ACTIVE TRANSPORTATION PROGRAM

CYCLE 1

APPLICATION

Project name:	Expo Line Bundy Station First Last Mile Improvements

For Caltrans use only: ____TAP _____STP_____RTP ____SRTS ____SRTS-NI ____SHA ____DAC ____Non-DAC ____Plan

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I. GENERAL INFORMATION

Project name:	Expo Line Bundy Station First Last Mile Improvements

(fill out all of the fields below)

1. APPLICANT (Agency name, address and zip code) City of Los Angeles, Bureau of Street Services	2. PROJECT FUNDING ATP funds Requested $ 3,053,000.00 Matching Funds (If Applicable) $ 397,000.00 Other Project funds $ TOTAL PROJECT COST $ 3,450,000.00
3. APPLICANT CONTACT (Name, title, e-mail, phone #) Kevin Minne, Transportation Engineer, kevin.minne@lacity.org, 213-847-4276	
4. APPLICANT CONTACT (Address & zip code) 1149 S. Broadway, Ste. 400, Los Angeles, CA 90015	5. PROJECT COUNTY(IES): Los Angeles County
6. CALTRANS DISTRICT #- Click Drop down menu below District 7	7. Application # 24 of 26 (in order of agency priority)

Area Description:

8. Large Metropolitan Planning Organization (MPO)- Select your" MPO" or "Other" from the drop down menu>	SCAG Southern California Association of Governn
9. If "Other" was selected for #8- select your MPO or RTPA from the drop down menu>	
10. Urbanized Area (UZA) population (pop.)- Select your UZA pop. from drop down menu>	Within a Large MPO (Pop > 200,000)

Master Agreements (MAs):

11. ☒ Yes, the applicant has a FEDERAL MA with Caltrans. 07-5006R
12. ☒ Yes, the applicant has a STATE MA with Caltrans. 00152S

13. If the applicant does not have an MA. Do you meet the Master Agreement requirements? Yes ☐ No ☐
The Applicant MUST be able to enter into MAs with Caltrans

Partner Information:

14. Partner Name*:	15. Partner Type
16. Contact Information (Name, phone # & e-mail)	17. Contact Address & zip code

☐ Click here if the project has more than one partner; attach the remaining partner information on a separate page

*If another entity agrees to assume responsibility for the ongoing operations and maintenance of the facility, documentation of the agreement must be submitted with the application, and a copy of the Memorandum of Understanding or Interagency Agreement between the parties must be submitted with the request for allocation.

Project Type: (Select only one)

18. Infrastructure (IF) ☒ 19. Non-Infrastructure (NI) ☐ 20. Combined (IF & NI) ☐

Project name:	Expo Line Bundy Station First Last Mile Improvements

I. GENERAL INFORMATION-continued

Sub-Project Type (Select all that apply)

21. ☐ Develop a Plan in a Disadvantaged Community (select the type(s) of plan(s) to be developed)
    ☐ Bicycle Plan ☐ Safe Routes to School Plan ☐ Pedestrian Plan
    ☐ Active Transportation Plan

    (If applying for an Active Transportation Plan- check any of the following plans that your agency already has):
    ☐ Bike plan ☐ Pedestrian plan ☐ Safe Routes to School plan ☐ ATP plan

22. ☒ Bicycle and/or Pedestrian infrastructure
    Bicycle only: ☐ Class I ☐ Class II ☐ Class III
    Ped/Other: ☒ Sidewalk ☒ Crossing Improvement ☐ Multi-use facility

    Other: Curb Extensions, Bicycle Repair Station, New Street Trees

23. ☐ Non-Infrastructure (Non SRTS)

24. ☐ Recreational Trails*- ☐ Trail ☐ Acquisition

    ***Please see additional Recreational Trails instructions before proceeding**

25. ☐ Safe routes to school- ☐ Infrastructure ☐ Non-Infrastructure

If SRTS is selected, provide the following information

26. SCHOOL NAME & ADDRESS:
27. SCHOOL DISTRICT NAME & ADDRESS:

28. County-District-School Code (CDS)	29. Total Student Enrollment	30. Percentage of students eligible for free or reduced meal programs **
31. Percentage of students that currently walk or bike to school	32. Approximate # of students living along school route proposed for improvement	33. Project distance from primary or middle school

**Refer to the California Department of Education website: http://www.cde.ca.gov/ds/sh/cw/filesafdc.asp

☐ Click here if the project involves more than one school; attach the remaining school information including school official signature and person to contact, if different, on a separate page

II. PROJECT INFORMATION

(Please read the "ATP instructions" document prior to attaching your responses to all of the questions in Sections II. Project Information, Section III. Screening Criteria and Section IV. Narrative Questions - 20 pages max)

1. Project Location

The project location is in the City of Los Angeles comprising an area 1/4 mile to 1/2 mile of the Expo/Bundy light rail station. The project is bounded by Centinela Avenue to the west, La Grange Avenue to the north, Barrington Avenue to the east and Pico Boulevard to the south. The service area consists of the Olympic Boulevard Business Center, Mar Vista Neighborhood, West Los Angeles Neighborhoods, and the Westside Media Center.

2. Project Coordinates

Latitude	34°01'53.5548" N
Longitude	118°26'54.4776" W

3. Project Description

Establish pedestrian/bike-friendly routes to the Expo/Bundy station through traffic calming, safety improvements, wayfinding, and place making.

The scope of work includes traffic calming/safety improvements through the installation of shade trees, accessible curb ramps, a median refuge and curb extensions at the single residential cluster east of Bundy, west of Barrington, and south of the Exposition transit corridor. The project will also consider placing a bicycle parklet rest stop at the Metro-proposed cul-de-sac at the east side of Barrington where it currently intersects with Exposition Boulevard. The traffic congested corridors of Centinela, Olympic, Barrington, and Pico that border the project and Bundy Drive, which cuts north-south through the project area will be provided with shade trees, new sidewalks where there are damages, and continental crosswalks at the major intersections. Bike racks, bus benches, and pedestrian-level lighting at bus stops will also be provided along these corridors.

Additionally, the sidewalks along La Grange and Mississippi Avenues between Bundy Drive and Barrington Avenue will be improved through the installation of shade trees and ADA-compliant access ramps.

4. Project Status

City of Los Angeles owns the entire right-of-way. There are no known future plans for the right-of-way that would affect the project.

The City of Los Angeles' Bureau of Street Services (BSS) will be the lead agency for this proposed project. BSS has successfully completed construction of numerous awarded Metro Call projects since 2001, and is currently in the process of implementing more projects awarded through the 2009/2011 Metro Call for Projects. BSS implements a design/build project delivery method, and has pride in its ability to complete projects within the time frames allocated. Being the design and construction entity for this project, the overall schedule will be reduced due to elimination of the solicitation of consultants for design, and the bid/award process for construction. In addition, potential contract change orders that require mediation, litigation, or other timely processes are eliminated.

This project will be designed by BSS' engineering/landscape architectural staff, and also constructed by BSS crews and equipment.

III. SCREENING CRITERIA

1. **Demonstrate the Needs of the Applicant**

Describe the need for this project and/or funding

The implementation of this project and its support of planning efforts, both adopted and ongoing, within the City of Los Angeles will make for stronger multi-modal connections to the Expo/Bundy light rail station, bus stops, and the numerous activity centers in this

neighborhood, thus leveraging previous transportation improvements and investments in the project area while laying the groundwork for future improvements.

The project addresses Caltrans' "Complete Streets" policy by providing traffic calming/safety improvements and place-making measures, by being within 1/2 mile of the Expo/Bundy light rail station and bus stops, and by considering safety, accessibility, mobility, land use, and community needs in the project proposals.

2. **Consistency with Regional Transportation Plan (100 words or less)**
Explain how this project is consistent with your Regional Transportation Plan (if applicable). Include adoption date of the plan.

This project supports regional transportation goals of the SCAG & Metro. The 2012 SCAG Regional Transportation Plan has the following goals: Goal 1- Decrease Bicyclist and Pedestrian Fatalities and Injuries, Goal 2- Develop an Active Transportation Friendly Environment throughout the SCAG Region, and Goal 3- Increase Active Transportation Usage in the SCAG Region. The 2009 Metro Long Range Transportation Plan states that bicycle and pedestrian programs are critical components of a successful transportation system. Finally, this project directly targets goals established in Metro's First Last Mile Strategic Plan (2014).

IV. NARRATIVE QUESTIONS

1. **POTENTIAL FOR INCREASED WALKING AND BICYCLING, ESPECIALLY AMONG STUDENTS, INCLUDING THE IDENTIFICATION OF WALKING AND BICYCLING ROUTES TO AND FROM SCHOOLS, TRANSIT FACILITIES, COMMUNITY CENTERS, EMPLOYMENT CENTERS, AND OTHER DESTINATIONS; AND INCLUDING INCREASING AND IMPROVING CONNECTIVITY AND MOBILITY OF NON-MOTORIZED USERS.** *(0-30 POINTS)*

A. Describe how your project encourages increased walking and bicycling, especially among students.

This project supports an area immediately adjacent to the future Bundy station on the Metro Expo light rail line. The Expo line is scheduled to open in late 2015 or early 2016.

The traffic calming/safety measures to be implemented ensure that cars en route to the light rail station drive at a safe speed once they enter the residential area that abuts the south end of the Expo/Bundy station, making for a friendly interface between existing Single Residential land uses and the new light rail station.

The project also includes signage and wayfinding to and from the station. The station will be an aerial station tucked behind several office buildings. Having clear signage to indicate safe and efficient means of accessing the station will help connect riders to jobs along Olympic Boulevard and Bundy Drive as well as the recreational opportunities at Stoner Park.

To encourage safety among bicycling students, the DOT funded the Citywide School Bicycle Safety and Transit Education Program, which includes safety lectures and seminars at over 300 elementary and middle schools per year in the City of LA to improve knowledge about bicycle safety.

B. Describe the number and type of possible users and their destinations, and the anticipated percentage increase in users upon completion of your project. Data collection methods should be described.

The Expo/Bundy Station, including 18 others that cover Downtown Los Angeles to Santa Monica, has an expected ridership of 64,000 daily riders by 2030. The estimated daily

boardings for the Expo/Bundy station is 2,122.

Bus stops are located at the intersections of Centinela Avenue at Olympic, Bundy, and Barrington. They are also located at the intersections of Pico Boulevard at Centinela, Bundy, and Barrington. Within ½ mile of the new station are a number of commercial and retail attractions, including a Trader Joe's, Ralphs, Bed Bath and Beyond, OSH, and a number of creative office spaces. Additionally, new a 240,000 square foot creative office campus is in construction near the corner of Olympic and Bundy.[i] Lastly, there are a number of educational institutions in the project area as well as a significant senior population in the southern portion of the project area.

We estimate a 200,200 increase in walking trips and 27,852 new bicycle trips. This translates to 60,100 and 41,778 in new miles travelled respectively. In order to estimate the potential new users of the facility, the existing users were first estimated. This process involved estimating the trips in the travel shed based on population of census tracts within 0.25 miles of the project, the average daily trips of the street or parallel corridor, and actual bike or pedestrian counts mentioned above. The percent of trips made by bicycle or pedestrian was estimated based on 2010 census commute mode share and the mode share for all trips in the 2012 Caltrans Household Travel Survey. The anticipated percentage increase of users upon project completion is 10% Forecast Methodology is described in Attachment F.

To be more specific, 2010 Census data were downloaded at the Census Tract level from US Bureau of Census. This tabular data were combined with Census Tract Boundary GIS file,

also from the US Bureau of Census, using ArcGIS 10.0 so that the Census information can be referenced by geographic locations. Also, project location GIS file was created based on US Street Centerline file. The project location was then used to create a 0.25 mile travel shed using the "Buffer" technique. Once the travel shed was identified, socio economic information, such as population, income, commute mode share, and age, was extracted for the travel shed.

Other primary data sources include SCAG's Bike Count Clearinghouse, California Air Resources Board, and Metro's First Last Mile Strategic Guidelines. These data sources provided existing pedestrian counts, bicycle trip counts, and Average Daily Traffic (ADT) along parallel streets in the project area, which were used to estimate existing pedestrian and bicycle trips within the travel shed.

C. Describe how this project improves walking and bicycling routes to and from, connects to, or is part of a school or school facility, transit facility, community center, employment center, state or national trail system, points of interest, and/or park.

The primary goal of this project is to improve connectivity between the Expo Line station and the community. To that end, signage and wayfinding, improved pedestrian and bicycle facilities, as well as attractive landscaping will improve safety, make for a more walkable community, and maximize the positive impact of brining rail to the neighborhood. As noted above, Olympic Boulevard has several major office buildings and there is a burgeoning creative/flexible office park to the north of the Expo/Bundy Station. Demographically, these are the type of people who prefer to use transit and utilize walking or biking to reach their destinations. Additionally, there is a large city park also in the northern section of the project area which attracts residents of all ages and abilities.

Improving the connectivity to the park via this project will allow greater numbers of Angelinos to access recreational opportunities.

D. Describe how this project increases and/or improves connectivity, removes a barrier to mobility and/or closes a gap in a non-motorized facility.

The project enhances regional mobility by providing pedestrian/bike-friendly routes to nearby bus stops and to the Expo/Bundy light rail stop. This is done through traffic calming, safety improvements and place-making.

The proposed project also includes installing curb extensions at unusually wide single residential streets leading to the designated parking for the Expo/Bundy Station, which lines the length of the rail corridor and is accessed through the residential neighborhoods. In addition to curb extensions, providing for missing curb ramps and sidewalks, and installing trees will make for a more aesthetic and friendly interface between the Expo Station and the land uses that lie north and south of the Expo Line while also providing pedestrian and bike-friendly routes to the light rail station, bus stops and the many local businesses along Pico Boulevard.

IV. NARRATIVE QUESTIONS- continued

2. **POTENTIAL FOR REDUCING THE NUMBER AND/OR RATE OF PEDESTRIAN AND BICYCLIST FATALITIES AND INJURIES, INCLUDING THE IDENTIFICATION OF SAFETY HAZARDS FOR PEDESTRIANS AND BICYCLISTS.** *(0-25 POINTS)*

A. Describe the potential of the project to reduce pedestrian and/or bicycle injuries or fatalities.

Based on the most recently available crash data from SWITRS, the project area has seen 37 pedestrian injuries and fatalities between 2003 and 2011. Over 60% of the pedestrian injuries and fatalities within the project boundary are from incidents where the driver was at fault.

Based on "Local Roadway Safety, Version 1.1, April 2013" by Caltrans, we estimate an

average crash reduction factor (CRF) of 25 from the improvements identified in this project. This translates to one fewer pedestrian injuries and fatalities per year. Additionally, once the Expo Line Phase II is operational, we can expect even more pedestrians within the project area. As such, building the project would deter the potential for further pedestrian injuries and fatalities. Since the project is slated to be completed by the revenue operation date, these improvements are timely and will allow newer pedestrians in the area to access the station as well as other destinations in a safe and efficient manner.

B. Describe if/how your project will achieve any or all of the following:

- Reduces speed or volume of motor vehicles
- Improves sight distance and visibility
- Improves compliance with local traffic laws
- Eliminates behaviors that lead to collisions
- Addresses inadequate traffic control devices
- Addresses inadequate bicycle facilities, crosswalks or sidewalks

- Project will reduce the speed of vehicular traffic by better defining the pedestrian realm and crossings. The project adds continental crosswalks which improves visibility and cues drivers to reduce speed. Also the project includes curb extensions which slow the turn speeds of vehicles as well as narrows portions of residential streets. These improvements will act as a visual cue to drivers that pedestrians use these streets and that speeds should be reduced. Lastly, the project will construct median safety islands which will protect pedestrians attempting to cross Olympic Boulevard.
- Project restripes 18 intersections with continental crosswalks. This represents a significant increase in visibility for pedestrians crossing these streets, particularly the intersection of Bundy Drive and Pico Boulevard. Additionally curb extensions

improve visibility for pedestrians in crosswalks. The project will also increase pedestrian visibility through the installation of median safety islands. These will provide a safe place for pedestrians attempting to cross busy streets while also allowing motorists to clearly see the pedestrians. Lastly, the project will improve lighting at several bus stops. Improved lighting will increase safety for transit patrons waiting for the bus as well as improve their visibility.

- The project will provide pedestrian and bike improvements along 12 different streets. These improvements will allow pedestrians to safely remain on the sidewalk and will encourage legal street crossings and safe locations. Additionally, the project will provides secure bicycle parking the Expo Line station at the adjacent bike parklet. Additionally, the bike parklet will function as a gap closure in the bicycle network and provide a place for bicyclists to rest. Lastly, the project will install trees along Bundy Drive which will create a physical buffer between the vehicle traffic and pedestrians walking along the street.
- The project adds ADA-compliant access ramps at Carmelina, Wellesley, Amherst, Granville, Tennessee, and La Grange and Mississippi Avenues/Places. This will allow persons with disabilities to remain on the sidewalk rather than having to use the street. Additionally, enhanced visibility from the crosswalk improvements will allow drivers to better see pedestrians as well as create visual cues to reduce speed. Clearly marked crosswalks provide drivers with additional visual cues to remain alert and reduce speed through the area. In a study of crosswalks in San Francisco, researchers found that high-visibility crosswalks reduced collision rates by 37%.[ii]

- The project will provide bicycle racks as well as a bicycle parklet which will allow for secure bicycle parking. This will make bicycling to and from the station more attractive. Additionally, there are 18 intersections which will be improved through continental crosswalks. These high-visibility crosswalks will facilitate the expected increase in pedestrian activity as well as improve safety. Lastly, the sidewalk improvements will remove barriers for those with disabilities as well as improve the overall safety and comfort for all users.

C. Describe the location's history of events and the source(s) of data used (e.g. collision reports, community observation, surveys, audits) if data is not available include a description of safety hazard(s) and photos.

To acquire this data, we used SWITRS which provided crash location and severity information from 2003 to 2011 (See Attachment G). During that time period, there were 32 collisions which led to pedestrian injury. Of those injuries, six were severe and two were fatalities. There were also 29 collisions involving bicyclists, 2 of which resulted in severe injuries. Additionally, City and LACMTA staff conducted two site visits to identify specific barriers using the methodology presented in the First/Last Mile Strategic Plan. Pictures are included.

IV. NARRATIVE QUESTIONS- continued

3. **PUBLIC PARTICIPATION AND PLANNING** *(0-15 POINTS)*

A. Describe the community based public participation process that culminated in the project proposal or plan, such as noticed meetings/public hearings, consultation with stakeholders, etc.

The City of Los Angeles, in partnership with Metro, held four different public meetings which lead to the creation of this project. The meetings supported the following efforts: Los Angeles Transit Neighborhood Plan, City of Los Angeles' Mobility Element Update of the General Plan, Westside Mobility Plan, and West LA Community Plan. These Plans

focus on enhancing areas within a half-mile, 15-minute walk of the Exposition station and thus encompasses this Project Area. The meetings were with local stakeholders that included residents, employees, business and property owners, developers, and community organizations and allowed them to voice concerns regarding existing conditions, the impact of the new light rail station to the neighborhood, and what improvements they envision. Please see Attachment H for more detail.

In addition, City of Los Angeles and Metro staff utilized the First/Last Mile Strategic Plan to conduct planning for this project. The Strategic Plan also included a well-vetted public process to develop the planning guidelines which informed the developed of this project.

B. Describe the local participation process that resulted in the identification and prioritization of the project:

In addition to the community meetings mentioned above, conversations with local bicycle groups also indicated that Barrington Avenue is used by many bicyclists as a key north-south alternate route to Class II-designated Bundy Drive and bicyclists navigating this congested corridor uphill have no place to stop for respite.

C. Is the project cost over $1 Million? Y/N

Yes

If Yes- is the project Prioritized in an adopted city or county bicycle transportation plan, pedestrian plan, safe routes to school plan, active transportation plan, trail plan, circulation element of a general plan, or other publicly approved plan that incorporated elements of an active transportation plan?

This project complements and furthers the goals and objectives of the following plans:

(1) The Los Angeles Transit Neighborhood Plan, which focuses on enhancing areas within a half-mile, 15-minute walk of the Exposition and Crenshaw transit corridors. The Plan's focus includes "improving the configuration and condition of

streets to better promote pedestrian, bicycle, and vehicular circulation."

(2) The ongoing City of Los Angeles' Mobility Element Update of the General Plan (formerly the Transportation Element), which aims to provide a full range of travel options to meet the public's mobility needs, such as walking, bicycling, and transit.

(3) The Westside Mobility Plan, because the project is within the boundaries of the study area for this Plan, which is led by the Los Angeles Department of Transportation. The major objective of the plan is to "increase the passenger-carrying capacity and efficiency of the transportation system through multimodal solutions, including transit, bicycle, and pedestrian-friendly facilities."

(4) The Metro First/Last Mile Strategic Plan, which focuses on improving active transportation connections to Metro Rail and Bus stations. The City and Metro conducted planning activities consistent with the First/Last Mile Strategic Plan. The findings from this effort resulted in the improvements identified in this project.

IV. NARRATIVE QUESTIONS- continued

4. COST EFFECTIVENESS *(0-10 POINTS)*

A. Describe the alternatives that were considered. Discuss the relative costs and benefits of all the alternatives and explain why the nominated one was chosen.

The alternatives considered to this project were a no-build and a smaller scope version of this project. The no-build would allow existing conditions to persist despite the Expo Line opening for service. This alternative was rejected due to the likely increase in pedestrian and bicycle activity to the Expo Line Station.

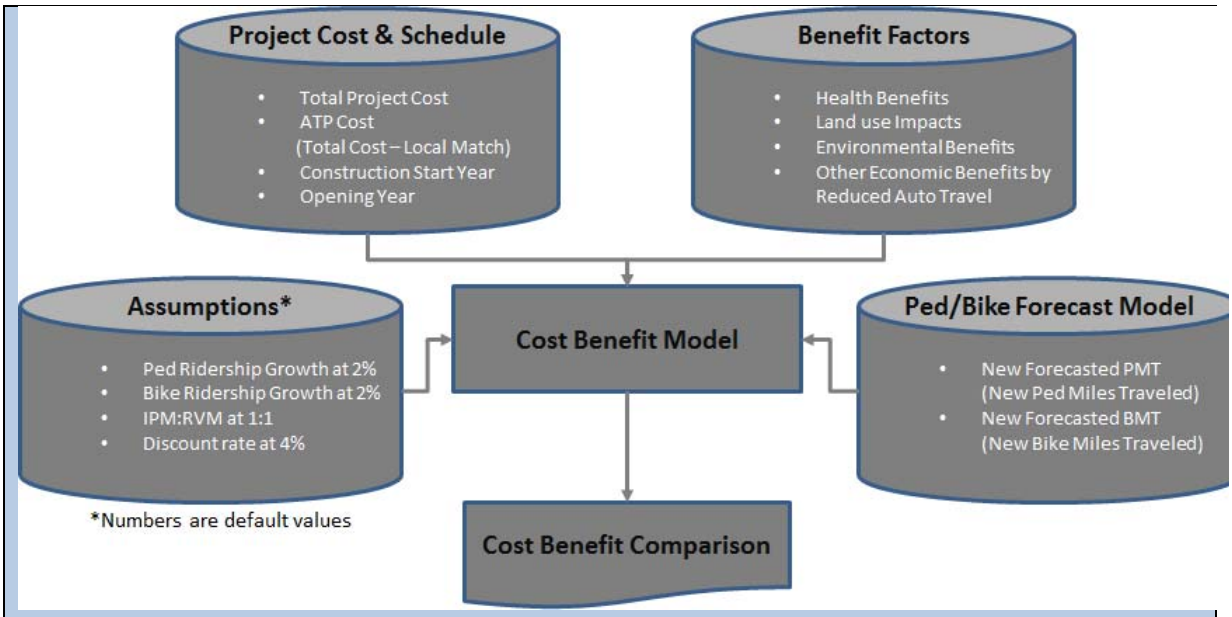
The reduced scope version of this project focused on the area south of the station. After further analysis using the First/Last Mile Strategic Plan, it was decided that this alternative ignored significant needed improvements to the station's catchment area. As a

result, the project was amended to add additional elements to the north of the station.

The project as presented in this application was selected because it offers the best means to safely and efficiently connect the residential and commercial areas of this neighborhood to the Expo/Bundy Station. By adding signage and wayfinding, improving sidewalks and crosswalks throughout the station catchment area, the economic, health, and safety benefits of this project would be greatly expanded.

B. Calculate the ratio of the benefits of the project relative to both the total project cost and funds

The benefit estimation is derived based on information from three data sources; (1) Bike/Pedestrian demand forecasts, (2) detailed cost estimates, and (3) the Benefit Factor developed by Victoria Transport Policy Institute (VTPI). The demand forecasting results provide increased bicycle and pedestrian miles as well as reduced vehicle traveled miles. These input values are then multiplied by economic benefits factors from VTPI which account for three main benefits by ATP type projects, including (1) changes in human health effects associated with increased active travel behaviors (i.e., walking and bicycling) and reduced driving as well as improved air quality (reduced CO2), (2) land use impacts created by more walkable and bikeable communities around the project area, and (3) other economic benefits associated with reduced travel miles, including parking cost savings, congestion reduction, and energy conservation. After the benefits are calculated, they are compared to direct project costs to calculate the lifetime Benefits Cost Ratio (BC ratio). The figure below illustrates the Cost-Benefit Model structure.



The estimated ratio of the benefits of the project relative to both the total project cost and funds requested are summarized in the table below. It should be noted that the BC ratio assumes a 20-year useful life and the costs and benefits have been adjusted to 2014 dollars.

BC Ratio Summary	Based on Total Project Cost	Based on Funds Requested
Benefits*	$5,987,256	$5,987,256
Direct Cost*	$5,194,461	$4,605,664
Benefits/Cost	1.15	1.30

* Cost and benefits have been adjusted to year 2014 dollars

*Benefits must directly relate to the goals of the Active Transportation Program.

IV. NARRATIVE QUESTIONS- continued

5. IMPROVED PUBLIC HEALTH *(0-10 points)*

A. Describe how the project will improve public health, i.e. through the targeting of populations who have a high risk factor for obesity, physical inactivity, asthma, or other health issues.

This project will improve public health by making walking and bicycling more attractive for

residents, workers, and transit customers. According to the Los Angeles County Department of Public Health, nearly a quarter of the residents in the West District have high cholesterol and over one-third are overweight.[iii] By providing safe and efficient bicycle and pedestrian infrastructure, the project will allow residents to more easily use active modes of travel to reach their destinations. The Centers for Disease Control (CDC) notes that bicycle and pedestrian projects are essential to improving public health due to the increase in physical activity. Similarly, a 2012 study titled, "Air Quality and Exercise-Related Health Benefits from Reduced Car Travel in the Midwestern United States" noted that if short car trips could be replaced by walking or bicycling, there are significant health and economic benefits such as savings of approximately $3.8 billion/year from avoided mortality and reduced health care costs.[iv] Given that West Los Angeles is relatively well built-out, the project will allow even more residents to safely walk or bicycle to the Expo/Bundy Station. Furthermore, the Integrated Transport and Health Impacts Model (I-THIM), used in the San Francisco Bay Area, found that a significant but achievable mode shift to active transportation would result in reduced greenhouse gas emissions as well as reducing the burden of chronic diseases such as heart attacks, stroke, and diabetes by 15 percent.[v] Finally, researchers have estimated anywhere from $0.18 to $8.00 of financial benefit to the health care system per mile bicycled or walked.[vi] Our cost effectiveness analysis uses a very conservative estimate (for fitness only) of $0.20 for biking and $0.50 for walking.[vii]

Furthermore, the addition of urban trees in the project has substantial health and environmental benefits. First, urban trees help reduce fine particulate matter in neighborhoods which is a leading cause of respiratory issues, especially among children.

Also, there is up to a 60% reduction in street level particulates with trees. For every 5% of tree cover added to a community, storm water runoff is reduced by approximately 2% and trees can intercept between 7 percent and 22 percent of storm water runoff from impermeable surfaces.[viii]

In summary, the proposed project will promote increased active transportation by providing more safe and accessible pedestrian facilities and by remedying the current conditions that discourage walking and biking. Increased active transportation as a result of the First Last Mile Enhancements will result in tangible public health benefits to the West LA community.

IV. NARRATIVE QUESTIONS- continued

6. BENEFIT TO DISADVANTAGED COMMUNITIES *(0-10 POINTS)*

			Yes	No
A.	I.	Is the project located in a disadvantaged community?		X
	II.	Does the project significantly benefit a disadvantaged community?	X	

a. Which criteria does this project meet? (Answer all that apply)

• Median household income for the community benefited by the project:	$47,414
• California Communities Environmental Health Screen Tool (CalEnvironScreen) score for the community benefited by the project:	
• For projects that benefit public school students, percentage of students eligible for the Free or Reduced Price Meals Programs:	

b. Should the community benefitting from the project be considered to be disadvantaged based on criteria not specified in the program guidelines? If so, provide data for all criteria above and a quantitative assessment of why the community should be considered disadvantaged.

B. Describe how the project demonstrates a clear benefit to a disadvantaged community and what percentage of the project funding will benefit the community. For projects using the school based criteria, specifically describe the school students and community that will benefit from the project.

While the project boundary does not include a disadvantaged community, there is a disadvantaged community directly adjacent, to the west of the project area. This area qualifies under the median household income requirement. In terms of benefit, the

Expo/Bundy Station is the closest rail station to this community as the 26th Street/Bergamot Station is over one mile away. As a result, the moderate to low income residents of this area will benefit from better pedestrian and bicycle linkages to the Expo Rail Line, which provides service to major job centers in Santa Monica, USC, and downtown Los Angeles. Additionally, the improved crosswalks and sidewalks will make walking safer and easier for those residents. As noted above, increased walking and bicycling has significant health benefits. We believe this project will create a healthier and more economically vibrant neighborhood.

We estimate that approximately 70 percent of the total project budget directly benefits a disadvantaged community.

IV. NARRATIVE QUESTIONS- continued

7. USE OF CALIFORNIA CONSERVATION CORPS (CCC) OR A CERTIFIED COMMUNITY CONSERVATION CORPS *(0 to -5 points)*

The applicant must send the following information to the CCC and CALCC prior to application submittal to Caltrans:

- Project Description
- Project Map
- Detailed Estimate
- Preliminary Plan
- Project Schedule

The corps agencies can be contacted at:
California Conservation Corps: www.ccc.ca.gov
Community Conservation Corps: http://calocalcorps.org

		Yes	No
A.	The applicant has coordinated with the CCC to identify how a state conservation corps can be a partner in the project.	Y	
B.	The applicant has coordinated with the California Association of Local Conservation Corps (CALCC) to identify how a state conservation corps can be a partner in the project.	Y	
C.	The applicant intends to use the CCC or a certified community conservation corps on all items where participation is indicated?	Y	

D. Name, email, and phone number of the corps contact person contacted that the date the project information was submitted.

Cynthia Vitale, Cynthia@csgcalifornia.com, 916-558-1516

Virginia Clark, Virginia.Clark@ccc.ca.gov, 916-341-3147

Project information submitted to both on Wednesday, Apr 30, 2014.

I have coordinated with a representative of the CCC; and the following are project items that they are qualified to partner on:

CCC opted not to participate on this project. CCC declined on May 13, 2014.

I have coordinated with a representative of the CALCC; and the following are project items that they are qualified to partner on:

CALCC has agreed to partner on the following items: provide services on all projects related to street furnishings, bike rack installation, and all facets of the landscape construction.

Points will be deducted if an applicant does not seek corps participation or if an applicant intends not to utilize a corps in a project in which the corps can participate*.

**If the applicant has indicated intended use of the CCC or CALCC in the approved application, a copy of the agreement between the implementing agency and the CCC or CALCC must be provided by the implementing agency, and will be incorporated as part of the original application, prior to request for authorization of funds for construction.*

IV. NARRATIVE QUESTIONS- continued

8. APPLICANT'S PERFORMANCE ON PAST GRANTS *(0-10 points)*

A. Describe any of your agency's ATP type grant failures during the past five years and what changes your agency will take in order to deliver this project.

The City of Los Angeles has been the successful recipient of millions of dollars in ATP-type grants over the past several years. We have received and successfully managed and delivered State and Federal Safe Routes to School grants, Highway Safety Improvement Program (HSIP) grants, and federal/state grants programmed by Los Angeles County Metro through their biennial Call for Projects. We have not been delinquent in any such grants and have the experience and in-house expertise to meet the stringent CTC guidelines. Additionally, the City of Los Angeles has been recently recognized by Caltrans' as a model agency in the delivery of HSIP projects.

[i] Element LA: http://elementla.com/

[ii] Feldman, Mark, Jessica Greig Manzi, and Meghan Fehlig Mitman. An Empirical Bayesian Evaluation of the Safety Effects of High-Visibility School (Yellow) Crosswalks in San Francisco. Transportation Research Board. 2010.

[iii] 2011. Los Angeles County Department of Public Health http://publichealth.lacounty.gov/ha/LACHSDataTopics2011.htm

[iv] Grabow et al Air Quality and Exercise-Related Health Benefits from Reduced Car Travel in the Midwestern United States. Environmental Heath Perspectives. 2012.

[v]Maizlish et al, Health Co-Benefits and Transportation-Related Reductions in Greenhouse Gas Emissions in the Bay Area. 2011. http://www.cdph.ca.gov/programs/CCDPHP/Documents/ITHIM_Technical_Report11-21-11rev3-6-12.pdf

[vi] 2013. Metro Bicycle Investment Scenario Analysis Model – Methodology Technical Memo. Cambridge Systematics.

[vii] 2014. Litman, Todd. Evaluating Active Transport Benefits and Costs. Victoria Transport Policy Institute. http://www.vtpi.org/nmt-tdm.pdf

[viii] "Benefits of Urban Trees." Prepared by Keep Indianapolis Beautiful, Inc. http://isites.harvard.edu/fs/docs/icb.topic238238.files/C:_Documents%20and%20Settings_Don%20Bockler_Desktop_CITYgreen%20articles/Urban_Tree_Facts.pdf

Project name:	Expo Line Bundy Station First Last Mile Improvements

V. PROJECT PROGRAMMING REQUEST

Applicant must complete a Project Programming Request (PPR) and attach it as part of this application. The PPR and can be found at http://www.dot.ca.gov/hq/transprog/allocation/ppr_new_projects_9-12-13.xls

PPR Instructions can be found at http://www.dot.ca.gov/hq/transprog/ocip/2012stip.htm

Notes:

- Fund No. 1 must represent ATP funding being requested for program years 2014/2015 and 2015/2016 only.
- Non-infrastructure project funding must be identified as Con and indicated as "Non-infrastructure" in the Notes box of the Proposed Cost and Proposed Funding tables.
- Match funds must be identified as such in the Proposed Funding tables.

STATE OF CALIFORNIA ● DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST

DTP-0001 (Revised July 2013)

General Instructions

☑ New Project					Date:	5/13/14
District	**EA**	**Project ID**	**PPNO**	**MPO ID**	**TCRP No.**	
07						

County	Route/Corridor	PM Bk	PM Ahd	Project Sponsor/Lead Agency	
LA				City of Los Angeles	
				MPO	**Element**
				SCAG	Local Assistance

Project Manager/Contact	Phone	E-mail Address
Kevin Minne	213-847-4276	kevin.minne@lacity.org

Project Title

Expo Line Bundy Station First Last Mile Improvements

Location, Project Limits, Description, Scope of Work ☐ See page 2

In the City of Los Angeles on surrounding the Expo Rail Line station located at Exposition Bl and Bundy Dr. The scope of work includes traffic calming/safety improvements through the installation of shade trees, pedestrian-level lighting, accessible curb ramps, a median refuge and curb extensions. The project will also consider placing a bicycle parklet rest stop at the Metro-proposed cul-de-sac at the east side of Barrington where it currently intersects with Exposition Boulevard. Sidewalks along La Grange and Mississippi Avenues will be improved through the installation of shade trees and ADA-compliant access ramps.

☑ Includes ADA Improvements ☑ Includes Bike/Ped Improvements

Component	Implementing Agency
PA&ED	City of Los Angeles
PS&E	City of Los Angeles
Right of Way	City of Los Angeles
Construction	City of Los Angeles

Purpose and Need ☐ See page 2

Project area is not well connected to future Expo Line station. Project will help improve bicycle and pedestrian connectivity to and from the Expo/Bundy Station. Project willl also improve the safety for all roadway users through increased visibility, traffic calming, and other safety countermeasures. Also, a number of sidewalks are not in compliance with ADA. Project will improve those areas.

Project Benefits ☐ See page 2

Project is estimated to increase ridership by about 3% at the Expo/Bundy Station. Project will also reduce vehicle collisions with bicyclists and pedestrians through traffic calming and other safety improvements. It is anticipated that the project will also help encourage more walking and bicycling in the community.

☑ Supports Sustainable Communities Strategy (SCS) Goals ☑ Reduces Greenhouse Gas Emissions

Project Milestone			Proposed
Project Study Report Approved			
Begin Environmental (PA&ED) Phase			
Circulate Draft Environmental Document	**Document Type**	CE	
Draft Project Report			
End Environmental Phase (PA&ED Milestone)			04/01/14
Begin Design (PS&E) Phase			03/01/15
End Design Phase (Ready to List for Advertisement Milestone)			12/01/15
Begin Right of Way Phase			01/01/16
End Right of Way Phase (Right of Way Certification Milestone)			03/30/16
Begin Construction Phase (Contract Award Milestone)			08/01/16
End Construction Phase (Construction Contract Acceptance Milestone)			03/01/17
Begin Closeout Phase			04/01/17
End Closeout Phase (Closeout Report)			05/01/17

ADA Notice For individuals with sensory disabilities, this document is available in alternate formats. For information call (916) 654-6410 or TDD (916) 654-3880 or write Records and Forms Management, 1120 N Street, MS-89, Sacramento, CA 95814.

STATE OF CALIFORNIA ● DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST

DTP-0001 (Revised July 2013)

Date: 5/13/14

District	County	Route	EA	Project ID	PPNO	TCRP No.
07	LA					

Project Title: Expo Line Bundy Station First Last Mile Improvements

Proposed Total Project Cost ($1,000s)									Notes
Component	Prior	14/15	15/16	16/17	17/18	18/19	19/20+	Total	
E&P (PA&ED)									
PS&E		325						325	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			3,125					3,125	
TOTAL		325	3,125					3,450	

Fund No. 1:	Active Transportation Program (ATP)								Program Code
Proposed Funding ($1,000s)									
Component	Prior	14/15	15/16	16/17	17/18	18/19	19/20+	Total	Funding Agency
E&P (PA&ED)									Caltrans
PS&E		287						287	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			2,766					2,766	
TOTAL		287	2,766					3,053	

Fund No. 2:	Local Funds - Local Return								Program Code
Proposed Funding ($1,000s)									
Component	Prior	14/15	15/16	16/17	17/18	18/19	19/20+	Total	Funding Agency
E&P (PA&ED)									City of Los Angeles
PS&E		38						38	
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON			359					359	
TOTAL		38	359					397	

Fund No. 3:									Program Code
Proposed Funding ($1,000s)									
Component	Prior	14/15	15/16	16/17	17/18	18/19	19/20+	Total	Funding Agency
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

STATE OF CALIFORNIA ● DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST

DTP-0001 (Revised July 2013)

Date: 5/13/14

District	County	Route	EA	Project ID	PPNO	TCRP No.
07	LA					
Project Title:	Expo Line Bundy Station First Last Mile Improvements					

Fund No. 4:									**Program Code**
Proposed Funding ($1,000s)									
Component	Prior	14/15	15/16	16/17	17/18	18/19	19/20+	Total	**Funding Agency**
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

Fund No. 5:									**Program Code**
Proposed Funding ($1,000s)									
Component	Prior	14/15	15/16	16/17	17/18	18/19	19/20+	Total	**Funding Agency**
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

Fund No. 6:									**Program Code**
Proposed Funding ($1,000s)									
Component	Prior	14/15	15/16	16/17	17/18	18/19	19/20+	Total	**Funding Agency**
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

Fund No. 7:									**Program Code**
Proposed Funding ($1,000s)									
Component	Prior	14/15	15/16	16/17	17/18	18/19	19/20+	Total	**Funding Agency**
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

STATE OF CALIFORNIA ● DEPARTMENT OF TRANSPORTATION

PROJECT PROGRAMMING REQUEST

DTP-0001 (Revised July 2013)

Date: 5/13/14

District	County	Route	EA	Project ID	PPNO	TCRP No.
07	LA					
Project Title:	Expo Line Bundy Station First Last Mile Improvements					

Fund No. 8:									**Program Code**
Proposed Funding ($1,000s)									
Component	Prior	14/15	15/16	16/17	17/18	18/19	19/20+	Total	**Funding Agency**
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

Fund No. 9:									**Program Code**
Proposed Funding ($1,000s)									
Component	Prior	14/15	15/16	16/17	17/18	18/19	19/20+	Total	**Funding Agency**
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

Fund No. 10:									**Program Code**
Proposed Funding ($1,000s)									
Component	Prior	14/15	15/16	16/17	17/18	18/19	19/20+	Total	**Funding Agency**
E&P (PA&ED)									
PS&E									
R/W SUP (CT)									
CON SUP (CT)									
R/W									
CON									
TOTAL									

Project name:	Expo Line Bundy Station First Last Mile Improvements

VI. ADDITIONAL INFORMATION

Only fill in those fields that are applicable to your project

FUNDING SUMMARY

ATP Funds being requested by Phase (to the nearest $1000)	**Amount**
PE Phase (includes PA&ED and PS&E)	$ 287,000
Right-of-Way Phase	$
Construction Phase-Infrastructure	$ 2,766,000
Construction Phase-Non-infrastructure	$
Total for ALL Phases	**$** 3,053,000

All Non-ATP fund types on this project* (to the nearest $1000)	**Amount**
Local Funds - Local Return	$ 397,000
	$
	$
	$
	$
	$

*Must indicate which funds are matching

Total Project Cost	$ 3,450,000
Project is Fully Funded	Yes

ATP Work Specific Funding Breakdown (to the nearest $1000)	**Amount**
Request for funding a Plan	$
Request for Safe Routes to Schools Infrastructure work	$
Request for Safe Routes to Schools Non-Infrastructure work	$
Request for other Non-Infrastructure work (non-SRTS)	$
Request for Recreational Trails work	$

ALLOCATION/AUTHORIZATION REQUESTS SCHEDULE

	Proposed Allocation Date	**Proposed Authorization (E-76) Date**
PA&ED or E&P		
PS&E	12/01/2014	01/30/2015
Right-of-Way		
Construction	06/30/2016	09/01/2016

All project costs MUST be accounted for on this form, including elements of the overall project that will be, or have been funded by other sources.

Project name:	Expo Line Bundy Station First Last Mile Improvements

VII. NON-INFRASTRUCTURE SCHEDULE INFORMATION

Start Date	End Date	Task/Deliverables

Project name:	Expo Line Bundy Station First Last Mile Improvements

VIII. APPLICATION SIGNATURES

Applicant: The undersigned affirms that the statements contained in the application package are true and complete to the best of their knowledge.

Signature: _____ Date: _____
Name: Kevin Minne Phone: 213-847-4276
Title: Transportation Engineer e-mail: kevin.minne@lacity.org

Local Agency Official (City Engineer or Public Works Director): The undersigned affirms that the statements contained in the application package are true and complete to the best of their knowledge.

Signature: _____ Date: _____
Name: Nazario Sauceda Phone: 213-847-3333
Title: Director, Bureau of Street Services e-mail: nazario.sauceda@lacity.org

School Official: The undersigned affirms that the school(s) benefited by this application is not on a school closure list.

Signature: _____ Date: _____
Name: _____ Phone: _____
Title: _____ e-mail: _____

Person to contact for questions:

Name: Phone: _____
Title: e-mail: _____

Caltrans District Traffic Operations Office Approval*
If the application's project proposes improvements on a freeway or state highway that affects the safety or operations of the facility, it is required that the proposed improvements be reviewed by the district traffic operations office and either a letter of support or acknowledgement from the traffic operations office be attached (_) or the signature of the traffic personnel be secured below.

Signature: _____ Date: _____
Name: _____ Phone: _____
Title: _____ e-mail: _____

*Contact the District Local Assistance Engineer (DLAE) for the project to get Caltrans Traffic Ops contact information. DLAE contact information can be found at http://www.dot.ca.gov/hq/LocalPrograms/dlae.htm

Project name:
Expo Line Bundy Station First Last Mile Improvements

VIII. ADDITIONAL APPLICATION ATTACHMENTS

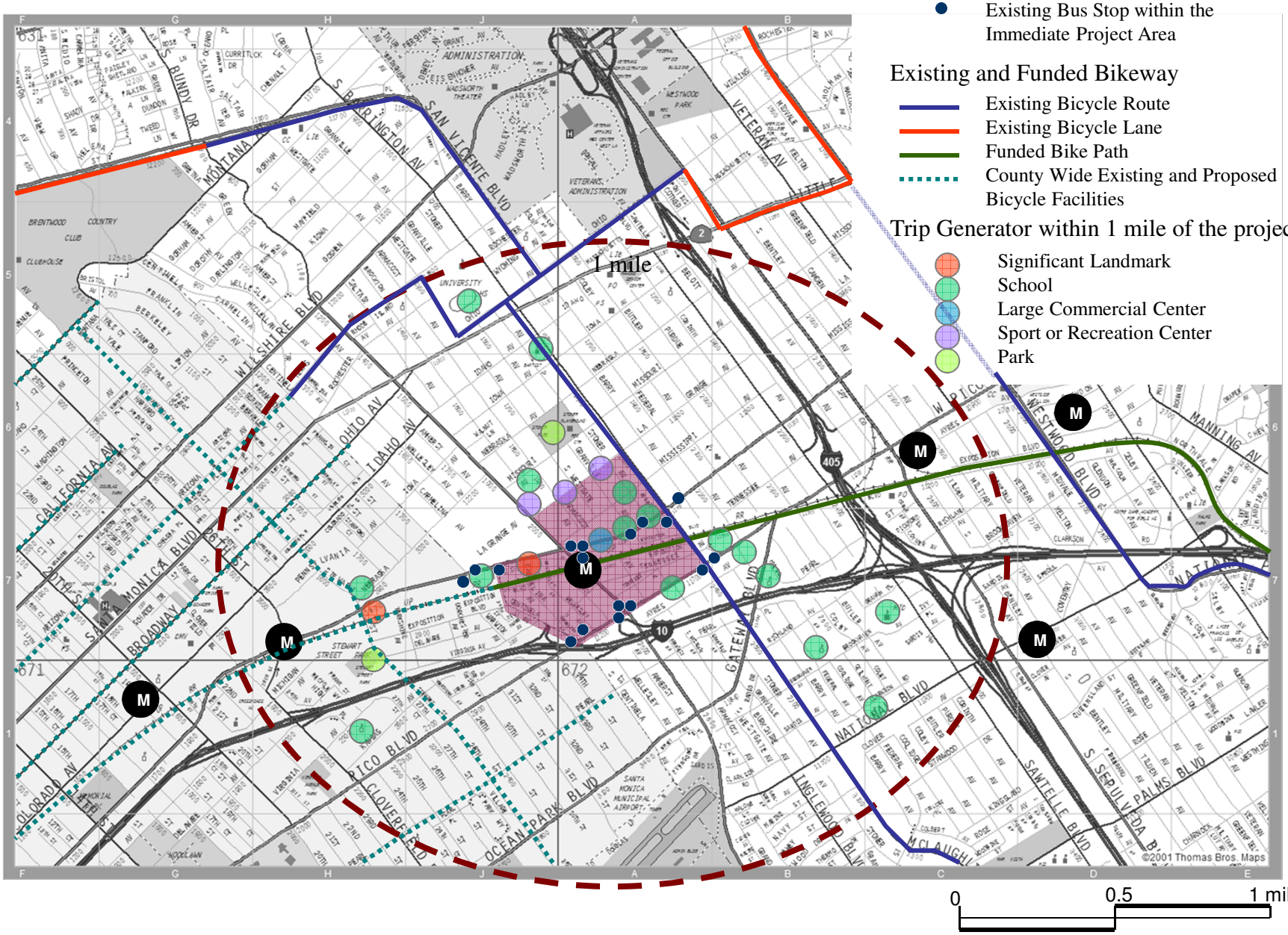
Check all attachments included with this application.

- ☒ Vicinity/Location Map- **REQUIRED for all IF Projects**
  - ☒ North Arrow
  - ☒ Label street names and highway route numbers
  - ☒ Scale
- ☒ Photos and/or Video of Existing Location- **REQUIRED for all IF Projects**
  - ☒ Minimum of one labeled color photo of the existing project location
  - ☒ Minimum photo size 3 x 5 inches
  - ☐ Optional video and/or time-lapse
- ☐ Preliminary Plans- **REQUIRED for Construction phase only**
  - ☐ Must include a north arrow
  - ☐ Label the scale of the drawing
  - ☐ Typical Cross sections where applicable with property or right-of-way lines
  - ☐ Label street names, highway route numbers and easements
- ☒ Detailed Engineer's Estimate- **REQUIRED for Construction phase only**
  - ☒ Estimate must be true and accurate. Applicant is responsible for verifying costs prior to submittal
  - ☒ Must show a breakdown of all bid items by unit and cost. Lump Sum may only be used per industry standards
  - ☒ Must identify all items that ATP will be funding
  - ☒ Contingency is limited to 10% of funds being requested
  - ☒ Evaluation required under the ATP guidelines is not a reimbursable item
- ☐ Documentation of the partnering maintenance agreement- Required with the application if an entity, other than the applicant, is going to assume responsibility for the operation and maintenance of the facility
- ☐ Documentation of the partnering implementation agreement-Required with the application if an entity, other than the applicant, is going to implement the project.
- ☐ Letters of Support from Caltrans (Required for projects on the State Highway System(SHS))
- ☒ Digital copy of or an online link to an approved plan (bicycle, pedestrian, safe routes to school, active transportation, general, recreation, trails, city/county or regional master plan(s), technical studies, and/or environmental studies (with environmental commitment record or list of mitigation measures), if applicable. Include/highlight portions that are applicable to the proposed project.
- ☒ Documentation of the public participation process (required)
- ☐ Letter of Support from impacted school- when the school isn't the applicant or partner on the application (required)
- ☒ Additional documentation, letters of support, etc (optional)

Expo/Bundy Station Multi-Modal Connectivity Enhancements

Department of Public Works
Bureau of Street Services

Project Vicinity Map

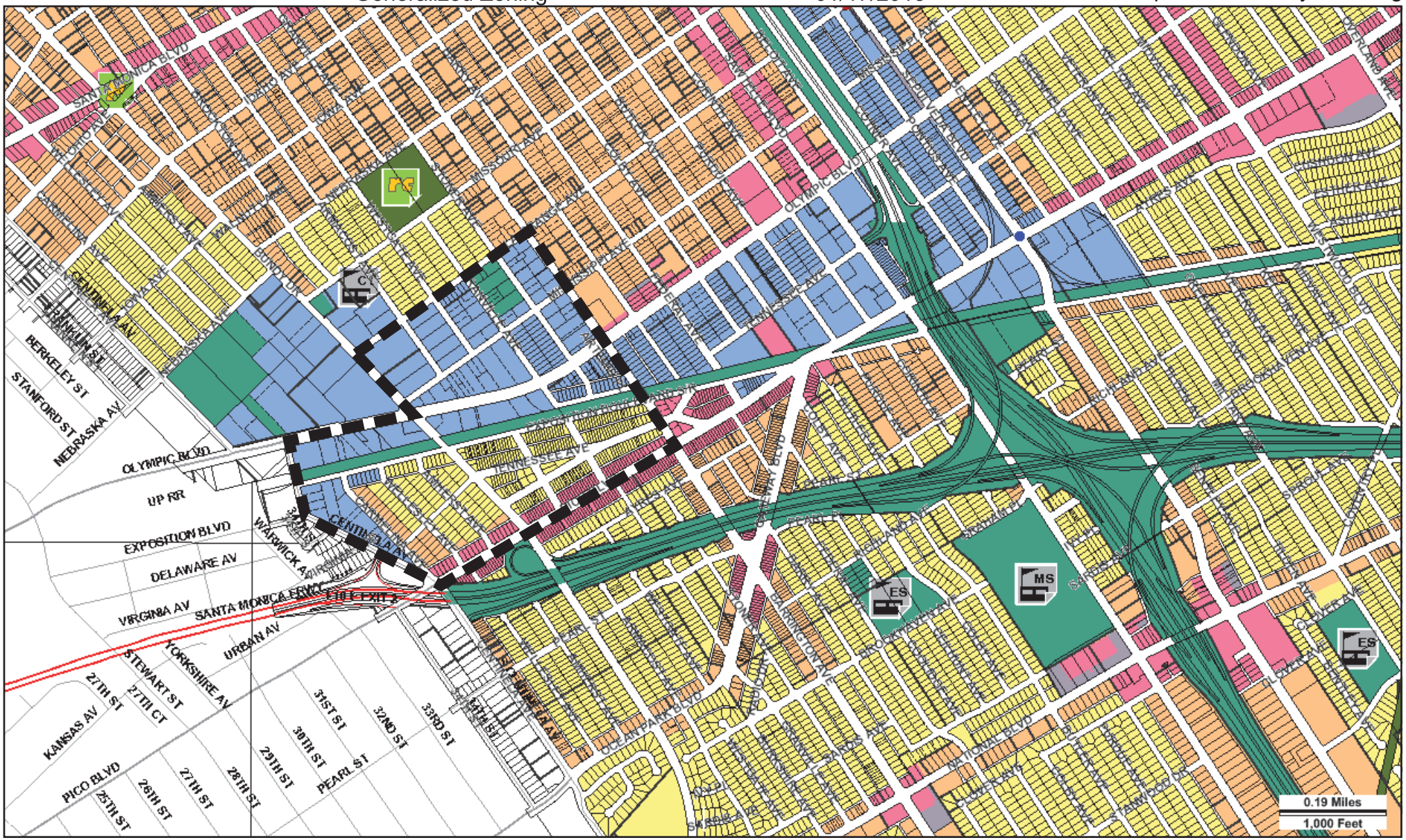


ZIMAS PUBLIC

Generalized Zoning

01/17/2013

City of Los Angeles
Department of City Planning

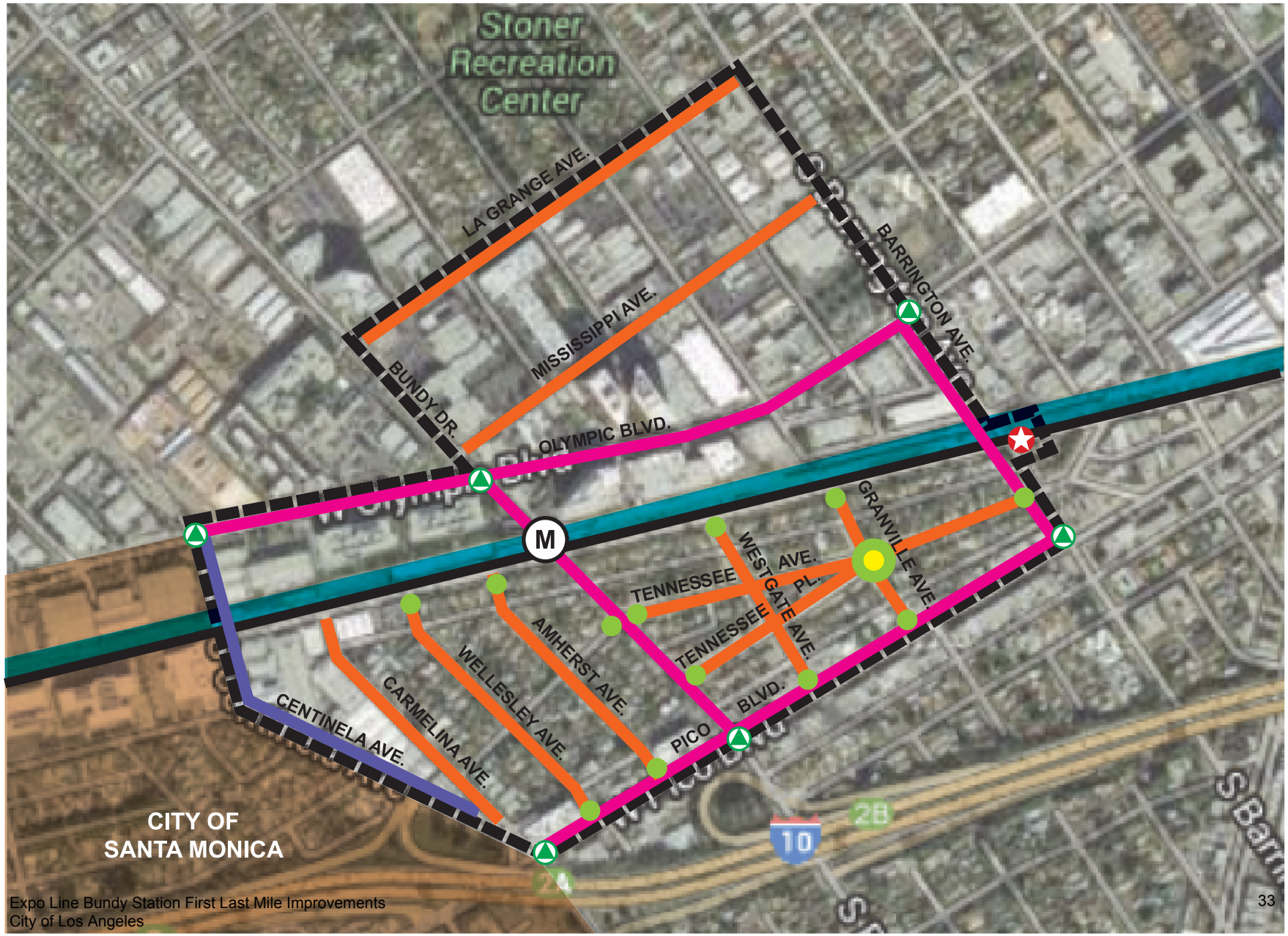


PROJECT LOCATION:
EXPO/BUNDY STATION MULTI-MODAL CONNECTIVITY ENHANCEMENTS

Streets Copyright (c) Thomas Brothers Maps, Inc.

Attachment C

PROJECT AREA
EXPO LINE
EXPO LINE SURFACE PARKING
CITY OF SANTA MONICA
STATION ENTRANCE
SIDEWALK IMPROVEMENT, BIKE RACKS, TREES, BUS STOP AMENITIES
SIDEWALK IMPROVEMENT, BIKE RACKS, TREES
ACCESS RAMPS, TREES
INTERSECTION RECON-FIGURATION AND CURB EXTENSIONS
CURB EXTENSION W/ CONTINETNAL CROSSWALK
CONTINENTAL CROSSWALK
BICYCLE PARKLET



EXPO/BUNDY STATION MULTIMODAL CONNECTIVITY IMPROVEMENTS

Department of Public Works
Bureau of Street Services

Proposed Bicycle Parklet at Exposition and Barrington

LEGEND

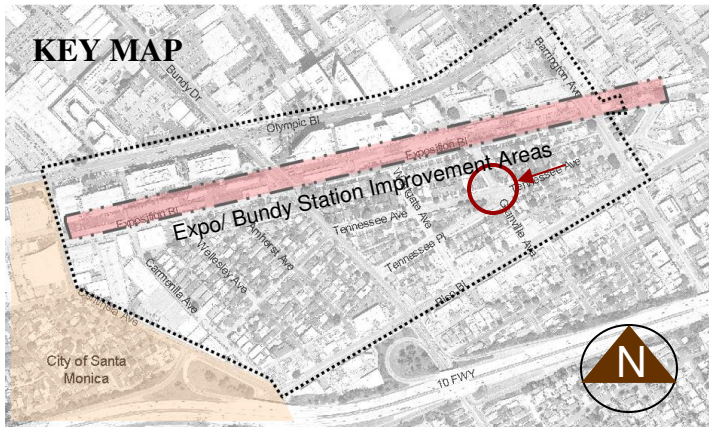
1. Metro's proposed median island, crosswalk, and ADA compliant curb ramp
2. Metro's proposed cul-de-sac
3. Metro's proposed street trees
4. Metro's proposed landscape areas
5. Metro's proposed soundwall
6. Metro's proposed tracks
7. Metro's proposed bike and pedestrian path
8. Bicycle Parklet with bike repair kiosk and benches

N

EXPO/BUNDY STATION MULTIMODAL CONNECTIVITY IMPROVEMENTS

Department of Public Works
Bureau of Street Services

Five-Point Intersection Before and After



Before

After

EXPO/BUNDY STATION MULTIMODAL CONNECTIVITY IMPROVEMENTS

Department of Public Works
Bureau of Street Services

Proposed Improvement at Five-Point Intersection

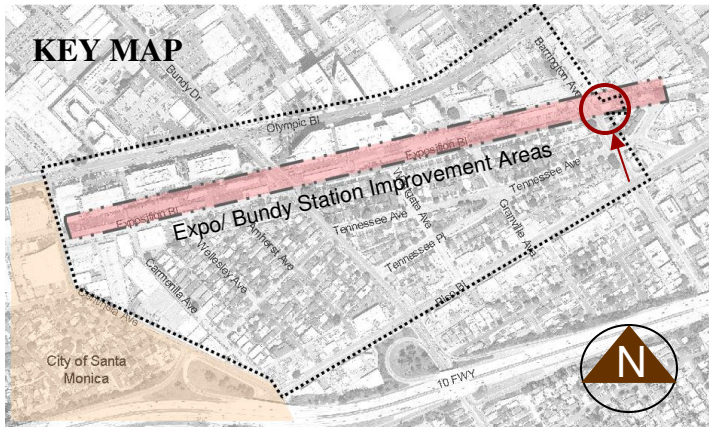
LEGEND

1. Proposed street tree, typical
2. Curb extension with landscape enhancement
3. Median refuge with landscape enhancement
4. Pedestrian Lighting
5. ADA compliant curb ramp, typical
6. Continental crosswalk
7. Metro's proposed street parking to serve Expo/ Bundy station
8. Metro's proposed 17' bike and pedestrian path
9. Metro's proposed landscape areas
10. Metro's proposed soundwall

EXPO/BUNDY STATION MULTIMODAL CONNECTIVITY IMPROVEMENTS

Department of Public Works
Bureau of Street Services

Bicycle Parklet Before and After



Before

After

Estimated Project Budget for Expo ATP

Description of Work	Quantity	Unit	Unit Cost	Total	Eligible/ Incidental
Preliminary Engineering					
Plans, Specs, & Estimates (PS&E)	1	LS	$ 325,000	$ 325,000	
Total PE Cost				***$ 325,000.00***	
Construction Phase					
Demolition	1	LS	$ 200,000	$ 200,000	E
Utility Relocation	1	LS	$ 100,000	$ 100,000	I
Construction Survey	1	LS	$ 100,000	$ 100,000	E
Earthwork	13,050	SF	$ 5	$ 65,250	E
Pavement	58,500	SF	$ 10	$ 585,000	E
Curb and Gutter	4,800	LF	$ 32	$ 153,600	I
Sidewalk Improvements	15,000	SF	$ 9	$ 135,000	E
Crosswalk Visibility Enhancement (inte	14	EA	$ 10,000	$ 140,000	E
Access Ramps	55	EA	$ 3,500	$ 192,500	E
Bike Station	1	LS	$ 50,000	$ 50,000	E
Pedestrian Lighting (at 15 bus stops)	40	EA	$ 12,000	$ 480,000	E
Landscape Planting	6,000	SF	$ 8.50	$ 51,000	I
Irrigation	6,000	SF	$ 6.50	$ 39,000	I
Street Trees and Tree Wells	150	EA	$ 725	$ 108,750	I
Wayfinding Signage	1	LS	$ 100,000	$ 100,000	E
Construction Cost				$ 2,500,100	
Contingency (~10% of Construction Cost)				$ 250,010	
Construction Engineering (Inspection & CM)				$ 375,015	
Total Construction Cost				***$ 3,125,125***	
Total Project Costs				**$ 3,450,125**	

E = ELIGIBLE	$	2,047,750	81.9%
I = INCIDENTAL	$	452,350	18.1%
TOTAL	$	2,500,100	

ACTIVE TRANSPORTATION APPENDIX

REGIONAL TRANSPORTATION PLAN
2012–2035
SUSTAINABLE COMMUNITIES STRATEGY
Towards a Sustainable Future
RTP

Southern California Association of Governments

ADOPTED APRIL 2012

Policy Recommendations

While SCAG is not an implementing agency SCAG may work with local jurisdictions to assist them with developing policies and projects that may improve active transportation.

Agencies, Groups and Individuals in Bicycle and Walking Planning

Federal and state regulations require SCAG to plan and accommodate for bicycle and walking transportation. As the region's MPO, SCAG develops regional planning strategies and encourages local jurisdictions to think about transportation at the regional level, since individual travel decisions are not bound by political boundaries and often transverse multiple jurisdictions. A regional approach towards transportation planning will provide increased connectivity and accessibility. The 2012 RTP has been developed in cooperation and collaboration with federal, state and local stakeholders. Each stakeholder plays a different role in the development and final adoption of the RTP.

FEDERAL GOVERNMENT

Federal statutes have mandated Metropolitan Planning Organizations (MPOs) to include pedestrian and bicycle facility strategies as part of their overall systematic approach in addressing current and future transportation demands.

STATE OF CALIFORNIA

The State of California and Caltrans has long supported active transportation planning, design policies and practices.

COUNTIES

Each county within the SCAG region has developed and maintained a bicycle and walking master plan to guide their active transportation development.

CITIES

Many of the cities within the SCAG region have developed and maintained a bicycle and/or walking plan as part of their circulation element or as a separate document. These plans are used to guide their transportation development and assist them with the implementation of their active transportation policies.

Performance Measures

In addition to the established goals and objectives the following performance measures have been identified in an effort to maximize the benefits of active transportation modes:

1. Change in Active Transportation mode share: Increase bicycling and walking in the SCAG region by creating and maintaining an active transportation system that includes well maintained bicycle and pedestrian facilities, easy access to transit facilities, and increased safety and security.
2. Change in the amount of Active Transportation facilities: Increase accommodation and planning for bicyclists and pedestrians (including persons with disabilities) for all transportation planning projects.
3. Change in the number of accidents involving Active Transportation users: Decrease bicyclist and pedestrian fatalities and injuries by increasing transportation safety.
4. Change in land use patterns and Active Transportation: Support local jurisdictions comply with the Complete Streets Act and the development of local active transportation plans. SCAG will also work with local jurisdictions in developing a regional active transportation plan.

Proposed Policies

The goals, objectives and policies in this report were derived from information gathered over the course of the planning process, including public input, review of bicycle and pedestrian master plans from local jurisdictions throughout the region.

GOAL 1: DECREASE BICYCLIST AND PEDESTRIAN FATALITIES AND INJURIES

- **Objective 1.1:** SCAG will work with local jurisdictions to support a safe transportation environment in the SCAG Region.
  - Policy 1.1.1: SCAG will work with local jurisdictions to provide comprehensive education for all road users.

- Policy 1.1.2: SCAG will work with local jurisdictions to direct enforcement agencies to focus on bicycling and walking safety to reduce multi-modal conflicts.
- Policy 1.1.3: SCAG will partner with local advocacy groups and bicycle related businesses to provide bicycle-safety curricula to the general public.

The 2006 Strategic Highway Safety Plan (SHSP) established goals to make walking and street crossing safer; and improve bicycle safety. The SHSP intended on achieving these goals by 2010, reducing the number of pedestrian fatalities attributed to vehicle collisions and the number of bicycle roadway fatalities by 25 percent from their 2000 level. These goals were established by the Legislature in the 2002 California Blueprint for Bicycling and Walking, and assumed that the Legislature's mobility goal of a 50 percent increase in bicycling and pedestrian trips by 2010 would also be achieved.

Improved data collection regarding pedestrian and bicycle trip characteristics, facility conditions and injuries and fatalities would provide local jurisdictions with a clearer understanding of the active transportation conditions within their jurisdictions. Analysis generated from this data would also provide decision makers with a better understanding of the deficiencies and needs within the existing active transportation system.

FIGURE 14 California Coastal Trail Timeline

GOAL 2: DEVELOP AN ACTIVE TRANSPORTATION FRIENDLY ENVIRONMENT THROUGHOUT THE SCAG REGION

- **Objective 2.1:** Produce a comprehensive regional active transportation plan
  - Policy 2.1.1: SCAG will work with local jurisdictions to adopt and implement the proposed SCAG Regional Bikeway Network
  - Policy 2.1.2: SCAG will work with local jurisdictions to connect all cities in the SCAG region via bicycle facilities
  - Policy 2.1.3: SCAG will work with local jurisdictions to complete the California Coastal Trail

The need for active transportation needs to be fully considered for all transportation planning projects. Increased accommodation for bicyclists and pedestrians requires increased funding, multi-modal planning, programming, and design. As planners increase accommodation for active transportation users, an increase in bicyclist and pedestrian safety should also occur.

Research by Dr. Jennifer Dill, Portland State University Associate Processor, and anecdotal evidence from New York City (NYC) indicate that increases in dedicated bicycle facilities (bicycle lanes and bicycle paths) in those cities have resulted in greater bicycle usage. In addition, in NYC, while bicycling use has doubled along with the number of bicycle facilities, bicycle fatalities have not grown, and injuries have actually declined in total. Collaborative efforts that are capable of integrating the needs of all commuters are essential to developing a safe and accessible transportation system for all users.

Adoption of the SCAG Regional Bikeway Network would increase bicycle facilities by 827.5 miles beyond existing local plans, and may further promote ridership in the SCAG region. In addition, SCAG may partner with local jurisdictions on grant opportunities such as the Caltrans Bicycle Transportation Account (BTA) or Safe Routes to School (SRTS) projects. SCAG may also provide local jurisdictions with assistance in the development of their local active transportation plans and by providing them with Pedestrian Safety Action Plan (PSAP) workshops. The SCAG Compass Blueprint program may further assist local jurisdictions with the development of innovative transportation and land-use planning projects.

Adoption of a Complete Streets Policy that would ensure that all streets are safe, comfortable, and convenient for travel for everyone, regardless of age or ability—motorists, pedestrians, bicyclists, and public transportation riders.

GOAL 3: INCREASE ACTIVE TRANSPORTATION USAGE IN THE SCAG REGION

- **Objective 3.1:** Adoption of a Safe Routes to School Policy
  - Policy 3.1.1: Enable and encourage children, including those with disabilities to walk and bicycle to school
  - Policy 3.1.2: Make bicycling and walking to school a safer and more appealing transportation method, thereby encouraging a healthy and active lifestyle from an early age
  - Policy 3.1.3: Facilitate the planning, development, and implementation of project and activities that will improve safety and reduce traffic, fuel consumption, and air pollution in the vicinity (approximately 2 miles) of primary and middle schools (Grade K-8)
- **Objective 3.2:** Adoption of a Complete Streets Policy
  - Policy 3.2.1: Encourage local jurisdictions to prioritize and implement projects/policies to comply with ADA requirements
  - Policy 3.2.2: Encourage local jurisdictions to develop and implement Complete Streets Policies.

Increasing bicycling and walking requires well maintained bicycle and pedestrian facilities, easy access to transit facilities, and increased safety and security. While pedestrian sidewalks are fairly well established in most areas, it is estimated that there are only 4,315 miles of dedicated bicycle facilities in the region, with an additional 7,154 miles planned.

Reliable data for planning is also needed to increase active transportation and investments. Active transportation data needs include, but are not limited to, comprehensive user statistics, user demographics, bicycle travel patterns/corridors, accident mapping, bikeway system characteristics, and sub-regional improvement projects and funding needs.

GOAL 4: ENCOURAGE THE DEVELOPMENT OF LOCAL ACTIVE TRANSPORTATION PLANS

- **Objective 4.1:** SCAG will assist local jurisdictions with the development and maintenance of their local active transportation plans
  - Policy 4.1.1: SCAG will work with local jurisdictions in the development of bicycle/pedestrian plans for all cities in the region
- **Objective 4.2:** Develop Pedestrian Safety Action Plans
  - Policy 4.2.1: SCAG will work with local jurisdictions in the development of PSAPs by conducting workshops
- **Objective 4.3:** Encourage the use of Intelligent Traffic Strategies
  - Policy 4.3.1: Encourage the use of Intelligent Traffic Signals that are able to detect slower pedestrians in signalized crosswalks and extend the signal time appropriately

SCAG will work with all member counties and cities to develop bicycle and walking plans and policies. Active transportation plans have been created or updated within the previous four years are eligible for BTA funds.

Air Quality Improvements

In addition to increased mobility for all users throughout the SCAG region, implementation of the 2012–2035 RTP/SCS will further improve the environment and congestion of the region through the reduction of vehicle miles traveled (VMT).

Potential VMT Reduction

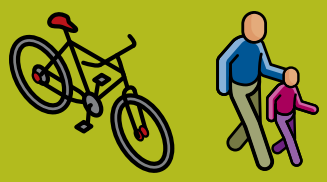
As described previously, active transportation has grown dramatically in recent years. This trend is expected to continue into the foreseeable future aided by several factors. First, dramatic increase in the bicycle network, as demonstrated earlier, will result in improved access to bicycle network for the Region's residents by more than 50 percent. Second, more compact mixed use urban forms in the future will be much more conducive to biking and walking. Third, better coordination with other modes, primarily transit, will become an incentive for some to switch to biking or walking. Most importantly, a significant change in the culture that values a healthy lifestyle, bikeability and walkability will become a greater impetus in promoting active transportation as a viable means of accessing opportunities. Given this context and survey data that supports dramatic increase in bicycling and walking mode shares in recent years, it is reasonable to assume this trend will continue into the future. For example, according to the NHTS data, bicycle mode share increased for all trips from 0.8 percent in 2000 to over 1.7 percent in 2009. This is an increase of almost 9 percent on an annualized basis. The share of walk trips for all trip purposes increased by approximately 6 percent on an annualized basis during the same period.

So, if we assumed annualized increase of 9 percent in mode share of bicycle trips for all trips, the potential bicycle mode share could be as high as 4.4 percent in 2020 and as high as 16 percent in 2035. However, it is somewhat unrealistic to assume that 9 percent growth rate could be sustained over such a long period of time. On the other hand, given the significant investments proposed for active transportation and the current trends, it is reasonable to assume that at least 2/3 of all trips shorter than 3 miles or half of all trips that are 5 miles or less could be converted to active transportation by 2035.

As indicated earlier, based on NHTS-CA Survey for all trips, bicycling and walking mode share for all trips are approximately 1.7 percent and 19.24 percent respectively for 2009. This represents a little over 50 percent of all trips less than 3 miles. Assuming 2/3 of all trips under 3 miles or half of all trips under 5 miles as the upper limit of Active Transportation mode share in 2035, relative increase (from the base year of 2008) in bicycling and walking mode shares can be estimated as 1.7 percent and 3.1 percent in 2020, and 3.9 percent and 6.3 percent in 2035. Relative reduction in VMT resulting from these mode shifts are estimated at approximately 7.8 million miles and 20.4 million miles for 2020 and 2035 respectively.

metro.net/longrangeplan
I want a mobile future.
2009 Long Range Transportation Plan
Metro

Bicycles and Pedestrians



> There are more than 1,250 miles of bikeways in Los Angeles County.

> The Metro Call for Projects will fund an expansion of the bicycle network.

> Metro will focus on improving bicycle safety and bicycle access on buses and trains, and at transit hubs.

> Coordinating pedestrian links between transit and the user's final destination is critical to an effective transportation system.

> Metro will improve pedestrian linkages to bus centers and rail stations.

Expo Line Bundy Station First Last Mile Improvements
City of Los Angeles

This 2009 Long Range Plan promotes the development of bicycle facilities and pedestrian improvements throughout Los Angeles County.

Bicycle and pedestrian programs are critical components of a successful transit system, as transit riders should be able to access buses and trains without having to drive a vehicle to and from transit stations. The sustainability of our transportation system depends upon the interface between modes.

According to SCAG's Year 2000 Post-Census Travel Survey, nearly 12 percent of all trips in the SCAG region are bicycling and walking trips. According to the 2001 National Household Travel Survey, many trips in metropolitan areas are three miles or shorter. These trips are targets for bicycling and walking, if facilities are available and safe.

Bicycling and walking produce zero emissions as no fossil fuels are used. These trips can eliminate the "cold start" of a vehicle engine and reduce GHGe, VMT, and energy consumption.

Bicycle Programs

This 2009 Plan will help implement the 2006 Metro Board-adopted Bicycle Transportation Strategic Plan (BTSP). It describes a vision for Los Angeles County to improve bicycling as a viable transportation mode. The BTSP outlines a bicycle infrastructure that improves overall mobility, air quality and access to opportunities. It also shifts the focus in countywide bicycle planning from long arterial bikeways to improvements for bicycle access to 167 bike-transit hubs throughout the County. Focusing improvements at bike-transit hubs is a relatively simple way to link bikes with transit and extend the reach of transit without the use of a car. It increases the viability of public transportation and facilitates ridership without a huge investment in infrastructure and right-of-way.

In 2006, the inventory of existing bicycle facilities in the County totaled 1,252 miles, including facilities such as the Metro Orange Line Bike Path, San Gabriel and Los Angeles River Bike Paths, Whittier Greenway Bike Path, Ballona Creek Bike Path, Santa Monica and Venice Boulevard bicycle lanes and hundreds more miles of bicycle lanes and routes. Another 1,145 miles of bikeway projects have been proposed in local agency bicycle plans that would nearly double the current bikeway system. Further, Metro identified 53 gaps in the inter-jurisdictional bikeway system that can be filled by on-street or off-street bicycle facilities.

Bicycle parking at transit stations is essential to encourage the use of bicycles with transit. Bicycle parking at employment centers and local destinations also help reduce the expanding need for costly automobile parking,

particularly in dense urban areas where space is limited. As many as 36 bicycles can be parked in the space of one automobile.

Local governments will continue to build bicycle facilities using their Transportation Development Act (TDA) Article 3 and Proposition C local return funding, while Metro will provide regional funds through the Call for Projects. Eligible projects include on- and off-street bicycle improvements, bicycle parking, safety education, bicycle racks on buses, bicycle stations and other bicycle access improvements. Other sources of funds are Safe Routes to School and State BTA (Bicycle Transportation Account) Grant funds. While acknowledging its role in coordinating bicycle facility planning in the region, Metro recognizes the importance of local bicycle planning and strongly encourages cities to develop their own plans. Metro provides technical assistance to develop those plans and qualify them for BTA funding.

Pedestrian Priority Improvement Program

Nearly all trips within Los Angeles County, regardless of purpose, include a non-motorized component. Although almost nine percent of all the trips within Los Angeles County are exclusively pedestrian trips and about half of these are walking trips to and from home to work, the pedestrian system can be improved further. All non-motorized transport modes should connect to an efficient, aesthetically pleasing and safe pedestrian system that enables a person to successfully complete a trip. Motorized transport modes should seamlessly link to the pedestrian system in a way that efficiently allows people to access primary and secondary destinations as well as to make connections to the public transit system.

Several factors combine to create a pedestrian-friendly environment. Examples include: a wayfinding signage system, ease of access to destinations from the sidewalk network, appropriate street-crossing safety features, and easy connection to public transport modes. Physically attractive features and amenities facilitate the flow of pedestrian movement and encourage people to walk.

The primary challenge to improving the quality of the pedestrian environment is retrofitting the existing built form to make walking a more viable option for more people, more often. Since much of the built form is orientated to access by automobiles and the set of development standards and regulations governing land development are primarily focused on maintaining auto accessibility, significantly increasing the share of non-motorized trips will require time, coordinated policy and program development, and a sustained funding approach. Many cities in Los Angeles County have begun to initiate activities to improve the livability of their neighborhoods, including reducing traffic congestion and improving overall mobility. The linkages between development and transportation modes are a critical factor in improving overall mobility while maintaining the economic and social viability and attractiveness of these communities.

Metro's Pedestrian Priority Improvement Program is designed to achieve a qualitative improvement in the pedestrian environment in Los Angeles County. The approach focuses on the development of public policy and adoption of appropriate regulatory standards and targeted funding to develop more safe, connected and walkable pedestrian environments that promote non-motorized transport as a viable alternative for an increasing share of trips made by residents and visitors of Los Angeles County.

Call for Projects

FIGURE BB

Bicycle Program

	$ IN MILLIONS ESCALATED TO YEAR OF EXPENDITURE
Constrained Plan	
$11.7 m/yr in 2009 dollars	$ 287
Strategic Plan	
$12.5 m/yr in 2009 dollars	$ 302

FIGURE CC

Pedestrian Program

	$ IN MILLIONS ESCALATED TO YEAR OF EXPENDITURE
Constrained Plan	
$11.7 m/yr in 2009 dollars	$ 287
Strategic Plan	
$10.0 m/yr in 2009 dollars	$ 242

FIGURE DD

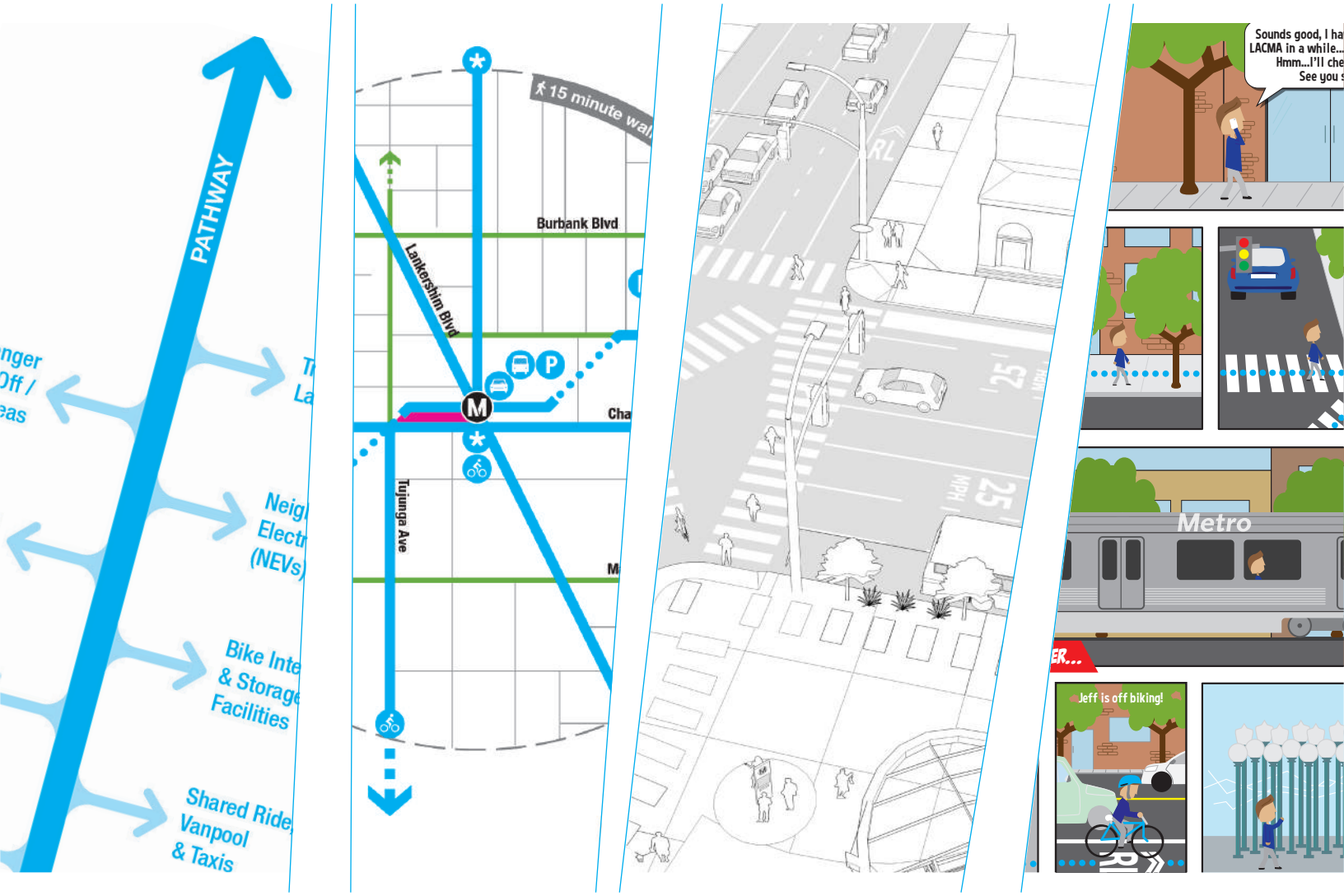
Transportation Enhancements Program

	$ IN MILLIONS ESCALATED TO YEAR OF EXPENDITURE
Constrained Plan	
$2.3 m/yr in 2009 dollars	$ 72

THE SUSTAINABILITY OF OUR TRANSPORTATION SYSTEM DEPENDS UPON THE INTERFACE BETWEEN MODES.

First Last Mile Strategic Plan

& PLANNING GUIDELINES



5 PATHWAY TOOLBOX

* This Chapter presents a set of components that directly relate to the development of the Pathway concept. This is not an exhaustive list of what makes for a great public realm, and more components may be added on to this list as this concept is developed. The components chosen respond to our specific challenges here and now, and how we can make a more dignified transit-to-destination link, one that is safer and better maintained, more intuitive, efficient, and inviting, effectively expanding the transit station outward.

Introduction

The planning components presented in this chapter focus on improving access to and from Metro stations, in particular Metro Rail and fixed route BRT stations throughout Los Angeles County along identified Pathway networks and within the confines of defined station areas. The Pathway aims to overcome critical access barriers through flexible deployment of a number of design components, while following the Metro Pathway Guiding Principles noted in the first chapter.

The components focus on five categories of improvements as part of the Pathway:

1. ***Crossing Enhancements and Connections***
2. ***Signage and Wayfinding***
3. ***Safety and Comfort***
4. ***Allocation of Streetspace***
5. ***Plug-in Components***

Components do not all directly relate to one another, but they work in concert to support the overall goals and guidelines of the Pathway. For example, traffic calming and curb-extensions are very different tools with respect to planning, design and implementation, but utilized together they enhance transit user safety, comfort and access ability.

Applying the Toolbox to Real Places

Components presented in this chapter aim to:

- *Expand the station's sphere of influence and improve the transit rider experience*
- *Contribute to a hierarchy of improvements that are more concentrated, visible, and frequent as transit users approach transit stations*
- *Be flexible in order to fit into diverse settings around stations*

Components presented in this chapter were developed with the recognition that Pathway Networks need to be responsive to local context and variations that exist both across and within station areas. The following ***key considerations*** are intended to support local jurisdictions in selecting treatments along Pathway networks:

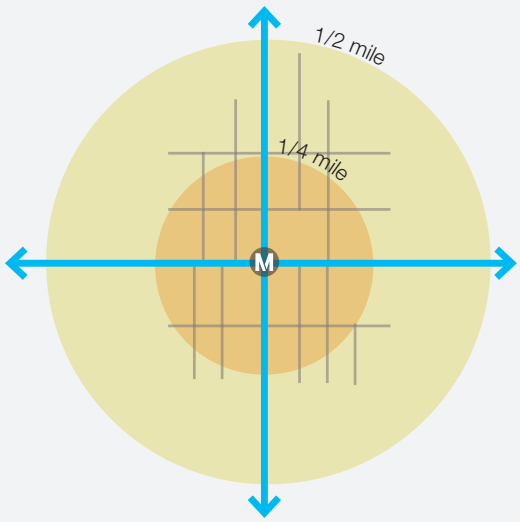
Sphere of Influence: The types and intensity of components deployed along Pathway Networks will differ depending on proximity to station. The "Extended Station Zone" is defined as roughly one-quarter mile radius from the station portal. The larger "Transit-Friendly Zone" extends out to an approximate one-half mile radius; this area would include active transportation infrastructure, but to a lesser extent than in the Extended Station Zone. Pathway Arterials may extend out farther still and link up with regional bike and pedestrian networks. The goals for these different spheres are noted in the graphic and provide guidance for prioritizing improvements.

A Hierarchy of Improvements: Paramount to a clear and navigable transit environment is a system of cues that help the transit rider intuit which direction the station is, how best to get there, and how long it will take. The frequency of access improvements should increase and be made more prominent as the transit rider approaches a station. For example, farther from the station within the Transit-Friendly Zone, crosswalks may be designed with a simpler and more traditional double stripe. In the Extended Station Zone, closer to the transit station, crosswalks should become more visible, prominent, and frequent, with continental or zebra stripes, colored paint, and increased width.

Flexibility in Design: The contextual diversity of Los Angeles warrants a place-specific approach that does not stifle the individual identity of each location, allows for a flexible approach in design of the Pathway, and simultaneously provides a legible and intuitive system-wide strategy. Each component can be applied where appropriate depending on the urban condition. Illustrative examples of how Pathway components may be realized in different locations are presented in the Illustrations chapter.

Branding and Identity Building: The Pathway, whether named or not, will be most effective if it is recognizable and visually consistent, both within station areas and across communities served by Metro. For example, some Pathway elements could use standard/consistent messages, font, style, placement, material and colors while others may be informed by the identity of community in which they are located. The intent is to support seamless system navigation for the user, while allowing for the expression of local identity. These considerations should be made as part of further design development. Development of standard components would rely both on inter-jurisdictional coordination throughout the Metro region and coordination with state and federal standards.

Expanding the Sphere of Influence



M Metro Station
Pathway Collector
Pathway Arterial

EXTENDED STATION ZONE (AREA 1)

5-Minute Walk/2-Minute Bike

- Pathways are more visible
- Enhanced safety features
- Larger, more prominent Pathway signage
- Directional markers with time-to-station signage
- Frequent crossings
- Train time arrival/departure digital displays

TRANSIT-FRIENDLY ZONE (AREA 2)

10-Minute Walk/5-Minute Bike

- Less overt, more passive wayfinding and Pathway markers
- Address the most pressing safety and access improvements, such as:
  - New crossings
  - Curb ramps
  - Maintenance
  - Lighting and landscaping

How to Use this Guide

Category Labels each Component with one of the six categories: Crossing Enhancements and Connections; Signage and Wayfinding, Safety and Comfort, Allocation of the Streetspace, and Integrated Transit Access Solutions.

Component Name of Component.

Goal Describes what the Component should aim to do and who it should serve.

Guidelines and Resources Defines the Component. Guidelines presented focus on those aspects of design and planning that are particularly transit-supportive, rather than describing the full universe of good design standards or common best practices. References are included for other design and planning guidance. See the end of this chapter for a full list of references.

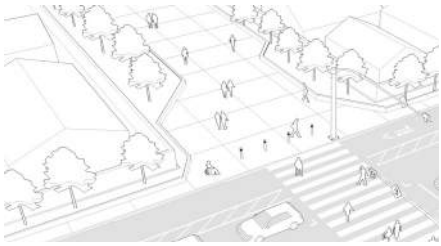
Transit Integration Identifies elements that can be used to identify or brand the Component as part of the Metro System, recognizable to the transit rider.

Pathway Network Compatibility Identifies relevance of Tool by pathway type (Collector, Arterial, or Cut-Through), and by sphere of influence (Area 1, the Extended Station Zone or Area 2, the Transit Friendly Zone.).

Issues Addressed Shows how the Component responds to the six critical Station Access Barriers, that identify which problem(s) it helps solve.

CROSSINGS AND CONNECTIONS

Cut-Throughs and Shortcuts



Goals

» Provide more direct routes to and from the station

Guidelines and Resources

» Design shortcuts with special paving, lighting, furnishings, and shade so that they are inviting to pedestrians of varying ages and abilities
» Design shortcuts to accommodate bicyclists and other active transportation users with a sufficiently wide pathway and smooth surface
» Use directional signage to the stations at entrances to shortcuts
» If located in the middle of the block, design shortcut paths that lead to a mid-block crossing for easier access across streets
» Make sure that pathways are well-maintained, well-lit, and located in "people-friendly" places, i.e. places that are well-traveled, highly-visible, and pedestrian-oriented
» Maintain existing cut-throughs and add safety enhancements

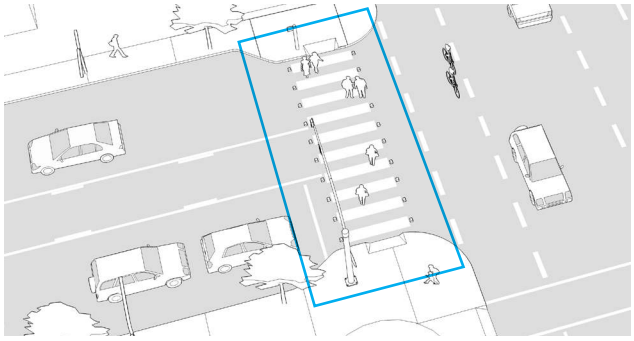
Transit Integration

» Use Metro signage at entrances and decision points
» Regularly place branded Metro medallion signage for the length of the pathway, every 60-100 ft approx

Station Access Barriers Addressed:	Component Appropriate For Use On:
☑ Long Blocks	☐ Arterial 1
☐ Freeways	☐ Collector 1
☑ Maintenance	☐ Arterial 2
☑ Safety and Security	☐ Collector 2
☐ Legibility	☑ Cut-Through
☐ ROW Allocation and Design	

CROSSINGS AND CONNECTIONS

Enhance Existing Crosswalks



Goals

- Protect pedestrians and active transportation users when crossing vehicular traffic
- Enhance the visual presence of crosswalks to slow approaching vehicles

Guidelines and Resources

- Paint stripes on existing crosswalk (or use special paving or paint). Stripes may be perpendicularly- or diagonally-placed
- Incorporate advance stop bar or yield lines for on-coming vehicular traffic to give pedestrians more room to cross
- Where feasible, incorporate special paving at intersections to call further attention to the crosswalk
- Where feasible, install in-road warning lights or rectangular rapid-flashing beacons
- Use leading pedestrian intervals on transit-adjacent crossings, which give pedestrians a head start across the intersection
- Improve crosswalk lighting
- Resource: Manual on Uniform Traffic Control Devices Best Practices

Transit Integration

- Where feasible and applicable, paint stripe or edges of crosswalks to identify with Pathway network access route
- Couple crosswalks with directional signage

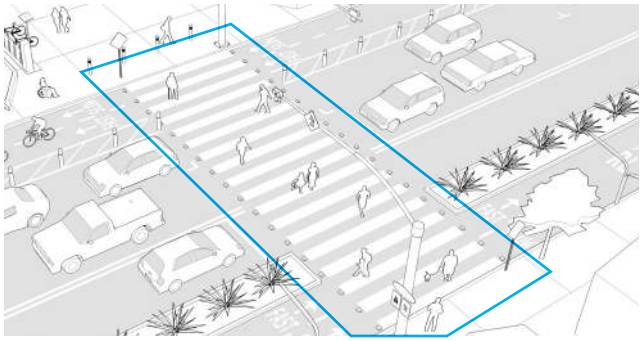
Station Access Barriers Addressed

- [x] Long Blocks
- [ ] Freeways
- [x] Maintenance
- [x] Safety and Security
- [x] Legibility
- [ ] ROW Allocation and Design

Component Appropriate For Use On:

- [x] Arterial 1
- [x] Collector 1
- [x] Arterial 2
- [ ] Collector 2
- [ ] Cut-Through

Mid-Block and Additional Intersection Crossings



Goals

- Break up long blocks by allowing pedestrians to safely cross, thereby traveling shorter distances
- Provide visual cues to allow approaching motorists to anticipate pedestrian activity and stopped vehicles

Guidelines and Resources

- At mid-block crossings, or currently unsignalized intersections, introduce new crosswalks and vehicular control, such as pedestrian-oriented flashing beacons, in-road flashers, or HAWK (High-intensity activated crosswalk) signals, which are activated by a pedestrian push button
- Provide a crossing at least every 300 ft on average, as a good rule of thumb
- Add crossings around and adjacent to freeway overpasses/underpasses, so that pedestrians can navigate these areas more easily
- Resource: Safety Effectiveness of the HAWK Pedestrian Crossing Treatment

Transit Integration

- Where feasible and applicable, paint stripe or edges of crosswalks to identify with Pathway network access route.
- Couple crosswalks with directional signage
- Incorporate medallion signage or related branding on new crossing signal posts

Station Access Barriers Addressed

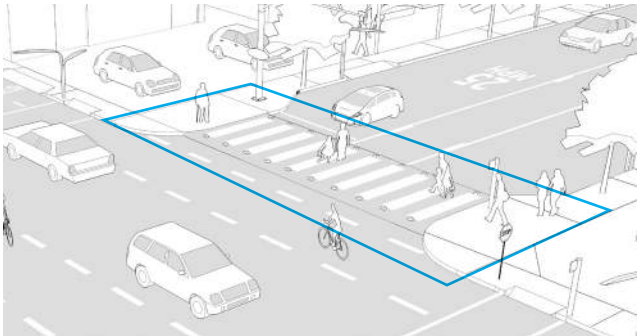
- [x] Long Blocks
- [x] Freeways
- [ ] Maintenance
- [x] Safety and Security
- [x] Legibility
- [x] ROW Allocation and Design

Component Appropriate For Use On:

- [x] Arterial 1
- [x] Collector 1
- [x] Arterial 2
- [x] Collector 2
- [ ] Cut-Through

CROSSINGS AND CONNECTIONS

Raised Crossings



Goals

- Calm traffic at intersections along high-speed streets
- Visibly prioritize the pedestrian at key crossing locations

Guidelines and Resources

- Raise crossings to be flush with the sidewalk and use special paving material to differentiate them from the roadway
- Place raised crosswalks in areas with significant amounts of pedestrian traffic
- Entire intersections may also be raised
- Raised crosswalks may not be appropriate on streets with bus routes as they can slow and impede bus flow

Transit Integration

- Where feasible and applicable, paint stripe or edges of crosswalks to identify with Pathway network access route
- Key signage to intersection

Station Access Barriers Addressed

- [x] Long Blocks
- [ ] Freeways
- [ ] Maintenance
- [x] Safety and Security
- [x] Legibility
- [x] ROW Allocation and Design

Component Appropriate For Use On:

- [x] Arterial 1
- [x] Collector 1
- [ ] Arterial 2
- [ ] Collector 2
- [ ] Cut-Through

[Case Study] Raised Crosswalks in Boulder and Cambridge

Raised Crossings Aid in Pedestrian Safety

Boulder, Colorado[1]

In response to "poor driver compliance with crosswalk yield laws", designers in Boulder embarked on a mission to increase comprehensive crosswalk compliance. Raised crosswalks were implemented throughout the city to test driver compliance. The raised pedestrian crossings were installed at right-turn islands, and were found to "increase compliance from 69% to 91%." Accompanied by a number of other additional crossing enhancements, Boulder saw an overall increase of motorist crosswalk compliance by 43%.

Cambridge, Massachusetts[2]

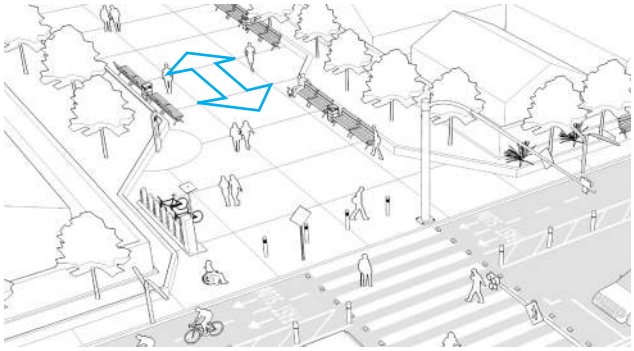
Similar results were seen in Cambridge, where "raised crossings tripled the number of drivers yielding to pedestrians." Community surveys revealed that 69% of nearby residents felt that raised crossing enhancements were a better solution than the introduction of a traffic signal.

Cambridge, MA

On one street in Cambridge, MA, motorists yielding to pedestrians crossing at the raised devices went from approximately 10% before installation to 55% after.

CROSSINGS AND CONNECTIONS

Cut-Throughs and Shortcuts



Goals

» Provide more direct routes to and from the station

Guidelines and Resources

» Design shortcuts with special paving, lighting, furnishings, and shade so that they are inviting to pedestrians of varying ages and abilities
» Design shortcuts to accommodate bicyclists and other active transportation users with a sufficiently wide pathway and smooth surface
» Use directional signage to the stations at entrances to shortcuts
» If located in the middle of the block, design shortcuts that lead to a mid-block crossing for easier access across streets
» Make sure that pathways are well-maintained, well-lit, and located in people-friendly places, i.e. places that are well-traveled, highly-visible, and pedestrian-oriented
» Maintain existing cut-throughs and add safety enhancements

Transit Integration

» Use signage at entrances and decision points
» Regularly place medallion signage for the length of the pathway, every 60-100 ft approx

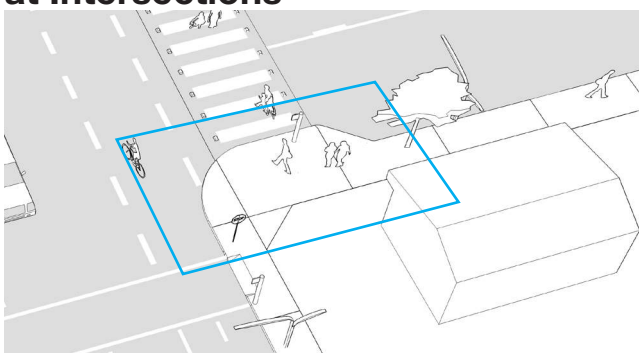
Station Access Barriers Addressed

- [x] Long Blocks
- [ ] Freeways
- [x] Maintenance
- [x] Safety and Security
- [ ] Legibility
- [ ] ROW Allocation and Design

Component Appropriate For Use On:

- [ ] Arterial 1
- [ ] Collector 1
- [ ] Arterial 2
- [ ] Collector 2
- [x] Cut-Through

Curb Extensions at Intersections



Goals

» Improve safety by shortening crossing distances, increasing pedestrian visibility, slowing turning vehicles, and visibly narrowing roadway for high-speed traffic
» Provide more room for walking/active transportation, along with seating areas, expanded access for transit waiting areas, and opportunities for bioswales, stormwater management, and other planted areas

Guidelines and Resources

» Place curb extensions on streets with high pedestrian volumes or pedestrian emphasis, or wide streets that are difficult to cross
» Incorporate bioswales, bollards, planters, or other objects along street edge to protect pedestrians
» Resource: Designing Sidewalks and Trails for Access, Best Practices Design Guide
» Design curb extensions at bus stops so that bus waiting areas are made larger and the bus does not have to pull out of the travel lane to pick up passengers

Transit Integration

» Couple curb extensions with established signage

Station Access Barriers Addressed

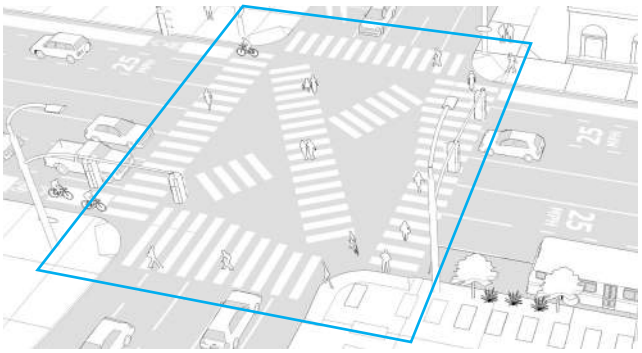
- [x] Long Blocks
- [ ] Freeways
- [ ] Maintenance
- [x] Safety and Security
- [ ] Legibility
- [x] ROW Allocation and Design

Component Appropriate For Use On:

- [x] Arterial 1
- [x] Collector 1
- [ ] Arterial 2
- [ ] Collector 2
- [ ] Cut-Through

CROSSINGS AND CONNECTIONS

Scramble Crossings



Goals

- Prioritize the pedestrian at the intersection
- Increase safety and visibility for pedestrians
- Shorten crossing times for pedestrians

Guidelines and Resources

- Place scramble crossings in dense areas with a lot of commercial and pedestrian activity
- Paint continental striping or highly-visible pattern/ color fully across all four legs and both diagonal paths of the crosswalks
- Install informational signage that instructs pedestrians of appropriate crossing movements at scramble crossings
- Resource: Oakland Chinatown Pedestrian Scramble: An Evaluation
- Resource: Exclusive Pedestrian Phasing for the Business District Signals in Beverly Hills

Transit Integration

- Where feasible and applicable, paint stripe or edges of crosswalks to identify with Pathway network access routes
- Key signage to intersection

Station Access Barriers Addressed

- ☐ Long Blocks
- ☐ Freeways
- ☐ Maintenance
- ☑ Safety and Security
- ☑ Legibility
- ☑ ROW Allocation and Design

Component Appropriate For Use On:

- ☑ Arterial 1
- ☐ Collector 1
- ☐ Arterial 2
- ☐ Collector 2
- ☐ Cut-Through

[Case Study] Scramble Crossings in Beverly Hills[3]

In Beverly Hills' Business Triangle where daytime pedestrian activity is very high, there had been a high number of pedestrian/vehicle collisions. In the late 1980s the City modified traffic signals at eight locations to include scramble crossings. As Bijan Vaziri of the City of Beverly Hills Engineering Department notes, "after implementation, it seemed that people quickly became accustomed to the new operation. Public opinion has been very favorable..."

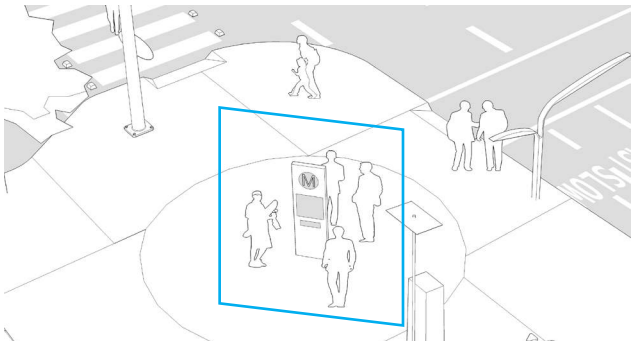
Safety was improved after installation of the scramble crossings as a study of collision data showed. Collision data from 10 years prior and 10 years after was compared and pedestrian/ vehicle collisions decreased significantly, by up to 63%. Furthermore, overall collisions in the Business Triangle were also reduced by 20%.

Scramble Crossings in Shabuya Crossings Tokyo, Japan

Beverly Hills saw an overall decrease in pedestrian/ vehicle collisions by as much as 63% after a series of scramble crossings were installed.

SIGNAGE AND WAYFINDING

Metro Signage and Maps



Goals

- Increase legibility of the urban landscape
- Increase visibility and awareness of proximity to transit station
- Display paths of travel to station and to local destinations

Guidelines and Resources

- Place signs on/near corners and decision points, regularly-spaced along a route approximately 200-300 ft. apart
- Use signs that relate to Metro's established family of signage
- Ensure that signs are pedestrian-scaled and oriented
- Use arrows and maps on these signs to highlight station location, common destination areas, and routes
- Consider the potential to stamp or stencil the Metro 'M' at corners on the sidewalk
- Resource: Legible London; A Wayfinding Study

Transit Integration

- Coordinate with Metro signage and branding efforts

Station Access Barriers Addressed

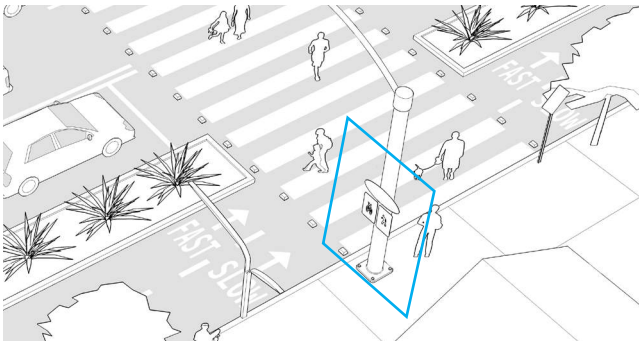
- ☐ Long Blocks
- ☐ Freeways
- ☐ Maintenance
- ☐ Safety and Security
- ☑ Legibility
- ☐ ROW Allocation and Design

Component Appropriate For Use On:

- ☑ Arterial 1
- ☐ Collector 1
- ☐ Arterial 2
- ☐ Collector 2
- ☑ Cut-Through

Medallion Signage

4



Goals

- Increase visibility and awareness of proximity to transit station
- Display paths of travel to station and to local destinations; pulls people along the Pathway
- Increase legibility of the urban landscape
- Help identify the Pathway with repetitive elements that are recognizable

Guidelines and Resources

- Place medallion signs on existing and new infrastructure such as light poles at heights that are visible to both pedestrians and active transportation users
- Place signs with a consistent rhythm down the Pathway, approximately every two or three blocks

Transit Integration

- Coordinate with Metro signage and branding efforts.
- Carry the color of the medallion sign to the ground plane where feasible

Station Access Barriers Addressed

- ☐ Long Blocks
- ☐ Freeways
- ☐ Maintenance
- ☐ Safety and Security
- ☑ Legibility
- ☐ ROW Allocation and Design

Component Appropriate For Use On:

- ☑ Arterial 1
- ☑ Collector 1
- ☑ Arterial 2
- ☐ Collector 2
- ☑ Cut-Through

SIGNAGE AND WAYFINDING

[Case Study] Legible London

Legible London is a city-wide, comprehensive, and intuitive wayfinding strategy in the city of London. Along with clear pylon signage, the program is coupled with simple navigational maps that depict average distances to and from key destinations and streets. The success of Legible London has made it an international model for wayfinding design. After an initial roll-out of the system in strategic locations in the heart of the city, a complete survey of the program has shown that it has had positive and impactful results. Select statistical findings confirm that:

- 83% of users acknowledge that the wayfinding system has helped them navigate the city
- The reported number of pedestrians getting lost on a journey fell by 65%
- 87% of users support a full roll-out of Legible London throughout the city

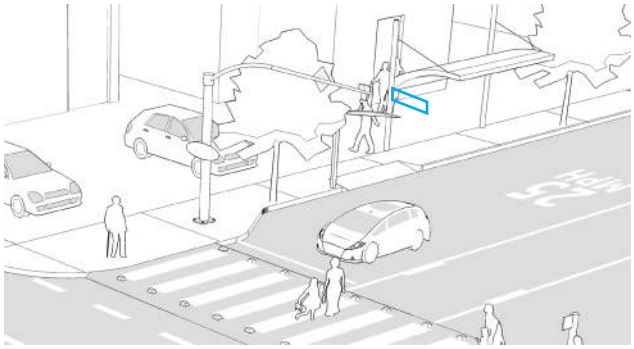
Legible London has also introduced new wayfinding tools that increase user legibility. Large key maps are complemented by in-road placard signage, traditional finger-posts, and taller, narrow posts that are placed in heavily congested areas.

Rather than orienting north to the top, Legible London uses heads-up mapping, a system that orients maps to face the same way the user is facing.

Simple and intuitive, the Legible London mapping and wayfinding program has reduced peak hour congestion on the tube by helping pedetrians navigate the street network.

SIGNAGE AND WAYFINDING

Time-to-Station Signage



Goals

- Increase awareness of active transportation, transit, and transit-proximity
- Encourage people to use active transportation modes
- Provide helpful navigation and information on distance and time to get to the station via alternative transportation

Guidelines and Resources

- Include pedestrian and bicycle times with directional arrows
- Consider the travel times for other active transportation users

Transit Integration

- Place notation on or adjacent to Pathway medallion signage

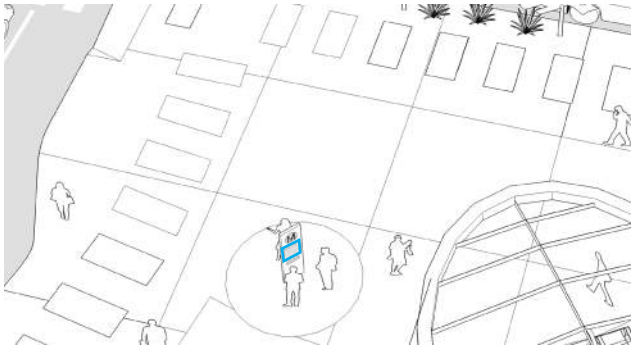
Station Access Barriers Addressed

- ☐ Long Blocks
- ☐ Freeways
- ☐ Maintenance
- ☐ Safety and Security
- ☑ Legibility
- ☐ ROW Allocation and Design

Component Appropriate For Use On:

- ☐ Arterial 1
- ☐ Collector 1
- ☑ Arterial 2
- ☑ Collector 2
- ☐ Cut-Through

Real-Time Signage Adjacent to Station



Goals

- Facilitate a bus to rail transfer and allow active transportation users to pick the best transit option in real-time
- Warn user of expected delays
- Encourage use for first-time transit users

Guidelines and Resources

- Introduce dynamic signage that shows expected arrival times for buses, trains, etc.
- Place signs at or immediately adjacent to bus stops and subway portals (above ground)
- Maintain and update real-time signage as technological capabilities improve

Transit Integration

- Place real-time signage on or adjacent to Pathway medallion signage or other Pathway components, using consistent Pathway logo and design

Station Access Barriers Addressed

- ☐ Long Blocks
- ☐ Freeways
- ☐ Maintenance
- ☐ Safety and Security
- ☑ Legibility
- ☐ ROW Allocation and Design

Component Appropriate For Use On:

- ☑ Arterial 1
- ☑ Collector 1
- ☐ Arterial 2
- ☐ Collector 2
- ☐ Cut-Through

SIGNAGE AND WAYFINDING

Smart Technologies

Goals

- Increase the ease of use of alternative transportation modes
- Encourage first-time users
- Integrate with Metro Nextrip service
- Integrate with on-demand ride-share and carpool services (i.e. Uber, Lyft and Sidecar)

Guidelines and Resources

- Provide real-time information and expected transit arrival times on mobile devices
- Provide detailed service advisories for delayed transit, and safety issues
- Assist new users in finding stations using geospacial software
- Run marketing campaign for initial launch
- Design smart technologies to be used on all platforms
- Resource: Smart Cities Applications and Requirements White Paper

Transit Integration

- Integrate transit access into existing and planned smart technologies

Station Access Barriers Addressed

- ☐ Long Blocks
- ☐ Freeways
- ☐ Maintenance
- ☑ Safety and Security
- ☑ Legibility
- ☐ ROW Allocation and Design

Component Appropriate For Use On:

- ☐ Arterial 1
- ☐ Collector 1
- ☐ Arterial 2
- ☐ Collector 2
- ☐ Cut-Through

N/A

[Case Studies] Non-Signage Wayfinding

In-Pavement Trails and Markings

Wayfinding and signage are not always synonymous. Wayfinding can take the shape of any sort of consistent clue that helps someone understand where they are going. These clues can be more or less literal and are usually accommodated through a change in materials such as pavement or ground plane differentiation, lines and graphics imbedded in the pavement, raised symbols, changes in lighting, or a coordinated family of streetscape amenities.

The Freedom Trail in Boston, MA
Boston's Freedom Trail is a red path through downtown that leads pedestrians to key sites. The design of the path material changes as it passes through different areas, but the family of materials used remain consistent.

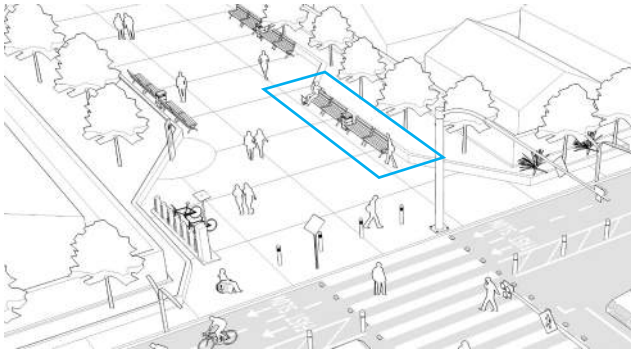
Melbourne
Decades ago, Melbourne installed pavement markers along various pedestrian walks around the City. The trail includes red granite and brass pavement inlays to demarcate it.

Freedom Trail, Boston, MA

Melbourne's Pedestrian Trail System

SAFETY AND COMFORT

Street Furniture



Goals

» Provide amenities to make active transportation users comfortable while travelling
» Increase number of eyes-on-the-street by providing places for people to sit comfortably

Guidelines and Resources

» Along streets with heavy pedestrian traffic, place street furniture and pedestrian amenities, such as benches, bike parking, skateboard parking, charging stations, etc.
» Place street furniture regularly and rhythmically
» Maintain clear paths of travel around furniture with enough clearance to accommodate active transportation users along the sidewalk
» Maintain and clean existing street furniture along Pathway networks
» Install parking areas for bikes, scooters, and other active transportation mobility devices along Pathways, near destinations and front doors
» Where feasible, use environmentally sustainable materials

Transit Integration

» Street furniture may respond to the street furniture family already in place at that particular location

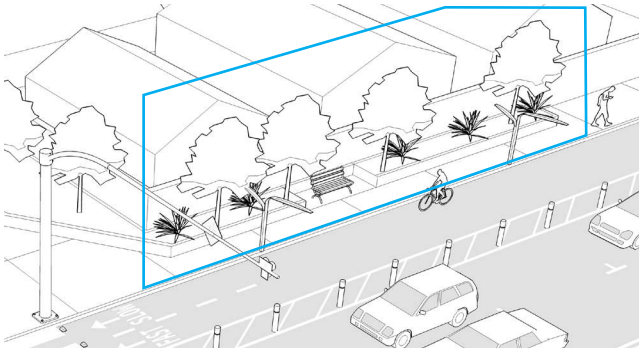
Station Access Barriers Addressed

- ☐ Long Blocks
- ☐ Freeways
- ☑ Maintenance
- ☑ Safety and Security
- ☐ Legibility
- ☑ ROW Allocation and Design

Component Appropriate For Use On:

- ☑ Arterial 1
- ☑ Collector 1
- ☑ Arterial 2
- ☐ Collector 2
- ☑ Cut-Through

Landscaping and Shade



Goals

» Provide refuge from the sun
» Provide pleasant and safe pathways and resting spaces for transit users

Guidelines and Resources

» Plant shrubs, trees, etc. along sidewalks edges of pathways with heavy vehicular traffic, to buffer active transportation users and filter the air
» Maintain and enhance existing landscaping
» Provide shade structures in areas where pedestrians gather and along pathways

Transit Integration

» Landscaping along Pathway networks may respond to the landscape identity already in place at that particular location.

Station Access Barriers Addressed

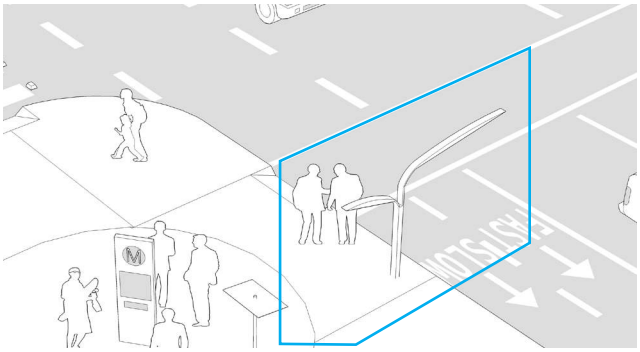
- ☐ Long Blocks
- ☐ Freeways
- ☑ Maintenance
- ☑ Safety and Security
- ☐ Legibility
- ☑ ROW Allocation and Design

Component Appropriate For Use On:

- ☑ Arterial 1
- ☑ Collector 1
- ☑ Arterial 2
- ☑ Collector 2
- ☑ Cut-Through

SAFETY AND COMFORT

Lighting



Goals

» Increase safety and aid in night navigation for active transportation users along Pathway routes

Guidelines and Resources

» Provide pedestrian-oriented light fixtures along sidewalks, spaced as needed, approximately every 30 feet on center
» Install lighting rhythmically and consistently, in coordination with existing street light pattern
» Assure that lights are not located within tree canopies, which may block the light
» Maintain existing light fixtures on street
» Consider installing lights that are efficient and/ or motion activated/self powered in areas where constant light is not needed
» Provide uniform light levels along the sidewalk and assure that other paths of travel for active transportation users are also well-lit
» Install lighting around bus stops and bus to rail transfer routes

Transit Integration

» Closer to the station, wrap pedestrian light poles with stripes and/or Metro color palette so that visually the poles guide the active transportation user to or from stations

Station Access Barriers Addressed

- ☐ Long Blocks
- ☐ Freeways
- ☐ Maintenance
- ☑ Safety and Security
- ☑ Legibility
- ☐ ROW Allocation and Design

Component Appropriate For Use On:

- ☑ Arterial 1
- ☑ Collector 1
- ☑ Arterial 2
- ☑ Collector 2
- ☑ Cut-Through

[Case Study] Active Lights[10]

Motion Activated, Solar Pedestrian Lighting

Quality pedestrian lighting ensures a safe environment for pedestrians and active transportation users alike. With regularly spaced pedestrian lighting comes increased visibility, perception of safety, and eyes-on-the-street.

New pedestrian lighting strategies involve creative ways to light up active transportation networks. For example, a number of cities in Sweden have been using Active Lights. The design incorporates an LED lighting system that is motion activated to provide security and lighting for those who pass by. Using solar energy, this system is self-powered and extremely cost effective.

Active Lights in Sweden

Active Lights Illustration

Studies of the Active Lights show a 65% reduction in nighttime fatal accidents, a 30% reduction in nighttime injury accidents, and a 15% reduction in nighttime property-damage-only accidents.

SAFETY AND COMFORT

Freeway Underpass & Overpass Enhancements

Goals

- Increase pedestrian, bicycle and personal mobility safety and comfort
- Incorporate visually-enagaging elements at freeway crossings that make for a more friendly street and pull active transportation users along the Pathway, by giving them compelling things to look at

Guidelines and Resources

- Provide lighting that illuminates the overpass/ underpass at all hours of the day and night
- Where feasible incorporate public art in the tunnel or on the overpass
- Maintain existing overpasses/underpasses
- Improve the experience and perception of safety along the sidewalk with special paving and bollards along the curb edge. On overpasses, introduce trees in planters where space permits along curb edges or growing vines along edge fences
- Take advantage of underutilized space in the roadway to expand the sidewalk where feasible

Transit Integration

- Incorporate Metro elements such as lighting, signage, and paving treatments along the sidewalk to direct pedestrians and active transportation users across the freeway

Station Access Barriers Addressed

- [ ] Long Blocks
- [x] Freeways
- [x] Maintenance
- [x] Safety and Security
- [ ] Legibility
- [x] ROW Allocation and Design

Component Appropriate For Use On:

- [x] Arterial 1
- [x] Collector 1
- [ ] Arterial 2
- [ ] Collector 2
- [x] Cut-Through

Enhanced Bus Waiting Areas

Goals

- Enhance transit riders' level of comfort
- Improve safety for users at night by improving facility visibility

Guidelines and Resources

- Increase seating options and provide bus shelters at bus stops where space permits
- Provide shading, lighting, and public art where space permits
- Couple street furniture (e.g. lighting, trash cans, and parking for varying mobility devices) with enhanced bus stops
- Add real-time transit signage that displays next bus and train estimated arrival/departure time
- Incorporate informational wayfinding signage, route maps, and a push-to-talk assistance button
- Maintain existing bus waiting area facilities
- Introduce a transit boarding island or bulb-outs to allocate more space for bus boarding, where feasible

Transit Integration

- Use signage at bus waiting areas

Station Access Barriers Addressed

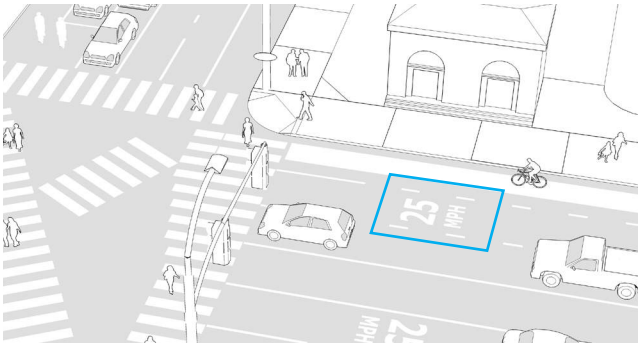
- [ ] Long Blocks
- [ ] Freeways
- [x] Maintenance
- [x] Safety and Security
- [x] Legibility
- [x] ROW Allocation and Design

Component Appropriate For Use On:

- [x] Arterial 1
- [x] Collector 1
- [ ] Arterial 2
- [ ] Collector 2
- [ ] Cut-Through

SAFETY AND COMFORT

Traffic Calming



Goals

- Decrease speeds along heavily trafficked streets to protect multi-modal users on Pathway networks
- Reduce collisions and conflicts between modes
- Increase awareness of transit stations
- Begin to establish safe transit-zones around Metro transit areas
- Allow for NEV integration within Transit Friendly Zone

Guidelines and Resources

- Paint reduced speed MPH signs in and along roadway for vehicular travellers
- Use narrow travel lanes that naturally cause motorists to slow. Use 11feet as a good maximum width for outside lanes and 10 feet as a good average width for inside lanes
- Use physical measures such as curb extensions to narrow the roadway
- Promote police enforcement of new 'transit-zone' friendly speeds
- When calming traffic, consider impact on bus service; while the goal is to increase safety for active transportation users, the usability and convenience of the Metro bus service should not be comprimised

Transit Integration

- N/A

Station Access Barriers Addressed

- [ ] Long Blocks
- [ ] Freeways
- [ ] Maintenance
- [x] Safety and Security
- [ ] Legibility
- [ ] ROW Allocation and Design

Component Appropriate For Use On:

- [x] Arterial 1
- [x] Collector 1
- [ ] Arterial 2
- [ ] Collector 2
- [ ] Cut-Through

Sidewalk Paving & Surface Enhancements

Goals

- Make it easier and smoother to walk and roll along the sidewalk
- Make areas for different modes on the sidewalk, apparent and obvious, for improved safety

Guidelines and Resources

- In areas were multiple modes are converging, consider using paving, pavers, and other ground plane treatment differentiation in linear zones along the sidewalk to help people understand where they should be walking or rolling, so that conflicts are avoided
- Use enhanced paving to highlight pedestrian facilities, edges, and sidewalk amenities, for example along curb edges, around tree wells, in seating areas, or at corners or crossings. These treatments make the sidewalk a nicer place to be and an easier place to navigate.
- Use appropriate, slip resistent paving and surfaces. If people are expected to roll or bike across the surface, make sure that it is smooth, without bumps.

Transit Integration

- Consider coordinating the color and style of the surface treatment with bundled improvements
- Use color, pattern, or texture to provide cues to transit riders that they are approaching a station or stop

Station Access Barriers Addressed

- [ ] Long Blocks
- [ ] Freeways
- [ ] Maintenance
- [x] Safety and Security
- [x] Legibility
- [x] ROW Allocation and Design

Component Appropriate For Use On:

- [x] Arterial 1
- [x] Collector 1
- [ ] Arterial 2
- [ ] Collector 2
- [ ] Cut-Through

ALLOCATION OF STREETSPACE

Reduced Lane Width

Goals

» Narrow vehicular lane widths, were possible, to help promote slower driving speeds, reduce the severity of vehicular crashes, and reduce crossing distances
» Gain under utilized space that can be used for more transit-friendly uses, such as bus access, extended sidewalks, buffer-zones, protected bicycle lanes, and bulb-outs

Guidelines and Resources

» In urban areas where traffic volumes and bus usage permits, do not use lanes that are wider than 11 feet, ideally 10 feet
» Use striping to channelize traffic, and create buffer zones or delineate parking from travel lanes (pictured)

Transit Integration

» Confirm Lane width requirements for efficient bus operations

Station Access Barriers Addressed

- [ ] Long Blocks
- [ ] Freeways
- [ ] Maintenance
- [x] Safety and Security
- [ ] Legibility
- [x] ROW Allocation and Design

Component Appropriate For Use On:

- [x] Arterial 1
- [x] Collector 1
- [x] Arterial 2
- [x] Collector 2
- [ ] Cut-Through

Enhanced Bike Facilities

Goals

» Provide bike facilities that are separated and/or protected from vehicular traffic

Guidelines and Resources

» Convert existing standard bike lanes or sharrows into protected facilities where feasible
» On streets that have heavy traffic, multiple lanes, lots of parking turnover, and existing or potential high bicycle ridership, consider installing separated cycle tracks to protect cyclists and make cycling more comfortable and inviting to all users
» On streets with high speeds, few driveways or cross streets, and high demand for bicycle access, consider installing raised cycle tracks
» On streets where cyclists are already riding the wrong way, where direct access is very difficult for cyclists, where two way connections are needed, and where traffic is low-speed and low volume, consider installing contraflow bike lanes or bike routes that cut-through blocks
» Other protected facilities and bike enhancements recommended for transit zones include: buffered bike lanes, bike boxes, bike signal heads, and bike signal detection

Transit Integration

» For separated facilities use paint on the street surface to conform with bundled improvements
» Consider signage, both directional and wayfinding

Station Access Barriers Addressed

- [ ] Long Blocks
- [ ] Freeways
- [ ] Maintenance
- [x] Safety and Security
- [ ] Legibility
- [x] ROW Allocation and Design

Component Appropriate For Use On:

- [x] Arterial 1
- [x] Collector 1
- [x] Arterial 2
- [x] Collector 2
- [x] Cut-Through

ALLOCATION OF STREETSPACE

Bus Enhancements

Goals

» Provide dedicated space and more direct access for buses, which facilitates travel by bus and makes transfers easier for bus riders.

Guidelines and Resources

» Use bus-only lanes and design lights for buses, along long transit corridors
» Consider the application of contra-flow bus lanes where streets are one-way, but short, efficient connections could be made for buses
» Consider the use of dedicated bus lanes and bus stops bulbs that make it easier for bus operators to pick up passengers and re-enter traffic
» Consider the application of far-side bus stops - stops that are past the intersection rather than before it, which are safer in terms of pedestrian crossing and easier in terms of bus traffic flow
» See Enhanced Bus Waiting Area Tool

Transit Integration

» Integrate these improvements into the Metro brand, in terms of signage, wayfinding, and any special treatments to the ground plane

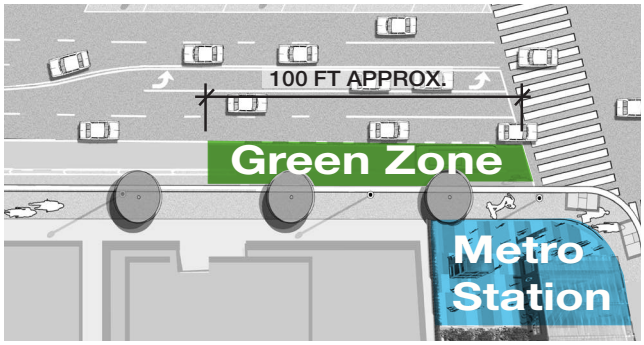
Station Access Barriers Addressed

- [ ] Long Blocks
- [ ] Freeways
- [ ] Maintenance
- [x] Safety and Security
- [ ] Legibility
- [x] ROW Allocation and Design

Component Appropriate For Use On:

- [x] Arterial 1
- [x] Collector 1
- [ ] Arterial 2
- [ ] Collector 2
- [ ] Cut-Through

The Green Zone



Goals

» Prioritize green vehicles and active transportation uses at or very near the station area

Guidelines and Resources

» Dedicate a Green Zone within the parking lane, parking area, or outside travel lane adjacent to station areas, which is marked with paint and identity/safety signage and which allows area for green transportation such as pick up/drop off for shared rides, parking for electric vehicles, bus stops, car share parking, etc.
» Configure the Green Zone as space allows in each particular condition; sometimes the Zone may best serve as a bus waiting area or a kiss-and-ride location, while in others, car share or electric vehicle parking might be most appropriate

Transit Integration

» Use eye-catching paint and graphics on the street pavement and on signage to help brand the Green Zone as part of the Metro system

Station Access Barriers Addressed

- [ ] Long Blocks
- [ ] Freeways
- [ ] Maintenance
- [x] Safety and Security
- [x] Legibility
- [x] ROW Allocation and Design

Component Appropriate For Use On:

- [x] Arterial 1
- [x] Collector 1
- [ ] Arterial 2
- [ ] Collector 2
- [ ] Cut-Through

ALLOCATION OF STREETSPACE

[Case Study] Rolling Lanes

The idea of Rolling Lanes is to reorganize the streetspace to accommodate a wide spectrum of active transportation users, giving both more and better space and safer facilities. Internationally, cities are introducing their own versions of Rolling Lanes. Read below for precedents.

Copenhagen[11]

In 2010, the City of Copenhagen introduced the Conversation Lane, a throughway that aims to solve conflicts that arise as a result of varying mobility speeds. Citing the increase in electric bicycle sales and the ever-expanding range of mobility rolling options, designers have called the Conversation Lane a social cycle path, which will allocate more space for alternative transit modes.

Given the natural, self-organizing tendency of bicycle movements (faster traffic moves to the left while slower traffic shifts to the right), designers chose to allow "unusually wide social cycle paths" to accommodate a wider range of users. Additionally, the proposed program utilizes advancements in information technology by incorporating speed detecting signs that direct users to shift lanes depending on their independent speeds.

Conversation lanes are designed to give cyclists room to travel comfortably beside each other and will be designed alongside a fast lane; a separated bicycle facility for cyclists wishing to pass or move faster than 'normal' speed cyclists.

Conversation Lanes, Copenhagen

The Netherlands[12]

Similarly, in the Netherlands, the Dutch Ministry for Infrastructure and the Environment allocated €21million to build wide, high-capacity cycle routes to reduce overall cycling trip time. Named Fiets Filevrig (Queue-Free Cycling), the program is aimed to attract cyclists that experience congestion on cycle routes.

Queue-Free Cycling in the Netherlands

Copenhagen has committed to the goal of providing conversation lanes alongside 80% of their already established cycle routes, ultimately encouraging riders of all speeds and levels to embrace the city's cycling culture.

ALLOCATION OF STREETSPACE

United States [13,14]

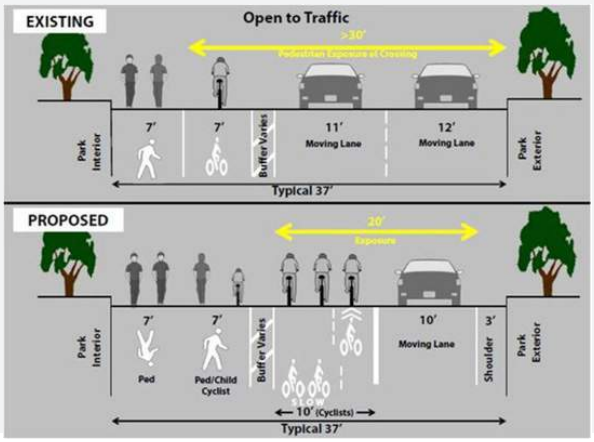
In the United States, a number of cities are implementing their own versions of a Rolling Lane.

Portland and Chicago have both introduced passing lanes for cyclists at key conflict points. In Portland the new markings expand the bike lane to 10 feet, and include side-by-side bike lane symbols that separate slow and fast lanes. New striping was completed to allow easier and safer passing on an uphill segment of one of Portland's heavily congested bikeways.

The Park Slope neighborhood of Brooklyn is also gearing up for some proposed changes in response to an increase in collisions between pedestrians and bicyclists. The plan introduces a new Ped/Child Cyclist lane, a widened slow bike lane, and a sharrow lane for faster cyclists. Vehicular traffic is shifted into one lane.

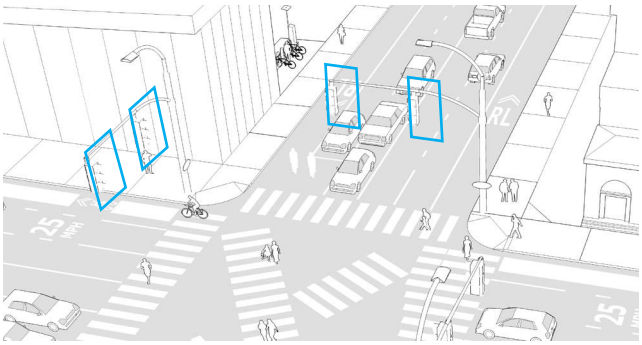
In March 2010, San Diego State University opened a dual skateboard/bike lane.

Portland, Oregon's Passing Lanes



Proposed Configuration of Prospect Park Loop, Park Slope, Brooklyn

Signal Modifications



Goals

- Slow vehicular speeds within transit zones
- Give crossing priorities to pedestrians and active transportation users
- Time signals to ease traffic and minimize conflicts between pedestrians and vehicles
- Begin to establish safe transit-zones around Metro transit areas

Guidelines and Resources

- Set vehicular signal timing for moderate progressive speeds, rather than aggressive speeds along Pathway routes
- Time signals to provide pedestrians and other active transportation users lead time for crossing before vehicular travel
- Use bus and bike detection at traffic signals for prioritization of active transportation devices
- Add pedestrian-actuated signals for crossings

Transit Integration

- N/A

Station Access Barriers Addressed

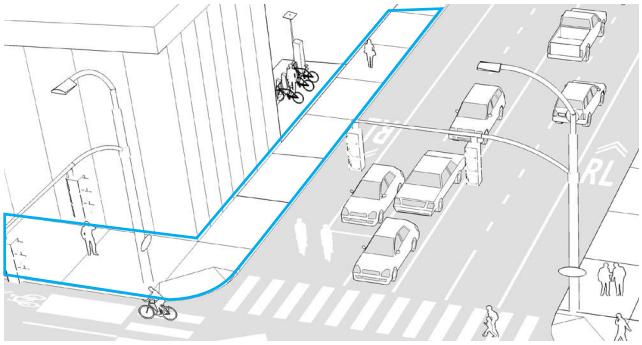
- ☐ Long Blocks
- ☐ Freeways
- ☐ Maintenance
- ☑ Safety and Security
- ☐ Legibility
- ☐ ROW Allocation and Design

Component Appropriate For Use On:

- ☑ Arterial 1
- ☑ Collector 1
- ☐ Arterial 2
- ☐ Collector 2
- ☐ Cut-Through

ALLOCATION OF STREETSPACE

Sidewalk Widening



Goals

- Shift the balance of the roadway so that it caters more to active transportation users of all types within station areas and transit zones
- Increase safety and comfort on the sidewalk for active transportation users
- Provide enough room on the sidewalk for active transportation users of varying speeds, ages, abilities, using varying mobility device types

Guidelines and Resources

- Couple sidewalk widening with the provision of amenities such as street furniture, lighting, and landscaping
- Maintain existing sidewalks, fix buckling sidewalks, pick up trash, etc.
- Assure that utility boxes and other auxiliary infrastructure is placed secondarily to through movement and does not impede access of pedestrians and other active transportation users
- Where space permits, introduce parklets in underutilized right of way
- If more permanent solutions are untenable, consider using temporary installations to test sidewalk improvements. Examples of these may include temporary extensions of the pedestrian realm into the right-of-way, through parklets and temporary plazas.

Transit Integration

- Consider identifiable paving treatments

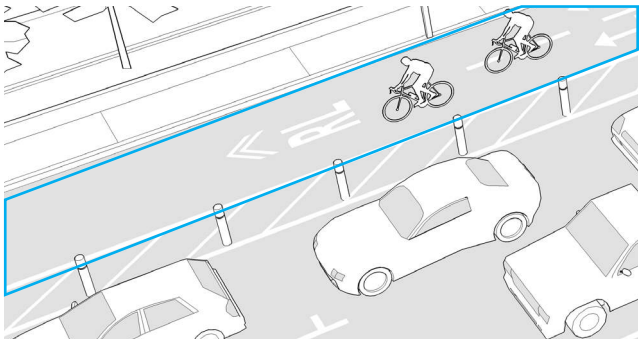
Station Access Barriers Addressed

- [x] Long Blocks
- [x] Freeways
- [x] Maintenance
- [x] Safety and Security
- [ ] Legibility
- [x] ROW Allocation and Design

Component Appropriate For Use On:

- [x] Arterial 1
- [x] Collector 1
- [ ] Arterial 2
- [ ] Collector 2
- [ ] Cut-Through

Rolling Lane



Goals

- Shift the balance of the roadway so that it caters more to active transportation users of all types within station areas and transit zones
- Increase safety and comfort in the roadway for active transportation users
- Provide a passing lane for faster riders

Guidelines and Resources

- Convert existing bike lanes into Rolling Lanes and add new Rolling Lanes within a 1/4 or 1/2 mile radius of the station, where feasible. Rolling lanes are dedicated lanes, wider than standard bike lanes, which welcome users of varying speeds beyond bicyclists such as scooter riders, electric bicycles, skateboarders, etc.
- Paint fast/slow indicators in the Lane, giving ample room for passing at conflict points such as crosswalks and hills.
- Ideally provide buffer (painted or raised, e.g. planter, parking, or bollards) to separate active transportation users comfortably from vehicular traffic.
- Couple with informational signage, traffic markings, and dedicated signalization through intersections
- Allow cyclists to also travel outside of the Rolling Lane, contrary to current regulation regarding bike lanes.
- Coordinate Rolling Lane design/placement with bus operations needs and stop locations; the bus/bike interface should be coordinated for maximum impact
- Resource: Urban Bikeway Design Guide

Transit Integration

- At conflict zones, apply paint on street

Station Access Barriers Addressed

- [ ] Long Blocks
- [ ] Freeways
- [ ] Maintenance
- [x] Safety and Security
- [x] Legibility
- [x] ROW Allocation and Design

Component Appropriate For Use On:

- [x] Arterial 1
- [x] Collector 1
- [x] Arterial 2
- [x] Collector 2
- [ ] Cut-Through

Project Number	
LAExpo	Bike/Ped

Activity Centers	
# within 1/2 mi	# within 1/4 mi
10	10

Existing Bike Trips	Existing Ped Trips	New Bike Trips	New Pedestrian Trips
177,608	1,916,000	27,852	200,200
Existing Bike Miles Traveled	**Existing Ped Miles Traveled**	**New Bike Miles Traveled**	**New Pedestrian Miles Traveled**
266,412	574,800	41,778	60,100

Bicycle

Existing Conditions

Adult Population of Census Tracts within 1/4 Mi	Average Daily Trips on Parallel Streets	2012 Bicycle Commute Modeshare in selected tracts	Estimated All Trips Bicycle Modeshare*	Bike Count Implied Mode Share (Observed vs Agerage)	Estimated Project Area Modeshare***	Estimated Adult Weekday Bicycle Trips**	Estimated Adult Weekend day trips**	Population below age 16	Percent of Students who Commute by Bike	Estimated All Trips Child Bicycle Modeshare*	Estimated Child Daily Commute Bicycle Trips	Estimated Child Daily Weekend Bicycle Trips	Total Annual Bike Trips
14,803	27,165	2.10%	3.03%	0.94%	2.33%	490	387	2,331	1.2%	1.75%	28	22	177,608

*Commute mode share ignores students, linked trips, and all other trips made on bicycle. This estimate is based on the percent difference (44%) between the ACS 2012 commute mode share for California (1.04%) and the Caltrans Household Travel Survey for all trips (1.5%).

**24% of all trips occur over the weekends - or 12% of all trips on a given Saturday or Sunday compared to 15% of all trips on a given weekday. There are 79% as many trips on weekend days compared to weekday trips.

***See Methodology Document

Projected Increases

Estimated Annual Bike Trips	Existing Ped Miles Traveled*	Credit for Activity Centers	Percent Increase	Forecasted Annual Bicycle Trips	Net Increase in annual bike trips	Annual Bike Trips in 2035 - Metro Model	Average New Bike Trips	New Bicycle Miles Traveled (Annual)*
177,608	266,412	0.45%	30.45%	231,690	54,082	1,622	27,852	41,778

*2012 Caltrans Household Travel Survey found that average trip length for bicycle trips is 1.5 miles. This is a conservative estimate based on findings of other reports.
http://dot.ca.gov/hq/tsip/otfa/tab/documents/chts_finalreport/FinalReport.pdf

Pedestrian

Existing Conditions

Adult Population of Census Tracts within 1/4 Mi	Average Daily Trips on Parallel Streets	2012 Pedestrian Commute Modeshare in selected tracts	Estimated All Trips Pedestrian Modeshare*	Estimated Project Area Modeshare***	Estimated Adult Weekday Walking Trips**	Estimated Adult Weekend Walk Trips**	Population below age 16	Percent of Students who Walk to School	Estimated All Trips Child Pedestrian Modeshare*	Estimated Child Daily Walk Trips	Estimated Child Daily Walk Trips	Total Annual Walk Trips
14,803	27,165	5.18%	26.76%	18.16%	3,810	3196	2,331	12.6%	73.78%	1,720	1,358	1,915,970

*Commute mode share ignores students, linked trips, and all other walking trips. Our estimate is based on the percent difference (486%) between the ACS 2012 commute mode share for California (2.76%) and the Caltrans Household Travel Survey for all trips (16.2%).

**24% of all trips occur over the weekends - or 12% of all trips on a given Saturday or Sunday compared to 15% of all trips on a given weekday. There are 79% as many trips on weekend days compared to weekday trips.

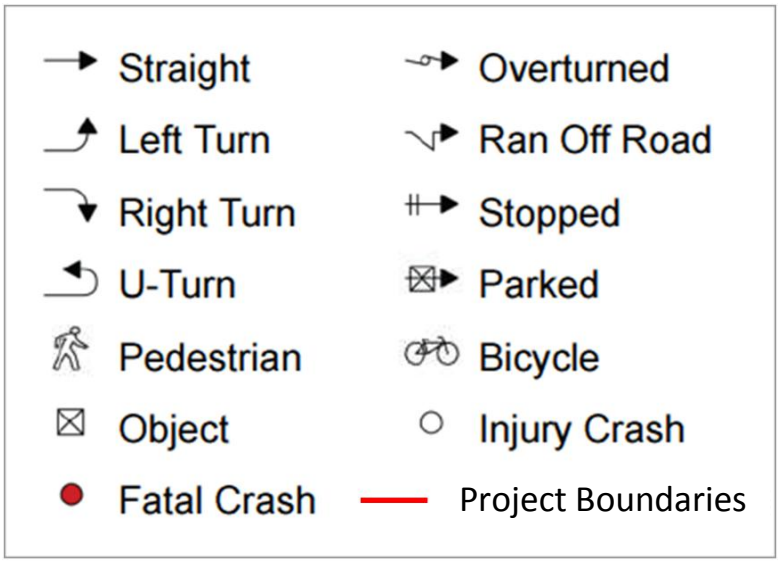
***See Methodology Document

Projected Increases

Estimated Annual Ped Trips	Existing Ped Miles Traveled*	Credit for Activity Centers	Percent Increase	Forecasted Annual Walk Trips	Net Increase in annual Walk Trips	New Walk Miles*
1,915,970	574,791	0.45%	10.45%	2,116,189	200,219	60,066

*2012 Caltrans Household Travel Survey found that average trip length for pedestrian trips is 0.3 miles
http://dot.ca.gov/hq/tsip/otfa/tab/documents/chts_finalreport/FinalReport.pdf

Bicycle and Pedestrian Collisions On Alignment



State of California Active Transportation Program
Attachment G
Collision Data (SWITRS 2003 - 2011)
Project: **Expo/Bundy Station Multimodal Connectivity Improvements**
Sponsor: **City of Los Angeles**

Case ID	Year	Date	Day	Time	Primary RD	Secondary RD	Distance	Direction	Crash Type	Viol. Cat.	Involved W/	Severity	Parties	Killed	Injured	Ped Action
643728	2003	2/1/2003	Sat	925	PICO BL	WELLESLEY AV	45	W	Veh/Ped	Ped ROW	Ped	Complained of Pain	2	0	1	Not in Road
643744	2003	1/31/2003	Fri	1450	PICO BL	BUNDY DR	4	W	Veh/Ped	Ped ROW	Ped	Complained of Pain	2	0	1	Not Stated
752618	2003	4/3/2003	Thu	2035	BARRINGTON AV	OLYMPIC BL	0		Broadside	Wrong side of Road	Bike	Complained of Pain	2	0	1	No Ped
772264	2003	4/18/2003	Fri	1600	BUNDY DR	TENNESSEE	50	S	Other	Other than Driver	Bike	Severe	2	0	1	No Ped
860136	2003	6/9/2003	Mon	1605	PICO BL	CENTINELA AV	0		Broadside	Auto ROW	Bike	Visible Injury	2	0	1	No Ped
874025	2003	6/23/2003	Mon	1845	EXPOSITION BL	CENTINELA BL	10	E	Broadside	Unknown	Bike	Visible Injury	2	0	1	No Ped
1059460	2003	10/8/2003	Wed	1110	BUNDY AV	PICO BL	0		Veh/Ped	Improp Turning	Bike	Complained of Pain	2	0	1	No Ped
1065780	2003	10/13/2003	Mon	1130	PICO BL	GRANVILLE AV	75	E	Broadside	Auto ROW	Bike	Visible Injury	2	0	1	No Ped
1117139	2003	10/30/2003	Thu	820	PICO BL	BARRINGTON AV	0		Veh/Ped	Improp Passing	Ped	Severe	2	0	1	Xing in X-walk
1421201	2004	5/10/2004	Mon	1840	BUNDY DR	PICO BL	0		Veh/Ped	Ped ROW	Ped	Visible Injury	2	0	1	Xing in X-walk
1766664	2004	11/11/2004	Thu	2235	BUNDY DR	OLYMPIC BL	75	S	Veh/Ped	Ped Violation	Ped	Complained of Pain	2	0	1	Xing not in X-walk
1883061	2005	2/10/2005	Thu	1245	OLYMPIC BL	BUNDY DR	300	E	Veh/Ped	Ped Violation	Ped	Severe	2	0	1	Xing not in X-walk
2123853	2005	6/30/2005	Thu	2115	BUNDY DR	PICO BL	0		Veh/Ped	Ped ROW	Ped	Complained of Pain	2	0	1	Xing in X-walk
2123901	2005	6/27/2005	Mon	1600	PICO BL	WESTGATE AV	220	E	Other	Other than Driver	Ped	Complained of Pain	3	0	1	Not in Road
2146024	2005	7/18/2005	Mon	1235	OLYMPIC BL	BUNDY DR	23	E	Sideswipe	Wrong side of Road	Bike	Complained of Pain	2	0	1	No Ped
2146040	2005	7/21/2005	Thu	1425	BUNDY DR	OLYMPIC BL	0		Veh/Ped	Ped ROW	Ped	Fatal	2	1	0	Xing in X-walk
2235589	2005	9/15/2005	Thu	915	PICO	BUNDY DR	0		Veh/Ped	Ped ROW	Ped	Complained of Pain	2	0	1	Xing in X-walk
2456329	2006	1/21/2006	Sat	1650	PICO BL	GRANVILLE AV	0		Veh/Ped	Ped ROW	Ped	Fatal	2	1	0	Xing in X-walk
2507330	2006	2/24/2006	Fri	1215	OLYMPIC BL	BUNDY AV	0		Veh/Ped	Ped ROW	Ped	Visible Injury	2	0	1	Xing in X-walk
2695764	2006	6/26/2006	Mon	1950	PICO BL	BUNDY DR	6	E	Broadside	Wrong side of Road	Bike	Complained of Pain	2	0	1	No Ped
2772231	2006	8/2/2006	Wed	1645	PICO BL	BARRINGTON AV	5	E	Veh/Ped	Ped ROW	Ped	Visible Injury	2	0	1	Xing in X-walk
2793371	2006	9/1/2006	Fri	1945	BUNDY DR	OLYMPIC BL	200	S	Broadside	Wrong side of Road	Bike	Visible Injury	2	0	1	No Ped
2831742	2006	10/9/2006	Mon	930	BARRINGTON AV	EXPOSITION BL	150	N	Veh/Ped	Ped Violation	Ped	Visible Injury	2	0	1	Xing not in X-walk
2831750	2006	10/5/2006	Thu	931	OLYMPIC BL	BARRINGTON AV	0		Other	Wrong side of Road	Bike	Visible Injury	2	0	1	No Ped
2833418	2006	9/26/2006	Tue	1645	EXPOSITION BL	BARRINGTON AV	0		Veh/Ped	Ped ROW	Ped	Severe	2	0	1	Xing in X-walk
2882522	2006	10/25/2006	Wed	1215	BUNDY DR	PICO BL	30	N	Other	Unknown	Bike	Complained of Pain	2	0	1	No Ped
3023285	2007	1/24/2007	Wed	2220	PICO BL	WELLESLEY AV	40	W	Broadside	Other Improp Driving	Bike	Visible Injury	2	0	1	No Ped
3105883	2007	3/15/2007	Thu	1600	TENNESSEE PL	TENNESSEE AV	0		Veh/Ped	Ped Violation	Ped	Severe	2	0	1	In Road
3108847	2007	4/15/2007	Sun	1315	EXPOSITION BL	BARRINGTON AV	35	E	Broadside	Auto ROW	Bike	Visible Injury	2	0	1	No Ped
3277880	2007	7/12/2007	Thu	1535	WESTGATE AV	TENNESSEE PL	0		Other	Auto ROW	Bike	Visible Injury	2	0	1	No Ped
3404637	2007	10/2/2007	Tue	1300	BUNDY DR	TENNESSEE AV	0		Veh/Ped	Ped Violation	Ped	Complained of Pain	2	0	1	In Road
3641220	2008	2/17/2008	Sun	1340	PICO BL	WELLESLEY AV	51	W	Broadside	Auto ROW	Bike	Visible Injury	2	0	1	No Ped
3725339	2008	5/8/2008	Thu	835	EXPOSITION BL	CENTINELA AV	0		Veh/Ped	Ped ROW	Ped	Complained of Pain	2	0	1	Xing in X-walk
3788598	2008	6/3/2008	Tue	1810	PICO BL	BUNDY DR	0		Other	Other than Driver	Bike	Visible Injury	2	0	1	No Ped
3807766	2008	6/25/2008	Wed	1740	PICO BL	GRANVILLE AV	0		Veh/Ped	Ped ROW	Ped	Complained of Pain	2	0	1	Xing in X-walk
3948822	2008	10/17/2008	Fri	935	PICO BL	BARRINGTON AV	5	E	Other	Wrong side of Road	Bike	Visible Injury	2	0	1	No Ped
3958693	2008	10/23/2008	Thu	1610	OLYMPIC BL	BARRINGTON AV	0		Veh/Ped	Unknown	Ped	Visible Injury	2	0	1	Xing in X-walk
3978731	2008	11/22/2008	Sat	1000	OLYMPIC BL	BARRINGTON AV	0		Other	Other Improp Driving	Bike	Severe	2	0	1	No Ped
4126403	2009	2/17/2009	Tue	745	BUNDY DR	PICO BL	0		Not Stated	Ped Violation	Ped	Complained of Pain	2	0	1	Xing in X-walk
4143025	2009	3/3/2009	Tue	1540	PICO BL	WELLESLEY AV	45	E	Broadside	Improp Passing	Bike	Visible Injury	2	0	1	No Ped
4463531	2009	10/16/2009	Fri	1920	OLYMPIC BL	BUNDY AV	2	W	Broadside	Ped ROW	Ped	Visible Injury	2	0	1	Xing in X-walk
4521821	2009	12/15/2009	Tue	1715	TENNESSEE AV	BUNDY DR	3	E	Sideswipe	Auto ROW	Bike	Complained of Pain	2	0	1	No Ped
4521833	2009	12/12/2009	Sat	1845	BUNDY DR	PICO BL	3	N	Veh/Ped	Ped ROW	Ped	Visible Injury	3	0	2	Xing in X-walk
4584373	2009	12/22/2009	Tue	850	EXPOSITION BL	CENTINELA AV	10	E	Veh/Ped	Ped ROW	Ped	Complained of Pain	2	0	1	Xing in X-walk
4598694	2010	1/22/2010	Fri	2000	TENNESSEE PL	WESTGATE AV	10	W	Veh/Ped	Ped ROW	Ped	Severe	2	0	1	Xing in X-walk
4738075	2010	5/17/2010	Mon	1110	OLYMPIC BL	BUNDY DR	590	E	Other	Unsafe Speed	Bike	Visible Injury	2	0	1	No Ped
4751018	2010	5/28/2010	Fri	1835	BARRINGTON AV	PICO BL	0		Veh/Ped	Ped ROW	Ped	Complained of Pain	2	0	1	Xing in X-walk
4752900	2011	5/2/2011	Mon	915	PICO BL	CENTINELA AV	0		Veh/Ped	Ped ROW	Ped	Visible Injury	2	0	1	Xing in X-walk
4811161	2010	3/19/2010	Fri	1045	PICO BL	GRANVILLE AV	13	E	Veh/Ped	Ped ROW	Ped	Severe	2	0	1	Xing in X-walk

State of California Active Transportation Program
Attachment G
Collision Data (SWITRS 2003 - 2011)
Project: **Expo/Bundy Station Multimodal Connectivity Improvements**
Sponsor: **City of Los Angeles**

Case ID	Year	Date	Day	Time	Primary RD	Secondary RD	Distance	Direction	Crash Type	Viol. Cat.	Involved W/	Severity	Parties	Killed	Injured	Ped Action
4854237	2010	8/3/2010	Tue	1730	OLYMPIC BL	BARRINGTON AV	2	E	Broadside	Wrong side of Road	Bike	Visible Injury	2	0	1	No Ped
4868246	2010	8/13/2010	Fri	1850	PICO BL	BARRINGTON AV	0		Not Stated	Not Stated	Ped	Visible Injury	2	0	1	Not Stated
4868313	2010	8/16/2010	Mon	900	OLYMPIC BL	STONER AV	0		Broadside	Wrong side of Road	Bike	Complained of Pain	2	0	1	No Ped
5016932	2010	12/2/2010	Thu	1730	PICO BL	WELLESLEY AV	75	E	Other	Not Stated	Bike	Visible Injury	2	0	1	No Ped
5017208	2010	11/18/2010	Thu	1225	OLYMPIC BL	BUNDY DR	0		Broadside	Wrong side of Road	Bike	Visible Injury	2	0	1	No Ped
5127324	2011	2/21/2011	Mon	1910	BARRINGTON AV	EXPOSITION	135	N	Other	Wrong side of Road	Bike	Complained of Pain	2	0	1	No Ped
5127605	2011	3/16/2011	Wed	650	PICO BL	BUNDY DR	9	E	Veh/Ped	Ped ROW	Ped	Visible Injury	2	0	1	Xing in X-walk
5177277	2011	4/14/2011	Thu	1510	CENTINELA AV	PICO BL	16	S	Other	Wrong side of Road	Bike	Complained of Pain	2	0	1	No Ped
5218916	2011	5/21/2011	Sat	1530	BARRINGTON AV	PICO BL	5	S	Not Stated	Ped ROW	Ped	Complained of Pain	2	0	1	Xing in X-walk
5239089	2011	5/25/2011	Wed	1005	CENTINELLA AV	DELAWARE AV	60	N	Veh/Ped	Ped Violation	Ped	Visible Injury	2	0	1	Xing not in X-walk
5394010	2011	11/11/2011	Fri	550	STONER AV	OLYMPIC BL	0		Broadside	Auto ROW	Bike	Visible Injury	2	0	1	No Ped
5394021	2011	11/16/2011	Wed	1125	BUNDY DR	TENNESSEE AV	4	W	Broadside	Wrong side of Road	Bike	Visible Injury	2	0	1	No Ped

Mobility Plan 2035

DRAFT FOR PUBLIC REVIEW
FEBRUARY 2014

Los Angeles Department of City Planning

General Plan Mobility Element

Public Participation

Community participation and feedback have been critical to forming the direction of the Mobility Plan 2035. An open public dialogue has been integral to each step of the planning process, from visioning and analyzing to goal and policy formulation.

The Mobility Plan is a citywide document and community outreach for a city as large and spread out as Los Angeles is no easy undertaking. A strategic approach was used to engage citizens at the community level in order to inform them on citywide issues.

Since the inception of the Mobility Plan in the Fall of 2011, project staff have participated in over 80 community meetings throughout the city, held four "think lab" workshops, two scoping meetings, maintained a project website for easy access to materials, implemented an online town hall to hear from those unable to go to traditional meetings, and worked with various agencies, nonprofits, and community groups.

Online All the Time

Project Website: LA2B.org

LA2B.org has been the main source of information for the Mobility Plan with regular updates on the status of the plan. From the website, the public has been able to download important documents released along the process and become more informed about the analysis behind each step by reading blog posts. Website visitors can read about the project, learn how to get involved, and contact planning staff online to give their comments.

Online Town Hall : Ideas.la2b.org

As a new way of expanding the number and diversity of stakeholders, the Mobility Plan introduced an online town hall through ideas.la2b.org. This online format provided an opportunity for community members to share thoughts and opinions about the streets of Los Angeles.

The virtual town hall has allowed for a wider range of citizens to participate outside of traditional workshops and focus groups. The largest participant group was in the 25-45 age range. In addition, participants represented 79 of the 108 (73%) zip codes associated with the City of Los Angeles as well as additional participants from Culver City, Long Beach, Pasadena, Santa Monica, and the South Bay. The online format also allowed staff to identify geographical areas where there was limited participation and focus additional outreach efforts in those communities.

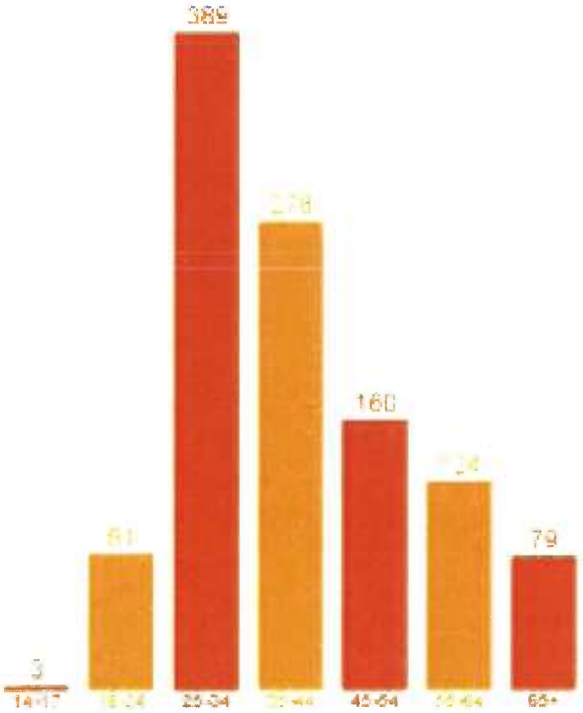
TOTAL TRAFFIC

Visitors

9,754

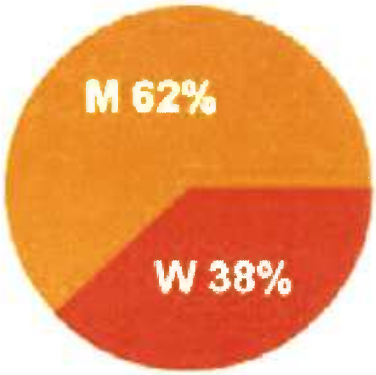
Page Views

57,234



There are 809 Ideas in this Project

There are 1114 Active Participants in this Project



40.8

Activated Communities

To ensure widespread distribution of information, materials were disseminated at the Council District and Neighborhood Council levels. The Mobility Plan Team worked with the Department of Neighborhood Empowerment and Council staff to reach out to the community on a citywide scale. In addition, a Task Force of interested stakeholders was formed to guide the direction of the Plan as well.

Task Force

The Mobility Task Force was put into place to guide this citywide effort and community-wide discussion. The Task Force played a pivotal role in assisting the City to generate significant engagement and input for the plan. Over 50 organizations were invited including: community groups, nonprofits, major transit providers, and civic, business, and environmental transportation leaders throughout the City.

Great Streets, Great Neighborhood Activity Kit

To obtain participation on an overarching citywide scale, an activity kit was sent to over 100 Neighborhood Councils and civic organizations. This pen-and-paper activity, with a one fourth response rate, was meant to supplement the dialogue of our online town hall and included a series of brief exercises to help give input toward the development of the draft goals, objectives, policies, and programs of the Mobility Plan.

Public Workshops

In early 2012, the Departments of City Planning and Transportation held community workshops in different neighborhoods across the City: Van Nuys, the Miracle Mile, Downtown, and Pacoima. These "Think Labs", encouraged participants to explore L.A.'s existing mobility system through a gallery of maps that convey key information about the City's streets and demographics. Community members also shared ideas that complemented those submitted onto LA/2B's online Town Hall.

Scoping Meetings

The environmental analysis of the plan required a scoping period to receive input from the public and other agencies on what should be studied in the Environmental Impact Report. Two scoping meetings held in the spring of 2013 focused the conversation around the potential impacts and benefits of the proposed enhanced networks.

Future Participation

Throughout the 90 day public comment period, a series of seven meetings held citywide will take place to take comments and answer questions on the Plan. Once the comment period is over, the draft plan will go through revision to reflect input and a final plan will be released to be adopted at Planning Commission and City Council. Each phase will include additional opportunities to give input.

Los Angeles Transit Neighborhood Plan

LOS ANGELES TRANSIT NEIGHBORHOOD PLANS

A Portal to L.A.'s Transit Neighborhood Plans
Official website of the Department of City Planning

HOME | ABOUT | CRENSHAW/LAX LINE | EXPOSITION LINE | NEWS | CONTACT US

EXPO COMMUNITY WORKSHOPS – THANK YOU

The LATNP team recently held a successful set of public workshops on May 30th and June 1st to share some initial concepts for land use and zoning changes and streetscapes in the Expo Corridor. There was a great turnout at both the Thursday evening workshop at the Henry Medina Parking Enforcement Facility, adjacent to the future Expo/Sepulveda station, as well as the Saturday morning workshop at the IMAN Center, near the future Palms station. Thank you to everyone who took the time to attend. We received a lot of feedback on the concepts and will be refining the proposal in the coming months. If you missed the workshop or wanted to get another look, the presentation, proposed zoning maps, and other graphics can be downloaded on the MATERIALS page of this site. We are still accepting comments, so please submit your thoughts by sending an email or letter to the following address:

Lameese Elqura
Department of City Planning
City Hall

STAY INFORMED

Stay informed of the project by receiving our email updates.

Your Name*

Company/Organization

Email*

Transit line interest:

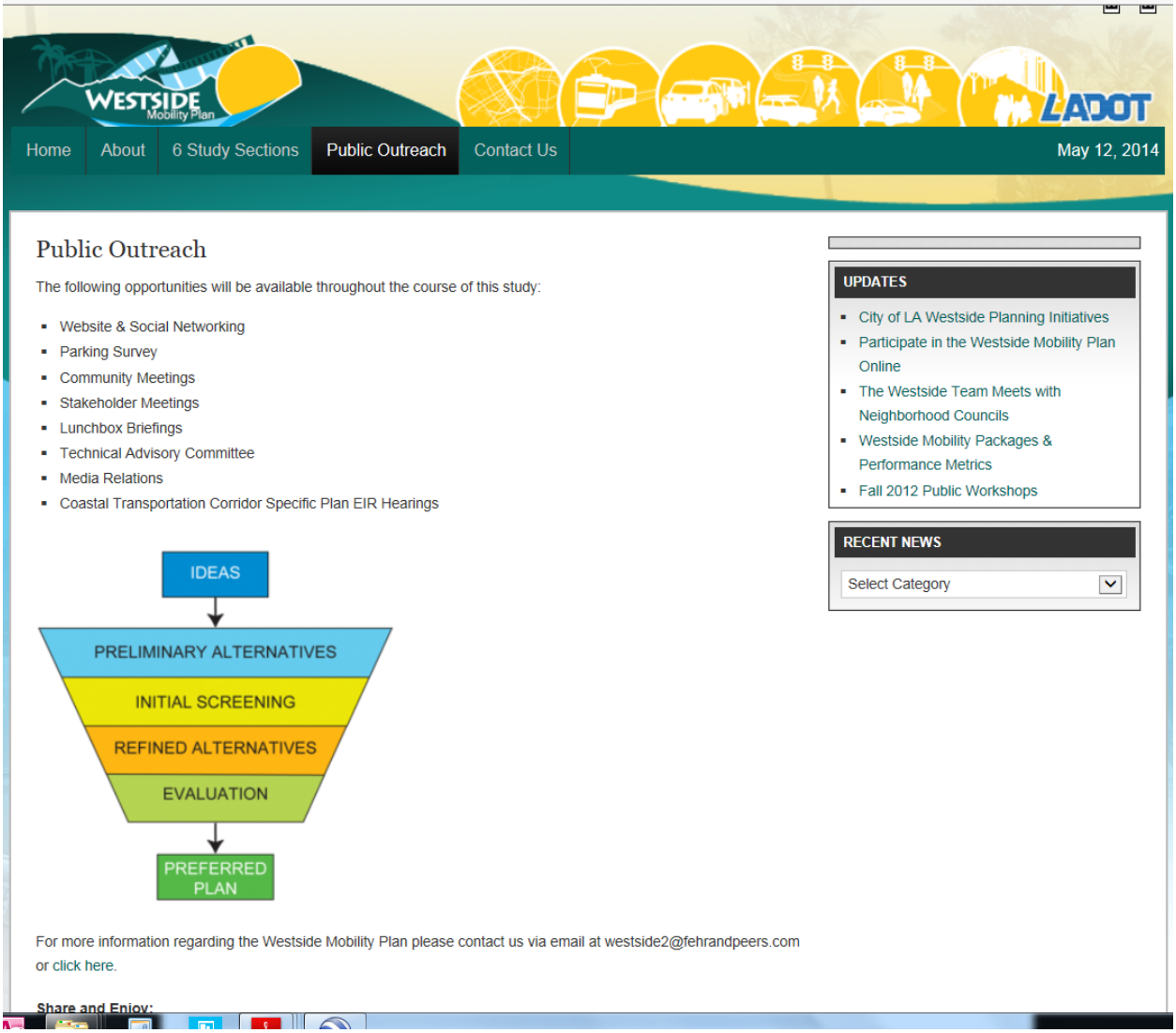
- ☐ Crenshaw/LAX Line
- ☐ Expo Line
- ☐ Both

submit

UPCOMING MEETINGS

Crenshaw Blvd Streetscape Plan Workshop

Westside Mobility Plan



Expo Line Bundy Station First Last Mile Improvements
City of Los Angeles

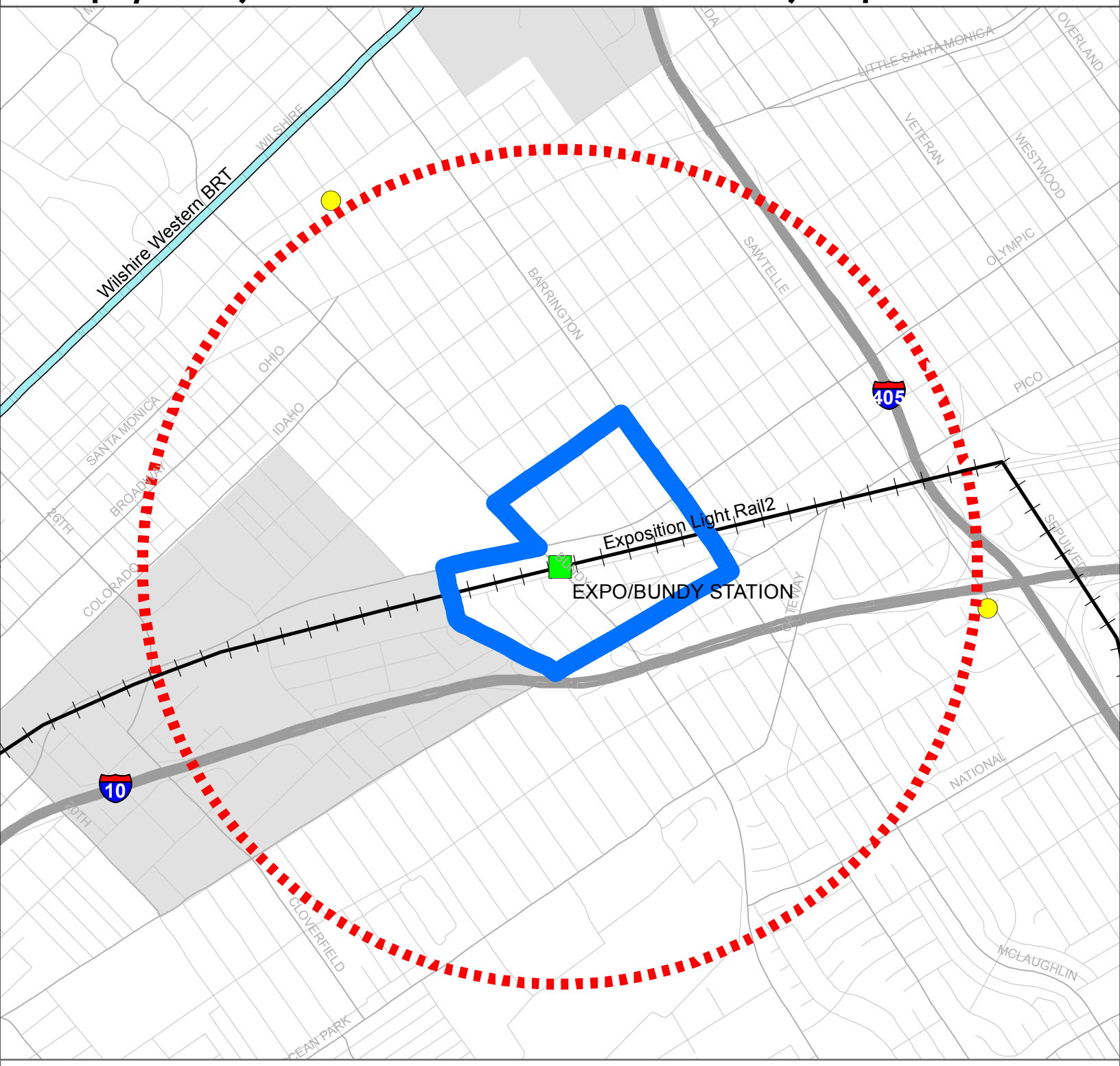
Benefits Summary			
New BMT	New WMT	Year 1 Benefits	Metric Tons C02 Reduced (Year 1)
41,800	60,100	$ 117,178.70	153.46

Cost Effectiveness Summary	Year 1					Lifetime	
	$/BMT	$/WMT	$/ Metric Ton CO2 reduced	Year 1 BC Ratio	$/mi	Lifetime BC Ratio	NPV
Total Project Cost	N/A	$90.57	$ 35,500	0.02	$ 10,886,772	1.15	$792,795
ATP Funds	N/A	$44.40	$ 31,400	0.02	$ 9,638,060	1.30	-

CO2 Calcuations		
VMT Reduced	407,512	
MPG	23.6	http://www.epa.gov/otaq/fetrends.htm
Annual Gal	17,267	
Metric Tons CO2/gal	0.008887	http://www.epa.gov/cleanenergy/energy-resources/refs.html
Metric Tons C02 Reduced	153.46	

Metro

City of Los Angeles
Expo/Bundy Station Multimodal Connectivity Improvements



Legend

Disadvantaged Communities (by ATP guideline)

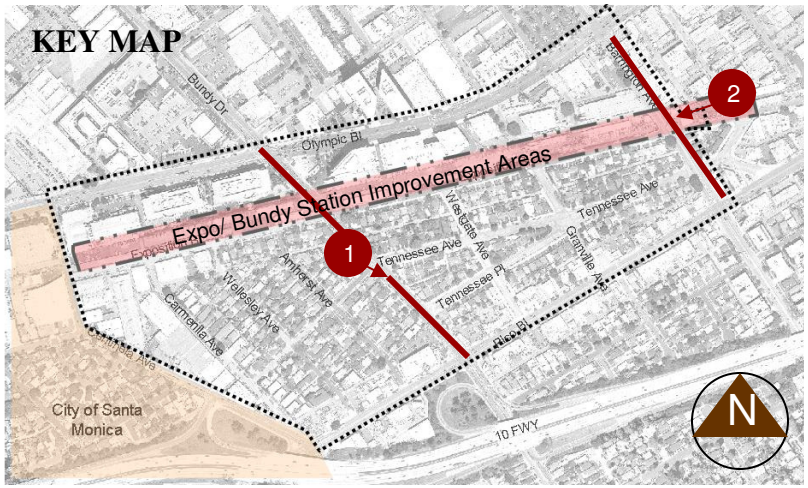
- (1) Census tract with median income below 80% of CA avg.
- (2) Public schools with at least 75% of students eligible for free lunch
- Proposed Project Boundary
- 1 mile Metro Station Service Area

0 0.25 0.5 1 Miles

N

Department of Public Works
Bureau of Street Services

Photos of Existing Location



(1) Bundy: Narrow sidewalks cannot be widened because of the need for all vehicle travel lanes and the two parking lanes the length of this corridor.

(2) Exposition Blvd., east of Barrington, looking west towards Barrington Avenue: Metro proposes closing the east side of Barrington where it intersects with Exposition Blvd., creating a cul-de-sac only accessible by emergency vehicles. Currently Barrington, which has a moderate elevation gain heading north, is used as an alternate north-south route to Bundy Drive by bicyclists. Immediately adjacent and north of Exposition Boulevard is the Expo bike path. The project will install a bicycle parklet with a bike repair kiosk and benches to provide respite for bicyclists using Barrington and the designated Expo bike path that runs east-west the length of the Expo light rail line.

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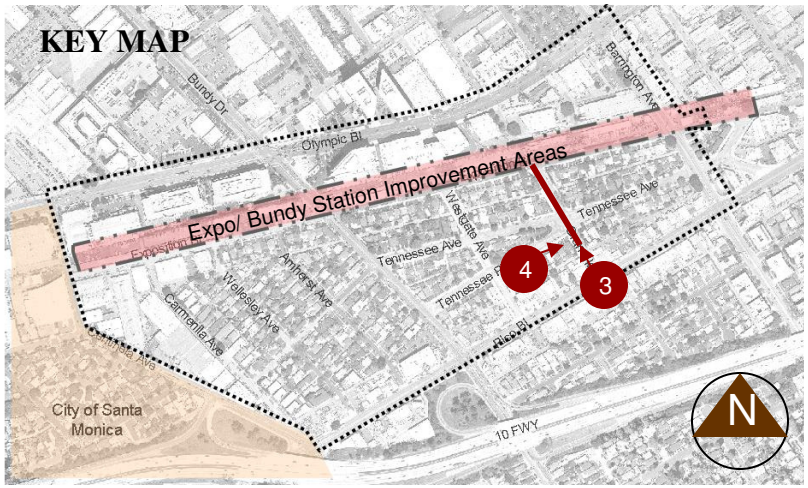
Photos of Existing Location



(3) Granville Ave. looking towards the new Expo/ Bundy station's street parking that runs the length of the rail corridor: This single residential neighborhood is characterized by unusually wide streets (80'ROW) and its location south adjacent to the Expo/Bundy station currently makes it an attractive alternate route for cut-through traffic avoiding the traffic congested corridors of Bundy and Barrington. A high number of vehicles, pedestrians and bicyclists is also expected to use this route once the station opens because it is the shortest distance to the station from Pico Boulevard.

(4) Lack of curb ramps throughout the project limits. This photo is taken at Granville and Tennesse Pl. where a significant increase in pedestrian activity is expected.

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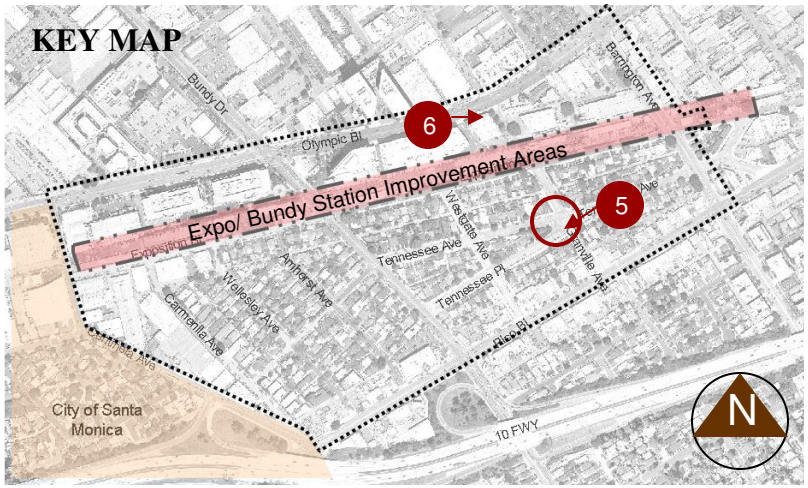
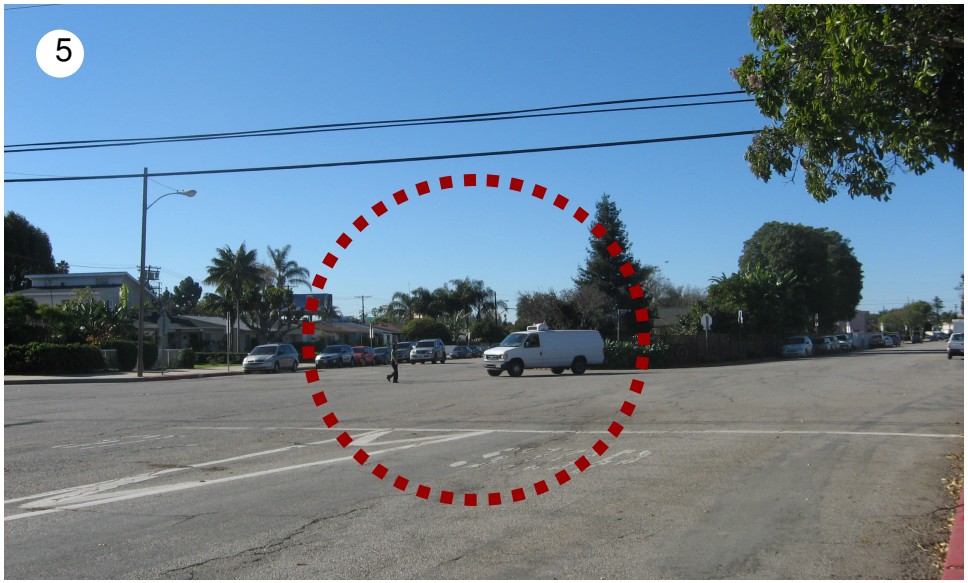
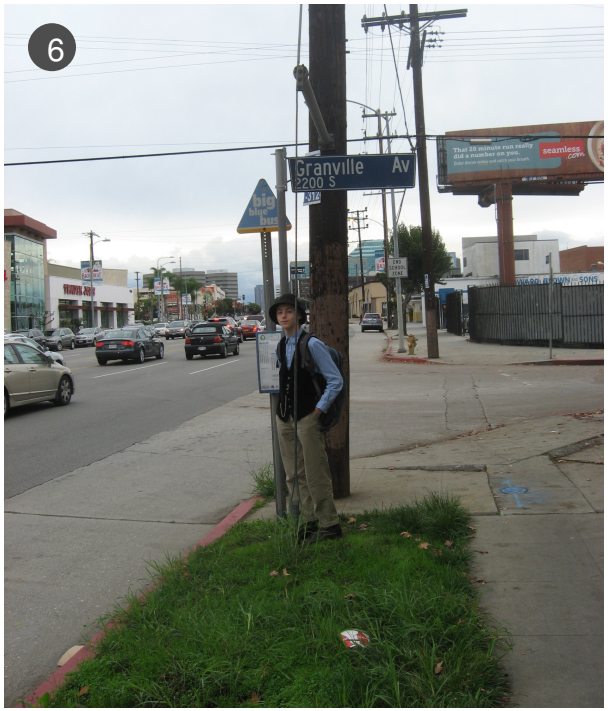
Photos of Existing Location





(5) Five-point intersection at Granville Ave, Tennessee Ave and Tennessee Pl: This intersection consists of unusually wide street widths, lack of roadway striping, and pedestrian-level lighting to define and separate space between pedestrians, bicyclists and vehicles, contributing to unsafe conditions for all. This photo demonstrates a near-miss when a motorist proceeds to make a right turn while a pedestrian attempts to cross the wide intersection. Based on a field interview with a local resident, this intersection is also dangerous during rush hour because of the volume of cut-through traffic heading east-west between Bundy and Barrington. Evening hours exacerbate the problem for pedestrians because of poor visibility due to lack of pedestrian-level lighting.

(6) A bus stop on Olympic Blvd. in need of improvements: The project will install sidewalk paving, bus benches, and trash receptacles as needed. In this photo, a young transit rider from a private school on Olympic Blvd. is commuting home to Culver City. He indicated during our field interview, that his school mates and their parents (he is graduating this year) are looking forward to the opening of the Expo/Bundy station because it wll make their commute easier and faster through the heavily congested corridors of this area.