

Appendix K

Transportation



Travel Model Report

City of Los Angeles

Central City/Central City North Community Plan
Areas (DTLA 2040)

July 2020





Table of Contents

INTRODUCTION.....	4
MODEL INPUTS.....	5
Socioeconomic Data.....	5
Traffic Analysis Zone System.....	5
Highway Network.....	8
Transit Network.....	9
Areas Outside of the Downtown Community Plan.....	11
FUTURE YEAR CONDITIONS.....	12
Future 2040 Socioeconomic Data.....	12
Future 2040 Transportation Network.....	16
MODEL OUTPUTS FOR THE COMMUNITY PLAN.....	22

Appendices

Appendix A: Network Project Assumptions



List of Figures

Figure 1 Downtown Community Plan Areas.....	7
Figure 2 Downtown Model Network	10
Figure 3 2040 Proposed Plan Household Growth	14
Figure 4 2040 Proposed Plan Employment Growth	15
Figure 5 2040 Future (No Project) Network Changes	20
Figure 6 2040 Proposed Plan Network Changes (With Project).....	21

List of Tables

Table 1 Existing 2017 Socioeconomic Data	5
Table 2 Existing 2017 Downtown Community Plan Socioeconomic Data.....	6
Table 3 2040 Existing Plan (No Project) Conditions SED	12
Table 4 2040 Proposed Plan (Project) SED.....	13
Table 5 Downtown Community Plan Enhanced Networks Model Assumptions	18
Table A1 Existing 2017 Network Edits.....	24
Table A2 Proposed Plan Transportation Improvement Project List.....	30

INTRODUCTION

In 2016 the City of Los Angeles updated their new Travel Demand Forecasting Model (Los Angeles Model) as part of the *Infill and Complete Streets – Capturing VMT Impacts and Benefits to CEQA Project*. The citywide model focused on consistency with the latest version of the SCAG regional travel demand model, improving key components of the model process, and meeting or exceeding industry standards for calibration and validation. The details of the updated Los Angeles Model are available as part of the *2016 City of Los Angeles Travel Demand Model, Model Development Report*.¹ The City of Los Angeles Model was used to analyze the 2040 Future (No Project) scenario for the Downtown Community Plan. The following were the major focus areas during the model update process:

- Maintain consistency with the 2016 SCAG RTP/SCS model
- Increase zonal detail across the City of Los Angeles
- Incorporate Big Data (such as cell phone and GPS data) into the trip distribution validation to improve VMT estimation at smaller geographic analysis zones
- Rebuild a majority of the transit route system using General Transit Feed Specification (GTFS) data from major transit operators
- Update the highway network to reflect major arterial and freeway construction projects
- Use Automated Traffic Surveillance and Control (ATSAC) loop volume data to collect traffic counts from several months for validation
- Include transit performance validation statistics including system ridership by mode and carrier

The Downtown Subregion Travel Demand Forecasting Model (referred to as the Downtown Model in the remainder of this report) builds upon the citywide model update and refines the level of detail within the Downtown Community Plan Area for improved sensitivity in measuring the effect of land use development and transportation network changes. The Downtown Model was developed using TransCAD Version 7.0 Build 12410. The model utilizes a conventional 4-step process consisting of trip generation, trip distribution, mode split, and assignment. This report focuses on the SED and network inputs included in the 2040 City of Los Angeles Model scenario, as well as the model enhancements made for the Downtown Community Plan Model, created for the purposes of analyzing both 2017 Existing Conditions and the 2040 Proposed Plan scenario.

¹ 2016 *City of Los Angeles Travel Demand Model, Model Development Report*, Fehr & Peers, February 2017.

MODEL INPUTS

SOCIOECONOMIC DATA

The Southern California Association of Governments (SCAG) 2016 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) provided the initial baseline socioeconomic data estimates for the Downtown Community Plan Area. From this baseline set of data, the City of Los Angeles derived 2017 estimates for population, households, and employment.

Table 1 summarizes the socioeconomic variables for the Downtown Community Plan and the City of Los Angeles. The Downtown Community Plan Area contain approximately 12% of the employment within the City of Los Angeles, and less than 3% of the households.

TABLE 1 EXISTING 2017 SOCIOECONOMIC DATA

Category	Downtown Model Area	City of Los Angeles
Population	75,740	3,950,476
Households	33,676	1,397,216
K12 Students	8,133	609,735
College Students	6,507	275,632
Employees	218,883	1,824,052

Source: Southern California Association of Governments (SCAG), 2016. City of Los Angeles, 2017.

TRAFFIC ANALYSIS ZONE SYSTEM

Socioeconomic data and other information used in the model are contained in geographically defined areas known as Transportation Analysis Zones (TAZs). These zones provide the spatial unit within which travel behavior and trip generation are estimated. The City of Los Angeles model has TAZ system based on the Tier 1 TAZ system used in the 2016 SCAG RTP/SCS model. The custom zone system was created to add more detail within the City of Los Angeles, so that the zonal boundaries are predominantly defined by roadways or other geographic features. This method of subdividing the SCAG Tier 1 zones improves vehicles accesses the local street network. The 37 Tier 1 zones in the Downtown Community Plan area were disaggregated into 233 TAZs in the Los Angeles Model. The subdivided TAZs better reflect how and where traffic enters and exits the street network and are divided along logical transportation boundaries like major streets and topography.

Figure 1 shows the TAZ system within the Downtown Community Plan Areas used by City staff to develop land use estimates for existing conditions and land use forecasts for the future year scenarios.

As part of the process to subdivide the SCAG Tier 1 zones for the citywide model update, Fehr & Peers reapportioned the socioeconomic data proportionally using geographic area calculations and aerial imagery within GIS software. Residential, school, and employment disaggregation factors were individually developed for each Tier 1 zone.

For the development of the Downtown Model, City staff reviewed the socioeconomic data assumptions for the TAZs within the Plan Area and adjusted the distribution of households and employment. These distribution adjustments were based on data from the Los Angeles County Assessor, but maintained the total number of households, population, and jobs within the Plan Area based on SCAG’s estimates for Year 2016. **Table 2** summarizes the Existing 2017 socioeconomic data within the Plan Area by Downtown planning subregion.

TABLE 2 EXISTING 2017 DOWNTOWN COMMUNITY PLAN SOCIOECONOMIC DATA

Subregion	Population	Households	Employment
Central City	49,458	26,293	191,802
Central City North	26,282	7,383	27,081
<i>Total</i>	75,740	33,676	218,883

Source: Southern California Association of Governments (SCAG), 2016. City of Los Angeles, 2017.

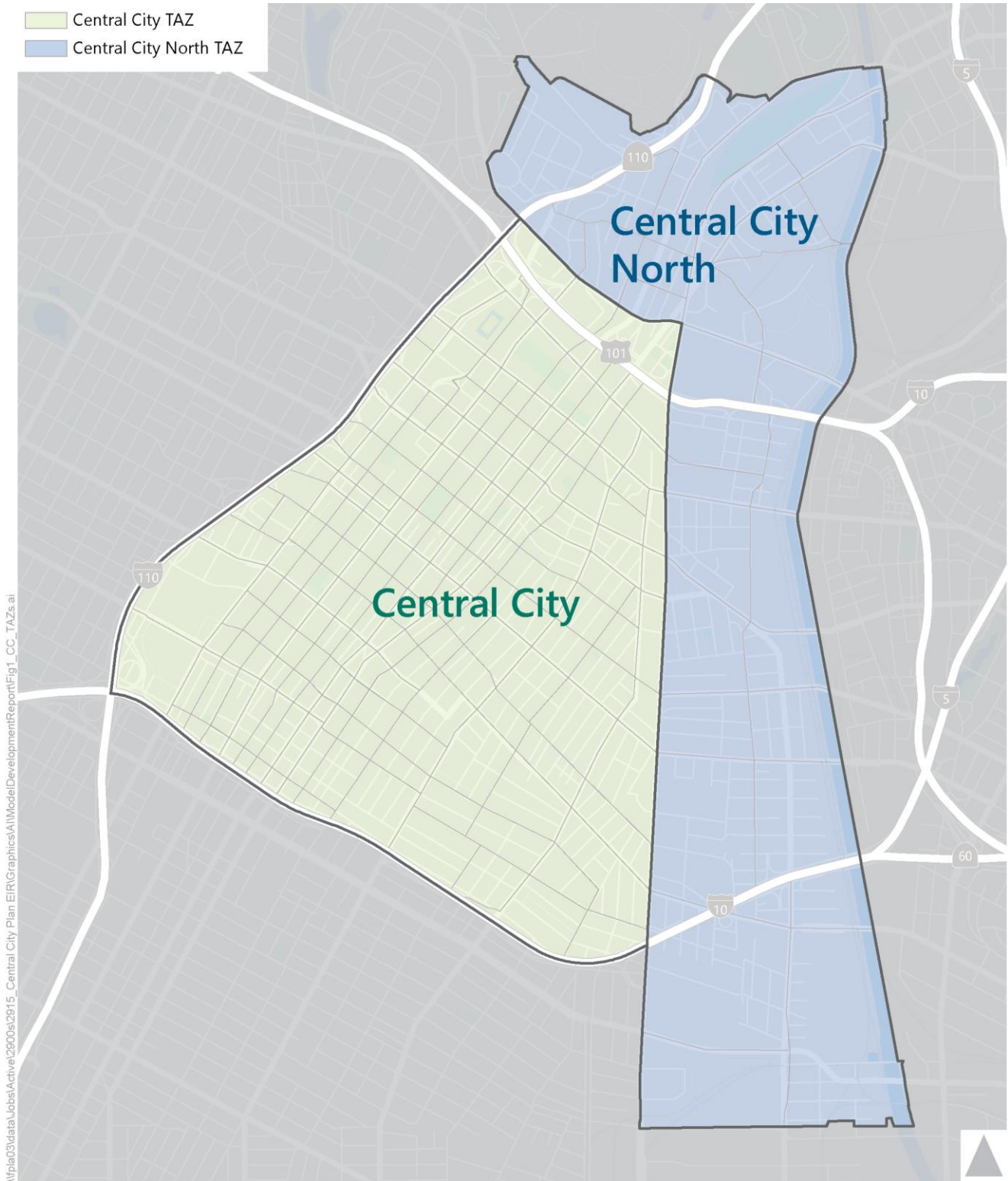


Figure 1
Central City and Central City North Community Plan Areas

HIGHWAY NETWORK

The highway network within the Downtown Model is shown in **Figure 2**. The primary attributes of the network links include: directionality (1-way versus 2-way), posted speed limit, and number of lanes (by time of day, including parking restrictions). Fehr & Peers conducted fieldwork visits in February 2017 to verify these attributes for roadways within the Plan Area. The network inputs also include turning movement restrictions for each model time period at signalized intersections and freeway ramps where appropriate.

The highway network was also reviewed for consistency with the classifications established in the Los Angeles Mobility Plan 2035 to ensure that facilities classified as Boulevards or Avenues within the Plan Area were included in the model. Key local collector roads were also added to the model, including:

- Santee Street
- Wall Street
- Crocker Street
- Towne Avenue
- Traction Avenue
- Palmetto Street
- Mill Street
- Industrial Street
- Bay Street
- Lemon Street
- Wilson Street
- Violet Street
- Mesquit Street
- Willow Street
- Yale Street
- Ord Street
- High Street
- Chavez Ravine Place
- College Street
- LA Live Way
- Georgia Street
- Francisco Street
- 17th Street
- Jesse Street
- 23rd Street
- 15th Street
- 2nd Street east of Alameda Street
- 3rd Street east of Alameda Street

A full list of additional roadway characteristic detail added to the Downtown Community Plan Area networks can be found in Appendix A.

TRANSIT NETWORK

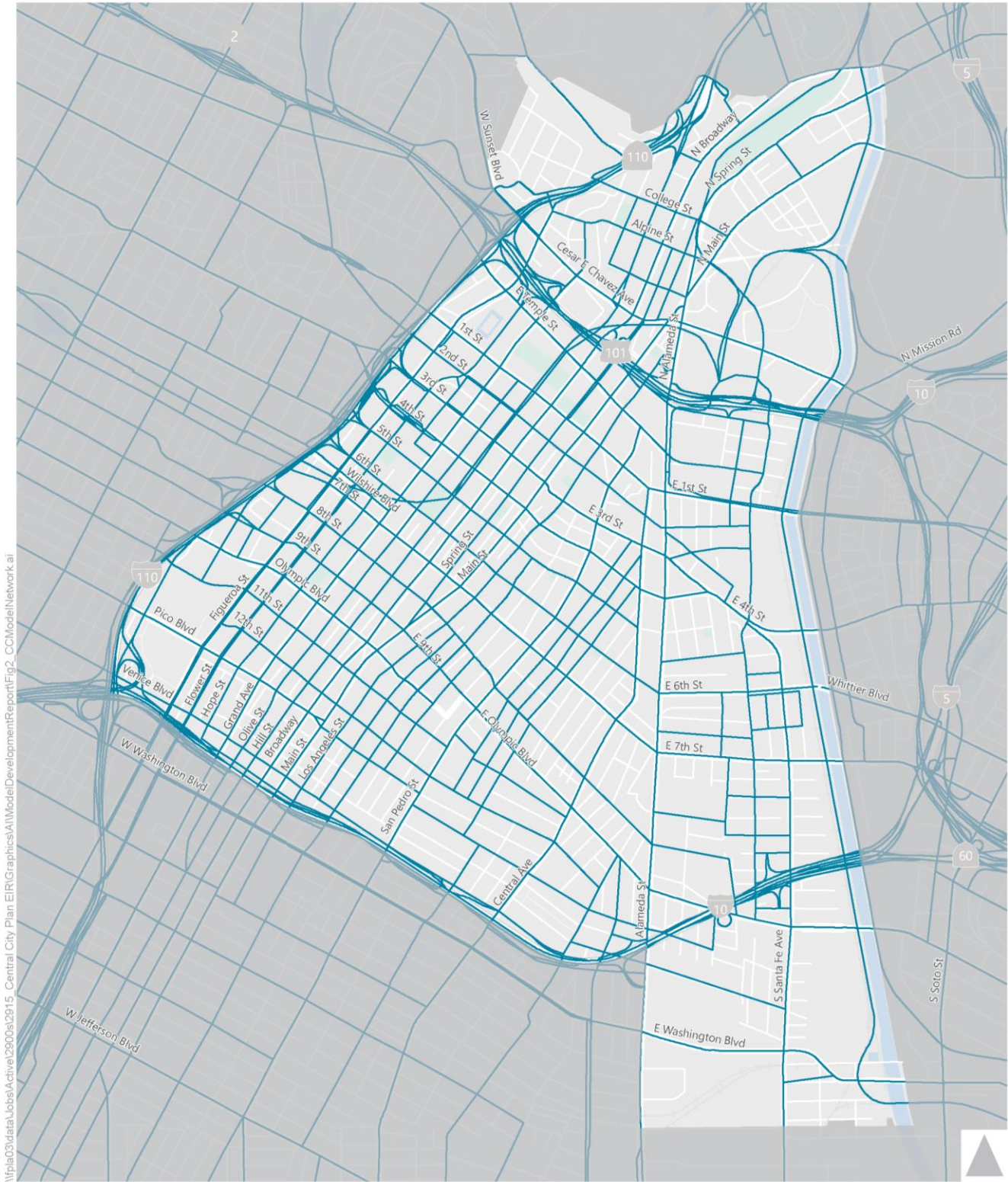
The transit network for the citywide model was updated to include the most recently available route and schedule information from the largest transit providers in Los Angeles County. As part of the 2017 Downtown Travel Demand Model, the Metro Expo Phase 2 and Gold Line Foothill light rail extensions were included in the transit network.

The following agencies and routes provide the majority of the transit service within the Plan Area:

- Los Angeles County Metropolitan Transportation Authority (Metro)
 - Red Line Subway
 - Purple Line Subway
 - Expo Line Light Rail
 - Blue Line Light Rail
 - Gold Line Light Rail
 - Silver Line Bus
 - Local Bus (105 routes)
 - Rapid Bus (8 routes)
 - Express Bus (2 routes)

- Los Angeles Department of Transportation (LADOT)
 - DASH local routes (6 routes)
 - Commuter Express (10 routes)

- Additional providers
 - Metrolink
 - Amtrak
 - Foothill Transit
 - Santa Clarita Transit
 - Orange County Transit Authority
 - Antelope Valley Transit Authority
 - Santa Monica Big Blue Bus
 - GTrans (Gardena)
 - Montebello Bus Lines
 - Torrance Transit



\\fplab03\data\lobos\active\2015\2015_Central_City_Plan_EIR\Graphics\AI\Model\Development\Report\Fig2_CCIModelNetwork.ai



Figure 2
Downtown Model Network

AREAS OUTSIDE OF THE DOWNTOWN COMMUNITY PLAN

Although the Downtown Community Plan Area is the main focus of the model development process, the model itself is a refinement of the 2016 City of Los Angeles travel demand model. Therefore, the entirety of the City-wide model is included in the Downtown Model, including the other Cities in Los Angeles County (e.g., West Hollywood, Burbank and Glendale). No additional refinements or changes were made to the roadway network outside of the Downtown Community Plan Area. However, to account for the 2017 base year of the Downtown Model, the 2016 City of Los Angeles model transit network was updated to include the Expo Line extension to Santa Monica (opened May 2016) and the Gold Line extension to Azusa (opened March 2016).

FUTURE YEAR CONDITIONS

The following future year scenarios were analyzed utilizing the City of Los Angeles and Downtown Models:

- 2040 Future (No Project) Conditions (City of Los Angeles Model)
- 2040 Proposed Plan (Project) Conditions (Downtown Model)

The socioeconomic data and transportation networks under these analysis scenarios are presented below.

FUTURE 2040 SOCIOECONOMIC DATA

Future year socioeconomic household, population, and employment data for the 2040 Future (No Project) Plan and 2040 Proposed Plan scenarios were developed by the Los Angeles Department of City Planning and are described below.

2040 FUTURE (NO PROJECT) CONDITIONS

The 2040 Future (No Project) Plan scenario was analyzed using the 2040 City of Los Angeles Model. The SED and network within the Community Plan Area match exactly the conditions in the 2040 City of Los Angeles Model. SED is shown by the areas within the Downtown Community Plan in **Table 3**.

TABLE 3 2040 EXISTING PLAN (NO PROJECT) CONDITIONS SED

Subregion	Households	Household Growth*	Population	Population Growth*	Employment	Employment Growth*
Central City	80,891	54,598	143,673	94,215	221,679	29,877
Central City North	15,433	8,050	45,422	19,140	35,181	8,100
<i>Total</i>	96,324	62,648	189,095	113,355	256,860	37,977

Source: Southern California Association of Governments (SCAG), 2016. City of Los Angeles, 2017.

*Growth is calculated as the difference between 2040 Future (No Project) Conditions and Existing 2017 Conditions.

2040 PROPOSED PLAN (PROJECT) CONDITIONS

Socioeconomic data for the Proposed Plan reflect reasonably anticipated future development through the Year 2040 including the proposed land use and zoning changes and housing incentive units. The distribution of household and employment growth with the Proposed Plan were determined at the TAZ level based on planned land use and zoning changes (See *Methodology*, in the Appendix of this EIR). **Table 4** shows the 2040 Proposed Plan socioeconomic data by planning area, as prepared by the Los Angeles Department of City Planning. This SED is based on known approved and pipeline development projects within the Plan Area in addition to growth associated with the Proposed Plan. The K-12 and college student data from the 2040 City of Los Angeles model were used for this scenario. **Figures 3** and **4** illustrate the growth distribution for Households and Employment, respectively, comparing the 2040 Proposed Plan scenario with the 2040 City of Los Angeles Model Future (No Project) scenario. As shown, household growth is primarily concentrated in the southern and eastern portions of the plan area, in the communities of South Park, Fashion District, and Arts District, while employment growth is concentrated in similar areas but is more dispersed. Outside of the Community Plan Area boundary, 2040 City of Los Angeles model SED data were used, which are consistent with the SCAG RTP/SCS.

Detailed SED data, including household categorization by income level and employment categorization by industry, for TAZs within the Community Plan Area was developed using the total population, household, and employment data described above. Given the anticipated change in housing type and employment sectors under the 2040 Proposed Plan Conditions when compared to Existing Conditions, detailed categorization for many areas with primarily industrial employment or few households was based on more densely developed areas of the Community Plan at the direction of the Los Angeles Department of City Planning. For example, it was assumed that detailed SED income and employment categories in parts of the Arts District would more closely resemble the more mixed-use areas of the Downtown Community Plan Area than Existing Arts District conditions.

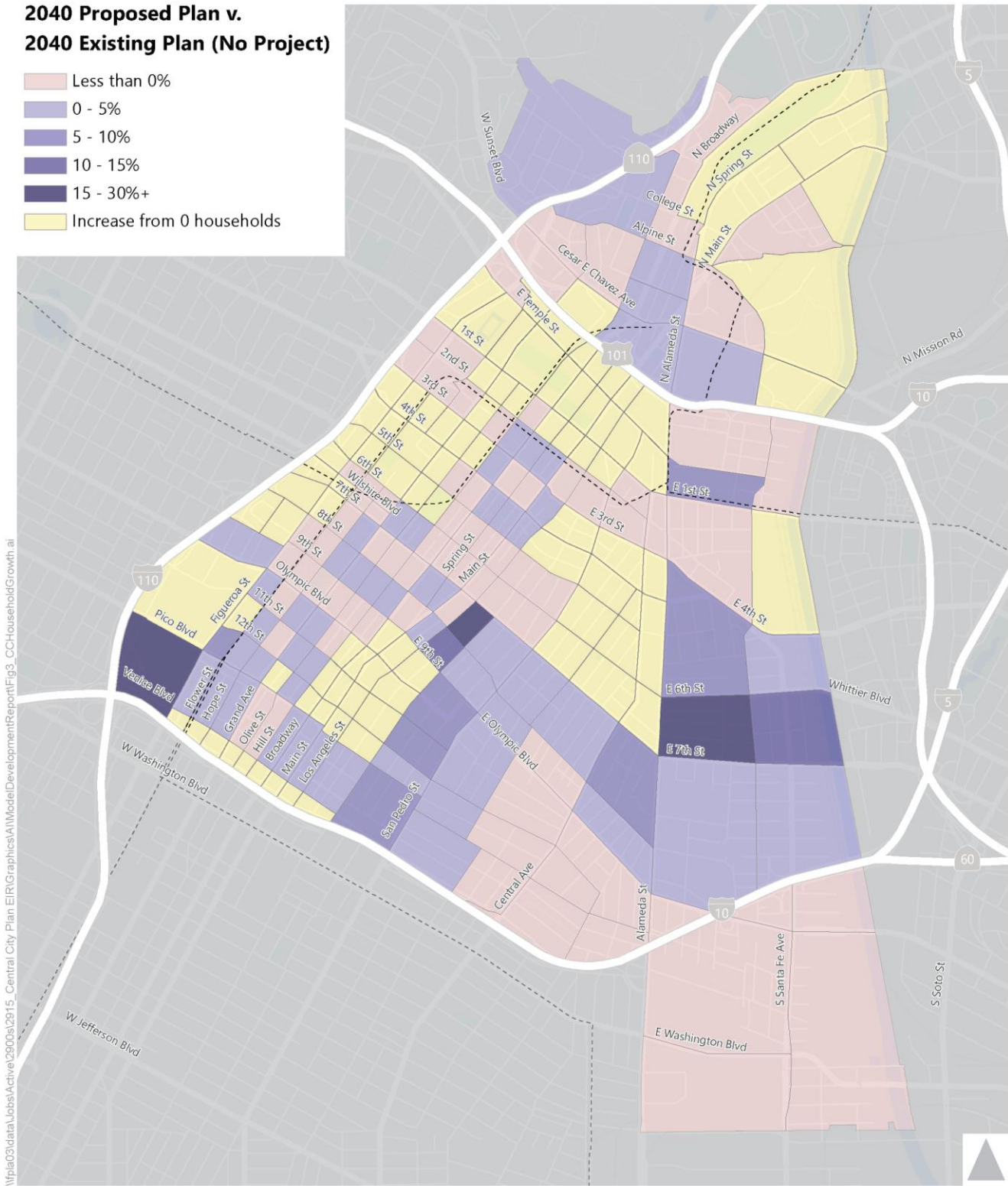
TABLE 4 2040 PROPOSED PLAN (PROJECT) SED

Subregion	Household	Household Growth*	Population	Population Growth*	Employment	Employment Growth*
Central City	108,462	27,571	204,807	61,134	236,871	15,192
Central City North	24,786	9,353	47,100	1,678	67,827	32,646
<i>Total</i>	133,248	36,924	251,907	62,812	304,698	47,838

*Growth is calculated as the difference between 2040 Proposed Plan and 2040 Future (No Project) Conditions.

**2040 Proposed Plan v.
 2040 Existing Plan (No Project)**

- Less than 0%
- 0 - 5%
- 5 - 10%
- 10 - 15%
- 15 - 30%+
- Increase from 0 households



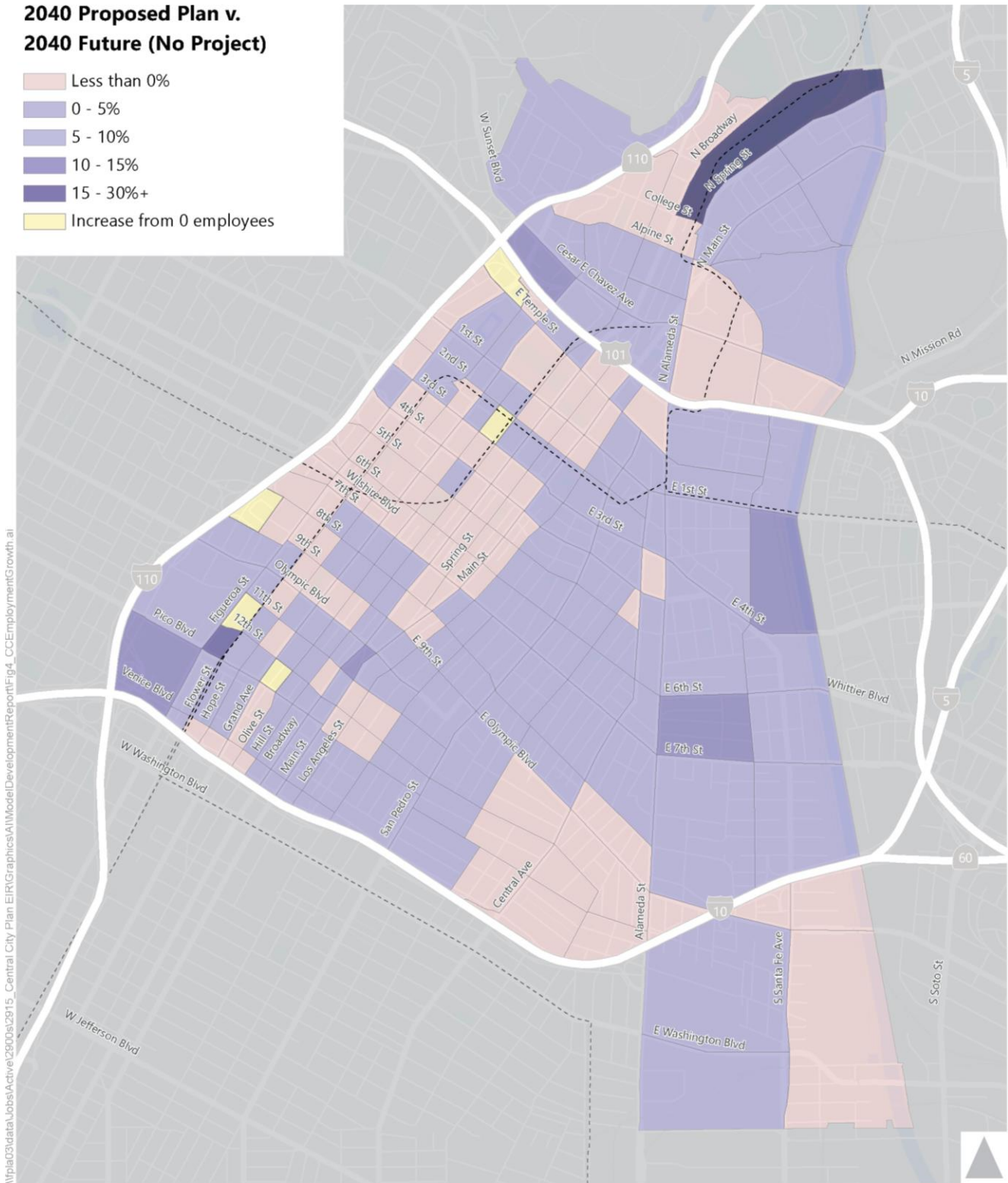
\\p1a03\data\lobst\active\2900s\2915_Central_City_Plan_EIR\Graphics\1\1\Model\Development\Report\Fig3_CCHouseholdGrowth.ai



Figure 3
 2040 Proposed Plan Household Growth

**2040 Proposed Plan v.
 2040 Future (No Project)**

- Less than 0%
- 0 - 5%
- 5 - 10%
- 10 - 15%
- 15 - 30%+
- Increase from 0 employees



\\plac03\data\lubs\active\2900\2915_Central City Plan EIR\Graphics\AllModelDevelopment\Report\Fig4_CCEmploymentGrowth.ai



Figure 4
 2040 Proposed Plan Employment Growth

FUTURE 2040 TRANSPORTATION NETWORK

2040 FUTURE (NO PROJECT) CONDITIONS

The highway and transit network improvements included in the 2040 Future (No Project) Conditions scenario reflect the 2040 Plan scenario of the 2016 SCAG RTP/SCS and Mobility Plan 2035. Related to the 2016 SCAG RTP/SCS, the improvements selected for the City of Los Angeles model 2040 scenario include those projects that have committed funding on the Federal Transportation Improvement Program (FTIP) in the near-term or are included in the fiscally-constrained Regional Transportation Plan (RTP). For a complete description of projects selected in the 2040 Existing Plan model, refer to the *2016 City of Los Angeles Travel Demand Model, Model Development Report*. No RTP or FTIP highway projects included in the 2040 City of Los Angeles model are located within or adjacent to the Downtown Community Plan area. The projects within or near-to the Downtown Community Plan area are:

- Transit Improvements:
 - Metro Regional Connector (ID #LA0G010, FTIP)
 - West Santa Ana Light Rail (ID #1TR1011, RTP_F)

In addition to the City of Los Angeles Travel Demand Model 2040 projects, the 2040 Future (No Project) scenario of the Downtown Model also includes projects from Mobility Plan 2035 latest version, September 2016. Mobility Plan 2035 provides the framework for future community plan updates, which take a closer look at the transportation system in specific areas of the City and recommend more detailed implementation strategies to realize Mobility Plan 2035. The Mobility Plan 2035 reflects policies and programs that lay the foundation for safe, accessible, and enjoyable streets for pedestrians, bicyclists, transit users, and vehicles throughout the City of Los Angeles, including the Downtown Community Plan. Mobility Plan 2035 was adopted by the City in August 2015 and is compliant with the 2008 Complete Streets Act (AB 1358), which mandates that the circulation element of a city's General Plan be modified to plan for a balanced, multimodal transportation network that meets the needs of all users of streets, roads, and highways, defined to include motorists, pedestrians, bicyclists, children, persons with disabilities, seniors, movers of commercial goods, and users of public transportation, in a manner that is suitable to the rural, suburban, or urban context of the general plan.

The Mobility Plan 2035 contains a variety of enhanced network treatments within the Downtown Community Plan Area that are incorporated into the 2040 Future (No Project) scenario of the model. **Figure 5** shows the following enhanced network treatments for roadways in the Plan Area:

- Bicycle Enhanced Network (BEN)

- Transit Enhanced Network (TEN)
- Vehicle Enhanced Network (VEN)

2040 PROPOSED PLAN (PROJECT) CONDITIONS

The highway and transit network improvements included in the 2040 Proposed Plan (Project) Conditions scenario reflect the 2040 Plan scenario of the 2016 SCAG RTP/SCS as outlined in detail above. Additionally, the 2040 Proposed Plan reflects a more refined version of the Mobility Plan 2035 than that originally imagined city-wide several years ago. The enhanced network treatments envisioned through Mobility Plan 2035 were reviewed and refined to complement the anticipated growth areas as well as the Downtown Plan's specific goals and policies. Since Mobility Plan 2035 does not prescribe or mandate how the enhanced network treatments are implemented within each community plan, the refinements to the enhanced network treatments primarily consisted of developing potential implementation options within the Downtown Plan Area. These are shown in **Figure 6**.

The full 2040 Proposed Plan Transportation Project List is presented in **Appendix A**. The Project List is not exhaustive but is representative of the types of improvements proposed for inclusion in the Community Plan. In addition, the Proposed Plan would not, itself, entitle or otherwise approve any transportation projects. Nevertheless, potential impacts of implementing the transportation improvements contained in the Project Lists were analyzed at a programmatic level as part of the Proposed Plan Conditions.

ADDITIONAL MOBILITY PLAN 2035 CONSIDERATIONS

Mobility Plan 2035 represents the best indication of long-term capital planning for transportation infrastructure in Los Angeles, and at the time of Mobility Plan 2035 adoption it was envisioned that the identified networks would be realized by the year 2035. As the officially adopted mobility element of the General Plan, the Plan establishes priority for future investments along the various enhanced networks on a citywide scale.

While the City typically accounts for and assumes projects that are built, underway, or have secured funding as part of the horizon year future, there is evidence of a rapid pace of improvements and funding of the enhanced networks in the Plan Area outlined in Mobility Plan 2035. Recent and ongoing investments and prioritization of first-last mile connectivity demonstrate the commitment to improve this infrastructure regardless of whether the Downtown Community Plan itself is adopted. For this reason, it is reasonable to analyze all future scenarios in this area with the inclusion of Mobility Plan 2035.

Given the closer level of attention and detail given in the community planning process, it is also reasonable to analyze the Proposed Plan with a refined version of Mobility Plan 2035 that better suits the

more nuanced and timely approach to the Downtown community specifically, as has been done for other community plans underway since the Mobility Plan 2035 adoption.

For all Future 2040 scenarios of the Downtown Plan, transportation network assumptions to be applied to the roadways designated for enhanced network treatments are summarized below in Error! Reference source not found..

TABLE 5 DOWNTOWN COMMUNITY PLAN ENHANCED NETWORKS MODEL ASSUMPTIONS

Enhanced Network	Treatment Level	Model Assumptions
Vehicle-Enhanced Network (VEN)	Moderate	<ul style="list-style-type: none"> • Reduce vehicle travel times by 10 percent • Add one vehicular travel lane per direction if all-day parking is available, or convert one off-peak parking lane per direction to a full-time vehicular travel lane
	Comprehensive	<ul style="list-style-type: none"> • Reduce vehicle travel times by 10 percent • Add one vehicular travel lane per direction if all-day parking is available, or convert one off-peak parking lane per direction to a full-time vehicular travel lane • Increase effective vehicular capacity by 10 percent
Transit-Enhanced Network (TEN)	Moderate	<ul style="list-style-type: none"> • No change to lane configurations • Double frequency of bus service
	Moderate Plus	<ul style="list-style-type: none"> • Convert one vehicular travel lane per direction to a bus only lane during peak periods • Double frequency of bus service
	Comprehensive	<ul style="list-style-type: none"> • Convert one vehicular travel lane per direction to a bus only lane for the full day • Double frequency of bus service
Bicycle-Enhanced Network (BEN)/Bicycle Lane Network	Bike Lane (Tier 3)	<ul style="list-style-type: none"> • No change in lane configuration
	Bike Lane (Tier 2)	<ul style="list-style-type: none"> • Remove one vehicular travel lane per direction to accommodate a bicycle lane or buffered bicycle lane
	Protected Bike Lanes (Tier 1)	<ul style="list-style-type: none"> • Remove one vehicular travel lane per direction to accommodate a Protected Bike Lane

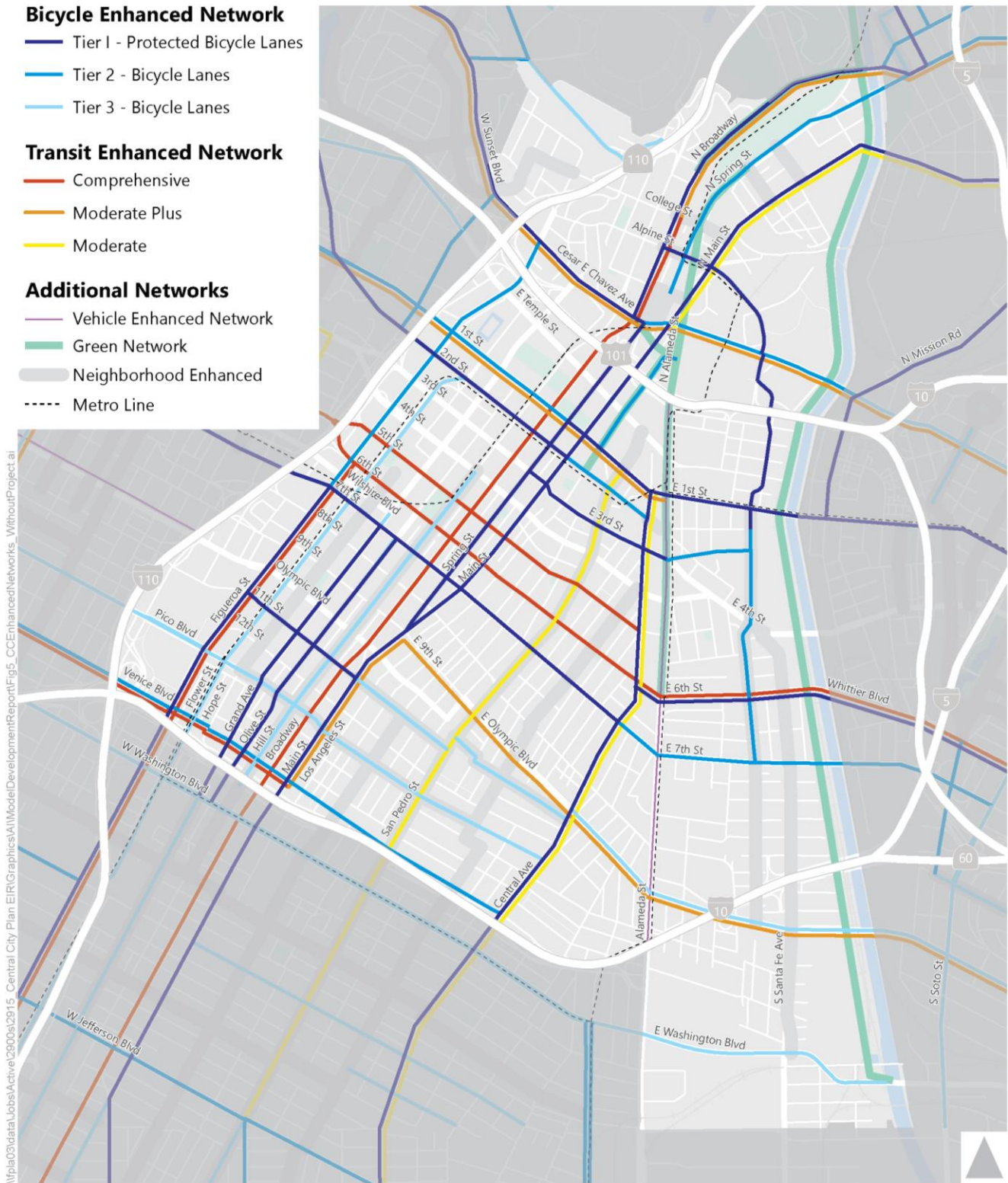
SOURCE: Mobility Plan 2035 Model Assumptions, Fehr & Peers, City of Los Angeles.

Table 5 Notes and Assumptions:

- Tier 1 and Tier 2 bicycle facilities were included as these are facilities planned by the sunset of this plan. Tier 3 was not included as those facilities were not assumed to be implemented by that time.
- In cases where Tier 1 or Tier 2 bicycle facilities, and Moderate Plus or Comprehensive transit enhancements are planned for the same roadway facility, only one vehicle travel lane was removed in each direction of travel as part of the Enhanced Network.
- On roadway facilities with only one general purpose vehicle lane in each direction under existing conditions, no travel lanes were removed from the Enhanced Network.
- For purposes of developing the network in a travel demand model, the Neighborhood Enhanced Networks (NEN) identified in Mobility Plan 2035, while increasing pedestrian safety, will not reduce vehicle capacity and therefore are not included in the transportation analysis.
- On the TEN, Comprehensive and Moderate Plus networks included the conversion of a travel lane, as these enhancements include bus-only lanes at least some of the day. Moderate networks were not modeled, as these are designated for stop enhancements and increases service, with buses operating in mixed flow with vehicles.
- Table 5 and these assumptions were determined with the project team.

BOYLE HEIGHTS COMMUNITY PLAN AREA

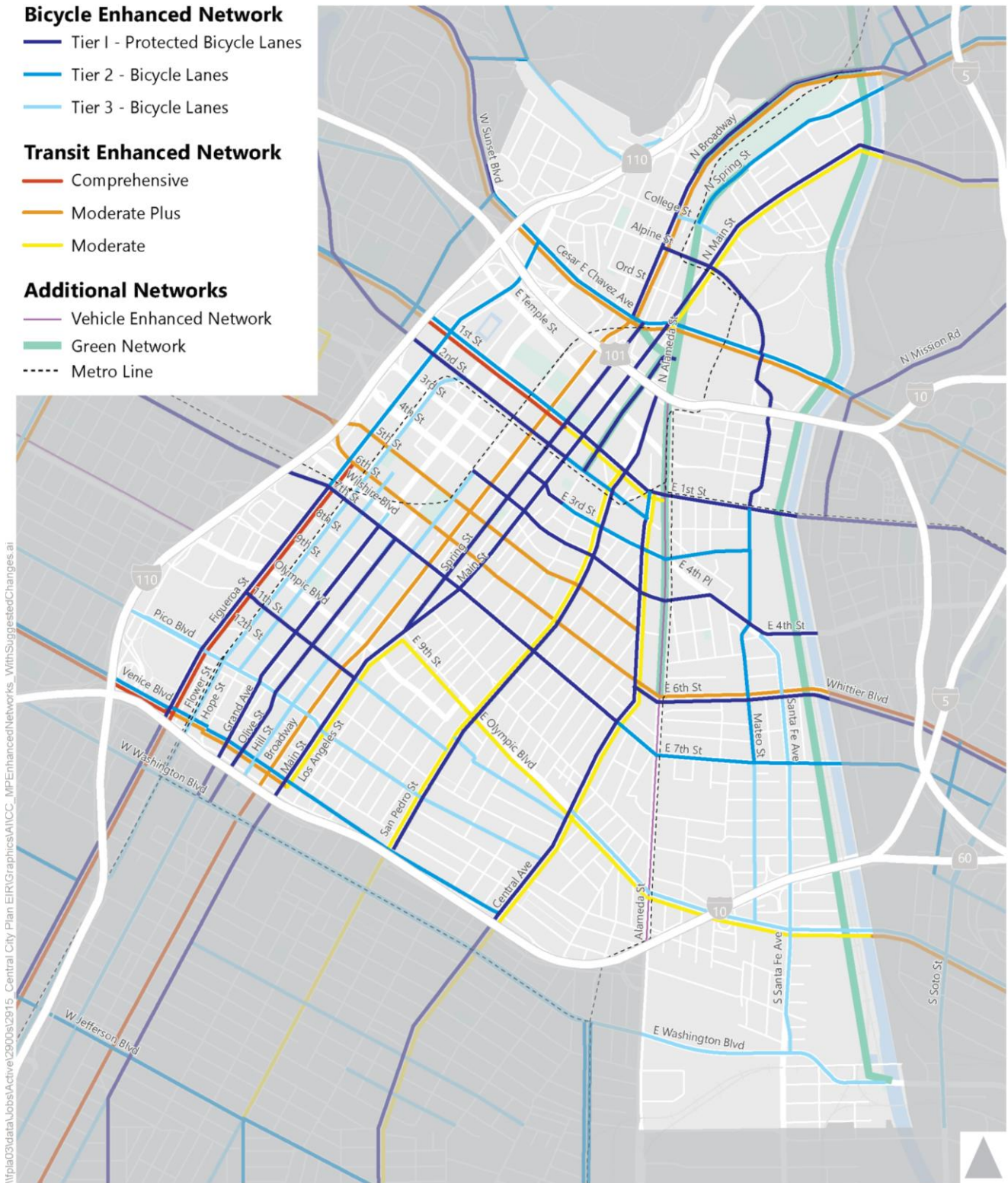
The 2040 Future (No Project) and Proposed Plan (Project) scenarios assume full buildout of the Boyle Heights 2040 Community Plan network improvements. The Boyle Heights Community Plan Area is directly adjacent to the Downtown Plan Area, and both areas began and intended to complete their planning and EIR documentation process in a relatively similar timeframe. Given the simultaneous nature of these plans, it was determined by the Department of City Planning that both should assume the other would be adopted in the future, and therefore should include inputs from the other plan's proposed SED and network assumptions in both the Future No Project and Project scenarios. This is reasonable and important to assume, as the proximity and street network connections could have significant effects on one another, and it is more conservative to run calculations with the possible increase of density and network usage both areas anticipate with future growth.



M:\p1a03\data\lubs\active\2800s\2815_Central_City_Plan_EIR\Graphics\AI\ModelDevelopment\Report\Fig5_CCEnhancedNetworks_WithoutProject.ai



Figure 5
 2040 Network Changes (No Project)



\\pja03\data\lobbs\active\29005\2915_Central_City_Plan_EIR\Graphics\A\ICC_MPEnhancedNetworks_WithSuggestedChanges.ai



Figure 6
 2040 Proposed Plan Network Changes (With Project)

MODEL OUTPUTS FOR THE COMMUNITY PLAN

One of the primary uses of the Downtown Model is to forecast vehicle miles traveled (VMT) and level of service (LOS) on the roadway network for each analysis scenario. These forecasts help to determine whether a plan would have any environmental impacts. For many years, LOS has been utilized to determine these impacts, but the City of Los Angeles is using VMT as the primary measurement tool. There are two methods for estimating VMT using the travel demand model: the boundary method and the origin-destination (OD) method. Each method is best suited for supporting different types of analysis, such as estimating air pollution and GHG emissions. For purposes of this project, the OD method will be employed.

VMT is a measurement of miles traveled (e.g., private automobiles, trucks and buses) by all land uses (e.g., residential, retail, office) in the Project Area. For this analysis, VMT is reported as Total Daily VMT per Service Population, which equates to all VMT for the Plan Area divided by the number of people living and working within the Plan Area. A reduction in VMT overall and in VMT per capita service population can be used as an indicator of reduced reliance on vehicular travel, primarily by private automobiles. Some VMT metrics focus on VMT per capita and VMT per employee as separate markers of these indications; however, VMT per service population the effects of all vehicular movement in an area. It includes not only trips that are attracted and produced by home and work trips, but those that fit in neither category (i.e. school to grocery store) as well as truck trips. The VMT calculation accounts for internal (II) trips and trips that begin or end (IX or XI) within the Plan Area, as these trips are generated by or attracted to land uses within the Downtown Community Plan Area. The travel behavior effects of land use changes in Downtown can be understood by measuring the VMT of trips originating in and/or destined for the Plan Area.

An alternative way to understand existing traffic conditions is to study existing traffic volumes with an analysis of the operating conditions, indicated through volume-to-capacity (V/C) ratios and Level of Service (LOS). LOS is a measure used to describe the condition of traffic flow, ranging from excellent conditions at LOS A to overloaded conditions at LOS F. LOS can be determined by dividing the number of vehicles (i.e., volume (V)) by roadway capacity (C), and the resulting V/C ratio is then used to obtain the corresponding LOS. To determine the operations of the roadway network during peak commute hours, a LOS analysis was conducted for the roadways in the Project Area.

APPENDIX A: NETWORK PROJECT ASSUMPTIONS



TABLE A1 EXISTING 2017 NETWORK EDITS

Segment Edited	Type of Network Edit	Description of Network Edit
Various locations throughout Community Plan Area	Turn Restrictions	Time period turn restrictions
Figueroa Street	Bicycle Lanes	Decreased travel lanes as appropriate to account for installation of bicycle facility
Grand Avenue	Bicycle Lanes	Decreased travel lanes as appropriate to account for installation of bicycle facility
Olive Street	Bicycle Lanes	Decreased travel lanes as appropriate to account for installation of bicycle facility
Broadway	Bicycle Lanes	Decreased travel lanes as appropriate to account for installation of bicycle facility
Spring Street	Bicycle Lanes	Decreased travel lanes as appropriate to account for installation of bicycle facility
Main Street	Bicycle Lanes	Decreased travel lanes as appropriate to account for installation of bicycle facility
Los Angeles Street	Bicycle Lanes	Decreased travel lanes as appropriate to account for installation of bicycle facility
1 st Street	Bicycle Lanes	Decreased travel lanes as appropriate to account for installation of bicycle facility
2 nd Street	Bicycle Lanes	Decreased travel lanes as appropriate to account for installation of bicycle facility
7 th Street	Bicycle Lanes	Decreased travel lanes as appropriate to account for installation of bicycle facility
Figueroa Street from 8 th Street to the 10 Freeway	Construction	Temporarily reduced by up to one lane
Flower Street from 11 th Street to Pico Boulevard	Construction	Temporarily reduced by one lane
Broadway from 11 th Street (midblock) to 12 th Street	Construction	Changed to two travel lanes in both directions at all times
6 th Street/Whittier Boulevard from Mateo Street to Mission Road	Construction	Included construction conditions as bridge currently does not exist
8 th Street from Grand Avenue to Hill Street	Construction	Temporarily reduced to two lanes
11 th Street from Figueroa Street to Flower Street	Construction	Reduced to one lane of westbound traffic and no eastbound lanes
Aliso Street at Alameda Street	Other	Changed to one left-turn lane onto Alameda Street
Grand Avenue from 4 th Street to Temple Street	Other	Changed to two lanes in both directions without parking restrictions
1 st Street from Beaudry Avenue to the 110 Freeway	Other	Updated to three lanes
1 st Street from the 110 Freeway to Fremont Avenue	Other	Updated to two lanes
8th between Broadway and Hill	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
8th between Hill and Olive	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions

8th between Olive and Grand	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
8th between Grand and Hope	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
9th between Flower and Hope	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
9th between Grand and Olive	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
9th between Olive and Hill	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
9th between Hill and Broadway	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Olympic between Broadway and Hill	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Olympic between Hill and Olive	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Olympic between Olive and Grand	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Olympic between Grand and Hope	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Olympic between Hope and Flower	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Olympic between Flower and Figueroa	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Olympic between Figueroa and Francisco	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Pico from Hill to Olive	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Pico from Olive to Grand	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Pico from Grand to Hope	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Venice from Hope to Grand	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Venice from Grand to Olive	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Venice from Olive to Hill	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Venice from Hill to Broadway	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Hill from Olympic to 9th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Hill from Olympic to 11th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Grand from 8th to 9th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Flower from Pico to Venice	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
4th between Hill and Broadway	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions

3rd between Broadway and Hill	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
1st between Hope & Grand	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
1st between Grand & Olive	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
1st between Broadway & Spring	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Spring between 2nd & 3rd	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Spring between 4th & 5th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Spring between 5th & 6th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Spring between 6th & 7th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Hill between 2nd & 3rd	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Hill between 3rd & 4th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Hill between 4th & 5th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Hill between 6th & 7th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Hill between 7th & 8th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Olive between 6th & 5th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Grand between Hope Pl & 5th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Grand between 6th & Wilshire	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Flower between 7th & 8th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Cesar Chavez between Fig and Bunker Hill	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Cesar Chavez between Bunker Hill and Grand	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Cesar Chavez between Grand and N Hill	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Cesar Chavez between Hill and Broadway	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Figueroa between Alpine and Bartlett	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Figueroa between Bartlett and Cesar Chavez	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
1st street between Dewap and Hope	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
1st Street between Hope and Grand	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions

1st Street between Grand and Olive	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
1st Street between Olive and Hill	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
1st Street between Hill and Broadway	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Alpine between Yale and Hill	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Spring between Elmyra and Ann	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Spring between Ann and Sotello	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Spring between Sotello and Mesnagers	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Spring between Mesangers and Wilhardt	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Spring between Elmyra and College	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Main between Bruno and College	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Main between College and Rondout	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Main between Rondout and Llewellyn	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Main between Llewellyn and Elmyra	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Main between Elmyra and Bloom	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Main between Bloom and Leroy	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
College between Alameda/Spring and New High	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
College between New High and Broadway	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Alpine between Spring and Broadway	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Temple from Los Angeles to Main	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
4th between Alameda and Mission	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Broadway between 2nd and 3rd	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Broadway between 3rd and 4th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Broadway between 4th and 5th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Broadway between 5th and 6th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Broadway between 6th and 7th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions

Broadway between 7th and 8th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Broadway between 8th and 9th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Broadway between 9th and Olympic	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Broadway between Olympic and 11th midblock	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Broadway between 11th midblock and 12th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Main between 8th midblock and 7th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Main between 7th and 6th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Main between 5th midblock to Winston	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Main between Winston and 4th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Main between 4th and 4th midblock	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Main between 3rd and 2nd	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
6th between Alameda and Central	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
5th from Spring midblock to Broadway	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
4th from Los Angeles to San Pedro	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
3rd from Los Angeles to Main	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
3rd from Spring to Broadway	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
6th from Broadway to Spring	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
6th from Wall to San Julian	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
8th between Spring and Broadway	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Broadway between 11th and 12th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Venice between Main and Broadway	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
16th between San Pedro and Trinity	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
16th between Trinity and Maple	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
16th between Maple and Santee	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
16th between Santee and Los Angeles	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions

16th between Los Angeles and Main	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Maple between Pico and 16th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Stanford between Pico and 12th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
9th from Crocker to San Pedro	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
9th from San Pedro to San Julian	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
9th from San Julian to Maple	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
9th from Maple to Santee	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
9th from Main to Los Angeles midblock	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
9th from Los Angeles to Santee	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
11th from Los Angeles to Main	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Pico from Los Angeles to Main	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Pico from Main to Broadway (north split)	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Pico from Main to Broadway	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Olympic Between Central and Stanford	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Central between 16th and 15th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Central between 15th and 14th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Central between 14th and Pico	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Central between Pico and 12th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Central between 12th and 11th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Central between 11th and Olympic	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Central between Olympic and 8th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Central between 8th and 7th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Central between 7th and 6th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Hooper between Fwy and Newton	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Hooper between Newton and 14th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions

Hooper between 14th and 12th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Hooper between 14th and 10th	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
Hooper between 10th and Olympic	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions
7th between Alameda & Mill	Parking Restrictions	Increased peak period travel lanes as appropriate to accommodate peak period parking restrictions

Source: Fehr & Peers fieldwork (2017).

TABLE A2 PROPOSED PLAN TRANSPORTATION IMPROVEMENT PROJECT LIST

Proposed Plan Transportation Improvement Project List		
PRIMARY MODE	PROJECT NAME	PROJECT DESCRIPTION
Active Modes	Mobility Hub Amenities	Encourage projects located near transit nodes and Mobility Hubs to provide people-oriented amenities such as shade trees, countdown crosswalk signals, bus shelters, bicycle racks or lockers and enhanced or decorated crosswalks.
	Pedestrian Access to Major Transit Stations	Provide enhanced amenities at major transit stops, including widened sidewalks, where possible, pedestrian waiting areas, transit shelters, comfortable seating, enhanced lighting, information kiosks and wayfinding signage (directing pedestrians to transit stops and stations, and from transit facilities to points of interest in the surrounding neighborhood), advanced fare collection mechanisms, shade trees and landscaping, bicycle access, self-cleaning restrooms, and enhanced, ADA compliant street crossing elements adjacent to transit stops and stations (ie. enhanced crosswalks, crossing signals, and accessible ramps).
	Path Network	Support the construction of pedestrian pathways, bicycle paths and facilities.
		Class I Bike Path: the Los Angeles River Bike Path
	Bicycle Enhanced Network & Bike Lanes	Figueroa St: 10 Fwy to 7 th St Protected Bike Lane
		Figueroa St: 7 th St to Cesar Chavez Ave Tier 2 Bike Lane
		Flower St: 10 Fwy to 2 nd St Tier 3 Bike Lane
		Hope St: Pico Blvd to 6 th St Tier 3 Bike Lane
		Grand Ave: 10 Fwy to 5 th St

Proposed Plan Transportation Improvement Project List

		Protected Bike Lane
		Olive St: 10 Fwy to 5 th St Protected Bike Lane
		Spring St: 9 th St to Cesar Chavez Ave Protected Bike Lane
		Spring St: College St to Broadway Tier 2 Bike Lane
		Main St: 10 Fwy to Albion St/LA River Protected Bike Lane
		Los Angeles St: 2 nd St to Alameda St Protected Bike Lane
		San Pedro: 10 Fwy to Temple St Protected Bike Lane
		Central Ave: 10 Fwy to 2 nd St Protected Bike Lane
		Central Ave: 2 nd St to 1 st St Tier 2 Bike Lane
		Mateo St: Olympic Blvd to 7 th St Tier 3 Bike Lane
		Mateo St: 7 th St to 4 th St Tier 2 Bike Lane
		Santa Fe Ave: Washington Blvd to 4 th St Tier 3 Bike Lane
		Santa Fe Ave: 4 th St to 2 nd St Tier 2 Bike Lane (one side)
		Santa Fe Ave: 2 nd St to 1 st St Protected Bike Lane
		Center St: 1 st St to 101 Fwy Protected Bike Lane
		Ramirez St/Center St: Ramirez St to Vignes St Protected Bike Lane
		Vignes St: Ramirez St to Main St Protected Bike Lane
		Alpine St: Main St to Broadway Protected Bike Lane

Proposed Plan Transportation Improvement Project List

	College St: Hill St to Main St Tier 3 Bike Lane
	Cesar Chavez Ave: Beaudry Ave to Spring St Tier 2 Bike Lane
	1 st St: 110 Fwy to Spring St Tier 2 Bike Lane
	1 st St: Spring St to Myer St/LA River Protected Bike Lane
	2 nd St: 110 Fwy to Main St Protected Bike Lane
	2 nd St: Main St to Central Ave Tier 2 Bike Lane
	3 rd St: Spring St to Los Angeles St Protected Bike Lane
	3 rd St: Los Angeles St to Alameda St Tier 2 Bike Lane
	4 th St: Spring St to Mission Rd/LA River Protected Bike Lane
	5 th St: Broadway to Central Ave Tier 2 Bike Lane
	6 th St: Broadway to Central Ave Tier 2 Bike Lane
	6 th St: Central Ave to Mission Rd/LA River Protected Bike Lane
	7 th St: 110 Fwy to Mission Rd/LA River Protected Bike Lane
	Olympic Blvd: Central Ave to LA River Tier 3 Bike Lane
	10 th St: Main St to Central Ave Tier 3 Bike Lane
	11 th St: Figueroa St to Main St Protected Bike Lane
	12 th St: Figueroa St to Flower St Protected Bike Lane
	Pico Blvd: 110 Fwy to Central Ave

Proposed Plan Transportation Improvement Project List		
		Tier 3 Bike Lane
		Venice Blvd: 110 Fwy to Main St Tier 2 Bike Lane
		16 th St: Main St to Hooper Ave Tier 2 Bike Lane
		Washington Blvd: Alameda St to LA River Tier 3 Bike Lane
	Bikeshare	Provide public bicycle rental in "pods" located throughout the city.
Roadways & ITS	Congestion Monitoring	Implement or enhance "Smart Corridors" to coordinate Caltrans' freeway traffic management system with the ATSAC/Adaptive Traffic Control System (ATCS) highway and street traffic signal management system to enhance incident management and motorist information to reduce traffic delays.
	ITS Corridor & Signal Upgrades	Implement signalization improvements to facilitate traffic flow. Install Automated Traffic Surveillance and Control (ATSAC) at all signalized intersections and all intersections along Boulevards and Avenues in Downtown.
	Intersection Improvements	Identify intersections where congestion related to left turns can be improved and implement improvements, taking into consideration impacts on pedestrians and bicyclists.
	Access Improvements	Support the planning and construction of new roadway connections as deemed necessary for Downtown.
	Vehicle Enhanced Network	Alameda St: 10 Freeway to Temple St
Transit	Transit Enhanced Network	Figuroa St: 10 Fwy to 7 th St Comprehensive Treatment
		Hill St: 10 Fwy to 4 th St Comprehensive Treatment
		Broadway: 10 Fwy to Pasadena Ave/LA River Moderate Plus Treatment
		Main St: Venice Blvd to 9 th St Moderate Treatment
		Main St: Cesar Chavez Ave to Albion St/LA River Moderate Treatment
		San Pedro St: 10 Fwy to 1 st St Moderate Treatment
		Central Ave: 10 Fwy to 1 st St

Proposed Plan Transportation Improvement Project List		
		Moderate Treatment
		Cesar Chavez Ave: Beaudry Ave to Spring St Moderate Plus Treatment
		Cesar Chavez Ave: Spring St to Mission Rd/LA River Comprehensive Treatment
		1 st St: 110 Fwy to Spring St Comprehensive Treatment
		1 st St: Spring St to Alameda St Moderate Treatment
		5 th St: 110 Fwy to Central Ave Moderate Plus Treatment
		6 th St: 110 Fwy to Mission Rd/LA River Moderate Plus Treatment
		9 th St: Main St to San Pedro St Moderate Treatment
		Olympic Blvd: San Pedro St to LA River Moderate Treatment
		Venice Blvd: 110 Fwy to Figueroa St Comprehensive Treatment
		Venice Blvd: Figueroa St to Main St Moderate Plus Treatment
Auto-Trip Reduction	Strategic Parking Program	Implement a parking program and update parking requirements to reflect mixed-use developments, shared parking opportunities, and parking needs at developments adjacent to major transit stations.
	Rideshare Toolkit	The Toolkit would develop an online Transportation Demand Management (TDM) Toolkit with information for transit users, cyclists, and pedestrians as well as ridesharing. It would include incentive programs for employers, schools, and residents. Additionally, it would be specific to City businesses, employees, and visitors and would integrate traveler information. It would also include carpooling/vanpooling and alternative work schedules.
	Transportation Demand Management (TDM) Program	The program would provide start-up costs for Transportation Management Organizations/Associations (TMOs/TMAs). It would also provide guidance and implementation of a TDM program.