

*The Economics of Land Use*



## Public Review Draft Report

# Citywide Transportation Development Impact Fee Nexus Study

Prepared for:

City of Sacramento

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# 1. INTRODUCTION AND SUMMARY

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## Background

This report establishes the City of Sacramento (City) Transportation Development Impact Fee (TDIF) Program. The City engaged Economic & Planning Systems, Inc. (EPS) to complete the TDIF Nexus Study (Nexus Study), documenting the requisite statutory findings to establish development impact fees on new residential and commercial development in the City.

This Nexus Study provides the City with the necessary technical documentation to support adoption of the TDIF Program, which will apply to future development in the City. After discussing the nexus between new development and the facilities needed to serve new development, this report calculates the maximum justifiable impact fees that may be levied for each land use based on the proportionate share of the total facility use that each land use represents.

## Purpose of the Nexus Study

As a development impact fee, the TDIF can be charged only to new development and must be based on the impact of new development on transportation facilities infrastructure. The purpose of this report is to establish the nexus (or reasonable relationship) between new development that occurs in the City and the need for additional public facility improvements as a result of this new development. This Nexus Study is based on the standards and improvements identified in the City of Sacramento 2035 General Plan that are incorporated into the future transportation network to serve SACOG's 2036 estimated development levels in the six-county SACOG region for the 2016 Metropolitan Transportation Plan/Sustainable Community Strategy (MTP/SCS).

This Nexus Study includes selected roadway improvements critical to increase citywide roadway system capacity to accommodate future development and does not address roadway structural damage and the requisite maintenance or reconstruction of those roadways resulting from development or other activity.

## Authority

This study serves as the basis for requiring development impact fees under Assembly Bill (AB) 1600 legislation, as codified by the Mitigation Fee Act (California Government Code Section 66000 et. seq.). This section of the Mitigation Fee Act sets forth the procedural requirements for establishing and collecting development impact fees. These procedures require that a reasonable relationship, or nexus, must exist between a governmental exaction and the purpose of the condition.

## Required Nexus Findings

- Identify the purpose of the fee.
- Identify how the fee is to be used.

- Determine how a reasonable relationship exists between the fee's use and the type of development project on which the fee is imposed.
- Determine how a reasonable relationship exists between the need for the public facility and the type of development project on which the fee is imposed.
- Demonstrate a reasonable relationship between the amount of the fee and the cost of the public facility attributable to the development on which the fee is imposed.

## Fee Program Applicability

Future development subject to the TDIF will include all development within the city limits, except as specifically exempted by the City.

The TDIF may be in addition to transportation impact fees where financing districts funding transportation improvements exist. Typically, finance plan areas are created to pay for locally serving infrastructure, including transportation facilities, needed to accommodate master-planned development. Where area finance plans include transportation improvements that provide citywide benefit and are included in the TDIF capital list, the TDIF will be reduced to account for the finance plan contribution toward these facilities. TDIF reductions will apply to the following subareas:

- Downtown
- North Natomas
- River District

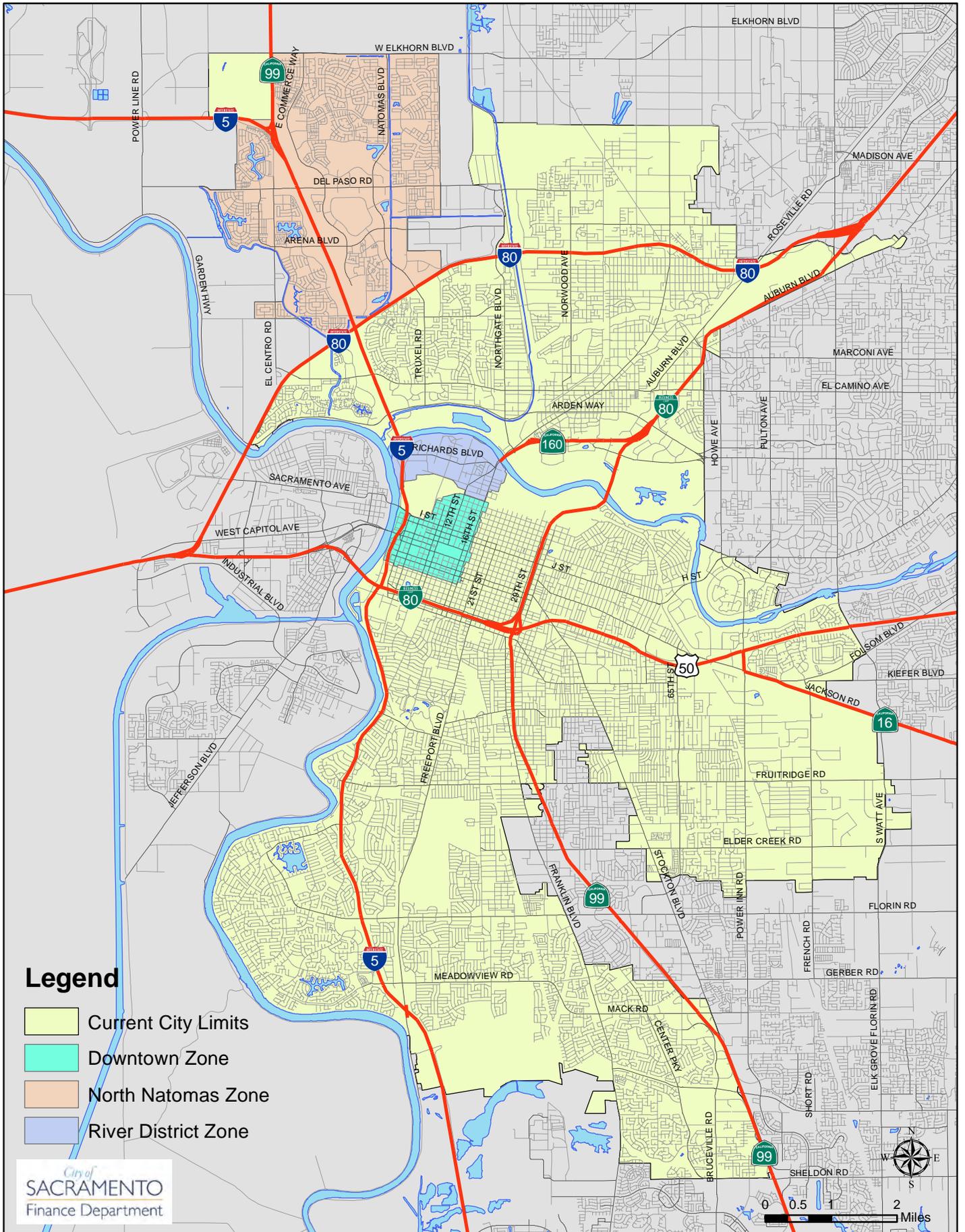
**Map 1-1** identifies the subareas eligible for credits against the TDIF.

## Summary of TDIF

As new development continues to occur in the City, additional transportation facilities will be required to serve future residents and employees. The transportation facility costs allocated to new development reflect transportation facility improvements that are needed to accommodate future development, while maintaining desired LOS and mobility standards. This Nexus Study computes future development's share of future transportation facility improvement costs based on planned transportation facilities or LOS standards as determined by the City. The TDIF will not fund the construction of transportation facility improvements required to cure existing LOS deficiencies. This study comprises the following transportation improvements benefiting new development in the City:

- Roadway improvements, including all "Complete Streets" elements (e.g., signals, street lighting, sidewalks, and bicycle facilities).
- Alternative mode facilities, including transit, bicycle, and pedestrian improvements.

# Map 1-1 TDIF Subareas



## **Nexus Methodology**

Development impact fees must be related to the demand for facilities generated by new development. Several findings regarding the demand and need for new facilities generated by new land uses are required to levy a fee on future development. The fee imposed must demonstrate rough proportionality to the demand generated, or benefit received, by each land use category on which the fee is imposed.

Transportation facility requirements used in this study are determined using a plan-based methodology, whereby costs of planned future roadway facilities are allocated to future development anticipated to benefit from those facilities.

## **Land Use Assumptions**

The future land uses used in this study represent the growth the City is anticipated to experience through buildout of the 2035 General Plan, based on land uses and growth projections developed as part of the 2035 General Plan. The City estimated existing and future development using an inventory of existing development and a projection of future uses, based on the 2035 General Plan land use designations. This Nexus Study includes only those land uses within the current city limits and policy area.

## **TDIF Facilities and Facilities Costs**

As previously mentioned, the TDIF comprises roadway improvements and alternative mode facilities improvements, including transit, bicycle, and pedestrian improvements. As shown in **Table 1-1**, the TDIF will fund approximately \$172.6 million in transportation facilities needed to serve new City development. TDIF facilities are described below and are detailed in **Chapter 3** of this Nexus Study.

### ***Roadway Improvements***

The City has identified specific roadway improvement projects that are eligible for TDIF funding. TDIF-eligible roadway improvement projects were selected based on improvements included in the City's adopted 2035 General Plan and identified in SACOG's 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) document as needed by 2036, as shown in **Map 1-2**. Projects were selected based on their ability to accommodate greater traffic volumes and address mobility connections needed as a result of new development.

Roadway improvements required to serve future development in the City were determined through traffic forecasts that reflect SACOG's 2036 estimated development levels in the six-county SACOG region generated by SACOG's SACSIM travel demand model, based on the projected number and origins/destinations of 2036 vehicle trips using the SACSIM regional travel demand model that SACOG used to prepare the 2016 MTP/SCS.

The TDIF includes only future development's share of each roadway improvement.

### ***Alternative Modes Improvements***

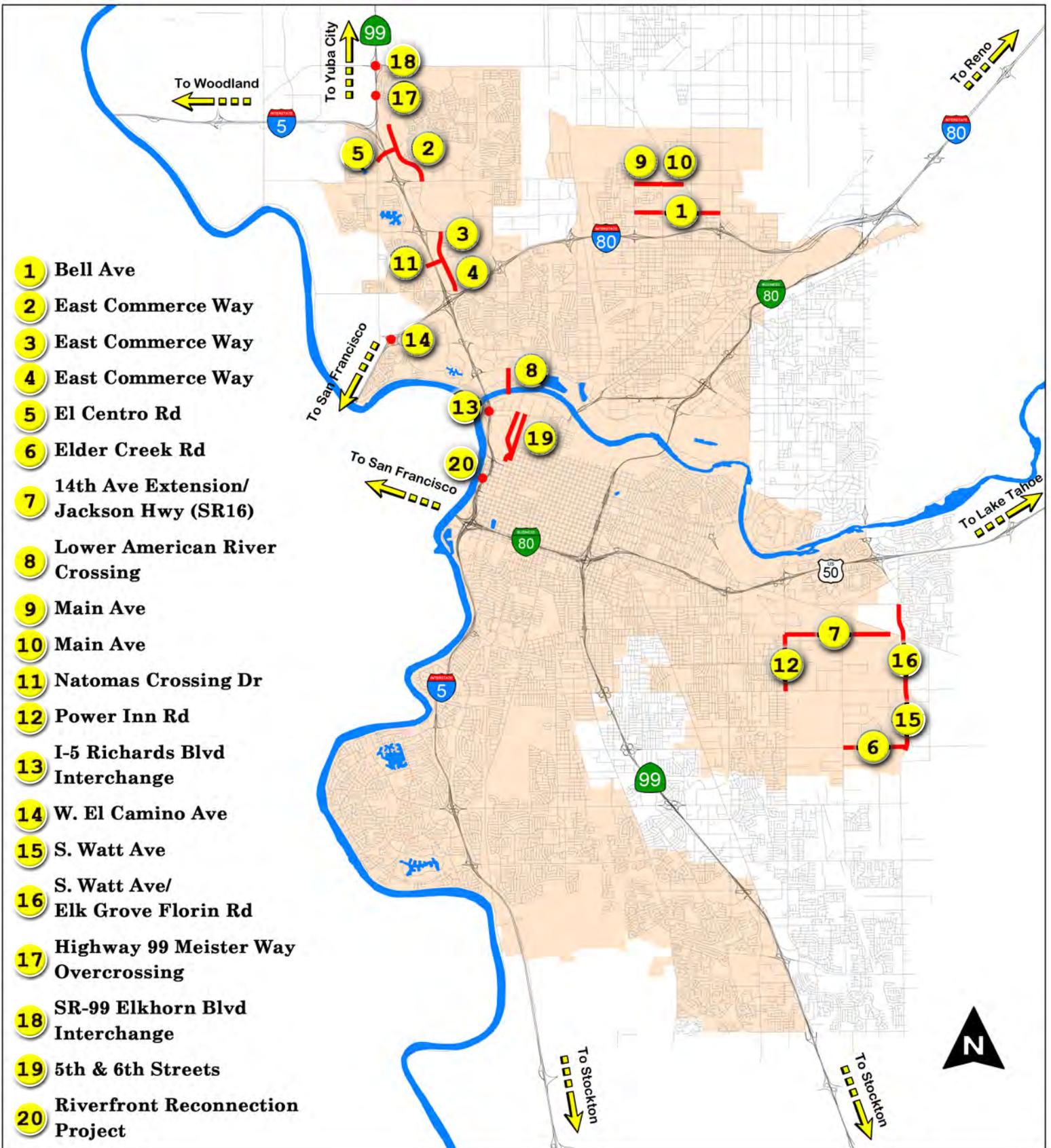
Alternative modes improvements, including transit, bicycle, and pedestrian facilities are a necessary component of the future transportation network to serve new growth in order to reduce vehicle miles travelled (VMT) in the City consistent with General Plan goals and to achieve

**Table 1-1  
City of Sacramento  
Transportation Development Impact Fee  
Summary of Transportation Improvement Costs**

TDIF Component	Assumption	Total Net TDIF Improvement Costs - New Development Share
<b>Roadway Projects</b>		<b>\$125,504,772</b>
<b>Programmatic Components</b>		
Grid 3.0 Projects		\$16,500,000
Alternative Modes	20% of Roadway Projects and Grid 3.0 Projects costs	\$30,549,875
<b>Subtotal Programmatic Components</b>		<b>\$47,049,875</b>
<b>Total</b>		<b>\$172,554,648</b>

*imp\_sum*

# Map 1-2 TDIF Projects



compliance with SB 743, SB 375, and air quality attainment goals. A cohesive transportation network that provides alternative options to vehicular travel also helps reduce congestion and increase capacity. The primary reason for the TDIF to fund alternative-mode transportation facilities is to reduce traffic volumes and improve mobility for new residents and employees. Transit, bicycle, and pedestrian facilities funded by the TDIF shall either increase multimodal capacity or make these systems more attractive to potential users.

### **TDIF Fee Calculation and Cost Allocation**

This Nexus Study converts PM Peak Hour trip data for different land uses to Trip Demand Factors to allocate future transportation facilities costs to future development. PM Peak Hour trip data provide a reasonable systemwide measure of the impact of new development on congestion and mobility. Vehicle trips directly are related to LOS and the need for capacity enhancements.

Trip generation rates are applied to development projections to allocate improvement costs by land use type. The trip generation rates used for this analysis are based on the "Trip Generation Manual, 7<sup>th</sup> Edition,"<sup>2</sup> prepared by the Institute of Transportation Engineers (ITE).

The following two adjustments were made to vehicle trip generation rates to produce Trip Demand Factors:

- Pass-by trips
- Trip lengths

Trip Demand Factors incorporate daily trip generation rates, relative shares of pass-by and diverted trips, and relative trip length by land use. Trip Demand Factors are calculated based on the following formula:

$$\text{Trip Demand Factor} = \text{PM Peak Hour Trip Rate} * \text{Total Trip Share Excluding Pass-by} * \text{Relative Trip Length}$$

The net TDIF costs were allocated proportionately to future development based on Trip Demand Factors for each land use category. For those subareas with overlapping transportation facilities funded by a subarea financing plan or other mechanisms, a credit against the TDIF was calculated by dividing the total improvement costs covered by a subarea financing mechanism by the total trips generated by that subarea.

### **Proposed TDIF by Subarea**

**Table 1-2** identifies the maximum justifiable TDIF by land use category and fee program subarea. The development impact fees presented in this Nexus Study are based on the best available cost estimates and land use information at this time. If costs change significantly in

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<sup>2</sup> City traffic engineering staff ran a comparison between ITE Trip Generation Manual, 7<sup>th</sup> Edition, that was used for this analysis and ITE Trip General Manual, 9<sup>th</sup> Edition, and the trip generation rates are comparable.

**Table 1-2  
City of Sacramento  
Transportation Development Impact Fee  
Summary of TDIF by Subarea**

Land Use	Total Base Fee [1] (Including Administration)				Transit Center Fee [2] (Including Administration)			
	Baseline	North Natomas	River District	Downtown	Baseline	North Natomas	River District	Downtown
<b>Residential Land Use Categories</b>								
	<i>per unit</i>				<i>per unit</i>			
Single-Family/Duplex Dwelling	\$2,152	\$450	\$916	\$2,031	\$1,614	\$337	\$687	\$1,523
Multi-Unit Dwelling	\$1,236	\$259	\$526	\$1,166	\$927	\$194	\$395	\$874
<b>Nonresidential Land Use Categories</b>								
	<i>per sq. ft.</i>				<i>per sq. ft.</i>			
Retail	\$3.23	\$0.67	\$1.38	\$3.05	\$2.42	\$0.50	\$1.03	\$2.29
Office	\$3.19	\$0.67	\$1.35	\$3.01	\$2.39	\$0.50	\$1.01	\$2.26
Hospital	\$3.07	\$0.65	\$1.30	\$2.90	\$2.30	\$0.49	\$0.97	\$2.17
Schools [3]	\$1.20	\$0.25	\$0.51	\$1.13	\$0.90	\$0.19	\$0.38	\$0.85
Church/Assembly	\$0.67	\$0.13	\$0.28	\$0.64	\$0.50	\$0.09	\$0.21	\$0.48
Industrial	\$2.19	\$0.45	\$0.93	\$2.06	\$1.64	\$0.34	\$0.70	\$1.54
Warehouse	\$1.04	\$0.22	\$0.44	\$0.99	\$0.78	\$0.17	\$0.33	\$0.74
	<i>per pump</i>				<i>per pump</i>			
Gas Station	\$3,236	\$668	\$1,378	\$3,054	\$2,427	\$501	\$1,034	\$2,291
	<i>per room</i>				<i>per room</i>			
Hotel/Motel	\$888	\$185	\$378	\$837	\$666	\$139	\$283	\$628

*summary*

[1] Base Fee and Transit Center Fee rates are mutually exclusive, not additive.

[2] Rate would apply to all new development located within one-half mile of a planned or existing light rail station. Projects meeting the criteria established by AB 3005 (Jones) would also be eligible for the Transit Center Fee.

[3] Includes Primary, Secondary, and Colleges and Universities.

either direction, or if other funding to construct the facilities becomes available, the fees should be adjusted accordingly. Periodically, the City will review improvement cost estimates and make necessary adjustments to the TDIF, including the application of an appropriate inflation adjustment factor to the fee, to reflect changes in project costs.

### **Streetcar Station Transit-Oriented Development Consideration**

State legislation codified the consideration of reduced automobile trips generated by transit-oriented development (TOD). AB 3005 (Jones) requires that development impact fee programs consider the lower rate of automobile trip generation for TOD. Based on traffic analysis showing reduced vehicle travel rates, this Nexus Study supports providing a fee reduction for development located within one-half mile of a Sacramento Regional Transit (RT) light rail station or otherwise able to demonstrate consistency with AB 3005 requirements. **Chapter 4** discusses in greater detail the trip demand and cost allocation factors assigned to all land use categories, including transit center development.

## **Organization of Report**

This report is divided into 6 chapters, including this Introduction and Executive Summary as **Chapter 1**:

- **Chapter 2** describes the methodology, land uses, and future development analyzed in this report.
- **Chapter 3** describes the transportation capital needs and costs to be funded by the TDIF.
- **Chapter 4** provides the cost allocation methodology and calculates the TDIF.
- **Chapter 5** provides the nexus findings for the development impact fees.
- **Chapter 6** describes how the TDIF will be implemented.

In addition, the following appendices are provided in this report:

- **Appendix A:** Land Use Summary, Resident, and Employee Population by Community Plan Area.
- **Appendix B:** DKS Memorandum: Cost Allocation of Roadway Improvements by Fee Program.
- **Appendix C:** Future Trip Demand by Subarea.

## 2. FEE METHODOLOGY, LAND USE AND GROWTH ASSUMPTIONS

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This Nexus Study presents a methodology that allocates the required roadway facility capital costs to land uses based on relative benefit received from such improvements. This chapter provides an overview of the nexus methodology and land use and growth assumptions used to derive the proposed TDIF, which funds transportation facility improvements needed to serve new development and establishes a nexus between the facilities to be funded and the benefit received by new development.

### Plan-Based Fee Method

This Nexus Study evaluates and allocates the costs of the roadway facilities required to serve future development in the City. The study uses a plan-based fee methodology whereby the costs of planned future roadway facilities are allocated to future development anticipated to benefit from those facilities. Roadway improvements included in the TDIF are those improvements generally identified in SACOG's 2016 MTP/SCS as "Road and Capacity" improvements needed to be constructed from 2021 to 2036 and as included in the City's 2035 General Plan to meet General Plan mobility standards. The list of roadway improvements included for funding through the TDIF focuses on those facilities that directly address projected new development, support economic development opportunities, provide a citywide benefit, increase capacity, and could impede opportunities for future growth if not constructed.

This Nexus Study provides a methodology to allocate the costs of future roadway facilities on a basis proportionate to each future land use category's relative benefit received from such roadway facilities. The Nexus Study estimates future development and evaluates the requisite improvements to serve the projected development. The City estimated the total future facility costs associated with these improvements, net of existing infrastructure deficiencies and applicable other funding sources. These net costs then were proportionately allocated to future development based on relative demand for roadway facilities as informed by the trip-generating characteristics of each land use category.

### TDIF Program Boundary

Future development subject to the TDIF will include all development within the city limits except as specifically exempted by the City. Fees in the subareas identified in **Chapter 1** will be reduced to reflect credits from existing or planned plan area financing programs to fund TDIF-eligible facilities needed to serve existing and future development in the plan area. **Map 1-1** in **Chapter 1** identifies the current city limits and the subareas eligible for credits against the TDIF.

### Land Use Assumptions

Estimates of future development are a significant variable used to determine facility requirements in this Nexus Study. The future land uses used in this Nexus Study represent the projected growth the City is anticipated to experience through buildout of the land uses identified in the 2035 General Plan.

The 2035 General Plan, adopted by the City Council on March 3, 2015, sets forth the land use policies for the City. The 2035 General Plan defines land use categories and identifies the conceptual land use configuration for lands in the City.

The remainder of this section summarizes the residential and nonresidential land use projections used to prepare this Nexus Study. To estimate existing and future land uses, the City conducted an inventory of existing development in the City, and projected future, or capacity, development, according to the land use designations set forth in planning documents (if available) or the 2035 General Plan. Existing and future development quantified in this chapter is limited to the existing City limits and does not include any development in the City's Sphere of Influence (SOI).

### Existing Development

Various methods were employed to quantify the existing residential units or nonresidential square footages for developed parcels. Current as of December 2012, the City established summaries of existing land uses using data originating from the Sacramento County Assessor, the City's GIS database and data, SACOG, and land use surveys conducted by City staff. City planning staff identified vacant land based on information from the Sacramento County Assessor's office, 2011 aerial photos, Google Earth, and field surveys.

Shown in **Table 2-1**, a total of 192,351 existing residential units are estimated in the City. Nearly 97.3 million square feet of nonresidential uses exist, including 38.4 million square feet of retail, 32.3 million square feet of office, and 26.5 million square feet of industrial development. The land use inventory excludes public land uses, which include government and education uses, because in most cases public land uses will not be subject to impact fees.

### Future Development

Growth projections in the 2035 General Plan were based on the SACOG 2035 MTP/SCS forecast, which provided projected single-family units<sup>2</sup> and multi-unit housing and employees by land use category. SACOG's MTP/SCS growth projections incorporated the "Preferred Blueprint Scenario" (Blueprint), a long-range vision for the SACOG Region that promotes compact, mixed-use development and more transit and transportation choices. The Blueprint anticipates smaller household sizes because of household formation, reproduction, and demographic trends.

Using the SACOG MTP/SCS growth projections and other City planning and policy documents (including approved and planned projects), projected new housing units and employees were allocated to the individual Community Plan Areas, based on a detailed analysis of priority investment, or opportunity, areas and associated development capacity and patterns. Employees were converted to nonresidential square footage based on the employee density factors documented in **Table 2-1**. Again, **Table 2-1** excludes public land uses.

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<sup>2</sup> For the purposes of this Nexus Study, single-family units include single-family homes and duplex units.

**Table 2-1**  
**City of Sacramento**  
**2015 Land Use Summary, Residents, and Employees - 2015 Citywide**

Land Use	Assumptions	Units/Sq. Ft.			Population/Employees		
		2012	Growth (2012-2035)	Buildout (2035)	2012	Growth (2012-2035)	Buildout (2035)
<b>Residential</b>	<i>Avg. PPH</i>	----- <i>units</i> -----			----- <i>residents</i> -----		
Single-Family/Duplex Dwelling	2.80	118,687	10,940	<b>129,627</b>	N/A	N/A	<b>N/A</b>
Multi-Unit Dwelling	2.10	73,664	57,417	<b>131,081</b>	N/A	N/A	<b>N/A</b>
<b>Subtotal Residential</b>	<b>2.47</b>	<b>192,351</b>	<b>68,357</b>	<b>260,708</b>	<b>475,400</b>	<b>165,000</b>	<b>640,400</b>
<b>Nonresidential</b>	<i>Sq. Ft./Emp.</i>	----- <i>sq. ft.</i> -----			----- <i>employees</i> -----		
Retail	400	38,396,580	11,991,786	<b>50,388,366</b>	95,991	29,979	<b>125,971</b>
Office	250	32,342,247	11,681,115	<b>44,023,362</b>	129,369	46,724	<b>176,093</b>
Industrial	850	26,530,268	2,612,480	<b>29,142,748</b>	31,212	3,074	<b>34,286</b>
<b>Subtotal Nonresidential</b>		<b>97,269,095</b>	<b>26,285,381</b>	<b>123,554,476</b>	<b>256,573</b>	<b>79,777</b>	<b>336,350</b>

"growth\_citywide"

Source: City of Sacramento General Plan Update.

Future citywide development therefore includes an estimated 68,400 residential units and 26.3 million square feet of nonresidential uses. Nonresidential development comprises roughly 12.0 million square feet of retail development, 11.7 million square feet of office development, and 2.6 million square feet of industrial uses.

As discussed above, estimates of future development in this report exclude lands included in the City's proposed SOI and other urban study areas. Should additional land be annexed into the City, additional land use planning, demand, and development projections would be required to determine additional facilities required to serve these development areas.

**Table 2-1** shows the existing development and projected development estimates through buildout of the 2035 General Plan for each identified land use category. **Tables A-1** through **A-8** in **Appendix A** show existing development and projected development estimates by subarea. These tables detail development estimates and growth projections for the following subareas:

- North Natomas
- Delta Shores
- Greenbriar Planned Unit Development (PUD)
- Downtown
- Railyards Specific Plan
- 65<sup>th</sup> Street Area
- River District Specific Plan
- Remaining City Areas

### Fee Program Land Use Categories

Land use categories in this Nexus Study have been defined to distinguish between various transportation facilities demand characteristics of different development types. Based on data available and the methodology used, projected development and facility requirements for future land uses are based on a limited set of land use categories and the associated travel demand for new development. Using the trip demand factor described in **Chapter 4**, this Nexus Study establishes impact fees for a more expansive list of residential and nonresidential land use categories:

- Residential Land Use Categories (per unit):
  - Single-Family Residential
  - Multi-Unit Residential
- Nonresidential Land Use Categories (per square foot of building area):
  - Retail
  - Office
  - Hospital
  - Schools<sup>3</sup>
  - Church/Assembly
  - Industrial
  - Warehouse
- Other:
  - Gas Station (per pump)
  - Hotel/Motel (per room)

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<sup>3</sup> Includes Primary and Secondary Schools, Colleges, and Universities.

### 3. *TDIF-ELIGIBLE PROJECTS, PROJECT COST ESTIMATES, AND NEW GROWTH SHARE OF COSTS*

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This chapter summarizes the transportation projects included in the TDIF Program and evaluates new development's proportional share of costs. In addition to identifying included transportation improvements, this chapter identifies and summarizes outside funding sources and other adjustments to the facilities costs. The net transportation improvement cost estimates, adjusted for other funding sources and other adjustments, is the basis of the TDIF calculations presented in **Chapter 4**.

The 2035 General Plan identifies major roadways and facilities for alternative modes of transportation that are needed to accommodate projected travel demand. Capital facilities identified for the TDIF do not include the ultimate transportation improvements needed to accommodate full buildout of the 2035 General Plan. TDIF facilities include approximately \$410.3 million in major roadway capacity increasing improvements, as identified in the 2016 update of SACOG's MTP/SCS that will be needed by 2036 to accommodate projected growth, with an emphasis on those facilities that promote economic development. In addition, the 2035 General Plan provides for development and transportation patterns that support reduced vehicle miles traveled by promoting access to alternative modes of transportation, including pedestrian, bicycle, and transit. Investments in additional facilities to support these modes of transportation also are a critical component needed in connection with future growth. These facilities are determined by the City's Bicycle Master Plan, Pedestrian Master Plan, and various policy documents related to transit systems.

#### **Project-Specific and Programmatic Facilities**

The use of TDIF funds is either project specific or programmatic. Project-specific facilities include roadway improvements, as identified and described in **Table 3-1**. Funds allocated to roadway improvements will be prioritized by the City as it plans for growth. Programmatic facilities to serve future growth needs include the Downtown Transportation Study (Grid 3.0) projects and alternative mode facilities.

Because opportunities for increased vehicle travel capacity in the Central City are limited, the improvements to accommodate future growth focus on improving opportunities for alternative modes of travel in order to provide needed additional capacity. The City's Grid 3.0 Plan identifies bicycle, pedestrian, transit, and other efficiency improvements to support the increased need for travel to, from, and within the Central City, as shown in **Maps 3-1** through **3-4**.

Alternative mode facilities include bicycle/pedestrian and transit facilities. Bicycle/pedestrian projects eligible for TDIF funding will be addressed on an annual basis in connection with programming and adopting the City's Capital Improvement Program. Bicycle/pedestrian improvements eligibility generally will be based on inclusion in the City's Pedestrian or Bicycle Master Plan, level of citywide significance and connectivity, and proportionately based on new development's share of the needs identified in the City's master plans.

**Table 3-1  
City of Sacramento  
Transportation Development Impact Fee  
TDIF Roadway Project Descriptions**

Map Number [1]	Project	From	To	Description	Subarea Funding Overlap
1	Bell Ave. Widening	Norwood Ave.	Raley Blvd.	Widen to 3 lanes	-
2	East Commerce Way	Club Center Dr.	Del Paso Rd.	Widen to 6 lanes	North Natomas
3	East Commerce Way	Arena Blvd.	Natomas Crossing Dr.	Widen to 6 lanes	North Natomas
4	East Commerce Way	Natomas Crossing Dr.	San Juan Rd.	Extend as a 4 lane road	North Natomas
5	El Centro Rd.	Del Paso Rd.	Bayou Rd.	New overcrossing	North Natomas
6	Elder Creek Rd.	Florin Perkins Rd.	S Watt Ave.	Widen to 4 lanes	-
7	14th Ave./Jackson Hwy (SR16)	Power Inn Rd.	S. Watt Ave.	Road Realignment- 4 lanes	-
8	Lower American River Crossing	-	-	New all-modal bridge between downtown and South Natomas.	-
9	Main Ave.	Norwood Ave.	Rio Linda Blvd.	Widen to 4 lanes	-
10	Main Ave.	Rio Linda Blvd.	Marysville Blvd.	2 lane roadway extension	-
11	Natomas Crossing Dr.	-	-	New overcrossing at I-5	North Natomas
12	Power Inn Rd.	Fruitridge Rd.	14th Ave.	Widen to 6 lanes	-
13	Richards Blvd./I-5 Interchange	-	-	Reconstruct Interchange	River District
14	West El Camino Ave./I-80 Interchange	-	-	Expand interchange to widen West El Camino Ave. to 6 lanes	North Natomas
15	South Watt Ave.	Elder Creek Rd.	Fruitridge Rd.	Widen to 6 lanes	-
16	South Watt Ave.	Fruitridge Rd.	Kiefer Blvd.	Widen to 6 lanes	-
17	Meister Way	-	-	New overcrossing at Hwy 99	-
18	SR 99/Elkhorn Blvd. Interchange	-	-	Expand interchange to accommodate the widening of Elkhorn Blvd. from 2 to 6 lanes	North Natomas
19	5th and 6th Streets	-	-	Extensions to Richards Blvd.	Downtown/River District
20	Riverfront Reconnection Project	-	-	Construct bridge across I-5; Reconfigure Capitol Mall to improve access to Old Sacramento	-

Source: City of Sacramento.

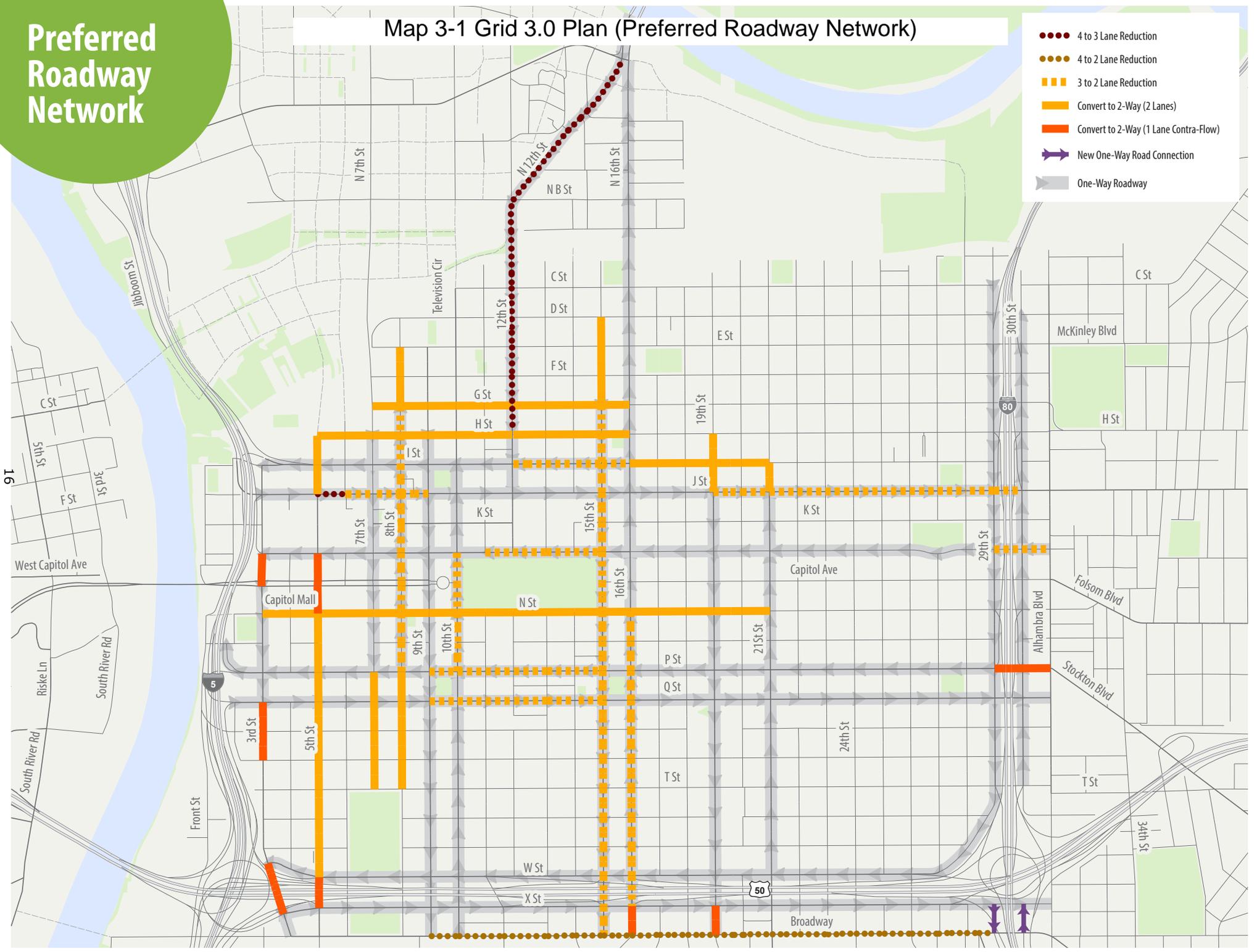
[1] See Map 1-2 for project locations.

"imp\_descrip"

# Preferred Roadway Network

## Map 3-1 Grid 3.0 Plan (Preferred Roadway Network)

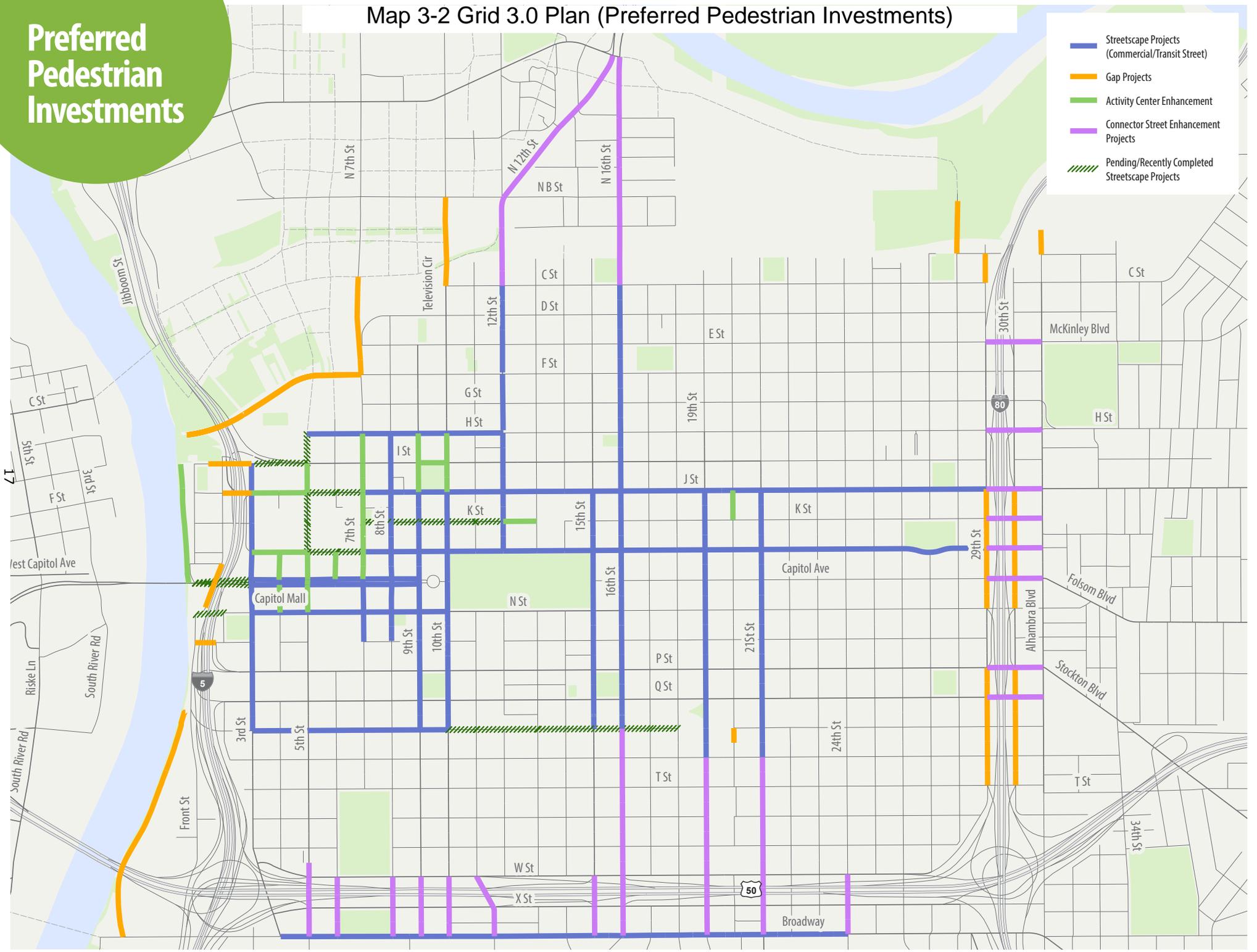
- 4 to 3 Lane Reduction
- 4 to 2 Lane Reduction
- 3 to 2 Lane Reduction
- Convert to 2-Way (2 Lanes)
- Convert to 2-Way (1 Lane Contra-Flow)
- ↔ New One-Way Road Connection
- One-Way Roadway



# Preferred Pedestrian Investments

## Map 3-2 Grid 3.0 Plan (Preferred Pedestrian Investments)

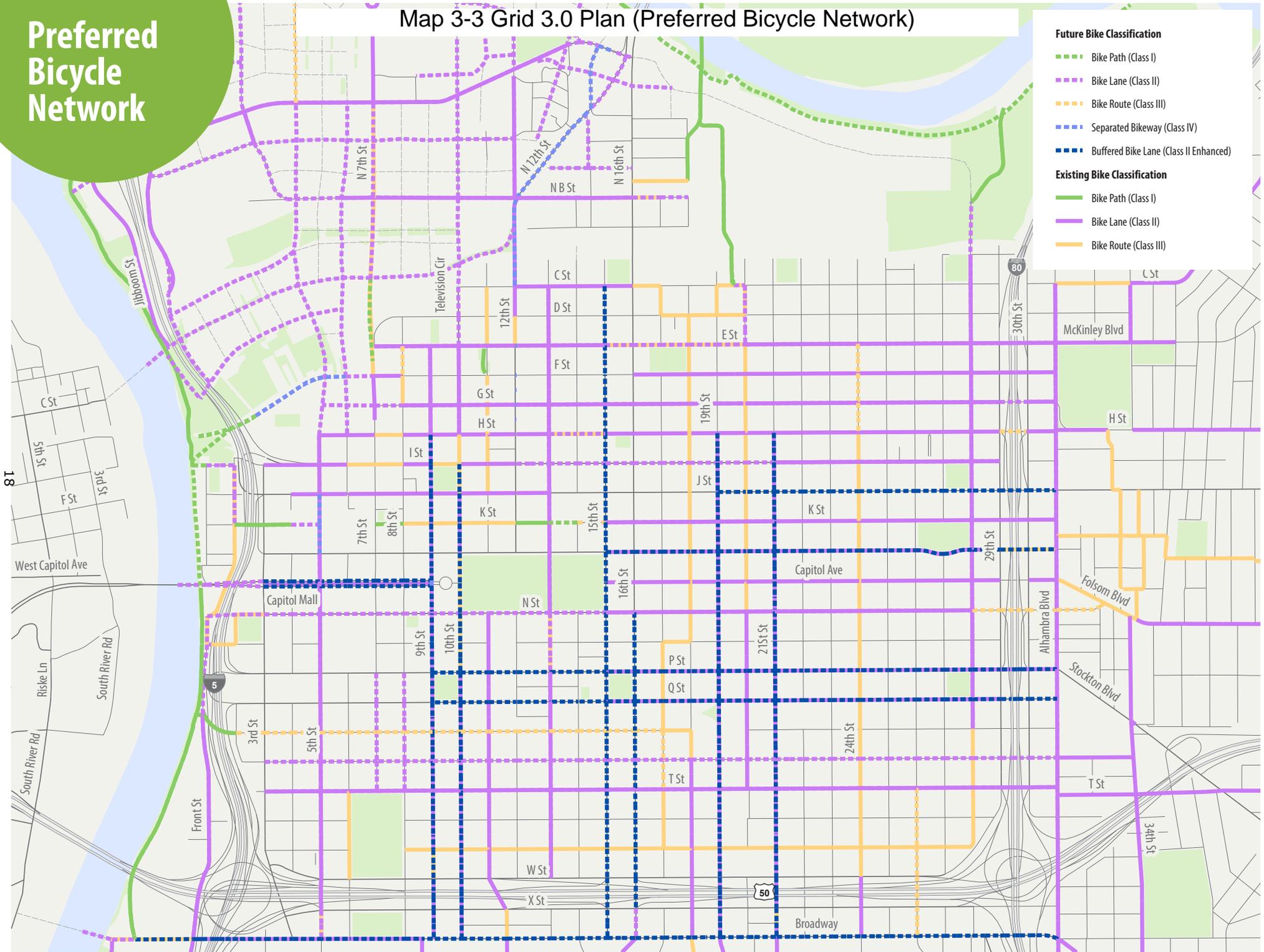
- Streetscape Projects (Commercial/Transit Street)
- Gap Projects
- Activity Center Enhancement
- Connector Street Enhancement Projects
- Pending/Recently Completed Streetscape Projects



# Preferred Bicycle Network

Map 3-3 Grid 3.0 Plan (Preferred Bicycle Network)

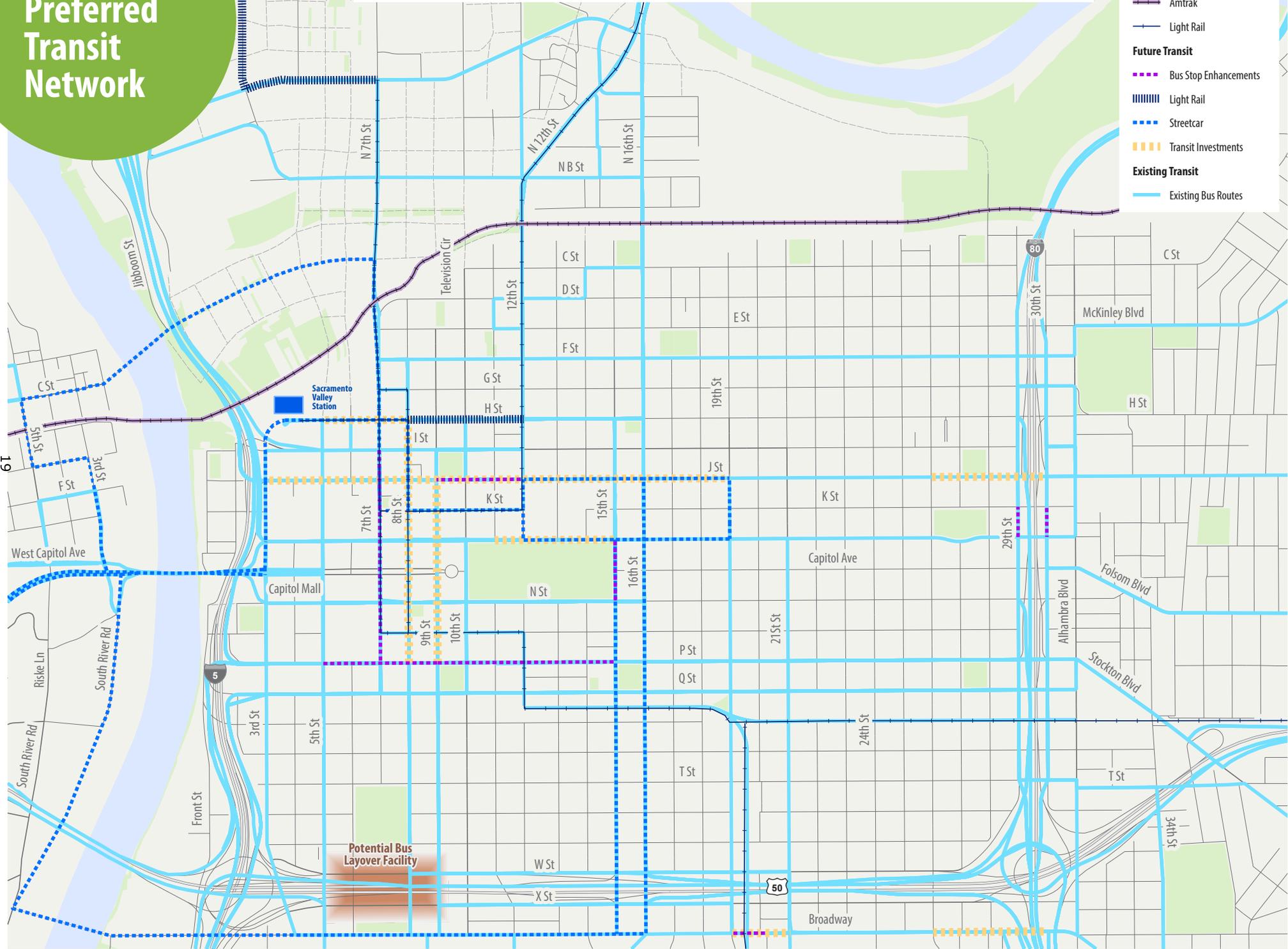
- Future Bike Classification**
- Bike Path (Class I)
  - Bike Lane (Class II)
  - Bike Route (Class III)
  - Separated Bikeway (Class IV)
  - Buffered Bike Lane (Class II Enhanced)
- Existing Bike Classification**
- Bike Path (Class I)
  - Bike Lane (Class II)
  - Bike Route (Class III)



# Map 3-4 Grid 3.0 Plan (Preferred Transit Network)

## Preferred Transit Network

- Amtrak
- Light Rail
- Future Transit**
  - Bus Stop Enhancements
  - Light Rail
  - Streetcar
  - Transit Investments
- Existing Transit**
  - Existing Bus Routes



The City's Pedestrian Master Plan identifies programmatic areas with pedestrian access deficiencies. Based on patterns of new development, priorities for funding pedestrian and bicycle projects supported by TDIF funding will be determined. The Bicycle Master Plan map is shown in **Map 3-5**, for illustrative purposes. The Bicycle Master Plan is currently being updated.

### **Roadway Improvements**

Roadway improvement projects comprise the following types of improvements:

- New major roadways
- Roadway extensions
- Interchanges
- Bridges/overpasses
- Widening of existing roadways

The City's Complete Streets policy dictates that roadway improvements incorporate all travel modes. Elements of many of the candidate roadway projects contain sidewalk, crosswalk, and signal features promoting transportation safety and travel; bike lane and signal features promoting cyclist safety and travel; transit access in the form of light rail crossings, curb, and lane improvements to accommodate bus stops and light rail platforms and parking areas; and intersection improvements that may include signalization. These improvements are related to vehicle trips from new development either because they are a necessary component of any roadway project for public health and safety (e.g., sidewalks) or because they provide an alternative transportation option to reduce VMT and provide for additional vehicle capacity.

Candidate roadway improvement projects were screened by the City for their relation to growth and citywide significance before being considered for inclusion in the TDIF Program.

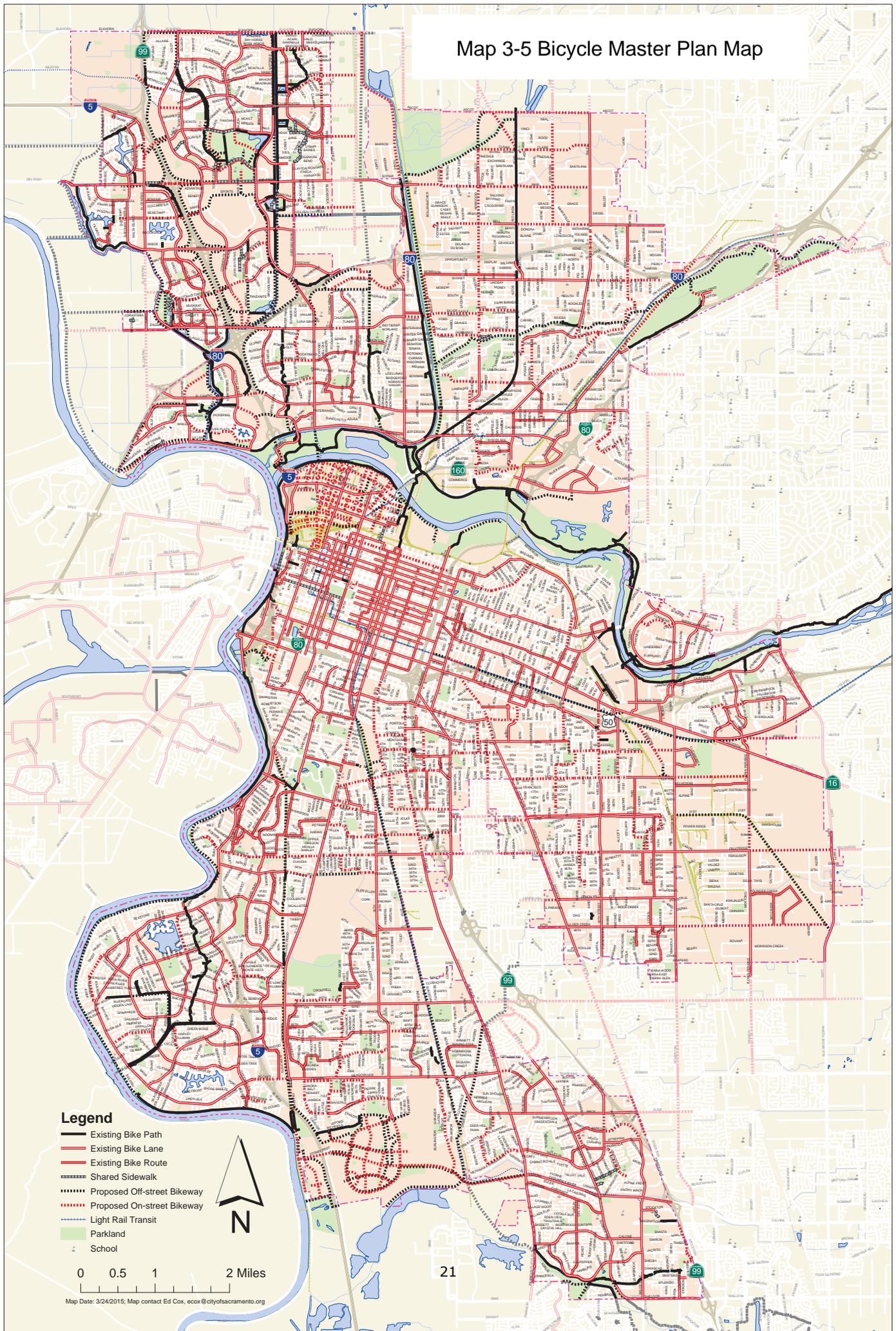
#### ***TDIF-Eligible Roadway Improvement Projects***

Roadway improvements included in the TDIF are those improvements generally identified in SACOG's 2016 MTP/SCS as Road and Capacity improvements needed to be constructed from 2021 to 2036 and as included in the City's 2035 General Plan to meet General Plan mobility standards.

SACOG's 2016 MTP/SCS identifies a total of \$1.8 billion in transportation improvements in the City, including those that will provide road and highway capacity, regional bike and pedestrian projects, major rehabilitation, and operations and safety improvements (e.g., streetscapes, signal upgrades). While all facilities identified in SACOG's 2016 MTP/SCS also will provide benefit to future growth, the list included for funding through the TDIF focuses on those facilities that directly address projected new development, support economic development opportunities, provide a citywide benefit, increase capacity, and could impede opportunities for future growth if not constructed.

Of the total City projects included in SACOG's 2016 MTP/SCS, \$777 million in road and highway capacity improvements are identified to be needed by 2036. Those projects where funding already has been identified, or that appear to depend on annexations, are not included on the list

# Map 3-5 Bicycle Master Plan Map



## Legend

- Existing Bike Path
- Existing Bike Lane
- Existing Bike Route
- Shared Sidewalk
- Proposed Off-street Bikeway
- Proposed On-street Bikeway
- Light Rail Transit
- Parkland
- School

0 0.5 1 2 Miles

Map Date: 3/24/2015; Map contact Ed Cox, [ecox@cityofsacramento.org](mailto:ecox@cityofsacramento.org)

to be funded by the TDIF. Some roadway segments identified in SACOG's 2016 MTP/SCS as needed by 2036 were not included in the TDIF list of projects at this time to further assess whether those may be needed by 2036.

In this Nexus Study, the City identified 20 roadway projects of citywide importance for TDIF funding. The total gross cost for these projects is approximately \$410.3 million, as shown in **Table 3-2**. Only a portion of this gross cost is attributable to future development, discussed further later in this chapter. This list of eligible roadway improvement projects does not provide a prioritized ranking on whether the project is funded first or last from TDIF revenues. Funds allocated to roadway improvements will be prioritized by the City as it plans for growth.

### **Downtown Transportation Study (Grid 3.0) Projects**

Proposed residential and non-residential development growth will result in increased trips to, from, and within the Central City. With limited opportunities to increase traffic capacity in the established roadway system (the "grid"), to accommodate future growth, the transportation network needs to efficiently accommodate all modes of travel, and encourage alternative travel modes to reduce the need for automobile trips and create increased capacity for new trips. The City recently completed a study of Downtown Transportation Improvements (Grid 3.0) that analyzed a wide range of projects and programs to improve circulation and access for all travel modes on the streets in the downtown grid.

While in the past roadway systems prioritized automobile travel, Grid 3.0 is a plan for the Central City's transportation grid that effectively accommodates more trips using multiple travel modes.

Elements of Grid 3.0 include:

- Conversion of additional one-way streets to two-way operations or from 3 lanes in one direction to 2 lanes in one direction.
- Improving the bicycle network with additional on-street bike lanes.
- Enhancing the pedestrian network through sidewalk gap closures and design features.
- Coordinating transit network expansion, including streetcars and light rail.
- Improving bus operations, including designation of transit priority streets, potentially with some exclusive bus lanes.
- Managing travel and parking demand.

The total estimated costs of the Grid 3.0 projects are approximately \$165.0 million. New development's share of this cost is discussed further in the following section.

### **Alternative Modes Improvements**

The primary reason for the TDIF to fund alternative mode transportation facilities is to reduce traffic volumes and improve mobility for new residents and employees. These alternative mode transportation facilities include transit, bicycle, and pedestrian improvements.

**Table 3-2  
City of Sacramento  
Transportation Development Impact Fee  
TDIF Roadway Improvement Costs**

Preliminary TDIF Improvement Costs:  
Subject to Change

Item	Total Project Cost	Percent Use [1]			Total	Existing & Future Pass-Thru Share	New Development Share	Adjustments [2]	Other Funding [3]	Net TDIF Costs	Contributions to be Credited Against TDIF [4]		
		Existing Uses	Future Pass-Thru	Future City Growth							NNFP	River District	Downtown
<b>Roadway Projects</b>													
Bell Ave. Widening (Norwood Ave. to Raley Blvd.)	\$20,000,000	69.0%	1.8%	29.2%	100.0%	\$14,154,592	\$5,845,408	\$0	\$0	\$5,845,408	\$0	\$0	\$0
East Commerce Way Widening (Club Center Dr. to Del Paso Rd.)	\$3,787,699	49.6%	0.0%	50.4%	100.0%	\$1,879,418	\$1,908,281	\$0	\$0	\$1,908,281	\$1,908,281	\$0	\$0
East Commerce Way Widening (Arena Blvd. to Natomas Crossing Dr.)	\$1,251,294	54.0%	0.0%	46.0%	100.0%	\$676,062	\$575,232	\$0	\$0	\$575,232	\$575,232	\$0	\$0
East Commerce Way Extension (Natomas Crossing Dr. to San Juan Rd.)	\$3,671,780	62.1%	0.0%	37.9%	100.0%	\$2,280,616	\$1,391,164	\$0	\$0	\$1,391,164	\$1,391,164	\$0	\$0
El Centro Road Overcrossing	\$11,900,084	53.3%	0.0%	46.7%	100.0%	\$6,342,269	\$5,557,815	\$0	\$0	\$5,557,815	\$5,557,815	\$0	\$0
Elder Creek Road Widening (Florin Perkins Rd. to S. Watt Ave.)	\$10,000,000	66.3%	3.3%	30.3%	100.0%	\$6,966,400	\$3,033,600	\$0	\$0	\$3,033,600	\$0	\$0	\$0
14th Ave./Jackson Hwy (SR16) Road Realignment (Power Inn Rd. to S. Watt Ave.)	\$30,000,000	69.3%	0.6%	30.1%	100.0%	\$20,975,100	\$9,024,900	\$0	\$0	\$9,024,900	\$0	\$0	\$0
Lower American River Crossing	\$40,000,000	77.0%	0.0%	23.0%	100.0%	\$30,794,400	\$9,205,600	\$0	\$0	\$9,205,600	\$0	\$0	\$0
Main Ave Widening (Norwood Ave. to Rio Linda Blvd.)	\$10,500,000	59.7%	4.1%	36.2%	100.0%	\$6,699,735	\$3,800,265	\$0	\$0	\$3,800,265	\$0	\$0	\$0
Main Ave Extension (Rio Linda Blvd. to Marysville Blvd.)	\$9,000,000	52.2%	3.9%	43.9%	100.0%	\$5,052,510	\$3,947,490	\$0	\$0	\$3,947,490	\$0	\$0	\$0
Natomas Crossing Dr. Overcrossing	\$11,900,084	60.0%	0.0%	40.0%	100.0%	\$7,138,265	\$4,761,819	\$0	\$0	\$4,761,819	\$4,761,819	\$0	\$0
Power Inn Road Widening (Fruitridge Rd. to 14th Ave.)	\$30,000,000	76.6%	2.7%	20.7%	100.0%	\$23,792,100	\$6,207,900	\$0	\$0	\$6,207,900	\$0	\$0	\$0
Richards/I-5 Interchange	\$89,000,000	59.1%	3.4%	37.5%	100.0%	\$55,611,650	\$33,388,350	\$0	\$10,000,000	\$23,388,350	\$0	\$8,200,000	\$0
West El Camino Ave/I-80 Interchange	\$30,000,000	77.5%	0.4%	22.2%	100.0%	\$23,346,000	\$6,654,000	\$0	\$0	\$6,654,000	\$6,654,000	\$0	\$0
South Watt Ave Widening (Elder Creek Rd. to Fruitridge Rd.)	\$20,000,000	64.5%	7.9%	27.6%	100.0%	\$14,475,800	\$5,524,200	\$0	\$0	\$5,524,200	\$0	\$0	\$0
South Watt Ave Widening (Fruitridge Rd. to Kiefer Blvd.)	\$10,000,000	60.7%	7.0%	32.3%	100.0%	\$6,770,900	\$3,229,100	\$0	\$0	\$3,229,100	\$0	\$0	\$0
Hwy. 99 Meister Way Overcrossing	\$8,195,118	31.8%	0.0%	68.2%	100.0%	\$2,604,982	\$5,590,136	\$0	\$0	\$5,590,136	\$0	\$0	\$0
SR 99/Elkhorn Blvd Interchange	\$11,085,277	60.5%	14.7%	24.8%	100.0%	\$8,340,673	\$2,744,604	\$744,604	\$0	\$2,000,000	\$2,000,000	\$0	\$0
5th and 6th Streets	\$30,000,000	32.8%	0.0%	67.2%	100.0%	\$9,841,927	\$20,158,073	\$0	\$0	\$20,158,073	\$0	\$3,526,747	\$622,987
Riverfront Reconnection Project	\$30,000,000	87.5%	0.1%	12.3%	100.0%	\$26,298,560	\$3,701,440	\$0	\$0	\$3,701,440	\$0	\$0	\$0
<b>Subtotal Roadway Projects</b>	<b>\$410,291,336</b>					<b>\$274,041,960</b>	<b>\$136,249,376</b>	<b>\$744,604</b>	<b>\$10,000,000</b>	<b>\$125,504,772</b>	<b>\$22,848,311</b>	<b>\$11,726,747</b>	<b>\$622,987</b>
<b>Programmatic Projects</b>													
Grid 3.0 Projects	\$165,000,000	90.0%	0.0%	10.0%	100.0%	\$148,500,000	\$16,500,000	\$0	\$0	\$16,500,000	\$0	\$0	\$0
Alternative Modes (20% of Roadway Project and Grid 3.0 Projects Costs)							\$30,549,875	\$0	\$0	\$30,549,875	\$0	\$0	\$0
<b>Subtotal Programmatic Projects</b>	<b>\$165,000,000</b>						<b>\$47,049,875</b>			<b>\$47,049,875</b>	<b>\$22,848,311</b>	<b>\$11,726,747</b>	<b>\$622,987</b>
<b>Total Net TDIF Costs</b>										<b>\$172,554,648</b>	<b>\$22,848,311</b>	<b>\$11,726,747</b>	<b>\$622,987</b>

Source: City of Sacramento.

"imp\_costs"

[1] The "percent use" estimates are based on a future development scenario that reflects SACOG's 2036 estimated development levels in the six-county SACOG region for the 2016 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS). The percent use estimates are calculated by tracking the projected number and origins/destinations of 2036 vehicle trips using the SACSIM regional travel demand model that SACOG used to prepare the 2016 MTP/SCS. The percent use categories are described below.  
Existing Uses: Vehicle trips that come from existing development within or outside the City of Sacramento. Future Pass Thru: Vehicle trips from future development where neither end of trip is within the City of Sacramento. Future City Growth: Vehicle trips for future development (through 2036) where either end of the trip is within the City of Sacramento.  
 [2] Adjustment used to reconcile estimated TDIF costs with lower costs included in the NNFP.  
 [3] Includes \$10,000,000 for the Richards Boulevard/I-5 Interchange from Measure A Expenditure Plan.  
 [4] Subarea costs reflect costs included in Area Finance Plans toward facilities in the TDIF. TDIF fees will be reduced in these areas accordingly to account for these contributions.

Transit facilities include extensions of existing transit systems, new systems to serve high growth and TOD areas, and intermodal facilities that interconnect multiple modes of travel. Each transit improvement would alleviate vehicle congestion on TDIF-funded roadways by reducing traffic volumes and improving mobility for new residents and employees. To ensure a reasonable relationship to new development, all TDIF projects must meet one or more of the following criteria:

- Provide additional capacity to move people who otherwise would use the roadways.
- Help maintain existing headways for bus and light rail routes so transit services keep pace with growth.
- Create capacity to move people to activity centers such as community centers, colleges, universities, hospitals, medical offices, parks, athletic facilities, government buildings, employment centers, and major transportation facilities such as airports.

Bicycle- and pedestrian-supportive facilities funded by TDIF revenues shall be constrained to projects that increase bicycle and pedestrian capacity, improve access to or use of alternative modes, or make these systems more attractive to potential users by meeting one or more of the following criteria:

- Fill gaps in existing, planned, or proposed citywide interconnected off-street bicycle or on- and off-street pedestrian routes.
- Enable pedestrians to access transit by providing a route to light or heavy rail station platforms, bus stops, or streets with bus stops.
- Provide bicycle or pedestrian access across barriers such as arterial roads, highways, freeways, rivers, canals, creeks, and railroads.
- Improve the time convenience of walking or bicycling with shortcuts or special bicycle/pedestrian boulevards.
- Improve the safety and security of walking or bicycling.
- Provide an aesthetic, pleasant, or more comfortable walking or bicycling experience.
- Provide capital facilities to support bicycling, such as storage, parking, bike stations, racks, or lockers.
- City-sponsored transit improvements, such as streetcar, bus-only travel lanes, improvements to the Sacramento Intermodal Transit Station, or other supportive actions.

The City will identify and fund TDIF bicycle/pedestrian projects included in the City's Bicycle Master Plan and Pedestrian Master Plan. TDIF-funded bicycle/pedestrian projects will be programmed annually as part of the City Council-approved Capital Improvement Plan, subject to the criteria listed above. Alternative modes facilities costs included in the TDIF are described later in this chapter.

## New Growth Share of TDIF Projects Costs

This Nexus Study evaluates and allocates the costs of the improvements required to serve future development in the City. In addition to accommodating future development, some of the selected roadway improvements for the TDIF also would help improve some existing deficiencies or provide mobility benefits to existing development. Therefore, the nexus for new development's share of the cost of roadway improvements in the TDIF will be based on the estimated percentage of the total future traffic volume using each roadway improvement that stems from vehicle trips generated by future development in the City. As shown in **Table 3-2**, the share of costs for new development in the City is approximately \$172.6 million. The share of the costs from other traffic (i.e., traffic generated by existing development or non-City growth) will need to be funded by sources other than the TDIF.

### New Growth Share of Roadway Costs

The City and traffic consultant DKS Associates (DKS) estimated new development's share of costs in the City for the 20 roadway projects using a "Percent Use" approach, as shown on **Table 3-2**, and further described in a memorandum produced by DKS and included as **Appendix B** of this Nexus Study.

The Percent Use estimates are based on a future development scenario that reflects SACOG's 2036 estimated development levels in the six-county SACOG region for the 2016 MTP/SCS. The Percent Use estimates are calculated by tracking the projected number and origins/destinations of 2036 vehicle trips using the SACSIM regional travel demand model that SACOG used to prepare the 2016 MTP/SCS.

The SACSIM model was used to estimate the number of weekday vehicle trips on each of the 20 roadway improvement projects that fit into the Percent Use categories listed below:

- **Existing Uses**—Vehicle trips that come from existing development in or outside the City.
- **Future Pass-Through**—Vehicle trips from future development (existing through 2036) where neither end of the trip is in the City.
- **Future City Growth**—Vehicle trips for future development where either end of the trip is in the City.

As shown in **Table 3-2**, the percentage of costs allocated to Future City Growth for roadway improvement projects ranges from approximately 12 percent to 68 percent. As previously mentioned, costs from existing uses and future pass-through trips will need to be funded by sources other than the TDIF.

### New Growth Share of Costs for Grid 3.0 Projects

New development throughout the City will increase use of transportation facilities in the Central City. Based on the Grid 3.0 Plan, published in August 2016, the Plan includes about \$165.0 million in improvements to the pedestrian, bicycle, transit, and roadway facilities in the Central City. Based on the SACSIM travel model, about 10 percent of total 2036 trips would come from growth in the city outside the Central City. Future development is therefore assigned a 10 percent share of costs of Grid 3.0 projects — approximately \$16.5 million.

## **New Growth Share of Costs for Alternative Modes Improvement Projects**

The 2035 General Plan calls for a multimodal transportation system. Increasing opportunities for trips by walking, bicycling, or using transit reduces the demand for vehicular travel. Substantial investment in facilities that allow for travel through these alternative modes is needed to serve projected growth. Based on current City spending and regional investments, at least 20 percent of future transportation facilities will need to be investments in alternative modes. Future development share of costs for alternative modes improvement projects is therefore approximately \$30.5 million.

## **Other Funding Sources**

The TDIF is based on the assumption that other transportation funding sources will be used to support TDIF improvements. These other transportation funding sources are described below.

### **Federal and State Sources**

Outside of master-planned areas, where infrastructure typically is built in conjunction with new development, the City heavily relies on federal transportation funds to achieve its major transportation priorities. The City will continue to pursue federal transportation funds and grants. These applications must be prepared on a project-specific basis and rely on the City having available local funds to complete preliminary work and to provide local match. Federal funds will be expected to be used where possible to help fund the share of TDIF improvements related to existing deficiencies and where possible to support TDIF project needs to support the program.

In the past, State sources of funding have been an important component for funding the City's infrastructure. In the early 2000s, the State issued a \$200 billion infrastructure funding bond that was used to support local infrastructure projects. Historically, the State also has supported regional funding through the State Transportation Implementation Plan (STIP). At this time, no major new statewide infrastructure bonds are anticipated, and the State had ceased funding local or regional projects in the STIP for the foreseeable future until gas tax revenue declines are addressed. State funding therefore is not anticipated as a significant funding source to support the TDIF program, at least for the next several years.

The State has launched several Cap and Trade grant projects that reduce greenhouse gas emissions. The Affordable Housing and Sustainable Communities (AHSC) program provides for funding infrastructure projects in connection with affordable housing. Funding for certain facilities might be possible as part of this program, depending on the timing and location of affordable housing development. If such Cap and Trade funding sources come available, this Nexus Study will be updated to reflect the availability of additional funds.

### **Local Transportation Funding**

Depending on the type of project, various local funds are used to leverage grants by serving as local match and completing preliminary work. These local transportation funds are described below.

#### ***Countywide One-Half Cent Sales Tax (Measure A)***

The Sacramento Transportation Authority (STA) was created in 1988 when Sacramento County's electorate approved Measure A. Measure A funds ongoing transportation maintenance activities,

with some funding for bicycle and pedestrian program funding and safety improvements. The TDIF includes \$10 million of Measure A funding offsetting construction costs of the Richards Boulevard/Interstate 5 interchange. In addition, the STA assesses a countywide development impact fee to pay for regional facilities, and 14 percent of that fee revenue ultimately will be used toward a Smart Growth Incentive program. This program has not yet been developed, but if possible, it may be used to help support the TDIF Program, in which case, this Nexus Study will be updated to reflect the availability of that other funding source.

#### **Major Street Construction Tax (Building Excise Tax)**

Under City Code Section 3.36, the City imposes an excise tax on new building construction (excluding disaster construction) at a rate of eight-tenths of 1 percent of building valuation (0.8 percent). Under the code, funds are used for construction, replacement, or alteration of major roadways, bridges, traffic control, or lighting. These revenues generally are used to support new development and provide grant matching funds. Some of this funding can be anticipated to augment TDIF funding to support completion of TDIF improvements. The Major Street Construction Tax (MSCT) also will continue to be used to support infrastructure associated with new development and to help fund transportation projects that are not included in the TDIF Program and those in subarea plans.

#### **Other Potential Funding Sources**

There are several initiatives under discussion that may provide additional funding to help support the TDIF projects. A new countywide measure for an additional one-half cent transportation sales tax is scheduled for the November 2016 election. If approved by voters, the majority of funding would go toward maintenance and transit activities; some additional local funds to support capital projects will also be realized.

At the State level, Governor Brown has proposed a transportation funding plan to address the steep decline in gas tax revenues. One component of the Governor's plan is to include \$2.5 billion in State and Local Partnership Grants, which include grants available to match funding by citywide impact fees. If this is implemented, along with the TDIF, this could provide additional funding toward TDIF capital facilities. If such funding sources come available, this Nexus Study will be updated to reflect the availability of additional funds.

#### **Net Future Development Share of Costs**

After taking account of all additional costs and other adjustments as specified in **Table 3-2**, the net TDIF improvement projects cost estimates total approximately \$172.6 million.

## 4. FEE CALCULATION AND COST ALLOCATION METHODOLOGY

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This Nexus Study presents a methodology that allocates the required transportation facility costs to all new land uses based on relative benefit received from such improvements. The previous chapter provided a detailed overview of the costs included in the TDIF. This chapter provides an overview of the nexus methodology used to allocate those costs and a summary of the proposed TDIF.

The methodology that follows results in a fee schedule with a maximum justifiable fee per unit for residential land uses, per 1,000 building square feet for nonresidential land uses, per gas pump for gas stations, and per room for hotels and motels.

### Fee Calculation

As described in detail below, future transportation facility costs are allocated to future development via a Trip Demand Factor, which provides the relative demand for roadway facilities by each land use. TDIF costs are allocated on a Trip Demand Factor basis according to the following steps:

1. Determine the projected amount of new development (discussed in **Chapter 2**).
2. Determine the roadway improvements needed to serve the new development (identified by the City and discussed in **Chapter 3**).
3. Determine the net cost of the transportation improvements to be funded by the TDIF after accounting for adjustments such as existing infrastructure deficiencies and other funding sources, if applicable (identified by the City and their traffic consultants and discussed in **Chapter 3**).
4. Determine the proportionate impact and the appropriate share of costs attributable to each land use category (discussed in this chapter):
  - a. Determine the appropriate allocation factor to allocate the cost of required traffic improvements, or Trip Demand Factor.
  - b. Determine the total trip demand created by new development.
  - c. Divide total costs from **Step 3** by the total trip demand created by new development to determine the cost per Trip Demand Factor.
  - d. Determine fee for all land use categories by multiplying the cost per Trip Demand Factor by the Trip Demand Factor per land use.
  - e. Add a TDIF administration cost to the allocated costs for each land use category.
5. Determine the TDIF for new development (presented in this chapter).

## Cost Allocation Methodology

The purpose of allocating certain improvement costs among the various land uses is to provide an equitable method of funding required infrastructure. The apportionment methodology reflects these requirements:

1. Demands placed on public facilities are related to each land use paying the fee.
2. Such demands are stated in relative terms for all affected land uses.

It is by relating demand for facilities to land use types that a reasonable nexus, or relationship, can be established to apportion the proportionate share of costs to given land uses. This Nexus Study uses a common use factor, called a Trip Demand Factor, which relates the average trip demand for each land use in common terms.

For purposes of this Nexus Study, Trip Demand Factors are determined based on vehicle trips generated by each land use category. The need for transportation improvements is based on a peak-hour analysis because peak-hour travel times create the greatest need for infrastructure capacity. PM peak hour trip data provides a reasonable systemwide measure of the impact of new development on congestion and mobility. Vehicle trips are directly related to LOS and the need for capacity enhancements.

The trip generation rates discussed above were adjusted to fully account for each land use category's comparative benefit from roadway facilities. These adjustments are discussed in further detail below.

### Trip Demand Factor Adjustments

Trip generation rates used in this Nexus Study include the following trip adjustments:

- Pass-By Trips
- Trip Length

These adjustments, which are described in further detail below, are applied to the trip generation rates to derive Trip Demand Factors summarized in **Table 4-1**. **Table 4-2** details the resulting allocation of TDIF costs per land use on a Trip Demand Factor basis.

#### *Pass-By Trips*

Typically, retail-based trips often involve multiple stops. To recognize this traffic pattern, a pass-by adjustment, or percentage of new trip adjustment, takes into account vehicle trips using the adjacent roadway that enter a site as an intermediate stop on the way to another destination.

For example, some drivers will stop for fuel on their way home from work. The pass-by adjustment reduces total number of vehicle trips to account for the sharing of the one trip for two destinations (fuel and then home). The adjustment often ranges by land use type and by local development and traffic patterns and ranges from 14 percent to 55 percent. For some retail land uses, such as retail and hotels/motel, traffic patterns indicate significantly greater

**Table 4-1  
City of Sacramento  
Transportation Development Impact Fee  
Trip Demand Factors by Land Use**

Land Use	Primary Trips [1]	Trip Length Factor [2]	Adjustment Factor [3]	PM Peak Trips	ITE Category/Source [4]	Calculated Trip Demand Factor
<i>Formula</i>	<i>A</i>	<i>B</i>	<i>C = A * B</i>	<i>D</i>	-	<i>C * D</i>
<b>Residential Land Use Categories [5]</b>	----- <i>per dwelling unit</i> -----					
Single-Family/Duplex Dwelling	86%	1.14	0.98	1.01	Single Family Detached Housing (210)	0.99
Multi-Unit Dwelling	86%	1.14	0.98	0.58	Low Rise Apartment (221)	0.57
<b>Nonresidential Land Use Categories</b>	----- <i>per 1,000 building sq. ft.</i> -----					
Retail	45%	0.52	0.23	6.36	Shopping Center (820)	1.49
Office	77%	1.28	0.99	1.49	General Office Building (710)	1.47
Hospital	73%	1.20	0.88	1.61	Hospital (610)	1.41
Schools [6] [7]	79%	0.64	0.51	1.08	Schools (522 & 530)	0.55
Church/Assembly	64%	0.74	0.47	0.66	Church (560)	0.31
Industrial	79%	1.30	1.03	0.98	General Light Industrial (110)	1.01
Warehouse [8]	56%	1.30	0.73	0.66	Provided by City of Sacramento.	0.48
	----- <i>per pump</i> -----					
Gas Station	45%	0.52	0.23	6.36	Shopping Center (820)	1.49
	----- <i>per room</i> -----					
Hotel/Motel [9]	58%	1.10	0.64	0.64	Hotel (310) / Motel (320)	0.41

"factors"

Source: San Diego Association of Governments (SANDAG), Brief Guide of Vehicular Traffic Generation Rates for the San Diego Region, April 2002; Institute of Traffic Engineers (ITE), Trip Generation, 7th Edition, 2003; EPS.

- [1] Percent of total trips. Primary trips are trips with no midway stops, or "links". Pass-by trips are links that do not add more than one mile to the total trip.
- [2] Represents the average trip length by land use relative to the system wide average trip length.
- [3] The trip adjustment factor equals the percent of non-pass-by trips multiplied by the average trip length factor.
- [4] This analysis uses ITE Trip Generation 7th Edition. City of Sacramento Traffic Engineering staff ran a comparison between ITE Trip Generation 7th Edition and ITE Trip Generation 9th Edition (latest edition) and the trip generation is comparable.
- [5] Trip percentages and average trip lengths based on SANDAG "residential" category.
- [6] PM Peak Trip represents the average between the ITE factors for middle schools and high schools.
- [7] Includes Primary, Secondary, and Colleges and Universities.
- [8] Trip Demand Factor provided by the City of Sacramento.
- [9] PM Peak Trip represents the average between the ITE factors for hotels and motels.

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**Table 4-2  
City of Sacramento  
Transportation Development Impact Fee  
Summary of Proposed Fees - Baseline**

Baseline TDIF  
(Prior to Application of Credits)

Land Use	Trip Demand Factor [1]	TDIF Costs by Component			Subtotal TDIF Costs	Plus Administration	Total Base Fee	Transit Center Adjustment	Transit Center Fee
		Project Specific	Programmatic						
		Roadways	Alternative Modes	Grid 3.0					
						3%	25%		
<b>Improvement Costs [2]</b>		\$125,504,772	\$30,549,875	\$16,500,000	<b>\$172,554,648</b>	\$5,176,639	<b>\$177,731,287</b>		
Total Trip Demand [3]		81,112	81,112	81,112	81,112	81,112	81,112		
<b>Cost per Trip Demand Factor</b>	1.00	\$1,547	\$377	\$203	<b>\$2,127</b>	\$64	<b>\$2,191</b>		
<b>Residential Land Use Categories</b>	<i>per unit</i>	<i>per unit</i>							
Single-Family/Duplex Dwelling	0.99	\$1,532	\$373	\$201	<b>\$2,106</b>	\$46	<b>\$2,152</b>	(\$538)	<b>\$1,614</b>
Multi-Unit Dwelling	0.57	\$880	\$214	\$116	<b>\$1,210</b>	\$26	<b>\$1,236</b>	(\$309)	<b>\$927</b>
<b>Nonresidential Land Use Categories</b>	<i>per 1,000 sq. ft.</i>	<i>per sq. ft.</i>							
Retail	1.49	\$2.30	\$0.56	\$0.30	<b>\$3.16</b>	\$0.07	<b>\$3.23</b>	(\$0.81)	<b>\$2.42</b>
Office	1.47	\$2.27	\$0.55	\$0.30	<b>\$3.12</b>	\$0.07	<b>\$3.19</b>	(\$0.80)	<b>\$2.39</b>
Hospital	1.41	\$2.18	\$0.53	\$0.29	<b>\$3.00</b>	\$0.07	<b>\$3.07</b>	(\$0.77)	<b>\$2.30</b>
Schools [4]	0.55	\$0.85	\$0.21	\$0.11	<b>\$1.17</b>	\$0.03	<b>\$1.20</b>	(\$0.30)	<b>\$0.90</b>
Church/Assembly	0.31	\$0.48	\$0.12	\$0.06	<b>\$0.66</b>	\$0.01	<b>\$0.67</b>	(\$0.17)	<b>\$0.50</b>
Industrial	1.01	\$1.56	\$0.38	\$0.20	<b>\$2.14</b>	\$0.05	<b>\$2.19</b>	(\$0.55)	<b>\$1.64</b>
Warehouse	0.48	\$0.74	\$0.18	\$0.10	<b>\$1.02</b>	\$0.02	<b>\$1.04</b>	(\$0.26)	<b>\$0.78</b>
	<i>per pump</i>	<i>per pump</i>							
Gas Station	1.49	\$2,303	\$561	\$303	<b>\$3,167</b>	\$69	<b>\$3,236</b>	(\$809)	<b>\$2,427</b>
	<i>per room</i>	<i>per room</i>							
Hotel/Motel	0.41	\$632	\$154	\$83	<b>\$869</b>	\$19	<b>\$888</b>	(\$222)	<b>\$666</b>

fee

[1] See Table 4-1.  
 [2] See Table 1-1.  
 [3] See Table C-1.  
 [4] Includes Primary, Secondary, and Colleges and Universities.

pass-by traffic. For instance, 55 percent of trips made to retail uses are incidental to the primary purpose of the trip and require adjustment.

Pass-by adjustments are included before calculating the relative Trip Demand Factor, as shown in **Table 4-1**, which also summarizes the PM peak hour trip assumptions provided by the City.

#### ***Trip Length Adjustment***

Trip length adjustment factors account for the average distance traveled per trip for a particular land use. The trip generation used in this analysis is weighted by the relative length of trips for a specific land use category compared to the average length of all trips.

Trip length adjustments are included before calculating Trip Demand Factor, as shown in **Table 4-1**.

#### ***Transit-Oriented Development Adjustment***

Land uses near transit stations (existing or future) can generate fewer trips than do more traditional land use configurations that typically rely on vehicles as the primary mode of transportation. According to studies, measurable trip reduction occurs as a function of several variables. In addition to the proximity to transit stations, factors including a diversity of land uses, urban design characteristics such as connectivity and walkability, and land use densities combine to reduce the overall vehicle trips generated for a particular area. To account for the reduced trip rates generated by transit center development and the variety of factors that contribute to the potential trip reduction, an additional adjustment factor is considered for residential, office, and retail land uses meeting the following criteria:

1. Project is located within one-half mile of an existing or planned transit station. Related legislative statutes<sup>6</sup> define a transit station as a rail or light rail station, bus transfer station, or major bus hub (an intersection of 3 or more bus routes with minimum route headways of 10 minutes during peak hours).
2. Direct pedestrian access to transit facilities is provided and total pedestrian travel distance to the transit station does not exceed one-half mile.
3. Project is located within one-half mile of a complementary land use (office, retail, residential). For example, an office project must be located within one-half mile of a retail or residential project. Similarly, a residential project must be located within one-half mile of office or retail land uses.
4. Project provides either the minimum number of parking spaces required by the local ordinance, or no more than one on-site parking space for 0- to 2-bedroom units, and two on-site parking spaces for three or more bedroom units, whichever is less.

The TDIF applied to the project automatically will receive discount if the development is one-half mile from a streetcar light rail station. Otherwise, the Transit Center Adjustment also will be considered if the project meets all of the above criteria. **Table 4-2** provides the Transit Center Adjusted fees.

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<sup>6</sup> AB 3005 (Jones) chaptered February 22, 2008.

## TDIF Calculation

The TDIF is a citywide fee program—all future development in the City will pay the fee based on the citywide facilities required to serve future development. As discussed previously, however, new land uses in the North Natomas Specific Plan, the River District Specific Plan, and Downtown have plan area or other financing mechanisms that cover costs of some facilities that have impact on the greater City circulation network. **Table 3-2** in **Chapter 3** details the roadway improvement costs covered by the described financing mechanisms. As a result, the City determined that future development in the 3 subareas is eligible for a credit against the TDIF because they will fund a portion of their fair share of citywide roadway facilities through participation in other financing mechanisms. **Table 4-3** details the roadway improvement credits applicable to each benefiting subarea. TDIF credits were determined by dividing the roadway improvement costs covered by the subarea financing mechanism by each subarea total trip demand, where applicable. **Table C-1** in **Appendix C** provides the total trip demand for all City growth areas. **Tables 4-4** through **4-6** identify the resulting fee rates for the TDIF subareas depicted in **Map 1-1**.

As future plan area financing plans are completed [e.g., Greenbriar PUD, Railyards, etc.], plan area construction of TDIF improvements will be considered, and credits for those subareas may be computed and added to the TDIF Program.

## TDIF Administration Charge

Development impact fee programs may include the cost of administering the program that funds the construction of public facilities necessary to serve new development, including these:

- The administrative costs of assessing, collecting, cost-accounting, and public reporting of the TDIF.
- The cost of justification analyses, legal support, and other costs of annual, periodic, and 5-year updates to the TDIF.
- Costs of capital planning and programming, including project management costs associated with the share of projects funded by the impact fee.
- Costs associated with any GIS provided as an input to the TDIF.

Administration charges typically range from 1.0 percent up to 5.0 percent. This Nexus Study applies a 3.0-percent allowance to fund administration costs. The methodology described above results in a fee schedule, which includes an administration charge of 3.0 percent, as shown in **Table 4-2** and in **Tables 4-4** through **4-6**.

**Table 4-3  
City of Sacramento  
Transportation Development Impact Fee  
TDIF Roadway Credits by Subarea**

Item	Reference/ Assumption	North Natomas	River District	Downtown
Subarea Funding for Roadway Improvements	Table 3-1	\$22,848,311	\$11,726,747	\$622,987
Subarea Future Trip Demand	Table C-1	17,452	9,673	5,256
<b>Roadway Credit per Subarea Trip Demand Unit</b>		<b>\$1,309</b>	<b>\$1,212</b>	<b>\$119</b>
<b>CREDIT BY LAND USE CATEGORY</b>				
	<u>Trip Demand Factor</u>	<u>per unit</u>		
<b>Residential</b>				
Single-family	0.99	\$1,296	\$1,200	\$117
Multifamily	0.57	\$744	\$689	\$67
<b>Nonresidential</b>		<u>per 1,000 sq. ft.</u>		
Retail	1.49	\$1,948	\$1,804	\$176
Office	1.47	\$1,923	\$1,780	\$174
Industrial	1.01	\$1,318	\$1,220	\$119

Source: City of Sacramento.

credit

**Table 4-4  
City of Sacramento  
Transportation Development Impact Fee  
Summary of Proposed Fees - North Natomas**

North Natomas Fee  
(Including Credits)

Land Use	Trip Demand Factor [1]	TDIF Costs by Component - Net of Fee Credits			Subtotal TDIF Costs	Plus Administration	Total Base Fee	Transit Center Adjustment	Transit Center Fee
		Project Specific	Programmatic						
		Roadways	Alternative Modes	Grid 3.0					
			[2]		3%		25%		
Cost per Trip Demand Factor [3]		\$1,547	\$377	\$203	<b>\$1,924</b>	\$58	<b>\$2,185</b>	(\$546)	<b>\$1,639</b>
Less Credit per Trip Demand Factor [4]		(\$1,309)	(\$377)	\$0	<b>(\$1,686)</b>	(\$51)	<b>(\$1,736)</b>	\$434	<b>(\$1,302)</b>
<b>Net Cost per Trip Demand Factor</b>	1.00	<b>\$238</b>	<b>\$0</b>	<b>\$203</b>	<b>\$441</b>	<b>\$13</b>	<b>\$455</b>	<b>(\$114)</b>	<b>\$341</b>
<b>Residential Land Use Categories</b>									
	<i>per unit</i>	-----			<i>per unit</i>				
Single-Family/Duplex Dwelling	0.99	\$236	\$0	\$201	<b>\$437</b>	\$13	<b>\$450</b>	(\$113)	<b>\$337</b>
Multi-Unit Dwelling	0.57	\$135	\$0	\$116	<b>\$251</b>	\$8	<b>\$259</b>	(\$65)	<b>\$194</b>
<b>Nonresidential Land Use Categories</b>									
	<i>per 1,000 sq. ft.</i>	-----			<i>per sq. ft.</i>				
Retail	1.49	\$0.35	\$0.00	\$0.30	<b>\$0.65</b>	\$0.02	<b>\$0.67</b>	(\$0.17)	<b>\$0.50</b>
Office	1.47	\$0.35	\$0.00	\$0.30	<b>\$0.65</b>	\$0.02	<b>\$0.67</b>	(\$0.17)	<b>\$0.50</b>
Hospital	1.41	\$0.34	\$0.00	\$0.29	<b>\$0.63</b>	\$0.02	<b>\$0.65</b>	(\$0.16)	<b>\$0.49</b>
Schools [5]	0.55	\$0.13	\$0.00	\$0.11	<b>\$0.24</b>	\$0.01	<b>\$0.25</b>	(\$0.06)	<b>\$0.19</b>
Church/Assembly	0.31	\$0.07	\$0.00	\$0.06	<b>\$0.13</b>	\$0.00	<b>\$0.13</b>	(\$0.04)	<b>\$0.09</b>
Industrial	1.01	\$0.24	\$0.00	\$0.20	<b>\$0.44</b>	\$0.01	<b>\$0.45</b>	(\$0.11)	<b>\$0.34</b>
Warehouse	0.48	\$0.11	\$0.00	\$0.10	<b>\$0.21</b>	\$0.01	<b>\$0.22</b>	(\$0.05)	<b>\$0.17</b>
	<i>per pump</i>	-----			<i>per room</i>				
Gas Station	1.49	\$354	\$0	\$303	<b>\$657</b>	\$11	<b>\$668</b>	(\$167)	<b>\$501</b>
	<i>per room</i>	-----			<i>per room</i>				
Hotel/Motel	0.41	\$97	\$0	\$83	<b>\$180</b>	\$5	<b>\$185</b>	(\$46)	<b>\$139</b>

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[1] See Table 4-1.  
 [2] Assumes North Natomas receives credit against alternative modes improvements for subarea improvements installed.  
 [3] See Table 4-2.  
 [4] See Table 4-3.  
 [5] Includes Primary, Secondary, and Colleges and Universities.

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**Table 4-5  
City of Sacramento  
Transportation Development Impact Fee  
Summary of Proposed Fees - River District**

<b>River District Fee (Including Credits)</b>
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Land Use	Trip Demand Factor [1]	TDIF Costs by Component			Subtotal TDIF Costs	Plus Administration	Total Base Fee	Transit Center Adjustment	Transit Center Fee
		Project Specific	Programmatic						
		Roadways	Alternative Modes	Grid 3.0					
					3%		25%		
Cost per Trip Demand Factor [2]		\$1,547	\$377	\$203	<b>\$2,127</b>	\$64	<b>\$2,191</b>	(\$548)	<b>\$1,643</b>
Less Credit per Trip Demand Factor [3]		(\$1,212)	\$0	\$0	<b>(\$1,212)</b>	(\$36)	<b>(\$1,249)</b>	\$312	<b>(\$937)</b>
<b>Net Cost per Trip Demand Factor</b>	1.00	<b>\$335</b>	<b>\$377</b>	<b>\$203</b>	<b>\$915</b>	<b>\$27</b>	<b>\$942</b>	<b>(\$236)</b>	<b>\$707</b>
<b>Residential Land Use Categories</b>									
	<i>per unit</i>	-----			<i>per unit</i> -----				
Single-Family/Duplex Dwelling	0.99	\$332	\$373	\$201	<b>\$906</b>	\$10	<b>\$916</b>	(\$229)	<b>\$687</b>
Multi-Unit Dwelling	0.57	\$190	\$214	\$116	<b>\$520</b>	\$6	<b>\$526</b>	(\$131)	<b>\$395</b>
<b>Nonresidential Land Use Categories</b>									
	<i>per 1,000 sq. ft.</i>	-----			<i>per sq. ft.</i> -----				
Retail	1.49	\$0.50	\$0.56	\$0.30	<b>\$1.36</b>	\$0.02	<b>\$1.38</b>	(\$0.35)	<b>\$1.03</b>
Office	1.47	\$0.49	\$0.55	\$0.30	<b>\$1.34</b>	\$0.01	<b>\$1.35</b>	(\$0.34)	<b>\$1.01</b>
Hospital	1.41	\$0.47	\$0.53	\$0.29	<b>\$1.29</b>	\$0.01	<b>\$1.30</b>	(\$0.33)	<b>\$0.97</b>
Schools [4]	0.55	\$0.18	\$0.21	\$0.11	<b>\$0.50</b>	\$0.01	<b>\$0.51</b>	(\$0.13)	<b>\$0.38</b>
Church/Assembly	0.31	\$0.10	\$0.12	\$0.06	<b>\$0.28</b>	\$0.00	<b>\$0.28</b>	(\$0.07)	<b>\$0.21</b>
Industrial	1.01	\$0.34	\$0.38	\$0.20	<b>\$0.92</b>	\$0.01	<b>\$0.93</b>	(\$0.23)	<b>\$0.70</b>
Warehouse	0.48	\$0.16	\$0.18	\$0.10	<b>\$0.44</b>	\$0.00	<b>\$0.44</b>	(\$0.11)	<b>\$0.33</b>
	<i>per pump</i>	-----			<i>per room</i> -----				
Gas Station	1.49	\$499	\$561	\$303	<b>\$1,363</b>	\$15	<b>\$1,378</b>	(\$344)	<b>\$1,034</b>
	<i>per room</i>	-----			<i>per room</i> -----				
Hotel/Motel	0.41	\$137	\$154	\$83	<b>\$374</b>	\$4	<b>\$378</b>	(\$95)	<b>\$283</b>

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[1] See Table 4-1.  
 [2] See Table 4-2.  
 [3] See Table 4-3.  
 [4] Includes Primary, Secondary, and Colleges and Universities.

Table 4-6  
City of Sacramento  
Transportation Development Impact Fee  
Summary of Proposed Fees - Downtown

Downtown Fee  
(Including Credits)

Land Use	Trip Demand Factor [1]	TDIF Costs by Component			Subtotal TDIF Costs	Plus Administration	Total Base Fee	Transit Center Adjustment	Transit Center Fee
		Project Specific	Programmatic						
			Roadways	Alternative Modes					
					3%		25%		
Cost per Trip Demand Factor [2]		\$1,547	\$377	\$203	\$2,127	\$64	\$2,191	(\$548)	\$1,643
Less Credit per Trip Demand Factor [3]		(\$119)	\$0	\$0	(\$119)	(\$4)	(\$122)	\$31	(\$92)
<b>Net Cost per Trip Demand Factor</b>	1.00	<b>\$1,429</b>	<b>\$377</b>	<b>\$203</b>	<b>\$2,009</b>	<b>\$60</b>	<b>\$2,069</b>	<b>(\$517)</b>	<b>\$1,552</b>
<b>Residential Land Use Categories</b>									
	<i>per unit</i>	-----			<i>per unit</i>				
Single-Family/Duplex Dwelling	0.99	\$1,415	\$373	\$201	\$1,989	\$42	\$2,031	(\$508)	\$1,523
Multi-Unit Dwelling	0.57	\$812	\$214	\$116	\$1,142	\$24	\$1,166	(\$292)	\$874
<b>Nonresidential Land Use Categories</b>									
	<i>per 1,000 sq. ft.</i>	-----			<i>per sq. ft.</i>				
Retail	1.49	\$2.13	\$0.56	\$0.30	\$2.99	\$0.06	\$3.05	(\$0.76)	\$2.29
Office	1.47	\$2.10	\$0.55	\$0.30	\$2.95	\$0.06	\$3.01	(\$0.75)	\$2.26
Hospital	1.41	\$2.02	\$0.53	\$0.29	\$2.84	\$0.06	\$2.90	(\$0.73)	\$2.17
Schools [4]	0.55	\$0.79	\$0.21	\$0.11	\$1.11	\$0.02	\$1.13	(\$0.28)	\$0.85
Church/Assembly	0.31	\$0.45	\$0.12	\$0.06	\$0.63	\$0.01	\$0.64	(\$0.16)	\$0.48
Industrial	1.01	\$1.44	\$0.38	\$0.20	\$2.02	\$0.04	\$2.06	(\$0.52)	\$1.54
Warehouse	0.48	\$0.69	\$0.18	\$0.10	\$0.97	\$0.02	\$0.99	(\$0.25)	\$0.74
	<i>per pump</i>	-----			<i>per room</i>				
Gas Station	1.49	\$2,126	\$561	\$303	\$2,990	\$64	\$3,054	(\$763)	\$2,291
	<i>per room</i>	-----			<i>per room</i>				
Hotel/Motel	0.41	\$583	\$154	\$83	\$820	\$17	\$837	(\$209)	\$628

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[1] See Table 4-1.  
[2] See Table 4-2.  
[3] See Table 4-3.  
[4] Includes Primary, Secondary, and Colleges and Universities.

## 5. NEXUS FINDINGS

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### Authority

This report has been prepared to establish the TDIF in accordance with the procedural guidelines established in AB1600, which is codified in California Government Section 66000 et. seq. These code sections set forth the procedural requirements for establishing and collecting development impact fees. These procedures require that a “reasonable relationship or nexus must exist between a governmental exaction and the purpose of the condition.”<sup>5</sup> Specifically, each local agency imposing a fee must:

- Identify the purpose of the fee.
- Identify how the fee is to be used.
- Determine how a reasonable relationship exists between the fee’s use and the type of development project on which the fee is imposed.
- Determine how a reasonable relationship exists between the need for the public facility and the type of development project on which the fee is imposed.
- Demonstrate a reasonable relationship between the amount of the fee and the cost of the public facility or portion of the public facility attributable to the development on which the fee is imposed.

### Summary of Nexus Findings

The development impact fee to be collected for each land use is calculated based on the proportionate share of the total facility use that each land use represents. With this approach, the following findings are made concerning the City’s TDIF.

#### Purpose of Fee

The TDIF will fund the construction of new roadways and other transportation improvements, including alternative transportation modes facilities needed to accommodate new citywide development.

#### Use of Fees

The TDIF will fund improvements to the citywide transportation system to provide additional travel capacity accommodating new development. TDIF-funded improvements include roadway improvement projects such as new major roadways, roadway extensions, interchanges, bridges, overpasses, and widening of existing roadways; and alternative modes facilities, including transit, bicycle, and pedestrian improvements.

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<sup>5</sup> William Abbott, Marian E. Moe, and Marilee Hanson, *Public Needs & Private Dollars*; (July 1993), page 109.

### **Relationship Between Use of Fees and Type of Development**

New residential and nonresidential development in the City will generate new residents, employees, and patrons that will in turn generate new vehicle, bicycle, and pedestrian trips and demand for expanded citywide roadway capacity and improved connectivity. Each residential and nonresidential development project will add to the incremental need for roadway capacity and alternative modes facilities, and each new residential and nonresidential development project will benefit from the new roadway capacity and alternative modes facilities. The TDIF will be used to fund the transportation improvements identified in **Chapter 3**, providing this increased capacity to the benefit of both residential and nonresidential development.

### **Relationship Between Need for Facility and Type of Project**

New residents and commercial users will generate additional vehicle and alternative modes trips, requiring expanded roadway capacity and improved bicycle, pedestrian, and transit facilities to accommodate increased vehicular and non-vehicular traffic, while maintaining desired LOS. As part of the General Plan Update process, the City analyzed future growth and the LOS provided by the circulation system proposed to accommodate planned levels of development. The TDIF includes roadway, transit, bicycle, and pedestrian improvements needed to accommodate additional trips generated by new residents and commercial enterprises, as discussed in **Chapter 3**. Completion of these improvements will mitigate the impact of greater traffic on roadways caused by new development, minimizing adverse impacts to service levels or public safety.

### **Relationship Between Amount of Fees and Cost of or Portion of Facility Attributed to Development on Which Fee is Imposed**

The total costs of transportation improvements funded by the TDIF are allocated amongst the projected new citywide residential and nonresidential land uses based on the proportional benefit each land use is anticipated to receive from the transportation improvements funded by the TDIF. The cost allocation methodology applies a Trip Demand Factor to each land use category that is used to weight the level of demand for additional roadway capacity generated by each land use category, based on each land use's average trip demand, as discussed in **Chapter 4**. Trip Demand Factors for the TDIF were derived using PM peak hour trip demand by land use, adjusted for the percentage of trips that are primary trips<sup>6</sup> and a trip length factor.<sup>7</sup> The Trip Demand Factor analysis therefore defines the relative benefit conferred to each land use category, based on trip usage, and apportions cost to each land use accordingly.

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<sup>6</sup> Primary trips are trips with no midway stops, or links. Pass-by trips are links that do not add more than one mile to the total trip.

<sup>7</sup> The trip length factor represents the average trip length by land use relative to the system wide average trip length.

## 6. FEE PROGRAM IMPLEMENTATION AND ADMINISTRATION

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The TDIF Program presented in this report is based on the best facility improvement cost estimates, existing facility cost or value estimates, funding source information, administrative cost estimates, and land use information available at this time. If costs change significantly, if the type or amount of new development changes, if other assumptions significantly change, or if other funding becomes available (as a result of legislative action on State and local government finance, for example), the TDIF should be updated accordingly.

After the fees presented in this report are established, the City should conduct periodic reviews of facility improvement costs and other assumptions used as the basis of this Nexus Study. Based on these reviews, the City may make necessary adjustments to the fee program through subsequent fee program updates.

The cost estimates presented in this report are in constant 2016 dollars. The City automatically may adjust the costs and fees for inflation each year as outlined in this chapter.

The TDIF will be implemented in accordance with Government Code Section 66000 and City Code Chapter 18.56. City ordinances and resolutions required for implementation of this Nexus Study are an integral and controlling part of the policies and procedures authorized for this Nexus Study. If there are any inconsistencies or contradictions between the implementing ordinance and resolution(s) and the Nexus Study, the ordinance/resolution(s) shall prevail.

### Administration Fee Component

An administrative fee will be collected to fund the administration, oversight, implementation, and updates of the TDIF, including administration of any credit and reimbursement agreements. The administration fee will include adequate funding to cover all City costs.

### Fee Amount

This Nexus Study identifies fee rates for the major land use categories, which are detailed in **Table 4-2, Table 4-4, Table 4-5, and Table 4-6** in **Chapter 4**. The fee rates have been calculated for single family and multi-unit dwellings, several nonresidential land use categories, and hotel development. For projects that do not fit the land use categories identified in **Tables 4-2, 4-4, 4-5, and 4-6**, the City Manager or designee may compute the required fee based on the cost per Trip Demand Factor and the trip demand generated by the specific development project.

The fee rates for a development project are those fees in effect as of the date of acceptance of a complete building permit application. Any adjustments to the fees that occur after that time (e.g., automatic inflation adjustment) would not apply.

The City Manager or designee shall determine and calculate the required fees for each development project in accordance with this Nexus Study. Fees shall be computed based on the primary use or uses of the development project, defined as the principal functions of a building or structure, based on the rates specified for that primary use by this Nexus Study. In some

cases, a development project may include ancillary uses that are different from the primary use but which exist only to support the primary activities or operation of the primary use, such as office space for management or accounting functions in a retail enterprise. These ancillary uses would not exist absent the operations associated with the primary use. In these cases, the ancillary use would not be charged a different fee rate, and the area associated with ancillary uses would be included in the commercial building area of the primary use.

For projects with multiple primary uses that are operationally separate (i.e., mixed-use projects such as office over retail), fees shall be computed based on applying the applicable fee rate to the total residential units or total commercial building area for each primary use. Note that under Sacramento City Code Section 18.56.060.C, warehouses may include no more than 25 percent of the building area as an ancillary office use for the purposes of calculating the fee.

### **Examples**

- *Project with Multiple Primary Uses*—100,000-square-foot mixed-use building comprising 60,000 square feet of office and 40,000 square feet of retail. Office and retail are separate enterprises, not a single tenant user:
  - 60,000 square feet of office charged the office rate.
  - 40,000 square feet of retail charged the retail rate.
- *Warehouse with less than 25 percent office uses, all one enterprise*—100,000-square-foot warehouse with 85,000 square feet of warehouse uses and 15,000 square feet of office uses:
  - Entire 100,000 square feet charged the warehouse rate.
- *Warehouse with more than 25 percent office uses, all one enterprise*—100,000-square-foot warehouse with 74,000 square feet warehouse and 26,000 square feet office:
  - 74,000 square feet of warehouse charged the warehouse rate.
  - 26,000 square feet of office charged the office rate.

Note that the City may use its discretion to determine the applicable fee rates and land use categories that apply to a specific project.

## **Fee Program Updates**

The fees presented in this report are based on the best available cost estimates and land use information at this time. If costs or land uses change significantly in either direction, or if other funding becomes available, the fees will need to be updated accordingly. Updates to the TDIF, other than the automatic annual adjustments described below, must be adopted by a City Council Resolution.

### **Annual Inflation Adjustment**

The TDIF may be escalated annually. The annual adjustments, effective July 1 of each year, take into account the potential for inflation of public facility design, construction, installation, and acquisition costs. The proposed adjustment procedure is described below.

The TDIF will be escalated annually using the percentage change in the Engineering News Record Construction Cost Index (ENR-CCI) for San Francisco as published by ENR/McGraw-Hill Construction Weekly. The percentage change in the ENR-CCI is the year-over-year change as of each March. The City shall carry out the percentage change calculation to 3 decimal places.

### **Periodic Fee Updates**

The proposed TDIF is subject to periodic update based on changes in developable land, cost estimates, or outside funding sources. The City will review the costs and TDIF periodically to determine if any updates to the fee are warranted. During the periodic reviews, the City will analyze these items:

- Changes to the required facilities listed in this Nexus Study.
- Changes in the cost to update or administer the fee.
- Changes in costs greater than inflation.
- Changes in assumed land uses.
- Changes in other funding sources.
- Other issues as warranted.

Any changes to the fee based on the periodic update will be presented to the City Council for approval before an increase or decrease in the fee.

The City Council also may specify during a periodic update which improvements should receive funding from the TDIF before other improvements. Based on facility LOS evaluations, the location of approved new development that will add significant housing or jobs, or other considerations, the City has the ability to spend the fee revenues on any of the projects identified in the TDIF, regardless of project location and the location of collected fees.



## APPENDICES:

- Appendix A: Land Use Summary—Resident and Employee Population by Community Plan Area
- Appendix B: DKS Memorandum: Cost Allocation of Roadway Improvements Funded by Fee Program
- Appendix C: Future Trip Demand by Subarea



## APPENDIX A:

### Land Use Summary—Resident and Employee Population by Community Plan Area

Table A-1	Land Use Summary—Resident and Employee Population—North Natomas .....	A-1
Table A-2	Land Use Summary—Resident and Employee Population—Delta Shores.....	A-2
Table A-3	Land Use Summary—Resident and Employee Population—Greenbriar.....	A-3
Table A-4	Land Use Summary—Resident and Employee Population—Downtown.....	A-4
Table A-5	Land Use Summary—Resident and Employee Population—Railyards.....	A-5
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Table A-7	Land Use Summary—Resident and Employee Population—River District .....	A-7
Table A-8	Land Use Summary—Resident and Employee Population—Remaining City Areas .....	A-8

**Table A-1**  
**City of Sacramento**  
**Land Use Summary - Resident and Employee Population - North Natomas**

Land Use	Assumptions	Units/Sq. Ft.			Population/Employees		
		Existing	Future	Buildout	Existing	Future	Buildout
	<i>PPH</i>	----- <i>units</i> -----			----- <i>residents</i> -----		
Single-Family/Duplex Dwelling	2.80	11,476	2,587	<b>14,063</b>	32,133	7,244	<b>39,376</b>
Multi-Unit Dwelling	2.10	11,373	8,103	<b>19,476</b>	23,883	17,016	<b>40,900</b>
<b>Residential</b>	<b>2.47</b>	<b>22,849</b>	<b>10,690</b>	<b>33,539</b>	<b>56,437</b>	<b>26,404</b>	<b>82,841</b>
	<i>Sq. Ft./Emp.</i>	----- <i>sq. ft.</i> -----			----- <i>employees</i> -----		
<b>Nonresidential</b>							
Retail	400	4,439,552	4,383,248	<b>8,822,800</b>	11,099	10,958	<b>22,057</b>
Office	250	1,294,500	1,864,250	<b>3,158,750</b>	5,178	7,457	<b>12,635</b>
Public	250	307,000	336,250	<b>643,250</b>	1,228	1,345	<b>2,573</b>
Industrial	850	3,421,250	1,014,900	<b>4,436,150</b>	4,025	1,194	<b>5,219</b>
<b>Subtotal Nonresidential</b>		<b>9,462,302</b>	<b>7,598,648</b>	<b>17,060,950</b>	<b>21,530</b>	<b>20,954</b>	<b>42,484</b>

"growth\_nn"

Source: City of Sacramento General Plan Update.

[1] Includes government and education.

A-1

# DRAFT

Delta Shores

**Table A-2**  
**City of Sacramento**  
**Land Use Summary - Resident and Employee Population - Delta Shores**

Land Use	Assumptions	Units/Sq. Ft.			Population/Employees		
		Existing	Future	Buildout	Existing	Future	Buildout
	<i>PPH</i>	----- <i>units</i> -----			----- <i>residents</i> -----		
Single-Family/Duplex Dwelling	2.80	0	1,673	<b>1,673</b>	0	4,684	<b>4,684</b>
Multi-Unit Dwelling	2.10	0	4,466	<b>4,466</b>	0	9,379	<b>9,379</b>
<b>Residential</b>	2.47	<b>0</b>	<b>6,139</b>	<b>6,139</b>	<b>0</b>	<b>15,163</b>	<b>15,163</b>
	<i>Sq. Ft./Emp.</i>	----- <i>sq. ft.</i> -----			----- <i>employees</i> -----		
<b>Nonresidential</b>							
Retail	400	3,600	780,000	<b>783,600</b>	9	1,950	<b>1,959</b>
Office	250	3,000	50,250	<b>53,250</b>	12	201	<b>213</b>
Public	250	0	0	<b>0</b>	0	0	<b>0</b>
Industrial	850	0	0	<b>0</b>	0	0	<b>0</b>
<b>Subtotal Nonresidential</b>		<b>6,600</b>	<b>830,250</b>	<b>836,850</b>	<b>21</b>	<b>2,151</b>	<b>2,172</b>

"growth\_delta"

Source: City of Sacramento General Plan Update.

[1] Includes government and education.

A-2

**Greenbriar**

**Table A-3  
City of Sacramento  
Land Use Summary - Resident and Employee Population - Greenbriar**

Land Use	Assumptions	Units/Sq. Ft.			Population/Employees		
		Existing	Future	Buildout	Existing	Future	Buildout
	<i>PPH</i>	----- <i>units</i> -----			----- <i>residents</i> -----		
Single-Family/Duplex Dwelling	2.80	0	2,007	<b>2,007</b>	0	5,620	<b>5,620</b>
Multi-Unit Dwelling	2.10	0	695	<b>695</b>	0	1,460	<b>1,460</b>
<b>Residential</b>	<b>2.47</b>	<b>0</b>	<b>2,702</b>	<b>2,702</b>	<b>0</b>	<b>6,674</b>	<b>6,674</b>
	<i>Sq. Ft./Emp.</i>	----- <i>sq. ft.</i> -----			----- <i>employees</i> -----		
<b>Nonresidential</b>							
Retail	400	0	113,600	<b>113,600</b>	0	284	<b>284</b>
Office	250	0	104,000	<b>104,000</b>	0	416	<b>416</b>
Public	250	0	0	<b>0</b>	0	0	<b>0</b>
Industrial	850	0	0	<b>0</b>	0	0	<b>0</b>
<b>Subtotal Nonresidential</b>		<b>0</b>	<b>217,600</b>	<b>217,600</b>	<b>0</b>	<b>700</b>	<b>700</b>

*"growth\_greenbriar"*

Source: City of Sacramento General Plan Update.

[1] Includes government and education.

A-3

# DRAFT

Downtown

**Table A-4**  
**City of Sacramento**  
**Land Use Summary - Resident and Employee Population - Downtown**

Land Use	Assumptions	Units/Sq. Ft.			Population/Employees		
		Existing	Future	Buildout	Existing	Future	Buildout
	<i>PPH</i>	----- <i>units</i> -----			----- <i>residents</i> -----		
Single-Family/Duplex Dwelling	2.80	238	257	495	666	720	1,386
Multi-Unit Dwelling	2.10	4,058	1,658	5,716	8,522	3,483	12,004
<b>Residential</b>	2.47	<b>4,296</b>	<b>1,915</b>	<b>6,211</b>	<b>10,611</b>	<b>4,731</b>	<b>15,342</b>
	<i>Sq. Ft./Emp.</i>	----- <i>sq. ft.</i> -----			----- <i>employees</i> -----		
<b>Nonresidential</b>							
Retail	400	5,480,110	1,388,285	6,868,394	13,700	3,471	17,171
Office	250	7,456,137	1,356,716	8,812,853	29,825	5,427	35,251
Public	250	4,052,152	73,314	4,125,466	16,209	293	16,502
Industrial	850	0	0	0	0	0	0
<b>Subtotal Nonresidential</b>		<b>16,988,399</b>	<b>2,818,315</b>	<b>19,806,714</b>	<b>59,733</b>	<b>9,191</b>	<b>68,924</b>

"growth\_dt"

Source: City of Sacramento General Plan Update.

[1] Includes government and education.

A-4

Railyards
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**Table A-5**  
**City of Sacramento**  
**Land Use Summary - Resident and Employee Population - Railyards**

Land Use	Assumptions	Units/Sq. Ft.			Population/Employees		
		Existing	Future	Buildout	Existing	Future	Buildout
	<i>PPH</i>	----- <i>units</i> -----			----- <i>residents</i> -----		
Single-Family/Duplex Dwelling	2.80	0	0	0	0	0	0
Multi-Unit Dwelling	2.10	0	10,728	10,728	0	22,529	22,529
<b>Residential</b>	2.47	<b>0</b>	<b>10,728</b>	<b>10,728</b>	<b>0</b>	<b>26,498</b>	<b>26,498</b>
	<i>Sq. Ft./Emp.</i>	----- <i>sq. ft.</i> -----			----- <i>employees</i> -----		
<b>Nonresidential</b>							
Retail	400	0	1,384,800	1,384,800	0	3,462	3,462
Office	250	0	2,028,250	2,028,250	0	8,113	8,113
Public	250	0	0	0	0	0	0
Industrial	850	0	0	0	0	0	0
<b>Subtotal Nonresidential</b>		<b>0</b>	<b>3,413,050</b>	<b>3,413,050</b>	<b>0</b>	<b>11,575</b>	<b>11,575</b>

"growth\_railyards"

Source: City of Sacramento General Plan Update.

[1] Includes government and education.

**Table A-6**  
**City of Sacramento**  
**Land Use Summary - Resident and Employee Population - 65th**

Land Use	Assumptions	Units/Sq. Ft.			Population/Employees		
		Existing	Future	Buildout	Existing	Future	Buildout
	<i>PPH</i>	----- <i>units</i> -----			----- <i>residents</i> -----		
Single-Family/Duplex Dwelling	2.80	115	67	<b>182</b>	322	188	<b>510</b>
Multi-Unit Dwelling	2.10	332	2,313	<b>2,645</b>	697	4,857	<b>5,555</b>
<b>Residential</b>	2.47	<b>447</b>	<b>2,380</b>	<b>2,827</b>	<b>1,104</b>	<b>5,879</b>	<b>6,983</b>
	<i>Sq. Ft./Emp.</i>	----- <i>sq. ft.</i> -----			----- <i>employees</i> -----		
<b>Nonresidential</b>							
Retail	400	780,912	1,814,095	<b>2,595,007</b>	1,952	4,535	<b>6,488</b>
Office	250	342,345	515,300	<b>857,645</b>	1,369	2,061	<b>3,431</b>
Public	250	32,315	89,491	<b>121,806</b>	129	358	<b>487</b>
Industrial	850	641,580	370,196	<b>1,011,776</b>	755	436	<b>1,190</b>
<b>Subtotal Nonresidential</b>		<b>1,797,152</b>	<b>2,789,082</b>	<b>4,586,234</b>	<b>4,206</b>	<b>7,390</b>	<b>11,596</b>

"growth\_65th"

Source: City of Sacramento General Plan Update.

[1] Includes government and education.

**Table A-7**  
**City of Sacramento**  
**Land Use Summary - Resident and Employee Population - River District**

Land Use	Assumptions	Units/Sq. Ft.			Population/Employees		
		Existing	Future	Buildout	Existing	Future	Buildout
	<i>PPH</i>	----- <i>units</i> -----			----- <i>residents</i> -----		
Single-Family/Duplex Dwelling	2.80	0	0	<b>0</b>	0	0	<b>0</b>
Multi-Unit Dwelling	2.10	386	7,758	<b>8,144</b>	811	16,292	<b>17,102</b>
<b>Residential</b>	2.47	<b>386</b>	<b>7,758</b>	<b>8,144</b>	<b>953</b>	<b>19,162</b>	<b>20,116</b>
	<i>Sq. Ft./Emp.</i>	----- <i>sq. ft.</i> -----			----- <i>employees</i> -----		
Retail	400	384,000	470,479	<b>854,479</b>	960	1,176	<b>2,136</b>
Office	250	850,000	3,106,000	<b>3,956,000</b>	3,400	12,424	<b>15,824</b>
Public	250	0	0	<b>0</b>	0	0	<b>0</b>
Industrial	850	1,463,700	0	<b>1,463,700</b>	1,722	0	<b>1,722</b>
<b>Subtotal Nonresidential</b>		<b>2,697,700</b>	<b>3,576,479</b>	<b>6,274,179</b>	<b>6,082</b>	<b>13,600</b>	<b>19,682</b>

"growth\_river"

Source: City of Sacramento General Plan Update.

[1] Includes government and education.

A-7

**Table A-8**  
**City of Sacramento**  
**Land Use Summary - Resident and Employee Population - Remaining City Areas**

Land Use	Assumptions	Units/Sq. Ft.			Population/Employees		
		Existing	Future	Buildout	Existing	Future	Buildout
	<i>PPH</i>	<i>units</i>			<i>residents</i>		
Single-Family/Duplex Dwelling	2.80	106,858	4,349	<b>111,207</b>	299,202	12,177	<b>311,380</b>
Multi-Unit Dwelling	2.10	57,515	21,696	<b>79,211</b>	120,782	45,561	<b>166,342</b>
<b>Residential</b>	<b>2.47</b>	<b>164,373</b>	<b>26,045</b>	<b>190,418</b>	<b>406,001</b>	<b>64,330</b>	<b>470,332</b>
	<i>Sq. Ft./Emp.</i>	<i>sq. ft.</i>			<i>employees</i>		
Retail	400	27,308,406	1,657,278	<b>28,965,685</b>	68,271	4,143	<b>72,414</b>
Office	250	22,396,265	2,656,348	<b>25,052,613</b>	89,585	10,625	<b>100,210</b>
Public	250	6,398,395	1,177,276	<b>7,575,671</b>	25,594	4,709	<b>30,303</b>
Industrial	850	21,003,738	1,227,384	<b>22,231,122</b>	24,710	1,444	<b>26,154</b>
<b>Subtotal Nonresidential</b>		<b>77,106,804</b>	<b>6,718,286</b>	<b>83,825,090</b>	<b>208,160</b>	<b>20,922</b>	<b>229,082</b>

"growth\_remaining"

Source: City of Sacramento General Plan Update.

[1] Includes government and education.



## APPENDIX B:

DKS Memorandum: Cost Allocation of Roadway  
Improvements Funded by Fee Program



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www.dksassociates.com

# MEMORANDUM

**DATE:** August 8, 2016  
**TO:** Lucinda Willcox, City of Sacramento  
**FROM:** John P. Long  
**SUBJECT:** Cost Allocation of Roadway Improvements Funded by Fee Program

---

This memorandum provides a brief summary of the methodology used to allocate the cost of roadway improvements that will be funded by the City's Transportation Development Impact Fee (TDIF) Program. The results of this analysis will be used in the Nexus Study for the TDIF Program.

## Methodology

The City of Sacramento has identified a set of transportation improvements (roadway improvements as well as to new/improved facilities for bikes, transit and pedestrians) that the TDIF Program will help fund. The selected improvements are needed to help accommodate the projected growth in travel demand due to new development within the City limits, which is the TDIF "benefit area".

In addition to accommodating future development, some of the selected roadway improvements for the TDIF Program would also help some improve existing deficiencies and/or provide some mobility benefits to existing development. Therefore, the "nexus" for new development's share of the cost of roadway improvements in the TDIF Program will be based on the estimated percentage of the total future traffic volume using each roadway improvement that stems from vehicle trips generated by future development within the City. The share of the costs from "other" traffic (i.e. traffic generated by existing development or non-City growth) will need to be funded by sources other than the TDIF Program.

The "percent use" estimates are based on a future development scenario that reflects SACOG's 2036 estimated development levels in the six-county SACOG region for the 2016 Metropolitan Transportation Plan/Sustainable Community Strategy (MTP/SCS). The percent use estimates are calculated by tracking the projected number and origins/destinations of 2036 vehicle trips using the SACSIM regional travel demand model that SACOG used to prepare the 2016 MTP/SCS.

"Percent use" estimates were prepared for roadway improvement projects that the City intends to use the TDIF Program to help fund. The SACSIM model was used to estimate the number of weekday vehicle trips on each of the roadway improvement projects that fit into the following "percent use" categories:

- **Existing Uses** – vehicle trips that come from existing development within or outside the City of Sacramento
- **City Growth** – vehicle trips for future development (existing through 2036) where either end of the trip is within the City of Sacramento
- **Thru Growth** – vehicle trips from future development where neither end of trip is within the City of Sacramento



## Results

**Table 1** shows the cost allocation of roadway improvement projects in the TDIF Program, including the following:

- The description of each of the 20 roadway improvement projects to be funded by the TDIF Program
- The estimated percent of vehicle trips in each of the three “percent use” categories for each of the roadway improvement projects
- The estimated cost of each roadway improvement project
- The cost allocation for each roadway improvement project. The percentage of traffic generated by City Growth was multiplied by the cost of each of the roadway improvement projects to determine the amount to be funded by the TDIF Program.

The total cost of the roadway improvement projects is estimated at about \$410 million. This nexus analysis determined that new development should pay about \$136 million (about 33 percent of the total cost of these improvements) through the TDIF Program. The City will identify any other sources of funding for the selected roadway improvement projects

### Sacramento Grid 3.0 Improvements

In addition to the 20 roadway improvements shown in Table 1, the City intends to include a portion of the cost of the Sacramento “Grid 3.0” in the TDIF Program. This plan, described in “GRID 3.0 - Planning the Future of Mobility in the Sacramento Central City” (August 2016) is the City’s plan to improve the downtown grid and accommodate growth. The plan includes about \$165 million in improvements to pedestrian, bicycle, transit and roadway facilities in the Sacramento Central City.

New development that occurs within the Central City will clearly use the facilities in the Grid 3.0 improvement plan. However, new development in other parts of the City will also contribute new auto, transit, bike and/or pedestrian trips to the Central City and thus should contribute a share of those costs.

DKS used the SACSIM regional travel demand model (that SACOG used to prepare the 2016 MTP/SCS) to estimate that about 10 percent of total 2036 trips that travel to/from the Central City would come from new development that occurs within portions of the City of Sacramento outside the Central City. While new development that occurs within the Central City could be allocated a higher share of the costs of the Grid 3.0 improvement plan, an allocation of 10 percent of the cost of the Grid 3.0 improvement costs Citywide is warranted.



Facility	Project Description	Percent Use (2036)				Total Cost (2015 Dollars)	Cost Allocation	
		Existing Uses	Growth		Total		TDIF Program (City Growth)	Other
			City	Thru				
Bell Ave.	Widen: 3 lanes from Norwood Ave. to Raley Blvd.	69.0%	29.2%	1.8%	100%	\$20,000,000	\$5,845,408	\$14,154,592
East Commerce Way	East Commerce Way from Club Center Dr. to Del Paso Rd, extend as a 6-lane facility	49.6%	50.4%	0.0%	100%	\$3,787,699	\$1,908,281	\$1,879,418
East Commerce Way	Extend East Commerce Way from Arena Blvd. to Natomas Crossing Dr., as a 6 lane road	54.0%	46.0%	0.0%	100%	\$1,251,294	\$575,232	\$676,062
East Commerce Way	Extend East Commerce Way from planned Natomas Crossing Drive to San Juan Rd. as a 4 lane road	62.1%	37.9%	0.0%	100%	\$3,671,780	\$1,391,164	\$2,280,616
El Centro Rd.	New Overcrossing: El Centro Rd. overcrossing	53.3%	46.7%	0.0%	100%	\$11,900,084	\$5,557,815	\$6,342,269
Elder Creek Rd.	Widen: 4 lanes from Florin Perkins Rd. to South Watt Ave.	66.3%	30.3%	3.3%	100%	\$10,000,000	\$3,033,600	\$6,966,400
14th Ave Extension/ Jackson Hwy (SR 16)	Road Realignment: 4 lane Rd. from Power Inn Rd. to South Watt Ave.	69.3%	30.1%	0.6%	100%	\$30,000,000	\$9,024,900	\$20,975,100
Lower American River Crossing	New all-modal Bridge: between downtown Sacramento and South Natomas across the Lower American River. Includes: Auto, transit, bicycle, and pedestrian facilities. Scale and features to be determined through need and purpose study anticipated to begin in 2012	77.0%	23.0%	0.0%	100%	\$40,000,000	\$9,205,600	\$30,794,400
Main Ave.	Widen: 4 lanes from Norwood Ave. to Rio Linda Blvd.	59.7%	36.2%	4.1%	100%	\$10,500,000	\$3,800,265	\$6,699,735
Main Ave.	Road Extension: 2 lanes from Rio Linda Blvd. to Marysville Blvd.	52.2%	43.9%	3.9%	100%	\$9,000,000	\$3,947,490	\$5,052,510
Natomas Crossing Dr.	New Overcrossing: Natomas Crossing Dr. at I-5	60.0%	40.0%	0.0%	100%	\$11,900,084	\$4,761,819	\$7,138,265
Power Inn Rd.	Widen: 6 lanes from Fruitridge Rd. to 14th	76.6%	20.7%	2.7%	100%	\$30,000,000	\$6,207,900	\$23,792,100



Table 1: Cost Allocation Based on Percent Use of Roadway – City of Sacramento TDIF Program								
Facility	Project Description	Percent Use (2036)				Total Cost (2015 Dollars)	Cost Allocation	
		Existing Uses	Growth		Total		TDIF Program (City Growth)	Other
			City	Thru				
I-5 at Richards Blvd. Interchange	Richards Blvd. and I-5; reconstruct interchange	59.1%	37.5%	3.4%	100%	\$89,000,000	\$33,388,350	\$55,611,650
W. El Camino Ave.	Widen: 6 lanes West El Camino Interchange. Includes: bike lanes at I-80 / Natomas Main Drainage Canal	77.5%	22.2%	0.4%	100%	\$30,000,000	\$6,654,000	\$23,346,000
S. Watt Ave.	Widen: 6 lanes from Elder Creek Rd. to Fruitridge Rd.	64.5%	27.6%	7.9%	100%	\$20,000,000	\$5,524,200	\$14,475,800
S. Watt Ave. / Elk Grove Florin Rd.	Widen: 6 lanes from Fruitridge Rd. to Kiefer Blvd.	60.7%	32.3%	7.0%	100%	\$10,000,000	\$3,229,100	\$6,770,900
Highway 99 Meister Way Overcrossing	New Overcrossing: Meister Wy. / Hwy. 99	31.8%	68.2%	0.0%	100%	\$8,195,118	\$5,590,136	\$2,604,982
SR 99 Elkhorn Boulevard Interchange	In Sacramento County :Expand the Elkhorn Blvd. interchange on Route 99 to accommodate the widening of Elkhorn Blvd. from 2 to 6 lanes	60.5%	24.8%	14.7%	100%	\$11,085,277	\$2,744,604	\$8,340,673
5th and 6th Streets	Extend roadways between Railyards Blvd and Richards Blvd	32.8%	67.2%	0.0%	100%	\$30,000,000	\$20,158,073	\$9,841,927
Riverfront Reconnection Project	Phases 2 and 3	87.5%	12.3%	0.1%	100%	\$30,000,000	\$3,701,440	\$26,298,560
<b>Total Roadway Improvements</b>						<b>\$410,291,336</b>	<b>\$136,249,376</b>	<b>\$274,041,960</b>



## APPENDIX C: Future Trip Demand by Subarea

Table C-1	Future Trip Demand by Subarea (3 pages) .....	C-1
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**Table C-1  
City of Sacramento  
Transportation Development Impact Fee  
Future Trip Demand by Subarea**

Land Use Category	Trip Demand Factor	Citywide		Infill		North Natomas	
		Future Units/ Square Feet	Trip Demand	Future Units/ Square Feet	Trip Demand	Future Units/ Square Feet	Trip Demand
<b>Residential</b>	<i>per Unit</i>						
Single-Family/Duplex Dwelling	0.99	10,940	10,833	4,349	4,306	2,587	2,562
Multi-Unit Dwelling	0.57	57,417	32,649	21,696	12,337	8,103	4,608
<b>Subtotal Residential</b>		<b>68,357</b>	<b>43,482</b>	<b>26,045</b>	<b>16,643</b>	<b>10,690</b>	<b>7,169</b>
<b>Nonresidential</b>	<i>per 1,000 Sq. Ft.</i>						
Retail	1.49	11,991,786	17,847	1,657,278	2,466	4,383,248	6,523
Office	1.47	11,681,115	17,154	2,656,348	3,901	1,864,250	2,738
Industrial	1.01	2,612,480	2,629	1,227,384	1,235	1,014,900	1,021
<b>Subtotal Nonresidential</b>		<b>26,285,381</b>	<b>37,630</b>	<b>5,541,010</b>	<b>7,603</b>	<b>7,262,398</b>	<b>10,283</b>
<b>TOTAL ALL LAND USES</b>			<b>81,112</b>		<b>24,246</b>		<b>17,452</b>

Source: City of Sacramento.

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**Table C-1  
City of Sacramento  
Transportation Development Impact Fee  
Future Trip Demand by Subarea**

Land Use Category	Trip Demand Factor	Delta Shores		Greenbriar		Downtown	
		Future Units/ Square Feet	Trip Demand	Future Units/ Square Feet	Trip Demand	Future Units/ Square Feet	Trip Demand
<b>Residential</b>	<i>per Unit</i>						
Single-Family/Duplex Dwelling	0.99	1,673	1,657	2,007	1,987	257	255
Multi-Unit Dwelling	0.57	4,466	2,540	695	395	1,658	943
<b>Subtotal Residential</b>		<b>6,139</b>	<b>4,196</b>	<b>2,702</b>	<b>2,383</b>	<b>1,915</b>	<b>1,198</b>
<b>Nonresidential</b>	<i>per 1,000 Sq. Ft.</i>						
Retail	1.49	780,000	1,161	113,600	169	1,388,285	2,066
Office	1.47	50,250	74	104,000	153	1,356,716	1,992
Industrial	1.01	0	0	0	0	0	0
<b>Subtotal Nonresidential</b>		<b>830,250</b>	<b>1,235</b>	<b>217,600</b>	<b>322</b>	<b>2,745,001</b>	<b>4,058</b>
<b>TOTAL ALL LAND USES</b>			<b>5,431</b>		<b>2,704</b>		<b>5,256</b>

Source: City of Sacramento.

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**Table C-1  
City of Sacramento  
Transportation Development Impact Fee  
Future Trip Demand by Subarea**

Land Use Category	Trip Demand Factor	Railyards		River District		65th Street Area	
		Future Units/ Square Feet	Trip Demand	Future Units/ Square Feet	Trip Demand	Future Units/ Square Feet	Trip Demand
<b>Residential</b>	<i>per Unit</i>						
Single-Family/Duplex Dwelling	0.99	0	0	0	0	67	66
Multi-Unit Dwelling	0.57	10,728	6,100	7,758	4,411	2,313	1,315
<b>Subtotal Residential</b>		<b>10,728</b>	<b>6,100</b>	<b>7,758</b>	<b>4,411</b>	<b>2,380</b>	<b>1,382</b>
<b>Nonresidential</b>	<i>per 1,000 Sq. Ft.</i>						
Retail	1.49	1,384,800	2,061	470,479	700	1,814,095	2,700
Office	1.47	2,028,250	2,979	3,106,000	4,561	515,300	757
Industrial	1.01	0	0	0	0	370,196	373
<b>Subtotal Nonresidential</b>		<b>3,413,050</b>	<b>5,039</b>	<b>3,576,479</b>	<b>5,261</b>	<b>2,699,591</b>	<b>3,829</b>
<b>TOTAL ALL LAND USES</b>			<b>11,140</b>		<b>9,673</b>		<b>5,211</b>

*trips*

Source: City of Sacramento.

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