.

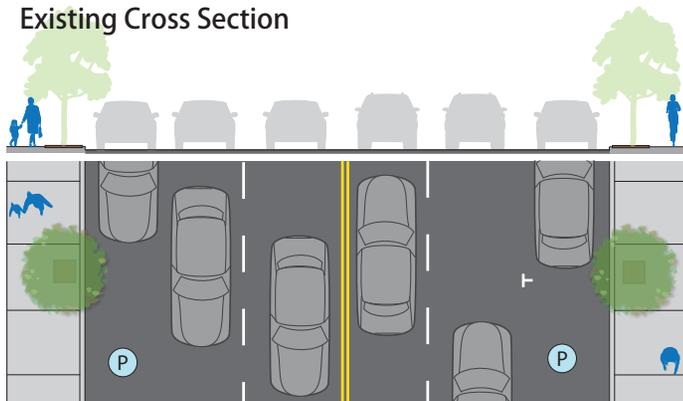


Stripe continental crosswalks at intersections with connections to major destinations, including schools and grocery stores.

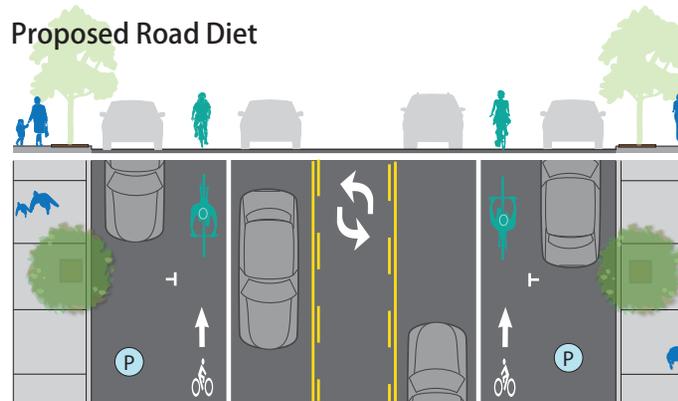


Stripe continental crosswalks and install curb extensions at intersections with new traffic signals and high pedestrian activity.

Existing Cross Section



Proposed Road Diet

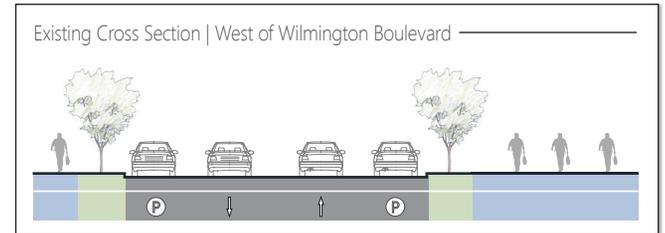


[Pictured]: A road diet would reconfigure Anaheim Street's four lanes of auto travel into two lanes of auto travel, one center turn lane, and two bike lanes.

C Street

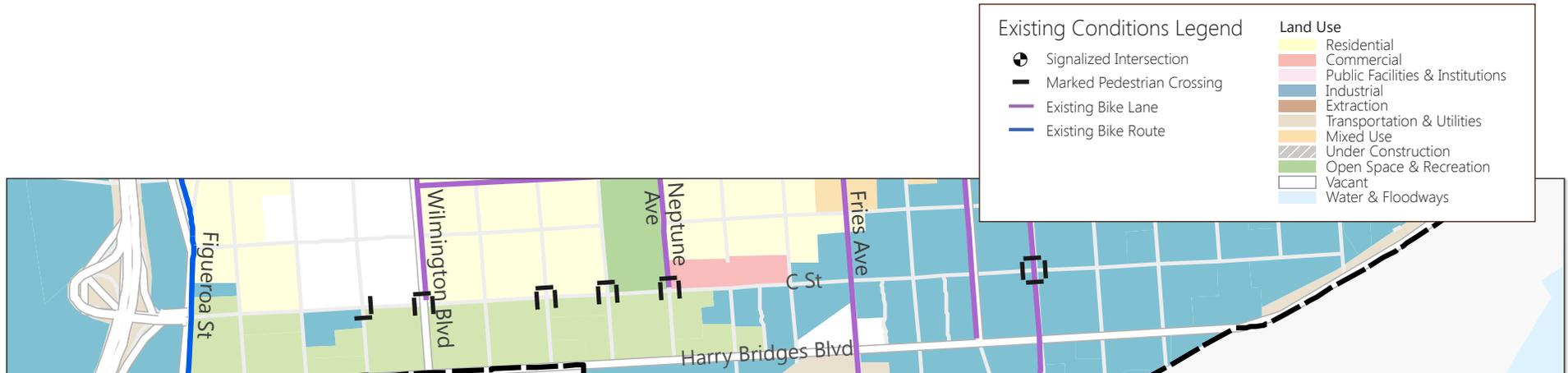


Current Roadway Classification: Local
 Emphasis on People Walking
 Corridor Length: 1.4 miles



Overview

As the southern terminus of a number of north/south streets, C Street is an important link between the community, the recently opened Wilmington Waterfront Park, and the port areas to the south. Serving primarily residential areas, the street sees little auto traffic east of Wilmington Boulevard and flanks the north side of Wilmington Waterfront Park for roughly half of its length. In those areas where it abuts the park, C Street exhibits a number of pedestrian amenities, including wide sidewalks, landscaping, and marked crossings. The street connects with a number of recently opened bicycle facilities.



Recommended Improvements

- **Walking:** Improving pedestrian access and connectivity between residences north of C Street and the Wilmington Waterfront Park through enhanced crossing and intersection treatments.

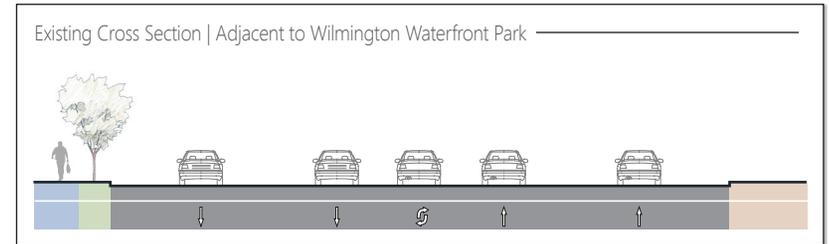


[Pictured]: Existing conditions at C Street and Gulf Avenue, left, and with high-visibility crosswalks installed, right.

Harry Bridges Boulevard

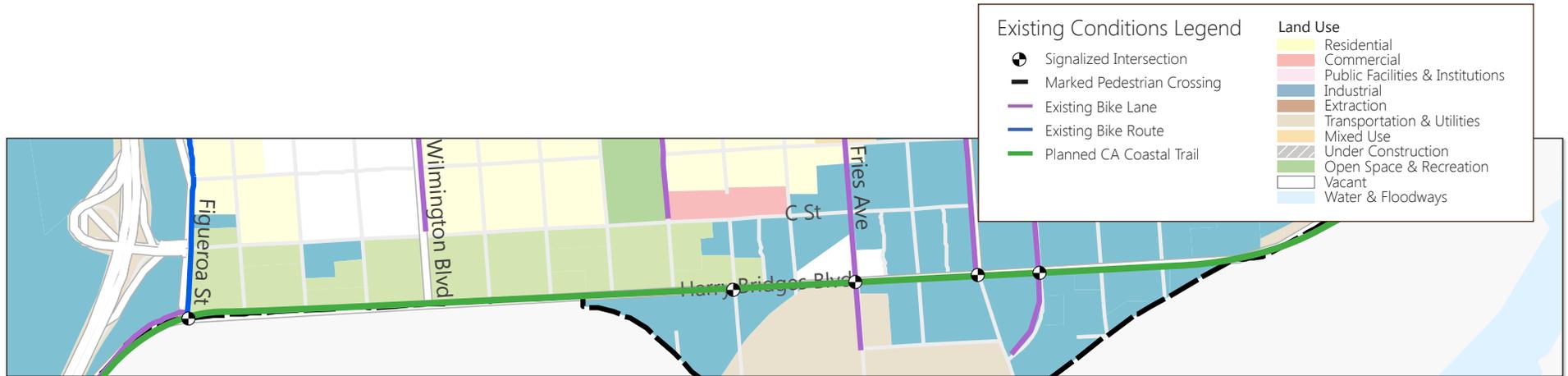


Current Roadway Classification: Major Highway Class II
 Emphasis on People Biking and Driving
 Corridor Length: 1.3 miles



Overview

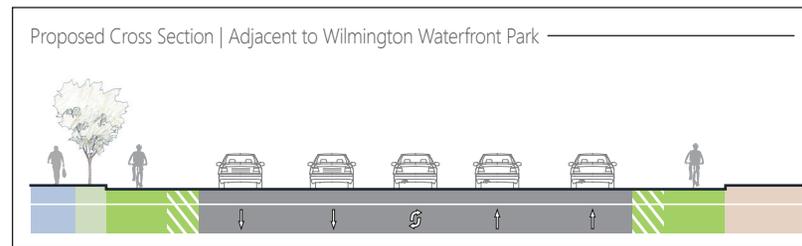
Harry Bridges Boulevard is an east-west four-lane roadway with a raised landscaped median that primarily fronts open space and port/industrial uses. Harry Bridges Boulevard becomes John S Gibson Boulevard to the west and provides access to the San Pedro Community. To the east, Harry Bridges Boulevard becomes Alameda Street, a north-south street. Because of limited surrounding land uses, Harry Bridges Boulevard is a travel corridor rather than a destination corridor for most traffic not associated with the Port of Los Angeles.



Recommended Improvements

Bicycling: Improving east-west bicycle connectivity between San Pedro and Wilmington by enhancing public access in the form of bike lanes along Harry Bridges Boulevard, designated part of the California Coastal Trail. This stretch of roadway currently has a wide curb lane where parking is prohibited. Therefore, one concept under consideration is to use this excess right of way for bicycle lanes (without removing vehicular capacity). A bike lane on Harry Bridges Boulevard will enhance the bike network by providing a high quality east-west facility connecting directly to four bike lanes and within one block of two other north-south bike lanes. In the future, another route may be selected for implementation of the California Coastal Trail.

[Pictured]: Ample lane space on Harry Bridges Boulevard, right, could be converted to buffered bike lane(s), similar to those currently on Lomita Boulevard, below.





Local Streets (i.e. Fries Avenue, Eubank Avenue, Blinn Ave, and Opp Street, L Street)

Current Roadway Classifications: Varying
Emphasis on People Walking, Biking, and Driving
Corridor Lengths: Varying

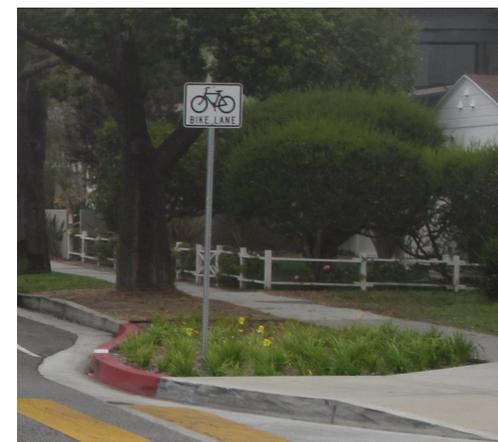
Overview

The street grid and land use patterns in Wilmington provide an opportunity for enhancing local streets for walking and bicycling. Larger streets in the area, such as Avalon Boulevard, Anaheim Street, and Pacific Coast Highway, already serve substantial levels of multi-modal activity due to the number of destinations along these corridors. For residents that don't live on or near these streets, a network of quality pedestrian and bicycle facilities can provide opportunities for walking or biking to local destinations and can also be an alternative to those who do not feel comfortable walking or biking on streets with higher levels of vehicle activity. These streets can vary from two to four travel lanes and include both signalized and stop-controlled intersections. These smaller streets can also enhance the walking routes currently used by residents traveling to/from school.



Recommended Improvements

- **Walking:** improving pedestrian access, connectivity, and comfort by improving streetscape, crossing, and sidewalk conditions. This can be accomplished by identifying additional and consistent treatments based on location characteristics such as number of lanes, travel speeds, and traffic control.
- **Bicycling:** improving bicycle access and connectivity throughout the area with a Neighborhood-Friendly Streets concept that includes sharrow pavement markings, signage, and traffic calming features as appropriate.
- **Driving:** traffic volumes are relatively low on most local streets; however, they play a vital role by providing direct access to local residences. Opportunities exist to address conflicts with bicyclists and pedestrians, and to improve signage and pavement condition.

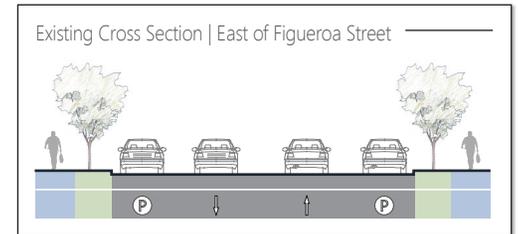


[Pictured]: Bike-friendly and pedestrian-friendly street amenities include (clockwise from top left) signage; landscaping; high-visibility crosswalks/bulbouts; and neighborhood traffic circles.

Local Street Case Study: L Street



Current Roadway Classification: Collector
 Emphasis on People Biking
 Corridor Length: 3.0 miles



Overview

L Street has a number of qualities that make it a notable Neighborhood-Friendly Street. Stretching almost the entirety of the study area, L Street currently runs from Los Angeles Harbor College in the east to just shy of Alameda Street in the west. The majority of the street is two lanes (one auto travel lane in each direction), and traffic volumes are relatively low. With the exception of the areas directly adjacent to Avalon Boulevard, land use surrounding the street is primarily low-density residential. At a few locations, L Street jogs to the north or south a short distance before continuing in its east-west direction.



Recommended Improvements

- Biking:** Because of its low levels of traffic, and high connectivity to numerous north and south streets throughout the study area, designate the street a neighborhood-friendly street. Provide neighborhood-friendly street amenities along L street throughout the study area, including shared use lanes marked with sharrows, wayfinding signage, and traffic calming as necessary. At the intersections where L Street jogs, provide standardized, high-visibility bicycle facility signage and striping treatments.

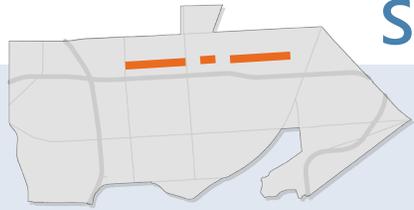


Bicycle boxes with bicycle detection allow cyclists to position themselves in front of vehicle traffic in order to make the left-turn jog and continue along L Street. Sharrows with a right-turn assist in wayfinding for right-turning bikes.



[Pictured]: A shared use lane marking (sharrow) and a traffic circle.





Sandison Street

Current Roadway Classification: Local
Emphasis on People Walking
Corridor Lengths: 1.6 miles

Overview

A local street spanning a residential section of northern Wilmington, Sandison Street offers opportunity for increased east/west connections for pedestrians and bicyclists traveling in the area north of Pacific Coast Highway. The street is located near two schools, Wilmington Middle School and Banning High School, as well as the Wilmington Plaza Shopping Center.

Recommended Improvements

- **Walking:** Sandison Street between McDonald Avenue and Island Avenue currently lacks sidewalks on one or both sides of the street. Installation of sidewalks here would reduce pedestrian conflicts with automobiles, as pedestrians would have a dedicated facility separate from moving and parked cars. Sidewalks would also enhance overall pedestrian connectivity in the area north of Pacific Coast Highway.



[Pictured]: Sandison Street at Neptune Avenue.





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5. WILMINGTON ACTION PLAN

The EMPOWER Mobility Plan focuses on the walking, biking, driving, and transit modes of travel to address existing and future transportation needs of the Wilmington Community. The Mobility Plan was developed based on a review of existing travel conditions, planned local improvements, and stakeholder input. The recommendations fall in two categories: general recommendations that can be applied throughout the community and specific corridor improvements. In addition, a priority list of mobility improvement projects was developed as part of an Action Plan targeted for near-term implementation:

- Figueroa Street – Provide sidewalks and bicycle/pedestrian safety improvements
- Figueroa Place – Pedestrian and bicycle connections to Harbor College; Public Art at pedestrian tunnels under I-110
- I-110 Interchange at Pacific Coast Highway – Operational and safety improvements
- Anaheim Street – New traffic signals at Bayview & Marine
- Wilmington Retail District – At Avalon & Anaheim intersection, create gateway features, improve signing, pedestrian safety, enhanced bus stops, pedestrian scale lighting
- Anaheim Street – Road diet to accommodate bicycle lanes
- Safe Routes to School – Funding for school access improvements
- Neighborhood Friendly Streets –neighborhood friendly street design with bicycle treatments, traffic calming and pedestrian safety with L Street as a case study

A project fact sheet was developed for each of the eight short-term projects considered for near-term implementation in the Wilmington area. The project fact sheets are displayed in the following pages and full-size versions are in Appendix G.





action plan



PROJECT LOCATION

New Signals on Anaheim St

- Anaheim at Bay View Ave
- Anaheim at Marine Ave



Pictured Above: Existing Anaheim Street signal (top), potential Anaheim at Bay View intersection configuration (middle) and potential Anaheim at Marine intersection configuration (bottom).

project PURPOSE & NEED

High numbers of pedestrians and automobiles travel through the intersections of Anaheim/Bayview and Anaheim/Marine, and these nodes of activity are vital links between the residential areas to the north and south of Anaheim Street. These intersections also are also vital to the accessibility of the commercial corridor along Anaheim Street and are an important link for nearby schools.

improvement DESCRIPTION

Signalization of Anaheim/Bay View and Anaheim/Marine, two highly utilized intersections. Opportunities exist for additional pedestrian improvements at these newly signalized intersections, including high-visibility "continental" crosswalks and curb extensions to reduce pedestrian crossing distances.

project BENEFITS

	Safety	Congestion/ Delay	Access/ Mobility
	<input checked="" type="checkbox"/>		
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>

funding OPPORTUNITIES

Pursue opportunities that enhance safety and connections for all modes of travel in and around this location, including the Highway Safety Improvement Program (HSIP) and Safe Routes to School programs.

environmental justice mobility plan & opportunities for wilmington employees & residents 2014



action plan



PROJECT LOCATION

Figueroa Place Tunnel Improvements

project PURPOSE & NEED

Three pedestrian freeway underpasses currently connect Figueroa Street on the east side of I-110 with Figueroa Place on the west side of I-110. However, these connections are limited by a lack of lighting and a proliferation of trash and debris.

improvement DESCRIPTION

Improving pedestrian access and connectivity between Los Angeles Harbor College, recreational facilities, and surrounding residential areas through improved pedestrian infrastructure, including added lighting, pedestrian-friendly design, murals and/or public art, as well as trash clean-up and maintenance programs.

project BENEFITS

	Safety	Streetscape/ Aesthetics	Access/ Mobility
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

funding OPPORTUNITIES

Partnerships with local organizations--Harbor College, South Bay Center for Counseling (SBCC), or Harbor Community Benefit Foundation (HCBF), for example--could cultivate public art programs and lead regular maintenance efforts to ensure pedestrian connections remain safe and clean.

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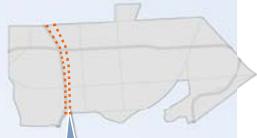
[Pictured]: The existing pedestrian tunnels under the 110 are dark and have trash and debris.



[Pictured]: Examples of adding lighting and artistic elements to tunnels to improve pedestrian comfort. Consider partnering with community groups, such as Harbor College, SBCC, or HCBF, to sponsor and lead a mural program.



action plan



PROJECT LOCATION

project PURPOSE & NEED

Improve pedestrian access and connectivity between Los Angeles Harbor College, recreational facilities, and surrounding residential areas that are separated by the I-110 freeway and multi-lane roads with uncontrolled crossings.

improvement DESCRIPTION

Enhance unsignalized crossings by shortening crossing distances with a median refuge island or by adding curb extensions, striping high visibility crosswalks, and adding flashing beacons.

Where sidewalks are currently narrow, widened sidewalks can allow improved pedestrian movement and greater separation from vehicle traffic. New sidewalks or decomposed granite paths can be placed where there are currently gaps. Potential improvement locations include the east and west sides of the street from Pacific Coast Highway to Papeete St.

project BENEFITS

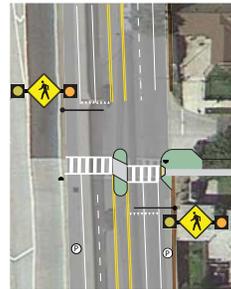
	Safety	Congestion/ Delay	Access/ Mobility
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>		

funding OPPORTUNITIES

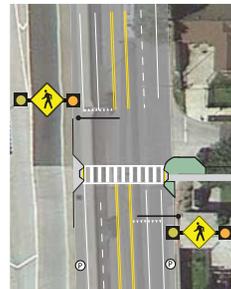
Pursue opportunities that enhance safety and connections for all modes of travel in and around this location, including the Highway Safety Improvement Program (HSIP), Safe Routes to School programs, Metro Call for Projects, and port mitigation funds.

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Crossing with Median Refuge Island



Crossing with Curb Extensions



Pictured Above: Examples of typical crosswalk enhancements, median refuge island (top) and curb extensions (bottom).



action plan



PROJECT LOCATION

project PURPOSE & NEED

Traffic volumes tend to be greatest near freeway ramps and arterial streets, resulting in the potential for congestion, delay, and multi-modal conflicts. For instance, the I-110 northbound on-ramp at Figueroa Street & Pacific Coast Highway is unsignalized. Observations indicate this location can be challenging for motorists, bicyclists, and pedestrians, especially due to the large percentage of trucks traveling to the I-110. Furthermore, a review of collision data (January 2008 - June 2012) indicates that over this period 11 collisions have been reported between 125 and 400 feet north of the Figueroa Street & Pacific Coast Highway intersection.

improvement DESCRIPTION

The recommendations at these locations focus on reducing delay and congestion at freeway ramps, facilitating local goods movement, and improving safety for all modes of travel. A similar redesign of the I-110 ramps at Anaheim should be studied.

project BENEFITS

	Safety	Congestion/ Delay	Access/ Mobility
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

funding OPPORTUNITIES

Pursue opportunities that enhance safety and connections for all modes of travel in and around this location, including the Highway Safety Improvement Program (HSIP), Safe Routes to School, Metro Call for Projects, SCAG Regional Transportation Plan, port mitigation funds, and the Harbor Community Benefit Foundation.

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Pictured Above: Existing conditions at Figueroa Street and Pacific Coast Highway.



action plan



PROJECT LOCATION

project PURPOSE & NEED

improvement DESCRIPTION

project BENEFITS

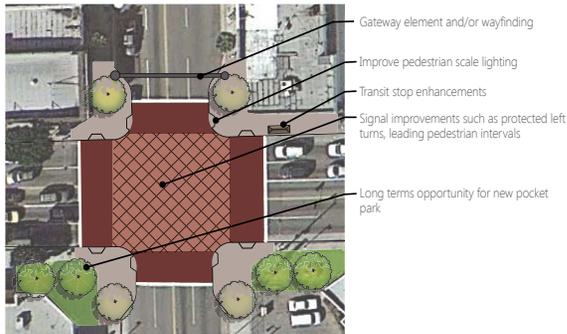
funding OPPORTUNITIES

Wilmington Retail District Gateway Enhancements

- Avalon / Anaheim Intersection Improvements

This intersection is a node of pedestrian, transit, vehicular, and commercial activity. A review of collision data indicates that between 2008 and 2010 there were 15 reported collisions at the intersection, three of which involved a pedestrian and one involved a bicyclist. Additional streetscape improvements such as wayfinding signage and trash receptacles can help improve the pedestrian experience in this area.

Opportunities at Avalon Boulevard and Anaheim Street, pictured below, include gateway/wayfinding elements, improved pedestrian-scale lighting, enhanced transit stops at street corners, street art and, in the long term, pocket parks.



	Safety	Streetscape/Comfort	Access/Mobility
Bus	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Pedestrian	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Bicyclist	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Car	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



Pictured Above: Examples of signal cabinet art.

Pursue opportunities that enhance safety and connections for all modes of travel in and around this location, including the Highway Safety Improvement Program (HSIP) and Safe Routes to School programs.

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action plan



PROJECT LOCATION

project PURPOSE & NEED

improvement DESCRIPTION

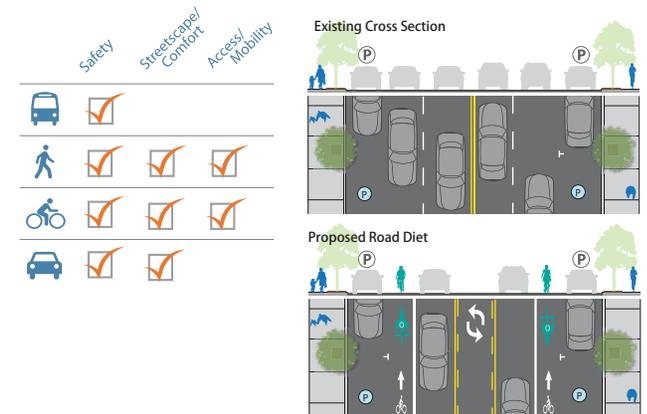
project BENEFITS

funding OPPORTUNITIES

Anaheim Road Diet

Anaheim Street is a critical street in the community from a transportation and land use perspective, as it has several major destinations such as retail centers, schools, and parks, and is a regionally significant corridor that serves a high number of multi-modal users. Anaheim Street includes infrastructure to serve various travel modes and has good connectivity with surrounding areas; however, the level of activity on the street and conflicts between various modes provides opportunities for enhancements. The street sees high transit usage; five out of the top ten most used transit stops occur on Anaheim Street between Figueroa Street and Avalon Boulevard.

Reconfigure the existing four lanes of auto travel into a road diet, including two lanes of auto travel, a center turn lane, and a bike lane in each direction.



Pictured Above: Existing roadway configuration with four travel lanes (top) and proposed roadway configuration with two travel lanes, bike lanes, and a center turn lane (bottom).

Pursue opportunities that enhance safety and connections for all modes of travel in and around this location, including the Highway Safety Improvement Program (HSIP), Safe Routes to School programs, and Caltrans funding.

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action plan



Safe Routes to School

project PURPOSE & NEED

Wilmington is home to a number of schools, including Wilmington Middle School, Banning High School, Wilmington Park Elementary School, George De La Torre Jr Elementary School, and others. Walking and bicycling are important ways for students, teachers, and staff to get to and from these schools. Programs and facilities allowing and promoting walking and bicycling around schools will enhance safety and connections to nearby destinations.

improvement DESCRIPTION

Safe Routes to Schools Plans encompass the 5 E's: Engineering, Enforcement, Education, Evaluation and Encouragement. This plan seeks to incorporate these components to provide local schools with improved walking and bicycling facilities and programs that enhance safety and connections. This can be accomplished by pursuing both infrastructure and non-infrastructure Safe Routes to School grant money.



Pictured: Above left, a walking school bus, an organized group walk to/from school, is one form of encouragement. Above, an example of curb extensions on a residential street creating a safer route to school.

project BENEFITS

	Safety	Congestion/ Delay	Access/ Mobility
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

funding OPPORTUNITIES

Pursue opportunities that plan and implement Safe Routes to School Programs at local schools.

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action plan



project PURPOSE & NEED

Neighborhood-Friendly Streets

• Case Study: L Street

The street grid and land use patterns in Wilmington provide an opportunity for enhancing local streets for walking and bicycling. For residents that do not live on or near streets with high levels of multi-modal activity, quality pedestrian and bicycle facilities can provide opportunities for walking or biking to local destinations and can also be an alternative to those who do not feel comfortable walking or biking on streets with higher levels of vehicle activity. One such street, L Street, provides an example for how to implement a pedestrian-friendly and bicycle-friendly toolbox.

improvement DESCRIPTION

Provide bike-friendly street amenities along neighborhood-friendly streets as local conditions permit. On L Street, implement shared use lanes marked with sharrows, wayfinding signage, and traffic calming as necessary. At the intersections where L Street jogs, provide standardized, high-visibility bicycle facility signage and striping treatments.



[Above]: Bicycle boxes with bicycle detection allow cyclists to position themselves in front of vehicle traffic in order to make the left turn jog and continue along L Street. Sharrows with a right turn arrow assist in wayfinding for right turning bikes.



[Pictured, clockwise from top left]: A shared-use lane marking (sharrow); shared-use lane signage; high-visibility crosswalks; landscaped neighborhood traffic circle; and sidewalk-adjacent landscaping.

project BENEFITS

	Safety	Aesthetics/ Comfort	Access/ Mobility
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

funding OPPORTUNITIES

Pursue opportunities that enhance safety and connections for all modes of travel in and around this location, including the Highway Safety Improvement Program (HSIP), Safe Routes to School programs, and Metro Call for Projects.

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FUNDING SOURCES

Numerous funding sources are potentially available at the federal, state, regional, county, and local levels for the projects included in this report. Below is a description of the most promising funding programs available for the proposed projects at the federal, state, MPO and county levels.

State and Federal Programs

The majority of public funds for bicycle and pedestrian projects are derived through a core group of federal and state programs. Federal funds from the Surface Transportation Program (STP), Transportation Enhancements (TE), and Congestion Mitigation Air Quality (CMAQ) programs are allocated to the County and distributed accordingly.

Active Transportation Program

At the writing of this report, the California Transportation Commission is in the process of developing program guidelines and project selection criteria for the statewide Active Transportation Program. The following funding sources will be either completely or partially subsumed under a single \$134.2 million account for active transportation projects, as follows*:

Transportation Alternatives Program (TAP)	\$67 million
Recreational Trails Program (RTP)	\$5 million
Safe Routes to School Program (SR2S)	\$24 M (state) + \$21 M (federal)
Environmental Enhancement and Mitigation Program (EEMP)	\$10 million
Bicycle Transportation Account (BTA)	\$7.2 million

**The amount of competitive grant funding available from these sources will be determined in the spring of 2014.*



Bicycle Transportation Account (BTA)

The BTA is a Caltrans-administered program that provides funding to cities and counties for projects that improve the safety and convenience of bicycling commuting. Eligible projects include secure bicycle parking; bicycle-carrying facilities on transit vehicles; installation of traffic-control devices that facilitate bicycling; planning, design, construction and maintenance of bikeways that serve major transportation corridors; and elimination of hazards to bicycling commuters. In fiscal year 2008/09, the BTA provided \$7.2 million for projects throughout the state. To be eligible for BTA funds, a city or county must prepare and adopt a bicycling transportation plan that meets the requirements outlined in Section 891.2 of the California Streets and Highways Code. More information on the Bicycle Transportation Account is available at:

www.dot.ca.gov/hq/LocalPrograms/bta/btawebPage.htm

Transportation Enhancements

Under the Transportation Enhancements (TE) program, California receives approximately \$60 million per year from the federal government to fund projects and activities that enhance the surface transportation system. The program funds projects under 12 eligible categories, including the provision of bicycling lanes, trails, bicycle parking, and other bicycling facilities; safety-education activities for pedestrians and bicyclists; landscaping, streetscaping, and other scenic beautification projects; and the preservation of abandoned railway corridors and their conversion to trails for non-motorized transportation. In California, 75 percent of TE funding is distributed by the regional transportation planning agencies. For the Los Angeles County, the Metropolitan Transportation Authority (Metro) manages the disbursement of funds. The remaining 25 percent of the state budget is allocated by Caltrans at the district level.

Safe Routes to School (SR2S)

California's Safe Routes to Schools program (SR2S) is a Caltrans-administered grant-funding program established in 1999 (and extended in 2007 to the year 2013). Eligible projects include bikeways, walkways, crosswalks, traffic signals, traffic-calming applications, and other infrastructure projects that improve the safety of walking and biking routes to elementary, middle, and





high schools, as well as “incidental” education, enforcement, and encouragement activities. Planning projects are not eligible. In fiscal year 2007/08, approximately \$25.5 million was available in grant funding.

www.dot.ca.gov/hq/LocalPrograms/saferoutes/saferoutes.htm

Environmental Enhancement and Mitigation Program

The Environmental Enhancement and Mitigation Program (EEMP) was established in 1989 and is administered by the California Natural Resources Agency and Caltrans. The program offers a total of \$10 million each year for grants to local, state, and federal governmental agencies and to nonprofit organizations, funded through gasoline taxes. EEMP Funds are allocated to projects that either directly or indirectly offset environmental impacts of modified or new public transportation facilities including streets, mass transit guideways, park-n-ride facilities, transit stations, tree planting to offset the effects of vehicular emissions, and the acquisition or development of roadside recreational facilities, such as trails. resources.ca.gov/eem/

Recreational Trails Program

The Recreational Trails Program (RTP) provides funds to states to develop and maintain recreational trails and trail-related facilities for both non-motorized and motorized recreational trail uses. The RTP is an assistance program of the Department of Transportation’s Federal Highway Administration (FHWA). The RTP funds come from the Federal Highway Trust Fund, and represent a portion of the motor fuel excise tax collected from non-highway recreational fuel use. RTP funds are distributed to each state by legislative formula: half of the funds are distributed equally among all states, and half are distributed in proportion to the estimated amount of non-highway recreational fuel use in each State. RTP funds may be used for maintenance and restoration of existing trails, purchase and lease of equipment to construct or maintain trails, administrative costs associated with the program, or operation of educational programs to promote safety and environmental protection related to trails. www.fhwa.dot.gov/environment/recreational_trails/index.cfm



Highway Safety Improvement Program (HSIP)

The Highway Safety Improvement Program (HSIP) is a core federal-aid program that aims to reduce traffic fatalities and serious injuries on public roads. Caltrans administers the program in California and received \$74.5 million for the 2010/11 Federal Fiscal Year. HSIP funds can be used for projects such as bike lane or sidewalk projects on local roadways, improvements to Class I multi-use paths, or for traffic calming measures. Applications that identify a history of incidents and demonstrate their project's improvement to safety are most competitive for funding. The Transportation Development Act can also be used to fund related improvements; however, these funds are allocated to cities on the basis of a formula.

www.dot.ca.gov/hq/LocalPrograms/hsip.htm

Caltrans Transportation Planning Grants

Caltrans provides Transportation Planning Grants on a yearly basis. These grants are available to jurisdictions focusing on improving mobility by innovatively addressing problems or deficiencies in the transportation system. Funds can be used for planning or feasibility studies. The maximum funding available per project is \$300,000. Fiscal year 2012-2013 grants were awarded to 70 projects totaling almost \$10 million.

www.dot.ca.gov/hq/tpp/grants.html

OTS Grant Opportunities

The California Office of Traffic Safety (OTS) provides grants for safety programs and equipment. Bicycle and Pedestrian Safety is a specifically identified funding priority. This category of grants includes enforcement and education programs, which encompass a wide range of activities, including bicycle helmet distribution, design and printing of billboards and bus posters, other public information materials, development of safety components as part of physical education curriculum, or police safety.

www.ots.ca.gov/Grants/default.asp





Transportation Development Account Article III

Transportation Development Act was enacted by the California State Legislature and is administered by Caltrans. Article 3 of the TDA provides funding for pedestrian and bicycle facilities. By ordinance, Metro is responsible for administering the program and establishing its policies within Los Angeles County. TDA, Article 3 funds are allocated annually on a per capita basis to both cities and the County of Los Angeles. Agencies must submit a claim form to Metro by the end of the fiscal year in which they are allocated. TDA Article 3 funds may be used for right-of-way acquisition, design costs, construction or major reconstruction, retrofitting to comply with the Americans with Disabilities Act (ADA), route improvements such as bicycle detectors at signals, and purchase and installation of supporting bicycle facilities such as parking, lockers, and showers.

www.metro.net/projects/tda/

Safe and Active Communities

The California Department of Public Health Safe and Active Communities Branch (SACB) is soliciting applications from eligible entities to develop, implement, and evaluate a set of small-scale, low-cost educational interventions with underserved California schools. A total of \$375,000 is available in the support of building school interest and capacity to conduct year-round interventions to improve safety for walking and bicycling in the neighborhoods surrounding school campuses. Interventions must focus on improving safety rather than simply encouraging walking and bicycling. The desired outcome is that each local intervention site will create a calendar outlining its ongoing SRTS activities during the year subsequent to the grant period. Applications must include five to eight elementary or middle school interventions over a 24-month period.

www.cdph.ca.gov

Regional and Local Funding

At the regional and county level, SCAG and Metro administer much of the funds that can be used to fund active transportation projects. Metro administers several programs that are sources of funding for recommended projects. As mentioned, federal and



state programs, such as the Transportation Enhancements program, are administered at the state or county level and distributed to local jurisdictions.

Metro Call for Projects

Metro is responsible for allocating discretionary federal, state, and local transportation funds to improve all modes of surface transportation. Metro also prepares the Los Angeles County Transportation Improvement Program (TIP). The Call for Projects program is a competitive process that distributes discretionally capital transportation funds to regionally significant projects. Metro accepts applications for this program every other year. Funding levels for each mode is established by the Metro Long Range Transportation Plan and bicycling and walking improvements may be included in up to five modal categories.

SCAG Compass Blueprint Program

The Southern California Association of Governments' Compass Blueprint Program began identifying Active Transportation as a project funding category in its 2013-2014 Call for Projects. This grant program is intended for planning project that integrate transportation and land use planning.

www.compassblueprint.org

Measure R

The Measure R Expenditure Plan devotes its funds to seven transportation categories as follows: 35% to new rail and bus rapid transit projects, 3% to Metrolink projects, 2% to Metro Rail system improvement projects, 20% to carpool lanes, highways and other highway related improvements, 5% to rail operations, 20% to bus operations, and 15% for local city sponsored improvements. Many jurisdictions use their local Measure R funding for active transportation projects.

www.metro.net/projects/measurer/





Traffic Mitigation Fees

Some agencies have implemented development fees that can then be used to fund various types of infrastructure. For example, a fee may be adopted for each PM peak hour trip that is generated by a project. This funding is combined with funds from other projects to establish a source of funds to construct the improvements that are on an adopted project list. Based on the list of projects or other mechanisms, the traffic mitigation program can be used to fund a variety of projects that serve several travel modes.

Toll Road Revenue (Los Angeles County)

The Los Angeles County Metro Board of Directors adopted a Toll Road Revenue Action Plan that targets 40 percent of revenues be invested in active transportation projects within three miles of the I-110 and I-10 corridors. The policy will help ensure that communities, stakeholders, and all travelers along these corridors to benefit from projects that include congestion reduction, improved safety and access, transportation options, and air quality/environmental improvements.

This section presents some of the general ideas and goals that have been developed for the Wilmington Mobility Plan based on the various sources of input for this project, such as stakeholder outreach, consultation with City staff, and ideas generated by the project team. As this project represents a first draft of the Mobility Plan, the concepts and recommendations proposed here will be further vetted and reviewed in the context of feasibility, operations, and simultaneous planning efforts such as the Los Angeles Mobility Plan and Los Angeles Bicycle Plan.

Port of Los Angeles Capital Improvement Project and Environmental Mitigation

As previously discussed, the shipping and goods movement industry has a significance presence in the Wilmington community as it is adjacent to the Port of Los Angeles (the Port). Due to recent and proposed port expansion projects the Port has several planned capital improvement projects in the area and is also required to implement various other mitigations as a result of



environmental compliance requirements. An independent non-profit organization, the Harbor Community Benefit Foundation (HCBF), has been established to administer mitigation funds by soliciting and identifying local projects that address the various environmental areas where the Port is required to fund mitigations. Coordination with the Port and HCBF on their on-going projects and the projects proposed in this plan is underway.





**APPENDIX A:
ON-LINE WILMINGTON EMPOWER SURVEY
(SEE WILMINGTON EMPOWER COMMUNITY SURVEY REPORT)**

**APPENDIX B:
ENGLISH AND SPANISH WILMINGTON EMPOWER SURVEYS
(SEE WILMINGTON EMPOWER COMMUNITY SURVEY REPORT)**

**APPENDIX C:
WILMINGTON EMPOWER OUTREACH EFFORTS SUMMARY
(SEE WILMINGTON EMPOWER COMMUNITY SURVEY REPORT)**

**APPENDIX D:
WILMINGTON EMPOWER SURVEY RAW RESULTS
(SEE WILMINGTON EMPOWER COMMUNITY SURVEY REPORT)**

**APPENDIX E:
VEHICLE COUNTS
(SEE WILMINGTON EMPOWER EXISTING CONDITIONS REPORT)**

**APPENDIX F:
ROADWAY SEGMENT LEVELS OF SERVICE
(SEE WILMINGTON EMPOWER EXISTING CONDITIONS REPORT)**



**APPENDIX G:
WILMINGTON EMPOWER ACTION PLAN PROJECT FACT SHEETS**





New Signals on Anaheim St

- Anaheim at Bay View Ave
- Anaheim at Marine Ave



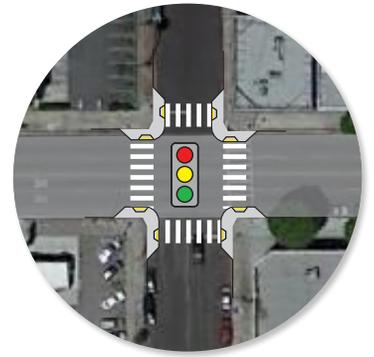
project
PURPOSE & NEED

High numbers of pedestrians and automobiles travel through the intersections of Anaheim/Bayview and Anaheim/Marine, and these nodes of activity are vital links between the residential areas to the north and south of Anaheim Street. These intersections also are also vital to the accessibility of the commercial corridor along Anaheim Street and are an important link for nearby schools.



improvement
DESCRIPTION

Signalization of Anaheim/Bay View and Anaheim/Marine, two highly utilized intersections. Opportunities exist for additional pedestrian improvements at these newly signalized intersections, including high-visibility "continental" crosswalks and curb extensions to reduce pedestrian crossing distances.



project
BENEFITS

	Safety	Congestion/ Delay	Access/ Mobility
	<input checked="" type="checkbox"/>		
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>

Pictured Above: Existing Anaheim Street signal (top), potential Anaheim at Bay View intersection configuration (middle) and potential Anaheim at Marine intersection configuration (bottom).

funding
OPPORTUNITIES

Pursue opportunities that enhance safety and connections for all modes of travel in and around this location, including the Highway Safety Improvement Program (HSIP) and Safe Routes to School programs.



Figueroa Place Tunnel Improvements

project
PURPOSE & NEED

Three pedestrian freeway underpasses currently connect Figueroa Street on the east side of I-110 with Figueroa Place on the west side of I-110. However, these connections are limited by a lack of lighting and a proliferation of trash and debris.

improvement
DESCRIPTION

Improving pedestrian access and connectivity between Los Angeles Harbor College, recreational facilities, and surrounding residential areas through improved pedestrian infrastructure, including added lighting, pedestrian-friendly design, murals and/or public art, as well as trash clean-up and maintenance programs.



[Pictured]: The existing pedestrian tunnels under the 110 are dark and have trash and debris.

project
BENEFITS

	Safety	Streetscape/ Aesthetics	Access/ Mobility
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



[Pictured]: Examples of adding lighting and artistic elements to tunnels to improve pedestrian comfort. Consider partnering with community groups, such as Harbor College, SBCC, or HCBF, to sponsor and lead a mural program.

funding
OPPORTUNITIES

Partnerships with local organizations--Harbor College, South Bay Center for Counseling (SBCC), or Harbor Community Benefit Foundation (HCBF), for example--could cultivate public art programs and lead regular maintenance efforts to ensure pedestrian connections remain safe and clean.



PROJECT LOCATION

Figueroa Street Crosswalk and Sidewalk Improvements

project
PURPOSE & NEED

Improve pedestrian access and connectivity between Los Angeles Harbor College, recreational facilities, and surrounding residential areas that are separated by the I-110 freeway and multi-lane roads with uncontrolled crossings.

improvement
DESCRIPTION

Enhance unsignalized crossings by shortening crossing distances with a median refuge island or by adding curb extensions, striping high visibility crosswalks, and adding flashing beacons.

Where sidewalks are currently narrow, widened sidewalks can allow improved pedestrian movement and greater separation from vehicle traffic. New sidewalks or decomposed granite paths can be placed where there are currently gaps. Potential improvement locations include the east and west sides of the street from Pacific Coast Highway to Papeete St.

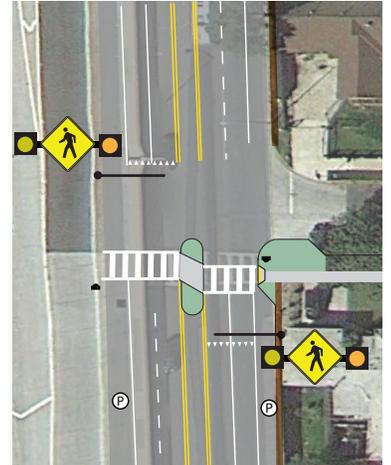
project
BENEFITS

	Safety	Congestion/ Delay	Access/ Mobility
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>		

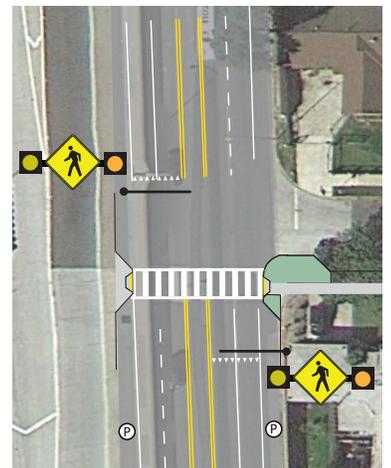
funding
OPPORTUNITIES

Pursue opportunities that enhance safety and connections for all modes of travel in and around this location, including the Highway Safety Improvement Program (HSIP), Safe Routes to School programs, Metro Call for Projects, and port mitigation funds.

Crossing with Median Refuge Island



Crossing with Curb Extensions



Pictured Above: Examples of typical crosswalk enhancements, median refuge island (top) and curb extensions (bottom).



I-110 Ramp Study & Reconfiguration

project
PURPOSE & NEED

Traffic volumes tend to be greatest near freeway ramps and arterial streets, resulting in the potential for congestion, delay, and multi-modal conflicts. For instance, the I-110 northbound on-ramp at Figueroa Street & Pacific Coast Highway is unsignalized. Observations indicate this location can be challenging for motorists, bicyclists, and pedestrians, especially due to the large percentage of trucks traveling to the I-110. Furthermore, a review of collision data (January 2008 - June 2012) indicates that over this period 11 collisions have been reported between 125 and 400 feet north of the Figueroa Street & Pacific Coast Highway intersection.

improvement
DESCRIPTION

The recommendations at these locations focus on reducing delay and congestion at freeway ramps, facilitating local goods movement, and improving safety for all modes of travel. A similar redesign of the I-110 ramps at Anaheim should be studied.

project
BENEFITS

	Safety	Congestion/ Delay	Access/ Mobility
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

funding
OPPORTUNITIES

Pursue opportunities that enhance safety and connections for all modes of travel in and around this location, including the Highway Safety Improvement Program (HSIP), Safe Routes to School, Metro Call for Projects, SCAG Regional Transportation Plan, port mitigation funds, and the Harbor Community Benefit Foundation.



Pictured Above: Existing conditions at Figueroa Street and Pacific Coast Highway.



Wilmington Retail District Gateway Enhancements

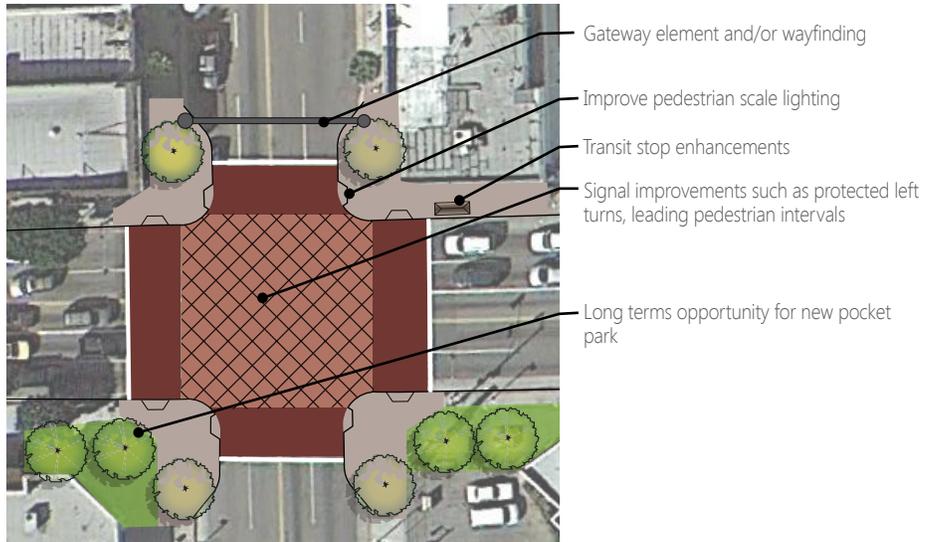
- Avalon / Anaheim Intersection Improvements

project
PURPOSE & NEED

This intersection is a node of pedestrian, transit, vehicular, and commercial activity. A review of collision data indicates that between 2008 and 2010 there were 15 reported collisions at the intersection, three of which involved a pedestrian and one involved a bicyclist. Additional streetscape improvements such as wayfinding signage and trash receptacles can help improve the pedestrian experience in this area.

improvement
DESCRIPTION

Opportunities at Avalon Boulevard and Anaheim Street, pictured below, include gateway/wayfinding elements, improved pedestrian-scale lighting, enhanced transit stops at street corners, street art and, in the long term, pocket parks.



project
BENEFITS

	Safety	Streetscape/Comfort	Access/Mobility
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>



Pictured Above: Examples of signal cabinet art.

funding
OPPORTUNITIES

Pursue opportunities that enhance safety and connections for all modes of travel in and around this location, including the Highway Safety Improvement Program (HSIP) and Safe Routes to School programs.



PROJECT LOCATION

Anaheim Road Diet

project PURPOSE & NEED

Anaheim Street is a critical street in the community from a transportation and land use perspective, as it has several major destinations such as retail centers, schools, and parks, and is a regionally significant corridor that serves a high number of multi-modal users. Anaheim Street includes infrastructure to serve various travel modes and has good connectivity with surrounding areas; however, the level of activity on the street and conflicts between various modes provides opportunities for enhancements. The street sees high transit usage; five out of the top ten most used transit stops occur on Anaheim Street between Figueroa Street and Avalon Boulevard.

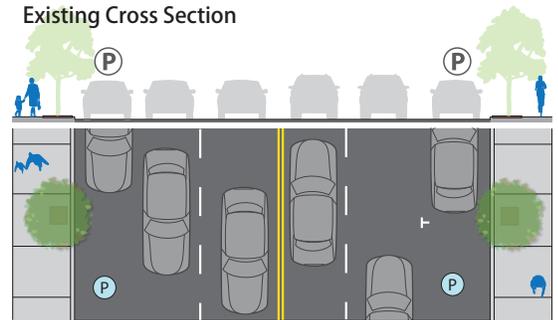
improvement DESCRIPTION

Reconfigure the existing four lanes of auto travel into a road diet, including two lanes of auto travel, a center turn lane, and a bike lane in each direction.

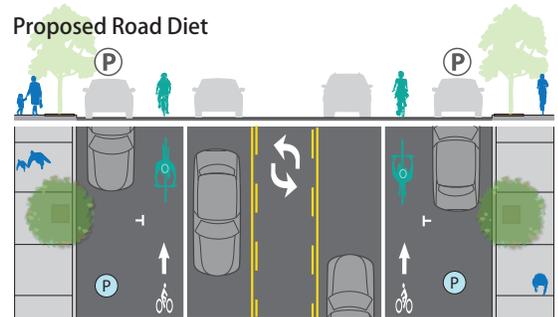
project BENEFITS

	Safety	Streetscape/ Comfort	Access/ Mobility
	<input checked="" type="checkbox"/>		
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	

Existing Cross Section



Proposed Road Diet



Pictured Above: Existing roadway configuration with four travel lanes (top) and proposed roadway configuration with two travel lanes, bike lanes, and a center turn lane (bottom).

funding OPPORTUNITIES

Pursue opportunities that enhance safety and connections for all modes of travel in and around this location, including the Highway Safety Improvement Program (HSIP), Safe Routes to School programs, and Caltrans funding.



□ K-12 SCHOOL



Safe Routes to School

project
PURPOSE & NEED

Wilmington is home to a number of schools, including Wilmington Middle School, Banning High School, Wilmington Park Elementary School, George De La Torre Jr Elementary School, and others. Walking and bicycling are important ways for students, teachers, and staff to get to and from these schools. Programs and facilities allowing and promoting walking and bicycling around schools will enhance safety and connections to nearby destinations.

improvement
DESCRIPTION

Safe Routes to Schools Plans encompass the 5 E's: Engineering, Enforcement, Education, Evaluation and Encouragement. This plan seeks to incorporate these components to provide local schools with improved walking and bicycling facilities and programs that enhance safety and connections. This can be accomplished by pursuing both infrastructure and non-infrastructure Safe Routes to School grant money.



Pictured: Above left, a walking school bus, an organized group walk to/from school, is one form of encouragement. Above, an example of curb extensions on a residential street creating a safer route to school.

project
BENEFITS

	Safety	Congestion/ Delay	Access/ Mobility
	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>

funding
OPPORTUNITIES

Pursue opportunities that plan and implement Safe Routes to School Programs at local schools.



PROJECT LOCATION(S)

Neighborhood-Friendly Streets

• Case Study: L Street

project
PURPOSE & NEED

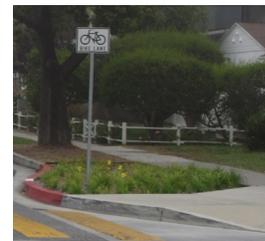
improvement
DESCRIPTION

The street grid and land use patterns in Wilmington provide an opportunity for enhancing local streets for walking and bicycling. For residents that do not live on or near streets with high levels of multi-modal activity, quality pedestrian and bicycle facilities can provide opportunities for walking or biking to local destinations and can also be an alternative to those who do not feel comfortable walking or biking on streets with higher levels of vehicle activity. One such street, L Street, provides an example for how to implement a pedestrian-friendly and bicycle-friendly toolbox.

Provide bike-friendly street amenities along neighborhood-friendly streets as local conditions permit. On L Street, implement shared use lanes marked with sharrows, wayfinding signage, and traffic calming as necessary. At the intersections where L Street jogs, provide standardized, high-visibility bicycle facility signage and striping treatments.



[Above]: Bicycle boxes with bicycle detection allow cyclists to position them-selves in front of vehicle traffic in order to make the left turn jog and continue along L Street. Sharrows with a right turn arrow assist in wayfinding for right turning bikes.



[Pictured, clockwise from top left]: A shared-use lane marking (sharrow); shared-use lane signage; high-visibility crosswalks; landscaped neighborhood traffic circle; and sidewalk-adjacent landscaping.

project
BENEFITS

	Safety	Aesthetics/Comfort	Access/Mobility
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

funding
OPPORTUNITIES

Pursue opportunities that enhance safety and connections for all modes of travel in and around this location, including the Highway Safety Improvement Program (HSIP), Safe Routes to School programs, and Metro Call for Projects.