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DRAFT
Environmental Impact Report
City of Fresno Downtown Neighborhoods Community Plan, Fulton Corridor Specific Plan, and Downtown Development Code
City of Fresno, Fresno County, California

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Table of Contents

Acronyms and Abbreviations xi

Section 1: Introduction 1-1
1.1 - Regional and Local Setting 1-1
1.2 - Overview of the DNCP, FCSP, and DDC 1-1
1.3 - Purpose and Authority 1-3
1.4 - Role of the EIR 1-4
1.5 - Lead Agency, Project Contact and Sponsors 1-5
1.6 - EIR Focus 1-6
1.7 - Review of the Draft EIR 1-17
1.8 - Project Objectives 1-18

Section 2: Executive Summary 2-1
2.1 - Purpose 2-1
2.2 - Project Summary 2-1
2.3 - Significant Unavoidable Adverse Impacts 2-5
2.4 - Summary of Project Alternatives 2-6
2.5 - Areas of Controversy 2-6
2.6 - Public Review of the Draft EIR 2-7
2.7 - Executive Summary Matrix 2-8

Section 3: Project Description 3-1
3.1 - Project Location and Setting 3-1
3.2 - Project Overview 3-12
3.3 - Project Objectives 3-18
3.4 - Project Characteristics 3-20
3.5 - Conceptual Framework 3-26
3.6 - DNCP Planning Areas and FCSP Subareas 3-28
3.7 - Plan Implementation 3-32
3.8 - Intended Uses of this Draft EIR 3-72

Section 4: General Description of Environmental Setting 4-1
4.1 - Project Environmental Setting 4-1
4.2 - Cumulative Environmental Setting 4-5

Section 5: Environmental Impact Analysis 5-1
Approach to Environmental Analysis 5-1
Environmental Topics 5-1
Organization of Issue Areas 5-1
Level of Significance 5-2
Format Used for Impact Analysis and Mitigation Measures 5-2
5.1 - Aesthetics 5.1-1
5.2 - Agriculture Resources 5.2-1
5.3 - Air Quality 5.3-1
5.4 - Biological Resources 5.4-1
5.5 - Cultural Resources 5.5-1
5.6 - Geology and Soils 5.6-1
5.7 - Greenhouse Gases 5.7-1
5.8 - Hazards and Hazardous Materials 5.8-1

5.9 - Hydrology and Water Quality 5.9-1
5.10 - Land Use and Planning 5.10-1
5.11 - Noise 5.11-1
5.12 - Population and Housing 5.12-1
5.13 - Public Services 5.13-1
5.14 - Transportation 5.14-1
5.15 - Utilities and Service Systems 5.15-1

Section 6: Other CEQA Considerations 6-1
6.1 - Significant Unavoidable Adverse Impacts 6-1
6.2 - Growth Inducing Impacts 6-1
6.3 - Energy Conservation 6-2

Section 7: Alternatives to the Proposed Plans 7-1
7.1 - Introduction 7-1
7.2 - Project Objectives 7-3
7.3 - Alternative 1—No Project/Development in Accordance with Existing General Plan Land Use Designations 7-12
7.4 - Alternative 2—High Density Residential Focus 7-17
7.5 - Alternative 3—Retail Oriented Development Potential Scenario 7-21
7.6 - Alternative 4—Office Oriented Development Potential Scenario 7-26
7.7 - Environmentally Superior Alternative 7-30

Section 8: Effects Found not to be Significant 8-1
8.1 - Introduction 8-1

Section 9: Persons and Organizations Consulted/List of Preparers 9-1
9.1 - Report Preparation Panel 9-1
9.2 - Organizations and Persons Consulted 9-2

Section 10: References 10-1

List of Appendices

Appendix A: Downtown Neighborhoods Community Plan

Appendix B: Fulton Corridor Specific Plan

Appendix C: Downtown Development Code

Appendix D: NOP and Scoping Comments
D.1 - Notice of Preparation
D.2 - Comments Received on Notice of Preparation and Initial Study

Appendix E: Air Quality
E.1 - Health Risk Assessment Report
E.2 - CalEEMod Methodology, Assumptions, and Output
E.3 - Land Use Calculations
E.4 - Air Quality and Land Use Handbook

Appendix F: CNDDB, CNPS, and USFWS Inventory Results

Appendix G: Greenhouse Gas

Appendix H: Hazards
H.1 - Phase I Environmental Site Assessment (Phase I ESA) prepared for the DNCP
H.2 - Phase I Environmental Site Assessment (Phase I ESA) prepared for the FCSP

Appendix I: Noise Modeling

Appendix J: Traffic Data

Appendix K: Utility Technical Report

List of Tables

Table 1-1: Summary of IS/NOP 1-7
Table 1-2: First Scoping Meeting Comments 1-11
Table 1-3: Second Scoping Meeting Comments 1-12
Table 2-1: Executive Summary Matrix 2-9
Table 3-1: Existing Development by Land Use Type 3-2
Table 3-2: Maximum Development Potential by Land Use 3-20
Table 3-3: Development Potential Scenarios by Land Use 3-21
Table 3-4: Development Potential by Downtown (FCSP) District (High Development Potential) 3-23
Table 3-5: 2025 General Plan Allowed Population Increase by Existing Community Plan Area 3-23
Table 3-6: Residential Population Potential 3-24
Table 3-7: Jobs Potential 3-25
Table 3-8: Market Demand in DNCP and FCSP Areas Through 2035[1] 3-25
Table 5-1: Abbreviations for Mitigation Measures 5-3
Table 5.2-1: Description of Farmland Classifications 5.2-3
Table 5.3-1: Description of Air Pollutants 5.3-7
Table 5.3-2: Air Quality Monitoring Summary 5.3-14
Table 5.3-3: Air Quality Index and Health Effects from Ozone 5.3-16
Table 5.3-4: San Joaquin Valley Air Basin Attainment Status 5.3-18
Table 5.3-5: DNCP and FCSP Construction Emissions 5.3-35
Table 5.3-6: DNCP and FCSP Annual Air Pollutant Emissions 5.3-37
Table 5.3-7: CAPCOA Recommendations on Siting New Sensitive Receptors near TAC Sources 5.3-51
Table 5.3-8: Screening Levels for Potential Odor Sources 5.3-54
Table 5.7-1: Description of Greenhouse Gases 5.7-2
Table 5.7-2: City of Fresno 2010 Baseline Emission Inventory 5.7-8

Table 5.7-3: DNCP and FCSP Business as Usual Compared to 2020 Emissions with Reductions 5.7-47
Table 5.7-4: DNCP and FCSP at Project Buildout in 2039 ..... 5.7-49
Table 5.7-5: Scoping Plan Reduction Measures 5.7-55
Table 5.9-1: Summary of Groundwater Recharge 5.9-5
Table 5.10-1: Existing Development by Land Use[1] 5.10-3
Table 5.10-2: General Plan Consistency Analysis 5.10-25
Table 5.11-1: Typical A-Weighted Noise Levels 5.11-2
Table 5.11-2: Typical Construction Equipment Maximum Noise Levels, L_{max} 5.11-3
Table 5.11-3: Vibration Levels of Construction Equipment 5.11-5
Table 5.11-4: Measured Existing Noise Levels from General Plan Update 5.11-7
Table 5.11-5: Additional Measured Existing Noise Levels 5.11-7
Table 5.11-6: Summary of EPA Recommended Noise Levels to Protect Public Welfare 5.11-10
Table 5.11-7: FTA's Construction Vibration Damage Criteria 5.11-11
Table 5.11-8: FTA's Vibration Impact Criteria 5.11-12
Table 5.11-9: Transportation (Non-Aircraft) Noise Source 5.11-16
Table 5.11-10: Stationary Noise Sources 5.11-16
Table 5.11-11: Traffic Noise Contours 5.11-27
Table 5.12-1: Existing Population and Households in DNCP and FCSP Plan Areas, City of Fresno, Fresno County, and State of California 5.12-2
Table 5.12-2: Population and Households by Type in Downtown Neighborhoods Community Plan Area by Neighborhood 5.12-2
Table 5.12-3: Housing Unit Age, Tenure, and Vacancy Status 5.12-3
Table 5.12-4: Residential Population Potential 5.12-11
Table 5.12-5: 2025 General Plan Allowed Population Increase by Existing Community Plan Area 5.12-12
Table 5.12-6: Residential Population Potential 5.12-12
Table 5.12-7: Maximum Development Potential by Land Use[1] 5.12-14
Table 5.13-1: Fresno Fire Department Statistics 1980–2011 ..... 5.13-3
Table 5.13-2: Existing City of Fresno Fire Stations in the DNCP and FCSP Areas 5.13-4
Table 5.13-3: Capacity and Enrollment Figures for Fresno Unified School District 5.13-6
Table 5.13-4: Schools within the DNCP Area (Fresno Unified School District) 5.13-7
Table 5.13-5: Fresno Unified School District Student Generation Rates for K-12 ..... 5.13-19
Table 5.14-1: Study Intersections 5.14-10
Table 5.14-2: Study Freeway Segments 5.14-13

Table 5.14-3: Peak Hour Intersection Operations—Existing Conditions 5.14-19
Table 5.14-4: Peak Hour Freeway Mainline Operations—Existing Conditions 5.14-24
Table 5.14-5: Peak Hour Freeway Ramp Junction Operations—Existing Conditions 5.14-25
Table 5.14-6: Peak Hour Freeway Off-Ramp Queuing—Existing Conditions 5.14-28
Table 5.14-7: Level of Service Criteria—Signalized Intersections 5.14-54
Table 5.14-8: Level of Service Criteria—Unsignalized Intersections 5.14-54
Table 5.14-9: Level of Service Criteria—Freeway Mainline, Off-Ramp Diverge, & On-Ramp Merge Segments 5.14-55
Table 5.14-10: Proposed Project Trip Generation 5.14-61
Table 5.14-11: Peak Hour Intersection Operations—Existing Plus Project Conditions 5.14-62
Table 5.14-12: Peak Hour Freeway Mainline Operations—Existing Plus Project Conditions 5.14-68
Table 5.14-13: Peak Hour Freeway Ramp Junction Operations—Existing Plus Project Conditions 5.14-70
Table 5.14-14: Peak Hour Freeway Off-Ramp Queuing—Existing Plus Project Conditions 5.14-74
Table 5.14-15: High Speed Rail Local Roadway Circulation Changes 5.14-87
Table 5.14-16: Peak Hour Intersection Operations—Cumulative Conditions 5.14-91
Table 5.14-17: Peak Hour Freeway Mainline Operations—Cumulative Conditions 5.14-97
Table 5.14-18: Peak Hour Freeway Ramp Junction Operations—Cumulative Conditions 5.14-99
Table 5.14-19: Peak Hour Freeway Off-Ramp Queuing—Cumulative Plus Project Conditions 5.14-102
Table 5.15-1: Current and Planned Potable Water Supplies 5.15-4
Table 5.15-2: Downtown Neighborhoods Community Plan and Fulton Corridor Specific Plan Estimated Solid Waste Generation 5.15-31
Table 7-1: Significant and Unavoidable Impacts of the Proposed DNCP, FCSP and DDC 7-1
Table 7-2: Comparison Summary of Impacts between the Proposed Plans and Project Alternatives 7-6

List of Exhibits

Exhibit 3-1: Regional Location Map 3-3
Exhibit 3-2: Plan Areas 3-5
Exhibit 3-3: Fulton Corridor Specific Plan Area 3-7
Exhibit 3-4: Existing Land Use within the Downtown Neighborhoods Community Plan 3-9
Exhibit 3-5: Relationship of DNCP and FCSP to Existing Community Plan Areas 3-13
Exhibit 3-6: Relationship of DNCP and FCSP to Existing Specific Plans 3-15
Exhibit 3-7: Planning Subareas of the Downtown Neighborhoods Community Plan 3-35

Exhibit 3-8: Fulton Corridor Specific Plan—Planning Districts 3-37
Exhibit 3-9: DNCP Near-term Transportation Priorities 3-39
Exhibit 3-10: DNCP Mid-term Transportation Priorities 3-41
Exhibit 3-11: DNCP Long-term Transportation Priorities 3-43
Exhibit 3-12: DNCP Potential Access to Open Space 3-51
Exhibit 3-13: DNCP Utilities Improvements 3-53
Exhibit 3-14: FCSP Streetscape and Open Space Projects 3-65
Exhibit 3-15: FCSP Transportation Projects 3-67
Exhibit 3-16: FCSP Recommended Utility Improvements 3-69
Exhibit 5.2-1: Important Farmland Map 5.2-5
Exhibit 5.2-2: Soil Map 5.2-7
Exhibit 5.4-1: Vegetation Communities 5.4-15
Exhibit 5.8-1: Corresponding Community Plan Areas 5.8-5
Exhibit 5.8-2: Areas of Concern 5.8-7
Exhibit 5.9-1: 100-Year Flood Zones 5.9-11
Exhibit 5.10-1: Current General Plan Land Use Designations 5.10-5
Exhibit 5.10-2: Current Zoning Designations 5.10-7
Exhibit 5.10-3a: Proposed DNCP Land Use and Zoning Designations 5.10-21
Exhibit 5.10-3b: Proposed FCSP Land Use and Zoning Designations 5.10-23
Exhibit 5.11-1: Land Use Compatibility for Community Noise Environments Matrix 5.11-17
Exhibit 5.14-1: Study Area 5.14-15
Exhibit 5.14-2a: Peak Hour Traffic Volumes and Lane Configurations—Existing Conditions 5.14-31
Exhibit 5.14-2b: Peak Hour Traffic Volumes and Lane Configurations—Existing Conditions 5.14-33
Exhibit 5.14-2c: Peak Hour Traffic Volumes and Lane Configurations—Existing Conditions 5.14-35
Exhibit 5.14-3a: AM Peak Hour Level of Service—Existing Conditions 5.14-37
Exhibit 5.14-3b: PM Peak Hour Level of Service—Existing Conditions 5.14-39
Exhibit 5.14-4: Existing Bicycle Facilities 5.14-41
Exhibit 5.14-5: Existing Transit Network 5.14-45
Exhibit 5.14-6a: Peak Hour Traffic Volumes and Lane Configurations—Existing Plus Project Conditions 5.14-77
Exhibit 5.14-6b: Peak Hour Traffic Volumes and Lane Configurations—Existing Plus Project Conditions 5.14-79
Exhibit 5.14-6c: Peak Hour Traffic Volumes and Lane Configurations—Existing Plus Project Conditions 5.14-81

Exhibit 5.14-7a: AM Peak Hour Level of Service—Existing Plus Project Conditions.....5.14-83

Exhibit 5.14-7b: PM Peak Hour Level of Service—Existing Plus Project Conditions.....5.14-85

Exhibit 5.14-8a: Peak Hour Traffic Volumes and Lane Configurations—Cumulative Conditions.....5.14-111

Exhibit 5.14-8b: Peak Hour Traffic Volumes and Lane Configurations—Cumulative Conditions.....5.14-113

Exhibit 5.14-8c: Peak Hour Traffic Volumes and Lane Configurations—Cumulative Conditions.....5.14-115

Exhibit 5.14-9a: AM Peak Hour Level of Service—Cumulative Plus Project Conditions.....5.14-117

Exhibit 5.14-9b: PM Peak Hour Level of Service—Cumulative Plus Project Conditions.....5.14-119

List of Figures

Figure 5.3-1: Ultrafine Particles.....5.3-14

Figure 5.3-2: San Joaquin Valley NO_x Emissions Forecast.....5.3-22

Figure 5.7-1: Greenhouse Gas Emissions Trends.....5.7-7

Figure 5.7-2: Greenhouse Gas Emission Trends by Sector in California.....5.7-7

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ACRONYMS AND ABBREVIATIONS

1,1-DCE	1-dichloroethene
ACCM	asbestos-containing construction material
ADWF	Average Dry Weather Flows
AFY	acre-feet/year
ALUC	Airport Land Use Commission
ALUCP	Airport Land Use Compatibility Plan
AMSL	above mean sea level
APA	Administrative Procedure Act
APS	Alternative Planning Strategy
AQGGP	Air Quality Guidelines for General Plans
AQI	Air Quality Index
ARB	Air Resources Board
ARFF	Airport Rescue Fire Fighting
ARRA	American Recovery and Reinvestment Act
ATC	Authority to Construct
BAAQMD	Bay Area Air Quality Management District
BACT	best available control technology
BAU	Business as Usual
BGS	below ground surface
BMP	Best Management Practices
BNSF	Burlington Northern Santa Fe
BPS	Best Performance Standards
BRT	Bus Rapid Transit
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
CACP	Central Area Community Plan
CAFE	Corporate Average Fuel Economy
CAIR	Clean Air Interstate Rule
Cal/OSHA	California Occupational Safety and Health Administration
CalEMA	California Emergency Management Agency
Caltrans	California Department of Transportation
CANG	California Air National Guard
CAP	Climate Action Plan
CAPCOA	California Air Pollution Control Officers Association
CAPER	Consolidated Annual Performance Evaluation Report

CBC	California Building Code
CBD	Central Business District
CCAA	California Clean Air Act
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFG Code	California Fish and Game Code
CFR	Code of Federal Regulations
CGC	California Government Code
CHP	California Highway Patrol
CLG	Certified Local Government
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	Carbon monoxide
COC	constituents of concern
COG	Council of Governments
CPTED	Crime Prevention Through Environmental Design
CPUC	California Public Utilities Commission
CRHR	California Register of Historical Resources
CRPR	California Rare Plant Rank
CSI	California Solar Initiative
CSMP	Corridor System Management Plan
CTC	California Transportation Commission
CUPA	Certified Unified Program Agency
CWA	Clean Water Act
dB	decibel
dBA	weighted sound level
DCE	dicholoroethene
DDC	Downtown Development Code
DNCAC	Downtown Neighborhoods Community Advisory Committee
DNCP	Downtown Neighborhoods Community Plan
Draft EIR	Draft Environmental Impact Report
DTSC	California Department of Toxic Substances Control
DU	Dwelling Units
EA	Environmental Assessment
EISA	Energy Independence and Security Act of 2007

EOC	Emergency Operations Center
EPA	United States Environmental Protection Agency
EPO	Emergency Preparedness Officer
ESA	Endangered Species Act
F	Fahrenheit
FAA	Federal Aviation Administration
FAR	floor area ratio
FAX	Fresno Area Express
FBO	Fixed Base Operators
FCDASP	Fresno Chandler Downtown Airport Specific Plan
FCEHS	Fresno County Department of Community Health
FCH	Chandler Executive Airport
FCMA	Fresno-Clovis Metropolitan Area
FCRTA	Fresno County Rural Transit Agency
FCSP	Fulton Corridor Specific Plan
FCSPCAC	Fulton Corridor Specific Plan Advisory Committee
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FIC	Faith in Community
FID	Fresno Irrigation District
FIDS	Fresno-Madera Freeway Interchange Deficiency Study
FIP	Flood Insurance Program
FIRM	Flood Insurance Rate Map
FLSP	Fulton Lowell Specific Plan
FMC	Fresno Municipal Code
FMFCD	Fresno Metropolitan Flood Control District
FMMP	Farmland Mapping and Monitoring Program
FMSI	Fresno Major Streets Impact
FPD	Fresno Police Department
FPPA	Farmland Protection Policy Act
Fresno COG	Fresno Council of Governments
FTA	Federal Transit Administration
FUSD	Fresno Unified School District
FY	Fiscal Year
FYI	Fresno-Yosemite International Airport
GAMAQI	Guide for Assessing and Mitigating Air Quality Impacts
GPA	Galvin Preservation Associates
HAP	Hazardous Air Pollutants

HCM	Highway Capacity Manual
HCP	Habitat Conservation Plan
HMRT	Hazardous Materials Response Team
HMTA	Hazardous Materials Transportation Act
HRA	Health Risk Assessment
HSC	Health and Safety Code
HSR	High Speed Rail
HVAC	Heating/Air Conditioning
ICS	Initial Construction Section
IPCC	Intergovernmental Panel on Climate Change
ISO	Insurance Services Office
ISTEA	Intermodal Surface Transportation Efficiency Act of 1991
ITS	Intelligent Transportation System
LBP	lead-based paint
LCFS	Low Carbon Fuel Standards
Ldn	day/night average sound level
LEED	Leadership in Energy Efficient Design
LEPC	local emergency planning committee
LESA	Land Evaluation and Site Assessment Model
LEV	Low-Emission Vehicle
LID	Low Impact Development
L_{max}	maximum sound level
LOMR	Letter of Map Revision
LOS	Level of Service
LRT	Light Rail Transit
LRTP	Long-Range Transit Plan
LUFT	leaking underground fuel tank
MAP-21	Moving Ahead for Progress in the 21st Century Act
MBHCP	Metropolitan Bakersfield Habitat Conservation Plan
MBTA	Migratory Bird Treaty Act
MCL	maximum contaminant level
MEIR	Master Environmental Impact Report
MERV	Minimum Efficiency Reporting Value
mgd	million gallons per day
MLD	Most Likely Descendant
MOE	Measure of Effectiveness
MOU	Memorandum of Understanding
MPOs	Metropolitan Planning Organizations

MRZ	Mineral Resource Zone
MS4s	Municipal Separate Storm Sewer Systems
MWRMP	Metropolitan Water Resource Management Plan
NAAQS	National Ambient Air Quality Standards
NAGPRA	Native American Graves Protection and Repatriation Act
NCCP	National Community Conservation Plan
NEHRP	National Earthquake Hazards Reduction Program
NESHAP	National Emissions Standards for Hazardous Air Pollutants
NEWWTF	Northeast Surface Water Treatment Facility
NHPA	National Historic Preservation Act
NHTSA	National Highway Traffic Safety Administration
NIMS	National Incident Management System
NOFA	Notice of Funding Available
NOP	Notice of Preparation
NO_x	oxides of nitrogen
NPDES	National Pollutant Discharge Elimination System
NPL	National Priorities List
NPS	National Park Service
NSR	New Source Review
ODS	Ozone Depleting Substance
OES	Office of Emergency Services
OHWM	Ordinary High Water Mark
ONAC	Office of Noise Abatement and Control
OSHA	Occupational Safety and Health Administration
PACE	Property Assessed Clean Energy
PARCS	Parks, After School, Recreation and Community Services
PCB	polychlorinated biphenyl
PCE	tetrachlorethylene
PEC	potential environmental concern
PM	particulate matter
PPV	peak particle velocity
PRC	Public Resources Code
PTO	Permit to Operate
REL	Reference Exposure Level
RHNA	Regional Housing Needs Allocation
RMS	root mean square
ROG	reactive organic gases
RPS	Renewable Portfolio Standard

RTMF	Regional Transportation Mitigation Fee
RTP	Regional Transportation Plan
RTPA	Regional Transportation Planning Agency
RWMP	Recycled Wastewater Reclamation Facility
RWQCB	Regional Water Quality Control Board
SB	Senate Bill
SCS	Sustainable Community Strategy
SDWA	Safe Drinking Water Act
SEMS	Standardized Emergency Management System
sf	square feet
SFHA	Special Flood Hazard Area
SFRGWP	South Fresno Regional Groundwater Plume
SHPO	State Office of Historic Preservation
SIP	State Implementation Plan
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SOI	Sphere of Influence
SRTP	Short-Range Transit Plan
STIP	State Transportation Improvement Program
SWANCC	Solid Waste Agency of North Cook County
SWPPP	Storm Water Pollution Prevention Plan
SWRCB	State Water Resources Control Board
SWTF	Surface Water Treatment Facility
TAC	toxic air contaminant
TCE	trichloroethylene
TCP	trichlorpropane
TCR	Transportation Concept Report
TCSA	Toxic Substances Control Act
TDM	Transportation Demand Management
TEA-21	Transportation Equity Act for the 21st Century
TIZ	Traffic Impact Zone
TMDL	Total Maximum Daily Load
TPQ	Threshold Planning Quantity
TRUs	Transport Refrigeration Units
TSMI	Traffic Signal Mitigation Impact
UPRR	Union Pacific Railroad
USACE	United States Army Corps of Engineers
USBR	United States Bureau of Reclamation

USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey
UWMP	Urban Water Management Plan
v/c	volume-to-capacity
VdB	velocity in decibels
VERA	Voluntary Emission Reduction Agreements
VMT	vehicle miles traveled
VOC	volatile organic compounds
WCC	Woodward-Clyde Consultants
WCSMP	Wastewater Collection System Master Plan
WPA	Works Progress Administration

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SECTION 1: INTRODUCTION

1.1 - Regional and Local Setting

The City of Fresno (City) is located in the heart of California's San Joaquin Valley, approximately 190 miles southeast of San Francisco and 220 miles northwest of Los Angeles. Located very near the geographical center of California, the City is also the gateway to Yosemite National Park, Sierra National Forest, Kings Canyon National Park, and Sequoia National Park. Regional access to Fresno from the north and south is provided by State Routes 99 and 41, from the west by State Route 180, and from the east by State Routes 168 and 180.

The Downtown Neighborhoods Community Plan (DNCP) boundaries are located within the southern portion of the City of Fresno. The community plan boundaries encompass 7,290 acres. The Community Plan area is generally bounded to the east by Chestnut Avenue; to the south by Church Avenue, to the west by Thorne, West, and Marks Avenues; and to the north by State Route 180 (Exhibit 3-2). Along the western side of the Community Plan area, the boundaries extend as far north as Clinton Avenue. The Community Plan area is divided by State Routes 99, 41, and 180, as well as the Union Pacific and BNSF railroad rights-of-way.

The Fulton Corridor Specific Plan (FCSP) area is located within the boundaries of the DNCP (Exhibit 3-2). The FCSP boundaries encompass 655 acres. The Specific Plan area is generally bounded to the north by Divisadero Street, to the west by State Route 99, to the south by State Route 41, and to the east by N Street, O Street, and the alley between M and N Streets (Exhibit 3-3). The Specific Plan area is divided by the Union Pacific railroad right-of-way. Fulton Street is also within the boundaries of the FCSP.

The Downtown Development Code (DDC) is a form-based zoning code that contains the standards and requirements for development and land use activity within the boundaries of the DNCP and FCSP. It implements the DNCP and the FCSP and would apply to all 7,290 acres of property within the plan boundaries. While this code will be referenced as the "Downtown Development Code" throughout the DEIR, upon adoption it would be incorporated into the Citywide Development Code.

Today, Downtown is characterized by the concentration of commercial, retail, and office buildings and uses. Housing is noticeably absent, although several pioneering residential developments have emerged in recent years. In the Plan Areas' industrial districts, manufacturing, agricultural processing, warehousing, and industrial buildings and uses predominate. In both the Fulton District and South Van Ness, there is a rich stock of historic buildings in dire need of rehabilitation.

1.2 - Overview of the DNCP, FCSP, and DDC

1.2.1 - Downtown Neighborhood Community Plan (DNCP or Community Plan)

The DNCP (Appendix A) is an extension of the Fresno General Plan that provides updated and refined policy direction for Fresno's Downtown and the neighborhoods immediately adjacent to it. It contains within its boundaries the FCSP area and provides policy direction for the FCSP area and the

neighborhoods that surround it. The DNCP outlines the community's long-term goals for the Community Plan area and provides detailed policies concerning a wide range of topics, including land use and development, transportation, the public realm of streets and parks, infrastructure, historic resources, and health and wellness. Along with the form-based Downtown Development Code (DDC), the DNCP is intended to protect Fresno's oldest neighborhoods, while encouraging and accommodating future development, in a manner that contributes to a stronger and healthier community for everyone.

The overarching goal of the DNCP is to capitalize on the positive momentum for Downtown revitalization and put specific policies and actions into place to guide the rejuvenation of the Downtown neighborhoods that brings about lasting prosperity and improvements. The long-term vision for the DNCP can be summarized as follows:

- Establish Downtown as the heart of Fresno;
- Revive and/or transform each of the Plan's planning areas based upon their unique identity;
- Establish mixed-use neighborhood centers at important intersections that are within easy walking distance of surrounding residences and connect to existing and future transit networks;
- Improve the quality of the Community Plan Area's corridors by introducing street trees, traffic-calming measures, pedestrian amenities such as crosswalks, street lights and street furniture, and creating bicycle-friendly corridors; and
- Create a framework for improving neighborhoods in order to attract private investment back to the center of the City and fostering a sense of pride in Downtown and its surrounding neighborhoods that inspires residents and property owners to not only transform and refurbish their own properties, but also to inspire others to do the same.

1.2.2 - Fulton Corridor Specific Plan (FCSP or Specific Plan)

The FCSP (Appendix B) translates the policy direction of the Fresno General Plan and the DNCP into detailed goals, policies, and actions for the revitalization of the heart of Downtown. By establishing policies and standards for the Specific Plan area, the FCSP implements the General Plan at a site-specific level and provides for orderly development within the Plan area. The goal of the FCSP is to establish predictable and clear regulations that help reduce development costs and alleviate uncertainty, making good projects easier to build Downtown. To this end, the FCSP includes detailed policies regarding land use and development, historic resources, the public realm, transportation, and infrastructure that provide the foundation for urban and economic growth and the basis for the City to make decisions regarding growth, historic preservation, housing, transportation, the environment, community facilities, and community services within the Specific Plan area. The Fulton District is a main component of the FCSP, and one of the main objectives is to fully implement and construct the Fulton Mall Reconstruction Project as approved by the City Council in February 2014. The FCSP is more detailed than the DNCP and has been drafted to fully implement the goals, policies, and objectives of the DNCP. To the extent there appears to be any conflict between these two Plans, the FCSP takes precedence.

1.2.3 - Downtown Development Code (DDC or Downtown Code)

The DDC (Appendix C) is intended to be the implementing ordinance for both the DNCP and FCSP. The purpose and intent of the DDC is to:

1. Implement the policies, objectives and goals of the DNCP and the FCSP;
2. Provide an integrated set of development and land use standards to achieve the outcomes described in the DNCP and FCSP;
3. Be consistent with the principles, objectives, process and approach described in the Fresno General Plan; and
4. Preserve, protect, and promote the public health, safety, peace, comfort, convenience, prosperity, and general welfare of residents and businesses in the Downtown.

The DDC is a form-based code that contains most of the standards and requirements for development and land use activity within the DNCP and FCSP areas and regulates development patterns consistent with the existing scale and character of the plan areas' various neighborhoods districts and corridors. Form-based codes address the relationship between building facades and the public realm (streets and parks), the form and massing of buildings in relation to one another, and the scale and types of streets and blocks. The regulations and standards in form-based codes, presented in both diagrams and words, are keyed to a zoning map that designates the appropriate form and scale (and, therefore, character) of development, rather than only distinctions in land-use type. Land uses described in the DNCP and FCSP and the zones in the DDC are intended to be the same as those shown in Appendix C, Table 1-1. The DDC will ultimately be presented as a text amendment to the Citywide Development Code and if adopted will become an integral part of the code (FMC Chapter 15).

Form-based codes create an urban structure of centers, neighborhoods, and corridors and de-emphasize density in favor of standards for building form and streetscapes. Form-based codes recognize that uses may change over time, but the building and its physical environment will endure. In addition, a form-based code provides greater flexibility in the range of land uses that can occur in a building to make buildings sustainable and able to respond to changing economies. Finally, form-based codes recognize the high importance of public spaces in defining and creating a sense of place.

1.3 - Purpose and Authority

This Draft EIR evaluates the potential environmental impacts associated with the Downtown Neighborhood Community Plan (DNCP), Fulton Corridor Specific Plan (FCSP), and the Downtown Development Code (DDC) project. The scope of this Draft EIR is discussed below in Section 1.6. This document conforms to the following:

- California Environmental Quality Act California Environmental Quality Act (CEQA) (Public Resources Code Section 21000, et seq.)

- CEQA Guidelines (California Code of Regulations Section 15000, et seq.)
- City of Fresno Local CEQA Guidelines

This Draft EIR is intended to serve as an informational document for public agency decision-makers and the public in compliance with the CEQA Guidelines. Environmental impacts are analyzed to the degree of specificity prescribed by the CEQA Guidelines Section 15146. This document will address the potentially significant adverse environmental impacts that may be associated with both short-term construction period and long-term operations of the project, and will identify appropriate and feasible mitigation measures and alternatives in accordance with CEQA.

1.4 - Role of the EIR

This Draft EIR provides program-level analysis related to implementing the DNCP, FCSP, and the DDC.

1.4.1 - Tiering from General Plan EIR

This Draft EIR tiers from the MEIR, SCH 2012111915, prepared for the Fresno General Plan. "Tiering" or "tier" means the coverage of general matters and environmental effects in an environmental impact report prepared for a policy, plan, program or ordinance followed by narrower or site-specific environmental impact reports which incorporate by reference the discussion in any prior environmental impact report and which concentrate on the environmental effects which (a) are capable of being mitigated, or (b) were not analyzed as significant effects on the environment in the prior environmental impact report (Cal. Pub. Res. Code § 20168.5; CEQA Guidelines § 15152).

Tiering of EIRs is encouraged to promote construction of needed housing and other development projects by (1) streamlining regulatory procedures, (2) avoiding repetitive discussions of the same issues in successive environmental impact reports, and (3) ensuring that environmental impact reports prepared for later projects which are consistent with a previously approved policy, plan, program, or ordinance concentrate upon environmental effects that may be mitigated or avoided in connection with the decision on each later project. Tiering is appropriate when it helps a public agency to focus upon the issues ripe for decision at each level of environmental review and in order to exclude duplicate analysis of environmental effects examined in previous environmental impact reports. To achieve this purpose, the California Legislature has determined that EIR shall be tiered whenever feasible, as determined by the lead agency (Cal. Pub. Res. Code § 20193).

Where a lead agency is using the tiering process in connection with an EIR for a large-scale planning approval, such as a general plan or component thereof (e.g., an area plan or community plan such as the DNCP and FCSP), the development of detailed, site-specific information may not be feasible but can be deferred, in many instances, until such time as the lead agency prepares a future environmental document in connection with a project of a more limited geographical scale, as long as deferral does not prevent adequate identification of significant effects of the planning approval at hand.

Each topical section of this DEIR provides any applicable mitigation measures from the MEIR. Additional mitigation measures are provided where necessary to discuss impacts unique to the implementation of the DNCP, FCSP and DDC that were not addressed in the MEIR.

1.4.2 - Use of the EIR for Program-Level Analysis

This Draft EIR contains program-level analysis. A program-level analysis was selected for the EIR evaluation because this project is considered a program. To be considered a program by CEQA, a project must include a series of actions that are characterized as one large project. In this instance, the DNCP, FCSP and DDC qualify as codified in Section 15168 of the CEQA Guidelines, et seq., as a series of actions that can be related either:

- Geographically,
- As logical parts in the chain of contemplated actions,
- In connection with issuance of rules, regulations, plans, or other general criteria to govern the conduct of a continuing program, or
- As individual activities carried out under the same authorizing statutory or regulatory authority and having generally similar environmental effects which can be mitigated in similar ways.

1.4.3 - Use of the EIR for Project-Level Analysis

This Draft EIR also contains project-level analysis with the expectation that no additional environmental review will be required after the City certifies the Final EIR and subsequently approves the project, provided that subsequently proposed individual development projects are consistent with the DNCP, FCSP and DDC and within the scope of environmental analysis contained in this Draft EIR. For those projects that are consistent, other State Responsible Agencies would also be able to approve subsequent actions germane to their respective areas of statutory responsibility without additional environmental review and documentation.

1.5 - Lead Agency, Project Contact and Sponsors

CEQA Guidelines Section 15367 defines the Lead Agency as ". . . the public agency, which has the principal responsibility for carrying out or approving a project." Criteria considered in identifying the Lead Agency include whether the agency (1) has the greatest responsibility for supervising or approving the project as a whole; (2) is an agency with the general governmental powers; and (3) will act first on the project in question (CEQA Guidelines Section 15051). As previously stated, the Lead Agency for this Draft EIR is the City. In this capacity, the City is responsible for review of the environmental documentation through certification of a Final EIR.

In accordance with Section 15091 of the CEQA Guidelines, the Lead Agency would be required to make findings for each environmental impact of the project that cannot be mitigated below a level of significance, should the Lead Agency determine that the benefits of the proposed project outweigh unmitigated, significant environmental effects that would remain after project implementation. The City would be required to adopt a statement of overriding considerations,

stating the reasons supporting this action, regardless of the project's significant environmental effects that would remain. This Draft EIR reflects the independent judgment and analysis of the City as required by the Guidelines. Section 9 of this document provides the lists of organizations and persons consulted and the report preparation personnel.

Lead Agency and key contact persons are:

Lead Agency and Project Sponsor
Sophia Pagoulatos, Planning Manager
City of Fresno
Development and Resource Management Department
2600 Fresno Street, Room 3065
Fresno, CA 93721
Email: sophia.pagoulatos@fresno.gov
Attn: Long Range Planning

Environmental Consultant
Jason Brandman, Project Director
FirstCarbon Solutions
250 Commerce, Suite 250
Irvine, CA 92602
Email: jbrandman@fcs-intl.com

1.6 - EIR Focus

This Draft EIR will focus on the topical environmental issues identified below under Section 1.6.3. Section 1.6.1 identifies those topical environmental issues deemed not to be significant.

1.6.1 - Environmental Issues Determined not to be Significant

Evaluation of the Forestry Resources and Mineral Resources topical environmental issues determined that no impacts would result from project implementation, as provided in the discussions below. No further discussion or evaluation of these topical environmental issues will occur in this Draft EIR.

Forestry Resources

Based on a review of the California's Forest and Rangelands: 2010 Assessment (CAL FIRE June 2010) the boundaries of the DNCP or FCSP do not contain forest land or timberland. Therefore, the implementation of the DNCP, FCSP and DDC would result in no impacts to conflicts with forest land or timberland zoning, loss of forest land, or conversion of forest land to non-forest use.

Mineral Resources

The City of Fresno permits mining only within the Mining (M) Overlay District (Citywide Development Code). Moreover, the boundaries of the DNCP or FCSP are classified as Mineral Resource Zone (MRZ)-3, which are defined as potential, but unproven mineral resource reserves

(State of California, Division of Mines and Geology, Open File Report 99-02). MRZ-2 zones are those areas documented to have regionally significant mineral resources.

Because neither the State nor the City of Fresno identifies the project site as containing known regional mineral resource reserves, project implementation would not result in impacts to known mineral resources or locally important mineral resources.

1.6.2 - Scoping

In accordance with Section 15206 of the CEQA Guidelines, the project is considered to be one of regional or areawide significance, and therefore, at least one scoping meeting is required. The scope of the Draft EIR is based on written comments received from public agencies, organizations, and the public on the Notice of Preparation, two public scooping meetings, and community meetings.

Notice of Preparation

Two Notices of Preparation (see Appendix D.1) were prepared for this project. The first was in April of 2012. In 2013, work on the Downtown Plans and related EIR was put on hold until the pending General Plan was completed, deliberated upon, and adopted in December 2014. Since a new General Plan and Master Environmental Impact Report (MEIR) are now in place, the planning context for the Downtown Plans and Code and related EIR has changed. In addition, after the first NOP was issued, the City was awarded a large federal grant to convert the Fulton Mall into a more traditional street. In February 2014, the City Council certified an EIR and approved the Fulton Mall Reconstruction Project to convert the Fulton Mall into Fulton Street while incorporating all of the artwork and many of the features of the current mall design. The Downtown Plans and Codes have been updated to incorporate changes to the planning context, existing conditions since 2012 and any text related to the Fulton Mall. A subsequent Notice of Preparation was issued in September 2015 to provide maximum transparency and opportunity to comment given the changes in planning context.

Commenters are identified in Table 1-1 and copies of the correspondence are provided in Appendix D.2 of this Draft EIR.

Public Scoping Meeting

The City held a public scoping meeting on April 17, 2012 and again on September 29, 2015 at Fresno City Hall. The comments raised during these meetings are summarized in Table 1-1, Table 1-2, and Table 1-3. Response letters shown in Table 1-1 can be found in Appendix D.

Table 1-1: Summary of IS/NOP

Commenter	Summary of Environmental Issues Raised in Comment Letter	Section Where Comment Addressed
State of California, Governor's Office of Planning and Research, State Clearinghouse	The letter acknowledged receipt of the NOP by the State Clearinghouse, provided guidance to responsible agencies regarding commenting on the NOP, and included a list of reviewing agencies that were provided with a copy of the NOP by the State Clearinghouse.	Not Applicable

Table 1-1 (cont.): Summary of IS/NOP

Commenter	Summary of Environmental Issues Raised in Comment Letter	Section Where Comment Addressed
California Rural Legal Assistance May 2, 2012	The letter recommended the following be addressed in the EIR: mixed-income neighborhoods and minimized gentrification; displacement of low-income residents; vehicle miles traveled, greenhouse gas emissions, and air pollution; compliance with California Housing Laws; air quality degradation due to lack of public transportation; environmental and health impacts of increased industrial activity; public services; and impacts on vulnerable populations and small business owners.	Section 5.12, Population and Housing; Section 5.10, Land Use and Planning; Section 5.7, Greenhouse Gases; Section 5.3, Air Quality; Section 5.14, Transportation and Traffic; Section 5.13, Public Services;
City of Fresno Bicycle and Pedestrian Advisory Committee July 28, 2011	The letter requests the following to be adequately addressed in the bicycle components of the document: multipurpose trails; bike lanes; designations between existing and new facilities; and bike parking requirements.	Section 5.10, Land Use and Planning; Section 5.14, Transportation and Traffic
Daetweiler, et. al. Letter May 1, 2012	The letter requested written responses to comments on the following topics: aesthetic considerations; cultural aspects; environmental and health considerations; historic significance; economic considerations; and land use/planning considerations.	Section 5.1, Aesthetics; Section 5.5, Cultural Resources; Section 5.10, Land Use and Planning;
Downtown Fresno Coalition May 1, 2012	The letters commented on the necessary scope of the Draft EIR, the "Potential Environmental Effects of the Project" on page two of the Notice of Preparation, the analysis of the proposed alternative to the preferred alternative and procedural concerns in response to the Notice of Preparation of the Draft EIR.	Section 7, Alternatives to the Proposed Project;
Downtown Fresno Partnership April 30, 2012	The letter commented on the environmental impacts of the Fulton Corridor Specific Plan and the Fulton Mall project, including: the impact on urban decay of the available alternatives; air quality and cultural resources; necessary considerations for the reintroduction of vehicular traffic along the six blocks of the Fulton District; and impacts on traffic circulation and the ability to find on-street parking.	Section 5.5, Cultural Resources; Section 5.3, Air Quality; Section 5.14, Transportation and Traffic; Section 5.10, Land Use and Planning; Section 7, Alternatives to the Proposed Project;
Faith in Community May 2, 2012	The letter summarized concerns regarding the potential for the DNCP and added density to affect environmental conditions in the Southern Neighborhoods, including: water supply, water quality, natural resources, air quality, climate change, the heat island effect, housing, economic and social conditions, historic and cultural resources, cumulative environmental vulnerability, growth assumptions, cumulative effects, alternatives to the project, and adequate mitigation measures.	Section 5.9, Hydrology and Water Quality; Section 5.4, Biological Resources; Section 5.12, Population and Housing; Section 5.7, Greenhouse Gases; Section 5.3, Air Quality; Section 5.10, Land Use and Planning; Section 7, Alternatives to the Proposed Project;

Table 1-1 (cont.): Summary of IS/NOP

Commenter	Summary of Environmental Issues Raised in Comment Letter	Section Where Comment Addressed
Fresno City and County Historical Society c/o Baker Manock & Jensen May 1, 2012	The letter recommends the City to consider revising boundaries to include all portions of historic neighborhoods into plan areas, as well as new plans to contain a comprehensive preservation element. The letter also states that historic resource surveys should be reviewed, updated, and adopted, a prescribed project review should be included in the historic preservation element, and historic and old "good urban buildings" should be protected and reused.	Section 5.5, Cultural Resources; Section 5.10, Land Use and Planning
Fresno County Department of Public Health May 1, 2012	The letter commented on the appropriate removal of underground storage tank(s), wells, and septic systems; and the correct protocols pertaining to the demolition/remodel of existing structures.	Section 5.8, Hazardous Materials; Section 5.9, Hydrology and Water Quality; Section 5.10, Land Use and Planning
Fresno County Office of Education April 27, 2012	The letter asks that the following be analyzed in the EIR: air quality, noise, and traffic impacts related to introducing traffic; aesthetic impacts; the impacts associated with integration of traffic along corridors; and mitigation of the impacts to the public art along the Fulton Street.	Section 5.3, Air Quality; Section 5.11, Noise; Section 5.1, Aesthetics; Section 5.14, Transportation and Traffic;
Fresno Interdenominational Refugee Ministries (FIRM, Inc.) April 17, 2012	The letter recommends the following to improve employee housing and prevent displacement: affordable housing for all sectors of the community; a formal mitigation plan, consistent with its obligations under CEQA, as part of the DEIR; and equal consideration of alternatives to the project and the proposed Downtown Plan project in the DEIR.	Section 5.12, Population and Housing; Section 7, Alternatives to the Proposed Project; Section 5.10, Land Use and Planning
Fresno Metropolitan Flood Control District April 19, 2012	The letter discusses guidelines for storm water management and proposed development; information on drainage fees pursuant to the Drainage Fee Ordinance; proper procedures for the development of new and existing storm drainage facilities; requirements for the FMFCD to review and approve final improvement plans for all development; and efforts to improve storm runoff quality.	Section 5.9, Hydrology and Water Quality; Section 5.10, Land Use and Planning
George Bursik Letter April 29, 2012	The letter recommends a thorough consideration of alternatives to development of the Fulton District; that solutions to negative conditions described in the NOP be better addressed in the EIR; the identification of deferred maintenance and needed repairs; and the calculation of more accurate cost estimates.	Section 5.12, Population and Housing; Section 7, Alternatives to the Proposed Project; Section 5.10, Land Use and Planning

Table 1-1 (cont.): Summary of IS/NOP

Commenter	Summary of Environmental Issues Raised in Comment Letter	Section Where Comment Addressed
San Joaquin Valley Air Pollution Control District May 1, 2012	The letter recommends the following: an emissions analysis in the Air Quality section of the EIR that includes a discussion of Criteria Pollutants and Health Impacts; a discussion of the methodology used in characterizing the project's impact on air quality; district rules and regulations that individual projects may be subject to; and design standards that reduce vehicle miles traveled (VMT).	Section 5.3, Air Quality; Section 5.14, Transportation and Traffic
Binational Center for the Development of Oaxacan Indigenous Communities May 8, 2012	The letter recommends an evaluation of the impacts of the HSR station on development in the downtown neighborhood and an evaluation of how people residing in the surrounding areas will be affected by displacement, air quality, water supply, health hazards, traffic, and other effects during the construction of the station. The letter also states the implications of future development on prospective commercial/retail services, negative impacts addressed by policy 2.13, cultural preservation, environmental and health risks for residents near industrial areas, and that mitigation measures should be adequately addressed in the DEIR.	Section 5.12, Population and Housing; Section 5.3, Air Quality; Section 5.9, Hydrology and Water Quality; Section 5.14, Transportation and Traffic; Section 5.5, Cultural Resources; ; Section 5.8, Hazardous Materials; Section 5.10, Land Use and Planning; Section 5.11, Noise; Section 5.15, Utilities and Service Systems
West Fresno Health Care Coalition April 30, 2012	The letter recommends attention to environmental indicators, such as air quality and concentration of poverty; and the development of affordable mixed housing on the vacant neighborhood parcels west of State Route 99.	Section 5.3, Air Quality; Section 5.12, Population and Housing; Section 5.10, Land Use and Planning
City of Fresno Department of Public Utilities September 14, 2015	The letter recommends that recycled water be used once it becomes available.	N/A
State of California Department of Transportation October 9, 2015	The letter recommends coordination with Caltrans to discuss mitigation measures.	N/A
Downtown Fresno Coalition October 30, 2015	The letter recommends additional detail/information be provided in the various EIR sections.	N/A

Table 1-2: First Scoping Meeting Comments

Commenter	Summary of Environmental Issues Raised at Scoping Meeting	Section Where Comment Addressed
Rebecca Van Stokkum, Faith in Community (FIC),City of Fresno	The commenter stated that the following environmental topics should be evaluated in the Draft EIR: air quality; concentration of poverty; agricultural resources; denser population centers; need for additional housing units; aging infrastructure and infrastructural needs; environmental indicators in the area that have been historically poor; and mitigation effects.	Section 5.3, Air Quality; Section 5.12, Population and Housing; Section 5.13, Public Services; Section 5.15, Utilities and Service Systems
Pastor Juan M. Saavedra, Fresno Interdenominational Refugee Ministries (FIRM) and Faith in Community (FIC), City of Fresno	The commenter stated that the following environmental topics should be evaluated in the Draft EIR: water supply; water quality, citing the rise in cases of MERSA; impact on natural resources; aging infrastructure and infrastructural needs; and clean water for agriculture.	Section 5.9, Hydrology and Water Quality; Section 5.4, Biological Resources; Section 5.2, Agriculture Resources; Section 5.15, Utilities and Service Systems
Rev. Sophia DeWitt, Fresno Interdenominational Refugee Ministries (FIRM) and Faith in Community (FIC), City of Fresno	The commenter stated that the following environmental topics should be evaluated in the Draft EIR: affordable housing; project alternatives; and a formal mitigation plan consistent with CEQA obligations.	Section 5.12, Population and Housing; Section 7, Alternatives to the Proposed Project
Ray McKnight, Downtown Fresno Coalition, City of Fresno	The commenter stated that the following environmental topics should be addressed in the Draft EIR: Fresno's history of public policy making; a revision of the discussion of Fulton Mall on pages 11 and 12 of the NOP; the effect of the DNCP on the Eaton Plaza Master Plan; a possible violation of the Eaton Plaza Master Plan in the draft of the FCSP that is not adequately addressed in the NOP; and the need for the EIR to clarify its implementation and the responsible agencies.	Section 5.10, Land Use and Planning
Paula Mickalian, City of Fresno	The commenter stated that the following environmental topics should be evaluated in the Draft EIR: air quality; greenhouse gas emissions; increases in vehicular traffic; possibility of an increase in pavement creating a heat island; and a thorough investigation of the three Fulton Street alternatives.	Section 5.3, Air Quality; Section 5.7 Greenhouse Gases; Section 5.14, Transportation and Traffic; Section 7, Alternatives to the Proposed Project
Joyce Aiken, City of Fresno	The commenter stated that cultural resources should be evaluated in the Draft EIR by studying the totality of the Fulton Mall, including pavement, art, landscaping, and water features.	Section 5.5, Cultural Resources
Sue McCline, Downtown Fresno Coalition, City of Fresno	The commenter stated that the following environmental topics should be evaluated in the Draft EIR: transportation and traffic, including modes of transportation that do not require opening the Fulton Mall up to vehicular traffic.	Section 5.14, Transportation and Traffic

Table 1-2 (cont.): First Scoping Meeting Comments

Commenter	Summary of Environmental Issues Raised at Scoping Meeting	Section Where Comment Addressed
Kathy Omachi, Chinatown Revitalization, Inc., of Fresno (Co-Chair)	The commenter stated that the following environmental topics should be evaluated in the Draft EIR: clarification of the boundary definition; the issue of self-identification for communities; infrastructural failure in Chinatown; and preservation of cultural aspects of Chinatown.	Section 5.5, Cultural Resources; Section 5.9, Hydrology and Water Quality; Section 5.10, Land Use and Planning
Hal Tokmakian, Downtown Fresno Coalition, City of Fresno	The commenter stated that the following environmental topics should be evaluated in the Draft EIR: a comprehensive consideration of Chinatown and other downtown areas in the specific plan; the General Plan policy for the Specific Plan; and alternatives for the balance of the Specific Plan.	Section 5.10, Land Use and Planning
Source: Michael Brandman Associates, April 17, 2012.		

Table 1-3: Second Scoping Meeting Comments

Commenter	Summary of Environmental Issues Raised at Scoping Meeting	Section Where Comment Addressed
Patience Milrod	The commenter would like to reconvene the committees and review the Plans once they are revised.	N/A
Michael Navarro	The commenter requests to be involved throughout process.	N/A
Hal Tokmakian	The commenter stated that the following environmental topics should be evaluated in the Draft EIR: Fresno's history; Fulton Mall; Effects on Eaton Plaza Master Plan; Abolishing the Redevelopment Agency; Air Quality and GHG; Cultural; Transportation and Traffic; and Utilities and Service Systems	Addressed in sections required.
Kevin Norgaard	The commenter stated that any land use designation changes must be evaluated using the hydraulic model that is currently based on existing land uses. If capacity is too high, the the Public Utilities Department will identify improvements and cost necessary.	N/A
Kevin Norgaard	The commenter stated that the Public Utilities Department of the City is in the process of installing recycled water mains and distribution pipelines. Once available, the City's Recycled water ordinance will be reviewed and applied as necessary to all planning documents in the Downtown Area.	N/A
Source: FirstCarbon Solutions, September 29, 2015.		

Community Meetings

City staff conducted the following community meetings and outreach activities to assist in the formulation of the DNCP and FCSP:

- February 27, 2010: Approximately 40,800 mailers were mailed outlining the 2010 meeting schedule for the Downtown Neighborhoods Community Advisory Committee (DNCAC) and the Fulton Corridor Specific Plan Community Advisory Committee (FCSPCAC). This mailer included an overview of the process and encouraged public participation. The mailer was written in English and Spanish. It was mailed to all property owners and physical property addresses (to capture the renters) within the Plan Areas, including a 500-foot perimeter of the project area.
- March 9, 2010: Community Advisory Committee meetings held with both the FCSPCAC and the DNCAC.
- March 15, 2010: The Plan website, www.fresnodowntownplans.com, went live. This has been and remains the place to find all CAC agendas, upcoming meetings, plan process and status, and public documents.
- March 24, 2010: Moule & Polyzoides conducted stakeholder interviews with owners, business owners, renters, activists, and citizens within the Plan Areas. One of the stakeholder interviews conducted was with members of the Downtown Fresno Coalition. Ray McKnight, Hal Tokmakian, and Linda Zachritz spent over an hour with Moule & Polyzoides discussing various issues in the neighborhoods, an outdated zoning ordinance, and the Fulton Mall. To date, approximately 75 stakeholders have been interviewed.
- April 20, 2010: Community Advisory Committee meetings held with both the FCSPCAC and the DNCAC.
- April 27, 2010: Approximately 40,000 postcards were mailed to property owners and physical property addresses advertising the Downtown Neighborhoods Community Plan Charrette from May 10–15, 2010.
- Late April/early May 2010: Flyers promoting the Downtown Neighborhoods Community Plan charrette were delivered to all FUSD elementary schools within the Plan Areas. These went home in the student's backpacks one week before the May charrette.
- May 10–May 15, 2010: DNCP Design Workshops was held.
- June 8, 2010: Community Advisory Committee meetings held with both the FCSPCAC and the DNCAC.
- September 15, 2010: A postcard advertising the Fulton Corridor charrette (September 25–October 2), showcasing the Fulton Mall event on September 27, 2010, was mailed to approximately 2,800 property owners in the Plan Areas.
- September 25–October 2, 2010: FCSP Design Workshop held.
- October 19, 2010: Community Advisory Committee meeting with FCSPCAC held.

- September 14, 2011: Community Advisory Committee meetings held with both the FCSPCAC and the DNCAC.
- October 4, 2011: Community Advisory Committee meetings held with both the FCSPCAC and the DNCAC.
- October 25, 2011: Community Advisory Committee meetings held with both the FCSPCAC and the DNCAC.
- October 14–November 14, 2011: City Led Workshops.
- The following ads were placed in the Fresno Bee:
  - September 19, 2009, announcing the first meeting of the FCSPCAC
  - February 26, 2010, announcing the 2010 schedule for the DNCAC and FCSPCAC and project overview
  - September 26, 2010, to announce the Fulton Mall discussion and alternatives at the Fulton Corridor Charrette

1.6.3 - Potentially Significant Environmental Issues

Listed below are the topical environmental issues that could result in potentially significant environmental impacts to the environment. Numbers in parentheses indicate the section of the Draft EIR that describes and evaluates the topical environmental issue.

- Aesthetics (Section 5.1)
- Agriculture Resources (Section 5.2)
- Air Quality (Section 5.3)
- Biological Resources (Section 5.4)
- Cultural Resources (Section 5.5)
- Geology and Soils (Section 5.6)
- Greenhouse Gas Emissions (Section 5.7)
- Hazards and Hazardous Materials (Section 5.8)
- Hydrology and Water Quality (Section 5.9)
- Land Use and Planning (Section 5.10)
- Noise (Section 5.11)
- Population and Housing (Section 5.12)
- Public Services (Section 5.13)
- Transportation and Traffic (Section 5.14)
- Utilities and Service Systems (Section 5.15)

1.6.4 - Organization of the EIR

In addition to this Introduction section, the remainder of the document is organized into the following main sections individually described below.

- **Section 2: Executive Summary.** This section includes a summary of the DNCP, FCSP, and the DDC project and summary of the alternatives to the proposed project addressed in the Draft EIR. Also included are brief descriptions of the issues to be resolved, and a table that summarizes the impacts, mitigation measures, and level of significance after mitigation.
- **Section 3: Project Description.** The project description section provides a detailed description of the proposed project, including its location, technical, and environmental characteristics. Also provided in this section is a discussion of the project objectives, intended uses of the Draft EIR, responsible agencies, and anticipated approvals.

- **Section 4: General Description of Environmental Setting.** This section provides a generalized description of the environmental setting in the vicinity of the project site. This environmental setting will normally constitute the baseline physical conditions by which a lead agency determines whether an impact is significant. Also provided in this section is the list of related projects that will be used for cumulative analysis.
- **Section 5: Environmental Impact Analysis.** Each of the topical environmental issue sections (Sections 5.1 through 5.15) is organized into the following sub-sections: Introduction. Environmental Setting, Regulatory Setting, Thresholds of Significance, and Impact Analysis, Mitigation Measures, and Level of Significance After Mitigation. The beginning of Section 5 provides the details regarding format and content of each sub-section.
- **Section 6: Other CEQA Considerations.** This section describes if there are significant and unavoidable adverse or irreversible impacts, any growth inducing impacts, and a description of any irreversible and irretrievable commitment of resources from the DNCP, FCSP, and the DDC project.
- **Section 7: Alternatives to the Proposed Project.** This section compares the impacts of the proposed DNCP, FCSP, and the DDC project with land use alternatives, one of which includes the mandatory No Project/No Development Alternative in Accordance with Existing General Plan Land Use Designations, to determine if any feasible alternatives exist that would eliminate or reduce significant impacts. Among these alternatives, an environmentally superior alternative is identified.
- **Section 8: Effects Found not to be Significant.** This section lists those effects found not to be significant organized by each topical environmental issue.
- **Section 9: Persons and Organizations Consulted—List of Preparers.** This section provides details on the report preparation personnel and the organizations and persons consulted.

1.6.5 - Documents Prepared for the Project

The following documents have been prepared specifically for this Draft EIR:

- Downtown Neighborhoods Community Plan, Moule & Polyzoides (2011), updated by Juan Gomez-Novy Consulting (2016)
- Fulton Corridor Specific Plan, Moule & Polyzoides (2011), updated by Juan Gomez-Novy Consulting (2016)
- Downtown Development Code, Moule & Polyzoides, Tony Perez Associates, and Juan Gomez-Novy Consulting (2011), updated by Juan Gomez-Novy Consulting (2016)
- Archaeological Resources Assessment Report, Greenwood and Associates, February 2012
- Limited Geologic Hazards Summary Downtown Neighborhoods Community Plan Area, Krazan & Associates, Inc., September 21, 2011
- Limited Geologic Hazards Summary Fulton Corridor Specific Plan Area, Krazan & Associates, Inc., September 21, 2011

- Phase I Environmental Site Assessment (Draft) Downtown Neighborhoods Community Plan Area, Krazan & Associates, Inc., October 7, 2011
- Phase I Environmental Site Assessment (Draft) Fulton Corridor Specific Plan Area, Krazan & Associates, Inc., October 7, 2011
- Health Impact Assessment Fresno Downtown Neighborhoods, Raimi + Associates, March 2011
- Downtown Fresno (Fulton Corridor), Historic Resources Survey, Historic Resources Group, December 2011
- Downtown Neighborhoods Community Plan & Fulton Corridor Specific Plan Transportation Impact Study, Fehr & Peers, November 2015
- Fulton Mall Urban Decay Study—Fulton Corridor Specific Plan, RSG, July 16, 2012
- Fulton Corridor Specific Plan and Community Plan EIR Infrastructure Technical Report, Sherwood Design Engineers, April 9, 2012
- Health Risk Assessment, FirstCarbon Solutions, November 12, 2015
- Fulton Mall Reconstruction Project Transportation Impact Report, Fehr & Peers, July 2013
- Fulton Mall Reconstruction Project Visual Impact Assessment, FirstCarbon Solutions, November 20, 2013
- Fulton Mall Reconstruction Project Noise Study, FirstCarbon Solutions, November 20, 2013
- Fulton Mall Reconstruction Project Natural Environment Study, FirstCarbon Solutions, November 19, 2013
- Fulton Mall Reconstruction Draft Alternatives Analysis Report, RHAA, November 1, 2013
- Fulton Mall Reconstruction Project Noise Study, FirstCarbon Solutions, November 20, 2013
- Fulton Mall Reconstruction Project Sole-Source Aquifer—Water Quality Assessment, FirstCarbon Solutions, November 20, 2013
- Fulton Mall Reconstruction Project Community Impact Assessment, FirstCarbon Solutions, November 19, 2013.
- Fulton Mall Reconstruction Alternative Plans, Economic Impact Analysis Update Alternatives Review, Gibbs Planning Group, November 26, 2013
- Department of Public Utilities City of Fresno Memorandum, Response to Questions Related to DNCP and FCSP Environmental Studies, May 3, 2013
- Department of Public Utilities City of Fresno Memorandum, Water Supply and Delivery Infrastructure Within the Downtown Plans Area, July 5, 2013

1.7 - Review of the Draft EIR

This Draft EIR has been distributed to public agencies, other affected agencies, adjacent cities, and counties, members of the public, and any parties who have submitted a written request for a copy of the Draft EIR. The Notice of Completion of the Draft EIR has also been distributed as required by the Guidelines. During the 45-day public review period, which begins on Thursday, July 28, 2016 and ends on Monday, September 12, 2016, the Draft EIR, including the technical appendices, is available for review at the City of Fresno Development and Resource Management Department at the address below. Written comments on this Draft EIR must be addressed and submitted to:

Sophia Pagoulatos, Planning Manager
City of Fresno
Development and Resource Management Department
2600 Fresno Street, Room 3065
Fresno, CA 93721
Telephone: 559.621.8062
Email: sophia.pagoulatos@fresno.gov
Attn: Long Range Planning

1.7.1 - Responsible and Trustee Agencies

A number of other agencies in addition to the City of Fresno will serve as Responsible and Trustee Agencies, pursuant to CEQA Guidelines Section 15381 and Section 15386, respectively. This Draft EIR will provide environmental information to these and other public agencies, which may be required to grant approvals or to coordinate with other agencies as part of project implementation.

- California Department of Transportation (Caltrans)
- California Air Resources Board
- California Department of Fish and Wildlife
- California Department of Forestry and Fire Protection
- California Department of Housing and Community Development
- California Department of Parks and Recreation
- California Department of Toxic Substances Control
- California Public Utilities Commission
- California State Office of Historic Preservation
- California State Lands Commission
- California State University, Fresno
- California State Water Resources Control Board
- Central Valley Regional Water Quality Control Board
- County of Fresno Local Agency Formation Commission
- County of Fresno Office of Education
- Fire Districts (Various)
- Fresno Airport Land Use Commission
- Fresno Council of Governments
- Fresno Metropolitan Flood Control District
- Fresno Irrigation District

- San Joaquin River Conservancy
- San Joaquin Valley Air Pollution Control District
- School Districts (Various)
- Sewer Districts (Various)
- Water Districts (Various)
- Any other Responsible or Trustee Agency that may need to provide discretionary approval

1.7.2 - List of Approvals for which the EIR will be Used

The following approvals are needed:

- Certification of the Environmental Impact Report
- Adoption of Plan Amendments for the following:
  - Adoption of the proposed Downtown Neighborhoods Community Plan (DNCP)
  - Adoption of the Fulton Corridor Specific Plan (FCSP)
- Amendment of the Fresno General Plan, the West Area Community Plan, Edison Community Plan and the Roosevelt Community Plan
- Repeal of the Central Area Community Plan in its entirety
- Repeal of the Fulton Lowell Specific Plan Adoption of a Rezone to update the zoning map in the plan area;
- Adoption of a text amendment to the Citywide Development Code to incorporate the Downtown Development Code

1.8 - Project Objectives

The following list of objectives provides the underlying objectives of the DNCP, FCSP, and DDC.

1.8.1 - Downtown Neighborhood Community Plan

The primary objectives of the DNCP are as follows:

- To make the Downtown Neighborhoods attractive, healthy, mixed-income places to live, thanks to their historic character and their proximity to a revitalized Downtown.
- To revive the underlying structure of the Downtown Neighborhoods to create identifiable neighborhoods, districts, and corridors.
- To integrate the public realm of streets with a multi-modal transportation network that renders them walkable and livable.
- To regenerate parks and public spaces and make them safe and accessible to residents.
- To reinforce the identity of each of the Plan subareas by including all of the remaining ingredients for quality of life from childhood to old age within a walkable range.

- To reintroduce missing street trees, irrigation, and sidewalks, and slow down traffic on primary thoroughfares through various traffic-calming measures.
- To introduce a range of well-designed buildings that provide a variety of housing choices within easy access of parks, services, and jobs.
- To design residential buildings to promote safety and community on the sidewalk and street.
- To design commercial buildings with facades that are adjacent to sidewalks, are constructed of quality and durable materials, can accommodate a mix of uses at any one time, and can be reused over time under different programs.
- To introduce the High Speed Rail in a manner that has the most beneficial impact possible on the surrounding homes, businesses, and open spaces, while preserving Downtown's interconnected street network to the maximum extent possible.

1.8.2 - Fulton Corridor Specific Plan

The primary objectives of the FCSP are as follows:

- A vision for the future of Downtown that recognizes the importance of history and tradition while embracing opportunities for continued reinvestment, growth, and beneficial change.
- Goals and policies that work in tandem with and refine those of the General Plan and the Downtown Neighborhoods Community Plan to achieve the revitalization of the Plan area.
- New land use policies for the Plan area will guide upcoming zoning regulations. These new policies are calibrated to deliver new development that is consistent with Fresno's physical character, history, and culture, as well as the community's vision for its future growth.
- The implementation strategy for transforming the Plan area's streets, infrastructure, parks, and other public spaces.
- Revitalize Fulton District and promote it as a key asset and urban place. Strike a balance between the original character and value of the pedestrian-only Mall and its importance as the economic engine of the Downtown.

The above objectives provide private property owners with a clear understanding of the future context within which they are investing and reinvesting in their properties.

1.8.3 - Downtown Development Code

The objectives of the DDC are summarized as follows:

1. Property shall be occupied with land use activity to improve health; stabilize and improve property values; provide continuity of Fresno's heritage; maximize compatibility; offer a range of housing choices; increase reinvestment in the Downtown Neighborhoods; provide a wide range of services and shopping; revitalize mixed-use corridors; and support convenient transit.

2. Buildings and their additions shall be designed and maintained to support reinvestment; front the adjacent street(s); enhance the building's relationship to the public realm; use appropriate landscape materials; generate long-term value; and express creativity.
3. Frontages shall be designed and maintained to support the intended physical environment; support active and continuous pedestrian-oriented environments; and provide appropriate physical transitions between the public right-of-way and the property.
4. Signage shall be designed and maintained to promote the aesthetic and environmental values of the community; provide an effective channel of communication; avoid traffic safety hazards; and safeguard and protect the public health, safety, and general welfare.
5. Open spaces, landscaping and streetscapes shall be designed and maintained to preserve and promote the aesthetic character and environmental quality of Fresno as a place to live, work, and shop; correspond to the adjacent streetscapes; allow urban agriculture at all scales, as practical; and contribute to mitigating environmental degradation.
6. Each new or modified block and street shall be designed and maintained to interconnect and form/maintain a network; support the intended physical context; generate pedestrian-oriented block lengths; transform large sites into pedestrian-oriented blocks; increase the number of blocks; and support a multi-modal transportation system.

SECTION 2: EXECUTIVE SUMMARY

2.1 - Purpose

This Draft Environmental Impact Report (Draft EIR) is prepared in accordance with the California Environmental Quality Act (CEQA) to evaluate the potential environmental impacts associated with the implementation of the Downtown Neighborhood Community Plan (DNCP), the Fulton Corridor Specific Plan (FCSP), and the Downtown Development Code (DDC). This document is prepared in conformance with CEQA (California Public Resources Code, Section 21000, et seq.) and the CEQA Guidelines (California Code of Regulations, Title 14, Section 15000, et seq.).

The purpose of this Draft EIR is to inform decision makers, representatives of affected and responsible agencies, the public, and other interested parties of the potential environmental effects that may result from implementation of the proposed project. This Draft EIR describes potential impacts relating to a wide variety of environmental issues and methods by which these impacts can be mitigated or avoided.

2.2 - Project Summary

2.2.1 - Project Location

Fresno is located in the heart of California's San Joaquin Valley, approximately 190 miles southeast of San Francisco and 220 miles northwest of Los Angeles (Exhibit 3-1). The San Joaquin Valley is one of the largest and most productive farming regions in the world. Fresno, the regional city for the central San Joaquin Valley, is also the gateway to Yosemite National Park, Sierra National Forest, Kings Canyon National Park, and Sequoia National Park. Regional access to Fresno from the north and south is provided by State Routes 99 and 41, from the west by State Route 180, and from the east by State Routes 168 and 180.

The DNCP boundaries are located within the southern portion of the City of Fresno. The community plan boundaries encompass 7,290 acres. The Community Plan area is generally bounded to the east by Chestnut Avenue, to the south by Church Avenue; to the west by Thorne, West, and Marks Avenues; and to the north by State Route 180 (Exhibit 3-2). Along the western side of the Community Plan area, the boundaries extend as far north as Clinton Avenue. The Community Plan area is divided by State Routes 99, 41, and 180, as well as the Union Pacific and BNSF railroad rights-of-way.

The FCSP area is located within the boundaries of the DNCP (Exhibit 3-2). The FCSP boundaries encompass 655 acres. The Specific Plan area is generally bounded to the north by Divisadero Street, to the west by State Route 99, to the south by State Route 41, and to the east by N Street, O Street, and the alley between M and N Streets (Exhibit 3-3). The Specific Plan area is divided by the Union Pacific railroad right-of-way. The Fulton District is also within the boundaries of the FCSP.

The Downtown Development Code (DDC) is a form-based zoning code that contains the standards and requirements for development and land use activity within the boundaries of the DNCP and

FCSP. It implements the DNCP and the FCSP and would apply to all 7,290 acres of property within the plan boundaries. While this code will be referenced as the "Downtown Development Code" throughout the DEIR, upon adoption it would be incorporated into the Citywide Development Code.

2.2.2 - Project Description

The proposed project would implement the DNCP, the FCSP, and the DDC, each of which is described in more detail below.

Downtown Neighborhoods Community Plan (DNCP or Community Plan)

The DNCP (Appendix A) is an extension of the Fresno General Plan that provides updated and refined policy direction for Fresno's Downtown and the neighborhoods immediately adjacent to it. It contains within its boundaries the FCSP area and provides policy direction for the FCSP area and the neighborhoods that surround it. The DNCP outlines the community's long-term goals for the Community Plan area and provides detailed policies concerning a wide range of topics, including land use and development, transportation, the public realm of streets and parks, infrastructure, historic resources, and health and wellness. Along with the accompanying form-based DDC, the DNCP is intended to protect Fresno's oldest neighborhoods, while encouraging and accommodating future development, in a manner that contributes to a stronger and healthier community for everyone.

The overarching goal of the DNCP is to capitalize on the positive momentum for Downtown revitalization and put specific policies and actions into place to guide the rejuvenation of the Downtown neighborhoods that brings about lasting prosperity and improvements. The long-term vision for the DNCP can be summarized as follows:

- Establish Downtown as the heart of Fresno;
- Revive and/or transform each of the Plan's planning areas based upon their unique identity;
- Establish mixed-use neighborhood centers at important intersections that are within easy walking distance of surrounding residences and connect to existing and future transit networks;
- Improve the quality of the Community Plan Area's corridors by introducing street trees, traffic-calming measures, pedestrian amenities such as crosswalks, streetlights and street furniture, and creating bicycle-friendly corridors; and
- Create a framework for improving neighborhoods in order to attract private investment back to the center of the City and fostering a sense of pride in Downtown and its surrounding neighborhoods that inspires residents and property owners to not only transform and refurbish their own properties, but also to inspire others to do the same.

Fulton Corridor Specific Plan (FCSP or Specific Plan)

The FCSP (Appendix B) translates the policy direction of the Fresno General Plan and the DNCP into detailed goals, policies, and actions for the revitalization of the heart of Downtown. By establishing

policies and standards for the Specific Plan area, the FCSP implements the General Plan at a site-specific level and provides for orderly development within the Plan area. The goal of the FCSP is to establish predictable and clear regulations that help reduce development costs and alleviate uncertainty, making good projects easier to build Downtown. To this end, the FCSP includes detailed policies regarding land use and development, historic resources, the public realm, transportation, and infrastructure that provide the foundation for urban and economic growth and the basis for the City to make decisions regarding growth, historic preservation, housing, transportation, the environment, community facilities, and community services within the Specific Plan area. The Fulton District is a main component of the FCSP, and one of the main objectives is to fully implement and construct the Fulton Mall Reconstruction Project as approved by the City Council in February 2014. The FCSP is more detailed than the DNCP and has been drafted to fully implement the goals, policies, and objectives of the DNCP. To the extent there appears to be any conflict between these two Plans, the FCSP takes precedence.

Downtown Development Code (DDC or Downtown Code)

The DDC (Appendix C) is intended to be the implementing ordinance for both the DNCP and FCSP. The purpose and intent of the DDC is to:

1. Implement the policies, objectives and goals of the DNCP and the FCSP;
2. Provide an integrated set of development and land use standards to achieve the outcomes described in the DNCP and FCSP;
3. Be consistent with the principles, objectives, process and approach described in the Preamble; and
4. Preserve, protect, and promote the public health, safety, peace, comfort, convenience, prosperity, and general welfare of residents and businesses in the Downtown.

The DDC is a form-based code that contains most of the standards and requirements for development and land use activity within the DNCP and FCSP areas and regulates development patterns consistent with the existing scale and character of the plan areas' various neighborhoods districts and corridors. Form-based codes address the relationship between building facades and the public realm (streets and parks), the form and massing of buildings in relation to one another, and the scale and types of streets and blocks. The regulations and standards in form-based codes, presented in both diagrams and words, are keyed to a zoning map that designates the appropriate form and scale (and, therefore, character) of development, rather than only distinctions in land-use type. Land uses described in the DNCP and FCSP and the zones in the DDC are intended to be identical, as shown in Appendix C, Table 1-1. The DDC will ultimately be presented as a text amendment to the Citywide Development Code and, if adopted, will become an integral part of the code (FMC Chapter 15).

2.2.3 - Project Objectives

Downtown Neighborhoods Community Plan Objectives

The primary objectives of the DNCP are as follows:

- To make the Downtown Neighborhoods attractive, healthy, mixed-income places to live, thanks to their historic character and their proximity to a revitalized Downtown.
- To revive the underlying structure of the Downtown Neighborhoods to create identifiable neighborhoods, districts, and corridors.
- To integrate the public realm of streets with a multi-modal transportation network that renders them walkable and livable.
- To regenerate parks and public spaces and make them safe and accessible to residents.
- To reinforce the identity of each of the Community Plan's planning areas by including all of the remaining ingredients for quality of life from childhood to old age within a walkable range.
- To reintroduce missing street trees, irrigation, and sidewalks, and slow down traffic on primary thoroughfares through various traffic-calming measures.
- To introduce a range of well-designed buildings that provide a variety of housing choices within easy access of parks, services, and jobs.
- To design residential buildings to promote safety and community on the sidewalk and street.
- To design commercial buildings with facades that are adjacent to sidewalks, are constructed of quality and durable materials, can accommodate a mix of uses at any one time, and can be reused over time under different programs.
- To introduce the High Speed Rail in a manner that has the most beneficial impact possible on the surrounding homes, businesses, and open spaces, while preserving Downtown's interconnected street network to the maximum extent possible.

Fulton Corridor Specific Plan Objectives

The primary objectives of the FCSP are as follows:

- A vision for the future of Downtown that recognizes the importance of history and tradition while embracing opportunities for continued reinvestment, growth, and beneficial change.
- Goals and policies that work in tandem with and refine those of the General Plan and the Downtown Neighborhoods Community Plan to achieve the revitalization of the Plan area.
- New land use policies for the Plan Area will guide upcoming zoning regulations. These new policies are calibrated to deliver new development that is consistent with Fresno's physical character, history, and culture, as well as the community's vision for its future growth.
- The implementation strategy for transforming the Plan area's streets, infrastructure, parks, and other public spaces.

- Revitalize the Fulton District and promote it as a key asset and urban place. Strike a balance between the original character and value of the pedestrian-only Mall and its importance as the economic engine of the Downtown.

The above purposes provide private property owners with a clear understanding of the future context within which they are investing and reinvesting in their properties.

Downtown Development Code Objectives

The objectives of the DDC are summarized as follows:

1. Property shall be occupied with land use activity to improve health; stabilize and improve property values; provide continuity of Fresno's heritage; maximize compatibility; offer a range of housing choices; increase reinvestment in the Downtown Neighborhoods; provide a wide range of services and shopping; revitalize mixed-use corridors; and support convenient transit.
2. Buildings and their additions shall be designed and maintained to support reinvestment; front the adjacent street(s); enhance the building's relationship to the public realm; use appropriate landscape materials; generate long-term value; and express creativity.
3. Frontages shall be designed and maintained to support the intended physical environment; support active and continuous pedestrian-oriented environments; provide appropriate physical transitions between the public right-of-way and the property.
4. Signage shall be designed and maintained to promote the aesthetic and environmental values of the community; provide an effective channel of communication; avoid traffic safety hazards; and safeguard and protect the public health, safety, and general welfare.
5. Open spaces, landscaping and streetscapes shall be designed and maintained to preserve and promote the aesthetic character and environmental quality of Fresno as a place to live, work, and shop; correspond to the adjacent streetscapes; incorporate urban agriculture at all scales, as practical; and contribute to mitigating environmental degradation.
6. Each new or modified block and street shall be designed and maintained to interconnect and form/maintain a network; support the intended physical context; generate pedestrian-oriented block lengths; transform large sites into pedestrian-oriented blocks; increase the number of blocks; and support a multi-modal transportation system.

2.3 - Significant Unavoidable Adverse Impacts

The proposed DNCP and FCSP would result in the following significant unavoidable impacts, which were also identified previously in the MEIR:

- Air Quality—increases in air emissions and increases in concentrations of toxic air contaminants

- Greenhouse Gases—increases in greenhouse gas emissions
- Noise—increases in noise levels
- Traffic—increases in traffic within and outside of the DNCP and FCSP

2.4 - Summary of Project Alternatives

Below is a summary of the four alternatives to the proposed project considered in Section 7, Alternatives to the Proposed Project.

- **No Project Alternative:** The DNCP, FCSP, and DDC would not be implemented.
- **High Density Residential Focus:** A 60 percent increase in residential land use density for the "high" capacity development potential (i.e., instead of 14 percent proposed for the DNCP), a 30 percent increase in residential land use density for the "medium" capacity development potential, and a 10 percent increase in the "low" capacity development potential for both Plan areas.
- **Retail Oriented Development Potential Scenario:** A 10 percent increase in total retail square footage in both Plan areas for the "high" capacity development potential, with a corresponding 5 percent decrease in the proposed office and 5 percent decrease in the proposed industrial square feet for the DNCP and FCSP in the Plan areas.
- **Office Oriented Development Potential Scenario:** A 10 percent increase of office square footage for the "high" capacity development potential with a corresponding 5 percent decrease in both the proposed residential and industrial land use square feet for the DNCP and FCSP within the Plan areas.

2.5 - Areas of Controversy

Pursuant to CEQA Guidelines Section 15123(b), a summary section must address areas of controversy known to the lead agency, including issues raised by agencies and the public, and it must also address issues to be resolved, including the choice among alternatives and whether or how to mitigate the significant effects.

A Notice of Preparation (NOP) for the proposed project was issued on September 1, 2015. The NOP describing the original concept for the project and issues to be addressed in the EIR was distributed to the State Clearinghouse, responsible agencies, and other interested parties for a 30-day public review period extending from September 1, 2015 through October 1, 2015. The NOP identified the potential for significant impacts on the environment related to the following topical areas:

- Aesthetics
- Agricultural Resources
- Air Quality and Greenhouse Gas Emissions
- Cultural Resources
- Land Use and Planning
- Noise
- Population and Housing
- Public Services

- Geology and Soils
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Transportation/Traffic
- Utilities and Service Systems

2.6 - Public Review of the Draft EIR

Upon completion of this Draft Programmatic EIR, the City of Fresno prepared and filed a Notice of Completion (NOC) with the California Office of Planning and Research/State Clearinghouse to begin the public review period (Public Resources Code, Section 21161). Concurrent with the NOC, the City of Fresno distributed a Notice of Availability (NOA) in accordance with Section 15087 of the CEQA Guidelines. The NOA was mailed to the organizations and individuals who previously requested such a notice to comply with Public Resources Code Section 21092(b)(3). This Draft Programmatic EIR was distributed to the California Office of Planning and Research/State Clearinghouse and the Fresno Council of Governments in accordance with Section 15206 of the CEQA Guidelines. This Draft Programmatic EIR was also published in the Fresno bee newspaper to comply with Section 15087(a) of the State CEQA Guidelines and was distributed to affected agencies, surrounding cities and municipalities, and all interested parties. During the public review period, this Draft Master EIR, including the appendices, is available for review at the following locations:

City of Fresno
Development and Resources Management Department
2600 Fresno Street, Room 3043, at the Front Counter
Fresno, CA 93721
Monday through Friday: 8:00 a.m. to 5:00 p.m.
Saturday and Sunday: Closed

City of Fresno Central Library
2420 Mariposa Street
Fresno, CA 93721
Monday through Thursday: 10:00 a.m. to 7:00 p.m.
Friday and Saturday: 10:00 a.m. to 5:00 p.m.
Sunday: 12:00 p.m. to 5:00 p.m.

In addition, the Draft Programmatic EIR, including the appendices, is available for review at the following City of Fresno website: http://www.fresno.gov/Government/MayorsOffice /DowntownRevitalization/FresnoDowntownPlans/DevelopmentCode.htm.

In addition, the DNCP, FCSP, and DDC, Incorporated by Reference, are available for review at the City of Fresno Development and Resources Management Department at the addressed shown above.

Agencies, organizations, individuals, and all other interested parties not previously contacted, or who did not respond to the NOP/IS or attended the scoping meeting, currently have the opportunity to comment on this Draft Master EIR during the 45-day public review period. Written comments on this Draft Programmatic EIR should be addressed to:

Sophia Pagoulatos, Planning Manager
City of Fresno
Development and Resource Management Department
2600 Fresno Street, Room 3065
Fresno, CA 93721
Attn: Long Range Planning

Comments may also be sent by email to Sophia Pagoulatos at:

Email: Sophia.Pagoulatos@fresno.gov

Upon completion of the public review period, written responses to all substantive environmental issues raised will be prepared and made available for review at least 10 days prior to the public hearing on the project before the City of Fresno City Council, at which the certification of the Final Master EIR will be considered. Comments received and the responses to comments will be included as part of the record for consideration by decision-makers for the project.

2.7 - Executive Summary Matrix

Table 2-1 below summarizes the impacts, mitigation measures, and resulting level of significance after mitigation for the relevant environmental issue areas evaluated for the proposed project. The table is intended to provide an overview; narrative discussions for the issue areas are included in the corresponding section of this EIR. Table 2-1 is included in the EIR as required by CEQA Guidelines Section 15123(b)(1).

Table 2-1: Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 5.1—Aesthetics		
Impact AES-1: The project would not have a substantial adverse effect on a scenic vista. (5.1-13)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact AES-2: The project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway. (5.1-15)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact AES-3: The project would not substantially degrade the existing visual character or quality of the site and its surroundings. (5.1-16)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact AES-4: The project would create a new source of substantial light or glare which would adversely affect day or nighttime views in the area. (5.1-22)	The following mitigation measures were included in the MEIR and remain applicable to this project: **Project-specific** **MM AES-4a:** Lighting systems for street and parking areas shall include shields to direct light to the roadway surfaces and parking areas. Vertical shields on the light fixtures shall also be used to direct light away from adjacent light sensitive land uses such as residences. **MM AES-4b:** Lighting systems for public facilities such as active play areas shall provide adequate illumination for the activity; however, low-intensity light fixtures and shields shall be used to minimize spillover light onto adjacent properties. **MM AES-4c:** Lighting systems for non-residential uses, not including public facilities, shall provide shields on the light fixtures and orient the lighting system away from adjacent properties. Low-intensity light fixtures shall also be used if excessive spillover light onto adjacent properties will occur.	**Project-specific** Less than significant impact. Implementation of Mitigation Measures AES-4a through AES-4e will reduce impacts on the illumination of the sky at night. Lighting on properties adjacent to lighting systems will be less than significant. Glare impacts will be less than significant. **Cumulative** Less than significant impact. Implementation of Mitigation Measures AES-4a through AES-4e will reduce impacts to the project's contribution of the

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	MM AES-4d: Lighting systems for freestanding signs shall not exceed 100 foot-Lamberts (FT-L) when adjacent to streets which have an average light intensity of less than 2.0 horizontal footcandles and shall not exceed 500 FT-L when adjacent to streets that have an average light intensity of 2.0 horizontal footcandles or greater. **MM AES-4e:** Materials used on building facades shall be non-reflective. **Cumulative** Implementation of Mitigation Measures AES-4a through AES-4e is required.	illumination of the sky at night. Lighting impact on properties adjacent to lighting systems will be less than cumulatively significant. Glare impacts will also be less than cumulatively significant.
Section 5.2—Agriculture Resources		
Impact AG-1: The project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. (5.2-11)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** No impact. **Cumulative** No impact.
Impact AG-2: The project would not conflict with existing zoning for agricultural use, or a Williamson Act contract. (5.2-12)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact AG-3: The project would not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)). (5.2-15)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** No impact. **Cumulative** No impact.

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact AG-4: The project would not result in the loss of forest land or conversion of forest land to non-forest use. (5.2-16)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** No impact. **Cumulative** No impact.
Impact AG-5: The project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use. (5.2-17)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Section 5.3—Air Quality		
Impact AIR-1: The project would not conflict with or obstruct implementation of the applicable air quality plan. (5.3-29)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact AIR-2: The project would violate an air quality standard or contribute substantially to an existing or projected air quality violation. (5.3-32)	The following mitigation measures were not included in the MEIR but are applicable to this project: **Project-specific** The implementation of the proposed plans and relevant policies for this area are expected to reduce per capita motor vehicle emissions to the extent feasible. This is well stated in the FCSP: "By improving Downtown, this Plan helps to expand access and make Downtown more inviting and attractive to everyone. Over time, Downtown's wide streets are put to better use, creating space for public transit, bicycles, and pedestrians, and connecting and creating synergy with adjacent neighborhoods and institutions that are within walking and biking distance of Downtown." The FCSP follows principles including infill development, mix of land uses, an interconnected street system, and a high level of walkability and bikability that have been documented to reduce vehicle miles traveled (see CAPCOA's 2010 report Quantifying Greenhouse Gas Mitigation	**Project-specific** Significant and unavoidable impact. **Cumulative** Significant and unavoidable impact.

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	Measures). No mitigation measures beyond General Plan policies, ordinances, and regulations are available to further reduce this impact. **Cumulative** No mitigation measures beyond General Plan policies, ordinances, and regulations are available to further reduce this impact.	
Impact AIR-3: The project would result in a considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors). (5.3-42)	The following mitigation measures were included in the MEIR and remain applicable to this project: **Mitigation Measure AIR-1** Projects that include five or more heavy-duty truck deliveries per day with sensitive receptors located within 300 feet of the truck loading area shall provide a screening analysis to determine if the project has the potential to exceed criteria pollutant concentration based standards and thresholds for NO2 and PM2.5. If projects exceed screening criteria, refined dispersion modeling and health risk assessment shall be accomplished and if needed, mitigation measures to reduce impacts shall be included in the project to reduce the impacts to the extent feasible. Mitigation measures include but are not limited to: • Locate loading docks and truck access routes as far from sensitive receptors as reasonably possible considering site design limitations to comply with other City design standards. • Post signs requiring drivers to limit idling to 5 minutes or less. **Mitigation Measure AIR-2** Projects that result in an increased cancer risk of 10 in a million [20 in a million under revised SJVAPCD thresholds] or exceed criteria pollutant ambient air quality standards shall implement site-specific measures that reduce TAC exposure to reduce excess cancer risk to less than 10 in a million [20 in a million under revised SJVAPCD thresholds]. Possible control measures include but are not limited to: • Locate loading docks and truck access routes as far from sensitive receptors as reasonably possible considering site design limitations to comply with other City design standards. • Post signs requiring drivers to limit idling to 5 minutes or less	**Project-specific** Significant and unavoidable impact. **Cumulative** Significant and unavoidable impact.

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	• Construct block walls to reduce the flow of emissions toward sensitive receptors • Install a vegetative barrier downwind from the TAC source that can absorb a portion of the diesel PM emissions • For projects proposing to locate a new building containing sensitive receptors near existing sources of TAC emissions, install HEPA filters in HVAC systems to reduce TAC emission levels exceeding risk thresholds. • Install heating and cooling services at truck stops to eliminate the need for idling during overnight stops to run onboard systems. • For large distribution centers where the owner controls the vehicle fleet, provide facilities to support alternative fueled trucks powered by fuels such as natural gas or bio-diesel. • Utilize electric powered material handling equipment where feasible for the weight and volume of material to be moved. **Mitigation Measure AIR-3** Require developers proposing projects on ARB's list of projects in its Air Quality and Land Use Handbook (Handbook) warranting special consideration to prepare a cumulative health risk assessment when sensitive receptors are located within the distance screening criteria of the facility as listed in the ARB Handbook. **Mitigation Measure AIR-4** Require developers of projects containing sensitive receptors to provide a cumulative health risk assessment at project locations exceeding ARB Land Use Handbook distance screening criteria or newer criteria that may be developed by the SJVAPCD (no longer required by CEQA). The following mitigation measures were not included in the MEIR but are applicable to this project: **Project-specific** The implementation of the proposed plans and relevant policies for this area are expected to reduce per capita motor vehicle emissions to the extent feasible. This is well stated in the FCSP: "By improving Downtown,	

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	this Plan helps to expand access and make Downtown more inviting and attractive to everyone. Over time, Downtown's wide streets are put to better use, creating space for public transit, bicycles, and pedestrians, and connecting and creating synergy with adjacent neighborhoods and institutions that are within walking and biking distance of Downtown." The DNCP and FCSP follow principles including infill development, mix of land uses, an interconnected street system, and a high level of walkability and bikability that have been documented to reduce vehicle miles traveled (see CAPCOA's 2010 report Quantifying Greenhouse Gas Mitigation Measures). No mitigation measures beyond General Plan policies, ordinances, and regulations are available to further reduce this impact. **Cumulative** As stated above, the plans provide an effective framework for reducing per capita emissions that would reduce the projects cumulative impacts. No mitigation measures beyond General Plan policies, ordinances, and regulations are available to further reduce this impact.	
Impact AIR-4: The project could expose sensitive receptors to substantial pollutant concentrations. (5.3-47)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact AIR-5: The project would not create objectionable odors affecting a substantial number of people. (5.3-54)	The following mitigation measures were included in the MEIR and remain applicable to this project: **Project-specific** Odor source types listed in Table 5.3 8 may result in a potentially significant impact that would require mitigation to ensure that the impact is reduced to less than significant. **MM AIR-5**: Require developers of projects with the potential to generate significant odor impacts as determined through review of SJVAPCD odor complaint history for similar facilities and consultation with the SJVAPCD to prepare an odor impact assessment and to implement odor control	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	measures recommended by the SJVAPCD or the City to the extent needed to reduce the impact to less than significant. **Cumulative** Implementation of Mitigation Measure AIR-3 is required.	
Section 5.4—Biological Resources		
Impact BIO-1: The project could have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service. (5.4-18)	The following mitigation measures were included in the MEIR and remain applicable to this project: **Project-specific** **MM BIO-1a:** Construction of a proposed project would avoid, where possible, vegetation communities that provide suitable habitat for a special-status species known to occur within the Plan areas. If construction within potentially suitable habitat must occur, the presence/absence of any special-status plant or wildlife species must be determined prior to construction, to determine if the habitat supports any special-status species. If a special-status species is determined to occupy any portion of a project site, avoidance and minimization measures shall be incorporated into the construction phase of a project to avoid direct or incidental take of a special-status species to the greatest extent feasible. Avoidance and minimization measures include and are not limited to removing vegetation communities to be replanted off-site. **MM BIO-1b:** Direct or incidental take of any state or federally listed species would be avoided to the greatest extent feasible. If construction of a proposed project will result in the direct or incidental take of a listed species, consultation with the resource agencies and/or additional permitting may be required. Agency consultation through the California Department of Fish and Wildlife Section 2081 and United States Fish and Wildlife Service Section 7 or Section 10 permitting processes must take place prior to any action that may result in the direct or incidental take of a listed species. Specific mitigation measures for direct or incidental impacts to a listed species will be determined on a case-by-case basis through agency consultation.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	MM BIO-1c: Development within the Plan areas would avoid, where possible, special-status natural communities and vegetation communities that provide suitable habitat for special-status species. If a proposed project will result in the loss of a special-status natural community or suitable habitat for special-status species, compensatory habitat-based mitigation may be required under the California Environmental Quality Act and the California Endangered Species Act. Mitigation will consist of preserving on-site habitat, restoring similar habitat, or purchasing off-site credits from an approved mitigation bank. Compensatory mitigation will be determined through consultation with the City and/or resource agencies. An appropriate mitigation strategy and ratio will be produced by the developer and lead agency to reduce project impacts to special-status natural communities to a less than significant level. Agreed-upon mitigation ratios will depend on the quality of the habitat and presence/absence of a special-status species. The specific mitigation for project level impacts will be determined on a case-by-case basis. **MM BIO-1d:** Proposed projects within the Plan areas would avoid, if possible, construction within the general nesting season of February through August for avian species protected under Fish and Game Code Section 3500 and the Migratory Bird Treaty Act, if it is determined that suitable nesting habitat occurs on a project site. If construction cannot avoid the nesting season, a pre-construction clearance survey must be conducted to determine if any nesting birds or nesting activity is observed on or within 500 feet of a project site. If an active nest is observed during the survey, a biological monitor must be present on-site to ensure that no proposed project activities would impact the active nest. A suitable buffer will be established around the active nest until the nestlings have fledged and the nest is no longer active. Project activities may continue in the vicinity of the nest only at the discretion of the biological monitor. **Cumulative** Implementation of Mitigation Measures BIO-1a through BIO-1d is required.	

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact BIO-2: The project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service. (5.4-22)	**Project-specific** Mitigation measures are not required. **Cumulative** Mitigation measures are not required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact BIO-3: The project could have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. (5.4-23)	The following mitigation measures were included in the MEIR and remain applicable to this project: **Project-specific** **MM BIO-3a:** If a proposed project will result in the significant alteration or fill of a federally protected wetland, a formal wetland delineation conducted according to United States Army Corps of Engineers (USACE) accepted methodology is required for each project to determine the extent of wetlands on a project site. The delineation shall be used to determine if federal permitting and mitigation strategy are required to reduce project impacts. Acquisition of permits from USACE for the fill of wetlands and USACE approval of a wetland mitigation plan would ensure a "no net loss" of wetland habitat within the planning area. Appropriate wetland mitigation/creation shall be implemented in a ratio according to the size of the impacted wetland. **MM BIO-3b:** In addition to regulatory agency permitting, Best Management Practices identified from a list provided by the USACE shall be incorporated into the design and construction phase of the proposed project to ensure that no pollutants or siltation drain into a federally protected wetland. Project design features such as fencing, appropriate drainage, and incorporating detention basins shall help to ensure that project-related impacts to wetland habitat are minimized to the greatest extent feasible. **Cumulative** Implementation of Mitigation Measures BIO-3a and BIO-3b is required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact BIO-4: The project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites. (5.4-25)	**Project-specific** Mitigation measures are not required. **Cumulative** Mitigation measures are not required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact BIO-5: The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. (5.4-26)	**Project-specific** Mitigation measures are not required. **Cumulative** Mitigation measures are not required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact BIO-6: The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. (5.4-29)	**Project-specific** Mitigation measures are not required. **Cumulative** Mitigation measures are not required.	**Project-specific** No impact. **Cumulative** No impact.
Section 5.5—Cultural Resources		
Impact CUL-1: The project could cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5. (5.5-33)	The following mitigation measures were included in the MEIR and remain applicable to this project: **Project-specific** **MM CUL-1:** In accordance with Objective HCR-2 (specifically HCR-2-a through HCR-2-c) of the Fresno General Plan, and in accordance with DNCP Chapter 6 Goal 6.1, all specific development projects within the DNCP, FCSP, and DDC should undergo a standard Cultural Resources Assessment, Archaeological Resource Assessment, Historic Property Evaluation, or equivalent Phase I review. • This CEQA-level evaluation should include, at minimum, a CHRIS records search for the project area and an appropriate search radius, a historical map/aerial photography and literature review for the project area, a pedestrian survey to identify specific historic-age structures within the project area, and any subsequent building/structure/object evaluations. The report should also address any project-specific archaeological sensitivity determinations and additional project-specific proposed	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	mitigation measures, as necessary. • Any newly recorded prehistoric or historic resources should be evaluated for significance and potential standing with the CRHR or NRHP, as necessary. Eligibility determinations and proposed mitigation measures should be summarized in the Phase I report. • To ensure that state and local historic resources databases are updated with new findings, the appropriate Department of Parks and Recreation (DPR) forms are required to be completed for any newly recorded resources and submitted to the CHRIS Information Center with the completed Phase I report. • Completed Phase I reports should be submitted to the City for incorporation into their local databases. **MM CUL-2:** In accordance with Objective HCR-3 (specifically HCR-3-a) of the Fresno General Plan, and in accordance with DNCP Chapter 6 Goal 6.1 (specifically Policy 6.2.1 through 6.2.7), all efforts should be made (within appropriate safest standards)to preserve, rehabilitate, and re-use historic-age structures (whether determined eligible or not). **MM CUL-3:** Subsurface excavations or mass grading for new developments within areas determined to have moderate to high archaeological sensitivity (whether in this Specific Plan or in subsequent Phase I reports) should be monitored by a City-approved archaeologist **MM CUL-4:** If previously unknown cultural resources are encountered during grading activities, construction shall stop in the immediate vicinity of the find and an archaeologist shall be consulted to determine whether the resource requires further study. The qualified archaeologist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines and the City's Historic Preservation Ordinance. • Potentially significant cultural resources consist of but are not limited to	

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	stone, bone, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate Department of Parks and Recreation (DPR) forms and evaluated for significance in terms of CEQA criteria. • If the resources are determined to be unique historical resources as defined under Section 15064.5 of the CEQA Guidelines, measures shall be identified by the archaeologist and recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping; incorporation of the site in green space, parks, or open space; or data recovery excavations of the finds. • No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any historical artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study. **Cumulative** Implementation of Mitigation Measure CUL-1 through CUL-4 is required.	
Impact CUL-2: The project could cause a substantial adverse change in the significance of a prehistoric archaeological resource pursuant to Section 15064.5. (5.5-42)	Mitigation Measure CUL-1 is required in order to assess the prehistoric archaeological sensitivity of specific project developments. If no previously recorded prehistoric resources are identified and no additional mitigation measures re proposed in the Phase I investigation, Mitigation Measure CUL-4 is required to address potential inadvertent finds. In addition to Mitigation Measure CUL-1 and CUL-4, the following mitigation measures, which were included in the MEIR and remain applicable to this project, are also required: **MM CUL-5:** Monitoring by a qualified professional archaeologist shall be conducted during any ground-disturbing activities in the vicinity of the Fresno Chinatown Block 51 Site, Fresno Block 534 Site, and the Block 1052 Isolate, which were identified by the current investigations. ("Vicinity" is defined here as lying within 300 feet of the identified site boundaries.)	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	These are presently the only archaeological sites recorded within the FCSP/DNCP areas. **MM CUL-6:** Ground-disturbing activities shall also be monitored in the vicinity of any archaeological sites identified in the future, as follows: A qualified professional archaeologist and a Native American representative shall monitor any ground-disturbing activities in the vicinity of known archaeological sites. An archaeological monitoring plan shall be developed in accordance with professional standards by an archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards for Archaeology. The monitors will ensure that any portions of previously identified significant resources are avoided and protected. In addition, they will identify any new cultural resources encountered during ground-disturbing activities. If potentially important cultural resources are discovered, the archaeologist will immediately divert such activity within 100 feet of the find, or a distance determined to be appropriate. The potential significance of the find will be assessed and mitigation measures formulated, if warranted. Appropriate mitigation may include avoidance of the resource, testing, and/or data recovery. Ground disturbance in the area of suspended activity shall not recommence until authorized by the archaeologist. Upon completion of the monitoring, an archaeological report will be prepared for the City in accordance with professional standards. A copy of the report will be submitted to the SSJV Information Center. Provisions will be made for curation of any significant cultural materials recovered. **Cumulative** Implementation of Mitigation Measure CUL-1, as well as Mitigation Measures CUL-4, CUL-5, and CUL-6 are required.	

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact CUL-3: The project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature. (5.5-46)	The following mitigation measure was included in the MEIR and remains applicable to this project: **Project-specific** **MM CUL-7:** Subsequent to a preliminary City review of the project grading plans, if there is evidence that a project will include excavation or construction activities within previously undisturbed soils, a field survey and literature search for unique paleontological/geological resources shall be conducted. The following procedures shall be followed: • If unique paleontological/geological resources are not found during either the field survey or literature search, excavation and/or construction activities can commence. In the event that unique paleontological/geological resources are discovered during excavation and/or construction activities, construction shall stop in the immediate vicinity of the find and a qualified paleontologist shall be consulted to determine whether the resource requires further study. The qualified paleontologist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to, excavation of the finds and evaluation of the finds. If the resources are determined to be significant, mitigation measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate mitigation measures for significant resources could include avoidance or capping; incorporation of the site in green space, parks, or open space; or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any paleontological/geological resources recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study. • If unique paleontological/geological resources are found during the field survey or literature review, the resources shall be inventoried and evaluated for significance. If the resources are found to be significant, mitigation measures shall be identified by the qualified paleontologist.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	Similar to above, appropriate mitigation measures for significant resources could include avoidance or capping; incorporation of the site in green space, parks, or open space; or data recovery excavations of the finds. In addition, appropriate mitigation for excavation and construction activities in the vicinity of the resources found during the field survey or literature review shall include a paleontological monitor. The monitoring period shall be determined by the qualified paleontologist. If additional paleontological/ geological resources are found during excavation and/or construction activities, the procedure identified above for the discovery of unknown resources shall be followed. **Cumulative** Implementation of Mitigation Measure CUL-3 is required.	
Impact CUL-4: The project would not disturb any human remains, including those interred outside of formal cemeteries. (5.5-48)	The following mitigation measure was included in the MEIR and remains applicable to this project: **Project-specific** **MM CUL-8:** In the event that human remains are unearthed during excavation and grading activities of any future development project, all activity shall cease immediately. Pursuant to Health and Safety Code (HSC) Section 7050.5, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98(a). If the remains are determined to be of Native American descent, the coroner shall within 24 hours notify the Native American Heritage Commission (NAHC). The NAHC shall then contact the most likely descendent of the deceased Native American, who shall then serve as the consultant on how to proceed with the remains. Pursuant to PRC Section 5097.98(b), upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or archaeological standards or practices, where the Native American human remains are located is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendants regarding	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment. **Cumulative** Implementation of Mitigation Measure CUL-4 is required.	
Section 5.6—Geology and Soils		
Impact GEO-1: The project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving: i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. Refer to Division of Mines and Geology Special Publication 42. ii) Strong seismic ground shaking. iii) Seismic-related ground failure, including liquefaction. iv) Landslides. (5.6-5)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact GEO-2: The project would not result in substantial soil erosion or the loss of topsoil. (5.6-8)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact GEO-3: The project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse. (5.6-9)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact GEO-4: The project would not be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property. (5.6-10)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact GEO-5: The project would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater. (5.6-10)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Section 5.7—Greenhouse Gases		
Impact GHG-1: The project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	**Project Specific** No mitigation measures beyond implementation of General Plan policies are feasible. **Cumulative** No mitigation measures beyond implementation of General Plan policies are feasible.	**Project Specific** Significant and unavoidable impact. **Cumulative** Significant and unavoidable impact.
Impact GHG-2: The project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.	**Project Specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project Specific** Less than significant impact. **Cumulative** Less than significant impact.
Section 5.8—Hazards and Hazardous Materials		
Impact HAZ-1: The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. (5.8-25)	**Project-specific** The following recommendations from the Phase I ESAs for the DNCP and the FCSP have been incorporated as mitigation measures and are anticipated to reduce potential impacts regarding hazardous materials to a less than significant level. The following mitigation measures shall be implemented on a property-by-property basis as development and/or redevelopment progresses throughout the DNCP and FCSP areas:	**Project-specific** *Potential Short Term Construction Impacts* During project construction/development, compliance with all applicable regulations combined with implementation of Mitigation

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	MM HAZ-1a: Prior to the issuance of a grading permit, the property owners and/or developers of properties shall ensure that a Phase I ESA shall be conducted for each individual property prior to development or redevelopment to ascertain the presence or absence of Recognized Environmental Conditions, Historical Recognized Environmental Condition, and Potential Environmental Concerns as defined in the Phase I Environmental Site Assessment for the Downtown Neighborhoods Community Specific Plan and the Fulton Corridor Specific Plan relevant to the property under consideration. The findings and conclusions of the Phase I ESA shall become the basis for potential recommendations for follow-up investigation, if found to be warranted. **MM HAZ-1b:** In the event that the findings and conclusions of the Phase I ESA for a property result in evidence of RECs, HRECs and/or PECs warranting further investigation, the property owners and/or developers of properties shall ensure that a Phase II ESA shall be conducted to determine the presence or absence of a significant impact to the subject site from hazardous materials. The Phase II ESA may include but may not be limited to the following: (1) Collection and laboratory analysis of soils and/or groundwater samples to ascertain the presence or absence of significant concentrations of constituents of concern; (2) Collection and laboratory analysis of soil vapors and/or indoor air to ascertain the presence or absence of significant concentrations of volatile constituents of concern; and/or (3) Geophysical surveys to ascertain the presence or absence of subsurface features of concern such as USTs, drywells, drains, plumbing, and septic systems. The findings and conclusions of the Phase II ESA shall become the basis for potential recommendations for follow-up investigation, site characterization, and/or remedial activities, if found to be warranted. **MM HAZ-1c:** In the event the findings and conclusions of the Phase II ESA reveal the presence of significant concentrations of hazardous materials warranting further investigation, the property owners and/or developers	Measures HAZ-1a through HAZ-1e are anticipated to mitigate potential hazardous materials impacts to construction workers and the general public. Therefore, related impacts are anticipated to be reduced to a level of less than significant. *Potential Long-Term Operational Impacts* Impacts from the proposed DNCP and FCSP related to hazards and hazardous materials transport, use, and disposal are anticipated to be less than significant because all new development under the General Plan that handles, stores, generates or disposes of hazardous materials must be in compliance with City of Fresno regulations/laws regarding hazardous materials, as well as state and federal laws regarding hazardous materials. It is anticipated that implementation of Mitigation Measures HAZ-1a through HAZ-1e will further reduce impacts to a less than significant level. As such, the proposed DNCP and FCSP are anticipated to have a less than significant impact.

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	of properties shall ensure that site characterization shall be conducted in the form of additional Phase II ESAs in order to characterize the source and maximum extent of impacts from constituents of concern. The findings and conclusions of the site characterization shall become the basis for formation of a remedial action plan and/or risk assessment. **MM HAZ-1d:** If the findings and conclusions of the Phase II ESAs, site characterization and/or risk assessment demonstrate the presence of concentrations of hazardous materials exceeding regulatory threshold levels, prior to the issuance of a grading permit, property owners and/or developers of properties shall complete site remediation and potential risk assessment with oversight from the applicable regulatory agency including, but not limited to, the Cal-EPA Department of Toxic Substances Control (DTSC) or Regional Water Quality Control Board (RWQCB), and Fresno County Department of Environmental Health Services (FCEHS). Potential remediation could include the removal or treatment of water and/or soil. If removal occurs, hazardous materials shall be transported and disposed at a hazardous materials permitted facility. **MM HAZ-1e:** In the event of planned renovation or demolition of residential and/or commercial structures on the subject site, prior to the issuance of demolition permits, asbestos and LBP surveys shall be conducted in order to determine the presence or absence of asbestos-containing construction materials and/or LBP. Removal of friable and non-friable ACCMs that have the potential to become friable during demolition and/or renovation shall conform to the standards set forth by the National Emissions Standards for Hazardous Air Pollutants. The San Joaquin Valley Unified Air Pollution Control District is the responsible agency on the local level to enforce the National Emission Standards for Hazardous Air Pollutants and shall be notified by the property owners and/or developers of properties (or their designee(s)) prior to any demolition and/or renovation activities. If asbestos-containing materials are left in place, an Operations and Maintenance	**Cumulative** The contribution of the proposed DNCP's and FCSP's impacts on the routine transport, use, or disposal of hazardous materials are anticipated to be less than significant and would not be cumulatively considerable because all generation, transport, and treatment of hazardous materials are required to comply with applicable federal, state and local requirements. Additionally, with implementation of mitigation measures listed above, impacts are anticipated to be less than significant.

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	Program (O&M Program) shall be developed for the management of asbestos-containing materials. **Cumulative** Implementation of Mitigation Measures HAZ-1a through HAZ-1f would reduce potential cumulative impacts to less than significant. Thus, no additional mitigation measures are required.	
Impact HAZ-2: The project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment. (5.8-29)	**Project-specific** The following project-specific mitigation measures (listed earlier in this section) regarding hazardous materials are anticipated to reduce potential impacts regarding the creation of a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving release of hazardous materials into the environment: Mitigation Measures HAZ-1a, HAZ-1b, HAZ-1c, HAZ-1d and HAZ-1e. **Cumulative** No additional mitigation measures have been identified for cumulative impacts beyond the project-specific mitigation required and identified above.	**Project-specific** Impacts from the proposed DNCP and FCSP related to the creation of a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving release of hazardous materials into the environment are anticipated to be less than significant. All new development under the DNCP and/or FCSP that would handle, store, generate or dispose of hazardous materials must be in compliance with City of Fresno regulations/laws regarding hazardous materials as well as state and federal laws regarding hazardous materials. Additionally, with the implementation of the mitigation measures listed above that apply to hazardous materials and the prevention of their release into the environment, the proposed DNCP and FCSP are anticipated to

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
		have a less than significant impact. **Cumulative** The contribution of the DNCP's and FCSP's impacts on the creation of a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving release of hazardous materials into the environment are anticipated to be less than significant and would not be cumulatively considerable. All generation, transport, and treatment of hazardous materials are required to comply with applicable federal, state, and local requirements.
Impact HAZ-3: The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. (5.8-30)	**Project-specific** The following mitigation measures were not included in the MEIR and are new for this project: **MM HAZ-3a:** A Business Plan must be submitted by businesses that handle a hazardous material, or a mixture containing a hazardous material, in quantities equal to or greater than 500 pounds of a solid, 55 gallons of a liquid, 200 cubic feet of a compressed has at standard room temperature and pressure, the Federal Threshold Planning Quantity (TPQ) for Extremely Hazardous Substances, radioactive materials in quantities for which an Emergency Plan is required in accordance with Parts 30, 40, or 70, Chapter 1 of Title 10 of Code of Federal Regulations. A Risk Management Plan shall be completed for any business that has more than a threshold quantity of a regulated substance in a process included any use, storage,	**Project-specific** The DNCP and FCSP's potential impacts on the emission of hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school are anticipated to be less than significant and would not be cumulatively considerable because all generation, transport, and treatment of hazardous

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	manufacturing, handling, or on-site movement or any combination of these activities. Regulated substances are those chemicals on either the Federal list or the State list. **MM HAZ-3b:** In the event that unknown soil contamination is discovered during grading activities, the property owners and/or developers of properties shall ensure that site characterization shall be conducted in the form of a Phase II ESA in order to characterize the source and maximum extent of impacts from constituents of concern. The findings and conclusions of the site characterization shall become the basis for formation of a remedial action plan and/or risk assessment. **MM HAZ-3c:** If the findings and conclusions of the Phase II ESA, site characterization and/or risk assessment demonstrate the presence of concentrations of hazardous materials exceeding regulatory threshold levels, property owners and/or developers of properties shall complete site remediation and potential risk assessment with oversight from the applicable regulatory agency, including but not limited to the Cal-EPA DTSC or RWQCB, and Fresno County Department of Environmental Health Services. Potential remediation could include the removal or treatment of water and/or soil. If removal occurs, hazardous materials shall be transported and disposed at a hazardous materials permitted facility. **Cumulative** No additional mitigation measures are required for cumulative impacts regarding emission of hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.	materials are required to comply with applicable federal, state and local requirements. Implementation of mitigation for the project will further reduce impacts to a less than significant level. **Cumulative** Impacts from hazards are generally site-specific, and do not result in cumulative impacts. The cumulative contribution of the DNCP's and FCSP's potential impacts on the emission of hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school are anticipated to be less than significant and would not be cumulatively considerable. All generation, transport, and treatment of hazardous materials are required to comply with applicable federal, state, and local requirements.
Impact HAZ-4: The project could potentially be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment. (5.8-32)	**Project-specific** The following mitigation measures are anticipated to reduce potential impacts regarding hazardous materials sites compiled pursuant to Government Code Section 65962.5: Mitigation Measures HAZ-1a, HAZ-1b, HAZ-1c, HAZ-1d, and HAZ-1e.	**Project-specific** Impacts from the proposed DNCP and FCSP related to hazardous materials sites compiled pursuant to Government Code Section 65962.5 are anticipated to be less

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	Cumulative No mitigation measures have been identified for cumulative impacts regarding inclusion on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5	than significant with mitigation because pursuant to the mitigation measures, property owners and/or developers of properties shall complete site remediation and potential risk assessment with oversight from the applicable regulatory agency. As such, with implementation of the mitigation measures listed above, the proposed DNCP and FCSP are anticipated to have a less than significant impact. **Cumulative** The contribution of the DNCP's and FCSP's impacts related to hazardous materials sites compiled pursuant to Government Code Section 65962.5 are anticipated to be less than significant and would not be cumulatively considerable. This is because any development that is proposed on a hazardous material site (pursuant to Government Code Section 65962.5) within an area surrounding the City of Fresno, such as the City of Clovis and the County of Fresno, would also be required to comply with applicable federal, state, and local requirements and undergo

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
		site-specific investigation and remediation. The project-level analysis concluded that impacts regarding hazardous materials sites compiled pursuant to Government Code Section 65962.5 would result in no or less than significant impact. While it is plausible that the development of future related projects could potentially result in significant impacts related to the inclusion on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, the project's contribution to such impacts would be less than cumulatively considerable, and thus less than significant.
Impact HAZ-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, the project would not result in a safety hazard for people residing or working in the project area. (5.8-35)	**Project-specific** No mitigation measures have been identified for project-specific impacts regarding airports. **Cumulative** No mitigation measures have been identified for cumulative impacts regarding airports.	**Project-specific** No project-specific mitigation measures have been identified. Conformance to the applicable airport land use plan for future development under the DNCP and FCSP will ensure a less than significant impact. **Cumulative** The contribution of development under the DNCP and FCSP

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
		regarding airports and potential safety hazards for people residing or working in the plan areas is not considered cumulatively significant because each airport—whether it is located in the plan areas, the County of Fresno or the City of Clovis, or other surrounding areas—is required to develop a plan that addresses each airport's potential impact to the area/land uses surrounding each airport. Individual development projects would be required to comply with the height and design restrictions imposed by the applicable plan. Therefore, the project's contribution would not result in a significant cumulative impact.
Impact HAZ-6: For a project within the vicinity of a private airstrip, the project would not result in a safety hazard for people residing or working in the project area. (5.8-38)	**Project-specific** No mitigation measures have been identified for project-specific impacts related to private airstrips. **Cumulative** No mitigation measures have been identified for cumulative impacts related to private airstrips.	**Project-specific** As described above, no private airstrips have been identified within the City of Fresno or its vicinity. Therefore, no project-specific impacts are anticipated. **Cumulative** No private airstrips currently exist or are proposed in the DNCP or FCSP plan areas. The contribution of the DNCP's and FCSP's impacts regarding private

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
		airstrips and potential safety hazards for people residing or working in the plan areas is not considered cumulatively significant. Future development of private airstrips, whether they are located in the City of Fresno, the County of Fresno or the City of Clovis, or other surrounding areas, would be required to comply with applicable laws and safety standards. Therefore, less than significant cumulative impacts are anticipated.
Impact HAZ-7: The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. (5.8-39)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** As described above, no mitigation measures are required, and less than significant impacts are anticipated. **Cumulative** As described above, no mitigation measures are required, and less than significant impacts are anticipated.
Impact HAZ-8: The project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. (5.8-42)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** No impact. **Cumulative** No impact.

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 5.9—Hydrology and Water Quality		
Impact HYD-1: The project would not violate any water quality standards or waste discharge requirements. (5.9-16)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact HYD-2: The project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted). (5.9-21)	The following mitigation measures were included in the MEIR and remain applicable to this project: **Project-specific** **MM HYD-2a:** The City shall develop and implement water conservation measures to continue to reduce the per capita water use to 247 gallons per capita per day by General Plan Buildout. **MM HYD-2b:** The City shall continue to be an active participant in the Kings Water Authority and the implementation of the Kings Basin Integrated Regional Water Management Plan. **Cumulative** Implementation of Mitigation Measures HYD-1, and HYD-2 is required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact HYD-3: The project would not substantially alter the existing drainage pattern of area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site. (5.9-26)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact HYD-4: The project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site. (5.9-30)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact HYD-5: The project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff. (5.9-33)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact HYD-6: The project would not otherwise substantially degrade water quality. (5.9-37)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact HYD-7: The project would place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map. (5.9-37)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact HYD-8: The project would place within a 100-year flood hazard area structures which would impede or redirect flood flows. (5.9-39)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact HYD-9: The project would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam. (5.9-40)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact HYD-10: The project would not expose people or structures to inundation by seiche, tsunami, or mudflow. (5.9-41)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** No impact. **Cumulative** No impact.

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 5.10—Land Use and Planning		
Impact LUP-1: The project would not physically divide an established community. (5.10-14)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact LUP-2: The project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. (5.10-20)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact LUP-3: The project would not conflict with any applicable habitat conservation plan or natural communities conservation plan. (5.10-33)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** No impact. **Cumulative** No impact.
Section 5.11—Noise		
Impact NOI-1: The project would result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies. (5.11-25)	**Project-specific** No feasible mitigation measures are available. **Cumulative** No feasible mitigation measures are available.	**Project-specific** Significant and unavoidable impact. **Cumulative** Significant and unavoidable impact.
Impact NOI-2: The project would result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels. (5.11-31)	The following mitigation measures were not included in the MEIR but are applicable to this project: **Project-specific** **MM NOI-2:** Any noise-sensitive land use development that would construct structures within 80 feet of the edge of existing or future rail	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	lines within the Plan Areas shall be required to prepare a vibration impact analysis to determine potential vibration impacts from railroad operations and to mitigate any impacts to below the FTA's significance criteria shown in Table 5.11 8. **Cumulative** Implement MM NOI-2.	
Impact NOI-3: The project would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. (5.11-33)	**Project-specific** No feasible mitigation measures are available. **Cumulative** No feasible mitigation measures are available.	**Project-specific** Significant and unavoidable impact. **Cumulative** Significant and unavoidable impact.
Impact NOI-4: The project would not result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project. (5.11-35)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact NOI-5: For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, the project would not expose people residing or working in the project area to excessive noise levels. (5.11-38)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact NOI-6: For a project within the vicinity of a private airstrip, the project would not expose people residing or working in the project area to excessive noise levels. (5.11-39)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 5.12—Population and Housing		
Impact POP-1: The project would not induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure). (5.12-11)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact POP-2: The project would not displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact POP-3: The project would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Section 5.13—Public Services		
Impact PS-1: The project would not result in substantial adverse physical impacts associated with the provision of or need for new or physically altered governmental facilities in order to maintain acceptable service ratios, response times or other performance objectives for fire protection, the construction of which could cause significant environmental impacts.	**Project Specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact PS-2: The project would not result in substantial adverse physical impacts associated with the provision of or need for new or physically altered governmental facilities in order to maintain acceptable service ratios, response times or other performance objectives for police protection, the construction of which could cause significant environmental impacts.	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact PS-3: The project would not result in substantial adverse physical impacts associated with the provision of or need for new or physically altered governmental facilities in order to maintain acceptable service ratios, response times or other performance objectives for schools, the construction of which could cause significant environmental impacts.	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact PS-4: The project would not result in substantial adverse physical impacts associated with the provision of or need for new or physically altered governmental facilities in order to maintain acceptable service ratios, response times or other performance objectives for parks, the construction of which could cause significant environmental impacts.	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact PS-5: The project would not result in substantial adverse physical impacts associated with the provision of or need for new or physically altered governmental facilities in order to maintain acceptable service ratios, response times or other performance objectives for libraries, the construction of which could cause significant environmental impacts.	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact PS-6: The project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Section 5.14—Transportation and Traffic		
Impact TRANS-1: The addition of project traffic to the roadway network results in LOS E and F intersection operations at City of Fresno intersections within the Downtown Planning Area. (5.14-103)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact TRANS-2: The addition of project traffic to the roadway network results in unacceptable intersection operations at City of Fresno intersections outside the Downtown Planning Area. (5.14-105)	**Project-specific** No mitigation measures are required. The following mitigation measures were not included in the MEIR but are applicable to this project: **Cumulative** **MM TRANS-2a:** The City of Fresno shall monitor AM and PM peak-hour traffic operations at the impacted intersections at least every 3 years. Once the impacted intersections reach LOS E operations during either the AM or PM peak hour, a Transportation Management Association (TMA) shall be formed and funded to actively implement feasible transportation demand management (TDM) strategies that reduce peak-hour vehicle trips to and from the project area, as supported by DNCP Policy 3.3.3 and General Plan Policy MT-2-g. The TMA will implement TDM measures such as: • Provide discounted transit passes. • Coordinate with Fresno Area Express and TMA members to ensure transit schedules align with TMA member work schedules to the extent feasible. • Organize ridesharing, bike-share, or car-share programs. • Offer shuttle/vanpool services, in collaboration with employers, to serve major employment centers. • Operate a commute trip reduction program that includes measures such as: - Preferential carpool parking. - Encouraging flexible work schedules/telecommuting. - Conducting marketing campaigns to encourage non-auto modes for commuting and other travel purposes. - Encouraging the use of a transportation coordinator for the project area - Provide end-of-trip facilities for bicyclists. **MM TRANS-2b:** The City of Fresno shall monitor AM and PM peak-hour traffic operations at the impacted intersections at least every 3 years. The monitoring program will identify improvements that are needed, if any, to mitigate the project's impacts to traffic operations at these impacted locations. If the monitoring program determines that the proposed	**Project-specific** Less than significant impact. **Cumulative** Significant and unavoidable impact.

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	project causes an intersection to operate at unacceptable levels (LOS E or F), or adds more than five seconds of delay to an intersection already operating at an unacceptable LOS, the City of Fresno shall implement mitigation measures that improve operations to mitigate the project's impact, if feasible. These measures may include, but are not limited to, feasible TDM strategies to reduce peak-hour vehicle trips or physical improvements, such as adding traffic signals, turn lanes, travel lanes, roundabouts, or the specific improvements listed for each impacted study intersection below. • Belmont Avenue/Golden State Boulevard-Wesley Avenue - Signalize the intersection. - Widen the westbound approach to two through lanes and one protected left-turn lane. • Belmont Avenue/Palm Avenue - Convert the northbound shared through/left-turn lane to separate through and left-turn lanes. - Convert the eastbound and westbound shared through/left-turn lane to a single left-turn lane. - Convert the left-turn movements to protected phasing. - Add a second eastbound left-turn lane. - Convert the eastbound shared through/right-turn lane to separate through and right-turn lanes. - Add a second northbound left-turn lane. - Optimize the signal timings.	
Impact TRANS-3: The addition of project traffic to the roadway network results in unacceptable intersection operations at Caltrans study intersections. (5.14-108)	The following mitigation measures were not included in the MEIR but are applicable to this project: **Project-specific** **MM TRANS-3a:** The City of Fresno shall monitor AM and PM peak-hour traffic operations at the impacted intersections at least every 3 years. Once the impacted intersections reach LOS D operations during either the AM or PM peak hour, a Transportation Management Association (TMA) shall be formed and funded to actively implement feasible transportation demand management (TDM) strategies to reduce peak-hour vehicle trips to and from	**Project-specific** Since the City of Fresno does not have jurisdiction over implementing improvements to facilities controlled by Caltrans, this impact remains significant and unavoidable. **Cumulative**

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	the project area, as supported by DNCP Policy 3.3.3 and General Plan Policy MT-2-g. The TMA will implement TDM measures such as: • Provide discounted transit passes. • Coordinate with Fresno Area Express and TMA members to ensure transit schedules align with TMA member work schedules to the extent feasible. • Organize ridesharing, bike-share, or car-share programs. • Offer shuttle/vanpool services, in collaboration with employers, to serve major employment centers. • Operate a commute trip reduction program that includes measures such as: - Preferential carpool parking. - Encouraging flexible work schedules/telecommuting. - Conducting marketing campaigns to encourage non-auto modes for commuting and other travel purposes. - Encouraging the use of a transportation coordinator for the project area. - Provide end-of-trip facilities for bicyclists. **MMTRANS-3b:** Implement General Plan Policy MT-2-j and MT-2-l pursuant to Fresno General Plan MEIR impact TRANS-1 to seek funding for a multimodal transportation system and funding mechanism to address region-wide traffic impacts. **Cumulative** **MM TRANS-3a:** The City of Fresno shall monitor AM and PM peak-hour traffic operations at the impacted intersections at least every 3 years. Once the impacted intersections reach LOS D operations during either the AM or PM peak hour, a Transportation Management Association (TMA) shall be formed and funded to actively implement feasible transportation demand management (TDM) strategies to reduce peak-hour vehicle trips to and from the project area, as supported by DNCP Policy 3.3.3 and General Plan Policy MT-2-g. The TMA will implement TDM measures such as: • Provide discounted transit passes. • Coordinate with Fresno Area Express and TMA members to ensure transit	Since the City of Fresno does not have jurisdiction over implementing improvements to facilities controlled by Caltrans, this impact remains significant and unavoidable.

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	schedules align with TMA member work schedules to the extent feasible. • Organize ridesharing, bike-share, or car-share programs. • Offer shuttle/vanpool services, in collaboration with employers, to serve major employment centers. • Operate a commute trip reduction program that includes measures such as: - Preferential carpool parking. - Encouraging flexible work schedules/telecommuting. - Conducting marketing campaigns to encourage non-auto modes for commuting and other travel purposes. - Encouraging the use of a transportation coordinator for the project area - Provide end-of-trip facilities for bicyclists. **MM TRANS-3b**: Implement General Plan Policy MT-2-j and MT-2-l pursuant to Fresno General Plan MEIR impact TRANS-1 to seek funding for a multimodal transportation system and funding mechanism to address region-wide traffic impacts.	
Impact TRANS-4: The addition of project traffic to the roadway network results in unacceptable freeway operations. (5.14-123)	The following mitigation measures were not included in the MEIR but are applicable to this project: **Project-specific** **MM TRANS-4a:** The City of Fresno shall monitor AM and PM peak-hour traffic operations at the impacted locations at least every 3 years. Once the impacted locations reach LOS D operations during either the AM or PM peak hour, a Transportation Management Association (TMA) shall be formed and funded to actively implement feasible transportation demand management (TDM) strategies to reduce peak-hour vehicle trips to and from the project area, as supported by DNCP Policy 3.3.3 and General Plan Policy MT-2-g. The TMA will implement TDM measures such as: • Provide discounted transit passes. • Coordinate with Fresno Area Express and TMA members to ensure transit schedules align with TMA member work schedules to the extent feasible. • Organize ridesharing, bike-share, or car-share programs.	**Project-specific** Since the City of Fresno does not have jurisdiction over implementing improvements to facilities controlled by Caltrans, this impact remains significant and unavoidable. **Cumulative** Since the City of Fresno does not have jurisdiction over implementing improvements to facilities controlled by Caltrans, this impact remains significant and unavoidable.

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	• Offer shuttle/vanpool services, in collaboration with employers, to serve major employment centers. • Operate a commute trip reduction program that includes measures such as: - Preferential carpool parking. - Encouraging flexible work schedules/telecommuting. - Conducting marketing campaigns to encourage non-auto modes for commuting and other travel purposes. - Encouraging the use of a transportation coordinator for the project area. - Provide end-of-trip facilities for bicyclists. **MM TRANS-4b:** Implement General Plan Policy MT-2-j and MT-2-l pursuant to Fresno General Plan MEIR impact TRANS-1 to seek funding for a multimodal transportation system and funding mechanism to address region-wide traffic impacts. **Cumulative** **MM TRANS-4a:** The City of Fresno shall monitor AM and PM peak-hour traffic operations at the impacted locations at least every 3 years. Once the impacted locations reach LOS D operations during either the AM or PM peak hour, a Transportation Management Association (TMA) shall be formed and funded to actively implement feasible transportation demand management (TDM) strategies to reduce peak-hour vehicle trips to and from the project area, as supported by DNCP Policy 3.3.3 and General Plan Policy MT-2-g. The TMA will implement TDM measures such as: • Provide discounted transit passes. • Coordinate with Fresno Area Express and TMA members to ensure transit schedules align with TMA member work schedules to the extent feasible. • Organize ridesharing, bike-share, or car-share programs. • Offer shuttle/vanpool services, in collaboration with employers, to serve major employment centers. • Operate a commute trip reduction program that includes measures such as:	

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	• Preferential carpool parking. - Encouraging flexible work schedules/telecommuting. - Conducting marketing campaigns to encourage non-auto modes for commuting and other travel purposes. - Encouraging the use of a transportation coordinator for the project area. - Provide end-of-trip facilities for bicyclists. **MM TRANS-4b:** Implement General Plan Policy MT-2-j and MT-2-l pursuant to Fresno General Plan MEIR impact TRANS-1 to seek funding for a multimodal transportation system and funding mechanism to address region-wide traffic impacts.	
Impact TRANS-5: The addition of project traffic to the roadway network results in unacceptable queuing at freeway off-ramps. (5.14-127)	The following mitigation measures were not included in the MEIR but are applicable to this project: **Project-specific** **MM TRANS-5a:** The City of Fresno shall monitor AM and PM peak-hour traffic queuing at the impacted ramps at least every 3 years. Once the queues at the impacted ramps extend into the deceleration zone as defined in Caltrans Highway Design Manual (HDM) during either the AM or PM peak hour, a Transportation Management Association (TMA) shall be formed and funded to actively implement feasible transportation demand management (TDM) strategies to reduce peak-hour vehicle trips to and from the project area, as supported by DNCP Policy 3.3.3 and General Plan Policy MT-2-g. The TMA will implement TDM measures such as: • Provide discounted transit passes. • Coordinate with Fresno Area Express and TMA members to ensure transit schedules align with TMA member work schedules to the extent feasible. • Organize ridesharing, bike-share, or car-share programs. • Offer shuttle/vanpool services, in collaboration with employers, to serve major employment centers. • Operate a commute trip reduction program that includes measures such as: - Preferential carpool parking. - Encouraging flexible work schedules/telecommuting.	Project-specific Since the City of Fresno does not have jurisdiction over implementing improvements to facilities controlled by Caltrans, this impact remains significant and unavoidable. Cumulative Since the City of Fresno does not have jurisdiction over implementing improvements to facilities controlled by Caltrans, this impact remains significant and unavoidable.

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	- Conducting marketing campaigns to encourage non-auto modes for commuting and other travel purposes. - Encouraging the use of a transportation coordinator for the project area - Provide end-of-trip facilities for bicyclists. **MM TRANS-5b:** Implement General Plan Policy MT-2-j and MT-2-l pursuant to Fresno General Plan MEIR impact TRANS-1 to seek funding for a multimodal transportation system and funding mechanism to address region-wide traffic impacts. **Cumulative** **MM TRANS-5a:** The City of Fresno shall monitor AM and PM peak-hour traffic queuing at the impacted ramps at least every 3 years. Once the queues at the impacted ramps extend into the deceleration zone as defined in Caltrans HDM during either the AM or PM peak hour, a Transportation Management Association (TMA) shall be formed and funded to actively implement feasible transportation demand management (TDM) strategies to reduce peak-hour vehicle trips to and from the project area, as supported by DNCP Policy 3.3.3 and General Plan Policy MT-2-g. The TMA will implement TDM measures such as: • Provide discounted transit passes. • Coordinate with Fresno Area Express and TMA members to ensure transit schedules align with TMA member work schedules to the extent feasible. • Organize ridesharing, bike-share, or car-share programs. • Offer shuttle/vanpool services, in collaboration with employers, to serve major employment centers. • Operate a commute trip reduction program that includes measures such as: - Preferential carpool parking. - Encouraging flexible work schedules/telecommuting. - Conducting marketing campaigns to encourage non-auto modes for commuting and other travel purposes. - Encouraging the use of a transportation coordinator for the project area - Provide end-of-trip facilities for bicyclists.	

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
	MM TRANS-5b: Implement General Plan Policy MT-2-j and MT-2-l pursuant to Fresno General Plan MEIR impact TRANS-1 to seek funding for a multimodal transportation system and funding mechanism to address region-wide traffic impacts.	
Impact TRANS-6: The addition of project traffic to the transportation network would increase ridership and demand for transit service. (5.14-132)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact TRANS-7: The addition of project traffic to the transportation network would increase demand for bicycle and pedestrian facilities. (5.14-132)	The following mitigation measures were not included in the MEIR but are applicable to this project: **Project-specific** **MM TRANS-7:** The City shall update the Bicycle, Pedestrian, and Trails Master Plan to reflect the proposed changes in the DNCP and FCSP. The implementation of this mitigation measure would maintain consistency among the City's plans for bicycle facilities and lessen proposed project's impact to less than significant. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact TRANS-8: The addition of project traffic to the transportation network would increase vehicles and pedestrian crossings of the at-grade railroad crossings. (5.14-134)	The following mitigation measures were not included in the MEIR but are applicable to this project: **Project-specific** **MM TRANS-8:** Implementation of the DNCP and FCSP would include improvements to the existing at-grade railroad crossings to ensure that they have adequate vehicle, bicycle, and pedestrian facilities, and that the crossing gates meet PUC standards. The implementation of these improvements would improve conditions at at-grade railroad crossings and lessen potential project impacts to less than significant.	**Project-specific** Less than significant impact.

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Section 5.15—Utilities and Service Systems		
Impact USS-1: The project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board. (5.15-18)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** No impact. **Cumulative** No impact.
Impact USS-2: The project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (5.15-15)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact USS-3: The project would not require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects. (5.15-23)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact USS-4: The project would have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed. (5.15-26)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact USS-5: The project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments. (5.15-29)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.

Table 2-1 (cont.): Executive Summary Matrix

Impacts	Mitigation Measures	Level of Significance After Mitigation
Impact USS-6: The project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs. (5.15-31)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.
Impact USS-7: The project would comply with federal, state, and local statutes and regulations related to solid waste. (5.15-33)	**Project-specific** No mitigation measures are required. **Cumulative** No mitigation measures are required.	**Project-specific** Less than significant impact. **Cumulative** Less than significant impact.

SECTION 3: PROJECT DESCRIPTION

This Environmental Impact Report (EIR) analyzes the potential environmental effects of the proposed Downtown Neighborhoods Community Plan (DNCP), Fulton Corridor Specific Plan (FCSP), and the Downtown Development Code (DDC or Downtown Code) in Fresno, California.

3.1 - Project Location and Setting

3.1.1 - Location

Fresno is located in the heart of California's San Joaquin Valley, approximately 190 miles southeast of San Francisco and 220 miles northwest of Los Angeles (Exhibit 3-1). The San Joaquin Valley is one of the largest and most productive farming regions in the world. Fresno, the regional city for the central San Joaquin Valley, is also the gateway to Yosemite National Park, Sierra National Forest, Kings Canyon National Park, and Sequoia National Park. Regional access to Fresno from the north and south is provided by State Route 99 (SR-99) and SR-41, from the west by SR-180, and from the east by State Routes 168 and 180.

The DNCP boundaries are located within the southern portion of the City of Fresno. The community plan boundaries encompass 7,290 acres. The Community Plan area is generally bounded to the east by Chestnut Avenue, to the south by Church Avenue, to the west by Thorne, West, and Marks Avenues, and to the north by SR-180 (Exhibit 3-2). Along the western side of the Community Plan area, the boundaries extend as far north as Clinton Avenue. The Community Plan area is divided by State Routes 99, 41, and 180, as well as the Union Pacific and BNSF railroad right-of-ways.

The FCSP area is located within the boundaries of the DNCP (Exhibit 3-2). The FCSP boundaries encompass 655 acres. The Specific Plan area is generally bounded to the north by Divisadero Street, to the west by SR-99, to the south by SR-41, and to the east by N Street, O Street, and the alley between M and N Streets (Exhibit 3-3). The Specific Plan area is divided by the Union Pacific railroad right-of-way. The Fulton District is also within the boundaries of the FCSP.

The DDC is a form-based zoning code that contains the standards and requirements for development and land use activity within the boundaries of the DNCP and FCSP. It implements the DNCP and the FCSP and would apply to all 7,290 acres of property within the plan boundaries. While this code will be referenced as the "Downtown Development Code" throughout the DEIR, upon adoption it would be incorporated into the Citywide Development Code

3.1.2 - Land Use

Residential, commercial, and industrial are the principal existing land use types, as shown in Exhibit 3-4 and in Table 3-1.

Table 3-1: Existing Development by Land Use Type

Land Use	Quantity DNCP (excl. FCSP)	Quantity FCSP	DNCP + FCSP
Residential (units)	15,953	1,065	17,018
Office (sf)	597,805	3,131,270	3,729,075
Retail (sf)	5,380,247	1,370,687	6,750,934
Hospitality (sf)	1,155,274	856,629	2,011,903
Industrial (sf)	6,932,355	570,222	7,502,577
Public Facilities (sf)	5,478,487	1,570,326	7,048,813
Open Conservation (acres)	251.69	14.78	266.47
Agriculture (acres)	10.70	0	10.70
Vacant Land (acres)	235.83	44.94	280.77

Notes:
Residential unit counts provided by Strategic Economics in "Economic and Demographic Overview of Fresno Downtown Neighborhoods," November 2011.
Office square footage in FCSP area provided by Strategic Economics in "Market Analysis Report: Fulton Corridor Specific Plan," April 25, 2011.
Retail, industrial, and public facilities square footage in FCSP and DNCP areas and office square footage in DNCP estimated by tracing buildings in AutoCAD from aerial and estimating uses based upon Google Maps birds-eye view.
Open space, agriculture, and vacant lands calculated using GIS.

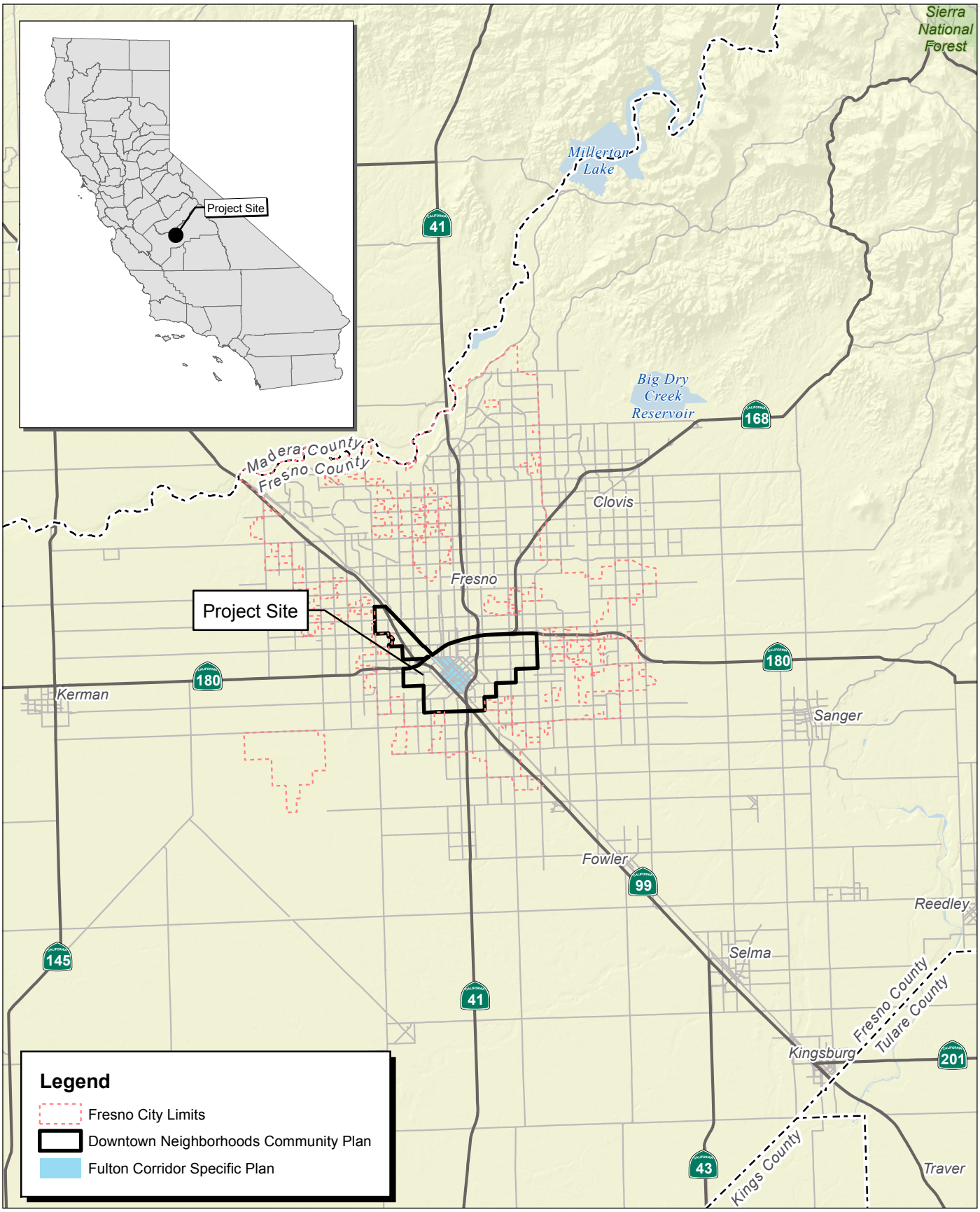
Outside of downtown, the Community Plan area is predominantly residential in character, most of it zoned for single-family housing, with some concentrations of multi-family housing. Commercial zoning is concentrated in the downtown area, and along the Plan area's automobile-oriented corridors, such as Belmont Avenue, Tulare Avenue, and Kings Canyon Road. The majority of parcels zoned for manufacturing are located along the Union Pacific railroad right-of-way, as well as in the southeastern portion of the DNCP, and in the areas surrounding the Fresno Chandler Downtown Airport.

3.1.3 - Land Use Designations and Zoning

General Plan

In 2014, the City of Fresno adopted the Fresno General Plan (General Plan), an update to the 2025 Fresno General Plan adopted in November 2002 and which provides land use designations for properties throughout the City. The primary land uses within the Community Plan and Specific Plan areas are neighborhood/residential, retail/commercial, public facility, open space, and industrial, as expressed through seven land-use classifications.

The intent of the DNCP and the FCSP is to further refine and build upon the General Plan goals for the planning areas and provide specific policies, measures, and projects to facilitate redevelopment as envisioned by the General Plan. As such, the DNCP is a highly articulated and informed extension of the Fresno General Plan, as it provides updated policy direction for Downtown and the neighborhoods immediately adjacent to it.



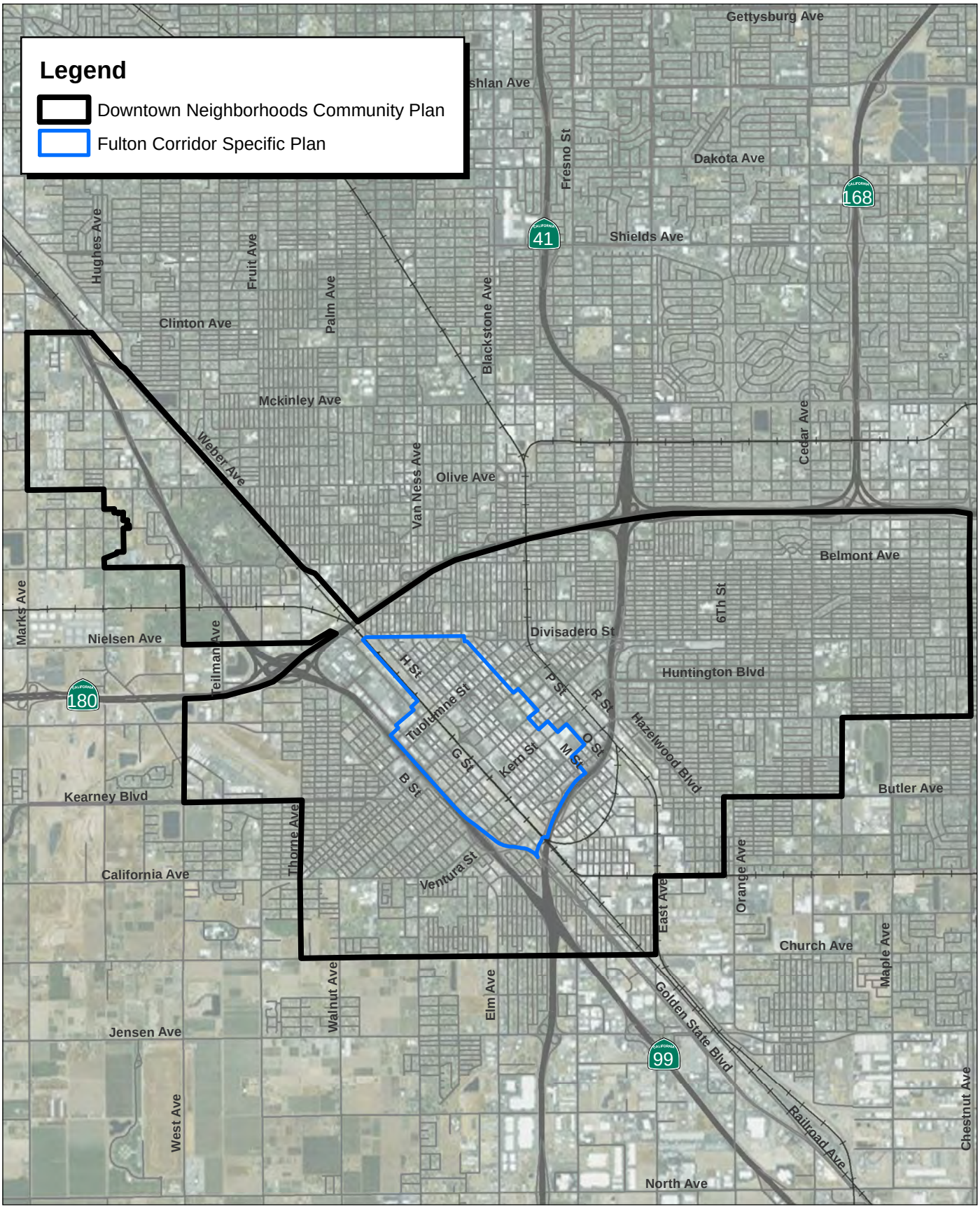
Source: Census 2000 Data, The CaSIL, FCS GIS 2013.

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Exhibit 3-1
Regional Location Map

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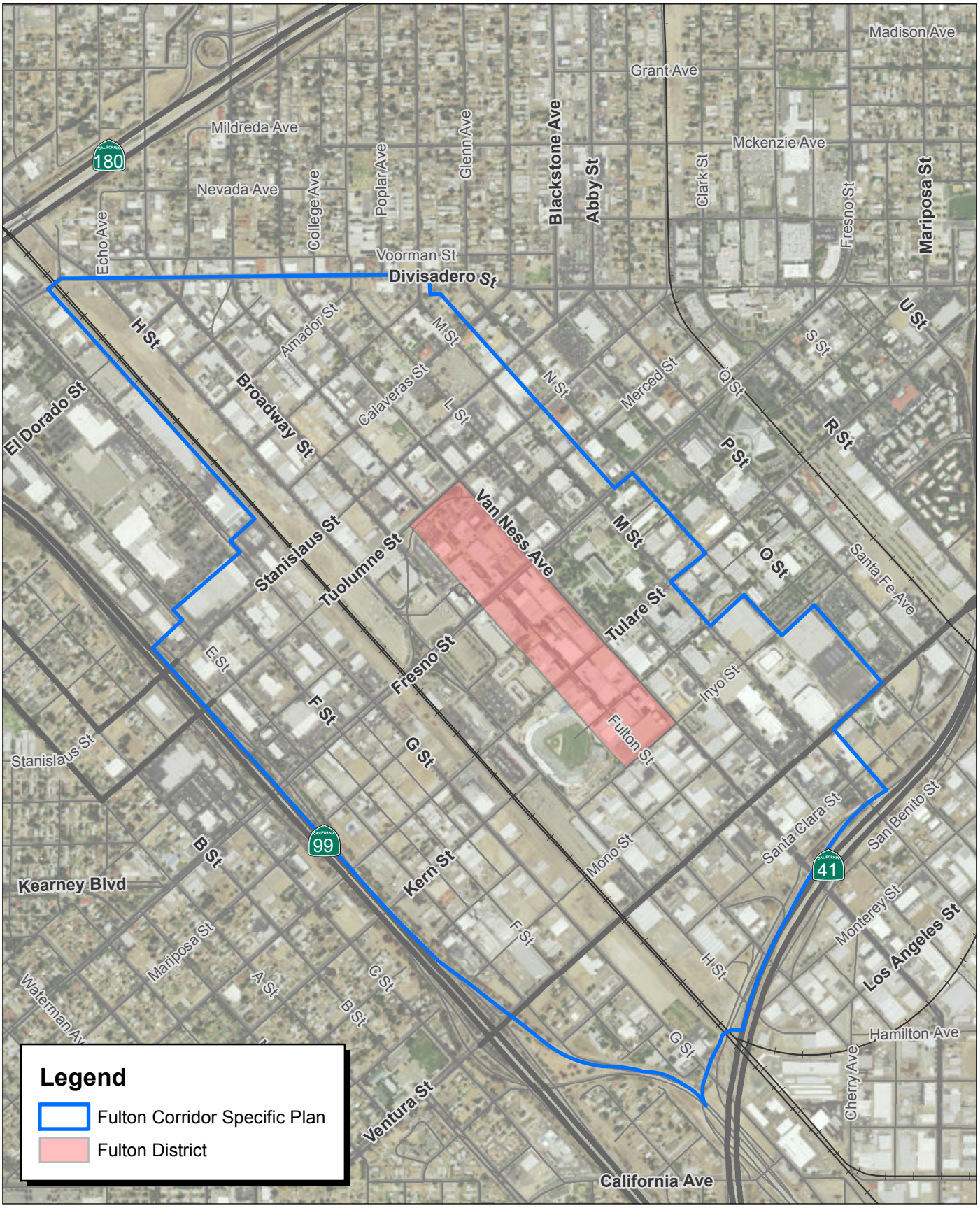
Source: ESRI Imagery, 2014

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Exhibit 3-2
Plan Areas

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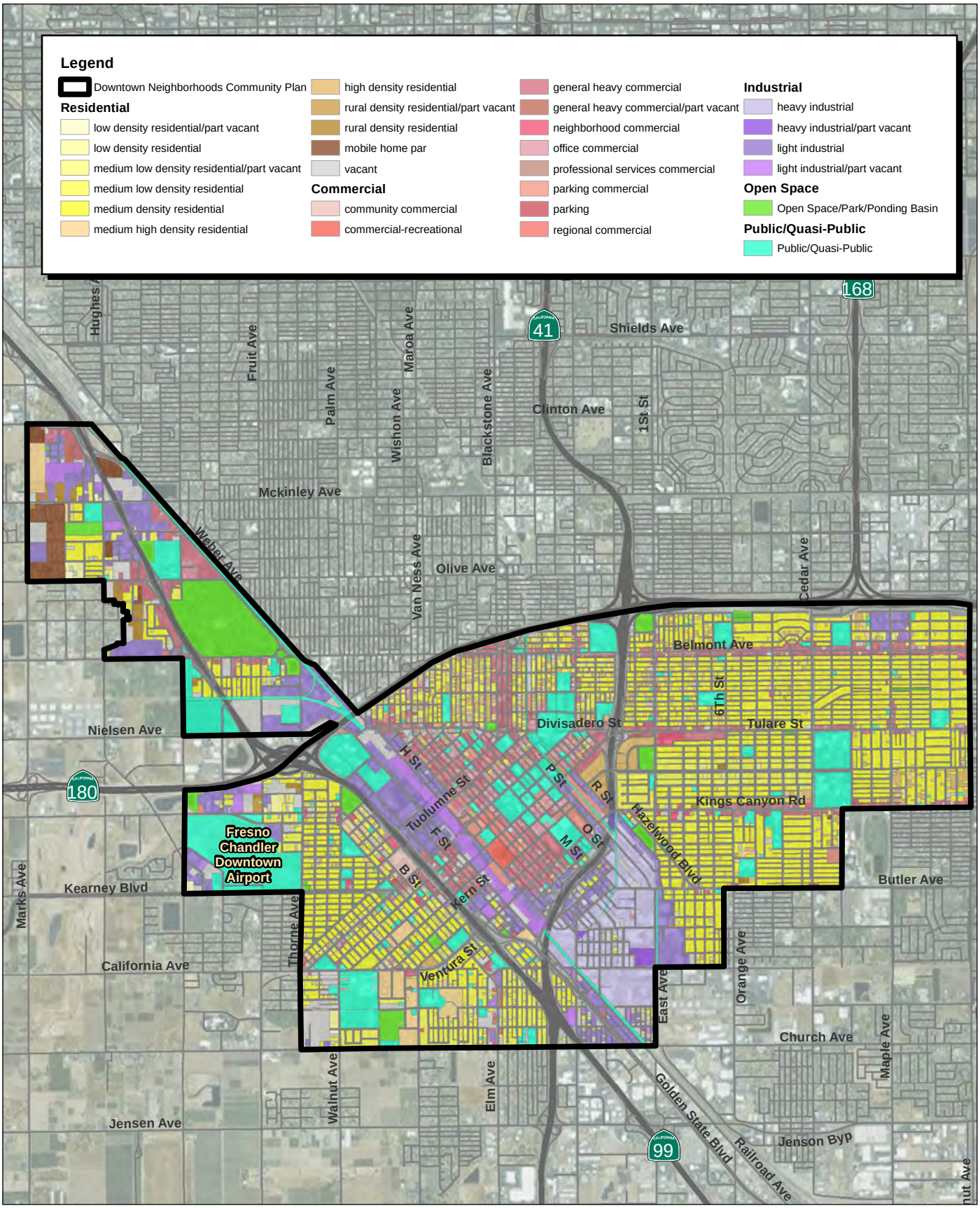
Source: ESRI Imagery, 2014

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Exhibit 3-3
Fulton Corridor Specific Plan Area

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Source: ESRI Imagery, 2014

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0.75 0.375 0 0.75 Miles

Exhibit 3-4
Existing Land Use within the Downtown Neighborhoods Community Plan

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The Downtown Development Code serves as the implementing ordinance of the DNCP and FCSP and will be incorporated into the Citywide Development Code through a text amendment.

Existing Community Plans and Specific Plans

The boundaries of the DNCP, FCSP, and Downtown Code overlap the boundaries of a number of existing Community Plans and Specific Plans, as shown in Exhibit 3-5 and Exhibit 3-6. As part of the preparation of the DNCP, the goals, policies, and actions of the four underlying Community Plans and the two underlying Specific Plans were evaluated in relationship to the vision of the DNCP. Those that were supportive of the vision were included in the DNCP, while those that were outdated were excluded. If adopted, the DNCP, FCSP, and Downtown Code would become the governing policy documents for these areas. The existing planning documents would be either amended or repealed to recognize the DNCP and FCSP.

Redevelopment Plans/Project Areas

The City contains six Redevelopment Project Areas, which includes the Airport Area, Central City Commercial, Chinatown, Roeding Business Park and Freeway 99, Southeast Fresno, and Southwest Fresno. The Merger No. 1 Project Area consists of nine Redevelopment Project areas. The DNCP boundary completely overlaps eight of the nine Redevelopment Project Areas, and overlaps the majority of the South Van Ness Project Area. Each Redevelopment Project area has its own separate Redevelopment Plan, with separate time and financial limits. None of the constituent redevelopment plans contain any land use, zoning, property development, or circulation requirements or regulations. Accordingly, land use and development standards for all projects within these Redevelopment Plan/Project areas would be subject to the DNCP, FCSP, and the DDC, if adopted.

Bicycle, Pedestrian, and Trails Master Plan

The Bicycle, Pedestrian, and Trails Master Plan (BMP) guides and influences bikeway policies, programs, and development standards of the City of Fresno. The goals, policies, and actions of the DNCP and FCSP are aligned with those of the Bicycle, Pedestrian, and Trails Master Plan pursuant to the City Council direction set forth in City Council Resolution No. 2010-237. The BMP is now being updated as the Active Transportation Plan. Coordination is ongoing between this plan and the downtown plans and code.

Zoning

The Community Plan and Specific Plan areas are primarily zoned residential, manufacturing, industrial, commercial, public facility, and shopping center/retail. Note that the proposed Downtown Development Code would serve as the zoning for the Plan areas, if adopted.

Citywide Development Code

Adopted on December 3, 2015, the Citywide Development Code establishes a new regulatory framework for Fresno. The upcoming Downtown Development Code, which will be an amendment to the Citywide Development Code, contains standards and requirements for development and land use activity within the FCSP and DNCP Plan Areas. It enables the variety of intended outcomes described in the Project Vision, providing rules for development in order to ensure that Fresno's growth will take place in an attractive, orderly manner. Setting forth clear but fair criteria for new

development, proposals that conform to the new vision will have a streamlined approval process, which in turn will boost economic development.

3.2 - Project Overview

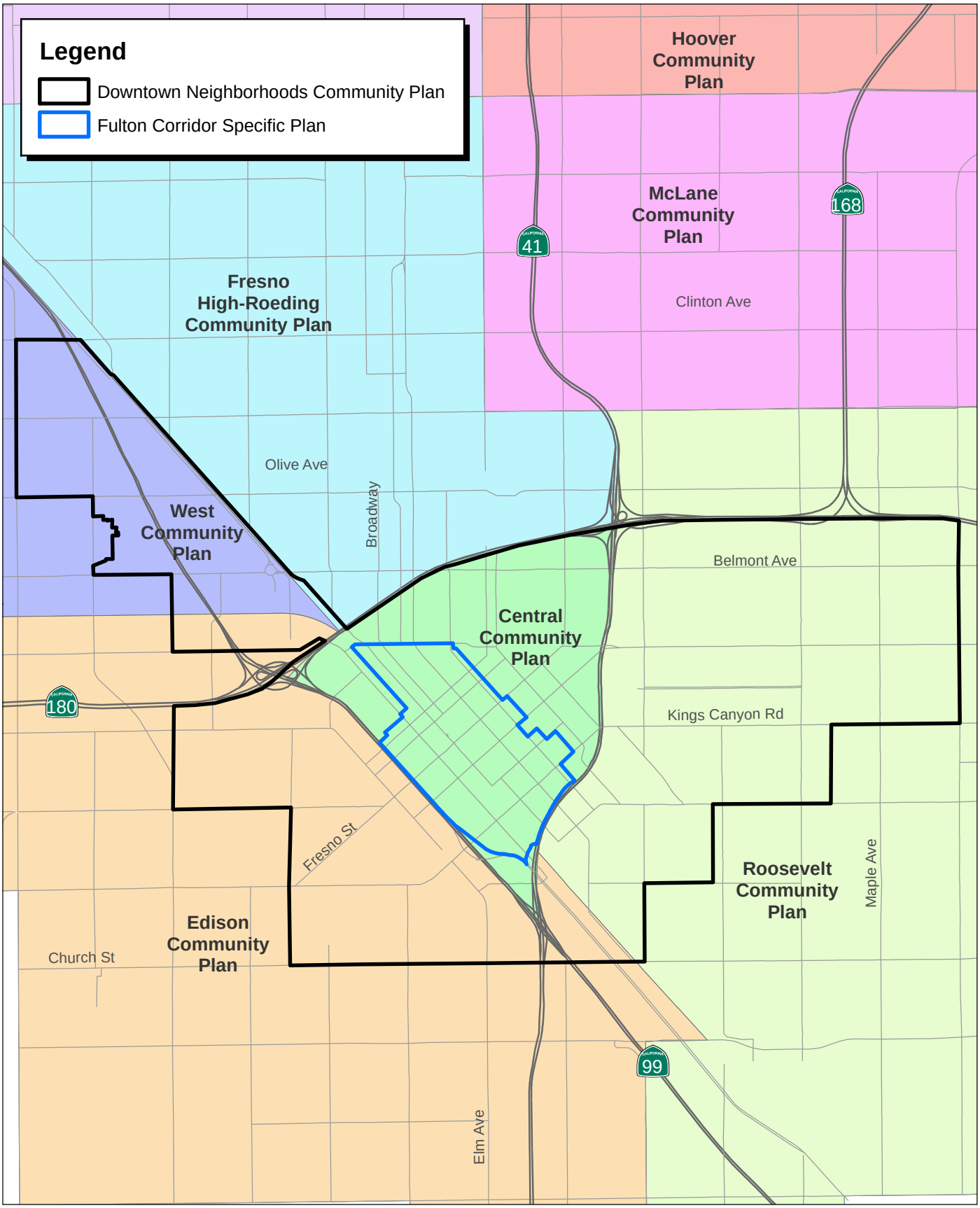
The proposed project would implement the DNCP, the FCSP, and the DDC, each of which is described in more detail below.

3.2.1 - Downtown Neighborhoods Community Plan (DNCP or Community Plan)

The DNCP (Appendix A) is an extension of the Fresno General Plan that provides updated and refined policy direction for Fresno's Downtown and the neighborhoods immediately adjacent to it. It contains within its boundaries the FCSP area and provides policy direction for the FCSP area and the neighborhoods that surround it. The DNCP outlines the community's long-term goals for the Community Plan area and provides detailed policies concerning a wide range of topics, including land use and development, transportation, the public realm of streets and parks, infrastructure, historic resources, and health and wellness. Along with the accompanying form-based DDC, the DNCP is intended to protect Fresno's oldest neighborhoods, while encouraging and accommodating future development in a manner that contributes to a stronger and healthier community for everyone.

The overarching goal of the DNCP is to capitalize on the positive momentum for Downtown revitalization and put specific policies and actions into place to guide the rejuvenation of the Downtown neighborhoods that brings about lasting prosperity and improvements. The long-term vision for the DNCP can be summarized as follows:

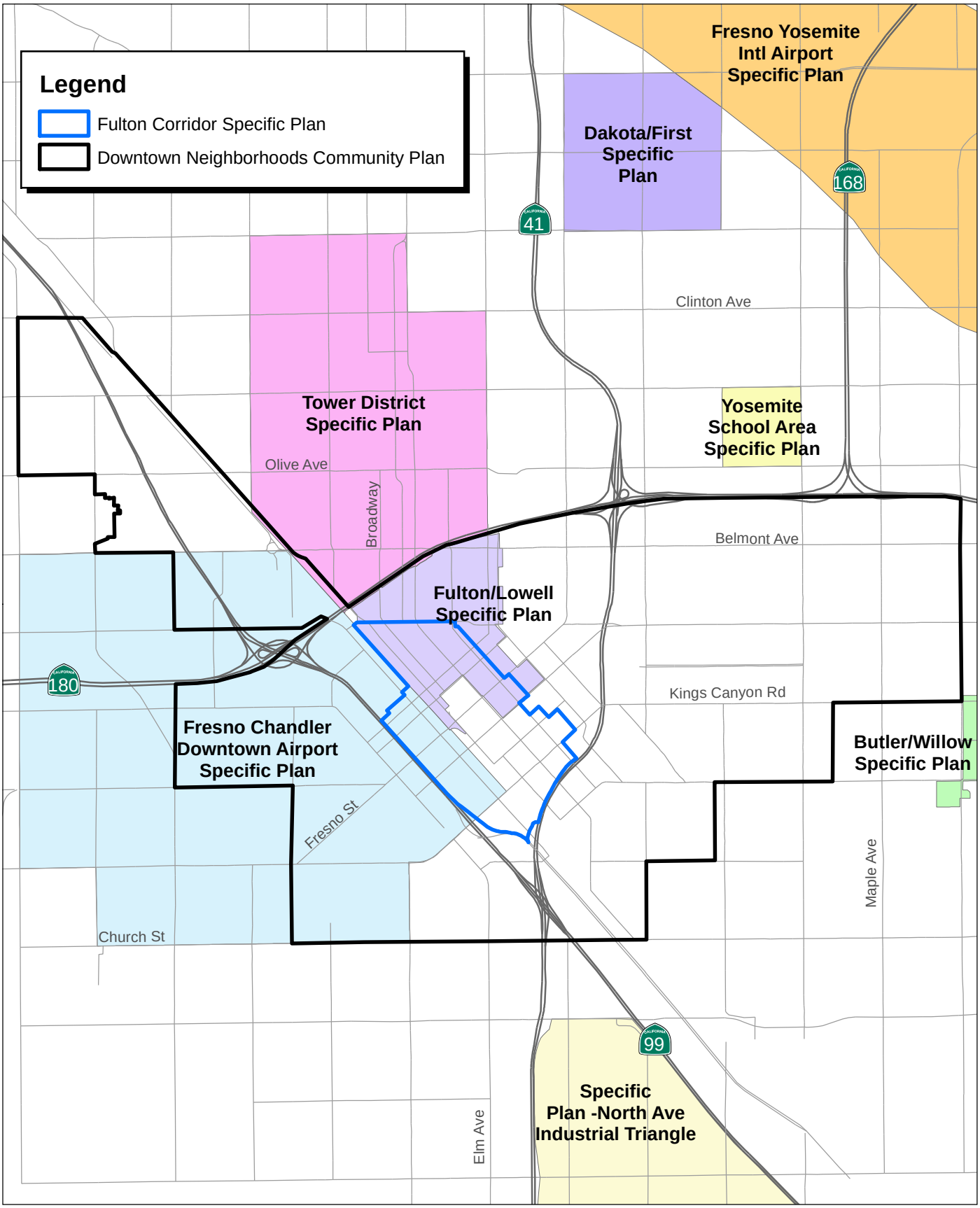
- Establish Downtown as the heart of Fresno;
- Revive and/or transform each of the Community Plan's planning areas based upon their unique identity;
- Establish mixed-use neighborhood centers at important intersections that are within easy walking distance of surrounding residences and connect to existing and future transit networks;
- Improve the quality of the Community Plan Area's corridors by introducing street trees, traffic-calming measures, pedestrian amenities such as crosswalks, street lights and street furniture, and creating bicycle-friendly corridors; and
- Create a framework for improving neighborhoods in order to attract private investment back to the center of the City and fostering a sense of pride in Downtown and its surrounding neighborhoods that inspires residents and property owners not only to transform and refurbish their own properties but also to inspire others to do the same.



Source: ESRI Imagery, 2014

Exhibit 3-5
Relationship of DNCP and FCSP to Existing Community Plan Areas

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Source: ESRI Imagery, 2014

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Exhibit 3-6
Relationship of DNCP and FCSP to Existing Specific Plans

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3.2.2 - Fulton Corridor Specific Plan (FCSP or Specific Plan)

The FCSP (Appendix B) translates the policy direction of the Fresno General Plan and the DNCP into detailed goals, policies, and actions for the revitalization of the heart of Downtown. By establishing policies and standards for the Specific Plan area, the FCSP implements the General Plan at a site-specific level and provides for orderly development within the Plan area. The goal of the FCSP is to establish predictable and clear regulations that help reduce development costs and alleviate uncertainty, making good projects easier to build Downtown. To this end, the FCSP includes detailed policies regarding land use and development, historic resources, the public realm, transportation, and infrastructure that provide the foundation for urban and economic growth and the basis for the City to make decisions regarding growth, historic preservation, housing, transportation, the environment, community facilities, and community services within the Specific Plan area. The Fulton District is a main component of the FCSP, and one of the main objectives is to fully implement and construct the Fulton Mall Reconstruction Project as approved by the City Council in February 2014. The FCSP is more detailed than the DNCP and has been drafted to fully implement the goals, policies, and objectives of the DNCP. To the extent there appears to be any conflict between these two Plans, the FCSP takes precedence.

3.2.3 - Downtown Development Code

The DDC (Appendix C) is the implementing ordinance for both the DNCP and FCSP. The purpose and intent of the DDC is to:

1. Implement the policies, objectives and goals of the DNCP and the FCSP;
2. Provide an integrated set of development and land use standards to achieve the outcomes described in the DNCP and FCSP;
3. Be consistent with the principles, objectives, process and approach described in the Purpose; and
4. Preserve, protect, and promote the public health, safety, peace, comfort, convenience, prosperity, and general welfare of residents and businesses in the Downtown.

The DDC is a form-based code that contains most of the standards and requirements for development and land use activity within the DNCP and FCSP areas and regulates development patterns consistent with the existing scale and character of the plan areas' various neighborhoods districts and corridors. Form-based codes address the relationship between building façades and the public realm (streets and parks), the form and massing of buildings in relation to one another, and the scale and types of streets and blocks. The regulations and standards in form-based codes, presented in both diagrams and words, are keyed to a zoning map that designates the appropriate form and scale (and, therefore, character) of development, rather than only distinctions in land-use type. Land uses described in the DNCP and FCSP and the zones in the DDC are intended to be one and the same as shown in Appendix C, Table 1-1. The DDC will ultimately be presented as a text amendment to the Citywide Development Code, and if adopted will become an integral part of the code (FMC Chapter 15).

Form-based codes create an urban structure of centers, neighborhoods, and corridors and de-emphasize density in favor of standards for building form and streetscapes. Form-based codes recognize that uses may change over time, but the building and its physical environment will endure. In addition, a form-based code provides greater flexibility in the range of land uses that can occur in a building to make buildings sustainable and able to respond to changing economies. Finally, form-based codes recognize the high importance of public spaces in defining and creating a sense of place.

3.3 - Project Objectives

3.3.1 - Downtown Neighborhoods Community Plan Objectives

The primary objectives of the DNCP are as follows:

- To make the Downtown Neighborhoods attractive, healthy, mixed-income places to live, thanks to their historic character and their proximity to a revitalized Downtown.
- To revive the underlying structure of the Downtown Neighborhoods to create identifiable neighborhoods, districts, and corridors.
- To integrate the public realm of streets with a multi-modal transportation network that renders them walkable and livable.
- To regenerate parks and public spaces and make them safe and accessible to residents.
- To reinforce the identity of each of the Plan's planning areas by including all of the remaining ingredients for quality of life from childhood to old age within a walkable range.
- To reintroduce missing street trees, irrigation, and sidewalks, and slow down traffic on primary thoroughfares through various traffic-calming measures.
- To introduce a range of well-designed buildings that provide a variety of housing choices within easy access of parks, services, and jobs.
- To design residential buildings to promote safety and community on the sidewalk and street.
- To design commercial buildings with facades that are adjacent to sidewalks, are constructed of quality and durable materials, can accommodate a mix of uses at any one time, and can be reused over time under different programs.
- To introduce the High Speed Rail in a manner that has the most beneficial impact possible on the surrounding homes, businesses, and open spaces, while preserving Downtown's interconnected street network to the maximum extent possible.

3.3.2 - Fulton Corridor Specific Plan Objectives

The primary objectives of the FCSP are to define:

- A vision for the future of Downtown that recognizes the importance of history and tradition while embracing opportunities for continued reinvestment, growth, and beneficial change.

- Goals and policies that work in tandem with and refine those of the General Plan and the Downtown Neighborhoods Community Plan to achieve the revitalization of the Plan area.
- New land use policies for the Plan area will guide upcoming zoning regulations. These new policies are calibrated to deliver new development that is consistent with Fresno's physical character, history, and culture, as well as the community's vision for its future growth.
- The implementation strategy for transforming the Plan area's streets, infrastructure, parks, and other public spaces.
- Revitalization of the Fulton District and promote it as a key asset and urban place. Strike a balance between the original character and value of the pedestrian-only Mall and its importance as the economic engine of the Downtown.

The above objectives provide private property owners with a clear understanding of the future context within which they are investing and reinvesting in their properties.

3.3.3 - Downtown Development Code Objectives

The objectives of the DDC are summarized as follows:

1. Property shall be occupied with land use activity to improve health; stabilize and improve property values; provide continuity of Fresno's heritage; maximize compatibility; offer a range of housing choices; increase reinvestment in the Downtown Neighborhoods; provide a wide range of services and shopping; revitalize mixed-use corridors; and support convenient transit.
2. Buildings and their additions shall be designed and maintained to support reinvestment; front the adjacent street(s); enhance the building's relationship to the public realm; use appropriate landscape materials; generate long-term value.
3. Frontages shall be designed and maintained to support the intended physical environment; support active and continuous pedestrian-oriented environments; provide appropriate physical transitions between the public right-of-way and the property; and express creativity.
4. Signage shall be designed and maintained to promote the aesthetic and environmental values of the community; provide an effective channel of communication; avoid traffic safety hazards; and safeguard and protect the public health, safety, and general welfare.
5. Open spaces, landscaping and streetscapes shall be designed and maintained to preserve and promote the aesthetic character and environmental quality of Fresno as a place to live, work, and shop; correspond to the adjacent streetscapes; incorporate urban agriculture at all scales, as practical; and contribute to mitigating environmental degradation.
6. Each new or modified block and street shall be designed and maintained to interconnect and form/maintain a network; support the intended physical context; generate pedestrian-oriented block lengths; transform large sites into pedestrian-oriented blocks; increase the number of blocks; and support a multi-modal transportation system.

3.4 - Project Characteristics

3.4.1 - Development Potential

The maximum amount of development that is anticipated to occur within the two Plan areas has been quantified for the purposes of conducting environmental impact analysis, as summarized in Table 3-2.

Table 3-2: Maximum Development Potential by Land Use

Land Use	Quantity DNCP (excl. FCSP)	Quantity FCSP	DNCP + FCSP
Residential (dwelling units)	3,697	6,293	9,990
Office (sf)	2,000,000	3,900,000	5,900,000
Retail (sf)	350,000	1,600,000	1,950,000
Industrial (sf)	2,900,000	150,000	3,050,000
Public Facilities (sf)	0	0	0
Agriculture (acres)	0	0	0
Open Conservation (acres)	33	31	64
Vacant Land (acres)	0	0	0

Notes:
To examine the level of development allowed within the FCSP area, individual underutilized parcels were identified within the FCSP area. These consisted of vacant lots, parking lots, lots that contain underutilized non-historic buildings, and buildings with parking lots in front of them. For the DNCP area, vacant parcels were identified. A floor area ratio (FAR) range, derived from the FAR of each proposed building type allowed within each parcel's respective zone in the DDC, was then applied to each of the underutilized parcels, resulting in a total gross new building square footage.

This gross square footage was then apportioned among the uses projected within the plan area according to the land use proportions of the market demand development potential. Since the Market Analysis did not evaluate the industrial market, the industrial development potential was assumed to be approximately 10% of the total building square footage for the combined plan areas. The existing building square footage currently present within these parcels was then subtracted, by use from the proposed square footage.

Note that the allowed development potential within the FCSP area included 1.5 million square feet (sf) of space within existing vacant buildings. As with new development potential, this 1.5 million sf of existing vacant space was apportioned according to the market demand potential, adding up to approximately 860 residential units 390,975 sf of office space, 119,233 sf of retail space, and a reduction of 42,587 sf of industrial space. This existing vacant space is considered new development potential, not existing development. Thus, the FCSP determines the allowed development that can occur within the FCSP area, regardless of whether it is a new building on vacant land or new uses in an existing vacant building.

Table 3-3 quantifies the development potential within the DNCP and FCSP areas under the low-, medium-, and high-capacity development intensity scenarios. In addition to being guided by the community's vision for the two Plan areas, the development potential calculations are based upon the anticipated market demand and the population potential permitted by the General Plan. Note that Table 3-2, above, summarizes the "high" capacity development potential, by land use, for the DNCP and FCSP areas.

Table 3-3: Development Potential Scenarios by Land Use

Land Use	DNCP + FCSP			DNCP			FCSP		
	Development Potential			Development Potential			Development Potential		
	Low	Medium	High	Low	Medium	High	Low	Medium	High
Residential (units)									
New Construction	3,086	6,066	9,130	1,481	2,589	3,697	1,605	3,477	5,433
Existing Vacant Space	860	860	860	N/A	N/A	N/A	860	860	860
Total Residential (units)	3,946	6,926	9,990	1,481	2,589	3,697	2,465	4,337	6,293
Residential (sf)									
New Construction (1,200 sf/unit)	3,703,299	7,279,117	10,955,735	1,777,299	3,106,717	4,436,135	1,926,000	4,172,400	6,519,600
Existing Vacant Space (1,200 sf/unit)	1,032,000	1,032,000	1,032,000	N/A	N/A	N/A	1,032,000	1,032,000	1,032,000
Total Residential Development Potential (sf)	*4,735,299*	*8,311,117*	*11,987,735*	*1,777,299*	*3,106,717*	*4,436,135*	*2,958,000*	*5,204,400*	*7,551,600*
Office (sf)									
New Construction	1,529,164	3,490,633	5,505,954	800,020	1,400,035	2,000,050	729,144	2,090,598	3,505,904
Existing Vacant Space	390,975	390,975	390,975	N/A	N/A	N/A	390,975	390,975	390,975
Total Office (sf)	1,734,852	3,555,229	5,429,458	614,733	1,073,656	1,532,579	1,120,119	2,481,573	3,896,879
Retail (sf)									
New Construction	362,400	1,081,032	1,817,349	140,039	245,067	350,096	222,361	835,965	1,467,253
Existing Vacant Space	119,233	119,233	119,233	N/A	N/A	N/A	119,233	119,233	119,233
Total Retail (sf)	746,857	1,671,969	2,614,766	405,263	716,771	1,028,280	341,594	955,198	1,586,486
Industrial (sf)									
New Construction	1,091,035	2,079,402	3,115,163	1,170,457	2,048,974	2,927,491	(79,422)	30,428	187,672
Existing Vacant Space	(42,587)	(42,587)	(42,587)	N/A	N/A	N/A	(42,587)	(42,587)	(42,587)
Total Industrial (sf)	1,048,448	2,036,815	3,072,576	1,170,457	2,048,974	2,927,491	(122,009)	(12,159)	145,085

Table 3-3 (cont.): Development Potential Scenarios by Land Use

Land Use	DNCP + FCSP			DNCP			FCSP		
	Development Potential			Development Potential			Development Potential		
	Low	Medium	High	Low	Medium	High	Low	Medium	High
Development Potential (sf)									
Total New Construction	2,982,599	6,651,067	10,438,466	2,110,516	3,694,076	5,277,637	872,083	2,956,991	5,160,829
Total Vacant Building Space	467,621	467,621	467,621	N/A	N/A	N/A	467,621	467,621	467,621
Total Non-Residential Development Potential (sf)	*3,450,220*	*7,118,688*	*10,906,087*	*2,110,516*	*3,694,076*	*5,277,637*	*1,339,704*	*3,424,612*	*5,628,450*

The "high" capacity development potential, by land use, for each of the FCSP districts is shown in Table 3-4. Negative development potential for industrial uses in certain districts is attributed to existing industrial uses that are assumed to be replaced by non-industrial uses.

Table 3-4: Development Potential by Downtown (FCSP) District (High Development Potential)

Land Use	Fulton District[1]	Mural District	Civic Center	South Stadium District	Chinatown	Armenian Town/	Divisadero Triangle	Total
Residential (units)	1,338	1,719	191	691	1,587	447	320	6,293
Office (sf)	1,338,402	1,172,463	57,775	290,845	891,318	206,191	-60,115	3,896,879
Retail (sf)	483,053	662,143	35,385	108,058	246,541	32,280	19,026	1,586,486
Industrial (sf)	—	-42,180	—	-848	204,062	-15,949	—	145,085

Note:
[1] Includes approximately 1.5 million sf, as estimated by the City, of vacant but usable space in existing multi-floor buildings in the Plan Area. Development potential is divided into 860 residential units and 467,621 sf of non-residential uses.

3.4.2 - Residential Population Potential

Table 3-5 shows the population increase allowed under the previous General Plan within each existing community plan area; the allowed population increase within the portion of each community plan that overlapped the DNCP area, the actual population within the portion of each community plan that overlapped the DNCP area in the year 2000 (according to the 2000 Census); and the total expected 2035 population within the portion of each community plan that overlapped the DNCP area. These estimates were evaluated in the population analysis for the current Fresno General Plan and were incorporated for the Downtown Planning Area.

Table 3-5: 2025 General Plan Allowed Population Increase by Existing Community Plan Area

Existing Community Plan	Allowed Population Increase (Persons)		Population Within Proposed DNCP/FCSP Boundary (Persons)	
	Within Each Existing Community Plan Boundary	Within Proposed DNCP/FCSP Boundary[1]	Year 2000[2]	Year 2035[3]
Central Area	12,845	12,845	14,927	27,772
Edison	43,286	7,657	12,356	20,013
Roosevelt	39,036	5,809	35,598	41,407
West Area	73,913	5,447	4,754	10,201
Total	**169,080**	**31,758**	**67,635**	**99,393**

Table 3-5 (cont.): 2025 General Plan Allowed Population Increase by Existing Community Plan Area

Existing Community Plan	Allowed Population Increase (Persons)		Population Within Proposed DNCP/FCSP Boundary (Persons)	
	Within Each Existing Community Plan Boundary	Within Proposed DNCP/FCSP Boundary[1]	Year 2000[2]	Year 2035[3]

Notes:
[1] Percentage of existing community plan areas within proposed DNCP/FCSP boundary are as follows:
Central Area: 100.00% Edison: 17.69% Roosevelt: 14.88% West Area: 7.37%
[2] Source: 2000 Census.
[3] Derived by adding together the year 2000 population and the allowed 2025 General Plan population increase for each existing plan area within the FCSP and DNCP boundaries.

As Table 3-5 shows, the anticipated year 2035 population within the portions of the Edison, Roosevelt, and West Area community plans that overlapped the DNCP is within the limits of the 2025 General Plan and the current Fresno General Plan. While the Central Area Community Plan permitted only 12,845 additional residents, the DNCP proposes to allow as many as 14,927 additional residents within this area. This increase is based upon the DNCP's—and the accompanying FCSP's—goals of generating a vibrant, mixed-use Downtown by introducing the maximum number of residents within the heart of Downtown (i.e., within the FCSP area). To achieve this end, the DNCP applies the aggregate allowed residential population increase for each portion of the Community Plan areas to the entire combined DNCP boundary, as shown below in Table 3-6.

The residential population for each plan area, as well as the combined population for both plan areas, is shown in Table 3-6. Together, the DNCP and FCSP anticipate that by the year 2035, the residential population of the plan areas could increase by as many as 27,225 people, to a total population of 97,446 residents, which is within the limits established by the Fresno General Plan.

Table 3-6: Residential Population Potential

Land Use	DNCP (excl. FCSP)	FCSP	DNCP + FCSP
Existing Population (persons)[a]	66,344	3,877	70,221
New Population (persons)[b]	15,268	11,957	27,225
Total Residential Population (persons)	**81,612**	**15,834**	**97,446**
Existing Population Density (persons/acre)	9.98	5.92	9.62
Population Density in Year 2035 (persons/acre)	12.28	24.17	13.35

Notes:
[a] Source: Claritas, Inc.; American Community Survey 2006-2008; Strategic Economics 2010.
[b] Assumes 4.1 persons per household for the DNCP and 1.9 persons per household for the FCSP. The Citywide average for persons per household is 3.0. Source: Claritas, Inc.; American Community Survey 2006–2008; Strategic Economics 2010. The DNCP is composed primarily of large families, while the FCSP is home to a much larger proportion of single person households.

3.4.3 - Jobs Potential

Table 3-7 shows the jobs potential for both plan areas. By the year 2035, the combined plan areas have the potential to accommodate up to 21,455 new office jobs, 4,875 new retail jobs, and 3,850 new industrial jobs, for total of 30,180 new jobs.

Table 3-7: Jobs Potential

Land Use	DNCP (excl. FCSP)	FCSP	DNCP + FCSP
Office	7,275	14,180	21,455
Retail	875	4,000	4,875
Industrial	3,660	190	3,850
Total	11,810	18,370	30,180

3.4.4 - Market Demand

Table 3-8 summarizes the demand-based development program for the DNCP and FCSP areas based on the market analysis. The numbers suggest that the Downtown can grow substantially by taking advantage of its location, its urban character, and its many commercial, civic, and institutional assets.

Table 3-8: Market Demand in DNCP and FCSP Areas Through 2035[1]

	DNCP + FCSP		DNCP		FCSP	
	Development Potential		Development Potential		Development Potential	
Land Use	Low	High	Low	High	Low	High
New Residential (dwelling units)	5,800	9,860	1,740	2,900	4,060	6,960
New Residential (sf)	6,988,000	11,880,000	2,088,000	3,480,000	4,900,000	8,400,000
Office (sf)	2,805,000	4,125,000	—	—	2,805,000	4,125,000
Regional Retail and Entertainment (sf)	1,348,700	1,571,000	—	—	1,348,700	1,571,000
Industrial[2]	N/A	N/A	N/A	N/A	N/A	N/A

Notes:
[1] Source: Strategic Economics 2011. "Market Analysis Report: Fulton Corridor Specific Plan," April 25, 2011.
[2] Industrial was not included in the Market Analysis

The development demand anticipated by the market and economic analysis correlates closely to the development potential (the maximum "allowed" development) under the DNCP, FCSP, and DDC.

3.5 - Conceptual Framework

3.5.1 - Downtown Neighborhoods Community Plan

The DNCP is organized as follows:

- The Introduction section describes the Plan area, explains the Plan's purpose and its relationship to other plans and documents; and summarizes the process the City and the community went through to prepare the Plan. This section discusses the social and physical, public realm (parks, open space, and streetscape), infrastructure, economic, and historic/cultural conditions of the Plan area. The section also introduces the Plan's seven planning areas and describes the existing challenges and opportunities that each planning areas faces.
- Chapter 1, Vision presents community-generated strategies for revitalizing the overall Plan area. Each of the Plan's seven planning areas is described in terms of the improvements desired by their residents over the next 25 years. This vision is critical to the Plan, since the Plan components that are described in the following chapters exist solely to carry out this vision.
- Chapter 2, Urban Form and Land Use addresses the overall form, use, and character of development within the Downtown Neighborhoods. Topics include enhancing the unique sense of character and identity of the DNCP planning areas; revitalizing Downtown through jobs and economic development, the introduction of the High-Speed Rail station, and new and refurbished housing; and revitalizing corridors through code enforcement, public facilities and services, land use and building quality, and streetscape design.
- Chapter 3, Transportation includes information on the desired future multi-modal transportation network within the Downtown Neighborhoods, with the overall objective of reducing reliance on the private automobile and promoting transit use, walking, and biking.
- Chapter 4, Parks, Open Space and Streetscapes presents the overall vision for increasing the public space and streetscapes network. Topics include improving the urban forest, expanding and improving parks, and increasing pedestrian comfort.
- Chapter 5, Infrastructure and Natural Resources addresses water use, energy use, sewer capacity, and the provision of infrastructure and discusses how a forward-looking approach to these topics can help make Fresno a statewide leader in sustainability.
- Chapter 6, Historic and Cultural Resources includes strategies for preserving and reviving the unique history and culture of Downtown Fresno, as well as the historic neighborhoods around it.
- Chapter 7, Health, Wellness and Community Development includes goals, policies, and actions to address the health and quality of life for DNCP area residents.
- Chapter 8, Implementation presents the implementation measures necessary to execute the public dimension of the DNCP. The responsible agents will be the City's various departments, who will implement the Plan's goals, policies, and actions.

3.5.2 - Fulton Corridor Specific Plan

The FCSP contains the following chapters:

- Chapter 1, Introduction describes the Plan area, including its location and boundaries; explains the Plan's purpose, including its relationship to other plans and documents; and summarizes the process the City and the community went through to prepare the Plan.
- Chapter 2, A Vision for Downtown Fresno in 2035 describes the overall vision for transforming Downtown into a vibrant regional destination; the ten community values for revitalization; and the ten core design principles that apply to each FCSP subarea.
- Chapter 3, Plan Framework and Goals describes the existing conditions and vision for the seven FCSP subareas and explains how much development the market can support within the Plan area and what the Plan area's underutilized land can support under the Citywide Development Code.
- Chapter 4, The Fulton Mall describes the history, the historic significance, and the existing physical and economic state of the Mall, as well as the preferred option for the Mall's future and the final design for the reopened Fulton Street.
- Chapter 5, Priority Development Projects describes top priority projects for the private and public sectors, focused in relatively small areas that will generate the most immediate physical impact, and catalyze economic regeneration.
- Chapter 6, Building and Development describes goals and policies that will enable and facilitate Downtown's physical transformation and ensure that this transformation occurs in a manner that preserves and regenerates Downtown's unique sense of place.
- Chapter 7, Historic Preservation includes goals and policies for preserving and reviving the unique history and culture of Downtown.
- Chapter 8, Public Realm provides an overall vision for increasing Downtown's public space and improving the streetscape.
- Chapter 9, Transportation outlines Downtown's future multi-modal transportation network that accommodates private automobiles, transit, walking, and biking.
- Chapter 10, Sustainability, Infrastructure, and Resources addresses a range of topics, including water use, energy use, sewer capacity, and the provision of infrastructure.
- Chapter 11, Implementation proposes a development strategy driven by private investors.

3.5.3 - Downtown Development Code

To enable the vision, intent, and variety of intended outcomes identified in the DNCP and FCSP, the Downtown Development Code introduces three new zoning districts (Downtown Core, Downtown General, and Downtown Neighborhood), two new overlays (Urban Campus and Neighborhood Revitalization), and modifies one existing overlay (Apartment House). The regulations for the new Downtown Core (DTC), Downtown General (DTG), and Downtown Neighborhood (DTN) zoning

districts—which are all located within the area bounded by Divisidero, Highway 41, and Highway 99—are described as follows:

- The use, density, intensity, and massing, site design, and façade design development standards are incorporated into Chapter 15 (Downtown Districts), which was reserved in the Citywide Development Code for future use.
- The fence, wall, and hedge standards are added to existing Citywide Development Code Article 20 (General Site Regulations).
- The parking and loading standards are introduced into existing Citywide Development Code Article 24 (Parking and Loading).
- The sign standards are incorporated into existing Citywide Development Code Article 26 (Signs).
- Definition clarifications are incorporated into existing Citywide Development Code Article 55 (Terms and Definitions).

All other areas covered by the Downtown Neighborhoods Community Plan will be governed by Base Districts that were previously adopted with the Citywide Development Code, such as RS-3, RS-5, NMX, NMX, IL, IH, and PI as shown on the Downtown Development Code Zoning Map. These Base Districts are tailored to enable the vision, intent, and intended outcomes identified in the DNCP and FCSP as follows:

- The new Urban Campus and Neighborhood Revitalization overlays are added to existing Citywide Development Code Article 16 (Overlays).
- The Apartment House Overlay, also in Article 16 is modified.
- The sign standards are incorporated into existing Citywide Development Code Article 26 (Signs).
- Definition clarifications are incorporated into existing Citywide Development Code Article 55 (Terms and Definitions).

3.6 - DNCP Planning Areas and FCSP Subareas

3.6.1 - DNCP Planning Areas

Exhibit 3-7 depicts the seven planning areas that comprise the DNCP. For planning purposes, the DNCP targets policies and regulations to address the key deficits of each planning area, thereby facilitating redevelopment in keeping with the overall DNCP vision for change. Following is a brief description of the challenges faced by the seven DNCP planning areas (see Appendix A for a more detailed description of the existing conditions and long-term vision for each planning area).

1. **Jane Addams Neighborhoods—**Located in the northwest quadrant of the DNCP area, the 1,155-acre Jane Addams Neighborhoods are more rural in character than other DNCP

planning areas. Jane Addams forms the agricultural edge of west Fresno and is disconnected from the east and south by SR-99 and SR-180, which have few pedestrian or vehicular crossings. This planning area lacks neighborhood-serving retail and services and has many auto-oriented motels that have fallen into serious disrepair and are occupied by transitional housing. Jane Adams lacks neighborhood-scale public open space and recreational space (aside from Roeding Park). It has many vacant lots, and its arterial streets and streets adjacent to schools lack curbs, sidewalks, and street trees.

2. **Edison Neighborhoods—**The 1,560-acre Edison Neighborhoods are primarily residential in character and contain some of Fresno's oldest neighborhoods. The neighborhood fabric has been compromised by recent infill projects, including public housing developments and single-family subdivisions; as well as dilapidated buildings that do not face the street and have unkempt front yards. The Edison Neighborhoods are deficient in retail, banking, and other services, which requires residents to drive to other planning areas to meet their daily needs. This planning area includes a number of industrial buildings located along SR-180 and SR-99, which isolate these neighborhoods from the rest of the City, as well as the Fresno Chandler Downtown Airport, numerous parks, and schools.

3. **Lowell Neighborhood—**The Lowell Neighborhood encompasses 225 acres just north of Downtown. The neighborhood contains some of Fresno's oldest homes and possesses strong historic character, despite inconsistent zoning, inadequate design standards, incompatible infill development, and a proliferation of vacant lots. Mature tree canopies, uniform setbacks, and porched single-family homes and cottages dominate Lowell Neighborhood's streets. Lowell Neighborhood is disconnected from neighborhoods to the north and west by SR-180 and SR-99, but the street grid is interconnected and several north-south corridors connect it to the other adjacent planning areas.

4. **Jefferson Neighborhood—**The 290-acre Jefferson Neighborhood planning area is adjacent to Downtown, is divided into two sections by the BNSF Railroad alignment, and is disconnected from neighborhoods to the north and east by SR-41 and SR-180. Like the Lowell neighborhood to the west, this planning area contains many late 19th and early 20th century homes, but unlike Lowell, it has suffered more damage from demolition and incompatible infill development. As a result, the Jefferson Neighborhood is less cohesive in character. The Jefferson Neighborhood lacks public parks but is home to the Community Regional Medical Center and three schools.

5. **Southeast Neighborhoods—**The 2,400-acre Southeast Neighborhoods are primarily residential and populated with single-family houses with isolated concentrations of multi-family dwellings. The east-west corridors are strip commercial in character and lined by auto-oriented development that lacks cohesion and character. There is a strong historic character along Huntington Boulevard, which is planted with turf and large canopy trees and is a popular recreation space among community members, but in general, this planning area suffers from a lack of neighborhood identity and a limited number of public parks.

6. **South Van Ness—**The 390-acre South Van Ness planning area principally comprises old warehouses and industrial buildings. There are very few residential properties in this South

Van Ness, and the planning area is particularly isolated from the rest of the City because of SR-41, the Union Pacific Railroad tracks, and the development of industrial mega-blocks that interrupt the street network and inhibit vehicular and pedestrian passage. While the early 20th century brick warehouses, industrial buildings, streetlights, and signage contribute to this planning area's identity, there are very few street trees, sidewalks, and curbs. The industrial nature of South Van Ness also contributes to friction with the residential uses and users in adjacent planning areas.

7. **Downtown—**The 1,000-acre Downtown planning area comprises the heart of downtown Fresno and hosts the Fresno Convention Center, Chukchansi Park, hotels, and many local, state, and federal agencies. The Downtown planning area overlaps almost entirely with the FCSP area described in Section 3.6.2, below (see Exhibit 3-8). As the oldest part of Fresno, this planning area contains the most historic resources and is one of the largest job centers in the region. It also contains many underperforming retail, restaurant, and entertainment uses; possesses a high retail vacancy rate and low office and retail lease rates; and is inactive outside of business hours. The 45-degree orientation of its street network, along with one-way and discontinuous streets, creates particularly confusing traffic patterns. Downtown also lacks street trees and pedestrian landscaping in many areas, which discourages foot traffic. Improvements to the existing water distribution and sewer infrastructure are necessary to accommodate the projected population growth.

3.6.2 - FCSP Districts

The FCSP is entirely contained within the DNCP's Downtown planning area and comprises seven distinct subareas that are among the oldest, most diverse, and most densely developed areas in the City of Fresno. For planning purposes, the boundaries of the subareas were determined by the unique character of each subarea, which in turn was based largely upon their physical form at the time they were built and the role each played in the context of the City (Exhibit 3-8). Following is a brief description of the seven distinct FCSP subareas (see Appendix B for a more detailed description of the existing conditions and long-term vision for each subarea):

1. **Fulton District.** The Fulton District is Fresno's traditional business and commercial center which comprises rectangular blocks oriented parallel to the Union Pacific Railroad tracks. The historic interconnected street network is disrupted by the railroad tracks and has been closed down to traffic at several locations, most notably Mariposa Street east of the County Courthouse. All of the streets within the Fulton District are two-way, with the exception of Tuolumne, Fulton Street, and Fresno Street, which are one-way. This street and block pattern, coupled with inadequate way-finding signage, confuses many Downtown drivers, especially those not familiar with Downtown. This District includes Fulton Street, which comprised the previous Fulton Mall and three cross malls consisting of the Merced Mall, Mariposa Mall including Mariposa Plaza, and Kern Mall. The Fulton Mall is currently the subject of reconstruction under the Fulton Mall Reconstruction Project, which will reopen the mall to vehicular traffic. A considerable amount of the Fulton District's building fabric has been demolished and replaced by either vacant land or parking lots. An important exception to this is Fulton Street, where, with the exception of its northern end, the adjacent building

fabric is well intact. Vacancies and blighted conditions persist throughout Downtown, and many of the area's largest buildings remain shuttered and in poor disrepair. The physical configuration of the District is unmistakably that of a metropolitan urban center.

2. **Mural District.** The street grid within the Mural District consists of pedestrian-scaled blocks oriented parallel to the Union Pacific Railroad tracks. The Mural District sits at the junction between the railroad street grid and the due north/south and east/west grid, opening up many opportunities on corner lots to introduce buildings and façades that mark entrances into Downtown. Like the majority of Downtown, the streets within the Mural District are wide, have too many lanes, and can therefore be easily transformed to accommodate bike lanes and on-street, angled parking. Stanislaus Street, Tuolumne Street, and M Street are one-way streets. The majority of the buildings within the Mural District are commercial or industrial in character and sited in a pedestrian-friendly manner (i.e., built to the sidewalk, with parking located at the side or at the rear). Like the rest of Downtown, there are a significant number of vacant lots and parking lots that offer opportunities for infill development. There is no public open space within the Mural Districts boundaries, although Dickey Playground is within a quarter-mile walk of properties east of L Street and a new park is under construction. In addition, Arte Americas Cultural Center has a plaza that provides open space to its visitors during business hours.

3. **Civic Center.** The heart of the Civic Center is the portion of Mariposa Street that connects the County Courthouse to City Hall. Along this portion of Mariposa Street is an assortment of municipal buildings—some with immense architectural value, and others with minimal architectural character—that have been haphazardly placed without any architectural or landscape element to unify them. The Civic Center street grid consists of rectangular blocks oriented parallel to the railroad tracks. Portions between M and N Streets and between O and P Streets are pedestrian-only, while the portion between and N and O Streets is open to vehicular traffic. This hampers vehicular connectivity by forcing cars to drive a further distance to go around each block. The lack of vehicular traffic also reduces the real and perceived safety of pedestrians who walk along the Mall, especially at night and on weekends. Beyond Mariposa Street, the rest of the Civic Center is relatively built out, with the exception of several surface parking lots, which compromise the visual and pedestrian character of the area, and Eaton Plaza, an important public park located between the Memorial Auditorium, Fresno Library, Federal Courthouse, and Fresno Police Station. It hosts a number of events and activities, including food truck events and movie nights.

4. **South Stadium.** South Stadium contains the western portion of Armenian Town, an ethnic enclave that occupied the area between Kern Street, Los Angeles Street, Broadway Street, and O Street. This subarea is generally contained and isolated by the Union Pacific Railroad tracks, SR-41, and, historically, the previous Fulton Mall—resulting in less connectivity to the adjacent subareas, although the reopening of Fulton Street will improve connectivity. Like the rest of Downtown, the street and block network within South Stadium is oriented to the railroad tracks and consists for the most part of rectangular, pedestrian-scaled blocks with alleys down their centers. Though well connected to the Fulton District, South Stadium is separated from Chinatown by the Union Pacific Railroad tracks and from South Van Ness by

SR- 41. South Stadium is occupied mainly by one- and two-story buildings that house primarily industrial, warehousing, manufacturing, auto repair, and sales uses. Over the years, many buildings have been demolished and replaced with parking lots and service yards.

5. **Chinatown.** The original, historic portion of Chinatown between Fresno Street and Ventura Avenue consists of a patchwork of vacant lots, parking lots, and isolated buildings, although F Street, Chinatown's main street, is relatively intact, particularly between Tulare Street and Inyo Street. Chinatown is also home to an extensive network of underground, interconnected basements. North of Fresno Street, Chinatown consists of relatively large-scale commercial and industrial buildings surrounded by parking lots. South of Ventura Avenue, it consists of a mix of single-family homes and industrial buildings. Chinatown does not have any public parks, although the abundance of vacant land and parking lots provides good opportunities for the transformation of these areas into parks as the need arises. In recent years, Chinatown has hosted a number of annual events, including the Chinese New Year Parade and the Chinatown Music and Arts Festival.

6. **Armenian Town/Convention Center District.** The Armenian Town/Convention Center's street and block network is oriented to the railroad tracks and consists for the most part of rectangular blocks, although the pedestrian scale of its blocks has been compromised by the creation of several megablocks. Mono Street between L and P Streets and N Street between Capitol Street and Ventura Street have been closed in order to accommodate the Fresno Entertainment and Convention Center and the Radisson Hotel. As a consequence of applying suburban zoning standards on traditional urban fabric, much of the Armenian Town/Convention Center subarea has been developed with buildings located at the center of the block, surrounded by large surface parking lots. In addition, several streets have been removed, creating megablocks that inhibit both vehicular and pedestrian access.

7. **Divisadero Triangle.** Originally, the area around Van Ness Avenue and L Street was one of Fresno's wealthiest residential neighborhoods. Several residences from the neighborhood's early years remain along L Street, including the Helm Home, the Bean Home, the Kutner Home, and the Swift Home (now Lisle Funeral Home). Many of these are on the local Historic Register. Like much of the Plan Area, many of the older buildings within the Divisadero Triangle have been demolished and replaced by parking or vacant lots.

3.7 - Plan Implementation

3.7.1 - Implementation Approach

The implementation of the DNCP and FCSP is guided by the following strategies, which were developed to help the City identify ongoing priorities and modify those priorities over time:

- Work in an interdisciplinary way to implement the DNCP and FCSP.
- Update the Implementation Plan (DNCP) and Implementation Framework (FCSP) on an annual basis.
- Tie Implementation Projects (DNCP) and Implementation Framework (FCSP) to department work plans and the City's Capital Improvements Plan.

- Identify and regularly update Implementation Strategies.
- Focus financial resources and physical improvements in concentrated areas.
- Use a variety of funding sources and monitor availability of sources over time.
- Build and maintain partnerships.
- Measure success over time.

While the specific actions (i.e., the Implementation Projects listed below) will change over time, the overall approach is intended to remain intact and guide the City in the implementation of the DNCP and FCSP.

3.7.2 - Funding Sources

A number of funding and financing alternatives are available for the types of infrastructure improvements envisioned in the DNCP and FCSP areas. The main types of funding include:

- **Land-based financing tools,** which leverage the value of real estate development on the site.
- **Assessment Districts**, which are most commonly established to finance the construction of public capital improvements and, where authorized, to operate and maintain costs of certain public facilities.
- **Impact fees** to fund public amenities made necessary by new development.
- **Negotiated development agreements** between the public sector and the master developer.
- **Direct city financing,** such as the City's General Fund, Infrastructure Financing Districts, Revenue Bonds, or User Fees/Rates.
- **Grants** from various federal, state, regional, and private-sector sources.

Each funding source is described in more detail in Chapter 8 of the DNCP and Chapter 11 of the FCSP (see Appendices A and B, respectively).

3.7.3 - Downtown Neighborhood Community Plan

Implementation Projects

The DNCP includes a list of Implementation Projects that are organized by Community Plan chapter (e.g., Urban Form and Land Use). Implementation Projects are either one-time actions needed to mobilize and execute specific policies or specific activities that should be completed by a certain time or at regular intervals. The current list of Implementation Projects is summarized below, but the list of Implementation Projects is intended to be maintained and updated more frequently than the rest of the DNCP; ideally the list will be updated annually and these updates will integrate with each City Department's annual work plan as well as with the City's Capital Improvements Plan.

Urban Form and Land Use

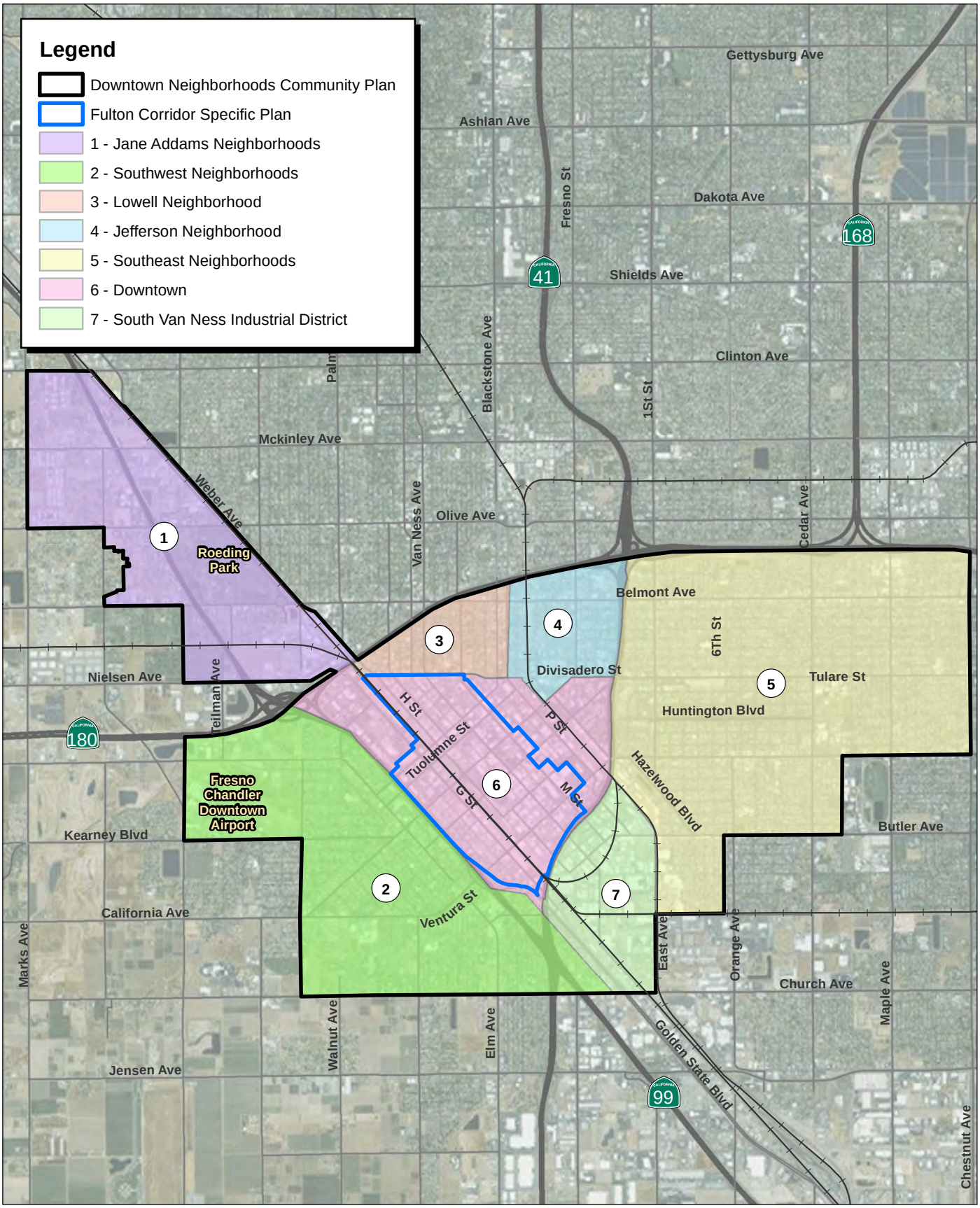
Since the Downtown Neighborhoods were built prior to World War II, most contain all the elements of authentic neighborhoods and districts: pedestrian-scaled, walkable streets and blocks, interconnected streets, a variety of public open spaces, a diverse array of building types, and easy access to jobs, services, and recreation. Though this pattern of development has been compromised over the years through street widenings, the introduction of the freeway system, the loss of street trees, and the demolition of many buildings, this traditional pattern of development nevertheless provides the inherent potential for encouraging pedestrian activity, providing multiple traffic-diffusing routes, providing a variety of housing choices, accommodating a public realm of beautiful streets and spacious public parks, and thereby contributing to the continuing appeal of the center city as a desirable place to live. The following Implementation Projects, which are described in detail in Chapter 8 of the DNCP (Appendix A), are intended to address these issues:

- **Community Benefits Agreement with Fresno Community Regional Medical Center.** Establish a Community Benefits Agreement with Fresno Community Regional Medical Center.
- **Multi-Family Rental Inspection Process.** Develop and implement a Multi-Family Rental Inspection Process (or similar process) to proactively address code violations; develop a priority list of multi-family properties in need of demolition and reconstruction and demolish the top three properties within five years and develop an incentive funding program to redevelop blighted multi-family properties.
- **Vacant/Underutilized Land Study.** Upgrade infrastructure of vacant and underutilized parcels on Abby Street, Fresno Street, Divisidero Street, and Belmont Avenue, and create a marketing plan for these parcels.
- **Homeownership Program.** Create a homeownership program that provides flexible terms and subsidies. Solicit funding through grant programs.
- **Parking Management.** Actively manage all parking.
- **High Speed Rail (HSR) Master Plan.** Prepare a Master Plan for the area around the High Speed Rail Station.

Transportation

The Downtown Neighborhoods have an interconnected street network that promotes walkability and provides multiple traffic diffusing routes. While the presence of the freeways has introduced a significant barrier between the plan area's neighborhoods, they have also siphoned much of the pass-through vehicular traffic from the plan area's corridors and streets. Accordingly, most streets are too wide for the number of cars they carry and can be modified to accommodate new or more on-street parking and/or a variety of transportation modes including bicycles, buses, and streetcars. These wide streets also mean that additional development and density can be introduced within the plan area without expanding the street network.

A number of projects are proposed to transform the Downtown Neighborhoods' streets into pedestrian-friendly, multi-modal thoroughfares, including road diets, one-way to two-way conversions, and reconnecting the grid in select locations. These transportation projects are listed below and depicted in Exhibit 3-9,Exhibit 3-10, and Exhibit 3-11, respectively. For a more detailed description of each project, refer to Chapter 8 of the DNCP (Appendix A).



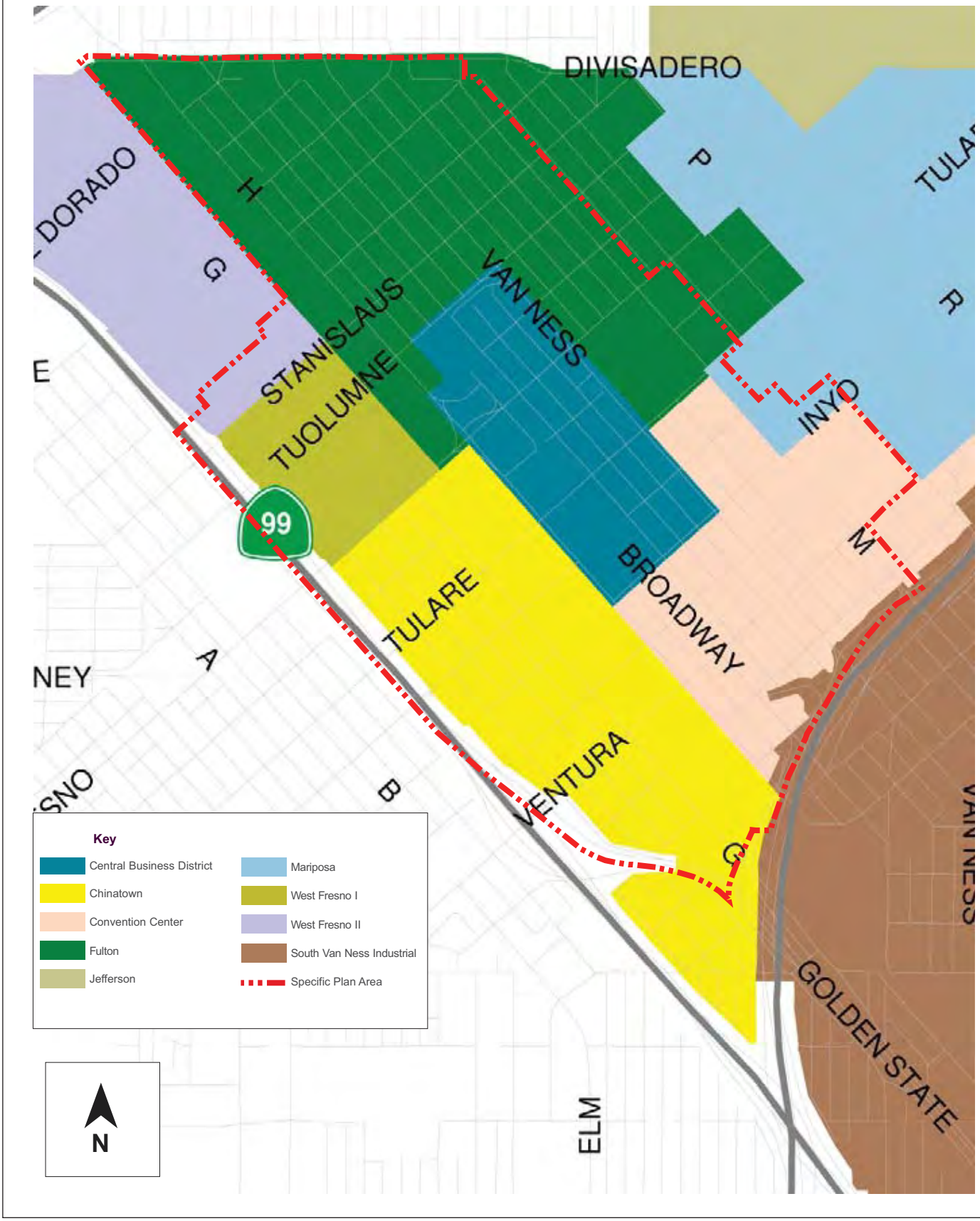
Source: ESRI Imagery, 2014

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Exhibit 3-7
Planning Subareas of the Downtown Neighborhoods Community Plan

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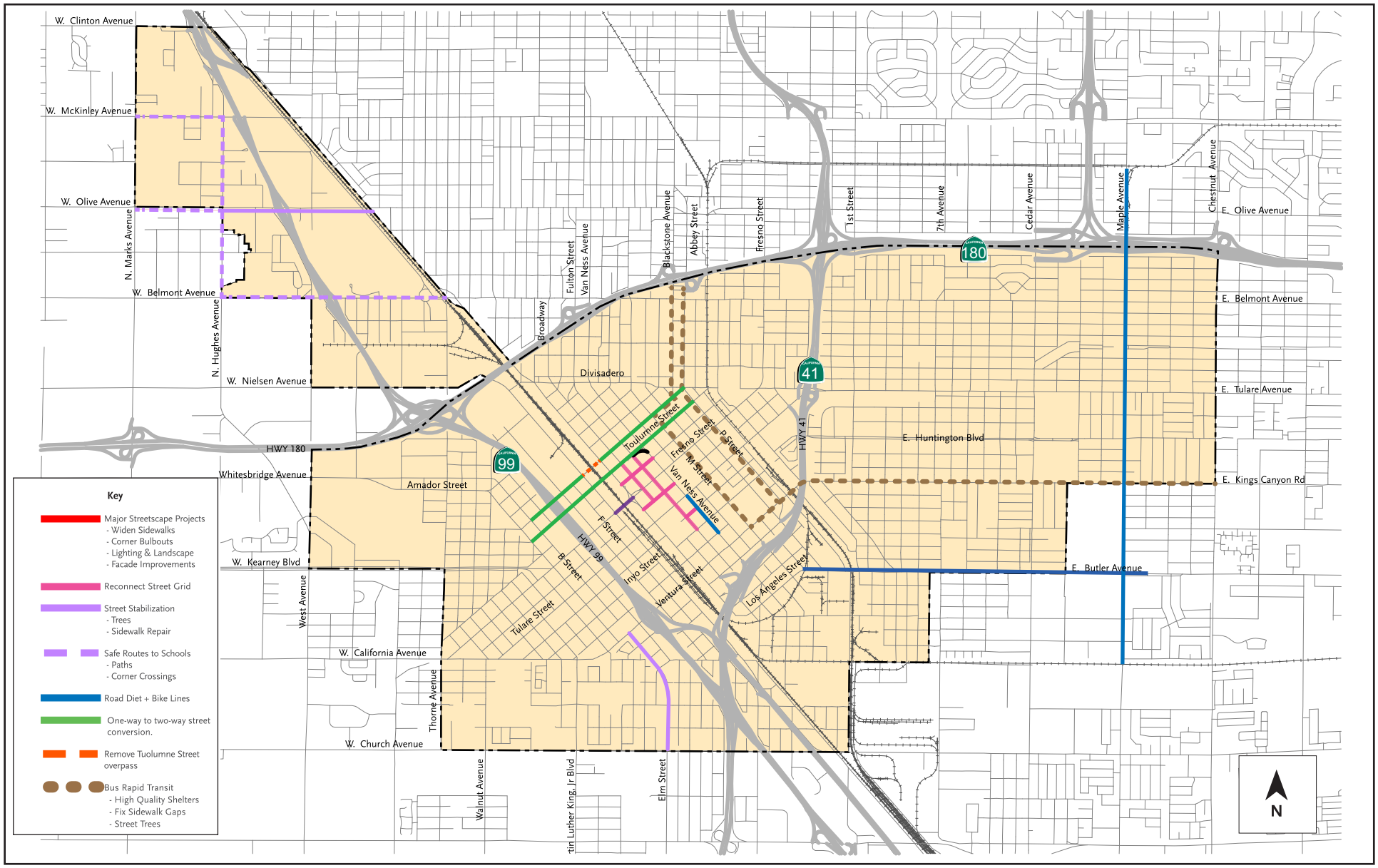


Source: Moule & Polyzoides, 2014

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Exhibit 3-8
Fulton Corridor Specific Plan - Planning Districts

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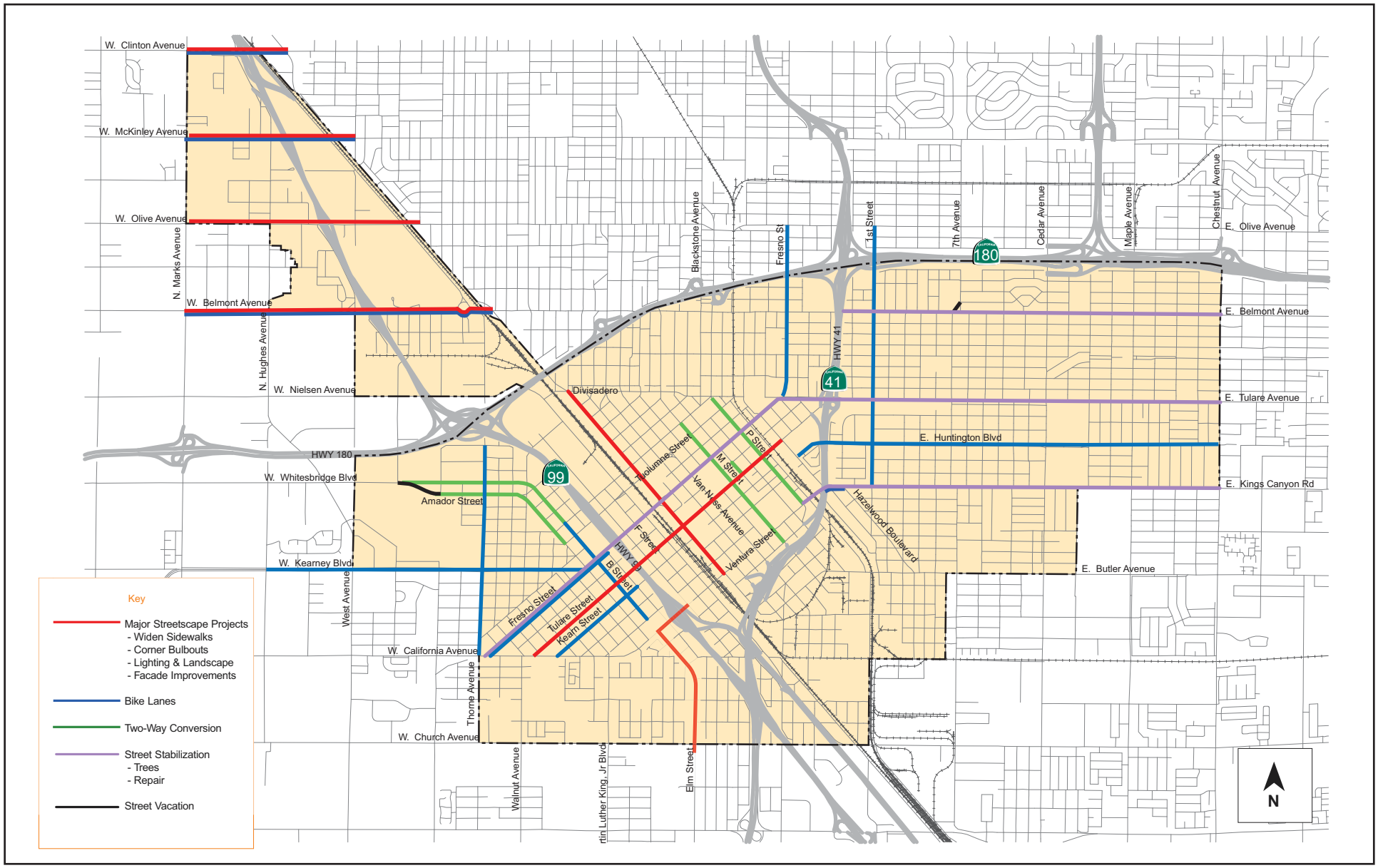


Source: Moule & Polyzoides, 2016

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Exhibit 3-9
DNCP Near-term Transportation Priorities

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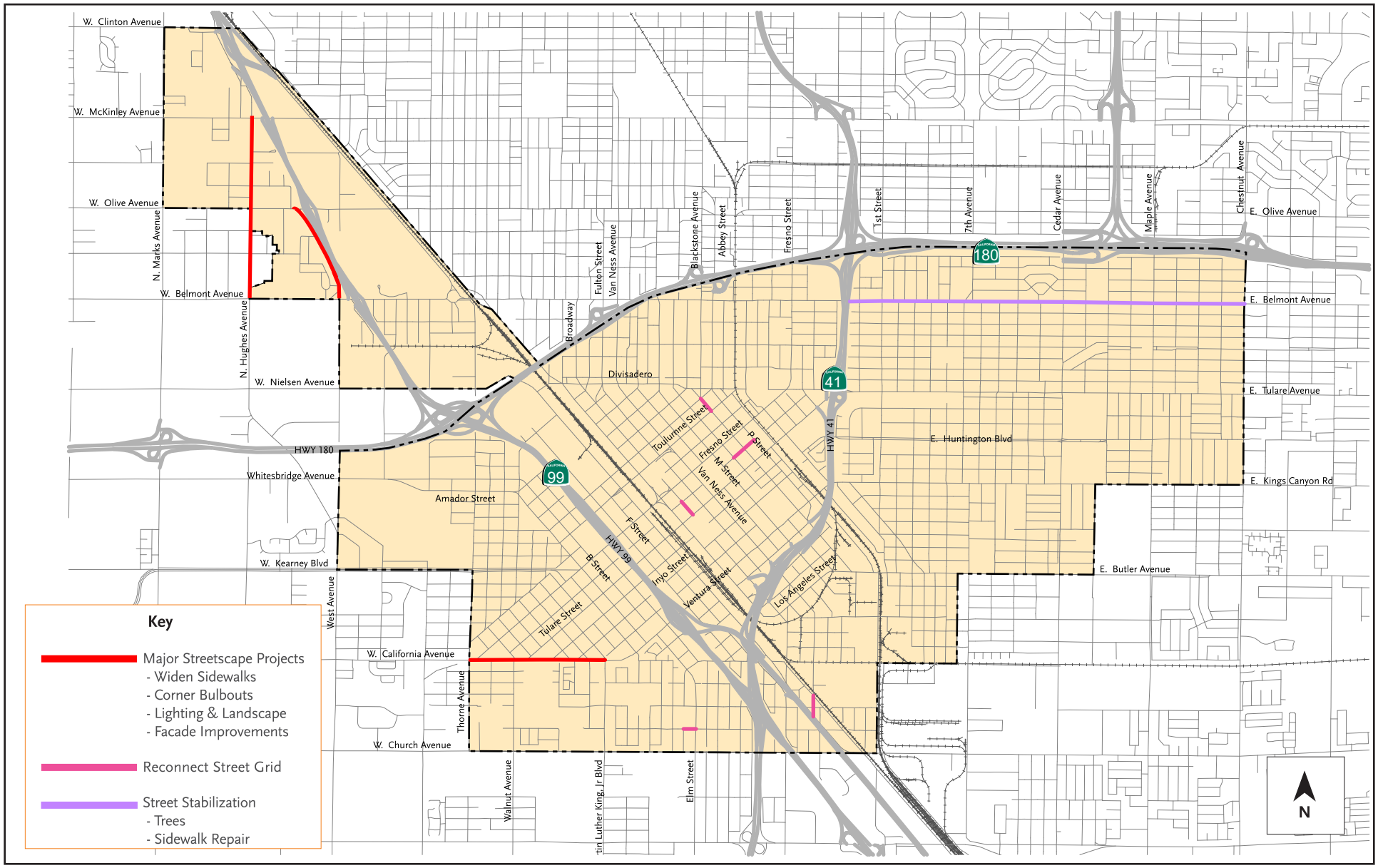


Source: Moule & Polyzoides, 2016

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Exhibit 3-10
DNCP Mid-term Transportation Priorities

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Source: Moule & Polyzoides, 2016

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Exhibit 3-11
DNCP Long-term Transportation Priorities

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- **Implement road diets.** Implement road diets throughout the Downtown Neighborhoods.
- **Implement one-way to two-way street conversions.** Convert the identified one-way streets back to two-way streets in order to enhance economic development, slow traffic, and aid in navigation within the Plan area.
- **Make physical improvements to reconnect the street grid.** Physically reconnect the street grid by adding new streets or making pedestrian through-connections, with priority given to identified streets.
- **Signage and Wayfinding Program.** Develop a signage and wayfinding program for the DNCP subareas.
- **Curb, gutter, and sidewalk study.** Identify specific residential streets that will maintain their rural character and not be required to construct curbs, gutters, and sidewalks.
- **Create Traffic Calming Program.** Create a traffic calming program in the DNCP.
- **Create Safe Routes to Schools Program.** Create a Safe-Routes-to-Schools program for each DNCP subarea.
- **Create Pedestrian Improvement Plan.** Create a pedestrian improvement plan for the Southeast Neighborhoods.
- **Implement curb, gutter and sidewalk improvements.** Create a list of locations for new curb, gutter, and sidewalk improvements and develop a funding plan to construct these facilities.
- **Develop streetscape standards.** Develop comprehensive streetscape standards for the DNCP that emphasize pedestrian and bicycle access and safety.
- **Bus rapid transit.** Finish construction (scheduled for late 2017) on rapid bus transit on Ventura Street/Kings Canyon Road and Abby Street/Blackstone Avenue.
- **Universal Pass Program.** Consider pass programs that give employees in the Plan Area unlimited access to local transit.
- **Traffic Operations Center.** Connect all existing and new traffic signals to the existing traffic operations center.
- **Truck Enforcement Program.** Create an enforcement program to reduce conflicts and nuisances caused by trucks.
- **Implement pedestrian safety improvements.** Implement the identified pedestrian safety improvements.
- **Improve the street network.** Improve the street network by implementing the identified physical improvements.
- **Street stabilization.** Conduct targeted investment in maintenance, sidewalk completion, and street tree introduction on the identified streets.

- **Major streetscape improvements.** Widen sidewalks, introduce corner bulbouts, introduce lighting and landscape, and implement façade improvements on the identified streets.
- **Street vacations.** Vacate Amador Street between Whitesbridge and Fruit Avenues and Milbrook Avenue between Belmont Avenue and Seventh Street.
- **Traffic preemption.** Retrofit all existing and proposed signalized intersections with signal preemption systems.

Parks, Open Space, and Streetscape

Although there is considerable open space within the DNCP area, access to the majority of schoolyards is limited to schoolchildren during school hours. These public realm assets, while incomplete and not entirely accessible, provide the basis for transforming the Downtown Neighborhoods into attractive, walkable places. The DNCP has a goal to provide open space within a half-mile of all residences, which will be accomplished by establishing joint-use agreements with the School District, introducing new open space on vacant land, and/or sharing or incorporating park space with existing or future stormwater ponding/recharge basins, as shown in Exhibit 3-12. The Priority parks, open space, and streetscape implementation projects are summarized below. For a more detailed description of each project, refer to Chapter 8 of the DNCP (Appendix A).

- **Parks Funding and Financing Plan.** Develop a long-term plan to identify funding and financing sources for constructing and maintaining new parks, tot lots, and playing fields.
- **Create Joint Use Agreement with Fresno Unified School District (FUSD).** Implement the joint use agreement with the Fresno Unified School District to share school fields, playgrounds, gyms, auditoriums, and aquatic facilities in order to provide a wider range of recreation programs and maximize the efficient use, maintenance, and supervision of public facilities.
- **Prepare a Street Tree Inventory.** Prepare a comprehensive street tree inventory for the entire Downtown Neighborhoods area. The inventory should catalogue the location, type, and condition of each tree in the area. In addition to the street trees, the study should inventory the location and height of telephone poles and lines as these may influence the selection of street trees. This information should be used to determine the appropriate street tree type and location of new street trees throughout the Downtown Neighborhoods.
- **Provide incentives** for developers to contribute funds, labor, or materials towards park development and maintenance.
- Whenever possible, **use a Landscaping Maintenance Benefit Assessment District or a Community Facilities District** for the maintenance of park lands. This relieves scarce City General Fund resources of an unsuitable parks maintenance burden while ensuring a higher level of attention to a park's condition by those benefitting from the amenity.
- **Partner with Private Citizens and Organizations** to contribute funds, labor, or materials towards public parks and open space.
- **Use Private Contributions** as "matching funds" for local, state, and federal funding programs.

- **Work with the City's Parks, After School, Recreation, and Community Services (PARCS)** to develop a program to increase the number of parks and open spaces for public use while maintaining existing facilities.
- **Improve visibility to and from all parks** by removing planting and other landscape features that block views and access into parks from surrounding streets and sidewalks.
- **Locate park furniture** such as benches, picnic tables, and trash cans beneath deciduous canopy trees, trellis structures, and/or other covered enclosures.
- **Institute a New Parks Management Program.** Create a program for the acquisition of land for new parks within the Community Plan area. Funds for purchasing the land could come from assessment districts, in-lieu fees paid by developers, or federal or state funding. The program should also identify funds for maintaining the new parks.
- A Parks Master Plan has just been initiated by the City that is expected to be the implementation tool for many of the projects listed above.

Infrastructure and Natural Resources

The Downtown Neighborhoods are supported by an infrastructure network that is mostly complete and adequately serves the existing land uses. Many of these utility networks are aging and in need of upgrades to increase capacity or to ensure proper long-term function. As the City of Fresno moves toward a more sustainable and resource-efficient future, the infrastructure of the Downtown Neighborhoods will be critical to the area's future. The vision, goals, and policies contained herein describe the City's intention for the role of infrastructure within the context of the City of Fresno's resource portfolio, and how infrastructure can be used to promote conservation, efficiency, and natural resource protection. These goals can be achieved while still providing a valuable service to citizens, business, and visitors. Specific water, sewer, and reclaimed water improvements are shown in Exhibit 3-13. These infrastructure goals and policies are summarized below.

- **Work within the existing water resources portfolio** to develop policies that enable the City as a whole, including the Downtown area, to thrive using all available water resources**.**
- **Promote recycled water programs and use in order to reduce loads on sewer system** to complete the development of the City's recycled water program to supplement the City's water supply resources.
- **Implement Low Impact Development (LID) stormwater design guidelines that integrate into complete streets, open space, and high density development** to enhance the existing infrastructure network of the FMFCD and to reduce localized flooding, improve water quality, provide community amenities and enhance aquifer recharge throughout the City.
- **Promote energy savings and local renewable power generation** to develop a more energy independent community that uses passive solar design (collecting, storing, and distributing heat during winter and rejecting heat during summer without the use of mechanical or electrical devices) and renewable energy derived from natural resources including sunlight, wind, rain, and geothermal to reduce the carbon footprint of the Downtown Neighborhoods.

- **Minimize natural resource consumption** to minimize resource consumption by all new structures, renovated buildings, and infrastructure facilities in order to protect the environment and support the local economy. To limit the consumption of natural resources through green building, resources conservation, and resource recovery.
- **Ensure collaboration between City of Fresno and outside utility agencies such as P.G.&E. and the Fresno Metropolitan Flood Control District (FMFCD)** to promote frequent and organized communication between agencies and utility providers that share the public realm in order to ensure that planning efforts and utility capacity studies are aligned. Synergies, cost savings and facility sharing can be realized through shared construction efforts and easements.
- **Maintain utilities to protect health, safety and welfare and to support the vision of the Downtown Neighborhoods** to plan and fund appropriate infrastructure improvements.
- **Maintain a sustainable, safe and effective wastewater treatment system** to ensure that the wastewater treatment system in the Downtown Neighborhoods provides a high level of wastewater treatment for residents and businesses while also meeting high standards for environmental quality.

Historic and Cultural Resources

The Downtown Neighborhoods contain many of the City's oldest and most historically significant neighborhoods. These areas are a direct link to the City's history and identity and, thus, are of critical importance to the future revitalization of the Downtown Neighborhoods. Specific historic and cultural resources projects and/or actions are summarized below. For details regarding the timing, cost and potential funding sources for these projects and actions, refer to Chapter 8 of Appendix A.

- **Historic Resources Guidebook.** Create a historic resources guidebook targeted to the local community, preservationists, and visitors.
- **Historic Preservation and Rehabilitation Guidelines.** Develop local comprehensive guidelines for rehabilitation based on the Secretary of the Interior's Standards.
- **Review process.** Develop a consistent and transparent review process for rehabilitation applications involving all agencies and stakeholders.
- **Create Historic Preservation protocols.** Establish policies and protocols to ensure compliance with and consistency in applying CEQA and Section 106 of the National Historic Preservation Act (NHPA) requirements.
- **Create City Cross-Department Working Group.** Develop a cross-departmental working group to develop appropriate rehabilitation protocols, simplify code issues, and locate funding.
- **Historic surveys.** Conduct historic preservation surveys in select locations in the Downtown Neighborhoods. The locations to be surveyed include the following:
    a. **Survey of Historic African-American and Mexican-American Areas.** Develop historic contexts for African-American and Mexican-American history to expand the knowledge

base of Fresno's ethnic communities. Survey these neighborhoods for any remaining associated historic properties.

b. Lowell Survey. Survey the remaining portions of the Lowell area not covered by the 2008 Galvin Planning Associates survey.

c. Jefferson Survey. Conduct an extensive survey of the Jefferson area. This includes reevaluating the Bellevue and East Madison districts within the Jefferson area using updated survey methodology and evaluation criteria.

d. South Van Ness Survey. Develop an historic resources inventory for the South Van Ness Industrial District and communicate this information to the community and affected property owners.

e. Roadside Motel Survey. Consider a citywide thematic survey of roadside motels from the early- and mid-20th Century.

f. Southwest Survey. Survey the older portions of the Southwest on the early diagonal grid, including identifying and recognizing the remaining folk/vernacular buildings.

g. Southeast Historic Neighborhoods. Conduct additional investigation of the identified pre-war neighborhoods to determine eligibility as historic districts.

h. Streetcar Suburbs. Consider research of historic streetcar lines, their associated development patterns, and their relationship to residential neighborhoods in order to identify remaining properties associated with streetcar development.

- **Historic Building and House Acquisition Program.** Create a coordinated program for the City and other institutions to acquire and renovate historic buildings and houses.
- **Historic Loan Interest Program.** Fund the Historic Property Loan-Interest Program.

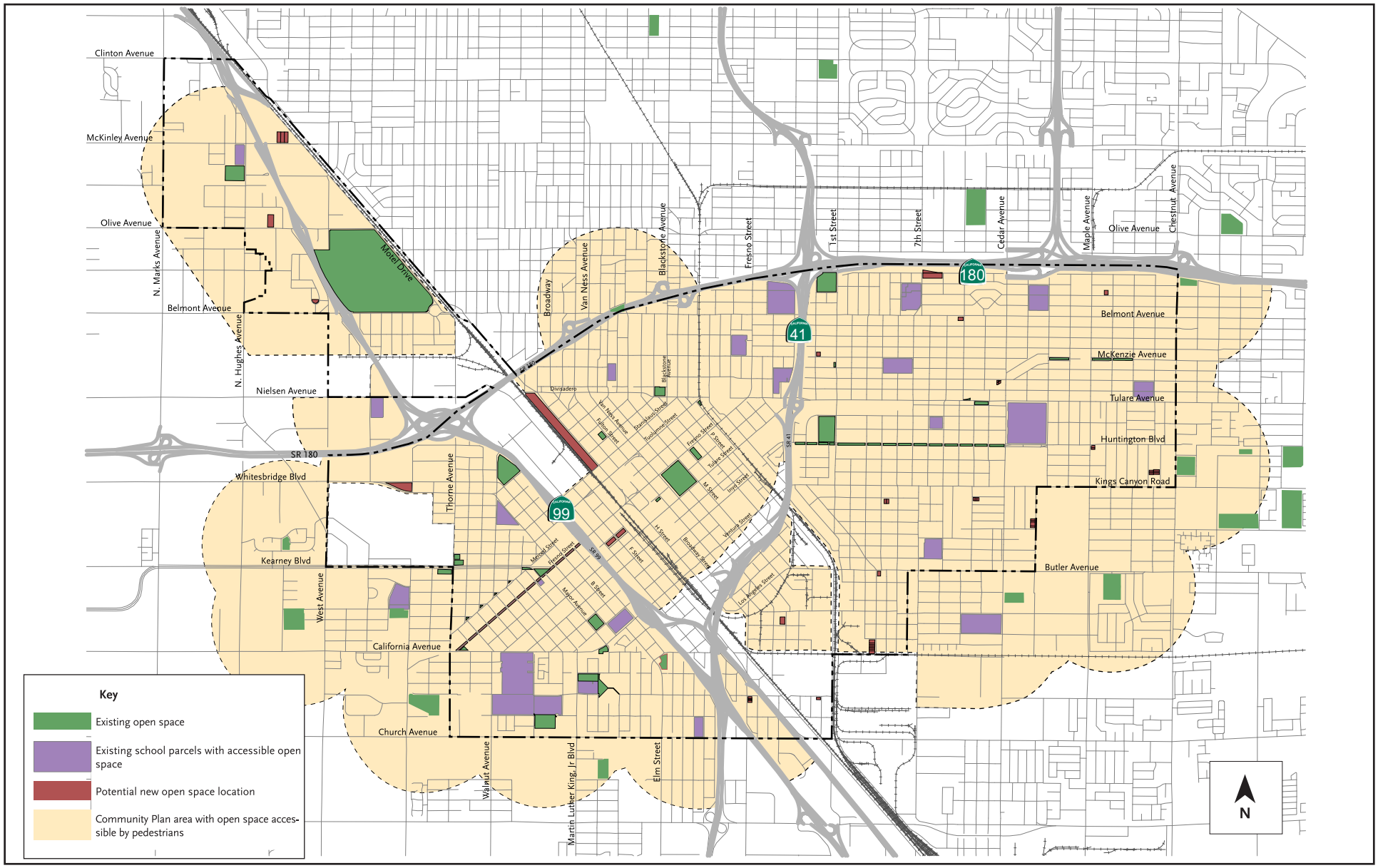
Health, Wellness, and Community Development

Community health and well-being are a principal quality-of-life issue for residents and businesses in Downtown Fresno. Both people and property are greatly affected by how the City is built and designed. Obesity, concerns over the homeless population, neighborhood crime, and poor air quality (and its associated high levels of lung disease and asthma) are reasons that Fresno's decision makers have taken a renewed interest in promoting policies and programs that improve community health.

Specific health, wellness, and community development goals and policies are summarized below. For details regarding the timing, cost, and potential funding sources for these projects and actions, refer to Chapter 8 of Appendix A.

- **Promote high levels of health and well-being for residents and employees** of the Downtown Neighborhoods.
- **Actively involve and engage all members of the community to improve health and quality of life in the Downtown Neighborhoods** to ensure that the wide diversity of residents and businesses in the Downtown Neighborhoods are involved in civic life and engaged through a process that is sensitive to diverse ethnicities, education levels and linguistic abilities.

- **Eliminate concentrations of poverty and blight in the Downtown Neighborhoods and create a quality of life that is comparable to other neighborhoods in Fresno** to improve current socioeconomic conditions, reduce or eliminate poverty, blight, and crime; and improve quality of life for residents of the Downtown Neighborhoods.
- **Increase safety in the Downtown Neighborhoods** to improve the health and well-being of Downtown Neighborhood residents through crime prevention, community policing, and other measures.
- **Nurture a skilled and adaptable local workforce** to provide additional training and education to prepare residents for positions with greater economic potential to elevate residents out of poverty. Such positions can be found in the medium- and high-wage industry categories.
- **Improve health outcomes through land use and transportation decisions** to promote land use and transportation decisions which reduce air pollution and encourage residents to lead physically active lifestyles.
- **Minimize exposure to hazardous pollution** to minimize community exposure to hazardous and potentially hazardous air, soil, or water contaminants whose exposure can lead to delayed, chronic and/or acute health effects, especially asthma and other respiratory conditions.
- **Support healthy, affordable production of food** to support the health and community benefits of local gardening and agriculture, including increased physical activity, access to affordable healthy food, positive social interaction, and local economic activity.
- **Improve access to and selection of nutritious food sources** to ensure that all residents and employees in the Downtown Neighborhoods have convenient access to safe, affordable, and nutritious foods.
- **Support increased access to health care and health care facilities** to improve the health of Downtown Neighborhoods residents by providing appropriate distributions of health care facilities and health care coverage to the uninsured in order to encourage timely medical care focused on culturally-competent prevention of illness, disease, and injury.
- **Support the increase of access to social and mental health services for all populations, including the homeless,** to improve the health outcomes of and decrease homelessness in the Downtown Neighborhoods.

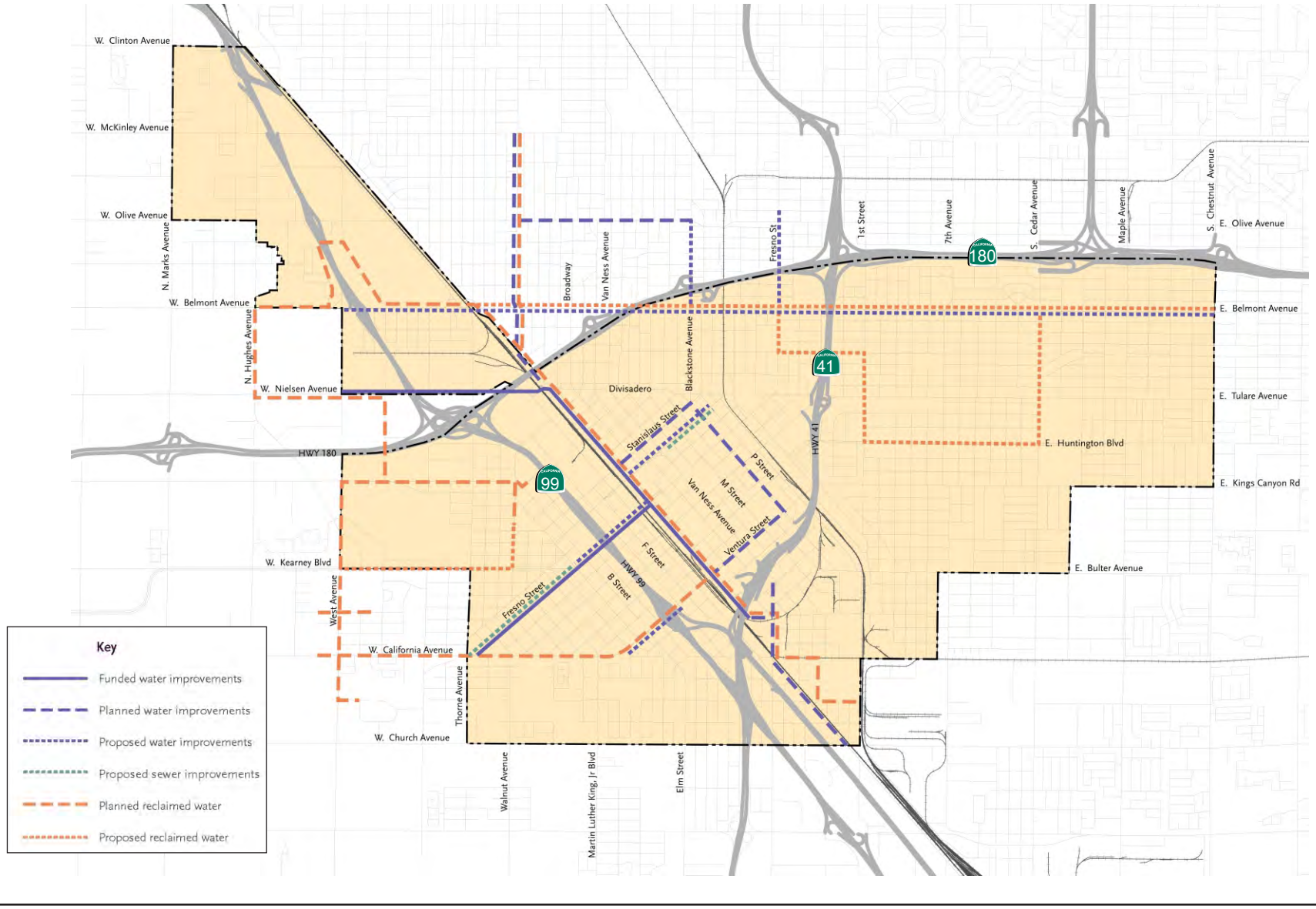


Source: Moule & Polyzoides, 2016

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Exhibit 3-12
DNCP Potential Access to Open Space

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Source: Moule & Polyzoides, 2014

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Exhibit 3-13
DNCP Utilities Improvements

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3.7.4 - Fulton Corridor Specific Plan

Priority Development Projects

The FCSP has identified 15 priority public infrastructure projects and nine public-private partnerships, which are further classified as Near Term Priority Projects, Mid Term Priority Projects, and Long Term Priority Projects. Near Term Priority Projects would occur within a 2-year period following FCSP adoption (by 2018), and Mid Term Priority Projects would start after the near-term projects are completed or nearly completed but should be completed or nearly-completed within the next 3 to 6 years following FCSP adoption (by 2022). Long Term Priority Projects would be completed after 2022. In the case of Priority Projects, the City will direct all relevant resources and departmental actions (in transportation, infrastructure, public realm design, etc.) to support their implementation. This includes investment in infrastructure, including upgraded water and sewer lines to support existing demand and new development, street trees, street lights, street furniture, traffic calming measures, and revitalized alleys.

The FCSP Priority Projects are briefly described below; for a detailed discussion and map of the Priority Projects, refer to Chapter 8 of the FCSP (Appendix B).

Near Term Priority Projects: 2016–2018

Near Term Priority Projects include private and public partnerships focused in relatively small areas that target efforts to generate the most immediate physical impact and economic regeneration. Near Term Priority Projects are set to occur in 0 to 2 years (by 2018) and include the following (in order of importance):

Public Infrastructure

1. Reconnect Broadway between Mariposa and Tuolumne as a street to provide better access to and catalyze development within the North Fulton District, and provide better connectivity with the Mural District.

2. Reconnect Merced from Van Ness to H Street as a street, with wider sidewalks on the north side of the street to maintain consistency with the Fulton Street Reconstruction design as well as to provide an additional security buffer for the IRS building at Broadway and Merced.

3. Reconnect and realign Mariposa between H Street and Van Ness Avenue as a street with wide sidewalks, on-street parking, sharrows, and vehicular access that restores the historic axis and establishes a view shed between the future High-Speed Rail Station and Courthouse Park. Relocate the pedestrian access ramps to the underground parking garage along Van Ness Avenue as stairwells/elevator with access from the sidewalk.

4. Develop the surface parking lot bounded by the Merced alignment, the Broadway alignment, Federal Alley, and Tuolumne Street with a multi-level public parking garage for shared use between the High Speed Rail Station riders and residents, employees, and shoppers in the North Fulton/Mural Districts. Wrap the garage with ground-floor retail and upper-floor residential and/or office uses.

5. To facilitate better connectivity between High Speed Rail and other transit providers (BRT, other FAX routes, other regional transit providers, Greyhound, Amtrak, taxis, transportation network companies, rental cars, and a potential future bike share system), secure state and federal financing to develop an intermodal transit center adjacent to the High Speed Rail Station with access from H and G Streets.
6. Redevelop Mariposa Plaza as a regional cultural space featuring a major public art installation and outdoor seating for eating and concerts.
7. Work with the California High Speed Rail Authority and Fresno Metropolitan Flood Control District to secure financing to develop the west side of H Street between Tuolumne and Calaveras Streets as a linear park and ponding basin, with green infrastructure to absorb stormwater runoff from the Mural District while providing active park space for downtown residents and employees.

Public-Private Partnerships

1. Continue to support state and other private financing for the South Stadium mixed-use transit-oriented development project on the northeast corner of Fulton and Inyo Streets.
2. Support the development of a public market in the retail portion of the city-owned former Gottschalks building as a regional destination that features locally grown and locally manufactured food products and restaurants. Consider the inclusion of an incubator kitchen that will help small cottage food business owners have better access to facilities and resources that can get their product to market.
3. Support the development of the city-owned surface parking lot south of Chukchansi Park as a minimum five-story, mixed-use residential or hotel project.
4. Publish a Request For Proposals (RFP) to develop the city-owned warehouse and surface parking lot at the west side of Inyo and H Streets as a minimum five-story mixed-use development with a public parking structure to be shared by High-Speed Rail riders as well as South Stadium residents, employees, and/or visitors.
5. Support the rehabilitation of existing historic buildings along the Fulton Corridor.

Mid- and Long-term Priority Projects: 2019–2022 and Beyond

Following are the FCSP Second Priority Projects, in their order of importance. These projects have mid-term and long-term implementation timeframes (4 years and beyond) as they are related to the local improvements related to the HSR.

Public Infrastructure

1. Continue to work towards construction of an intermodal transit center adjacent to the High-Speed Rail Station and ensure that local and regional transit service is well-coordinated to facilitate easy transfers between modes.

2. Reconstruct H Street between Divisadero and Ventura Streets as a complete street with wide sidewalks, on-street parking, protected bike lanes, and vehicular travel lanes to facilitate multi-modal access to the High-Speed Rail Station and the intermodal transit center.
3. Reconstruct Tulare Street between California Avenue and R Street as a complete street with wide sidewalks, on-street parking, bike lanes, and vehicular travel lanes to accommodate safer multi-modal access through downtown and to the High-Speed Rail and Amtrak Stations from the Edison and Southeast Neighborhoods. The segment from H Street to R Street should include protected bike lanes. In most places this will preclude on-street parking due to space contraints, although on-street parking should be included where the curb-to-curb width permits it.
4. Develop the southeast portion of the High-Speed Rail Station as "Station Market Square," a temporary/short term parking and loading zone that can be closed off to accommodate special events and farmers markets.
5. Secure financing to construct a new linear park in Chinatown that can catalyze improvements to existing historic buildings, stimulate redevelopment of Chinatown, and support development around the High-Speed Rail Station. The park should include green infrastructure to address stormwater runoff and recharge groundwater.
6. Reconstruct the south side of Tuolumne Street between H and Van Ness Avenues with a wide sidewalk, street trees, and on-street parking to facilitate active street frontage and catalyze the development of the North Fulton Corridor.
7. Work with CHSRA to develop a public parking structure to serve the High-Speed Train Station behind the Fresno Fire Headquarters Building, between Tulare Street, the HSR alignment, and Kern Street.
8. Work with the California High Speed Rail Authority (CHSRA) to develop a public parking structure to serve the High-Speed Rail Station and Chinatown development on the parcel bounded by G Street, Fresno Street, and F Street, adjacent to existing historic structures.

Public-Private Partnerships

1. Support the development of the Merchants' Lot (the parcel bounded by H, Mariposa, Broadway, and Fresno Streets) as a mid-to-high rise mixed-use structure with residential, retail, office, and hotel uses wrapped around a public parking structure that will serve the High-Speed Rail Station and the Fulton District.
2. Support the development of the North Fulton District, including the blocks bounded by Federal Alley, Merced, Van Ness, and Tuolumne as a mid-rise mixed-use development with mixed-income residential, office, and retail uses.
3. Support the rehabilitation of existing historic buildings in Chinatown.
4. Support the redevelopment of regional retail and office uses on vacant or underutilized parcels adjacent to the High Speed Rail corridor, particularly along H Street.

Implementation Projects

In addition to the Priority Projects described above, Chapter 11 of the FCSP includes a series of Implementation Projects, Actions, and Programs organized by Specific Plan Chapter (e.g., Public Realm, Transportation). Implementation Projects are primarily capital improvement projects that are intended to transform and improve Downtown's utilities, streetscape, and parks. Implementation Actions and Programs do not involve physical change to Downtown. The current list of Implementation Projects, Actions, and Programs is summarized below, but the Implementation Framework is intended to be maintained and updated by each City Department on an annual basis, and these updates will integrate with each Department's annual work plan as well as with the City's Capital Improvements Plan. For a more detailed discussion of each project, action, and/or program, refer to Chapter 11 of Appendix B. The standards that guide this transformation are contained in the DDC.

Building and Development

The transformation of Downtown into a lively, walkable, mixed-use, entertainment destination is contingent upon capitalizing on Downtown's existing assets—including the reopened Fulton Street, Downtown's extensive collection of older buildings, and its various visitor-serving and entertainment venues—and on attracting new development. Since the vast majority of new investment and construction in Downtown will be made by private sector, for-profit developers, entrepreneurs, investors, and property owners, opportunities to earn a return on investment must be created. The Priority Projects identified in Chapter 5 represent these initial opportunities for such investment. Following are the projects, actions, and programs related to building and development within the FCSP:

- **Reorient Entrance to Chukchansi Park.** In order to create a stronger connection between Chukchansi Park and the Fulton Corridor (as funding becomes available), reorient the entrance to Chukchansi Park by moving the stadium's H Street-facing facilities to the termination of Broadway Street at Tulare Street. In order to accommodate the new entrance facilities, work with Chukchansi Park to relocate the existing kitchen and delivery facilities to the Inyo Street side of the stadium.
- **Fund a Fire and Life Safety Improvement Loan Program.** Fund a fire and life safety improvement loan program to make very-low or no-interest loans for fire sprinkler and life safety upgrades available to businesses who want to reuse or change existing buildings in the Plan area.
- **Introduce Entertainment Venues in Downtown.** Introduce entertainment venues such as theaters and nightclubs.

Historic Resources

The investigation of historic resources as part of the Fulton Corridor Specific Plan effort includes intensive survey of up to 300 properties. The purpose of this survey is to evaluate properties within the Fulton Corridor that have not been studied in previous surveys, identify potential historic properties, and to provide the City with recommendations regarding local designation of these resources. The results of the intensive survey will be compiled in a final survey report that will include a historic context statement for Downtown Fresno and full documentation of the individual

properties subject to the survey. This information will augment the City's existing database of historic properties, and help to guide future development in a manner that continues to respect and preserve the City's historic resources. In addition, the following FCSP actions and programs would be implemented:

- **Ensure compliance with CEQA.** Use existing administrative protocols to ensure compliance and consistency with CEQA and Section 106 of the NHPA. Update protocols as changes in regulation require.
- **Establish review procedures.** Establish review procedures to reflect the updated FCSP and DDC and codify them in the FMC so they are uniformly applied and easily available.
- **Establish a Mills Act program.** Establish a Mills Act program and protocols for awarding Mills Act contracts.
- **Develop Cross-Departmental Working Group.** Develop a cross-departmental working group, consisting of members of the Planning Division and, as needed, the Fire Department, to routinely review applications involving an historic site or building. This group shall support the Historic Preservation Commission and its activities.
- **Provide Technical Assistance.** Provide funding in order to make city staff available to provide technical assistance to property owners concerning the maintenance, rehabilitation, and restoration of historic resources.
- **Update Inventory of Downtown's Historic Resources.** Provide funding for updating the inventory of Downtown Fresno's historic resources. Update the inventory at least every 5 years.

Public Realm

Prioritizing the public realm helps to manage limited public resources and contributes improvements to the identity of the Downtown area as a whole. The first priority is to revitalize the Fulton Corridor as approved by the City Council in 2014. Subsequent priorities include opening up overgrown tree canopies, planting street trees, and improving the pedestrian and bicycle character of Downtown's streets. Actions within the public realm should be carefully programmed to accommodate for the needs of all users. Physical barriers to movement, and those requiring people to deviate from their desired lines of movement, should be minimized or removed. The needs of those with disabilities, young children, and the elderly should be included and considered in the early stages of the process. As with all aspects of the design of the public realm, the critical issue to achieving ease of movement will be finding the right balance between modes of transport, the design quality of streetscape, and its practical installation and maintenance. Following are the projects, actions, and programs related to building and development within the FCSP. Streetscape and open space projects proposed under the FCSP are also depicted in Exhibit 3-14.

- **Streetscape Improvements.** Implement the identified streetscape improvement projects (see Chapter 11 of the FCSP for the complete list of identified projects).

- **Mariposa Plaza.** Transform Mariposa Plaza into a space that makes it easy to host frequent festivals and other cultural gatherings.

- **Courthouse Park.** Work with the County of Fresno to transform Courthouse Park into an accessible and usable place that is visible and accessible from surrounding streets, sidewalks, and buildings.
  a) Relocate the Downtown Transit Mall to an Intermodal Transit Center adjacent to the High Speed Rail Station along G Street;
  b) Re-establish an at-grade pedestrian crossing at Van Ness Avenue at Mariposa Street
  c) Adjust garage ramp entries at the corners of Van Ness Avenue and Fresno Street and Van Ness Avenue and Tulare Street.
  d) Remove the bus bays along Van Ness Avenue and Fresno Street.
  e) Replace the parking lots along Fresno Street and Tulare Street with on-street parking.
  f) Introduce continuous sidewalks and street trees around Courthouse Park's entire perimeter including along the entire length of Van Ness Avenue.
  g) Update Courthouse Park's landscape and hardscape by introducing enhanced paving, native landscapes, and providing filtered shade via landscape or architectural trellises/canopies.
  h) Install pedestrian lighting that continues the Civic Mall axis from M Street to Van Ness Avenue.

- **HSR Intermodal Transit Center.** In conjunction with the construction of the High Speed Rail station, introduce an intermodal transit center along G Street.

- **Station Market Square.** Develop the southeast portion of the High Speed Rail Station as "Station Market Square", a short term parking and loading zone that can be closed off to accommodate special events and farmers' markets.

- **Linear Park.** Introduce a Linear Park between H Street and the Union Pacific railroad tracks on the blocks south of Kern Street and north of Fresno Street, including a Class 1 trail running throughout the linear park.

- **Chinatown Park.** Introduce a civic park in Chinatown, centered on Mariposa Street, between E Street and F Street.

- **Mariposa Street.** Improve the axis, enhance pedestrian safety and comfort, and reinforce the pedestrian and vehicular connection between City Hall and the County Courthouse.
  a) Introduce vehicular traffic lanes between M Street and P Street.
  b) Add a landscaped center median between M Street and P Street.
  c) Plant street trees on both sides of Mariposa Street and within the center median.
  d) Add pedestrian-scaled lighting.
  e) Introduce street furniture.
  f) Install crosswalks at all intersections.

- **Utilize existing banner poles/install new banner poles in prominent locations.** Utilize existing banner poles and install new over-street banner poles in the following mid-block locations:

a) Fresno Street between Van Ness Avenue and H Street;
b) Tulare Street between Van Ness Avenue and H Street;
c) Fulton Street between Tuolumne Street and Stanislaus Street; and
d) Van Ness Avenue between Stanislaus Street and Inyo Street

- **Public Realm management and maintenance.** Adopt and fund a management regimen and maintenance program for the public realm upon adoption of the Plan.
- **Develop Wayfinding Program.** Develop a wayfinding and signage master plan for Downtown and install the highest priority signage as funding allows, including numbering, naming, or labeling each parking lot and/or garage in a common way that is user-friendly.
- **Create list of landscape features that block views and access into parks.** Create a detailed list of planting and other landscape features that block views and access into parks from surrounding streets and sidewalks and generate a priority list for removal. As funding allows, remove these plantings and landscaping and replace with new landscaping that enhances views and access.
- **Institute a Parks Master Plan.** Coordinate under the Parks Master Plan for the acquisition of land for new parks within the Specific Plan area, including the Railroad Linear Park, and the construction of new parks, such as the Densmore Skate Park. Funds for purchasing the land could come from assessment districts, in-lieu fees paid by developers, or federal or state funding. The program should also identify funds for maintaining new parks.

Transportation

The following transportation projects, actions, and improvements would enhance the transportation experience for all Downtown users and concentrate major investments in locations that have the greatest chance of catalyzing private investment. Transportation projects proposed under the FCSP are also depicted in Exhibit 3-15.

- **Road diets.** Implement road diets throughout Downtown. Road diets include a variety of techniques to reduce the space for vehicles and slow traffic, including adding bike lanes, adding diagonal parking, widening sidewalks and adding medians. See Chapter 11 of the FCSP for the complete list of identified improvements.
- **Bike lanes.** Install bike lanes in accordance with the adopted street typologies as called for in the Specific Plan. Complete the Class I Downtown Rail Trail.
- **Major streetscape and bike lanes.** Widen sidewalks, introduce corner bulbouts, introduce lighting and landscape, and implement façade improvements in accordance with the adopted street typologies as called for in the Specific Plan.
- **One-way to two-way conversion.** Convert the identified one-way streets back to two-way streets in order to enhance economic development, slow traffic, and facilitate navigation (see Chapter 11 of the FCSP for the complete list of identified improvements).

- **Reconnect street grid.** Throughout the Downtown Neighborhoods, physically reconnect the street grid by adding new streets or making pedestrian through-connections. The streets identified in Table 11.7A of the FCSP should be prioritized for physical improvements.
- **Street Stabilization.** Conduct targeted investment in maintenance, sidewalk completion, and introduction of center medians and street trees on Fresno Street (SR-99 to Broadway Street).
- **Reconstruct H Street interchange to at-grade.** Fresno Street (G Street to Broadway Street).
- **Reconstruct SR-41 on-ramp configuration.** Demolish SR-41 southbound on-ramp from Broadway Street and configure a new southbound on-ramp from Van Ness Avenue.
- **Bus Rapid Transit.** Finish construction (scheduled for late 2017) on rapid bus transit routes on Blackstone Avenue/O Street (Fresno Street to Abby Street) and Abby Street/P Street (Fresno Street to Blackstone Avenue).
- **Relocate Downtown Transit Station.** Relocate Downtown Transit Station and reconstruct Courthouse Park frontage (see Section 11.6 of the FCSP).
- **High Speed Rail Station. A** HSR station and related local infrastructure is to be constructed and development strategies can be seen in further discussions throughout this document.
- **Implement the parking strategy for the Fulton Corridor and HSR.** Implement the parking strategy for the Plan Area surrounding the Fulton Corridor and the proposed High Speed Rail station area by constructing Park-Once garages at the identified locations.
- **Implement the parking strategy for the Mural District.**
- **Install remaining Master-Planned traffic signals and upgrade traffic signals** where necessary to serve the FCSP area.
- **Improve Downtown storm drainage systems** to facilitate mixed-use ground floor retail uses and reduce on-street retention of stormwater.
- **Adopt parking policy reforms.**
- **Adjust Transportation Performance Measures and adopt new CEQA Significance Thresholds.**
- **Upgrade traffic signal control equipment and Install Opticom systems.** Upgrade traffic signal control equipment, interconnect traffics signals, connect all signals to a traffic operations center, and install emergency vehicle traffic signal interruption systems (Opticom) at all existing and new traffic signal controlled intersections.
- **Provide transit vehicles.** Provide transit vehicles with queue jumping and other transit priority capabilities.
- **Implement a driveway management program.** On commercial corridors, implement a driveway management program to consolidate the number and location of driveways.
- **Reconstruct bus pads at major transfer locations.** At major transit transfer locations, reconstruct the roadway to accommodate bus pads designed for increased load from buses.

- **Develop a maintenance/improvement program.** Develop an ongoing maintenance/improvement program for major circulation routes and intersections.
- **Develop ITS framework.** Develop an Intelligent Transportation Systems (ITS) framework, including traffic signal preemption for queue spillback, to facilitate the implementation of the Level of Service (LOS) F policy and ensure that vehicle queues do not extend onto the mainline freeway.
- **Implement the Active Transportation Program.** Implement the citywide Active Transportation Program (see FCSP Figure 9.6A), prioritizing Downtown facilities.
- **Permit angled parking in the Mural and South Stadium Districts.**
- **Purchase parking station equipment.** Purchase parking station equipment and parking ticket equipment for installation in priority areas or facilities.
- **Establish protocols for managing Downtown parking.**
- **Identify public parking façades to be improved** and generate a priority list with cost estimates.
- **Generate a priority list of lighting and parking wayfinding improvements** to create a better sense of place Downtown.
- **Generate a priority list of parking availability, management, and enforcement,** including cost estimates, of options for real-time information about parking availability and License Plate Recognition for parking management and enforcement.

Sustainability, Infrastructure, and Resources

A number of projects, actions, and improvements have been identified to implement the FCSP infrastructure network. These actions and improvements would be put in place in order to accommodate the growth that is projected to occur in Downtown over the Plan's 25-year horizon. Proposed infrastructure improvements under the FCSP are also depicted in Exhibit 3-16.

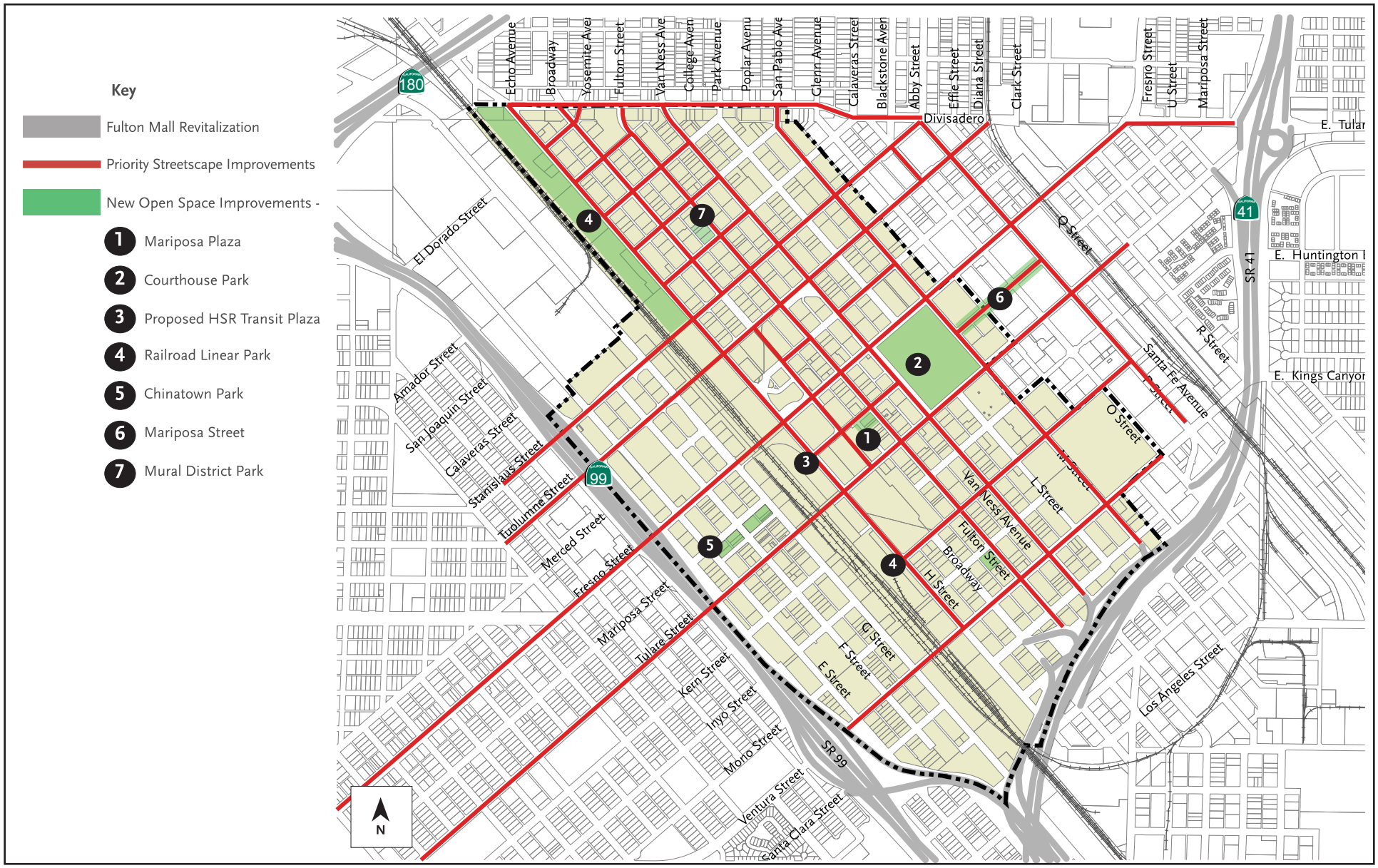
- **Regional transmission improvements.** Design and construct the identified improvements to the Regional Transmission Mains and Transmission Grid Mains, based on the recommendations made in the Metropolitan Water Resources Management Plan (MWRMP).
- **Projected water distribution modernization.** Replace water mains installed before 1950 to 1965 to improve water service and ensure functionality of distribution system for the duration of the Specific Plan.
- **Potential water distribution capacity improvements.** Complete the identified water pipeline improvements, based on West Yost Associates' hydraulic evaluation of the FCSP project.
- **Potential sewer capacity improvements.** Complete the identified Sanitary Sewer improvements, based on the City of Fresno's FCSP Sewer Capacity Study (July 2011).
- **Proposed recycled water facility.** Design and construct a recycled water facility adjacent to the water tower at Eaton Plaza.

- **Potential recycled water improvements.** Install recycled water main along identified streets in coordination with streetscape improvements.
- **Fiber-optic infrastructure.** Install fiber-optic infrastructure in conformance with the Fresno Intelligent Transportation Systems Master Plan (PW-625) as part of major road and sidewalk construction projects.
- **Monitor City's water and wastewater systems.** Continue to monitor and inventory the age and function of the City's water and wastewater infrastructure systems.
- **Update City's Capital Improvement Projects.** Update the City's Capital Improvement Projects to include and prioritize water infrastructure upgrades required to support development levels projected by this Specific Plan.
- **Design a Downtown recycled water distribution network.** Design a downtown recycled water distribution network to be aligned with and integrated into the City's planned recycled water Transmission Grid Main system and instituted with the priority street improvements and planting plan.
- **Develop criteria for due diligence agency coordination.** Develop criteria for due diligence agency coordination during the schematic design phase of each Capital Improvement Project.
- **Appoint Liaison to coordinate agency meetings.** Appoint a liaison within the City to coordinate meetings between various agencies and utility providers.
- **Align installation of downtown recycled water distribution network** with other FCSP Projects (e.g., priority street improvements, large irrigation users, and planting areas).
- **Fund, design, and install a packaged water facility.** Fund, design, and install a packaged recycled water facility that provides tertiary treatment near the historic Water Tower at Mariposa Street and O Street.
- **Apply LID strategies.** Apply the most relevant and practical type of LID strategies when right-of-way improvements are made in the identified areas.

3.7.5 - Downtown Development Code (Development Standards)

As previously discussed, the Citywide Development Code will include a text amendment to incorporate the Downtown Development Code, implementing the DNCP and the FCSP, which comprise refinements of Fresno's policy direction in the General Plan. Land uses described in the DNCP and FCSP and the zones in the Downtown Development Code are intended to be one in the same. The Downtown Code's requirements are keyed to the Downtown Development Code Zoning Map of Appendix C, which designates the appropriate form, scale, and character of development, including compatible land-use activity.

As a form-based code that contains most of the standards and requirements for development and land use activity within the DNCP and FCSP areas, the DDC addresses the relationship between building façade and the public realm, the form and mass of buildings in relation to one another, and the scale and type of streets and blocks.

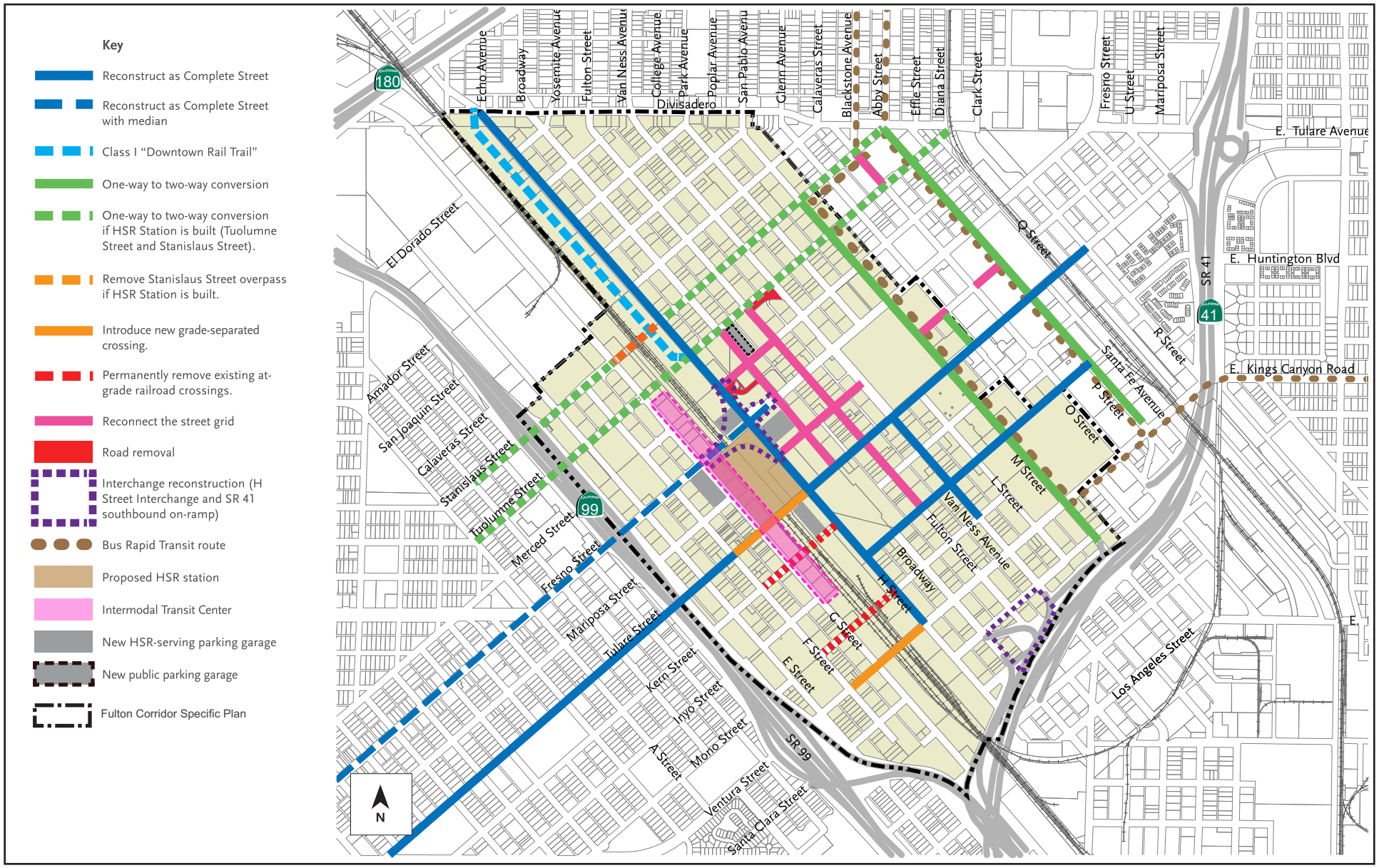


Source: Moule & Polyzoides, 2016

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Exhibit 3-14
FCSP Streetscape and Open Space Projects

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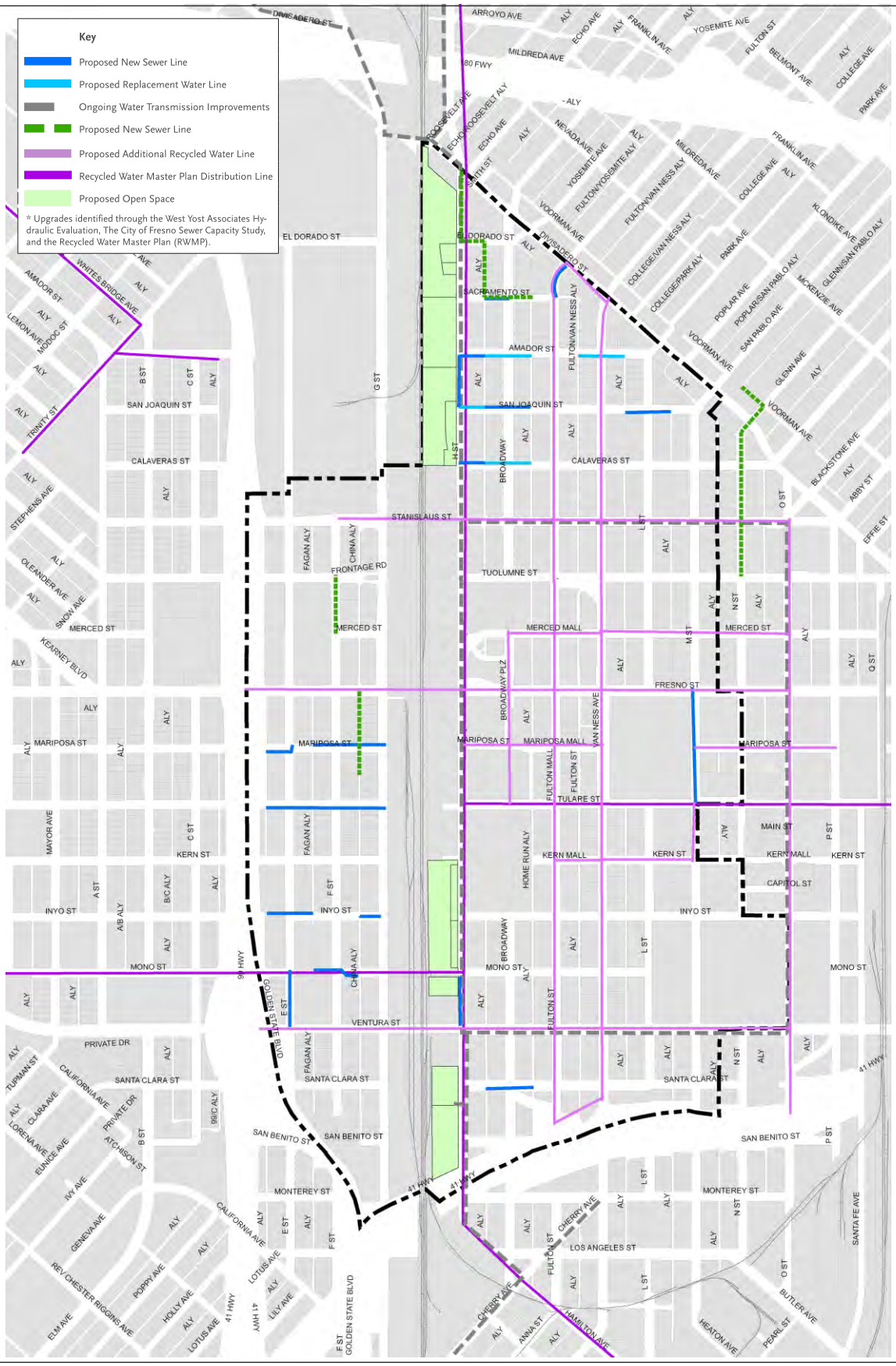


Source: Moule & Polyzoides, 2016

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Exhibit 3-15
FCSP Transportation Projects

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Source: Moule & Polyzoides, 2016

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Exhibit 3-16
FCSP Recommended Utility Improvements

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Zones and Overlays

In order to implement the DNCP and FCSP, the following zones and overlays are established and applied to property within the boundaries of the Downtown Development Code. All zones and overlays are replaced by the zones and overlays of the DDC.

Zones

The particular vision and direction for all of the property subject to the Downtown Development Code falls into six types of "environments," or zones, which are as follows:

1. **Downtown Zones**. Areas within Fresno's core that serve the entire city and, in certain cases, the region. Includes the downtown core, civic center and Downtown's unique center-city urban neighborhoods.
2. **Mixed-Use Zones.** Areas along corridors that border neighborhoods as well as areas that punctuate corridors, often at the intersection of two corridors, and serve sub-regional, community, and neighborhood level needs
3. **Residential Zones.** Areas that are primarily residential with limited mixed-use activity according to the particulars of each neighborhood.
4. **Employment Zones**. Areas that by their nature and scale of activity do not comprise or belong in neighborhoods or entirely along corridors. Examples include industrial areas, airports, and hospitals.
5. **Public Facilities Zones.** Public or institutional facilities, including city facilities, utilities, schools, health services, corporation yards, utility stations, as well as Fresno Chandler Executive Airport, the Fresno Community Regional Medical Center, the various cemeteries in the Jane Addams Neighborhood.
6. **Open Space Zones.** Open space facilities that accommodate both active and passive recreational uses such as public parks, outdoor and indoor playing fields, trails, playgrounds, and community centers. Also includes ponding basins or airport approach/clear zones that are developed for, programmed, and actively used for recreational purposes.

Overlays

The DDC establishes three overlays to further implement the DNCP and FCSP:

1. **Apartment House Overlay.** Preserves and enhances the pattern of pedestrian-oriented small-footprint apartment houses, grand homes, and small commercial buildings that exist in some surviving pre-World War II residential areas within Downtown.
2. **Neighborhood Revitalization Overlay.** Preserves the unique character of neighborhoods near Downtown, enhance their walkability, and promote a diverse population.

3. **Urban Campus Overlay**. Provides for large, centrally planned and operated campuses that integrate well into a dense, mixed-use, walkable urban environment and ensures that transitions to adjacent residential neighborhoods are graceful.

Specific Standards for Zones

Each zone represents a particular range, intensity, and organization of physical characteristics and land use activity and is implemented through standards in the following topics, as appropriate:

a) Use Regulations
b) Density and Massing Development Standards
c) Site Design Development Standards
d) Facade Design Development Standards

3.8 - Intended Uses of this Draft EIR

This Draft EIR is being prepared by the City of Fresno to assess the potential environmental impacts that may arise in connection with actions related to implementation of the proposed project. Pursuant to CEQA Guidelines Section 15367, the City of Fresno is the lead agency for the proposed project and has discretionary authority over the proposed project and project approvals. The Draft EIR is intended to address all public infrastructure improvements and all future development that are within the parameters of the proposed project.

3.8.1 - Approvals Needed

Discretionary approvals and permits are required by the City of Fresno for implementation of the proposed project. The proposed project would require the following discretionary approvals and actions. Note that adoption of the DNCP is proposed to be enacted by resolution of the City Council. Additionally, the FCSP and DDC are proposed to be adopted by ordinance.

- Certification of the Environmental Impact Report
- Adoption of Plan Amendments for the following:
  - Adoption of the proposed Downtown Neighborhoods Community Plan (DNCP)
  - Adoption of the Fulton Corridor Specific Plan (FCSP)
  - Amendment of the Fresno General Plan, the West Area Community Plan, Edison Community Plan and the Roosevelt Community Plan
  - Repeal of the Central Area Community Plan in its entirety
  - Repeal of the Fulton Lowell Specific Plan
- Adoption of a Rezone to update the zoning map in the plan area;
- Adoption of a text amendment to the Citywide Development Code to incorporate the Downtown Development Code.

Future development and land use activities that occur pursuant to the DNCP, FCSP, and DDC may require discretionary approvals, such as but not limited to subdivision parcel maps, use permits, and

design review, and/or ministerial approvals such as lot line adjustments and demolition, grading, and building permits. The intent of the EIR is to provide sufficient coverage for development and land use activities contemplated by the DNCP, FCSP, and DDC such that no additional or low-level environmental review (e.g., a Negative Declaration) would be necessary, provided that future individual development projects are consistent with the DNCP and FCSP and are within the scope of the environmental impacts analyzed in this Draft EIR.

3.8.2 - Responsible and Trustee Agencies

A number of other agencies in addition to the City of Fresno will serve as Responsible and Trustee Agencies, pursuant to CEQA Guidelines Section 15381 and Section 15386, respectively. This Draft EIR will provide environmental information to these and other public agencies, which may be required to grant approvals or to coordinate with other agencies as part of project implementation.

- California Department of Transportation (Caltrans)
- California Air Resources Board
- California Department of Fish and Wildlife
- California Department of Forestry and Fire Protection
- California Department of Housing and Community Development
- California Department of Parks and Recreation
- California Department of Toxic Substances Control
- California Public Utilities Commission
- California State Office of Historic Preservation
- California State Lands Commission
- California State University, Fresno
- California State Water Resources Control Board
- Central Valley Regional Water Quality Control Board
- County of Fresno Local Agency Formation Commission
- County of Fresno Office of Education
- Fire Districts (Various)
- Fresno Airport Land Use Commission
- Fresno Council of Governments
- Fresno Metropolitan Flood Control District
- Fresno Irrigation District
- San Joaquin River Conservancy
- San Joaquin Valley Air Pollution Control District
- School Districts (Various)
- Sewer Districts (Various)
- Water Districts (Various)
- Any other Responsible or Trustee Agency that may need to provide discretionary approval

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SECTION 4: GENERAL DESCRIPTION OF ENVIRONMENTAL SETTING

4.1 - Project Environmental Setting

California Environmental Quality Act (CEQA) Guidelines Section 15125(a) requires that an EIR must include a description of the physical environmental conditions in the vicinity of the project from both a local and regional perspective, as they exist at the time the notice of preparation is published. This environmental setting will constitute the baseline physical conditions against which a lead agency determines whether an impact is significant. The description of the environmental setting shall be no longer than is necessary to an understanding of the significant effects of the proposed project and its alternatives.

In 2008, the estimated population of the Community Plan Area was over 70,000, comprising 15 percent of the City of Fresno's total population with more than half of these people living in the Southeast Neighborhoods. The Edison Neighborhood had the second-largest population with 13,000 residents. Downtown and the Jane Addams, Lowell, and Jefferson Neighborhoods were more comparable in size, with populations ranging from 4,700 to 5,300.

Households in the Plan Area are larger than in the overall city, and are predominantly comprised of children.[1] About 70 percent of residents in the Plan Area are Latino, and 63 percent speak a language other than English at home. Plan Area residents generally have lower income and educational attainment than the rest of the City, and over 40 percent of families live below the poverty line. The relatively low skill and educational levels of the Plan Area's population have implications for the quality of jobs that they can attain.

There is a considerable amount of demographic variation by neighborhood, pointing to a diversity of places within the Plan Area, each with its unique characteristics and needs. For example, while the Jefferson neighborhood is primarily composed of large families, the Downtown is home to a much larger proportion of single person households[2]. In the Jefferson Neighborhood, 21 percent of households are singles or non-families, compared with 67 percent in the Downtown Sub area. The percentage of families living below the poverty level is 34 percent in the Jane Addams Neighborhoods and 67 percent in the Lowell Neighborhood. Clearly, each of the neighborhoods faces unique public policy and design conditions and requires different types of investments and interventions.

Downtown has one of the largest and best collections of urban buildings in the western United States, including many designated as historic. Unfortunately, over the years, many significant or attractive urban buildings have been demolished and have been replaced with vacant land and parking lots. Vacant parcels are especially prevalent along the Union Pacific railroad tracks, within Chinatown, and in the Cultural Mural District. These vacant parcels themselves contribute to further disinvestment and abandonment, as they advertise the fact that Downtown has been in a declining

[1] See Table 3—Population and Households by Type in Plan Area, City of Fresno; Fresno County, 2008.
[2] See Table 4—Population and Households by Type in Plan Area by Neighborhood.

state. This Plan and the accompanying Downtown Development Code (DDC) will lay out future development strategies to help the Downtown Area regain its welcoming aesthetic prowess.

The majority of the neighborhoods within the Plan Area predominantly consist of single-family houses, although some neighborhoods, such as Lowell, Jefferson, and portions of Edison and Southeast Fresno contain a mix of single-family and multi-family housing types; although, the Mural Arts District will have new multi-family development. The majority of the post-World War II, multi-family buildings are too large for their site, do not face the street, overwhelm their neighbors, are typically poorly maintained, lack sufficient amenities such as usable private outdoor space, provide substandard living conditions for many residents, and have had a severe negative impact on the economic value of these neighborhoods.

The corridors that separate the various neighborhoods are difficult to differentiate from one another and are designed to move traffic quickly and efficiently without regard to pedestrians, cyclists, or transit users. Their rights-of-way are uniformly wide, devoid of street trees, and the majority of the buildings that line them have parking lots located between the building and the street. The urban fabric at the intersections between major streets is unassuming. Streets are typically lined by parking lots or buildings that are set back from the street. However, there are several places, such as along Tulare Avenue and Belmont Avenue between Cedar and Barton Avenues, where pedestrian-oriented buildings are built close to the street and accessed from the adjacent sidewalk. These places were traditionally neighborhood centers and will be revitalized. This Plan and the accompanying Downtown Development Code will enable their revitalization and expansion.

The Plan Area contains older, established neighborhoods in which the vast majority of housing units were built before 1980 and nearly 20 percent were built before 1939. The Lowell, Jefferson, and Southeast neighborhoods have the greatest share of units built before 1980. The residential vacancy rate is well above the city average, as shown in Table 5 (Housing Unit Age, Tenure, and Vacancy Status).

Vacancy rates with the Downtown Neighborhoods are high and most dwellings are rental units. Overall, ten percent of units are vacant, well above what is considered by the real estate market to be a healthy rate of five percent. Vacancy rates are highest in the Downtown, Lowell, and Jefferson neighborhoods, and lowest in the Southwest and Southeast neighborhoods. The Plan Area has an owner occupancy rate of 36 percent, compared with 49 percent in the City and 58 percent in the State. The lowest owner occupancy rates can be found in the Downtown and Lowell neighborhoods. Jane Addams and the Southeast neighborhoods have the highest owner occupancy rates of 46 and 44 percent, respectively.

The quality, quantity, and type of parks and open space in the Plan Area are mixed and access to existing park space is generally limited. The Plan Area contains Roeding Park, located in the Jane Addams neighborhoods, one of Fresno's three regional city parks. It is home to the Chaffee Zoological Gardens, and the Storyland and Playland amusement parks. In the western half of the Plan Area, there are many public parks located within 0.5 mile of most residences and businesses. Noticeably absent are public parks in the eastern half of the Plan Area and within the Jane Addams Neighborhoods (other than Roeding Park). The Downtown Neighborhoods are served by many

schools, but access to their playing fields and playgrounds has historically been limited to children attending the schools and only during school hours. However, recently he City of Fresno and two local school districts entered into a joint use agreement allowing 16 school campuses to remain open to the public for use on weekends.

Street tree coverage in the Plan Area is uneven. The neighborhoods and districts south of State Route 180 have a relatively good street tree character, with many of them having more than 50 percent of their street length lined by mature street trees. In the Jane Addams Neighborhoods, however, street trees are noticeably absent. Moreover, there are almost no street trees within the areas zoned for commercial, manufacturing, and industrial use, and along major thoroughfares such as Belmont, Tulare, and Cedar Avenues.

Fresno has a semi-arid Mediterranean climate with an average annual precipitation between 6 and 11 inches per year; however, the area is subject to wide variations in annual precipitation. The majority of precipitation occurs during winter months (November through April).

The City is dependent upon precipitation and runoff from the Sierra Nevada snow pack to recharge its groundwater supplies and provide surface water for irrigation. A large, productive aquifer system exists beneath most of the Plan Area at depths ranging between 159 and 900 feet below the ground surface.

Current water consumption trends are straining the City's available water resources, highlighting the need for increased conservation measures and the development of alternative water resources. Much of the existing water distribution system is over 50 years old, and improvements are needed to strengthen the sufficiency and reliability of an aging infrastructure. Projected population growth and densification also require improvements to the water supply and distribution system to provide adequate fire flow.

To offset water demand for non-potable uses, plans are currently underway to expand and further establish the City's Recycled Water System, including the installation of tertiary treatment facilities.

Sewer capacity upgrades are also needed to accommodate the projected population growth and associated increase in wastewater demand increases.

The Downtown Area is characterized by large impervious areas, is susceptible to localized flooding, and could benefit from additional local stormwater retention facilities to mitigate flood hazards.

Downtown Fresno is one of the largest job centers in the region, with approximately 30,000 jobs. It continues to be an attractive location for government offices, legal, and medical services, and features a stable base of office employment, due to its concentration of public sector employment. However, the Plan Area's office market faces challenges associated with the physical and economic condition of Downtown, including persistent high vacancy rates in often neglected older structures, perceptions of lack of safety, difficult access by car, a lack of commercial amenities, and a location that is distant from the homes of office workers. These challenges have been especially acute along the former Fulton Mall, located in the Fulton District, which will undergo a transition within the City.

The vacancy rate for listed historic office buildings on the former Fulton Mall is estimated at 71 percent. Historically, the reuse of these buildings has been challenging due to the high cost of their renovation, and what had been the market uncertainty regarding the future of the Fulton Mall when it was still closed off to vehicular traffic.

In addition, building owners within the Plan Area must increasingly compete with North Fresno for new office tenants where the zoning code allows Class A office buildings taller than four stories to be built. Low rents in the Downtown area make many types of new commercial investment and development there more difficult.

Most development in Fresno in recent decades has consisted of detached single-family homes mostly at the edge of the City. During the housing boom, the market's delivery of higher-density units was limited to a small number of rental projects. There is, however, private development interest in building higher-density building types in the Plan Area, primarily within Downtown. Though there has been recent development of multi-family units in the Downtown area, the majority of the projects have received some form of subsidy from government sources. Developing a private market for unsubsidized higher-density housing will take time. There are significant financial feasibility challenges to building housing in the Plan Area, which is partially attributed to the continued popularity and affordability of suburban detached, single-family houses. In the short term, the private market is likely to continue to deliver attached single-family houses and townhouses. In the longer term, warehouse lofts and stacked flats in three- and four-story buildings may become financially feasible from the point of view of private developers.

Given the addition of new housing and office space in the Plan Area, as well as the considerable growth in population projected in the greater 45-minute drive time market area, there is an opportunity for the Plan Area to leverage its existing assets to draw more retail and entertainment uses. Downtown has the market potential to support the development of between 1.3 million and 1.6 million square feet of new retail and entertainment space in the next 25 years. The type of supportable retail includes food stores, eating and drinking establishments, general merchandise, and other retail stores.

Compared with the rest of Fresno, the Plan Area has a higher number of stores that generate lower total sales than the rest of the City. This is particularly notable for the grocery, restaurants, and regional serving/comparison goods categories (goods that consumers buy at infrequent intervals and on which they normally would compare prices before buying, such as televisions, refrigerators, apparel, household furnishings and equipment). This indicates the presence of smaller stores with lower sales per store within the Plan Area relative to the rest of the City. This could also indicate that higher-quality, higher-cost items are not as available within the Plan Area as they are in other parts of Fresno.

Large areas of the Plan Area, including all of the Jane Addams and Lowell Neighborhoods, and large areas of the Jefferson, Southeast, and Edison Neighborhoods, do not have good pedestrian access within 0.5 mile of a full-service grocery store. Although a grocery outlet market has recently opened within the boundaries of the Plan Area, it is well beyond walking distance from the Lowell Neighborhood and Jane Addams Neighborhoods as well as most of the Southeast Neighborhoods,

and would only capture a small portion of their unmet demand. Accordingly, there is demand for an additional 22,000 square feet of grocery store uses in Southeast Fresno and 7,000 square feet of grocery store uses in the Jane Addams Neighborhoods. There is also a small, additional demand for restaurants of approximately 2,500 square feet in the Edison Neighborhood and 9,000 square feet in Southeast Fresno. This translates into demand for approximately one new restaurant in the Edison Neighborhood and three to four new restaurants in Southeast Fresno, assuming a typical restaurant size of 2,500 square feet.

Downtown Fresno and its immediately surrounding neighborhoods include some of the City's oldest and earliest developed areas. Numerous buildings, structures, objects, and sites from the late 19th, early 20th, and mid-20th centuries remain in place as reminders of Fresno's vibrant and colorful past. Several properties have been listed in the National Register and many others have been designated as local historic resources by the City.

4.2 - Cumulative Environmental Setting

Section 15130 of the CEQA Guidelines requires that an EIR discuss cumulative impacts of a project when the incremental effects of a project are cumulatively considerable. A cumulative impact is defined as an impact that is created as a result of the combination of the project evaluated in the EIR, together with other projects causing related impacts. Cumulatively considerable means that the incremental effects of an individual project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

According to Section 15130(b) of the CEQA Guidelines, elements considered necessary to provide an adequate discussion of cumulative impacts of a project include either (1) a list of past, present, and probable future projects producing related or cumulative impacts; or (2) a summary of projections contained in an adopted General Plan or related planning document which is designed to evaluate regional or area-wide conditions.

The cumulative analysis discussed in this EIR is provided within each technical section in Section 5. A description of the cumulative impact study area is provided in the Environmental Setting for each technical section. The specific study area depends on the environmental issue that is analyzed.

Generally, a summary of projections contained in an adopted General Plan or related planning document was utilized to understand potential cumulative development. Because of recent approval of the High Speed Rail (HSR) project in the Fresno area, the HSR has been incorporated into the cumulative evaluations, as appropriate. The approval of HSR project items in the Fresno area is as to local improvements and does not reflect certainty of the project as a whole. Following is a general summary of projections contained in General Plans for agencies whose jurisdictions are located adjacent to the City of Fresno. These jurisdictions include the County of Fresno, the City of Clovis, and the County of Madera.

The County of Fresno General Plan was last adopted in the year 2000. The General Plan identified the year 2020 projections outside the sphere of influences for cities within the East Valley area,

which is located east of Interstate 5. The population projection in the unincorporated areas was projected to be 101,542 people and the employment projection was 57,737 (County of Fresno 2000).

The City of Clovis General Plan was last adopted in August, 2014; the General Plan identified a population projection for full buildout at 294,300 people (City of Clovis 2014). The employment projection was 106,900 (City of Clovis 2014).

The County of Madera General Plan was last adopted in the year 1995. The General Plan identified population and employment growth projections through the year 2010. These estimates included 177,071 people and 61,866 employees. Since the adoption of the County's General Plan, substantial new development projects have been proposed in the southern portion of the County.

SECTION 5: ENVIRONMENTAL IMPACT ANALYSIS

Approach to Environmental Analysis

Sections 5.1 through 5.15 of the Draft Environmental Impact Report (Draft EIR) contain a discussion of the potential environmental impacts related to the implementation of the proposed Downtown Neighborhood Community Plan (DNCP), Fulton Corridor Specific Plan (FCSP), and the Downtown Development Code (DDC) project.

The environmental analysis evaluates the change to the environmental baseline conditions resulting from implementing the proposed project in combination with the significance thresholds. This method is commonly known as the "delta method" of environmental analysis.

Environmental Topics

Listed below are the topical environmental issues that could result in potentially significant environmental impacts to the environment. Numbers in parentheses indicate the section of the Draft EIR that describes and evaluates the topical environmental issue.

- Aesthetics (Section 5.1)
- Agriculture Resources (Section 5.2)
- Air Quality (Section 5.3)
- Biological Resources (Section 5.4)
- Cultural Resources (Section 5.5)
- Geology and Soils (Section 5.6)
- Greenhouse Gas Emissions (Section 5.7)
- Hazards and Hazardous Materials (Section 5.8)
- Hydrology and Water Quality (Section 5.9)
- Land Use and Planning (Section 5.10)
- Noise (Section 5.11)
- Population and Housing (Section 5.12)
- Public Services (Section 5.13)
- Transportation and Traffic (Section 5.14)
- Utilities and Service Systems (Section 5.15)

Organization of Issue Areas

As referenced in Section 1.6.4 of the Introduction Section, following is the format and content of each of the topical environmental issue areas identified above:

- Project-Level Analysis of the DNCP, FCSP, and the DDC
- Cumulative Analysis
  - Project-Level
- Mitigation Measures
  - Project-Level
  - Cumulative
- Level of Significance After Mitigation (Program-Level Analysis, Project-Level, and Cumulative)
  - Program-Level
  - Cumulative

Level of Significance

Determining the severity of project impacts is fundamental to achieving the objectives of the California Environmental Quality Act (CEQA). CEQA Guidelines Section 15091 requires that decision makers mitigate, as completely as is feasible, the significant impacts identified in the Final EIR. If the EIR identifies any significant unmitigated impacts, CEQA Guidelines Section 15093 requires decision makers in approving a project to adopt a statement of overriding considerations that explains why the benefits of the project outweigh the adverse environmental consequences identified in the EIR.

The level of significance for each impact examined in this Draft EIR is determined by considering the predicted magnitude of the impact against the applicable threshold. Thresholds are developed using criteria from the CEQA Guidelines and checklist; state, federal, and local regulatory schemes; local/regional plans and ordinances; accepted practice; consultation with recognized experts; and other professional opinions.

Pursuant to CEQA Guidelines Section 15163, the lead or responsible agency may choose to prepare a supplement to an EIR rather than a subsequent EIR, if any of the conditions described in Section 15162 would require the preparation of a subsequent EIR and only minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation. Section 15163 of the CEQA Guidelines further states that the supplement to the EIR need contain only the information necessary to make the previous EIR adequate for the project as revised. In the context of Section 15163(b), this Draft EIR provides analysis of impacts for those environmental topics noted above where it was determined in the Notice of Preparation, as provided in Appendix D, that the proposed project would result in "potentially significant impacts."

Format Used for Impact Analysis and Mitigation Measures

The format adopted in this Draft EIR to present the evaluation of impacts is described and illustrated below.

Air Quality Plan

Impact AIR-1:	**An impact summary heading appears immediately following the impact description (Air Quality Plan in this example). The impact abbreviation identifies the section of the report (AIR for Air Quality in this example) and the sequential order of the impact (1 in this example) within that section. To the right of the impact number is the impact statement, which identifies the potential impact.**

Impact Analysis

A narrative analysis follows the impact statement.

Level of Significance Before Mitigation

This section identifies the level of significance of the impact before any mitigation is proposed.

Mitigation Measures

In some cases, following the impact discussion, reference is made to state and federal regulations and agency policies that would fully or partially mitigate the impact. In addition, policies and programs from applicable local land use plans that partially or fully mitigate the impact may be cited.

Project-specific mitigation measures, beyond those contained in other documents, are set off with a summary heading and described using the format presented below:

MM AIR-1a Project-specific mitigation is identified that would reduce the impact to the lowest degree feasible. The mitigation number links the particular mitigation to the impact with which it is associated (**AIR-1** in this example); the letter identifies the sequential order of that mitigation for that impact ("**a"** in this example).

Level of Significance After Mitigation

This section identifies the resulting level of significance of the impact following mitigation.

Abbreviations used in the mitigation measure numbering are listed in Table 5-1:

Table 5-1: Abbreviations for Mitigation Measures

Code	Environmental Issue
AES	Aesthetics
AG	Agriculture Resources
AIR	Air Quality
BIO	Biological Resources
CUL	Cultural Resources
GEO	Geology and Soils
GHG	Greenhouse Gas Emissions
HAZ	Hazards and Hazardous Materials
HYD	Hydrology and Water Quality
LUP	Land Use and Planning
NOI	Noise
POP	Population and Housing
PS	Public Services
TRANS	Transportation and Traffic
USS	Utilities and Service Systems

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5.1 - Aesthetics

5.1.1 - Introduction

This section addresses potential impacts resulting from implementation of the Downtown Neighborhoods Community Plan (DNCP), Fulton Corridor Specific Plan (FCSP), and the Downtown Development Code (DDC) on visual resources, including scenic vistas, scenic resources, and light and glare throughout the Plan areas, and assesses the potential for visual impacts to occur as a result of future development under the proposed project. Information obtained from the City of Fresno has been used to characterize the existing visual/aesthetic setting of the Plan areas, and to address potential impacts to those visual/aesthetic resources.

Sources

Information in this section is based on the following sources:

- Downtown Neighborhoods Community Plan. Public Draft. June 2016. The complete plan is contained in Appendix A.
- Fulton Corridor Specific Plan. Public Draft. May 2016. The complete plan is contained in Appendix B.
- Downtown Development Code. Public Draft. May 2016. The complete code is contained in Appendix C.
- Fresno General Plan (and the associated EIR). December 2014.

5.1.2 - Environmental Setting

The following information is provided in accordance with CEQA Section 15125. The environmental setting discussion provides a baseline discussion of the existing conditions within the DNCP and FCSP areas.

Study Area for Project Impacts

The study area for the analysis of project impacts on aesthetics and visual resources is the DNCP and FCSP areas because potential development under the DNCP and FCSP is limited to these areas.

Study Area for Cumulative Impacts

The study area for the analysis of cumulative aesthetic impacts includes the DNCP and FCSP areas, as well as the portions of the City of Fresno that can be viewed from, and that have views of, the Plan areas.

Downtown Neighborhoods Community Plan

Existing Conditions

The 7,290-acre DNCP area has been divided into seven planning areas (see Section 3.0, Project Description, Exhibit 3-7). For planning purposes, the DNCP targets policies and regulations to

address the key deficits of each planning area, thereby facilitating redevelopment in keeping with the overall DNCP vision for change. Following is a brief description of the challenges found in seven DNCP planning areas (see Appendix A for a more detailed description of the existing conditions and long-term vision for each planning area).

1. **Jane Addams Neighborhoods—**The 1,155-acre Jane Addams Neighborhoods are more rural in character than other DNCP planning areas. Jane Addams forms the agricultural edge of west Fresno and is largely disconnected from the east and south by freeways. This planning area has many auto-oriented motels that have fallen into serious disrepair and are occupied by transitional housing. The Jane Addams Neighborhoods lack neighborhood-scale public open space and recreational space (aside from Roeding Park). It has many vacant lots, and its arterial streets and streets adjacent to Jane Adams Elementary lack curbs, sidewalks, and street trees.

2. **Edison Neighborhoods—**The 1,560-acre Edison Neighborhoods are primarily residential in character and contain some of Fresno's oldest neighborhoods. The neighborhood fabric has been impacted by recent infill projects, including public housing developments and single-family subdivisions; as well as dilapidated buildings that do not face the street and have unkempt front yards. This planning area includes the Fresno Chandler Downtown Airport and a number of industrial buildings located along State Routes 180 and 99, which isolate these neighborhoods from the rest of the City.

3. **Lowell Neighborhood—The** Lowell Neighborhood encompasses 225 acres just north of Downtown. The neighborhood contains some of Fresno's oldest homes and possesses strong historic character, despite inconsistent zoning, inadequate design standards, incompatible infill development, and a proliferation of vacant lots. Mature tree canopies, uniform setbacks, and porched single-family homes and cottages dominate Lowell Neighborhood's streets. Lowell Neighborhood is disconnected from neighborhoods to the north and west by State Routes 180 and 99, but the street grid is interconnected and several north-south corridors connect it to the other adjacent planning areas.

4. **Jefferson Neighborhood—**The 290-acre Jefferson Neighborhood is adjacent to Downtown, is divided into two sections by the BNSF Railroad alignment, and is disconnected from neighborhoods to the north and east by State Routes 41 and 180. Like the Lowell neighborhood to the west, this planning area contains many late 19th and early 20th century homes, but unlike Lowell, it has suffered more damage from demolition and incompatible infill development. As a result, the Jefferson Neighborhood is less cohesive in character. The Jefferson Neighborhood lacks public parks but is home to the Community Regional Medical Center and three schools.

5. **Southeast Neighborhoods—**The 2,400-acre Southeast Neighborhoods are primarily residential and populated with single-family houses with isolated concentrations of multi-family dwellings. The east-west corridors are strip commercial in character and lined by auto-oriented development that lacks cohesion and character. There is a strong historic character along Huntington Boulevard, which is planted with turf and large canopy trees

and is a popular recreation space among community members, but in general, this planning area suffers from a lack of neighborhood identity and a limited number of public parks.

6. **Downtown—**The 1,000-acre Downtown planning area comprises the heart of downtown Fresno and hosts the Fresno Convention Center, Chukchansi Park, hotels, and many local, state, and federal agencies. The Downtown planning area overlaps almost entirely with the FCSP area described below. As the oldest part of Fresno, this planning area contains the most historic resources, as well as many underperforming retail, restaurant, and entertainment uses. It also possesses a high retail vacancy rate and low office and retail lease rates and is inactive outside of business hours. Downtown also lacks street trees and pedestrian streetscapes, which discourages foot traffic.

7. **South Van Ness—**The 390-acre South Van Ness planning area comprises primarily old warehouses and industrial buildings. There are very few residential properties in the South Van Ness, and the planning area is particularly isolated from the rest of the City because of State Route 41, the Union Pacific Railroad tracks, and the development of industrial mega-blocks that interrupt the street network and inhibit vehicular and pedestrian passage. While the early 20th century brick warehouses, industrial buildings, streetlights, and signage contribute to this planning area's identity, there are very few street trees, sidewalks, and curbs. The industrial nature of South Van Ness also contributes to friction with the residential uses and users in adjacent planning areas.

Fulton Corridor Specific Plan

Existing Conditions

For planning purposes, the FCSP has been divided into seven subareas (see Section 3.0, Project Description, Exhibit 3-8), which are among the oldest, most diverse, and most densely developed areas in the City of Fresno (FCSP 2016). The boundaries of the districts were determined by the unique character of each district, which in turn was based largely upon their physical form at the time they were built and the role each played in the context of the City. Following is a brief description of the seven distinct FCSP districts (see Appendix B for a more detailed description of the existing conditions and long-term vision for each district):

1. **Fulton District—**The Fulton District is Fresno's traditional business and commercial center which comprises of rectangular blocks oriented parallel to the Union Pacific Railroad tracks. The historic interconnected street network is disrupted by the railroad tracks and has been closed down to traffic at several locations, most notably Mariposa Street east of the County Courthouse. All of the streets within the Fulton District are two-way, with the exception of M Street, which is one-way. This street and block pattern, coupled with inadequate way-finding signage, confuses many Downtown drivers, especially those not familiar with Downtown. This District includes the former Fulton Mall, which comprised the Fulton Mall and three cross malls consisting of the Merced Mall, Mariposa Mall including Mariposa Plaza, and Kern Mall. The Fulton Mall is currently the subject of reconstruction under the Fulton Mall Reconstruction Project, which will reopen the mall to vehicular traffic. A considerable amount of the Fulton District's building fabric has been demolished and replaced by either vacant land or parking lots. An important exception to this is Fulton

Street, where, with the exception of its northern end, the adjacent building fabric is well intact. Vacancies and blighted conditions persist throughout Downtown, and many of the area's largest buildings remain shuttered and in poor disrepair. The physical configuration of the District is unmistakably that of a metropolitan urban center.

2. **Mural District—**The Mural District is a mostly industrial and commercial district of smaller urban loft buildings that is being reclaimed with fashionable new housing and mixed-use projects. The street grid within the Mural District comprises pedestrian-scaled blocks oriented parallel to the Union Pacific Railroad tracks. This District also sits at the junction between the railroad street grid and the due north-south and east-west grid, opening up many opportunities on corner lots to introduce buildings and facades that mark entrances into Downtown.

3. **Civic Center—**The heart of the Civic Center is the Civic Mall that connects the County Courthouse to City Hall along Mariposa Street with landscaping elements also tying them together. The Civic Mall is an assortment of municipal buildings—some with immense architectural value, and others with minimal architectural character—that have been placed without any architectural or landscape element to unify them. The Civic Center street grid consists of rectangular blocks oriented parallel to the railroad tracks. Beyond the Civic Mall, the rest of the Civic Center is relatively built out, with the exception of several surface parking lots, which compromise the visual and pedestrian character of the area, and Eaton Plaza, an important public park located between the Memorial Auditorium, Fresno Library, Federal Courthouse, and Fresno Police Station.

4. **South Stadium—**South Stadium contains the western portion of Armenian Town, an ethnic enclave that occupied the area between Kern Street, Los Angeles Street, Broadway Street, and O Street. This subarea is largely contained and isolated by the Union Pacific Railroad tracks, State Route 41, and, historically, the Fulton Mall, resulting in less connectivity to the adjacent subareas, although the reopening of Fulton Street will improve connectivity. South Stadium is occupied mainly by one- and two-story buildings that house primarily industrial, warehousing, manufacturing, auto repair, and sales uses. Over the years, many buildings have been demolished and replaced with parking lots and service yards.

5. **Chinatown—**The original, historic portion of Chinatown between Fresno Street and Ventura Avenue consists of a patchwork of vacant lots, parking lots, and isolated buildings, although F Street, Chinatown's main street, is relatively intact, particularly between Tulare Street and Inyo Street. North of Fresno Street, Chinatown consists of relatively large-scale commercial and industrial buildings surrounded by parking lots. South of Ventura Avenue, it consists of a mix of single-family homes and industrial buildings. Chinatown does not have any public parks, although the abundance of vacant land and parking lots provides good opportunities for the transformation of these areas into parks as the need arises.

6. **Armenian Town/Convention Center—**The Armenian Town/Convention Center's street and block network is oriented to the railroad tracks and consists for the most part of rectangular blocks, although the pedestrian scale of its blocks has been compromised by the creation of several megablocks. Mono Street between L and P Streets and N Street between Capitol

Street and Ventura Street have been closed in order to accommodate the Fresno Entertainment and Convention Center and the Radisson Hotel. Much of the subarea has been developed with buildings located at the center of the block, surrounded by large surface parking lots. In addition, several streets have been removed, creating megablocks that inhibit both vehicular and pedestrian access.

7. **Divisadero Triangle—**Originally, the area around Van Ness Avenue and L Street was one of Fresno's wealthiest residential neighborhoods. Several residences from the neighborhood's early years remain along L Street, including the Helm Home, the Bean Home, the Kutner Home, and the Swift Home (now Lisle Funeral Home). Many of these are on the local Historic Register. Like much of the Plan Area, many of the older buildings within the Divisadero Triangle have been demolished and replaced by parking or vacant lots. The District has suffered from poor patterns of redevelopment, yet contains well-formed streets, a variety of uses, and distinctive buildings, including housing.

Scenic Drive and Corridors

According to the California Scenic Highway Program, there are no officially designated State Scenic Highways in the City of Fresno (California Scenic Highway Program 2015). Within Fresno County, however, there are four Eligible State Scenic Highways:

1. State Route 33 (from State Route 198 near Coalinga to State Route 198 near Oilfields), located southwest of the City of Fresno.
2. State Route 168 (from State Route 65 near Clovis to Huntington Lake), located northeast of the City of Fresno.
3. State Route 180 (from State Route 65 near Minkler to the Kings Canyon National Park Boundary near Cedar Grove), located east of the City of Fresno.
4. State Route 198 (from State Route 33 near Oilfields to Interstate 5), located southwest of the City of Fresno.

Within the City of Fresno, scenic corridors are identified in the Fresno General Plan (Policy MT-3-a. Scenic Corridors). The proposed future of these corridors is addressed specifically in the Urban Form Land Use and Design chapter of the General Plan. The General Plan policy seeks to implement measures to preserve and enhance scenic qualities along scenic corridors or boulevards, including:

- Van Ness Boulevard—Weldon to Shaw Avenues
- Van Ness Extension—Shaw Avenue to the San Joaquin River Bluff
- Kearney Boulevard—Fresno Street to Polk Avenue
- Van Ness-Fulton couplet—Weldon Avenue to Divisadero
- Butler Avenue—Peach to Fowler Avenues
- Minnewawa Avenue—Belmont Avenue to Central Canal
- Huntington Boulevard—First Street to Cedar Avenue
- Shepherd Avenue—Friant Road to Willow Avenue
- Friant Road—Audubon to Millerton Roads

- Tulare Avenue—Sunnyside to Armstrong Avenues
- Ashlan Avenue—Palm to Maroa Avenues

The Urban Form and Land Use Design chapter of the General Plan also defines "gateways" within the City, which are areas with unified design requirements for gateways to welcome travelers to the City's activity centers. Gateway route designation will be considered for application to key access routes such as State Routes 99, 41, 168, and 180; passenger rail rights-of-way; Peach Avenue and Clinton Way where air travelers enter Fresno; Van Ness Avenue; Fulton, Divisadero, Tulare, and Fresno Streets; and Blackstone, Abby, Shaw, and Herndon Avenues.

Viewsheds

There is a steady nominal elevation drop from northeast to southwest of the City of Fresno. The elevation drops approximately 150 feet over 18.5 miles, and the resulting slope is virtually flat (0.15 percent). The areas surrounding the City are visible from elevated structures in the Downtown Neighborhoods but are not readily visible at ground level. Views from the foothills include portions of the City (including the FCSP and DNCP areas), but views of the foothills from the City are limited.

Scenic Vistas

A scenic vista is a viewpoint that provides a distant view of highly valued natural or man-made landscape features for the benefit of the general public. Typical scenic vistas are locations where views of rivers, hillsides, and open space areas can be obtained as well as locations where valued urban landscape features can be viewed in the distance.

Based on a review of the Fresno General Plan, the City has not identified or designated scenic vistas. However, the General Plan Update identifies six locations as publicly valued scenic features along the San Joaquin River bluffs. Although no official scenic vista has been designated, views of the downtown skyline and the foothills of the Sierra Nevada Mountain Range can be accessed from within the Plan areas. However, the majority of these available views are from private property. These distant views of the Sierra Nevada foothills are impeded many days during the year by the poor air quality in the Fresno region. The existing buildings in Downtown Fresno create a unique skyline within the San Joaquin Valley. Because of the valley's relatively flat topography and existing development and landscaping, views of the unique skyline are primarily limited to areas within the Downtown Fresno area. The interchanges at the freeways that border Downtown Fresno provide elevated views of the existing high rises, while views of the existing low-rise buildings are generally impeded by vegetation along these roadways.

Scenic Resources

Scenic resources include landscapes and features that are visually or aesthetically pleasing. They contribute positively to a distinct community or region. These resources produce a visual benefit upon communities. The scenic resources within the Plan areas include landscaped open spaces such as parks and historically agricultural land. Historic structures in Downtown Fresno buildings also represent scenic resources because they provide a unique skyline.

Light and Glare

The Plan areas are urbanized and as such contain significant sources of light and glare, including streetlights, parking lots, interior lights from Downtown buildings, lighted recreational facilities, and light emitted from residential and non-residential buildings. More limited lighting is present in the western portion of the Plan areas near the rural residential and agricultural areas to the west. Buildings and structures made with glass, metal, and polished exterior or roofing materials exist throughout the Plan areas. These surfaces, as well as the manmade light sources listed above, could result in localized glare.

Existing Visual Character

Visual character is a description of the attributes within a specific area. The Plan areas, located in downtown contain the bulk of the various distinctive visual attributes or characteristics of the City of Fresno as the Downtown area is the urban core of the City with high-rise buildings that contain a variety of land uses. The most common building types within Downtown are mixed-use buildings, theaters, civic/institutional buildings, and industrial warehouses. The Downtown area contains many structures that provide historic design elements. The DNCP and FCSP provide detailed descriptions of the existing visual character in each of the districts and subdistricts, described above.

Physical Conditions and Key Aesthetic Deficits of the DNCP and FCSP Areas

The following describes the existing key aesthetic deficits of the Plan areas (DNCP June 2016):

- Car-oriented streets. Over time, corridors have been transformed into conduits for moving cars as efficiently as possible, compromising the character and value of the buildings that line them and dividing neighborhoods from one another.
- Car-oriented buildings. Many commercial buildings, particularly those built after 1960, have parking lots between the building and the sidewalk, compromising the pedestrian character of the street.
- A significant number of dilapidated and sub-standard buildings. There are a large number of buildings in the Downtown Neighborhoods that are in need of improvement.
- Significant number of code violations. Many buildings within the Downtown Neighborhoods violate zoning and health codes.
- Incompatible land uses. Numerous incompatibilities with the type and location of industrial uses were identified throughout the planning process.
- Incorrect land use designations. Traditionally, residential streets in much of the Plan areas were designated for commercial uses. These new designations made the existing residential uses “nonconforming,” when in fact it was the zoning itself that did not conform to the character of the neighborhood.
- Incompatible buildings. Historically, the development pattern within the Plan areas consisted primarily of single-family homes, interspersed with compatibly designed multi-unit buildings, such as duplexes, quadplexes, and bungalow courts, that were virtually indistinguishable in form and design from their single-family neighbors.

- Lack of design standards. Many existing buildings have been renovated using materials and styles that are inconsistent with the predominant neighborhood character.
- Areas with physical and economic blight. There are conditions of physical and economic blight throughout the Plan areas. Physical barriers that divide the Downtown Neighborhoods. The Plan areas contain a number of locations where transportation infrastructure physically divides the Downtown Neighborhoods.

5.1.3 - Regulatory Setting

State Regulations

State Scenic Highway Program

The Scenic Highway Program was created in 1963 with the purpose of protecting and enhancing the natural scenic beauty of California highways and adjacent corridors, through special conservation treatment. The state laws governing the Scenic Highway Program are in Section 260-263 of the Streets and Highways Code. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been officially designated. The status of a proposed state scenic highway changes from eligible to officially designated when the local governing body applies to the California Department of Transportation (Caltrans) for scenic highway approval, adopts a Corridor Protection Program, and receives notification that the highway has been officially designated a Scenic Highway.

Local Policies

The principal tools used by the City of Fresno to regulate urban design are the Fresno General Plan and Citywide Development Code found in the Fresno Municipal Code (FMC). The General Plan governs the distribution and intensity of land uses, sets the principles for evaluating development, and guides the development and growth of the City. The Citywide Development Code establishes specific development criteria for each zoning district (i.e., parking requirements, walls, fencing, setbacks, and building height).

The DNCP (Appendix A) is an extension of the Fresno General Plan that provides updated and refined policy direction for Fresno's Downtown and the neighborhoods immediately adjacent to it.

The FCSP (Appendix B) translates the policy direction of the Fresno General Plan and the DNCP into detailed goals, policies, and actions for the revitalization of the heart of Downtown. The FCSP is more detailed than the DNCP and has been drafted to fully implement the goals, policies, and objectives of the DNCP. To the extent there appears to be any conflict between these two Plans, the FCSP takes precedence.

The DDC is a form-based code that contains most of the standards and requirements for development and land use activity within the DNCP and FCSP areas and regulates development patterns consistent with the existing scale and character of the plan areas' various neighborhoods districts and corridors. Form-based codes address the relationship between building facades and the public realm (streets and parks), the form and massing of buildings in relation to one another, and the scale and types of streets and blocks.

City of Fresno General Plan

The Fresno General Plan is the City's primary policy planning document. Through its twelve elements, the General Plan provides the framework for the management and utilization of the City's physical, economic, and human resources. Each element contains goals, policies, and implementation measures that guide development within the City.

The Fresno General Plan includes the following objectives and policies that pertain to aesthetics and visual resources:

Urban Form, Land Use and Design Element

- **Policy UF-1-c:** Identifiable City Structure. Focus integrated and ongoing planning efforts to achieve an identifiable city structure, comprised of a concentration of buildings, people, and pedestrian-oriented activity in Downtown; along a small number of prominent east-west and north-south transit-oriented, mixed-use corridors with distinctive and strategically located Activity Centers; and in existing and new neighborhoods augmented with parks and connected by multi-purpose trails and tree lined bike lanes and streets.
- **Policy UF-1-e.** Unique Neighborhoods. Promote and protect unique neighborhoods and mixed use areas throughout Fresno that respect and support various ethnic, cultural and historic enclaves; provide a range of housing options, including furthering affordable housing opportunities; and convey a unique character and lifestyle attractive to Fresnans. Support unique areas through more specific planning processes that directly engage community members in creative and innovative design efforts.
- **Objective UF-2.** Enhance the unique sense of character and identity of the different subareas of the Downtown neighborhoods.
- **Objective UF-8.** Develop each of Downtown's neighborhoods and districts, according to its unique character.
- **Policy UF-12-g.** Impacts on Surrounding Uses. Establish design standards and buffering requirements for high-intensity Activity Centers to protect surrounding residential uses from increased impacts from traffic noise and vehicle emissions, visual intrusion, interruption of view and air movement, and encroachment upon solar access.
- **Policy UF-13-a.** Future Planning to Require Design Principles. Require future planning, such as Specific Plans, neighborhood plans or Concept Plans, for Development Areas designated by the General Plan to include urban design principles and standards consistent with the Urban Form, Land Use, and Design Element.
- **Policy UF-1-f.** Complete Neighborhoods, Densities, and Development Standards. Use Complete Neighborhood design concepts, development standards, and project reviews outside the Downtown planning area to achieve the development of Complete Neighborhoods and the residential density targets of the General Plan.
- **Objective UF-14.** Create an urban form that facilitates multi-modal connectivity.
- **Policy UF-14-a.** Design Guidelines for Walkability. Develop and use design guidelines and standards for a walkable and pedestrian-scaled environment with a network of streets and connections for pedestrians and bicyclists, as well as transit and autos.

- **Objective LU-1.** Establish a comprehensive citywide land use planning strategy to meet economic development objectives, achieve efficient and equitable use of resources and infrastructure, and create an attractive living environment.
- **Policy LU-1-b.** Land Use Definition and Compatibility. Include zoning districts and standards in the Citywide Development Code that provide for the General Plan land use designations and create appropriate transitions or buffers between new development with existing uses, taking into consideration the health and safety of the community.
- **Policy LU-1-a.** Promote Development within the Existing City Limits as of December 31, 2012. Promote new development, infill, and rehabilitation of existing building stock in the Downtown planning area, along BRT corridors, in established neighborhoods generally south of Herndon Avenue, and on other infill sites and vacant land within the City.
- **Objective LU-2.** Plan for infill development that includes a range of housing types, building forms, and land uses to meet the needs of both current and future residents.
- **Policy LU-2-c.** Infill Design Toolkit. Develop and distribute an infill design toolkit, consistent with the City's Infill Development Act to support and encourage infill development.
- **Policy LU-2-e.** Neighborhood Preservation. Incorporate standards in the Citywide Development Code to preserve the existing small-scale residential quality of older neighborhoods.
- **Policy LU-3-b.** Mixed-Use Urban Corridors that Connect the Downtown planning area. Support the development of mixed-use urban corridors that connect the Downtown planning area with the greater Fresno-Clovis Metropolitan Area with functional, enduring, and desirable urban qualities along the Blackstone Avenue, Shaw Avenue, California Avenue, and Ventura Avenue/Kings Canyon Road corridors.
- **Policy LU-4-a.** Neighborhood Nuisance Abatement. Continue proactive and responsive code enforcement and nuisance abatement programs to improve the attractiveness of residential neighborhoods.
- **Policy LU-5-g.** Scale and Character of New Development. Allow new development in or adjacent to established neighborhoods that is compatible in scale and character with the surrounding area by promoting a transition in scale and architectural character between new buildings and established neighborhoods, as well as integrating pedestrian circulation and vehicular routes.
- **Policy LU-6-a.** Design of Commercial Development. Foster high quality design, diversity, and a mix of amenities in new development with uses through the consideration of guidelines, regulations and design review procedures.
- **Policy LU-6-b.** Commercial Development Guidelines. Consider adopting commercial development guidelines to assure high quality design and site planning for large commercial developments, consistent with the Urban Form policies of the General Plan.
- **Policy LU-6-d.** Neighborhood and Community Commercial Center Design. Plan for neighborhood mixed use and community commercial uses to implement the Urban Form concepts of the General Plan, promote the stability and identity of neighborhood and community shopping areas, and allow efficient access without compromising the operational effectiveness of the street system.
  - Neighborhoods will be anchored by community commercial centers with a mix of uses that meet the area's needs and create a sense of place.

  - Community commercial centers will be located within Activity Centers.
- **Policy LU-6-e.** Regional Center Planning and Design. Promote economic growth with regional commercial centers.
  - New regional commercial centers will be located with access to State Routes and/or other major transportation facilities to ensure access from throughout the region.
  - Regional shopping centers will have internally-unified building design, landscaping, and signage standards.
- **Policy LU-6-f.** Auto-Oriented Commercial Uses. Direct highway-oriented and auto-serving commercial uses to locations that are compatible with the Urban Form policies of the General Plan. Ensure adequate buffering measures for adjacent residential uses noise, glare, odors, and dust.
- **Policy LU-9-e.** Downtown Sightline. Require new development to preserve existing sightlines to Downtown to the extent feasible.
- **Policy LU-9-f.** View Corridors. Promote new view corridors that highlight the Downtown skyline.
- **Objective D-1.** Provide and maintain an urban image that creates a "sense of place" throughout Fresno.
- **Policy D-1-d.** Public Art. Continue to promote a citywide public art program that contributes to an awareness of the City's history and culture.
- **Policy D-1-e.** Graphic Identity. Continue the preservation, promotion, procurement and strategic location of landmarks, monuments and artwork that provide orientation and represent Fresno's cultural heritage and artistic values.
- **Policy D-1-h.** Screening of Parking. Continue requiring all new development with parking in Activity Centers and along corridors to be screened or concealed. Locate principal pedestrian entrances to new non-residential buildings on the sidewalk; any entrances from parking areas should be incidental or emergency use only.
- **Objective D-2.** Enhance the visual image of all "gateway" routes entering the Fresno Planning Area.
- **Policy D-2-a.** Design Requirements for Gateways. Consider unified design requirements for gateways to welcome travelers to the City's Activity Centers.
- **Policy D-2-c.** Highway Beautification. Work with Caltrans, the Fresno Council of Governments, Tree Fresno, neighboring jurisdictions, and other organizations to obtain funding for highway beautification programs.
- **Objective D-3.** Create unified plans for Green Streets, using distinctive features reflecting Fresno's landscape heritage.
- **Policy D-3-a.** Green Street Tree Planting. Create a Green Street Tree Planting Program, with a well-balanced variety and spacing of trees to establish continuous shading and visual continuity for each streetscape. Strive to achieve coherent linkages between public and private spaces, prioritizing tree planting along tree-deficient Arterial and Collector Roadways in neighborhoods characterized by lower per capita rates of vehicle ownership.
- **Policy D-3-b.** Funding for Green Street Tree Planting Program. Pursue funding for the Green Street Tree Planting Program, including landscaping of median islands.
- **Policy D-3-c.** Local Streets as Urban Parkways. Develop local streets as "urban parkways," where appropriate, with landscaping and pedestrian spaces.

- **Policy D-3-d.** Undergrounding Utilities. Partner with utility companies to continue to pursue the undergrounding of overhead utilities as feasible.
- **Objective D-4.** Preserve and strengthen Fresno's overall image through design review and create a safe, walkable and attractive urban environment for the current and future generations of residents.
- **Policy D-4-f.** Design Compatibility with Residential Uses. Strive to ensure that all new non-residential land uses are developed and maintained in a manner complementary to and compatible with adjacent residential land uses, to minimize interface problems with the surrounding environment and to be compatible with public facilities and services.
- **Objective D-5.** Maintain and improve community appearance through programs that prevent and abate blighting influences.
- **Policy D-5-a.** Code Enforcement. Continue enforcement of the Fresno Municipal Code to remove or abate public nuisances in a timely manner.
- **Policy D-5-b.** Clean Streets. Promote community partnerships and continued City efforts toward litter clean-up and abatement of trash stockpiles on public and private streets.
- **Policy D-5-c.** Facade Improvements. Pursue funding for, and support of, building facade improvement programs.
- **Policy D-5-d.** Graffiti Prevention and Abatement. Seek ways to end graffiti, continue and expand the City's effective Graffiti Abatement Program.
- **Policy D-6-b.** Consider adopting and implementing incentives for, and support efforts by, private development to incorporate culturally-specific architectural elements in areas with a predominant ethnic population.

Mobility and Transportation Element

- **Objective MT-3.** Identify, promote and preserve scenic or aesthetically unique corridors by application of appropriate policies and regulations.
- **Policy MT-3-a.** Scenic Corridors. Implement measures to preserve and enhance scenic qualities along scenic corridors or boulevards, including:
  - Van Ness Boulevard—Weldon to Shaw Avenues
  - Van Ness Extension—Shaw Avenue to the San Joaquin River Bluff
  - Kearney Boulevard—Fresno Street to Polk Avenue
  - Van Ness-Fulton couplet—Weldon Avenue to Divisadero
  - Butler Avenue—Peach to Fowler Avenues
  - Minnewawa Avenue—Belmont Avenue to Central Canal
  - Huntington Boulevard—First Street to Cedar Avenue
  - Shepherd Avenue—Friant Road to Willow Avenue
  - Audubon Drive—Blackstone to Herndon Avenues
  - Friant Road—Audubon to Millerton Roads
  - Tulare Avenue—Sunnyside to Armstrong Avenues
  - Ashlan Avenue—Palm to Maroa Avenues
- **Policy MT-3-b.** Preserve street trees lining designated scenic corridors or boulevards. Replace trees of the predominant type and in a comparable pattern to existing plantings if there is no detriment to public safety.

Projects within the DNCP and FCSP would be required to comply with the above listed General Plan policies and objectives. The DNCP and FCSP have been prepared to comply with and expand upon these General Plan policies and objectives, and to further provide for their implementation through expanded policies specific to the Plan areas. These provisions of the DNCP and FCSP have been proposed in order to ensure that the aesthetic environment of the Downtown Neighborhoods is preserved, enhanced, and improved with implementation of the Plans and DDC.

5.1.4 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether impacts to aesthetics are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

a) Have a substantial adverse effect on a scenic vista?

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway?

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?

5.1.5 - Impact Analysis, Mitigation Measures, and Level of Significance After Mitigation

Scenic Vista

Impact AES-1:	**The project would not have a substantial adverse effect on a scenic vista.**

Project-specific Impact Analysis

Less than significant impact. A scenic vista is a viewpoint that provides a distant view of highly valued natural or man-made landscape features for the benefit of the general public. Typical scenic vistas are locations where views of rivers, hillsides, and open space areas can be obtained as well as locations where valued urban landscape features can be viewed in the distance. Scenic vistas are generally formally recognized or designated to ensure that their views are protected.

The Fresno General Plan does not identify any locations within the City as a scenic vista. However, the General Plan Update identifies six locations as publicly valued scenic features along the San Joaquin River bluffs. The San Joaquin River is located approximately 6 miles northwest of the DNCP and FCSP areas and is not visible from the Plan areas, due to the flat topography. Implementation of the DNCP and FCSP would therefore not impede views of these City-designated scenic features.

The foothills of the Sierra Nevada are located over 10 miles northwest of the DNCP and FCSP areas, and are not readily publicly available due to this distance, and the relatively flat topography of the Plan areas. As discussed above, views of the San Joaquin River bluffs are not available from the Plan areas, and neither are views of the San Joaquin River.

The existing buildings in Downtown Fresno create a unique skyline within the San Joaquin Valley. Because of the valley's relatively flat topography and existing development and landscaping, views of the unique skyline are primarily limited to areas within the Downtown Fresno area. The interchanges at the freeways that border Downtown Fresno provide elevated views of the existing high-rises, while views of the existing low-rise buildings are generally impeded by vegetation along these roadways.

Implementation of the DNCP and FCSP and the associated future development in the DNCP and FCSP could introduce additional high rise buildings in the Plan areas. However, the anticipated future development under the proposed DNCP and FCSP is not anticipated to further obstruct publicly available views of the Downtown buildings from the areas within and near the Plan areas.

Implementation of the DNCP and FCSP would therefore have no impact on a scenic vista. Moreover, implementation of the DNCP and FCSP would have no impact on publicly valued scenic features from within the Plan areas and a less than significant impact on views of the Downtown buildings from areas immediately surrounding the Plan areas.

Cumulative Impact Analysis

Less than significant impact. Because there are no designated scenic vistas within the City of Fresno, there would be no project-related cumulative impact on a scenic vista caused by development within the DNCP and FCSP areas. Therefore, development under the DNCP and FCSP, in combination with the other development anticipated by the Fresno General Plan, would not have a cumulative impact on scenic vistas. Although the City has designated publicly valued scenic features along the San Joaquin River Bluffs, these bluffs are not visible from the Plan areas, nor would development in the Plan areas obstruct views of these features. Because the project itself would have no impact on these publicly valued scenic features, the project's contribution to cumulative effects on these resources would not be cumulatively considerable.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Scenic Resources within a State Scenic Highway

Impact AES-2:	**The project would not substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic building within a state scenic highway.**

Project-specific Impact Analysis

Less than significant impact. Scenic resources include landscapes and features that are visually or aesthetically pleasing, and that contribute positively to a distinct community or region. Scenic highways are California highways designated by a local governing body and protected by the State Scenic Highway Program for the purpose of protecting and enhancing the natural scenic beauty of California highways and adjacent corridors through special conservation treatment.

As described above, there are no officially designated State Scenic Highways in the City of Fresno (California State Scenic Highway Program 2015). While scenic resources such as landscaping trees, historic buildings, and the downtown skyline exist within the Plan areas, they are not within views that are available from a state scenic highway. There are four eligible State Scenic Highways within Fresno County as described below. The DNCP, FCSP, and DDC would not affect views from those traveling on these highways due to distance from the DNCP and FCSP areas. As a result, implementation of the DNCP, FCSP, and DDC would have a less than significant impact on scenic resources located within a State Scenic Highway.

Cumulative Impact Analysis

Less than significant impact. As described above, implementation of the DNCP, FCSP, and DDC would have no impacts on scenic resources within State Scenic Highways because none exist within the City of Fresno. There are also no designated State Scenic Highways within Fresno County, although there are four Eligible State Scenic Highways:

1. State Route 33 (from State Route 198 near Coalinga to State Route 198 near Oilfields), located southwest of the City of Fresno
2. State Route 168 (from State Route 65 near Clovis to Huntington Lake), located northeast of the City of Fresno
3. State Route 180 (from State Route 65 near Minkler to Kings Canyon National Park Boundary near Cedar Grove), located more than 5 miles east of the City of Fresno
4. State Route 198 (from State Route 33 near Oilfields to Interstate 5), located southwest of the City of Fresno

It may be possible for those traveling on the nearby State Route 180 (Eligible State Highway) to view the Downtown skyline, a scenic resource, from the roadway. Development in areas outside of the DNCP and FCSP areas could alter views of the Downtown skyline from this area. However, because of the City's distance from this section of State Route 180 and the fact that implementation of the DNCP, FCSP, and DDC would not significantly alter the Downtown skyline, project impacts are deemed less than cumulatively considerable. Therefore, the project would have a less than significant cumulative impact on scenic resources within State Scenic Highways.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Visual Character

Impact AES-3: The project would not substantially degrade the existing visual character or quality of the site and its surroundings.

Project-specific Impact Analysis

Less than significant impact. Visual character is a description of the attributes within a specific area. The Downtown area is the urban core of the City with high-rise buildings that contain a variety of land uses. The most common building types within Downtown are mixed-use buildings, theaters, civic/institutional buildings, and industrial warehouses.

The former Fulton Mall comprised the Fulton Mall and three cross malls consisting of the Merced Mall, Mariposa Mall including Mariposa Plaza, and Kern Mall. The Fulton Mall is currently the subject of reconstruction under the Fulton Mall Reconstruction Project, which will reopen the mall to vehicular traffic via a two-lane, enhanced street with oversize sidewalks, stately trees, and on-street parking. The reconstruction of Fulton Mall will enhance the visual character and quality of the area and will indirectly spur enhancement to the surrounding through revitalization.

The proposed DNCP and FCSP, as well as the DDC as the implementing ordinance for the two Plans, are location-specific continuations of the Fresno General Plan and Citywide Development Code. Implementation of the DNCP, FCSP, and DDC would result in a substantial alteration to the existing urban form and character of the Plan areas. The DNCP and FCSP shape how this alteration will be implemented over the next 20 years. The DNCP and FCSP consist of unique and customized standards that enable the City to shape or reshape its streets and public spaces and property owners to develop or redevelop their properties according to the vision of the General Plan and Citywide Development Code. These substantial alterations to the visual character of the Plan areas form a large component of the Plans' intent to improve the quality of life for Downtown Neighborhoods residents, and they were selected through a public visioning process described in the Plans, provided as Appendix A and Appendix B of this EIR.

The DNCP and FCSP will provide for a consistent increase in residential units and buildings occupied by non-residential uses in the Downtown neighborhoods. These non-residential uses include commercial, office, public facilities, mixed uses, and industrial. Based on the General Plan, roughly half of the future residential units will be located within Downtown Fresno, mixed-use centers, and along major transit corridors such as Blackstone Avenue and Ventura Avenue-Kings Canyon Road. Infill development within the Plan areas would change the Downtown skyline and building composition by allowing changes to the building heights and massing from what currently exists.

The Urban Form and Land Use chapter of the DNCP establishes land use designations for the Downtown neighborhoods. The Community Plan describes existing and intended land uses for the DNCP Districts. The land use designation criteria describe the allowable heights and massing for development in these areas as part of the intended physical character for each designation. This information is provided in Table 2-2, Summary of Land Use Designations, of the DNCP (see Appendix A).

Similarly, the Building and Development chapter of the FCSP describes the intended physical character of the land use designations developed as part of the FCSP. The height of buildings within each of these land use designations is provided in Table 6.4A, Summary of Land Use Designations of the FCSP (see Appendix B).

Fulton Mall

The former Fulton Mall comprised the Fulton Mall and three cross malls consisting of the Merced Mall, Mariposa Mall including Mariposa Plaza, and Kern Mall. The Fulton Mall is currently the subject of reconstruction under the Fulton Mall Reconstruction Project, which will reopen the mall to vehicular traffic via a two-lane, enhanced street with oversize sidewalks, stately trees, and on-street parking. The reconstruction of Fulton Mall will enhance the visual character and quality of the area and will indirectly spur enhancement to the surrounding through revitalization. To reduce potential impacts on the visual character and quality of the DNCP area, the Community Plan includes a series of goals and policies within the Urban Form and Land Use; Parks, Open Space, and Streetscape; and Historic Resources chapters, which are summarized below and provided in their entirety in Appendix A. To reduce potential impacts on the visual character and quality of the FCSP area, the Specific Plan includes a series of goals within the Public Realm, Historic Resources, and Building and Development sections, which are summarized below and provided in their entirety in Appendix B.

DNCP Chapter 2: Urban Form and Land Use

- **Goal 2.1:** Enhance the unique sense of character and identity of the Downtown Neighborhoods' different planning areas.

  Intent: To preserve the distinct neighborhood character of the different areas within the Downtown Neighborhoods—Lowell, Edison, Southeast Fresno, Jefferson, and Jane Addams, Downtown Fresno and South Van Ness.

- **Goal 2.4:** Promote a greater concentration of buildings and people in Downtown Fresno.

Intent: To create a lively Downtown with more pedestrian activity, "eyes on the street," more economic and entertainment activity, and thus a more attractive environment for visitors, residents, and businesses.

- **Goal 2.6:** Develop each of Downtown's subareas, as established by the FCSP, according to its unique character.

  Intent: To support the unique identity and character of each of Downtown's identified sub-districts as defined in the FCSP: the Fulton District, Chinatown, the Mural District, South Stadium, Armenian Town/Convention Center and Divisadero Triangle.

- **Goal 2.9:** Create a variety of housing types in the Downtown Neighborhoods.

  Intent: To introduce additional, pedestrian-friendly, contextually appropriate housing in the Downtown Neighborhoods in order to revitalize existing neighborhoods, generate a well-rounded resident population, and restore the late 19th and early-20th century neighborhood pattern of Community Plan Area's residential areas.

- **Goal 2.11:** Revitalize the corridors to strengthen neighborhood identity and appeal.

  Intent: To transform the Downtown Neighborhood's corridors into unique, tree-lined, multi-modal, pedestrian-friendly thoroughfares.

- **Goal 2.13:** Create a safe and attractive environment for residents and visitors to the Downtown Neighborhoods.

  Intent: To reduce or minimize conditions of blight and take steps necessary to address the significant number of code violations in the Downtown Neighborhoods.

- **Goal 2.16:** Require high quality building design.

  Intent: To introduce buildings that contribute to the late 19th and early-20th century form and character of the Downtown Neighborhoods and are also significant, lasting economic assets.

- **Goal 2.18:** Interconnect the Downtown Neighborhoods with great streets and beautiful public spaces.

  Intent: To transform the Downtown Neighborhoods by improving the urban forest, expanding and improving parks and open spaces, and creating pedestrian, transit, and bicycle oriented streets that also continue to accommodate automobiles.

DNCP Chapter 4: Parks, Open Space, and Streetscape

- **Goal 4.1**: Use landscaping to generate unique and distinct character for each of the Community Plan Area's various neighborhoods, districts, and corridors.

  Intent: To use landscape and street trees to give each neighborhood, district, and corridor a unique and easily identifiable character, to engender neighborhood pride, and to aid in navigation for drivers, cyclists, and pedestrians.

- **Policy 4.1.1**: As resources become available, infill missing street trees according to the unique character of each of the Community Plan Area's neighborhoods, districts, and corridors.
- **Policy 4.1.2**: Continue to coordinate street lighting spacing with street tree spacing according to the FMC by placing them at least 20 feet from trees.

- **Policy 4.1.4**: Use street trees and landscape to define principle gateways into each of the Downtown Neighborhoods' planning areas.
- **Policy 4.1.5:** Use gateway signage and monuments to mark entry into the Community Plan Area's various neighborhoods and districts. Gateway signage and monuments should be constructed of permanent and durable materials.

FCSP Chapter 8: Public Realm

Section 8.3 Open Space Improvements

- **Goal 8-1**: Increase access to and improve the quality of Downtown's existing parks, plazas, and open spaces.
- **Goal 8-2**: Introduce a variety of new public parks and open spaces throughout Downtown as valuable amenities for residents, workers, and visitors.

Section 8.4 Streetscape Enhancements

- **Goal 8-4**: Enhance the Downtown streetscape through the introduction of appropriate street trees.
- **Goal 8-8**: Generate a safe, inviting, interconnected walkable environment.
- **Goal 8-12**: Weave art and culture into the fabric of Downtown everyday life by nurturing creative and artistic expression in the public realm.

DNCP Chapter 6: Historic and Cultural Resources

- **Goal 6.2 (Similar to FCSP Goal 7-2)**: Protect historic and cultural resources from demolition and inappropriate alterations.

  Intent: To strengthen the procedures and mechanisms that will help protect historic resources. Inappropriate alterations and/or additions to historic resources raise important concerns. Historic resources, and/or the context in which they are meaningful, may be damaged due to alterations, additions or demolition.

- **Policy 6.2.1:** Preserve, rehabilitate, and reuse historic resources with materials and finishes consistent with their original design.
- **Policy 6.2.2:** As resources become available, protect the unique historic resources in each of Downtown Fresno's planning areas as a means of enhancing the unique identity and character of each planning area.
- **Policy 6.2.3:** Provide educational forums for policy makers that stress the role of preservation as an economic tool in revitalization.
- **Policy 6.2.4:** Discourage the demolition or inappropriate alteration of potential historic resources and encourage their appropriate renovation by providing guidance and incentives for rehabilitation and compatible alterations.
- **Policy 6.2.8**: Protect historic and cultural resources in each of the Downtown Neighborhoods' planning areas.
  - Use Roeding Park and its historic features as a focal point for redevelopment of the Jane Addams area.
  - Ensure that Roeding Park and the Fresno Chaffee Zoo are preserved and enhanced as regional destinations.

- Rehabilitate the historic portions of Roeding Park according to the Secretary of the Interior's Standards to preserve this outstanding example of landscape design and historically-significant arboretum.
- Preserve, rehabilitate, and reuse the historic industrial buildings in the South Van Ness planning area.
- Designate Kearney Boulevard as a Scenic Route to further protect its scenic qualities and reestablish the Boulevard as an important address within Fresno.
- Begin the process to designate the three potential districts in Lowell that were determined to be eligiblefor listing on the local register as historic districts in the 2008 GPA survey. Designation of historic districts requires the consent of a majority of the property owners within the proposed district.

- **Goal 6.3:** Protect historic resources and their setting from incompatible new development within historically sensitive areas.
  Intent: The value of a historic structure is greatly diminished if it is surrounded by incompatible more recent development. When new buildings are introduced adjacent to historic resources, it is important that they are designed in a manner that reinforces the historic character of the area.
- **Policy 6.3.1:** As resources become available, preserve, rehabilitate, and reuse historic resources consistent with their original design.
- **Policy 6.3.2:** As resources become available, restore and maintain the historic character of neighborhoods.
- **Policy 6.3.3:** Require new development to be compatible with the massing, scale, setbacks, and pedestrian-oriented disposition of adjacent historic resources.
- **Policy 6.3.4:** Pursue stricter code enforcement to eliminate inappropriate alterations (including "stucco wraps").

FCSP Chapter 6: Building and Development

- **Goal 6-2:** Transform the Downtown into a vibrant set of neighborhoods and districts.
- **Policy 6-2-1:** Introduce higher-density housing, office, retail, restaurant, entertainment, and hotel uses.
- **Policy 6-2-2:** Infill Downtown with buildings that are compatible with the existing physical, cultural, and historical context and that mitigate Fresno's climate.
- **Goal 6-9:** Require high quality building design.
- **Policy 6-9-1:** Permit new buildings with contemporary and innovative architectural designs are permitted, provided they utilize high-quality materials and contribute to a walkable attractive, urban environment.
- **Goal 6-10:** Generate high quality, pedestrian-oriented public space in Downtown.
- **Policy 6-10-3:** Enhance the visual continuity of streets to be pedestrian-oriented, promoting activity at the street level.
- **Policy 6-10-4:** Require that parking structures constructed adjacent to any street frontage or pedestrian way contain ground floor tenant spaces and human-scale design elements of public interest along the sidewalk level.
- **Policy 6-10-5:** In conformance with the Citywide Development Code require parking and services to be accessed from alleys.

- **Policy 6-10-6:** Prohibit the erection of new billboards within the Specific Plan area, with the exception of billboards on city-owned property which are part of an agreement to eliminate multiple billboards in other places.

Chapter 1 of the DNCP describes a "Planning Area by Planning Area Transformation" with a vision and intended land use activity range for each of the planning areas outlined above. The Planning Area by Planning Area Transformation describes improvements for urban form and land use; transportation; parks, open space and streetscape; infrastructure and natural resources; health and wellness; and historic and cultural resources for each planning area. These improvements would in turn enhance and improve the aesthetic setting of the Downtown area.

Chapter 2 of the FCSP outlines design principles for the specific plan area, intended to enhance a cohesive visual improvement within the subareas of the FCSP. The FCSP also identifies open space and historic resource improvements for the plan area that would contribute to the aesthetic quality of the FCSP. A number of the Near Term Priority Projects identified in Chapter 5 of the FCSP have aesthetic improvement implications for the plan area, including the revitalization of several historic buildings.

Implementation of the DNCP and FCSP goals, policies, and specific zone requirements with aesthetic considerations will serve to reduce potential impacts to the visual character and quality of the Plan areas. Although implementation of the Plans and DDC will allow for greater building height and massing, the intent of the Plans is to ensure that growth within the Plan areas through Year 2035 occurs in a sustainable and aesthetically pleasing way, considering balance with existing character and historic resources. Because implementation of the DNCP and FCSP would include implementation of these aesthetic policies, goals, and requirements, impacts on visual character and quality are considered less than significant.

Cumulative Impact Analysis

Less than significant impact. The revitalization of the Plan areas through the goals and policies of the DNCP and the design principles in the FCSP are intended to enhance and improve the aesthetic quality of the downtown area and are not anticipated to have visual character impacts on the broader City of Fresno area. The implementation of the DNCP, FCSP, and DDC and the reconstruction of Fulton Mall would not have cumulative visual alteration impacts within the City of Fresno and would not be cumulatively considerable. Therefore, the project would result in a less than significant cumulative impact related to the existing visual character of the City of Fresno.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Light or Glare

Impact AES-4:	**The project would create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.**

Project-specific Impact Analysis

Downtown Neighborhoods Community Plan

Potentially significant impact. Development in accordance with the DNCP will result in land use changes by increasing densities and intensities of land uses within the Plan area. These land use changes include the development of new residential and non-residential land uses.

Development under the DNCP, including the reconstruction of Fulton Mall, would include introducing contextual infill development, as part of revitalizing the Downtown neighborhoods. The addition of infill development would increase the amount of light from street lights, exterior lighting systems on private and public property, exterior lighting from buildings, and vehicular headlights. New development could also increase light with new illuminated signs and lighting systems to illuminate active play areas and to enhance nighttime safety throughout the Plan area. The increase in lighting within the city limits could result in light spillover onto adjacent properties and an increase in urban light illuminating the sky at night. This increase in light is considered a significant impact. Implementation of Mitigation Measures AES-1 through AES-5 is required.

New development in the Plan area will increase the number and/or the size of structures that could create new sources of glare. These new sources of glare could be from materials used on building facades, parking lots, signs, roadway surfaces, and motor vehicles. Within the city limits, there are currently many sources of glare, and future development will add to these existing sources. Within the rural and agricultural areas outside of but adjacent to the Plan area, there are limited sources of glare. The primary sources of glare that will be added within the Community Plan area will occur from vertical structures such as building facades and signs. Parking lots, roadway surfaces and motor vehicles do not create substantial amount of glare. Because of the anticipated amount of new building square footage planned for the DNCP area, DNCP implementation will result in a substantial increase in glare. This increase could result in significant glare impacts. Implementation of Mitigation Measures AES-4a through AES-4e is required.

Fulton Corridor Specific Plan

Potentially significant impact. The intent of the FCSP is to concentrate development within the heart of Downtown Fresno. FCSP Section 2.3, Design Principles—one of the design principles that forms the basis for the DDC as well as the goals, policies, and actions set forth in the FCSP—relates to infill development. The FCSP calls for effective use of existing private and public land and

infrastructure investments to fill in available urban sites to create a more vibrant public realm. As described above for the DNCP, this addition of infill development would result in additional sources of light and glare in the Plan area.

The FCSP also includes the following goals and policies for enhanced lighting throughout the Plan area:

- **Goal 6-1:** Allocate the necessary resources to stabilize and then revitalize Downtown Fresno as the economic and cultural heart of the City and the Region.
- **Policy 6-1-1:** Introduce new buildings in conformance with the Downtown Development Code that generate a safe, positive, and attractive mixed-use environment that encourages neighborhood pride and identity.
- **Goal 6-3:** Build new buildings in order to make Downtown a safe and inviting place to live, work, and visit.
- **Policy 6-3-1:** Promote passive security on streets ("eyes on the street") by:
  b. Introducing pedestrian-scaled street lighting on all streets within the Plan Area.
- **Policy 6-3-2:** Promote perceived and actual security on and around building sites by requiring new development to provide sufficient lighting along street- and alley-facing frontages and in shared open spaces.
- **Policy 6-3-3:** Promote passive security in parks ("eyes on the park") by:
  e. Providing sufficient lighting.
- **Goal 8-9:** Enhance the streetscape through appropriate street lighting.
- **Policy 8-9-1:** Install pedestrian-scaled street light poles and fixtures that emit warm light.
- **Policy 8-9-2:** Ensure safe lighting levels of at least 1 foot-candle at the sidewalk level, while meeting the needs of the intended physical character of the particular area.
- **Policy 8-9-3:** Encourage business and property owners to keep storefronts and offices window display lighting illuminated throughout the night.

Infill development of vacant sites and enhanced safety lighting throughout the Specific Plan area has the potential to add sources of light and glare to the FCSP area and result in a potentially significant impact with regard to light and glare. Implementation of Mitigation Measures AES-4a through AES-4e is required.

Cumulative Impact Analysis

Potentially significant impact. Growth within the DNCP and FCSP areas, combined with growth in the nearby areas within the City of Fresno, would result in a cumulatively significant impact on light and glare. Future development in the City, including the DNCP and FCSP areas, will increase population and development, which will in turn increase the amount of lighting and glare. Overall, cumulative development is anticipated to result in a significant increase in lighting. Since the proposed project is expected to result in potentially significant lighting impacts, the project's contribution to cumulative lighting impacts is potentially cumulatively considerable. Implementation of Mitigation Measures AES-4a through AES-4e is required.

With future development outside of the Plan areas, there will be increases in the amount of structures that could create new sources of glare. These new sources of glare could be from materials used on building facades, parking lots, signs, roadway surfaces, and motor vehicles.

Therefore, cumulative development could create significant glare impacts. Since the proposed project is expected to result in potentially significant glare impacts, the project's contribution to cumulative glare impacts is potentially cumulatively considerable. Implementation of Mitigation Measures AES-4a through AES-4e is required.

Mitigation Measures

The following mitigation measures were included in the MEIR and remain applicable to this project:

Project-specific

MM AES-4a Lighting systems for street and parking areas shall include shields to direct light to the roadway surfaces and parking areas. Vertical shields on the light fixtures shall also be used to direct light away from adjacent light sensitive land uses such as residences.

MM AES-4b Lighting systems for public facilities such as active play areas shall provide adequate illumination for the activity; however, low-intensity light fixtures and shields shall be used to minimize spillover light onto adjacent properties.

MM AES-4c Lighting systems for non-residential uses, not including public facilities, shall provide shields on the light fixtures and orient the lighting system away from adjacent properties. Low-intensity light fixtures shall also be used if excessive spillover light onto adjacent properties will occur.

MM AES-4d Lighting systems for freestanding signs shall not exceed 100 foot-Lamberts (FT-L) when adjacent to streets which have an average light intensity of less than 2.0 horizontal footcandles and shall not exceed 500 FT-L when adjacent to streets that have an average light intensity of 2.0 horizontal footcandles or greater.

MM AES-4e Materials used on building facades shall be non-reflective.

Cumulative

Implementation of Mitigation Measures AES-4a through AES-4e is required.

Level of Significance After Mitigation

Project-specific

Less than significant impact. Implementation of Mitigation Measures AES-4a through AES-4e will reduce impacts on the illumination of the sky at night. Lighting on properties adjacent to lighting systems will be less than significant. Glare impacts will be less than significant.

Cumulative

Less than significant impact. Implementation of Mitigation Measures AES-4a through AES-4e will reduce impacts to the project's contribution of the illumination of the sky at night. Lighting impact on properties adjacent to lighting systems will be less than cumulatively significant. Glare impacts will also be less than cumulatively significant.

5.2 - Agriculture Resources

5.2.1 - Introduction

This section addresses potential impacts resulting from implementation of the Downtown Neighborhoods Community Plan (DNCP), Fulton Corridor Specific Plan (FCSP), and the Downtown Development Code (DDC) on agricultural resources and assesses the potential impacts to agriculture resources that may result from implementation of the proposed project. Information obtained from the City of Fresno has been used to characterize the existing agricultural setting of the Plan areas, and identify and address potential impacts to those agricultural resources.

Sources

Information in this section is based on the following sources:

- Downtown Neighborhoods Community Plan. Public Draft. 2016. The complete plan is contained in Appendix A.
- Fulton Corridor Specific Plan. Public Draft. 2016. The complete plan is contained in Appendix B.
- Downtown Development Code. Public Draft. 2016. The complete code is contained in Appendix C.
- Fresno General Plan (and the associated EIR). December 2014.

5.2.2 - Environmental Setting

The following information is provided in accordance with the California Environmental Quality Act (CEQA) Section 15125. The environmental setting discussion provides a baseline discussion of the existing conditions within the DNCP and FCSP areas.

Study Area for Project Impacts

The study area for project impacts on agricultural resources includes the DNCP and FCSP areas.

Study Area for Cumulative Impacts

The study area for the analysis of cumulative impacts is the City of Fresno.

Existing Conditions

With a population of just over 500,000 people, the City of Fresno is the fifth-largest in California and the 34th largest in the United States. It is situated in the heart of California's San Joaquin Valley, the most productive agricultural region in the world, which produces over 350 crops valued at nearly $6 billion to $7 billion annually (Moule and Polyzoides 2015a).

While the DNCP and FCSP are considered urban areas, a unique quality of these Downtown Neighborhoods is their proximity to Fresno's rich agricultural land, coupled with the presence of many undeveloped urban lots within them.

Downtown Neighborhoods Community Plan

Existing land uses within the DNCP area generally consist of industrial, residential, and commercial uses (DNCP 2016). Outside of the Downtown area, the Plan area is predominantly residential in character, with most properties zoned for single-family housing. Vacant parcels are particularly prevalent along the various railroad tracks within the City, as well as near the Fresno Chandler Downtown Airport. Although some building has been done as of recent, there is still a significant amount of vacant land in the areas mentioned above.

The Fresno General Plan maps existing farmland within the City's sphere of influence (SOI) in the Map Atlas for the General Plan. According to the atlas's associated Important Farmland map, lands within the DNCP are designated as "Urban and Built-up land." The Citywide Development Code (CDC) divides properties within the Community Plan and Specific Plan areas into approximately 26 zoning districts. Approximately 12.8 acres of the DNCP area are currently zoned for agricultural use. The DNCP area includes 11.6 acres of lands zoned AE-20, Exclusive 20-acre Agricultural District; and 1.2 acres of land zoned AE-5, Exclusive 5-acre Agricultural District. These areas are located along the edges and margins of the Jane Addams Neighborhoods planning area of the DNCP.

Fulton Corridor Specific Plan Area

As previously discussed, there are no agricultural lands located within the FCSP area. The FCSP area generally consists of commercial uses, with approximately 2,100 total properties located within the area. Historically (from at least the late 1800s through the early 1900s), the properties located within the FCSP area were not utilized for agricultural purposes because of the progression of urban development in and surrounding the Downtown Fresno area (Krazan & Associates, Inc. 2011).

There are seven distinct subareas within the FCSP boundaries, which are among the oldest, most diverse, and densely developed areas in the City of Fresno (FCSP 2016), including the former Fulton Mall. Furthermore, the regional economy continues to shift from resource-based to service-based. Thus, much of the economic growth in Fresno County has occurred in resident-serving sectors, while the agriculture-related industries have comparatively experienced a significant decline. In addition to larger national and structural trends, these changes have been fueled by the region's expanding population; conversion of agricultural land to housing development; and the introduction of more efficient, less labor-intensive farming techniques (City of Fresno 2014). As such, the FCSP does not allocate any properties for agricultural use.

5.2.3 - Regulatory Setting

Federal Regulations

Farmland Protection Policy Act

The Farmland Protection and Policy Act (FPPA) was designed to minimize the impact federal programs have on the unnecessary and irreversible conversion of farmland to nonagricultural uses. This Act assures that to the extent possible, federal programs are administered to be compatible with state, local units of government, and private programs and policies to protect farmland. Federal agencies are required to develop and review their policies and procedures to implement the FPPA every 2 years. This act does not authorize the federal government to regulate the use of private or nonfederal land or,

in any way, affect the property rights of owners. For the purposes of the Act, "farmland" includes prime farmland, unique farmland, and farmland of statewide or local importance. Farmland subject to FPPA requirements does not have to be currently used for cropland. It can be forest land, pastureland, cropland, or other land, but not water or urban/built-up land (NRCS 2012).

State Regulations

Farmland Mapping and Monitoring Program

The California Department of Conservation established the Farmland Mapping and Monitoring Program (FMMP) in 1982. The FMMP is a non-regulatory program that provides a consistent and impartial analysis of agricultural land use and land use changes throughout California. The FMMP produces maps and statistical data used for analyzing impacts on California's agricultural resources. The maps are updated periodically from aerial photographs, a computer mapping system, public review, and field reconnaissance. The program rates agricultural lands according to physical characteristics and other factors such as irrigation status. The best quality farmland is land that contains a combination of physical and chemical features able to sustain long-term agricultural production; this land is classified as Prime Farmland. Additional classifications include Farmland of Statewide Importance, Unique Farmland, and Farmland of Local Importance (see Table 5.2-1 and Exhibit 5.2-1).

The FMMP also inventories and maps a variety of other land use categories. For purposes of determining the significance of a project's impacts under CEQA, only impacts to Prime Farmland, Unique Farmland, and Farmland of Statewide Importance are evaluated. Conversion to non-agricultural uses of lands falling under any of these classifications is considered a significant impact under CEQA.

Table 5.2-1 lists and describes the various farmland and other land categories that the United States Department of Agriculture Natural Resources Conservation Service tracks, maps, and inventories.

Table 5.2-1: Description of Farmland Classifications

Farmland Category	Description
Prime (P)	Farmland with the best combination of physical and chemical features able to sustain long-term agricultural production. This land has the soil quality, growing season, and moisture supply needed to produce sustained high yields. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
Statewide Importance (S)	Farmland similar to Prime Farmland but with minor shortcomings, such as greater slopes or less ability to store soil moisture. Land must have been used for irrigated agricultural production at some time during the 4 years prior to the mapping date.
Unique (U)	Farmland of lesser quality soils used for the production of the State's leading agricultural crops. This land is usually irrigated but may include nonirrigated orchards or vineyards as found in some climatic zones in California. Land must have been cropped at some time during the 4 years prior to the mapping date.

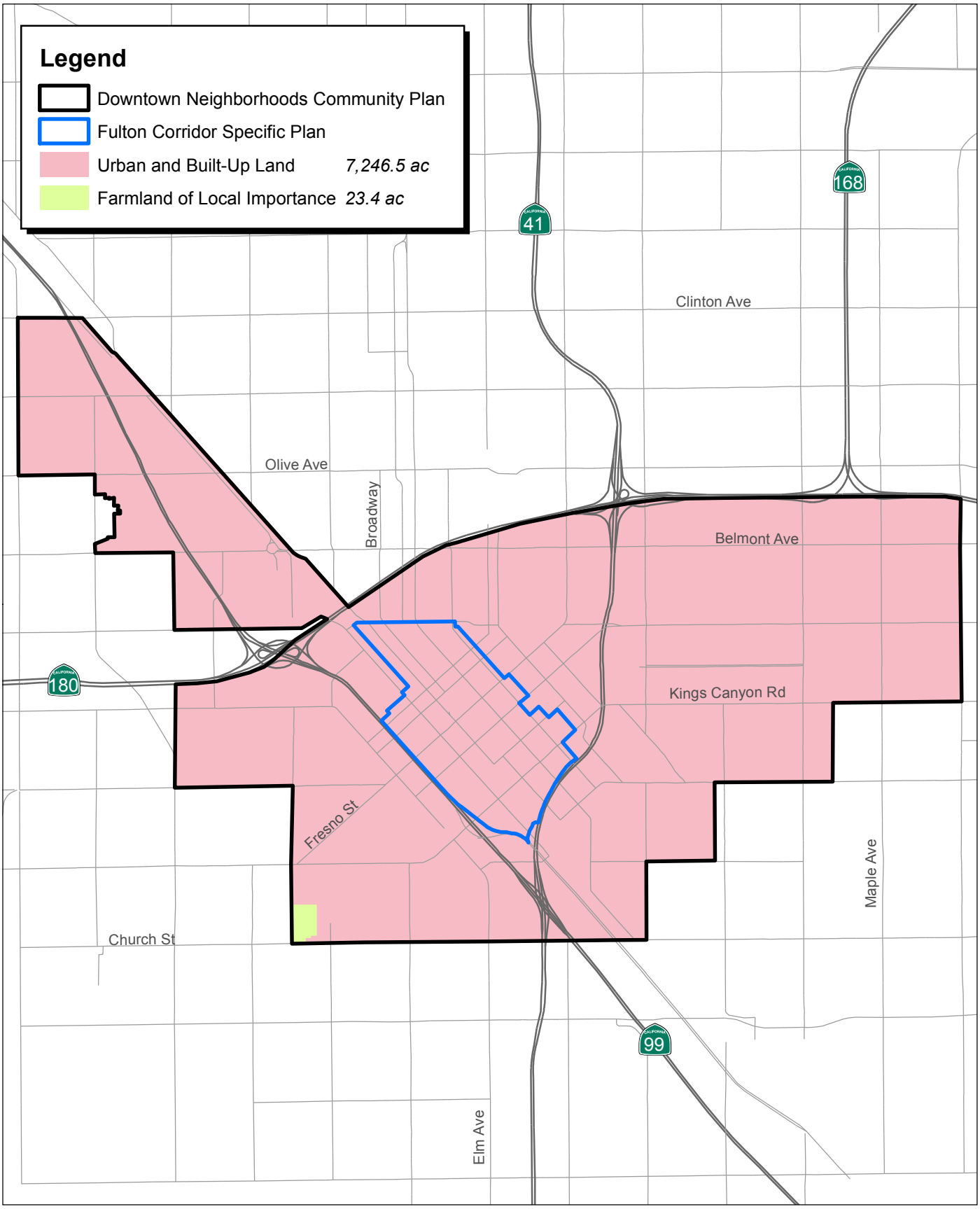
Table 5.2-1 (cont.): Description of Farmland Classifications

Farmland Category	Description
Local (L)	Land of importance to the local agricultural economy as determined by each county's board of supervisors and a local advisory committee. In some counties, Confined Animal Agriculture facilities are part of Farmland of Local Importance, but they are shown separately.
Grazing (G)	Land on which the existing vegetation is suited to the grazing of livestock. This category was developed in cooperation with the California Cattlemen's Association, University of California Cooperative Extension, and other groups interested in the extent of grazing activities.
Urban & Built Up Land (U)	Land occupied by structures with a building density of at least 1 unit to 1.5 acres, or approximately six structures to a 10-acre parcel. This land is used for residential, industrial, commercial, construction, institutional, public administration, railroad and other transportation yards, cemeteries, airports, golf courses, sanitary landfills, sewage treatment, water control structures, and other developed purposes.
Other (X)	Land not included in any other mapping category. Common examples include low density rural developments; brush, timber, wetland, and riparian areas not suitable for livestock grazing; confined livestock, poultry or aquaculture facilities; strip mines, borrow pits; and water bodies smaller than 40 acres. Vacant and nonagricultural land surrounded on all sides by urban development and greater than 40 acres is mapped as Other Land.
Water (W)	Perennial water bodies with an extent of at least 40 acres.
Source: California Department of Conservation, 2015.	

According to the FMMP California Important Farmland Finder (see Exhibit 5.2-1), there is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the Plan areas. There are approximately 23.4 acres of "Farmland of Local Importance" within the DNCP area, located to the southwest. There is no farmland or agricultural land of any type within the FCSP, which is considered Urban Built Up Land.

According to the Natural Resources Conservation Service (NRCS) soil survey data, the area within the DNCP that is designated as Farmland of Local Importance contains soils in the Atwater series (see Exhibit 5.2-2). The Atwater soils series is used mainly for production of truck crops, grapes, tree fruits, nuts, grain, and alfalfa (USDA 2003). However, no such uses currently occur on-site, as further discussed below.

As discussed above, the Fresno General Plan depicts existing farmland within the City's SOI in the Map Atlas for the General Plan. According to the atlas's associated Important Farmland map, the DNCP and FCSP areas are designated as "Urban Developed" land. Furthermore, the current General Plan Map Atlas describes the area containing the Farmland of Local Importance as "Vacant," indicating that there are no active agricultural uses on-site.



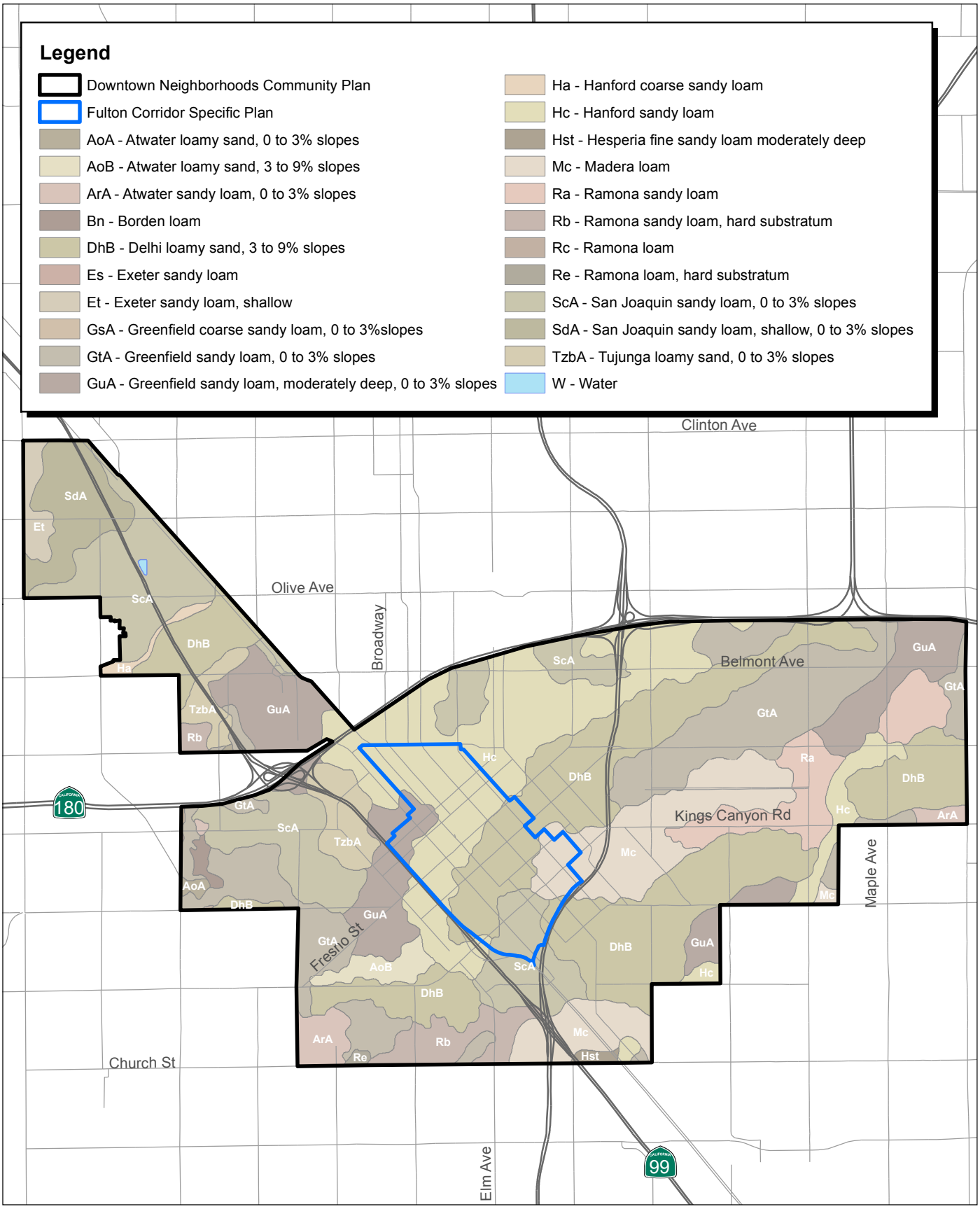
Source: Ca Dept of Conservation, 2012

FirstCarbon® SOLUTIONS

1 0.5 0 1 Miles

Exhibit 5.2-1
Important Farmland Map

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Source: Ca Dept of Conservation, 2012

FirstCarbon® SOLUTIONS

1 0.5 0 1 Miles

Exhibit 5.2-2
Soils Map

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Although the DNCP does contain approximately 23.4 acres of Farmland of Local Importance, it is no longer under active agriculture and not considered important on a local level.

California Land Conservation Act

The California Land Conservation Act, better known as the Williamson Act, was enacted by the State Legislature in 1965 to encourage the preservation of agricultural lands. Under the provisions of the Act, landowners agreeing to keep their lands under agricultural production for a minimum of 10 years receive property tax adjustments. The minimum preserve size is 100 acres. Williamson Act contracts limit the use of the properties to agricultural, open space, and other compatible uses.

Assessments of Williamson Act lands are based on their agricultural value rather than their potential market value under nonagricultural uses. The landowner can petition to cancel a contract, although the presiding jurisdiction must make a finding based on substantial evidence that supports the cancellation of the contract. Upon approval, the landowner must pay a fee equal to 12.5 percent of the unrestricted, current fair market valuation of the property.

Local Policies

City of Fresno General Plan

The Fresno General Plan contains objectives and policies related to agricultural resources within the City of Fresno. These include the following:

- **Policy RC-9-b:** Land Outside SOI. Express opposition to residential and commercial development proposals in unincorporated areas (excluding County Islands) within or adjacent to the planning area when these proposals would do any of the following:
  - Make it difficult or infeasible to implement the General Plan;
  - Contribute to the premature conversion of agricultural, open space, or grazing lands; or
  - Constitute a detriment to the management of resources and/or facilities important to the Fresno Metropolitan Area (such as air quality, water quantity and quality, traffic circulation, and riparian habitat).

The DNCP and FCSP areas are located within the City's SOI; therefore, Policy RC-9-b does not apply to the project.

- **Objective RC-9:** Preserve agricultural land outside of the area planned for urbanization under this General Plan.
- **Policy RC-9-a:** Regional Cooperation. Work to establish a cooperative research and planning program with the Counties of Fresno and Madera, City of Clovis, and other public agencies to conserve agricultural land resources.

  Policy RC-9-c: Farmland Preservation Program. In coordination with regional partners or independently, establish a Farmland Preservation Program. When Prime Farmland, Unique Farmland, or Farmland of Statewide Importance is converted to urban uses outside City limits, this program would require that the developer of such a project permanently protect an equal amount of similar farmland elsewhere through easement. The DNCP and FCSP are located within the City's SOI within the area planned for urbanization, and within the City limits.

Therefore, Objective RC-9 and Policies RC-9-a, RC-9-b, and RC-9c do not apply to the project. According to the Healthy Communities Element of the Fresno General Plan, the City seeks to provide opportunities for urban agriculture. The City defines urban agriculture as the practice of cultivating, processing, and distributing food in or around a city or town for local consumption. Urban agriculture includes farmers' markets, farm stands, community gardens, on-site garden produce market stands, and urban farms (City of Fresno, Healthy Communities Element 2014). The Healthy Communities Element includes the following policies related to agriculture:

- **Policy HC-5-f:** Urban Agriculture. Promote a full range of urban agriculture activities, including farmers' markets, farm stands, community gardens, on-site garden produce market stands, and urban farms. Support associations involved in these activities, which can be accomplished by a combination of the following:
  - Amend the Fresno Municipal Code (FMC) to provide clear and concise permitting procedures regarding Community Gardens, On-site Garden Produce Market Stands, and Urban Farms that allow sale of foods grown locally.
  - Create a policy for reduced planning entitlements and plan check fees.
  - Make publically available an inventory of City-owned surplus land that could be used for urban agriculture.
  - Continue to allow and promote community gardens in City-owned parks.
  - Support the planning of community gardens within walking distance of high-density residential areas to compensate for the reduced amount of open space in these areas.
  - Emphasize opportunities for urban agriculture in all areas of the city, schools, parks, residential food deserts, and especially in areas of the city with a relatively high proportion of "food insecure" individuals.
- **Policy HC-5-g:** Commercial Agriculture. Continue to develop policies to allow agriculture on land greater than 50 acres in area.

Policy HC-5-f encourages the implementation of small-scale agricultural uses within urban areas. Therefore, this policy would apply to the proposed DNCP and FCSP areas. Policy HC-5-g allows commercial agriculture on land greater than 50 acres in area, which would not apply to the DNCP and FCSP areas, since most of the parcels within these areas are less than 50 acres in size.

5.2.4 - Methodology

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (LESA) (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the State's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment Project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

5.2.5 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether impacts to agricultural and forestry resources are significant environmental effects, the following questions are analyzed and evaluated.

Would the project:

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g))?

d) Result in the loss of forest land or conversion of forest land to non-forest use?

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

5.2.6 - Impact Analysis, Mitigation Measures, and Level of Significance After Mitigation

Convert Farmland to Non-Agricultural Use

Impact AG-1:	**The project would not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use.**

Project-specific Impact Analysis

No impact. According to the FMMP California Important Farmland Finder (see Exhibit 5.2-1), there is no Prime Farmland, Unique Farmland, or Farmland of Statewide Importance within the Plan areas. There is no farmland or agricultural land of any type within the FCSP, which is considered Urban Built Up Land. The proposed project would have no impact on Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as none of these specific lands exist within the DNCP or the FCSP areas.

Cumulative Impact Analysis

No impact. As discussed above, the proposed project would not affect Prime Farmland, Unique Farmland, or Farmland of Statewide Importance, as none of these land classifications are present within the DNPC and FCSP areas. Historically, agriculture uses were common in Fresno County; however, the Plan areas have experienced urbanization and development activities that have resulted in the development of formerly agricultural land.

While development in areas outside of the Downtown Neighborhoods could convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance to non-agricultural use, the project itself would have no effect on these land classifications and therefore the contribution of the project to such cumulative impacts is not cumulative considerable. The project would not contribute to cumulative impacts on Prime Farmland, Unique Farmland, or Farmland of Statewide Importance.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

No impact.

Cumulative

No impact.

Conflict with Existing Zoning or Williamson Act Contract

Impact AG-2:	**The project would not conflict with existing zoning for agricultural use, or a Williamson Act contract.**

Project-specific Impact Analysis

Less than significant impact. The Fresno General Plan depicts existing farmland within the City's SOI in the Map Atlas Existing Conditions Report. According to the associated Williamson Act Property map, there are no Williamson Act properties within the Plan areas (City of Fresno 2014). Thus, no impacts to Williamson Act lands would occur.

The FMC divides properties within the Community Plan and Specific Plan areas into approximately 26 zoning districts. Approximately 12.8 acres of the DNCP area are currently zoned for agricultural use. The DNCP area includes 11.6 acres of lands zoned AE-20, Exclusive 20-acre Agricultural District, and 1.2 acres of land zoned AE-5, Exclusive 5-acre Agricultural District; these areas are located along the edges and margins of the Jane Addams Neighborhoods planning area of the DNCP.

Under the proposed project, the proposed Downtown Development Code would serve as the zoning for the Plan areas, if adopted. In order to implement the DNCP and FCSP, the DDC would establish and apply the following zones and overlays in the areas previously zoned as agricultural under the FMC:

- Areas previously zoned as AE-20 would now be zoned RS-5—Residential Single-Family, Medium Density.
- Areas previously zoned as AE-5 would now be zoned NMX—Neighborhood Mixed-Use.

Project implementation would therefore resolve the current conflicts between the existing General Plan Land Use designation and the existing FMC zoning designation, as these designations would be one and the same under the proposed project.

In order to avoid conflicts with adjacent land uses, including adjacent agricultural uses, the DNCP contains a Residential Single-Family, Low Density (RS-3) land use designation that is applied to areas west of Highway 99 and generally within the Jane Addams planning area. The RS-3 designation would allow larger lot residential uses that are compatible with the existing agricultural uses to the west (since much of the land west of Jane Addams is used for agricultural purposes). This zoning/land use designation is intended to serve as a buffer to gradually transition from the higher density uses within the FCSP and urban DNCP areas to the more rural nearby areas. As a result, project implementation would not impede the current use of such operations in terms of access, or limit the continued use of such properties for agriculture in any way.

The DNCP also includes the following policies that are designed to promote urban agriculture within the Plan area:

- **Policy 2.1.2:** Fill in the Jane Addams Neighborhoods over time, while retaining some aspects of its informal agricultural character. To achieve this policy, implement the following:
  - Create and maintain a rural neighborhood, balancing the preservation of Jane Addams' agricultural character with the need for revitalization.
  - Redevelop and revitalize the principle thoroughfares such as Clinton Avenue, McKinley Avenue, Olive Avenue, Golden State Boulevard, Weber Avenue, and Belmont Avenue in the Jane Addams Neighborhoods with pedestrian-friendly buildings that face and are accessed from the street. The uses should include a diverse mix of retail, office, service and residential uses.
  - Prioritize the installation of new sidewalks on arterial roads and near schools.
  - Create numerous neighborhood centers that provide goods and services within walking distance of most residents.
  - Revitalize Roeding Park, including continued improvements at the Fresno Chaffee Zoo, Rotary Playland and Rotary Storyland.
  - Allow a diversity of individual and small-scale commercial urban agriculture in the Jane Addams area (less than 4 acres or equivalent to one Fresno city block).
- **Policy 7.8.1:** Support the creation of new community gardens in the Downtown Neighborhoods, in accordance with the Development Code.
- **Policy 7.8.2:** Allow front yard gardens to provide raised planting beds.
- **Policy 7.8.3:** Work with local public schools, the Parks, After School, Recreation and Community Services Department (PARCS), and community organizations to create and implement educational programs on healthy eating, agriculture and farming, harvesting, and healthy cooking for the Downtown Neighborhoods residents.
- **Policy 7.8.4:** Promote pesticide-free, large-scale urban agriculture on vacant and underutilized parcels within the Downtown Neighborhoods, and consider partnering with job training programs to train area residents in urban agriculture management and production.
- **Policy 7.9.1:** Strive for all residents and employees to be within walking distance (e.g. ¼ mile), to food retailers that provide safe, affordable, and nutritious foods; especially full-service

grocery stores, neighborhood markets, produce markets, health food co-ops, and farmers' markets.

- **Policy 7.9.2:** Actively pursue the creation of new farmers' markets in the Downtown Neighborhoods. Explore opportunities for collaboration with local farms, local hospitals, or health clinics to sponsor farmers' markets in the Downtown Neighborhoods.
- **Policy 7.9.3:** Work with property owners and neighborhood organizations to identify locations for community gardens and farmer's markets within each of the Downtown Neighborhood's seven planning areas.
- **Policy 7.9.4:** Implement the Economic Expansion Act to incentivize full-service grocery stores and smaller scale health food or produce stores in the Downtown Neighborhoods.

The FCSP does not contain objectives or goals that pertain to agriculture.

Under the proposed DDC, areas zoned RS-5 and NMX would not allow the raising of livestock. However, community gardens and urban agriculture (under 4 acres) would be permitted by right in these areas. Community gardens would accommodate urban agriculture in a variety of physical contexts and provide areas for garden plots available to the general public for the cultivation of vegetables, fruits, and flowers. Because the areas under existing agricultural zoning are not currently under active agricultural production and are located in an urban/residential setting that is designated for urban/residential development under the Fresno General Plan, and because the proposed Plans and Downtown Development Code would incorporate urban agriculture at all scales, as practical, including community gardens, impacts associated with agricultural zoning conflicts are considered less than significant.

Cumulative Impact Analysis

Less than significant impact. As previously discussed, the City of Fresno General Plan does not contain any land uses that are specifically reserved for traditional farming, nor do the Plan areas contain any Williamson Act lands. Rezoning a small portion of the Plan areas from agricultural use to Neighborhood Mixed-Use and Neighborhood Residential Single-Family, Medium Density use would not preclude the use of these areas for urban agriculture or community gardens, but would prohibit large-scale farming and agricultural practices in this urban, developed region of the City.

According to the City of Fresno General Plan Land Use and Circulation Map, areas bordering the Plan areas are not designated for agricultural use. Nonetheless, the perimeter of the Jane Addams planning area of the DNCP includes buffers (the Residential Single-Family, Low Density zone) for existing agricultural uses in the unincorporated areas west of the City in order to reduce any potential conflicts with nearby areas that are under existing agricultural use/zoning.

While development in areas outside but in the vicinity of the Plan areas (such as in the County of Fresno) may conflict with existing agricultural zoning and/or Williamson Act land contracts, the contribution of the proposed project to such impacts is not deemed cumulatively considerable. Therefore, this impact is considered less than significant.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Conflict with Zoning or Rezoning of Forest Land or Timberland

Impact AG-3:	**The project would not conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)).**

Project-specific Impact Analysis

No Impact. There are no forest lands or timberland zoned Timberland Production within the DNCP or FCSP areas. Therefore, the implementation of the DNCP, FCSP, and DDC would have no impacts on forest land or timberland.

Cumulative Impact Analysis

No impact. As discussed above, there are no forest lands or timberland zoned Timberland Production within the DNCP or FCSP areas. The proposed Plans contain buffer areas along the Plan perimeters to reduce impacts to the more rural uses beyond the City's SOI, thereby avoiding any impacts relating to compatibility with forest land or timberland uses.

Future development in areas outside of the Plan areas may involve other changes in the existing environment that could result in conflicts with forest land or timberland. However, since the proposed project would not result in impacts to forest land or timberland, the proposed project would not contribute to potential cumulative impacts on these resources.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

No impact.

Cumulative

No impact.

Loss or Conversion of Forest Land

Impact AG-4:	**The project would not result in the loss of forest land or conversion of forest land to non-forest use.**

Project-specific Impact Analysis

No Impact. The Fresno General Plan does not allocate any land uses within the City's SOI for forestry uses. Additionally, the Resource Conservation Element of the General Plan does not contain any policies or objectives pertaining to forest resources. There are no forest lands within the DNCP or FCSP areas. Because there are no forest lands within the Plan areas, no impacts to these resources would occur.

Cumulative Impact Analysis

No impact. As discussed above, there are no forest lands within the DNCP or FCSP areas, so no forestry uses would be lost or converted to other uses as part of Plan implementation. The proposed Plans contain buffer areas along the Plan perimeters to reduce impacts on the more rural uses beyond the City's SOI, thereby avoiding any impacts relating to compatibility with forest lands.

Future development in areas outside of the Plan areas may result in the loss of forest lands or the conversion of forest land to non-forest uses. However, since the proposed project would not result in any impacts to forest land, the proposed project would not contribute to potential cumulative impacts on these resources.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

No impact.

Cumulative

No impact.

Conversion to Non-Agricultural or Non-Forest Use

Impact AG-5: **The project would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use.**

Project-specific Impact Analysis

Less than significant impact. As discussed above, the DNCP and FCSP areas do not contain forest land. Therefore, implementation of the Plans would not result in the conversion of forest land to non-forest use. Because of the urban setting, none of the lands adjacent to the Plan areas contain forest land; therefore, Plan implementation would not involve other changes in the existing environment that could result in the conversion of forest land to non-forest use.

There are no sites specifically designated as farmland within the Plan areas. Pursuant to Policy HC-5-g, Commercial Agriculture, the City shall continue to develop policies to allow agriculture on land greater than 50 acres in area (City of Fresno 2014), but the City does not consider commercial agricultural or farmland uses appropriate within the urban, developed core of the City, which includes the project area.

While the FCSP does not contain objectives or goals that pertain to agriculture, the DNCP includes numerous policies that are designed to promote urban agriculture within the Plan area. These policies are listed above under Impact 5.2-2. As discussed above, under Impact 5.2-2, in order to avoid conflicts with adjacent land uses, including adjacent agricultural uses, the DNCP contains a RS-3 land use designation within the Jane Addams planning area that would allow larger lot residential uses that are compatible with nearby agricultural uses (much of the land west of Jane Addams is used for agricultural purposes). This zoning/land use designation is intended to serve as a buffer to gradually transition from the higher density uses within the FCSP and urban DNCP areas to the more rural nearby areas. As a result, project implementation would not impede the current use of such operations in terms of access, or limit the continued use of such properties for agriculture in any way.

For these reasons, project implementation would not involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use. This impact is considered less than significant.

Cumulative Impact Analysis

Less than significant impact. As discussed above, the Fresno General Plan does not include agricultural uses within the Plan areas, and there are no forest lands within or adjacent to the Plan areas. In addition, the location and configuration of the Plans will not cause any changes to existing agricultural operations. The DNCP includes the RS-3 land use designation that would allow larger lot residential uses that are compatible with nearby agricultural uses and serve as a buffer to gradually transition from the higher density uses within the urban FCSP and DNCP areas.

Future development in areas outside of the Plan areas may involve other changes in the existing environment that could result in the conversion of farmland or forest lands. However, since the

proposed project would not have any effect on forest lands and due to their urban setting would not result in the conversion of farmland to non-agricultural use, the contribution of the project to these impacts is not deemed cumulatively considerable. Therefore, this impact is considered less than significant.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

5.3 - Air Quality

5.3.1 - Introduction

This section addresses the potential impacts to regional and local air quality associated with implementation of the project. Descriptions and analysis in this section are based on analysis performed by FirstCarbon Solutions as well as information contained in the Health Risk Assessment (HRA) prepared by FirstCarbon Solutions in November 2015, included in this Draft EIR as Appendix E.1. Although the land use maps have since been updated, the baseline assumptions remain unchanged.

Sources

Information in this section is based on the following sources:

- Downtown Neighborhood Community Plan. 2016. The complete report is contained in Appendix A.
- Fulton Corridor Specific Plan. 2016. The complete report is contained in Appendix B.
- Downtown Development Code. 2016. The complete report is contained in Appendix C.
- Health Risk Assessment, FirstCarbon Solutions, November 2015. The complete report is contained in Appendix E.1.
- Air Quality Analysis. FirstCarbon Solutions, October 2015.

5.3.2 - Environmental Setting

Overview

The DNCP and FCSP are in the San Joaquin Valley Air Basin (SJVAB), which is under the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD). Existing air quality conditions in the SJVAB and the factors affecting air quality conditions in the basin are described below.

Affected Environment

The project site is located within the SJVAB. Primary factors known to influence air quality within the SJVAB include topography and climate, which can affect pollutant transport and dispersion from sources located within and outside of the SJVAB. Additional air quality concerns within the SJVAB relate to the exposure of sensitive receptors to increased pollutant concentrations, including airborne concentrations of ground-level ozone, particulate matter, odors, and toxic air contaminants. Emissions of greenhouse gases and contributions to global warming are also of primary concern. These air quality-related issues are discussed in more detail, as follows:

The dispersion of air pollution in an area is determined by such natural factors as topography, meteorology, and climate, coupled with atmospheric stability conditions and the presence of inversions. The factors affecting the dispersion of air pollution with respect to the SJVAB are discussed below.

Study Area for Project Impacts

The study area for project impacts regarding air quality are the DNCP, FCSP, and the DDC planning areas and proximate sensitive receptors potentially impacted by a project within the planning areas, because potential development under the Fresno General Plan is limited to areas within the planning areas. However, the buildout of the Fresno General Plan is the cumulative result of hundreds of separate projects requiring separate approvals that add to emissions generated from existing development. Air quality impacts are inherently cumulative in nature. For example, the largest source of emissions, motor vehicles, occur as individuals travel throughout the Planning Area and beyond to a multitude of destinations each day.

The SJVAB is classified nonattainment for ozone, particulate matter less than ten micrometers in diameter (PM_{10}) and particulate matter less than 2.5 micrometers in diameter ($PM_{2.5}$). Therefore, a significant air quality impact currently exists without the project. When the existing air quality exceeds applicable thresholds, it is necessary to identify an amount of project emissions that would be considered a significant cumulative contribution to an existing exceedance. The SJVAPCD had adopted project-level thresholds based on a cumulative contribution of ozone precursors reactive organic gases (ROG) and oxides of nitrogen (NO_x) of 10 tons per year. The SJVAPCD recommends thresholds for PM_{10} and $PM_{2.5}$ of 15 tons per year based on their stationary source offset threshold. A conservative interpretation of this threshold would apply the annual emission thresholds to annual emissions generated during General Plan buildout. The combined annual emissions of projects during construction and operation would be compared with the annual threshold.

Study Area for Cumulative Impacts

The study area for the analysis of cumulative regional air quality impacts such as ROG, NO_x, PM_{10}, and $PM_{2.5}$ is the SJVAB, which includes the Counties of San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare and a portion of Kern. Under the federal Clean Air Act, any monitoring location that exceeds ambient air quality ozone and particulate standards within the air basin results in the entire air basin being designated nonattainment. Therefore, an exceedance in Fresno or another city would affect the attainment status of the rest of the San Joaquin Valley, even if no other location exceeded one of the standards. This means that air quality plans must provide reductions that demonstrate attainment at the location with the highest concentration in the basin, and cleaner locations would attain the standards earlier.

Air pollutants can remain in the atmosphere for long periods and can build to unhealthful levels when stagnant conditions that are common in the San Joaquin Valley occur. Pollutants are transported downwind from urban areas with many emission sources, but also are recirculated to the urban areas by wind eddies and upslope/downslope mountain and valley winds. Therefore, emissions from large urban areas like Fresno have the potential to create regional air quality impacts for ozone and PM in addition to localized impacts for CO, NO_2, and PM.

The analysis of regional emissions is based on a summary of projections approach as provided in Section 15130(b)(1)(B) of the CEQA Guidelines. The applicable projections include those provided within the air quality attainment plans for the SJVAB prepared by the District. The study area for the

analysis of cumulative localized impacts is limited to areas with sensitive receptors that are in the immediate vicinity of specific sources.

Topography

The SJVAB occupies the southern half of the Central Valley. The SJVAB is open to the north, and is surrounded by mountain ranges on all other sides. The Coast Ranges, which have an average elevation of 3,000 feet, are along on the western boundary of the SJVAB, while the Sierra Nevada Mountains (8,000 to 14,000 feet in elevation) are along the eastern border. The San Emigdio Mountains, which are part of the Coast Ranges, and the Tehachapi Mountains, which are part of the Sierra Nevada, form the southern boundary and have an elevation of 6,000 to 8,000 feet. The SJVAB is mostly flat with a downward gradient in terrain to the northwest.

Meteorology and Climate

The SJVAB has an inland Mediterranean climate that is strongly influenced by the presence of mountain ranges. The mountain ranges to the west and south induce winter storms from the Pacific Ocean to release precipitation on the western slopes producing a partial rain shadow over the valley. In addition, the mountain ranges block the free circulation of air to the east, trapping stable air in the valley for extended periods during the cooler half of the year.

Winter in the SJVAB is characterized as mild and fairly humid, while the summer is typically hot, dry, and cloudless. The climate is a result of the topography and the strength and location of a semi-permanent, subtropical high-pressure cell. During the summer months, the Pacific high-pressure cell is centered over the northeastern Pacific Ocean, resulting in stable meteorological conditions and a steady northwesterly wind flow. Upwelling of cold ocean water from below to the surface as a result of the northwesterly flow produces a band of cold water off the California coast. In winter, the Pacific high-pressure cell weakens and shifts southward, resulting in wind flow offshore, the absence of upwelling, and the occurrence of storms.

The annual temperature, humidity, precipitation, and wind patterns reflect the topography of the SJVAB and the strength and location of the semi-permanent, subtropical high-pressure cell. Summer temperatures that often exceed 100 degrees Fahrenheit (°F) and clear sky conditions are favorable to ozone formation. Most of the precipitation in the valley occurs as rainfall during winter storms. The winds and unstable atmospheric conditions associated with the passage of winter storms result in periods of low air pollution and excellent visibility. However, between winter storms, high pressure and light winds lead to the creation of low-level temperature inversions and stable atmospheric conditions resulting in high carbon monoxide (CO) concentrations and particulate matter (PM) accumulation. The orientation of the wind flow pattern in the SJVAB is parallel to the valley and mountain ranges. Summer wind conditions promote the transport of ozone and precursors from the San Francisco Bay Area through the Carquinez Strait, a gap in the Coast Ranges, and low mountain passes such as Altamont Pass and Pacheco Pass.

The climate is semi-arid, with an annual normal precipitation of approximately 14 inches. Temperatures in the Fresno region range from a normal minimum of 46°F in January, to a normal maximum of 82°F in July. The wind is predominantly from the west-northwest at 9 miles per hour.

Atmospheric Stability and Inversions

Stability describes the resistance of the atmosphere to vertical motion. The stability of the atmosphere is dependent on the vertical distribution of temperature with height. Stability categories range from "Extremely Unstable" (Class A), through Neutral (Class D), to "Stable" (Class F). Unstable conditions often occur during daytime hours when solar heating warms the lower atmospheric layers sufficiently. Under Class A stability conditions, large fluctuations in horizontal wind direction occur coupled with large vertical mixing depths. Under Class B stability conditions, wind direction fluctuations and the vertical mixing depth are less pronounced because of a decrease in the amount of solar heating. Under Class C stability conditions, solar heating is weak along with horizontal and vertical fluctuations because of a combination of thermal and mechanical turbulence. Under Class D stability conditions, vertical motions are primarily generated by mechanical turbulence. Under Class E and Class F stability conditions, air pollution emitted into the atmosphere travels downwind with poor dispersion. The dispersive power of the atmosphere decreases with progression through the categories from A to F.

With respect to the SJVAB, Classes D through F are predominant during the late fall and winter because of cool temperatures and entrapment of cold air near the surface. March and August are transition months with equally occurring percentages of Class F and Class A. During the spring months of April and May and the summer months of June and July, Class A is predominant. The fall months of September, October, and November have comparable percentages of Class A and Class F.

An inversion is a layer of warmer air over a layer of cooler air. Inversions influence the mixing depth of the atmosphere, which is the vertical depth available for diluting air pollution near the ground, thus significantly affecting air quality conditions. The SJVAB experiences both surface-based and elevated inversions. The shallow surface-based inversions are present in the morning but are often broken by daytime heating of the air layers near the ground. The deep elevated inversions occur less frequently than the surface-based inversions but generally result in more severe stagnation. The surface-based inversions occur more frequently in the fall, and the stronger elevated inversions usually occur during December and January.

Sensitive Receptors

One of the most important reasons for air quality standards is the protection of those members of the population who are most sensitive to the adverse health effects of air pollution, termed "sensitive receptors." The term sensitive receptors refer to specific population groups, as well as the land uses where individuals would reside for long periods. Commonly identified sensitive population groups are children, the elderly, the acutely ill, and the chronically ill. Commonly identified sensitive land uses would include facilities that house or attract children, the elderly, people with illnesses, or others who are especially sensitive to the effects of air pollutants. Residential dwellings, schools, parks, playgrounds, childcare centers, convalescent homes, and hospitals are examples of sensitive land uses.

5.3.3 - Regulatory Setting

Air pollutants are regulated to protect human health and for secondary effects such as visibility and building soiling. The Clean Air Act of 1970 tasks the United States Environmental Protection Agency (EPA) with setting air quality standards. The State of California also sets air quality standards that are in some cases are more stringent than federal standards and address additional pollutants. The following section describes these federal and state standards and the health effects of the regulated pollutants.

Clean Air Act

Congress established much of the basic structure of the Clean Air Act (CAA) in 1970, and made major revisions in 1977 and 1990. Six common air pollutants (also known as criteria pollutants) are addressed in the CAA. These are particulate matter, ground-level ozone, carbon monoxide, sulfur oxides, nitrogen oxides, and lead. The EPA calls these pollutants criteria air pollutants because it regulates them by developing human health-based and/or environmentally based criteria (science-based guidelines) for setting permissible levels. The set of limits based on human health is called primary standards. Another set of limits intended to prevent environmental and property damage is called secondary standards (EPA 2015a). The federal standards are called National Ambient Air Quality Standards (NAAQS). The air quality standards provide benchmarks for determining whether air quality is healthy at specific locations and whether development activities will cause or contribute to a violation of the standards. The criteria pollutants are:

- Ozone
- Nitrogen dioxide
- Lead
- Particulate matter (PM_{10} and $PM_{2.5}$)
- Carbon monoxide (CO)
- Sulfur dioxide

The federal standards were set to protect public health, including that of sensitive individuals; thus, the EPA is tasked with updating the standards as more medical research is available regarding the health effects of the criteria pollutants. Primary federal standards are the levels of air quality necessary, with an adequate margin of safety, to protect the public health (ARB 2015a).

California Clean Air Act

The California Legislature enacted the California Clean Air Act (CCAA) in 1988 to address air quality issues of concern not adequately addressed by the federal CAA at the time. California's air quality problems were and are some of the most severe in the nation and required additional actions beyond the federal mandates. The California Air Resources Board (ARB) administers California Ambient Air Quality Standards (CAAQS) for the 10 air pollutants designated in the CCAA. The 10 state air pollutants are the six federal standards listed above as well visibility-reducing particulates, hydrogen sulfide, sulfates, and vinyl chloride. The EPA authorized California to adopt its own regulations for motor vehicles and other sources that are more stringent than similar federal regulations implementing the CAA. Generally, the planning requirements of the CCAA are less stringent than federal CAA; therefore, consistency with the CAA will also demonstrate consistency with the CCAA.

Toxic Air Contaminants

A toxic air contaminant (TAC) is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. There are no ambient air quality standards for TAC emissions. TACs are regulated in terms of health risks to individuals and populations exposed to the pollutants. The 1990 Clean Air Act Amendments significantly expanded the EPA's authority to regulate hazardous air pollutants (HAP). Section 112 of the Clean Air Act lists 187 hazardous air pollutants to be regulated by source category. Authority to regulate these pollutants was delegated to the States. ARB and local air districts regulate TACs and HAPs in California.

Air Pollutant Description and Health Effects

The federal and state ambient air quality standards, relevant effects, properties, and sources of the pollutants are summarized in Table 5.3-1.

Table 5.3-1: Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Ozone	1 Hour	0.09 ppm	—	Irritate respiratory system; reduce lung function; breathing pattern changes; reduction of breathing capacity; inflame and damage cells that line the lungs; make lungs more susceptible to infection; aggravate asthma; aggravate other chronic lung diseases; cause permanent lung damage; some immunological changes; increased mortality risk; vegetation and property damage.	Ozone is a photochemical pollutant as it is not emitted directly into the atmosphere, but is formed by a complex series of chemical reactions between volatile organic compounds (VOC), NO_x, and sunlight. Ozone is a regional pollutant that is generated over a large area and is transported and spread by the wind.	Ozone is a secondary pollutant; thus, it is not emitted directly into the lower level of the atmosphere. The primary sources of ozone precursors (VOC and NO_x) are mobile sources (on-road and off-road vehicle exhaust).
	8 Hour	0.070 ppm	0.075 ppm[f]			
Carbon monoxide (CO)	1 Hour	20 ppm	35 ppm	Ranges depending on exposure: slight headaches; nausea; aggravation of angina pectoris (chest pain) and other aspects of coronary heart disease; decreased exercise tolerance in persons with peripheral vascular disease and lung disease; impairment of central nervous system functions; possible increased risk to fetuses; death.	CO is a colorless, odorless, toxic gas. CO is somewhat soluble in water; therefore, rainfall and fog can suppress CO conditions. CO enters the body through the lungs, dissolves in the blood, replaces oxygen as an attachment to hemoglobin, and reduces available oxygen in the blood.	CO is produced by incomplete combustion of carbon-containing fuels (e.g., gasoline, diesel fuel, and biomass). Sources include motor vehicle exhaust, industrial processes (metals processing and chemical manufacturing), residential wood burning, and natural sources.
	8 Hour	9.0 ppm	9 ppm			
Nitrogen dioxide[b] (NO_2)	1 Hour	0.18 ppm	0.100 ppm	Potential to aggravate chronic respiratory disease and respiratory symptoms in sensitive groups; risk to public health implied by pulmonary and extra-pulmonary biochemical and cellular changes and pulmonary structural changes; contribution to atmospheric discoloration; increased visits to hospital for respiratory illnesses.	During combustion of fossil fuels, oxygen reacts with nitrogen to produce nitrogen oxides—NO_x (NO, NO_2, NO_3, N_2O, N_2O_3, N_2O_4, and N_2O_5). NO_x is a precursor to ozone, PM_{10}, and $PM_{2.5}$ formation. NO_x can react with compounds to form nitric acid and related small particles and result in PM related health effects.	NO_x is produced in motor vehicle internal combustion engines and fossil fuel-fired electric utility and industrial boilers. Nitrogen dioxide (NO_2) forms quickly from NO_x emissions. NO_2 concentrations near major roads can be 30 to 100 percent higher than those at monitoring stations.
	Annual	0.030 ppm	0.053 ppm			

Table 5.3-1 (cont.): Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Sulfur dioxide[c] (SO_2)	1 Hour	0.25 ppm	0.075 ppm	Bronchoconstriction accompanied by symptoms which may include wheezing, shortness of breath and chest tightness, during exercise or physical activity in persons with asthma. Some population-based studies indicate that the mortality and morbidity effects associated with fine particles show a similar association with ambient sulfur dioxide levels. It is not clear whether the two pollutants act synergistically or one pollutant alone is the predominant factor.	Sulfur dioxide is a colorless, pungent gas. At levels greater than 0.5 ppm, the gas has a strong odor, similar to rotten eggs. Sulfur oxides (SO_x) include sulfur dioxide and sulfur trioxide. Sulfuric acid is formed from sulfur dioxide, which can lead to acid deposition and can harm natural resources and materials. Although sulfur dioxide concentrations have been reduced to levels well below state and federal standards, further reductions are desirable because sulfur dioxide is a precursor to sulfate and PM_{10}.	Human caused sources include fossil-fuel combustion, mineral ore processing, and chemical manufacturing. Volcanic emissions are a natural source of sulfur dioxide. The gas can also be produced in the air by dimethylsulfide and hydrogen sulfide. Sulfur dioxide is removed from the air by dissolution in water, chemical reactions, and transfer to soils and ice caps. The sulfur dioxide levels in the State are well below the maximum standards.
	3 Hour	—	0.5 ppm			
	24 Hour	0.04 ppm	0.14 (for certain areas)			
	Annual	—	0.030 ppm (for certain areas)			
Particulate matter (PM_{10})	24 hour	50 µg/m^3	150 µg/m^3	• Short-term exposure (hours/days): irritation of the eyes, nose, throat; coughing; phlegm; chest tightness; shortness of breath; aggravate existing lung disease, causing asthma attacks and acute bronchitis; those with heart disease can suffer heart attacks and arrhythmias. • Long-term exposure: reduced lung function; chronic bronchitis; changes in lung morphology; death.	Suspended particulate matter is a mixture of small particles that consist of dry solid fragments, droplets of water, or solid cores with liquid coatings. The particles vary in shape, size, and composition. PM_{10} refers to particulate matter that is between 2.5 and 10 microns in diameter, (1 micron is one-millionth of a meter). $PM_{2.5}$ refers to particulate matter that is 2.5 microns or less in diameter, about one-thirtieth the size of the average human hair.	Stationary sources include fuel or wood combustion for electrical utilities, residential space heating, and industrial processes; construction and demolition; metals, minerals, and petrochemicals; wood products processing; mills and elevators used in agriculture; erosion from tilled lands; waste disposal, and recycling. Mobile or transportation related sources are from vehicle exhaust and road dust. Secondary particles form from reactions in the atmosphere.
	Mean	20 µg/m^3	—			
Particulate matter ($PM_{2.5}$)	24 Hour	—	35 µg/m^3			
	Annual	12 µg/m^3	12.0 µg/m^3			
Visibility-reducing particles	8 Hour	See note below[d]				

Table 5.3-1 (cont.): Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Sulfates	24 Hour	25 µg/m^3	—	(a) Decrease in ventilatory function; (b) aggravation of asthmatic symptoms; (c) aggravation of cardio-pulmonary disease; (d) vegetation damage; (e) degradation of visibility; (f) property damage.	The sulfate ion is a polyatomic anion with the empirical formula SO_4^{2-}. Sulfates occur in combination with metal and/or hydrogen ions. Many sulfates are soluble in water.	Sulfates are particulates formed through the photochemical oxidation of sulfur dioxide. In California, the main source of sulfur compounds is combustion of gasoline and diesel fuel.
Lead[e]	30-day	1.5 µg/m^3	—	Lead accumulates in bones, soft tissue, and blood and can affect the kidneys, liver, and nervous system. It can cause impairment of blood formation and nerve conduction, behavior disorders, mental retardation, neurological impairment, learning deficiencies, and low IQs.	Lead is a solid heavy metal that can exist in air pollution as an aerosol particle component. Leaded gasoline was used in motor vehicles until around 1970. Lead concentrations have not exceeded state or federal standards at any monitoring station since 1982.	Lead ore crushing, lead-ore smelting, and battery manufacturing are currently the largest sources of lead in the atmosphere in the United States. Other sources include dust from soils contaminated with lead-based paint, solid waste disposal, and crustal physical weathering.
	Quarter	—	1.5 µg/m^3			
	Rolling 3-month average	—	0.15 µg/m^3			
Vinyl chloride[e]	24 Hour	0.01 ppm	—	Short-term exposure to high levels of vinyl chloride in the air causes central nervous system effects, such as dizziness, drowsiness, and headaches. Epidemiological studies of occupationally exposed workers have linked vinyl chloride exposure to development of a rare cancer, liver angiosarcoma, and have suggested a relationship between exposure and lung and brain cancers.	Vinyl chloride, or chloroethene, is a chlorinated hydrocarbon and a colorless gas with a mild, sweet odor. In 1990, ARB identified vinyl chloride as a toxic air contaminant and estimated a cancer unit risk factor.	Most vinyl chloride is used to make polyvinyl chloride plastic and vinyl products, including pipes, wire and cable coatings, and packaging materials. It can be formed when plastics containing these substances are left to decompose in solid waste landfills. Vinyl chloride has been detected near landfills, sewage plants, and hazardous waste sites.
Hydrogen sulfide	1 Hour	0.03 ppm	—	High levels of hydrogen sulfide can cause immediate respiratory arrest. It can irritate the eyes and respiratory tract and cause headache, nausea, vomiting, and cough. Long exposure can cause pulmonary edema.	Hydrogen sulfide (H_2S) is a flammable, colorless, poisonous gas that smells like rotten eggs.	Manure, storage tanks, ponds, anaerobic lagoons, and land application sites are the primary sources of hydrogen sulfide. Anthropogenic sources include the combustion of sulfur containing fuels (oil and coal).

Table 5.3-1 (cont.): Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources
Volatile organic compounds (VOC)		There are no State or federal standards for VOCs because they are not classified as criteria pollutants.		Although health-based standards have not been established for VOCs, health effects can occur from exposures to high concentrations because of interference with oxygen uptake. In general, concentrations of VOCs are suspected to cause eye, nose, and throat irritation; headaches; loss of coordination; nausea; and damage to the liver, the kidneys, and the central nervous system. Many VOCs have been classified as toxic air contaminants.	Reactive organic gases (ROG), or VOCs, are defined as any compound of carbon—excluding carbon monoxide, carbon dioxide, carbonic acid, metallic carbides or carbonates, and ammonium carbonate—that participates in atmospheric photochemical reactions. Although there are slight differences in the definition of ROG and VOCs, the two terms are often used interchangeably.	Indoor sources of VOCs include paints, solvents, aerosol sprays, cleansers, tobacco smoke, etc. Outdoor sources of VOCs are from combustion and fuel evaporation. A reduction in VOC emissions reduces certain chemical reactions that contribute to the formulation of ozone. VOCs are transformed into organic aerosols in the atmosphere, which contribute to higher PM_{10} and lower visibility.
Diesel particulate matter (DPM)		There are no ambient air quality standards for DPM.		Some short-term (acute) effects of DPM exposure include eye, nose, throat, and lung irritation, coughs, headaches, light-headedness, and nausea. Studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems. Human studies on the carcinogenicity of DPM demonstrate an increased risk of lung cancer, although the increased risk cannot be clearly attributed to diesel exhaust exposure.	DPM is a source of $PM_{2.5}$—diesel particles are typically 2.5 microns and smaller. Diesel exhaust is a complex mixture of thousands of particles and gases that is produced when an engine burns diesel fuel. Organic compounds account for 80 percent of the total particulate matter mass, which consists of compounds such as hydrocarbons and their derivatives, and polycyclic aromatic hydrocarbons and their derivatives. Fifteen polycyclic aromatic hydrocarbons are confirmed carcinogens, a number of which are found in diesel exhaust.	Diesel exhaust is a major source of ambient particulate matter pollution in urban environments. Typically, the main source of DPM is from combustion of diesel fuel in diesel-powered engines. Such engines are in on-road vehicles such as diesel trucks, off-road construction vehicles, diesel electrical generators, and various pieces of stationary construction equipment.

Table 5.3-1 (cont.): Description of Air Pollutants

Air Pollutant	Averaging Time	California Standard	Federal Standard[a]	Most Relevant Effects from Pollutant Exposure	Properties	Sources

Notes:
ppm = parts per million (concentration) µg/m^3 = micrograms per cubic meter Annual = Annual Arithmetic Mean 30-day = 30-day average Quarter = Calendar quarter

[a] Federal standard refers to the primary national ambient air quality standard, or the levels of air quality necessary, with an adequate margin of safety to protect the public health. All standards listed are primary standards except for 3 Hour SO_2, which is a secondary standard. A secondary standard is the level of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

[b] To attain the 1-hour NO_2 national standard, the 3-year average of the annual 98th percentile of the 1-hour daily maximum concentrations at each site must not exceed 100 parts per billion (0.100 ppm).

[c] On June 2, 2010, a new 1-hour SO_2 standard was established and the existing 24-hour and annual primary standards were revoked. To attain the 1-hour national standard, the 3-year average of the annual 99th percentile of the 1-hour daily maximum concentrations at each site must not exceed 75 ppb. The 1971 SO_2 national standards (24-hour and annual) remain in effect until one year after an area is designated for the 2010 standard, except that in areas designated nonattainment for the 1971 standards, the 1971 standards remain in effect until implementation plans to attain or maintain the 2010 standards are approved.

[d] Visibility-reducing particles: In 1989, the ARB converted both the general statewide 10-mile visibility standard and the Lake Tahoe 30-mile visibility standard to instrumental equivalents, which are "extinction of 0.23 per kilometer" and "extinction of 0.07 per kilometer" for the statewide and Lake Tahoe Air Basin standards, respectively.

[e] The ARB has identified lead and vinyl chloride as 'toxic air contaminants' with no threshold level of exposure for adverse health effects determined. These actions allow for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

[f] The EPA Administrator approved a revised 8-hour ozone standard of 0.07 ppm on October 1, 2015. The new standard will go into effect 60 days after publication of the Final Rule in the Federal Register. The Final Rule has not been published in the Federal Register as of October 14, 2015.

Source of effects, properties, and sources: South Coast Air Quality Management District 2007; California Environmental Protection Agency 2002; California Air Resources Board 2009a; U.S. Environmental Protection Agency 2003, 2009a, 2009b, 2010, 2011, 2012a and 2012b; National Toxicology Program 2011a and 2011b.
Source of standards: California Air Resources Board 2013a.

Several pollutants listed in Table 5.3-1 are not addressed in this analysis. Analysis of lead is not included in this report because no new sources of lead emissions are anticipated with the implementation of the project. Visibility-reducing particles are not explicitly addressed in this analysis because particulate matter is addressed. No specific projects are identified that would result vinyl chloride or hydrogen sulfide emissions in any substantial quantity. Projects proposing substantial emissions of these pollutants would require their own environmental review.

Health Effects of Toxic Air Contaminants

A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations. The California Almanac of Emissions and Air Quality presents the relevant concentration and cancer risk data for the ten TACs that pose the most substantial health risk in California based on available data. The ten TACs are acetaldehyde, benzene, 1.3-butadiene, carbon tetrachloride, hexavalent chromium, para-dichlorobenzene, formaldehyde, methylene chloride, perchloroethylene, and DPM.

Some studies indicate that DPM poses the greatest health risk among the TACs listed above. A 10-year research program (ARB 1998) demonstrated that DPM from diesel-fueled engines is a human carcinogen and that chronic (long-term) inhalation exposure to DPM poses a chronic health risk. In addition to increasing the risk of lung cancer, exposure to diesel exhaust can have other health effects. Diesel exhaust can irritate the eyes, nose, throat, and lungs, and it can cause coughs, headaches, lightheadedness, and nausea. Diesel exhaust is a major source of fine particulate pollution as well, and studies have linked elevated particle levels in the air to increased hospital admissions, emergency room visits, asthma attacks, and premature deaths among those suffering from respiratory problems.

DPM differs from other TACs in that it is not a single substance but a complex mixture of hundreds of substances. Although DPM is emitted by diesel-fueled, internal combustion engines, the composition of the emissions varies, depending on engine type, operating conditions, fuel composition, lubricating oil, and whether an emission control system is present. Unlike the other TACs, however, no ambient monitoring data are available for DPM because no routine measurement method currently exists. The ARB has made preliminary concentration estimates based on a DPM exposure method. This method uses the ARB emissions inventory's PM_{10} database, ambient PM_{10} monitoring data, and the results from several studies to estimate concentrations of DPM.

Limited data on levels and health risks attributable to the top 10 TACs listed above is available from the ARB as part of their California Almanac of Emissions and Air Quality—2009 Edition (ARB 2009b). As shown therein for data collected at the First Street air monitoring station in Fresno, cancer risks attributable to all of the listed TACs above with the exception of DPM have declined about 70 percent from the mid-1990s to 2007. Unfortunately, risks associated with DPM emissions are only provided for the year 2000 and have not been updated in the Almanac. However, the ARB's Diesel Risk Reduction Plan is expected to provide similar reductions in DPM during that same period.

Asbestos

Asbestos is the name given to a number of naturally occurring fibrous silicate minerals that have been mined for their useful properties such as thermal insulation, chemical and thermal stability, and high tensile strength. The three most common types of asbestos are chrysotile, amosite, and crocidolite. Chrysotile, also known as white asbestos, is the most common type of asbestos found in buildings. Chrysotile makes up approximately 90 to 95 percent of all asbestos contained in buildings in the United States.

Construction sometimes requires the demolition of existing buildings that may include materials containing asbestos. Asbestos is also found in a natural state known as naturally occurring asbestos. Exposure and disturbance of rock and soil that naturally contain asbestos can result in the release of fibers into the air and consequent exposure to the public. Asbestos most commonly occurs in ultramafic rock that has undergone partial or complete alteration to serpentine rock (serpentinite) and often contains chrysotile asbestos. In addition, another form of asbestos, tremolite, can be found associated with ultramafic rock, particularly near faults. Sources of asbestos emissions include unpaved roads or driveways surfaced with ultramafic rock, construction activities in ultramafic rock deposits, or rock quarrying activities where ultramafic rock is present.

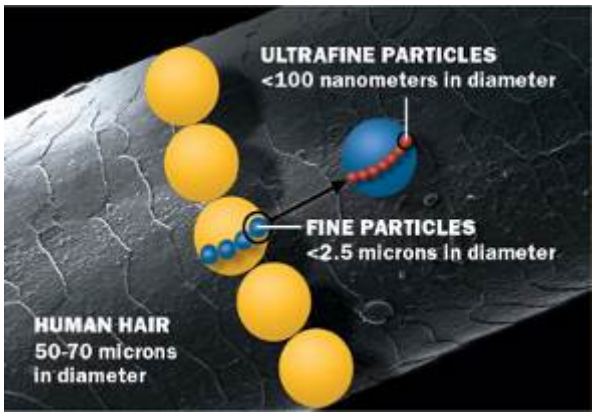
Exposure to asbestos is a health threat; exposure to asbestos fibers may result in health issues such as lung cancer, mesothelioma (a rare cancer of the thin membranes lining the lungs, chest, and abdominal cavity), and asbestosis (a non-cancerous lung disease that causes scarring of the lungs).

The ARB has an Air Toxics Control Measure for construction, grading, quarrying, and surface mining operations requiring the implementation of mitigation measures to minimize emissions of asbestos-laden dust. The measure applies to road construction and maintenance, construction and grading operations, and quarries and surface mines when the activity occurs in an area where naturally occurring asbestos is likely to be found. Areas are subject to the regulation if they are identified on maps published by the Department of Conservation as ultramafic rock units or if the Air Pollution Control Officer or owner/operator has knowledge of the presence of ultramafic rock, serpentine, or naturally occurring asbestos on the site. The measure also applies if ultramafic rock, serpentine, or asbestos is discovered during any operation or activity.

Ultrafine Particles (UFP)

Ultrafine particles are particulate matter (PM) that exists in the ambient air and are less than 0.1 micrometer (µm or microns) in diameter. Ultrafine particles (UFP or $PM_{0.1}$) are included in the group called $PM_{2.5}$, particulate matter less than 2.5 micrometers in diameter. Figure 5.3-1 displays the relative size of the particles compared with a human hair, with PM_{10} (particulate matter less than 10 micrometers in diameter) indicated as yellow circles, $PM_{2.5}$ shown as blue circles, and ultrafine particles are shown as red circles.

Figure 5.3-1: Ultrafine Particles



(Source: Levin 2012)

In its recent revisions to the NAAQS for particulate matter, the EPA states that, "In considering both the currently available health effects evidence and the air quality data, the Policy Assessment concluded that this information was still too limited to provide support for consideration of a distinct PM standard for ultrafine particles" (EPA 2013). Considering the above information, this assessment does not specifically distinguish between ultrafine particles and $PM_{2.5}$ or quantify in particular ultrafine particles. However, $PM_{2.5}$ emissions are estimated and a significance finding is provided for them.

Existing Air Quality Conditions

The local air quality can be evaluated by reviewing relevant air pollution concentrations near the project area. Table 5.3-2 summarizes 2012 through 2014 published monitoring data, which is the most recent 3-year period available. The table displays data from the Fresno-Garland monitoring station (located approximately 2.5 miles north of the DNCP project site and approximately 3.1 miles northeast of the FCSP project site). The data shows that during the past few years, the project area has exceeded the standards for ozone (state and national), PM_{10} (state), and $PM_{2.5}$ (national). The data in the table reflects the concentration of the pollutants in the air, measured using air monitoring equipment. This differs from emissions, which are calculations of a pollutant being emitted over a certain period. No recent monitoring data for Fresno County or the SJVAB was available for sulfur dioxide (SO_2). Generally, no monitoring is conducted for pollutants that are no longer likely to exceed ambient air quality standards.

Table 5.3-2: Air Quality Monitoring Summary

Air Pollutant	Averaging Time	Item	2012	2013	2014
Ozone[1]	1 Hour	Max 1 Hour (ppm)	0.135	0.103	0.112
		Days > State Standard (0.09 ppm)	23	6	16
	8 Hour	Max 8 Hour (ppm)	0.116	0.093	0.094
		Days > State Standard (0.07 ppm)	73	30	57

Table 5.3-2 (cont.): Air Quality Monitoring Summary

Air Pollutant	Averaging Time	Item	2012	2013	2014
		Days > National Standard (0.075 ppm)	47	17	29
Carbon monoxide	1 hour[2]	Max 1 Hour (ppm)	2.94	ID	ID
	8 Hour[1]	Max 8 Hour (ppm)	2.06	ID	ID
		Days > State Standard (9.0 ppm)	0	0	0
		Days > National Standard (9 ppm)	0	0	0
Nitrogen dioxide[1]	Annual	Annual Average (ppm)	ID	0.013	0.012
	1 Hour	Max 1 Hour (ppm)	0.064	0.060	0.059
		Days > State Standard (0.18 ppm)	0	0	0
Sulfur dioxide[1]	Annual	Annual Average (ppm)	ND	ND	ND
	24 Hour	Max 24 Hour (ppm)	ND	ND	ND
		Days > State Standard (0.04 ppm)	ND	ND	ND
Inhalable coarse particles (PM_{10})[1]	Annual	Annual Average (µg/m^3)	17.1	65.2	39.5
	24 hour	24 Hour (µg/m^3)	71.0	136.9	127.3
		Days > State Standard (50 µg/m^3)	2	60	87
		Days > National Standard (150 µg/m^3)	0	0	0
Fine particulate matter ($PM_{2.5}$)[1]	Annual	Annual Average (µg/m^3)	14.0	16.6	15.1
	24 Hour	24 Hour (µg/m^3)	88.8	99.6	94.6
		Days > National Standard (35 µg/m^3)	29	39	33

Notes:
> = exceed ppm = parts per million µg/m^3 = micrograms per cubic meter
ID = insufficient data ND = no data max = maximum
Bold = exceedance
State Standard = California Ambient Air Quality Standard
National Standard = National Ambient Air Quality Standard
[1] From the Fresno-Garland monitoring station.
[2] The ARB does not report 1-hour CO data. Therefore, the 8-hour data were divided by a persistence factor of 0.7 to arrive at a 1-hour concentration.
Source: California Air Resources Board 2014a.

The health impacts of the various air pollutants of concern can be presented in a number of ways. The clearest in comparison is to the state and federal ozone standards. If concentrations are below the standard, it is safe to say that no health impact would occur to anyone. When concentrations exceed the standard, impacts will vary based on the amount the standard is exceeded. The EPA developed the Air Quality Index (AQI) as an easy-to-understand measure of health impacts compared with concentrations in the air. Table 5.3-3 provides a description of the health impacts ozone at different concentrations.

Table 5.3-3: Air Quality Index and Health Effects from Ozone

Air Quality Index/ 8-hour Ozone Concentration	Health Effects Description
AQI—100–Moderate	**Sensitive Groups**: Children and people with asthma are the groups most at risk.
Concentration 75 ppb	**Health Effects Statements**: Unusually sensitive individuals may experience respiratory symptoms.
	Cautionary Statements: Unusually sensitive people should consider limiting prolonged outdoor exertion.
AQI—150–Unhealthy for Sensitive Groups	**Sensitive Groups**: Children and people with asthma are the groups most at risk.
Concentration 95 ppb	**Health Effects Statements**: Increasing likelihood of respiratory symptoms and breathing discomfort in active children and adults and people with respiratory disease, such as asthma.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should limit prolonged outdoor exertion.
AQI—200–Unhealthy	**Sensitive Groups**: Children and people with asthma are the groups most at risk.
Concentration 115 ppb	**Health Effects Statements**: Greater likelihood of respiratory symptoms and breathing difficulty in active children and adults and people with respiratory disease, such as asthma; possible respiratory effects in general population.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should avoid prolonged outdoor exertion; everyone else, especially children, should limit prolonged outdoor exertion.
AQI—210–Very Unhealthy	**Sensitive Groups**: Children and people with asthma are the groups most at risk.
Concentration 139 ppb	**Health Effects Statements**: Increasingly severe symptoms and impaired breathing likely in active children and adults and people with respiratory disease, such as asthma; increasing likelihood of respiratory effects in general population.
	Cautionary Statements: Active children and adults, and people with respiratory disease, such as asthma, should avoid all outdoor exertion; everyone else, especially children, should limit outdoor exertion.
Source: U.S. Environmental Protection Agency 2015b.	

Based on the AQI scale for the 8-hour ozone standard, Fresno experienced 73 days in the last 3 years that would be categorized as unhealthy (AQI 200), and as many as 87 days that were unhealthful for sensitive groups (AQI 150) or moderate (AQI 100) as measured at the Fresno-Garland monitoring station. The highest reading was 116 parts per billion (ppb) in 2012, more than the 115-ppb cutoff point for unhealthy (AQI 200).

The other nonattainment pollutant of concern is $PM_{2.5}$. An AQI of 100 or lower is considered moderate and would be triggered by a 24-hour average concentration of 35.4 micrograms per cubic meter ($\mu g/m^3$), which is considered an exceedance of the federal $PM_{2.5}$ standard. The Fresno-Garland monitoring station nearest the project exceeded the standard on 101 days in the 3-year period spanning from 2012 to 2014.

People with respiratory or heart disease, the elderly and children are the groups most at risk. Unusually sensitive people should consider reducing prolonged or heavy exertion. Unusually sensitive people should consider reducing prolonged or heavy exertion. The AQI of 150 is classified as unhealthful for sensitive groups with a $PM_{2.5}$ concentration of 55.4 $\mu g/m^3$. At this concentration, there is increasing likelihood of respiratory symptoms in sensitive individuals, aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease, and in the elderly. People with respiratory or heart disease, the elderly, and children should limit prolonged exertion. The highest concentration recorded in Fresno was 99.6 $\mu g/m^3$ in 2013. At this concentration, increased aggravation of heart or lung disease and premature mortality in persons with cardiopulmonary disease and the elderly and increased respiratory effects in general population would occur. People with respiratory or heart disease, the elderly, and children should avoid prolonged exertion; everyone else should limit prolonged exertion when the AQI exceeds this level.

Attainment Status

The EPA and the ARB designate air basins where ambient air quality standards are exceeded as "nonattainment" areas. If standards are met, the area is designated as an "attainment" area. If there is inadequate or inconclusive data to make a definitive attainment designation, they are considered "unclassified." National nonattainment areas are further designated as marginal, moderate, serious, severe, or extreme as a function of deviation from standards.

Each standard has a different definition, or "form" of what constitutes attainment, based on specific air quality statistics. For example, the federal 8-hour CO standard is not to be exceeded more than once per year; therefore, an area is in attainment of the CO standard if no more than one 8-hour ambient air monitoring values exceeds the threshold per year. In contrast, the federal annual $PM_{2.5}$ standard is met if the 3-year average of the annual average $PM_{2.5}$ concentration is less than or equal to the standard.

The current attainment designations for the Air Basin are shown in Table 5.3-4. The Air Basin is designated as nonattainment for ozone, PM_{10}, and $PM_{2.5}$.

Table 5.3-4: San Joaquin Valley Air Basin Attainment Status

Pollutant	State Status	National Status
Ozone	Nonattainment	Nonattainment—Extreme
Carbon monoxide	Attainment	Attainment—Maintenance
Nitrogen dioxide (annual)	Attainment	Attainment—Maintenance
Nitrogen dioxide (1-hour)	Attainment	Attainment—Maintenance
Sulfur dioxide	Attainment	Attainment
PM_{10}	Nonattainment	Attainment
$PM_{2.5}$	Nonattainment	Nonattainment
Lead	Attainment	Attainment
Source of State status: California Air Resources Board 2013a. Source of National status: U.S. Environmental Protection Agency 2012a.		

5.3.4 - Air Quality Plans and Regulations

Air pollutants are regulated at the national, state, and air basin or county level; each agency has a different level of regulatory responsibility. The EPA regulates at the national level. The ARB regulates at the state level. The SJVAPCD regulates at the air basin level.

The EPA is responsible for national and interstate air pollution issues and policies. The EPA sets national vehicle and stationary source emission standards, oversees approval of all State Implementation Plans, provides research and guidance for air pollution programs, and sets NAAQS, also known as the federal standards described earlier.

A State Implementation Plan is a document prepared by each state describing existing air quality conditions and measures that will be followed to attain and maintain federal standards. The State Implementation Plan for the State of California is administered by the ARB, which has overall responsibility for statewide air quality maintenance and air pollution prevention. California's State Implementation Plan incorporates individual federal attainment plans for regional air districts—an air district prepares their federal attainment plan, which is sent to ARB to be approved and incorporated into the California State Implementation Plan. Federal attainment plans include the technical foundation for understanding air quality (e.g., emission inventories and air quality monitoring), control measures and strategies, and enforcement mechanisms. The most recent attainment plans for the SJVAPCD are the 2007 8-hour Ozone Attainment Plan and the 2012 $PM_{2.5}$ Plan.

Areas designated non-attainment must develop air quality plans and regulations to achieve standards by specified dates depending on the severity of the exceedances. For much of the country, implementation of federal motor vehicle standards and compliance with federal permitting requirements for industrial sources are adequate to attain air quality standards on schedule. For

many areas of California; however, additional state and local regulation is required to achieve the standards. Regulations adopted by California are described below.

Federal

At the federal level, the EPA has been charged with implementing national air quality programs. The EPA's air quality mandates are drawn primarily from the Federal Clean Air Act, which was signed into law in 1970 and substantially amended by Congress in 1977 and again in 1990.

Federal Clean Air Act

The Federal Clean Air Act required the EPA to establish NAAQS and also set deadlines for their attainment. Two types of National standards have been established: primary standards, which protect public health, and secondary standards, which protect public welfare from non-health-related adverse effects, such as visibility restrictions.

The Federal Clean Air Act also required each state to prepare an air quality control plan referred to as a State Implementation Plan (SIP). The Federal Clean Air Act Amendments of 1990 added requirements for states with nonattainment areas to revise their State Implementation Plans to incorporate additional control measures to reduce air pollution. The SIP is periodically modified to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. The EPA has responsibility to review all State Implementation Plans to determine conformance to the mandates of the Federal Clean Air Act and the amendments thereof, and determine if implementation will achieve air quality goals. If the EPA determines a State Implementation Plan to be inadequate, a Federal Implementation Plan may be prepared for the nonattainment area that imposes additional control measures. Failure to submit an approvable State Implementation Plan or to implement the plan within the mandated timeframe may result in sanctions to transportation funding and stationary air pollution sources in the air basin.

State of California

Low-Emission Vehicle Program

The ARB first adopted Low-Emission Vehicle (LEV) program standards in 1990. These first LEV standards ran from 1994 through 2003. LEV II regulations, running from 2004 through 2010, represent continuing progress in emission reductions. As the State's passenger vehicle fleet continues to grow and more sport utility vehicles and pickup trucks are used as passenger cars rather than work vehicles, the more stringent LEV II standards were adopted to provide reductions necessary for California to meet federally mandated clean air goals outlined in the 1994 State Implementation Plan. In 2012, ARB adopted the LEV III amendments to California's Low-Emission Vehicle (LEV) regulations. These amendments include more stringent emission standards for both criteria pollutants and GHGs for new passenger vehicles (ARB 2012a).

On-Road Heavy-Duty Vehicle Program

The ARB has adopted standards for emissions from various types of new on-road heavy-duty vehicles. Section 1956.8, Title 13, California Code of Regulations contains California's emission standards for on-road heavy-duty engines and vehicles, and test procedures. ARB has also adopted programs to reduce emissions from in-use heavy-duty vehicles including the Heavy-Duty Diesel

Vehicle Idling Reduction Program, the Heavy-Duty Diesel In-Use Compliance Program, the Public Bus Fleet Rule and Engine Standards, and the School Bus Program and others (ARB 2013b).

ARB Regulation for In-Use Off-Road Diesel Vehicles

On July 26, 2007, the ARB adopted a regulation to reduce DPM and NO_x emissions from in-use (existing) off-road heavy-duty diesel vehicles in California. Such vehicles are used in construction, mining, and industrial operations. The regulation limits idling to no more than five consecutive minutes, requires reporting and labeling, and requires disclosure of the regulation upon vehicle sale. The ARB is enforcing that part of the rule with fines up to $10,000 per day for each vehicle in violation. Performance requirements of the rule are based on a fleet's average NO_x emissions, which can be met by replacing older vehicles with newer, cleaner vehicles or by applying exhaust retrofits. The regulation was amended in 2010 to delay the original timeline of the performance requirements, making the first compliance deadline January 1, 2014 for large fleets (over 5,000 horsepower), 2017 for medium fleets (2,501-5,000 horsepower), and 2019 for small fleets (2,500 horsepower or less).

ARB Airborne Toxic Control Measure for Asbestos

In July 2001, the ARB approved an Air Toxic Control Measure for construction, grading, quarrying and surface mining operations to minimize emissions of naturally occurring asbestos. The regulation requires application of best management practices to control fugitive dust in areas known to have naturally occurring asbestos and requires notification to the local air district prior to commencement of ground-disturbing activities. The measure establishes specific testing, notification and engineering controls prior to grading, quarrying, or surface mining in construction zones where naturally occurring asbestos is located on projects of any size. There are additional notification and engineering controls at work sites larger than one acre in size. These projects require the submittal of a "Dust Mitigation Plan" and approval by the air district prior to the start of a project.

Construction sometimes requires the demolition of existing buildings where construction occurs. Buildings often include materials containing asbestos, but no demolition is associated with this project. However, asbestos is also found in a natural state, known as naturally occurring asbestos. Exposure and disturbance of rock and soil that naturally contain asbestos can result in the release of fibers into the air and consequent exposure to the public. Asbestos most commonly occurs in ultramafic rock that has undergone partial or complete alteration to serpentine rock (serpentinite) and often contains chrysotile asbestos. In addition, another form of asbestos, tremolite, can be found associated with ultramafic rock, particularly near faults. Sources of asbestos emissions include unpaved roads or driveways surfaced with ultramafic rock, construction activities in ultramafic rock deposits, or rock quarrying activities where ultramafic rock is present.

The ARB has an Air Toxics Control Measure for construction, grading, quarrying, and surface mining operations requiring the implementation of mitigation measures to minimize emissions of asbestos-laden dust. The measure applies to road construction and maintenance, construction and grading operations, and quarries and surface mines when the activity occurs in an area where naturally occurring asbestos is likely to be found. Areas are subject to the regulation if they are identified on maps published by the Department of Conservation as ultramafic rock units or if the Air Pollution

Control Officer or owner/operator has knowledge of the presence of ultramafic rock, serpentine, or naturally occurring asbestos on the site. The measure also applies if ultramafic rock, serpentine, or asbestos is discovered during any operation or activity. Review of the Department of Conservation maps shows that no ultramafic rock has been found near Fresno.

Diesel Risk Reduction Plan

The ARB's Diesel Risk Reduction Plan has led to the adoption of new state regulatory standards for all new on-road, off-road, and stationary diesel-fueled engines and vehicles to reduce DPM emissions by about 90 percent overall from year 2000 levels as stated on page 1 of the plan. The projected emission benefits associated with the full implementation of this plan, including federal measures, are reductions in DPM emissions and associated cancer risks of 75 percent by 2010 and 85 percent by 2020 (ARB 2000).

San Joaquin Valley Air Pollution Control District

The District is responsible for controlling emissions primarily from stationary sources. The District, in coordination with the eight countywide transportation agencies, is also responsible for developing, updating, and implementing air quality attainment plans for the Air Basin. The District also has roles under CEQA.

Ozone Plans

The Air Basin is designated nonattainment of state and federal health-based air quality standards for ozone. To meet Clean Air Act requirements for the one-hour ozone standard, the District adopted an Extreme Ozone Attainment Demonstration Plan in 2004, with an attainment date of 2010. Although the EPA revoked the federal 1-hour ozone standard effective June 15, 2005 and replaced it with an 8-hour standard, the requirement to submit a plan for that standard remained in effect for the San Joaquin Valley.

The planning requirements for the 1-hour plan remain in effect until replaced by a federal 8-hour ozone attainment plan. The EPA approved the 2004 Extreme Ozone Attainment Demonstration Plan, including revisions to the plan, on March 8, 2010, effective April 7, 2010. However, the Air Basin failed to attain the standard in 2010 and was subject to a $29-million Clean Air Act penalty. The penalty is being collected through an additional $12 motor vehicle registration surcharge for each passenger vehicle registered in the Air Basin that will be applied to pollution reduction programs in the region. The District also instituted a more robust ozone episodic program to reduce emissions on days with the potential to exceed the ozone standards.

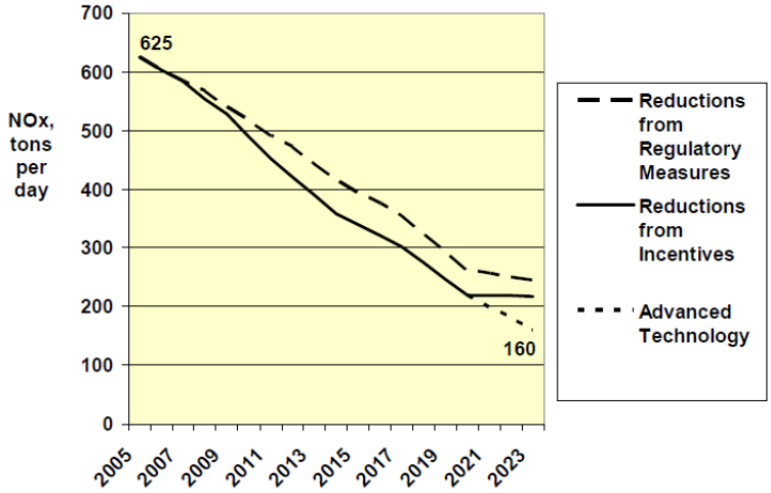
The EPA originally classified the Air Basin as serious nonattainment for the 1997 federal 8-hour ozone standard with an attainment date of 2013. On April 30, 2007, the District's Governing Board adopted the 2007 Ozone Plan, which contained analysis showing a 2013 attainment target to be infeasible. The 2007 Ozone Plan details the plan for achieving attainment on schedule with an "extreme nonattainment" deadline of 2024. At its adoption of the 2007 Ozone Plan, the District also requested a reclassification to extreme nonattainment. ARB approved the plan in June 2007, and the EPA approved the request for reclassification to extreme nonattainment on April 15, 2010.

The 2007 Ozone Plan contains measures to reduce ozone and particulate matter precursor emissions to bring the Basin into attainment with the federal 8-hour ozone standard. The 2007 Ozone Plan calls for a 75-percent reduction of NO_x and a 25-percent reduction of ROG. Figure 5.3-2 displays the anticipated NO_x reductions attributed in the 2007 Ozone Plan (Source: 2007 Ozone Plan). The plan, with innovative measures and a "dual path" strategy, assures expeditious attainment of the federal 8-hour ozone standard for all Air Basin residents. The District Governing Board adopted the 2007 Ozone Plan on April 30, 2007. The ARB approved the plan on June 14, 2007. The 2007 Ozone Plan requires yet to be determined "Advanced Technology" to achieve additional reductions after 2021 to attain the standard at all monitoring stations in the Air Basin by 2024 as allowed for areas designated extreme nonattainment by the federal Clean Air Act (CAA).

The Air Basin is designated as an extreme ozone nonattainment area for the EPA's 2008 8-hour ozone standard of 75 ppb. The plan to address this standard is expected to be due to the EPA in 2015/2016.

State ozone standards do not have an attainment deadline but require implementation of all feasible measures to achieve attainment at the earliest date possible. This is achieved through compliance with the federal deadlines and control measure requirements.

Figure 5.3-2: San Joaquin Valley NO_x Emissions Forecast



Particulate Matter Plans

The Air Basin was designated nonattainment of state and federal health-based air quality standards for PM_{10}. The Air Basin is also designated nonattainment of state and federal standards for $PM_{2.5}$.

To meet Clean Air Act requirements for the PM_{10} standard, the District adopted a PM_{10} Attainment Demonstration Plan (Amended 2003 PM_{10} Plan and 2006 PM_{10} Plan), which has an attainment date of 2010. The District adopted the 2007 PM_{10} Maintenance Plan in September 2007 to assure the San Joaquin Valley's continued attainment of the EPA's PM_{10} standard. The EPA designated the valley as an attainment/maintenance area for PM_{10} on September 25, 2008. Although the San Joaquin Valley has exceeded the standard since then, those days were considered exceptional events that are not considered a violation of the standard for attainment purposes.

The 2008 $PM_{2.5}$ Plan builds upon the comprehensive strategy adopted in the 2007 Ozone Plan to bring the Air Basin into attainment of the 1997 national standards for $PM_{2.5}$. The EPA has identified NO_x and sulfur dioxide as precursors that must be addressed in air quality plans for the 1997 $PM_{2.5}$ standards. The 2008 $PM_{2.5}$ Plan is a continuation of the District's strategy to improve the air quality in the Air Basin. The EPA issued final approval of the 2008 $PM_{2.5}$ Plan on November 9, 2011, which went into effect on January 9, 2012. The EPA approved the emissions inventory, the reasonably available control measures/reasonably available control technology demonstration, reasonable further progress demonstration, attainment demonstration and associated air quality modeling, and the transportation conformity motor vehicle emissions budgets. The EPA also granted California's request to extend the attainment deadline for the San Joaquin Valley to April 5, 2015 and approved commitments to measures and reductions by the District and the ARB. Finally, it disapproved the State Implementation Plan's contingency provisions and issued a protective finding for transportation conformity determinations.

In December 2012, the District adopted the 2012 $PM_{2.5}$ Plan to bring the San Joaquin Valley into attainment of the EPA's 2006 24-hour $PM_{2.5}$ standard of 35 µg/m³. The ARB approved the District's 2012 $PM_{2.5}$ Plan for the 2006 standard at a public hearing on January 24, 2013 (SJVAPCD 2012). This plan seeks to bring the Valley into attainment with the standard by 2019, with the expectation that most areas will achieve attainment before that time.

The 2015 Plan for the 1997 $PM_{2.5}$ Standard, approved by the District Governing Board on April 16, 2015, will bring the Valley into attainment of EPA's 1997 $PM_{2.5}$ standard as expeditiously as practicable, but no later than December 31, 2020 (SJVAPCD 2015b).

SJVAPCD Rules and Regulations

The SJVAPCD rules and regulations that may apply to projects that will occur during buildout of the project include, but are not limited to the following:

- **Rule 2201**—New and Modified Stationary Source Review (applies to any stationary/industrial equipment that emits regulated pollutants in amounts specified by the rule. Rule 2201 requires stationary source projects that exceed certain thresholds to install best available control technology (BACT) and to obtain emission offsets to ensure that growth in stationary sources on a cumulative basis will not result in an increase in emissions.
- **Rule 4002—National Emissions Standards for Hazardous Air Pollutants** The purpose of the rule is to incorporate the National Emission Standards for Hazardous Air Pollutants from Part 61, Chapter I, Subchapter C, Title 40, Code of Federal Regulations and the National Emission Standards for Hazardous Air Pollutants for Source Categories from Part 63, Chapter I, Subchapter C, Title 40, Code of Federal Regulations to protect the health and safety of the public from hazardous air pollutants, such as asbestos.
- **Rule 4102—Nuisance**. The purpose of this rule is to protect the health and safety of the public, and applies to any source operation that emits or may emit air contaminants or other materials.

- **Rule 4601—Architectural Coatings**. The purpose of this rule is to limit Volatile Organic Compounds (VOC) emissions from architectural coatings. Emissions are reduced by limits on VOC content and providing requirements on coatings storage, cleanup, and labeling.
- **Rule 4641**—Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations. The purpose of this rule is to limit VOC emissions from asphalt paving and maintenance operations. If asphalt paving will be used, then the paving operations will be subject to Rule 4641.
- **Rule 4901—Wood Burning Fireplaces and Wood Burning Heaters**. The purposes of this rule are to limit emissions of carbon monoxide and particulate matter from wood burning fireplaces, wood burning heaters, and outdoor wood burning devices, and to establish a public education program to reduce wood burning emissions. All development that includes woodburning devices are subject to this rule.
- **Regulation VIII—Fugitive PM_{10} Prohibitions**. Rule 8011-8081 are designed to reduce PM_{10} emissions (predominantly dust/dirt) generated by human activity, including construction and demolition activities, road construction, bulk materials storage, paved and unpaved roads, carryout and trackout, etc. All development projects that involve soil disturbance are subject to at least one provision of the Regulation VIII series of rules.
- **Rule 9510—Indirect Source Review**. This rule reduces the impact of NO_x and PM_{10} emissions from growth on the Air Basin. The rule places application and emission reduction requirements on development projects meeting applicability criteria in order to reduce emissions through on-site mitigation, off-site District-administered projects, or a combination of the two. This project must comply with Rule 9510 because it would develop more than 50 residential dwelling units.

CEQA

The District has three roles under CEQA:

1. **Lead Agency:** Responsible for preparing environmental analyses for its own projects (adoption of rules, regulations, or plans) or permit projects filed with the District where the District has primary approval authority over the project.
2. **Responsible Agency:** The discretionary authority of a Responsible Agency is more limited than a Lead Agency; having responsibility for mitigating or avoiding only the environmental effects of those parts of the project which it decides to approve, carry out, or finance. The District defers to the Lead Agency for preparation of environmental documents for land use projects that also have discretionary air quality permits unless no document is prepared by the Lead Agency, and potentially significant impacts related to the permit are possible. The District comments on documents prepared by Lead Agencies to ensure that District concerns are addressed.
3. **Commenting Agency:** The District reviews and comments on air quality analyses prepared by other public agencies (such as the project).

The District also provides guidance and thresholds for CEQA air quality and GHG analyses. The result of this guidance as well as state regulations to control air pollution is an overall improvement in the Air Basin. In particular, the District's 2015 GAMAQI states the following:

1. The District's Air Quality Attainment Plans include measures to promote air quality elements in county and city general plans as one of the primary indirect source programs. The general plan is the primary long range planning document used by cities and counties to direct development. Since air districts have no authority over land use decisions, it is up to cities and counties to ensure that their general plans help achieve air quality goals. Section 65302.1 of the California Government Code requires cities and counties in the San Joaquin Valley to amend appropriate elements of their general plans to include data, analysis, comprehensive goals, policies, and feasible implementation strategies to improve air quality in their next housing element revisions.
2. The Air Quality Guidelines for General Plans (AQGGP), adopted by the District in 1994 and amended in 2005, is a guidance document containing goals and policy examples that cities and counties may want to incorporate into their General Plans to satisfy Section 65302.1. When adopted in a general plan and implemented, the suggestions in the AQGGP can reduce vehicle trips and miles traveled and improve air quality. The specific suggestions in the AQGGP are voluntary. The District strongly encourages cities and counties to use their land use and transportation planning authority to help achieve air quality goals by adopting the suggested policies and programs.

City of Fresno

The General Plan sets forth the following guiding and implementing policies that are relevant to air quality.

- **Policy UF-1-c:** Identifiable City Structure. Focus integrated and ongoing planning efforts to achieve an identifiable city structure, comprised of a concentration of buildings, people, and pedestrian-oriented activity in Downtown; along a small number of transit-oriented, mixed-use corridors and strategically located Activity Centers; and in existing and new neighborhoods augmented with parks and connected by multi-purpose trails and tree lined bike lanes and streets.
- **Policy UF-12-a:** BRT Corridors. Design land uses and integrate development site plans along BRT corridors, with transit-oriented development that supports transit ridership and convenient pedestrian access to bus stops and BRT station stops.
- **Policy UF-12-b:** Activity Centers. Mixed-use designated areas along BRT and/or transit corridors are appropriate for more intensive concentrations of urban uses. Typical uses could include commercial areas; employment centers; schools; compact residential development; religious institutions; parks; and other gathering points where residents may interact, work, and obtain goods and services in the same place.
- **Policy UF-12-d:** Appropriate Mixed-Use. Facilitate the development of vertical and horizontal mixed-uses to blend residential, commercial, and public land uses on one site or adjacent

sites. Ensure land use compatibility between mixed-use districts in Activity Centers and the surrounding residential neighborhoods.

- **Policy UF-12-e:** Access to Activity Centers. Promote adoptions and implementation of standards supporting pedestrian activities and bicycle linkages from surrounding land uses and neighborhoods into Activity Centers and to transit stops. Provide for priority transit routes and facilities to serve the Activity Centers.
- **Policy UF-12-f:** Mixed-Use in Activity Centers. Adopt a new Development Code which includes use regulations and standards to allow for mixed-uses and shared parking facilities.
- **Objective UF-14:** Create an urban form that facilitates multi-modal connectivity.
- **Policy UF-14-a:** Design Guidelines for Walkability. Develop and use design guidelines and standards for a walkable and pedestrian-scaled environment with a network of streets and connections for pedestrians and bicyclists, as well as transit and autos.
- **Policy UF-14-b:** Local Street Connectivity. Design local roadways to connect throughout neighborhoods and large private developments with adjacent major streets and pathways of existing adjacent development. Create access for pedestrians and bicycles where a local street must dead end or be designed as a cul-de-sac to adjoining uses that provide services, shopping, and connecting pathways for access to the greater community area.
- **Policy UF-14-c:** Block Length. Create development standards that provide desired and maximum block lengths in residential, retail, and mixed-use districts in order to enhanced walkability.
- **Objective LU-2:** Plan for infill development that includes a range of housing types, building forms, and land uses to meet the needs of both current and future residences.
- **Policy LU-2-a:** Infill Development and Redevelopment. Promote development of vacant, underdeveloped, and re-developable land uses within the City Limits where urban services are available considering the establishment and implementation of supportive regulations and programs.
- **Policy LU-2-b:** Infill Development for Affordable Housing. Establish a priority infill incentive program for residential infill development of existing vacant lots and underutilized sites within the City as a strategy to help to meet the affordable housing needs of the community.
- **Policy LU-3-b:** Mixed-Use Urban Corridors that Connect the Downtown Planning Area. Support the development of mixed-use urban corridors that connect the Downtown Planning Area with the greater Fresno-Clovis Metropolitan Area with functional, enduring, and desirable urban qualities along the Blackstone Avenue, Shaw Avenue, California Avenue, and Ventura Avenue/Kings Canyon Road corridors, as shown on Figure LU-1: General Plan Land Use Diagram.
- **Policy LU-3-c:** Zoning for High Density on Major BRT Corridors. Consider the adoption of supportive zoning regulations for compact development along BRT corridors leading to the Downtown Core that will not diminish the long-term growth and development potential for Downtown.
- **Policy LU-5-f:** High Density Residential Uses. Promote high-density residential uses to support Activity Centers and BRT Corridors, affordable housing and walkable access to transit stops.
- **Policy LU-6-b:** Commercial Development Guidelines. Consider adopting commercial development guidelines to assure high quality design and site planning for large commercial developments, consistent with the Urban Form policies of this Plan.

- **Policy LU-6-f:** Auto-Oriented Commercial Uses. Direct highway-oriented and auto-serving commercial uses to locations that are compatible with planned Urban Form policies of the General Plan. Ensure adequate buffering measures for adjacent residential uses noise, glare, odors, and dust.
- **Policy LU-6-g:** Lodging Facilities Location. Site lodging facilities and related accommodations near major transportation facilities.
- **Policy LU-8-b:** Access to Public Facilities. Ensure that major public facilities and institutions have adequate multi-modal access and can be easily reached by public transit.
- **Objective RC-4:** In cooperation with other jurisdictions and agencies in the San Joaquin Valley Air Basin, take necessary actions to achieve and maintain compliance with State and federal air quality standards for criteria pollutants.
- **Policy RC-4-a:** Support Regional Efforts. Support and lead, where appropriate, regional, State and federal programs and actions for the improvement of air quality, especially the SJVAPCD's efforts to monitor and control air pollutants from both stationary and mobile sources and implement Reasonably Available Control Measures in the Ozone Attainment Plan.
- **Policy RC-4-b:** Conditions of Approval. Develop and incorporate air quality maintenance requirements, compatible with Air Quality Attainment and Maintenance Plans, as conditions of approval for General Plan amendments, community plans, Specific Plans, neighborhood plans, Concept Plans, and development proposals.
- **Policy RC-4-c:** Evaluate Impacts with Models. Continue to require the use of computer models used by SJVAPCD to evaluate the air quality impacts of plans and projects that require such environmental review by the City.
- **Policy RC-4-d:** Forward Information. Forward information regarding proposed General Plan amendments, community plans, Specific Plans, neighborhood plans, Concept Plans, and development proposals that require air quality evaluation, and amendments to development regulations to the SJVAPCD for their review of potential air quality and health impacts.
- **Policy RC-4-e:** Support Employer-Based Efforts. Support and promote employer implementation of staggered work hours and employee incentives to use carpools, public transit and other measures to reduce vehicular use and traffic congestion.
- **Policy RC-4-f:** Municipal Operations and Fleet Actions. Continue to control and reduce air pollution emissions from vehicles owned by the City operations and municipal operations and facilities by undertaking the following:
  - Expand the use of alternative fuel, electric, and hybrid vehicles in City fleets.
  - Create preventive maintenance schedules that will ensure efficient engine operation.
  - Include air conditioning recycling and charging stations in the City vehicle maintenance facilities, to reduce freon gases being released into the atmosphere and electrostatic filtering systems in City maintenance shops, when feasible or when required by health regulations.
  - Use satellite corporation yards for decentralized storage and vehicle maintenance.
  - Convert City-owned emergency backup generators to natural gas fuels whenever possible, and create an advanced energy storage system.
- **Policy RC-4-g:** FAX Actions. Continue efforts to improve Fresno Area Express (FAX) bus transit system technical performance, reduce emission levels, streamline system operations, and implement BRT where supportive land uses are proposed by Figure LU-1: Land Use Diagram.

- **Policy RC-4-h:** Airport Actions. Support Airport efforts to develop and maintain programs and policies to support City, State and Federal efforts to achieve and maintain air quality standards.
- **Policy RC-4-j:** All Departments. Continue to develop and implement in all City departments, operational policies to reduce air pollution.
- **Policy RC-7-d:** Update Standards for New Development. Continue to refine water saving and conservation standards for new development.
- **Objective RC-8:** Reduce the consumption of non-renewable energy resources by requiring and encouraging conservation measures and the use of alternative energy sources.
- **Policy RC-8-a:** Existing Standards and Programs. Continue existing beneficial energy conservation programs, including adhering to the California Energy Code in new construction and major renovations.
- **Policy RC-8-c:** Energy Conservation in New Development. Consider providing an incentive program for new buildings that exceed California Energy Code requirements by fifteen percent.
- **Policy RC-8-d:** Incentives. Establish an incentive program for residential developers who commit to building all of their homes to ENERGY STAR performance guidelines.
- **Policy RC-8-e:** Energy Use Disclosure. Promote compliance with State law mandating disclosure of a building's energy data and rating of the previous year to prospective buyers and lessees of the entire building or lenders financing the entire building.
- **Policy RC-8-f:** City Heating and Cooling. Reduce energy use at City facilities by updating heating and cooling equipment and installing "smart lighting" where feasible and economically viable.
- **Policy RC-8-g:** Revolving Energy Fund. Create a City Energy Fund, which uses first year savings and rebates from completed City-owned energy efficiency projects to provide resources for additional energy projects. Dedicate this revolving fund to the sole use of energy efficiency projects that will pay back into the fund.
- **Policy RC-8-h:** Solar Assistance. Identify and publicize information about financial mechanisms for private solar installations and provide over-the-counter permitting for solar installations meeting specified standards, which may include maximum size (in kV) of units that can be so approved.
- **Policy RC-8-i:** Renewable Target. Adopt and implement a program to increase the use of renewable energy to meet a given percentage of the city's peak electrical load within a given time frame.
- **Policy RC-8-j:** Alternative Fuel Network. Support the development of a network of integrated charging and alternate fuel station for both public and private vehicles, and if feasible, open up municipal stations to the public as part of network development.
- **Policy HC-3-f:** New Drive-Through Facilities. Incorporate design review measures in the Citywide Development Code to reduce vehicle emissions resulting from queued idling vehicles at drive-through facilities in proximity to residential neighborhoods.
- **Policy HC-3-d:** Green Standards for Affordable Housing. Provide appropriate incentives for affordable housing providers, agencies, non-profit and market rate developers to use LEED and CalGreen Tier 1 or Tier 2 standards or third party equivalents.

5.3.5 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether impacts to air quality are significant environmental effects, the following questions are analyzed and evaluated.

> Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations.
>
> Would the project:
>
> a) Conflict with or obstruct implementation of the applicable air quality plan?
>
> b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?
>
> c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors)?
>
> d) Expose sensitive receptors to substantial pollutant concentrations?
>
> e) Create objectionable odors affecting a substantial number of people?

5.3.6 - Impact Analysis, Mitigation Measures, and Level of Significance After Mitigation

Air Quality Plan

Impact AIR-1:	**The project would not conflict with or obstruct implementation of the applicable air quality plan.**

Program-Level Impact Analysis of the DNCP and FCSP

The DNCP and FCSP were assessed to determine if the impacts from implementing the planning areas would conflict with or obstruct the implementation of the applicable attainment plan. As defined above, the project consists of the buildout of both the DNCP and the FCSP. Buildout is predicted to occur at growth rates consistent with those used by the SJVAPCD to develop plans for all nonattainment pollutants in the SJVAB. For the purposes of this analysis, the project is estimated to be fully built out by 2039.

The project-level air quality impacts of the Fulton Mall Reconstruction Project were assessed in an Environmental Impact Report prepared by the City (State Clearinghouse Number 2013101046). The DEIR found the Fulton Mall project to be consistent with the applicable air quality plans, since its construction was included in the 2011 RTP, which was found to conform to the SJVAPCD air quality plans.

The assessment used two tests to determine if the project (buildout of both the DNCP and the FCSP) conflicts with or obstructs the applicable air quality plans. First, if the planning areas exceed the

growth projections used in the applicable attainment plan, it would produce a potentially significant impact. Second, if the project includes goals, policies, and development standards that are in conflict with the development-related control measures in the attainment plans, the project would result in a potentially significant impact. Under these tests, the planning areas would not have a significant impact.

The growth projections used for the General Plan assume that growth in population, vehicle use and other source categories will occur at historically robust rates that are consistent with the rates used to develop the SJVAPCD's attainment plans. In other words, the amount of growth predicted for the planning areas is accommodated by the SJVAPCD's attainment plan and would allow the air basin to attain the 8-hour ozone standard by the 2023 attainment date. In addition, as shown in the operational emissions analysis in Impact AIR-3, reductions anticipated from existing regulations and adopted control measures will result in emissions continuing to decline even though development and population will increase. Furthermore, buildout of the DNCP and FCSP would help reduce the City's motor vehicle use and energy consumption by developing downtown. This is accomplished with more compact development achieved by increasing development density and by providing a land use pattern and transportation infrastructure more supportive of public transportation, walking, and bicycling. Therefore, the DNCP and FCSP support the implementation of SJVAPCD's attainment plans and successfully meets this test.

Furthermore, the SJVAPCD has adopted rules and regulations specifically designed to reduce the impacts of growth on the applicable air quality plans. For example, Rule 9510-Indirect Source Review was adopted to provide emission reductions needed by the SJVAPCD to demonstrate attainment of the federal PM_{10} standard and contributed reductions that assist in attaining federal ozone standards. Rule 9510 also contributes toward attainment of state standards for these pollutants. The District's Regulation VIII—Fugitive PM_{10} Prohibitions requires controls for sources of particulate matter necessary for attaining the federal PM_{10} standards and achieving progress toward attaining the state PM_{10} standards.

Rule 2201—New and Modified Stationary Source Review requires new and modified stationary/industrial sources provide emission controls and offsets to ensure that stationary sources decline over time and do not impact the applicable air quality plans. Buildout of the DNCP and FCSP will comply with these rules and regulations, providing additional support for the conclusion that it will not interfere or obstruct with the application of the attainment plans.

Therefore, the project would be consistent with the air quality attainment plans and would result in a less than significant impact for this criterion.

Cumulative Impact Analysis

Attainment plans must demonstrate that the nonattainment area will achieve air quality standards by deadlines mandated by the Federal Clean Air Act, and maintain the standards accounting for the cumulative growth in all source emissions predicted for the air basin. The General Plan identifies the cumulative growth that would occur in the DNCP and FCSP, and its buildout is based on growth projections that are consistent with the applicable attainment plans. Therefore, under this criterion,

the buildout of the DNCP and FCSP would not have a significant cumulative impact on the applicable attainment plans.

Because the SJVAB is designated as an Extreme Nonattainment Area for the 8-hour ozone standard, the Clean Air Act allows the SJVAPCD 2007 Ozone Plan to rely upon future measures to be identified later after adopting all feasible control measures to demonstrate attainment. The 2007 Ozone Plan strategy is to achieve the remaining reductions with new incentive funding and technological advancements. The future reductions must be in place by 2020 to achieve the ozone standards by the 2023 attainment year. Attainment requires an additional 14 percent NO_x reduction beyond the adopted regulatory measures to achieve attainment at all monitoring stations in the air basin. The Clean Air Act (CAA) includes sanctions and penalties for air basins that fail to fulfill plan commitments, providing a strong incentive for the air district to identify and implement the required actions. The CAA requires the SJVAPCD to prepare Rate of Progress Plans every three years to identify any shortfalls early and to identify new control measures if needed. The DNCP and FCSP would not conflict with or obstruct attainment if the Air District fails to identify and implement the required reductions, since the planning areas would continue to assist the SJVAPCD in achieving the standards to the extent possible by helping reduce the City's motor vehicle use and energy consumption by developing a more compact, pedestrian-friendly downtown.

The SJVAB has attained federal PM_{10} standards, and state standards have no attainment deadlines. Attainment deadlines for $PM_{2.5}$ are earlier than for ozone and require fewer NO_x reductions to achieve the federal standards. In addition, the $PM_{2.5}$ Plan identifies sufficient reductions from adopted regulations to achieve the standard on schedule. Therefore, ozone precursor reductions are the controlling pollutants for attainment in the SJVAB.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Air Quality Standards/Violations

Impact AIR-2: The project would violate an air quality standard or contribute substantially to an existing or projected air quality violation.

Program-Level Impact Analysis of the DNCP and FCSP

Violations of air quality standards occur when official air monitoring stations within the Air Basin exceed air quality standards as defined by EPA criteria and statistical sampling methods. Monitoring stations are located in areas that are representative of air quality in the Air Basin and are not necessarily located in all areas impacted by local sources. The DNCP and FCSP do not identify specific projects that would allow quantification of localized impacts from project-level emissions. Additional discussion regarding localized impacts on sensitive receptors is provided under Impact AIR-4.

Although monitoring stations in Fresno currently experience violations of ozone and $PM_{2.5}$ air quality standards, the impacts of the project for these pollutants are better assessed on a cumulative basis, because a single project alone would not result in a violation of the ozone standard (see Impact AIR-3). Ozone is generated by photochemical reactions of the cumulative emissions of ROG and NO_x in the Air Basin. PM_{10} and $PM_{2.5}$ are generated by direct emissions and by secondary reactions in the atmosphere, and have localized and cumulative regional impacts.

The SJVAPCD has adopted project-level quantitative thresholds for ozone precursors, ROG and NO_x of 10 tons per year, and 15 tons per year for PM_{10} and $PM_{2.5}$. The threshold for CO is 100 tons per year. The threshold for SO_x is 27 tons per year. These thresholds are based on the SJVAPCD's New Source Review (NSR) offset thresholds contained in Rule 2201—New and Modified Stationary Source Review. Application of the District's NSR offset thresholds to development projects provides a measure of the project's impact in comparison to an important regulatory threshold. Projects that exceed these thresholds may be considered to contribute substantially to an existing or projected violation. The results of the quantitative analysis for comparison with SJVAPCD thresholds is provided under this impact.

Although these thresholds are intended for use on individual development projects, no other quantitative plan level threshold has been adopted by the SJVAPCD. The DNCP and FCSP provide for the development of numerous individual development projects that will be subject to the project-level thresholds at the time they are proposed. Large individual projects are likely to exceed the thresholds during project construction and operation.

The DNCP and FCSP include estimates of increases in population, housing, and jobs anticipated from implementation of the plans. One of the primary goals of the plans is to increase development densities through infill and redevelopment of underutilized locations within the plan areas. The DNCP and FCSP reflect the cumulative projects anticipated for the City from the present until buildout of the plan areas, which is predicted for 2039. A more appropriate metric for cumulative contribution at the plan level is whether the cumulative impact of development predicted by the DNCP and FCSP would conflict with plans adopted to achieve the applicable standards (see discussion under Impact AIR-1). A conflict would result when growth in emissions exceed the

amounts required for attainment by the years mandated by state and federal regulations. After the attainment year, the emissions inventory must stay below the attainment inventory even with continued growth in order to maintain the standard. Once standards are achieved, no significant impact to health would occur as long as standards are maintained.

The project area is designated nonattainment for ozone, PM_{10}, and $PM_{2.5}$. Ozone is not directly emitted but is formed in the atmosphere by ozone precursors (ROG and NO_2). In addition, PM_{10} and $PM_{2.5}$ are emitted directly and also form in the atmosphere as a secondary pollutant from emissions of NO_2 and ammonia. Ammonia is not a criteria pollutant and the SJVAPCD PM control strategy is based primarily on NO_2 controls and reductions of directly emitted PM_{10} and $PM_{2.5}$. Therefore, this section addresses the cumulative emissions of the pollutants ROG, NO_x, PM_{10}, and $PM_{2.5}$. The ambient concentrations of other criteria pollutants, CO and SO_2 are well below state and federal standards. CO is addressed under Impact AIR-4 for its potential to create a localized CO hotspot. There are no substantial sources of SO_2 emissions proposed in the plan area, so no additional analysis is warranted for this pollutant.

Analysis Approach

The quantitative analysis of project criteria pollutant emissions was accomplished using CalEEMod version 2013.2.2. The analysis uses growth assumptions contained in the DNCP and FCSP to estimate the amounts of each land use type anticipated for development within the plan areas through buildout. The Traffic Study prepared by Fehr & Peers for the plans identified the land use categories, square feet and units of each development type, and trip generation rates for each land use that are used in CalEEMod to estimate project emissions. Construction emissions are based on the amount of land expected to be disturbed during construction projects and the square feet of buildings that would be constructed. Model default assumptions were used for the vehicle fleet mix, trip length, construction equipment fleet, energy consumption, and area source emissions.

The land use and trip generation assumptions used in the analysis are provided in Appendix E.3.

Development of the planning areas would result in air pollutant emissions from short-term construction activities and long-term project operation described below.

Construction

Construction activity from implementing the planning areas would cause temporary, short-term emissions of various air pollutants at each project site developed through project buildout. Due to the size of the project, the activity would generate construction emissions at locations within the planning area throughout the 23-year buildout period. ROG and NO_x (ozone precursors), PM_{10}, and $PM_{2.5}$ would be emitted by construction equipment during various activities, which may include but are not limited to grading, excavation, building construction, or demolition.

Soil disturbance during construction activities emits fugitive dust, a fraction of which consists of PM_{10} and $PM_{2.5}$. CalEEMod assumes emissions from each construction phase would occur sequentially, no matter what the size of the project, unless each project is assessed separately. For example, all grading for all projects is assumed to occur in the first years of the buildout period and architectural coatings are assumed to be applied in the last years of buildout. The actual order and

timing of individual construction projects is unknown. To more accurately assess annual construction emissions, the total emissions for each year were added and then divided by the number of years anticipated to reach buildout, in order to arrive at an annual average emission rate.

SJVAPCD and state regulations reduce potential construction emissions. The ARB has adopted regulations for New Off-Road Diesel Engines and Equipment that result in cleaner equipment being placed in service as older, higher emitting equipment is retired. The ARB also adopted the In-Use Off-Road Diesel Vehicle Regulation requiring NO_x and PM_{10} emission reductions from equipment and vehicles currently in operation. SJVAPCD Regulation VIII includes requirements to control fugitive dust emissions during construction activities and requires commercial projects over 5 acres and residential projects over 10 acres to file a Dust Control Plan. The SJVAPCD 2015 GAMAQI states that compliance with Regulation VIII does not constitute mitigation because it is required by law. The SJVAPCD also provides Enhanced and Additional Control Measures that will provide a greater degree of PM_{10} reduction than required by Regulation VIII. Rule 9510—Indirect Source Review requires projects to reduce exhaust-related construction emissions by 20 percent for NO_x and 50 percent for PM_{10}; however, significance for these emissions is based on whether projects exceed the SJVAPCD annual quantitative thresholds.

The District indicates that the control measures in Regulation VIII are required by regulation for all construction sites to reduce fugitive dust emissions. The District's 2002 GAMAQI lists additional measures that may be required because of sheer project size or proximity of the project to sensitive receptors. The additional measures are referred to as "enhanced control measures" in the GAMAQI. These enhanced control measures have been added as amendments to Regulation VIII, so they are no longer considered mitigation measures that could be imposed on very large or sensitive projects, but standard control measures required for rule compliance. Each commercial project over 5 acres in size and residential project over 10 acres in size is required to submit a Dust Control Plan to the SJVAPCD for approval, and requires control measures adequate to prevent significant fugitive dust impacts. If measures included in the Dust Control Plan prove inadequate to control fugitive dust, construction contractors must implement additional controls or cease dust generating construction activities. In addition, projects smaller than the Dust Control Plan size thresholds must still comply with most other Regulation VIII requirements. Therefore, fugitive dust impacts from construction activities are considered less than significant.

The buildout of the planning areas will result in hundreds of individual development projects spread out over many years. Information regarding specific development projects, soil conditions, and the location of sensitive receptors in relation to the various projects would be needed in order to determine localized impacts associated with construction activity. The average annual emissions from construction of the planning areas is provided in Table 5.3-5. The annual emissions would substantially exceed the SJVAPCD project-level thresholds for the pollutants of ROG and NO_x. The inventory represents a worst-case emission estimate for construction activity. Emissions from construction activities are expected to decline over time as new, cleaner equipment replaces older, higher-emitting equipment. However, on a cumulative basis, construction emissions would continue to exceed SJVAPCD annual thresholds, even with the regulatory reductions.

Table 5.3-5: DNCP and FCSP Construction Emissions

Source	Emissions (tons/year)			
	ROG	NO_x	PM_{10}	$PM_{2.5}$
Downtown Neighborhood Community Plan	111.21	182.11	117.83	36.37
Fresno Corridor Specific Plan	149.33	219.52	155.81	47.07
Total	260.60	401.63	273.64	83.44
Annual Average	**10.86**	**16.73**	**11.40**	**3.48**
SJVAPCD Annual Thresholds	**10**	**10**	**15**	**15**
Exceeds District Significance Thresholds (yes or no)	**Yes**	**Yes**	**No**	**No**

Note:
Annual average emissions are calculated by adding the modeling results for each year of construction and dividing by the 24-year buildout period. The modeling results can be viewed in the Air Quality Analysis Report Appendix 4.
Source: FirstCarbon Solutions and CalEEMod.

Emissions related to projected construction activities are included in emission forecasts used to demonstrate attainment of the applicable air quality standards, and would therefore not interfere with or obstruct SJVAPCD attainment plans. However, the combined impact of all construction projects to reach buildout is a cumulative impact that makes it more difficult to attain the air quality standards, compared with a scenario where no growth takes place. Although individual projects may exceed SJVAPCD project-level thresholds, using a project threshold to address the impact of hundreds of projects that would be constructed to reach buildout of the planning areas is a highly conservative measure of project-level significance for an impact that is cumulative in nature.

Rule 9510—Indirect Source Review requires reductions of construction emissions in order to mitigate the impacts of growth. The rule requires NO_x reductions of 20 percent and PM_{10} reductions of 45 percent compared with the statewide average by using clean construction equipment at the project site or paying mitigation fees to the SJVAPCD to obtain off-site reductions. Rule 9510 serves to mitigate both project-level and cumulative effects of construction on ozone and particulate matter emissions. Individual projects that exceed project-level significance thresholds after accounting for Rule 9510 reductions would be required to implement additional mitigation measures to reduce significant emissions, or the City would be required to prepare an EIR and adopt a statement of overriding considerations if emissions remain significant after applying all feasible mitigation measures.

ARB off-road equipment regulations would result in reductions in NO_x and PM emissions as new equipment meeting current and future standards replaces older higher emitting equipment. The regulations provide substantial reductions near-term and mid-term. ARB also requires retrofits of existing equipment to reduce particulate emissions that will help reduce emissions from older equipment. Regulations are normally implemented over a 5- to 10-year period at which time a new round of regulations are proposed if still needed to attain the air quality standards. The ARB has a long history of tightening regulations as technology advances increase the feasibility of additional controls.

Large individual projects that exceed the SJVAPCD project thresholds will be required to include feasible mitigation measures that reduce the significant impact. The measures could include additional on-site controls or off-site mitigation fees that reduce emissions to less than significant levels.

Based on the continued emission reductions anticipated from adopted ARB and SJVAPCD regulations, the attainment of ozone and particulate standards, accounting for projected growth, are on track. In the event that the SJVAB fails to reach Rate of Progress requirements, fails to reach attainment of the air quality standards on schedule, or falls out of attainment in the future, the SJVAPCD will be required to implement contingency measures to address the shortfall or be subject to Clean Air Act sanctions. The SJVAPCD could obtain additional reductions from any source within its regulatory authority, which includes the construction emissions regulated under Rule 9510. No action by the SJVAPCD or the City of Fresno is required until such time the planned reductions prove insufficient.

When project construction emissions are viewed in relation to the applicable air quality plans adopted by the SJVAPCD, the emissions would not result in a significant cumulative contribution since the emissions would not interfere with attainment of air quality standards. However, estimated annual project construction emissions exceed project-level thresholds by a substantial margin for all pollutants. Therefore, construction emissions are considered potentially significant.

Operation

Operational emissions would increase each year as projects within the plan area are completed and occupied. In order to illustrate the cumulative growth over time, emissions were estimated based on the cumulative amount of development estimated for the years 2020, 2030, and the buildout year 2039.

The main sources of operational criteria air pollutants in the City of Fresno are on-road motor vehicles, off-road motor vehicles, natural gas combustion, and stationary/area sources. Operational emissions were modeled using CalEEMod Version 2013.2.2.

City of Fresno air pollutant emissions for the planning areas at 2020 and 2039 (buildout) are shown in Table 5.3-6. As shown in Table 5.3-6, the greatest sources of emissions are from on-road and off-road vehicles. Off-road vehicle emissions are generated by sources such as recreational equipment, lawn and garden equipment, and construction/mining equipment. Analysis of emission projections accounting for the effects of adopted regulations shows that there would be a net decrease in emissions with buildout of the planning areas. This is because the emission rates for the most important sources of these pollutants substantially decrease due to SJVAPCD and state regulations.

As shown in Table 5.3-6, total emissions of ROG, NO_x, PM_{10}, and $PM_{2.5}$ exceed the District's project-level significance thresholds; however, as discussed earlier, the project thresholds are a highly conservative measure of significance for a long-range plan.

Table 5.3-6: DNCP and FCSP Annual Air Pollutant Emissions

Year	Source	Emissions (tons/year)			
		ROG	NO_x	PM_{10}	$PM_{2.5}$
Downtown Neighborhood Community Plan					
2020	Area	7.17	0.05	0.04	0.04
	Energy	0.03	0.83	0.06	0.06
	Mobile	6.66	17.68	8.76	2.53
	Total	*13.86*	*18.56*	*8.86*	*2.63*
2030	Area	29.67	0.18	0.15	0.15
	Energy	0.38	3.38	0.26	0.26
	Mobile	20.14	46.00	36.29	10.38
	Total	*50.19*	*49.56*	*36.70*	*10.79*
2039	Area	43.05	0.32	0.26	0.26
	Energy	0.56	4.97	0.39	0.39
	Mobile	27.14	63.81	52.47	15.03
	Total	*70.75*	*69.10*	*53.12*	*15.68*
Fresno Corridor Specific Plan					
2020	Area	9.68	0.09	0.07	0.07
	Energy	0.10	0.88	0.07	0.07
	Mobile	12.88	32.12	15.37	4.43
	Total	*22.66*	*33.09*	*15.51*	*4.57*
2030	Area	33.84	0.31	0.26	0.26
	Energy	0.35	3.06	0.24	0.24
	Mobile	32.41	70.63	53.58	15.35
	Total	*66.60*	*74.00*	*54.08*	*15.85*
2039	Area	44.89	0.32	0.26	0.26
	Energy	0.47	4.18	0.33	0.33
	Mobile	45.73	100.03	77.45	22.21
	Total	*91.09*	*104.53*	*78.04*	*22.80*
2020 Total		**36.52**	**51.65**	**24.37**	**7.20**
2030 Total		**116.79**	**123.56**	**90.78**	**26.64**
2039 Total		**161.84**	**173.63**	**131.16**	**38.48**
SJVAPCD project significance thresholds		**10**	**10**	**15**	**15**
Significant Impact? (yes or no)		**Yes**	**Yes**	**Yes**	**Yes**
Source: FirstCarbon Solutions and CalEEMod.					

The emissions shown in Table 5.3-6 reflect the benefits of adopted regulations incorporated in the air quality models used to estimate emissions in each analysis year. The rate of decline is rapid through 2020 and goes beyond reflecting the benefits of currently adopted regulations. Mobile source regulations are dependent on technological advancements in pollution controls and fuels. The state cannot require manufacturers to produce new equipment and vehicles that are not technologically or economically feasible. ARB updates regulations as technologies come to fruition, or provides adequate lead times for compliance with technology forcing regulations. The latest on-road standards adopted by the ARB in 2013 are not yet reflected in the emission model (EMFAC 2011) used in CalEEMod to estimate emissions. Those standards would provide reductions well beyond 2020 that are not reflected in Table 5.3-6.

The State of California and the SJVAPCD are very likely to adopt additional regulations on most sources of emissions to be implemented during the plan buildout period and result in much greater reductions than is predicted with the adopted regulations included in the current version of CalEEMod or with off-model quantification methods available pending the next model update. Expanded use of renewable fuels, zero emission vehicles, and replacing combustion sources with electrically powered alternatives for greenhouse gas reductions will also result in reductions in criteria pollutant emissions. In addition, the General Plan includes policies and development patterns that will result in lower vehicle miles traveled and energy use compared with development projects constructed in the recent past that provide the basis for future emission projections.

Development within the planning area will result in increases in annual emissions that exceed SJVAPCD significance thresholds for all nonattainment pollutants. Although the growth in emissions is accounted for in SJVAPCD attainment plans and total emissions within the Air Basin will decline even when accounting for growth, this analysis identifies the impact as significant under the ton per year quantitative threshold criterion as listed in Table 5.3-6.

Stationary Sources

A variety of industrial and commercial processes (food processing plants, glass manufacturers, gas stations, dry cleaning, etc.) allowed under the project would also be expected to emit criteria pollutant emissions. These are referred to as stationary and stationary/area sources in this assessment.

Emissions from stationary sources are regulated at the local and regional level through SJVAPCD permitting and prohibitory rules. Under Rule 2201—New and Modified Stationary Source Review, sources emitting more than two pounds per day of any regulated pollutant are required to obtain an Authority to Construct (ATC) and Permit to Operate (PTO) from the SJVAPCD, and to implement best available control technology (BACT). Emission offsets are required for stationary sources that exceed offset thresholds contained in Rule 2201. The SJVAPCD has also adopted prohibitory rules that set emission limits and/or identify control technologies that apply to new and existing sources and further reduce emissions. The net effect of this regulatory system is continued reductions in stationary source emissions including proposed buildout of planning areas. Therefore, stationary source emissions from the project are considered less than significant.

Policies, Ordinances, and Regulations that Mitigate Project Impacts

It is important to note that the DNCP and the FCSP are a primary General Plan implementation strategy to reduce mobile source emissions in the City of Fresno, which as shown in Table 5.3-6 are responsible for over 90 percent of air quality impacts with the plan area. The increases in development densities, mixed-use development, and transportation infrastructure supportive of walking, bicycling, transit, are expected to provide substantial reductions in emissions compared with more traditional suburban automobile oriented development.

The City of Fresno has previously adopted comprehensive policies and strategies aimed at improving the environment for the people of Fresno. Initiatives include the following:

Fresno Green: The City of Fresno's Strategy for Achieving Sustainability. The City adopted the Handbook for Fresno Green Residential and Non-Residential Checklist in October 2009. The program provides incentives for projects that achieve a minimum of 20 points spread over five major sustainability categories, including those with air quality benefits. The incentives include:

- 25 percent reduction on Planning entitlement fees
- 20 percent minor deviation from development standards (parking, setbacks, etc.)
- Expedited processing
- Recognition

Fresno Bus Rapid Transit Master Plan. The City of Fresno prepared the Bus Rapid Transit (BRT) Master Plan in 2008. The overall vision of the BRT Master Plan is to demonstrate how improved efficiency, speed, and service can attract new transit ridership, improve customer satisfaction, and benefit the broader community by providing a quality of service similar to light rail systems through the use of bus technology. The City has received a grant from the federal government to implement BRT in Fresno. Construction has begun on the first BRT segment along Blackstone Avenue, with an expected completion date of 2017.

General Plan Policies. The General Plan includes policies designed specifically to address a variety of air quality impacts through measures that reduce vehicle and other operational-related air quality emissions. A list of policies that would reduce air pollutant emissions is provided below.

- Policies to reduce motor vehicle emissions by encouraging compact communities, smart growth, mixed use, infill development, pedestrian and bicycle accessibility, transit use, alternative fuel, and jobs/housing balance:
  - UF-1-c, UF-12-a, UF-12-b, UF-12-d, UF-12-e, UF-12-f, UF-14-a, UF-14-b, UF-14-c, LU-2-a, LU-2-b, LU-3-b, LU-3-c, LU-5-f, LU-5-e, LU-6-b, LU-6-f, LU-6-g, LU-8-b, RC-4-d, RC-4-e, RC-4-f, RC-4-g, RC-8-b, HC-3-b, and policies under the objectives MT-1, MT-4, MT-5, MT-6, MT-8, and MT-9.
- Policies to reduce the City government operational emissions:
  - RC-4-j, RC-8-f, RC-8-g.
- Policies encouraging the environmental review of projects to reduce air pollutant emissions:
  - RC-4c, RC-4d, RC-8c.

SJVAPCD Land Use Related Regulations. Individual projects to be developed under the proposed project would be subject to District Rules and Regulations, including Rule 9510 (Indirect Source Review) and Regulation VIII (Fugitive Dust Prohibitions). Existing businesses and new projects that are large employers (over 100 employees) will be subject to Rule 9410 (Employer Based Trip Reduction). Rule 9510 was adopted with the purpose of mitigating the impacts of growth on air quality throughout the San Joaquin Valley. Rule 9510 is by far the most stringent development related to air regulation in California and the nation. Reductions from Rule 9510 are surplus, meaning they are not required to demonstrate attainment of air quality standards. Rule 9410's purpose is to reduce emissions related to employee commute trips. These two rules provide substantial emission reductions from the General Plan buildout and provide assurance that the project would not result in significant air quality impacts.

SJVAPCD Voluntary Emission Reduction Agreements (VERA). The SJVAPCD offers VERAs as a method for development projects that exceed SJVAPCD thresholds after accounting for Rule 9510 reductions to mitigate significant criteria pollutant impacts. VERAs require emission reductions in addition to those required by Rule 9510. The developers of individual projects enter into contracts with the SJVAPCD to purchase emission reductions obtained through projects funded under SJVAPCD grant and incentive programs. The SJVAPCD will also verify emission reductions from projects identified by the developer and manage the implementation and long-term monitoring of the projects. The use of a VERA may not be feasible for all projects, but should be considered for large projects with significant impacts.

Summary

Although the existing policies, ordinances, regulations and objectives will reduce criteria pollutant emissions, the planning areas would exceed the SJVAPCD project-level thresholds of significance for ROG, NO_x, PM_{10}, and $PM_{2.5}$. Therefore, the project impact is potentially significant.

Cumulative Impact Analysis

The study area for the analysis of cumulative regional air quality impacts such as ROG, NO_x, PM_{10}, and $PM_{2.5}$ is the SJVAB, which includes the counties of San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare and a portion of Kern. This analysis will be based on a summary of projections approach as provided in Section 15130(b)(1)(B) of the CEQA Guidelines. Section 15130(b) of the CEQA Guidelines states:

> The following elements are necessary to an adequate discussion of significant cumulative impacts: 1) Either: (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact.

The District's 2015 GAMAQI states the following regarding cumulative criteria air pollutants:

> As discussed in section 8.4 (Thresholds of Significance—Criteria Pollutant Emissions) the District's thresholds of significance for criteria pollutants are based on District Rule 2201 (New Source Review) offset requirements. Furthermore, New Source Review (NSR) is a major component of the District's attainment strategy. The District's attainment plans demonstrate that project specific emissions below New Source Review (NSR) offset requirements will not prevent the District from achieving attainment. Consequently, if project specific criteria pollutant emissions are below their respective thresholds of significance, the project would be consistent with the overall District attainment plan and would be determined to have a less than cumulatively significant impact on air quality.

Under the amended CEQA Guidelines, cumulative impacts may be analyzed using other plans that evaluate relevant cumulative effects. The air quality attainment plans describe and evaluate the future projected emissions sources in the Basin and set forth a strategy to meet both state and federal Clean Air Act planning requirements and federal ambient air quality standards. Therefore, the attainment plans are relevant plans for a CEQA cumulative impacts analysis. As discussed in Impact AIR-1, the project is consistent with the air quality attainment plans. Therefore, this is a less than significant impact under this criterion. However, since the project exceeds the SJVAPCD quantitative thresholds for ROG and NO_x, cumulative air emissions impacts are considered potentially significant.

Mitigation Measures

The following mitigation measures were not included in the MEIR but are applicable to this project.

Project-specific

The implementation of the proposed plans and relevant policies for this area are expected to reduce per capita motor vehicle emissions to the extent feasible. This is well stated in the FCSP: "By improving Downtown, this Plan helps to expand access and make Downtown more inviting and attractive to everyone. Over time, Downtown's wide streets are put to better use, creating space for public transit, bicycles, and pedestrians, and connecting and creating synergy with adjacent neighborhoods and institutions that are within walking and biking distance of Downtown."

The FCSP follows principles including infill development, mix of land uses, an interconnected street system, and a high level of walkability and bikability that have been documented to reduce vehicle miles traveled (see CAPCOA's 2010 report Quantifying Greenhouse Gas Mitigation Measures). No mitigation measures beyond General Plan policies, ordinances, and regulations are available to further reduce this impact.

Cumulative

No mitigation measures beyond General Plan policies, ordinances, and regulations are available to further reduce this impact.

Level of Significance After Mitigation

Project-specific

Significant and unavoidable impact.

Cumulative

Significant and unavoidable impact.

Criteria Pollutant

Impact AIR-3:	**The project would result in a considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions, which exceed quantitative thresholds for ozone precursors).**

Program-Level Impact Analysis of the DNCP and FCSP

To result in a less than significant impact, the following criteria must be true:

1. Regional analysis: emissions of nonattainment pollutants must be below the District's regional significance thresholds. This is an approach recommended by the District in its GAMAQI.
2. Summary of projections: the project must be consistent with current air quality attainment plans including control measures and regulations. This is an approach consistent with Section 15130(b) of the CEQA Guidelines.
3. Cumulative health impacts: the project must result in less than significant cumulative health effects from the nonattainment pollutants. This approach correlates the significance of the regional analysis with health effects, consistent with the court decision, *Bakersfield Citizens for Local Control v. City of Bakersfield* (2004) 124 Cal.App.4th 1184, 1219-20.

Step 1: Regional Analysis

If an area is in nonattainment for a criteria pollutant, then the background concentration of that pollutant has historically exceeded the ambient air quality standard. It follows that if a project exceeds the regional threshold for that nonattainment pollutant, it would result in a cumulatively considerable net increase of that pollutant and result in a significant cumulative impact.

The Air Basin is in nonattainment for PM_{10}, $PM_{2.5}$, and ozone. Therefore, if the project exceeds the regional thresholds for PM_{10}, or $PM_{2.5}$, then it contributes to a cumulatively considerable impact for those pollutants. If the project exceeds the regional threshold for NO_x or ROG (ozone precursors), then it follows that the project would contribute to a cumulatively considerable impact for ozone.

Regional emissions include those generated from all on-site and off-site activities. Regional significance thresholds have been established by the District because emissions from projects in the Air Basin can potentially contribute to the existing emission burden and possibly affect the attainment and maintenance of ambient air quality standards. Projects within the Air Basin region

with regional emissions in excess of any of the thresholds presented previously are considered to have a significant regional air quality impact.

The criteria pollutant emissions analysis assessed whether the project would exceed the District's thresholds of significance. As shown in Table 5.3-6, criteria pollutant emissions would exceed the threshold of significance during project construction for ROG and NO_x; however, buildout of the DNCP and FCSP is the cumulative result of hundreds of separate projects requiring separate approvals. Therefore, the combination of project emissions with the criteria pollutants from other sources within the Air Basin would not cumulatively contribute to a significant impact according to this criterion.

Step 2: Plan Approach

Section 15130(b) of the CEQA Guidelines states the following:

> The following elements are necessary to an adequate discussion of significant cumulative impacts: 1) Either: (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact.

In accordance with CEQA Guidelines 15130(b), this analysis of cumulative impacts is based on a summary of projections analysis.

The Fresno MEIR includes development projections through the year 2056. The growth anticipated by the DNCP and the FCSP are included in the growth projections used for the MEIR. The Master Environmental Impact Report (MEIR) prepared for the Fresno General Plan found the regional criteria pollutant impacts to be significant and unavoidable. The MEIR included the following mitigation measures to reduce the impacts from the General Plan:

Mitigation Measure AIR-1

> Projects that include five or more heavy-duty truck deliveries per day with sensitive receptors located within 300 feet of the truck loading area shall provide a screening analysis to determine if the project has the potential to exceed criteria pollutant concentration based standards and thresholds for NO_2 and $PM_{2.5}$. If projects exceed screening criteria, refined dispersion modeling and health risk assessment shall be accomplished and if needed, mitigation measures to reduce impacts shall be included in the project to reduce the impacts to the extent feasible. Mitigation measures include but are not limited to:
>
> - Locate loading docks and truck access routes as far from sensitive receptors as reasonably possible considering site design limitations to comply with other City design standards.
> - Post signs requiring drivers to limit idling to 5 minutes or less.

Mitigation Measure AIR-2

Projects that result in an increased cancer risk of 10 in a million [20 in a million under revised SJVAPCD thresholds] or exceed criteria pollutant ambient air quality standards shall implement site-specific measures that reduce TAC exposure to reduce excess cancer risk to less than 10 in a million [20 in a million under revised SJVAPCD thresholds]. Possible control measures include but are not limited to:

- Locate loading docks and truck access routes as far from sensitive receptors as reasonably possible considering site design limitations to comply with other City design standards.
- Post signs requiring drivers to limit idling to 5 minutes or less
- Construct block walls to reduce the flow of emissions toward sensitive receptors
- Install a vegetative barrier downwind from the TAC source that can absorb a portion of the diesel PM emissions
- For projects proposing to locate a new building containing sensitive receptors near existing sources of TAC emissions, install HEPA filters in HVAC systems to reduce TAC emission levels exceeding risk thresholds.
- Install heating and cooling services at truck stops to eliminate the need for idling during overnight stops to run onboard systems.
- For large distribution centers where the owner controls the vehicle fleet, provide facilities to support alternative fueled trucks powered by fuels such as natural gas or bio-diesel.
- Utilize electric powered material handling equipment where feasible for the weight and volume of material to be moved.

Mitigation Measure AIR-3

Require developers proposing projects on ARB's list of projects in its Air Quality and Land Use Handbook (Handbook) warranting special consideration to prepare a cumulative health risk assessment when sensitive receptors are located within the distance screening criteria of the facility as listed in the ARB Handbook.

Mitigation Measure AIR-4

Require developers of projects containing sensitive receptors to provide a cumulative health risk assessment at project locations exceeding ARB Land Use Handbook distance screening criteria or newer criteria that may be developed by the SJVAPCD (no longer required by CEQA).

The projects within the planning areas will be required to follow these mitigation measures in order to reduce impacts from TAC emissions. Additionally, no other mitigation measures beyond General Plan policies, ordinances, and regulations were available to further reduce this impact.

The impacts of the Fulton Mall Reconstruction Project on cumulative criteria pollutant emissions were assessed in a DEIR prepared specifically for the project. The analysis in the DEIR found that project construction emissions would not exceed SJVAPCD regional criteria pollutant threshold and therefore would not produce a significant cumulative contribution to this impact. The operational emissions assessed in the current analysis assume the completion of the reconstruction project.

The District attainment plans are based on a summary of projections that accounts for projected growth throughout the Air Basin and the controls needed to achieve ambient air quality standards. This analysis considers the current CEQA Guidelines, which includes the amendments approved by the Natural Resources Agency and effective on March 18, 2010. The Air Basin is in nonattainment or maintenance status for ozone and particulate matter (PM_{10} and $PM_{2.5}$), which means that concentrations of those pollutants currently exceed the ambient air quality standards for those pollutants or that the standards have recently been attained. When concentrations of ozone, PM_{10}, or $PM_{2.5}$ exceed the ambient air quality standard, then those sensitive to air pollution (such as children, the elderly, and the infirm) could experience health effects such as decrease of pulmonary function and localized lung edema in humans and animals, increased mortality risk, and risk to public health implied by altered connective tissue metabolism and altered pulmonary morphology in animals after long-term exposures and pulmonary function decrements in chronically exposed humans. See Section 2.3: Existing Air Quality Conditions for additional correlation of the health impacts with the existing pollutant concentrations experienced in the Fresno area.

Under the amended CEQA Guidelines, cumulative impacts may be analyzed using other plans that evaluate relevant cumulative effects. The geographic scope for cumulative criteria pollution from air quality impacts is the Air Basin, because that is the area in which the air pollutants generated by the sources within the Air Basin circulate and are often trapped. The SJVAPCD is required to prepare and maintain air quality attainment plans and a State Implementation Plan to document the strategies and measures to be undertaken to reach attainment of ambient air quality standards. While the SJVAPCD does not have authority over land use decisions, it is recognized that changes in land use and circulation planning would help the Air Basin achieve clean air mandates. The District evaluated emissions from land uses and transportation in the entire Air Basin when it developed its attainment plans.

In accordance with CEQA Guidelines Section 15064, subdivision (h)(3), a lead agency may determine that a project's incremental contribution to a cumulative effect is not cumulatively considerable if the project complies with the requirements in a previously approved plan or mitigation program.

The history and development of the SJVAPCD's current Ozone Attainment Plan is described in Section 2.4, Air Quality Plans. The 2007 8-Hour Ozone Plan contains measures to achieve reductions in emissions of ozone precursors and sets plans towards attainment of ambient ozone standards by 2023. The 2012 $PM_{2.5}$ Plan and the 2015 $PM_{2.5}$ Plan for the 1997 $PM_{2.5}$ Standard require fewer NO_x reductions to attain the $PM_{2.5}$ standard than the Ozone Plan, so the Ozone Plan is considered the applicable plan for reductions of the ozone precursors NO_x and ROG. The 2012 $PM_{2.5}$ Plan requires reductions in directly emitted $PM_{2.5}$ from combustion sources such as diesel engines and fireplaces and from fugitive dust to attain the ambient standard and is the applicable plan for $PM_{2.5}$ emissions. $PM_{2.5}$ is also formed in secondary reactions in the atmosphere involving NO_x and ammonia to form nitrate particles. Reductions in NO_x required for ozone attainment are also sufficient for $PM_{2.5}$ attainment. As discussed in Impact AIR-1, the project is consistent with all applicable control measures in the air quality attainment plans. The planning areas would comply with any District rules and regulations that may pertain to implementation of the AQPs. Therefore, impacts would be less than significant with regard to compliance with applicable rules and regulations.

Step 3: Cumulative Health Impacts

The study area for the analysis of cumulative regional air quality impacts such as ROG, NO_x, PM_{10}, and $PM_{2.5}$ is the SJVAB, which includes the counties of San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, Tulare and a portion of Kern. This analysis will be based on a summary of projections approach as provided in Section 15130(b)(1)(B) of the CEQA Guidelines. Section 15130(b) of the CEQA Guidelines states:

> The following elements are necessary to an adequate discussion of significant cumulative impacts: 1) Either: (A) A list of past, present, and probable future projects producing related or cumulative impacts, including, if necessary, those projects outside the control of the agency, or (B) A summary of projections contained in an adopted general plan or related planning document, or in a prior environmental document which has been adopted or certified, which described or evaluated regional or area wide conditions contributing to the cumulative impact.

The District's 2015 GAMAQI states the following regarding cumulative criteria air pollutants:

> As discussed in section 8.4 (Thresholds of Significance—Criteria Pollutant Emissions) the District's thresholds of significance for criteria pollutants are based on District Rule 2201 (New Source Review) offset requirements. Furthermore, New Source Review (NSR) is a major component of the District's attainment strategy. The District's attainment plans demonstrate that project specific emissions below New Source Review (NSR) offset requirements will not prevent the District from achieving attainment. Consequently, if project specific criteria pollutant emissions are below their respective thresholds of significance, the project would be consistent with the overall District attainment plan and would be determined to have a less than cumulatively significant impact on air quality.

Under the amended CEQA Guidelines, cumulative impacts may be analyzed using other plans that evaluate relevant cumulative effects. The air quality attainment plans describe and evaluate the future projected emissions sources in the Basin and set forth a strategy to meet both state and federal Clean Air Act planning requirements and federal ambient air quality standards. Therefore, the attainment plans are relevant plans for a CEQA cumulative impacts analysis. As discussed in Impact AIR-1, the project is consistent with the air quality attainment plans. Therefore, this is a less than significant impact under this criterion. However, since the project exceeds the SJVAPCD quantitative thresholds for ROG, NO_x, PM_{10}, $PM_{2.5}$, cumulative air emissions impacts are considered potentially significant.

The Air Basin is in nonattainment for ozone, PM_{10}, (State only) and $PM_{2.5}$, which means that the background levels of those pollutants are at times higher than the ambient air quality standards. The air quality standards were set to protect public health, including the health of sensitive individuals (such as children, the elderly, and the infirm). Therefore, when the concentration of those pollutants exceeds the standard, it is likely that some sensitive individuals in the population would experience health effects that were described in Table 5.3-3. However, the health effects are

a factor of the dose-response curve. Concentration of the pollutant in the air (dose), the length of time exposed, and the response of the individual are factors involved in the severity and nature of health impacts. If a significant health impact results from project emissions, it does not mean that 100 percent of the population would experience health effects.

Since the Basin is nonattainment for ozone, PM_{10}, and $PM_{2.5}$, it is considered to have an existing significant cumulative health impact without the project. When this occurs, the analysis considers whether the project's contribution to the existing violation of air quality standards is cumulatively considerable. The SJVAPCD regional thresholds for NO_x, VOC, PM_{10}, or $PM_{2.5}$ are applied as cumulative contribution thresholds. Projects that exceed the regional thresholds would have a cumulatively considerable health impact. As shown in Table 5.3-5**,** the regional analysis of construction emissions indicates that the project would exceed the District's significance thresholds for ROG and NO_x; however, buildout of the DNCP and FCSP is the cumulative result of hundreds of separate projects requiring separate approvals. Therefore, the project would not result in significant cumulative health impacts.

Mitigation Measures

The following mitigation measures were not included in the MEIR but are applicable to this project:

Project-specific

The implementation of the proposed plans and relevant policies for this area are expected to reduce per capita motor vehicle emissions to the extent feasible. This is well stated in the FCSP: "By improving Downtown, this Plan helps to expand access and make Downtown more inviting and attractive to everyone. Over time, Downtown's wide streets are put to better use, creating space for public transit, bicycles, and pedestrians, and connecting and creating synergy with adjacent neighborhoods and institutions that are within walking and biking distance of Downtown."

The DNCP and FCSP follow principles including infill development, mix of land uses, an interconnected street system, and a high level of walkability and bikability that have been documented to reduce vehicle miles traveled (see CAPCOA's 2010 report Quantifying Greenhouse Gas Mitigation Measures). No mitigation measures beyond General Plan policies, ordinances, and regulations are available to further reduce this impact.

Cumulative

As stated above, the plans provide an effective framework for reducing per capita emissions that would reduce the projects cumulative impacts. No mitigation measures beyond General Plan policies, ordinances, and regulations are available to further reduce this impact.

Level of Significance After Mitigation

Project-specific

Significant and unavoidable impact.

Cumulative

Significant and unavoidable impact.

Sensitive Receptors

Impact AIR-4: The project could expose sensitive receptors to substantial pollutant concentrations.

Program-Level Impact Analysis of the DNCP and FCSP

This analysis contains the results of a detailed health risk assessment to determine the potential community health risk and hazard impacts associated with TAC emissions from nearby TAC sources including DPM sources located within the project study area. The principal focus was on assessing the long-term health impacts from TAC emissions used in assessing both long-term and short-term hazards.

The California Supreme Court recently ruled on provisions of CEQA related to addressing the effects of existing environmental impacts on projects. The Court issued its opinion in *California Building Industry Association v. Bay Area Air Quality Management District* (2015) Cal. 4th (Case No. S213478) (*CBIA v. BAAQMD*). The Court held that "agencies subject to CEQA generally are not required to analyze the impact of existing environmental conditions on a project's future users or residents. But when a proposed project risks exacerbating those environmental hazards or conditions that already exist, an agency must analyze the potential impact of such hazards on future residents or users. In those specific instances, it is the project's impact on the environment—and not the environment's impact on the project—that compels an evaluation of how future residents or users could be affected by exacerbated conditions." Under this opinion, impacts on projects that locate new sensitive receptors near existing sources of air pollution such as criteria pollutants, toxic air contaminants, and odors and are not sources of emissions themselves do not require analysis to satisfy CEQA. Therefore, the impacts of existing emission sources on new sensitive receptors are included herein for information purposes only.

Any project with the potential to expose sensitive receptors or the general public to substantial levels of TACs would be deemed to have a potentially significant impact. A health risk is the probability that exposure to a TAC under a given set of conditions will result in an adverse health effect. The health risk is affected by several factors, such as the amount, toxicity, and concentration of the contaminant; meteorological conditions; distance from the emission sources to people; the distance between emission sources; the age, health, and lifestyle of the people living or working at a location; and the length of exposure to the toxic air contaminant.

The term "risk" usually refers to the chance of contracting cancer as a result of an exposure, and it is expressed as a probability: chances-in-a-million. The values expressed for cancer risk do not predict actual cases that will result from exposure to toxic air contaminants. Rather, they state a probability of contracting cancer over and above the background level and over a given exposure to toxic air contaminants.

According to APR-1906 Framework for Performing Health Risk Assessments (SJVAPCD 2015c), any project that has the potential to expose the public to TACs in excess of the following threshold would be considered to result in a significant impact:

- Maximum Exposed Individual Cancer Risk from carcinogens equals or exceeds 20 in one million persons;
- Maximum Exposed Individual Acute Hazard Index from non-carcinogens equals or exceeds 1.0; or
- Maximum Exposed Individual Chronic Hazard Index from non-carcinogens equals or exceeds 1.0.

It should be noted that the above thresholds have been developed by the SJVAPCD in order to analyze projects that create new sources of TAC emissions and are not meant to be used in analyzing existing ambient concentrations of TAC emissions to projects with new sensitive receptors, such as the residential component of the proposed project.

The BAAQMD (BAAQMD 2011) Guidelines provide quantitative thresholds for both project-only impacts and cumulative impacts. The BAAQMD Guidelines removed the quantitative thresholds while the Supreme Court case was pending. However, the BAAQMD Guidelines include substantial evidence to support their cumulative thresholds. In order to provide a conservative analysis, the quantitative thresholds provided in the 2011 BAAQMD Guidelines have been utilized.

According to the BAAQMD 2011 Guidelines (BAAQMD 2011) a cumulatively significant impact would occur if the project impacts combined with all sources within 1,000 feet of the project site at the maximum likely exposed individual to TACs in excess of the following thresholds:

- Maximum Incremental Cancer Risk: 100 in 1 million at the proposed sensitive receptors (i.e., residential, school, and hospital uses);
- Maximum Exposed Individual Acute Hazard Index from non-carcinogens equals or exceeds 10.0; or
- Maximum Exposed Individual Chronic Hazard Index from non-carcinogens equals or exceeds 10.0.

Sensitive Receptors

Individual who are more sensitive to toxic exposures than the general population are considered sensitive receptors. This would include children, the elderly, and persons with pre-existing respiratory or cardiovascular illness. Such receptors may reside at hospitals, residences, convalescent facilities, and schools.

Diesel Particulate Matter Cancer Risks from Freeways

According to the SJVAPCD Guidance the SJVAPCD (SJVAPCD 2015c) Staff Report (SJVAPCD 2015d), and OEHHA methodology (OEHHA 2015), health effects from carcinogenic air toxics are usually described in terms of individual cancer risk, which is the likelihood that a person exposed to concentrations of TACs over a 70-year lifetime will contract cancer, based on the use of standard risk-assessment methodology. The cancer risk should be calculated using the following formula:

$$\text{Slope Factor} \times [C_{air} * DBR * A * EF * ED * ASF * 1x10\text{-}6]/AT = \text{Potential Cancer Risk}$$

Where:

Oral Slope Factor = 1.1

C_{air} [Concentration in air ($\mu g/m^3$)] = (Calculated by AERMOD Model)

DBR [Daily breathing rate (L/kg body weight—day)] = 361 for 3rd trimester to 0, 1,090 for 0 to 2 years, 745 for 2 to 16 years, and 233 for 16 to 69.75 years

A [Inhalation absorption factor] = 1

EF [Exposure frequency (days/year)] = 350 for residential uses

ED [Exposure duration (years)] = 0.25 (3rd trimester to 0), 2.0 (0 to 2 years), 14 (2 to 16 years), and 53.75 (16 to 69.75 years)

ASF [Age Sensitivity factors] = 10 10 for 3rd trimester to 2 years, 3 for 2 to 16 years and 1 for 16 to 69.75 years

10^{-6} [Conversion to cancer risk per 1,000,000 persons]

AT [Average time period over which exposure is averaged in days] = 25,550

The SJVAPCD Staff Report recommends that the OEHHA's Age Sensitivity factors be utilized, which includes utilizing a 10-fold multiplier to infants (3rd trimester to age 2), a three-fold increase in exposure for children (ages 2 to 16 years old), and an exposure factor of 1 for ages 16 and older. The SJVAPCD also recommends utilizing OEHHA guidelines of separate breathing rates for each age group, which utilizes the 95th percentile for all age groups up to 16 years old and utilizes the 80th percentile for 16 years and older. The 95th percentile breathing rates for 3rd trimester is 361, for 0 to 2 years is 1,090, and for 2 to 16 years is 745 and the 80th percentile for 16 years and older is 233.

According to the above formula, the risk to residential receptors equates to:

$$\text{Potential Cancer Risk} = C_{air} * 14 \text{ (3rd trimester to 0)} + C_{air} * 328 \text{ (0 to 2 years)} + C_{air} * 471 \text{ (2 to 16 years)} + C_{air} * 1898 \text{ (16 to 69.75 years)} = 1{,}002 * C_{air}$$

Therefore, in order to exceed the cumulative cancer risk threshold of 100 per million that is detailed above in Section 6.0, the DPM concentration has to exceed 0.1 $\mu g/m^3$ (i.e., 0.1 x 1,002 = 100.2). The AERMOD model (see Appendix E.2) found that that most impacted sensitive receptor in the study area is located at Three Palms RV Park, which is located on the east side of State Route 99 and west of Golden State Boulevard, which measured a PM_{10} concentration of 0.98 $\mu g/m^3$. The cancer risk at this location is 979.6 per million from DPM emissions. Exhibit 4 of the HRA shows the DPM concentrations, and it should be noted that all areas within the project study area that are shaded red would exceed the 100 per million cumulative cancer risk threshold. Since the proposed project would allow development of residential uses within the area that already exceeds the 100 per million cumulative cancer risk threshold, this would be considered a significant existing impact.

Under the *CBIA v. BAAQMD* Supreme Court opinion described above, projects containing sensitive receptors would not be required to reduce the impact from these existing sources. However, the City may request developers to implement voluntary control measures to reduce health impacts on future residents. Voluntary Measure AIR-1 is provided, which recommends any new residential development that is located within 0.1 $\mu g/m^3$ DPM concentration contours to install a positive static pressure forced air heating, ventilation, and air conditioning (HVAC) system into each residential

unit. Each HVAC system should install a high efficiency Minimum Efficiency Reporting Value (MERV) filter of MERV 13 or better in the air intake for the HVAC system, and the air intake will be installed with a fan designed to force air through the MERV 13 filter in order to create positive static pressure.

According to Status of Research on Potential Mitigation Concepts to Reduce Exposure to Nearby Traffic Pollution (ARB 2012), research has shown that homes with positive static pressure HVAC systems with MERV 13 to 16 air filters result in a 90 percent reduction in fine particles (PM_{10}) when compared with outdoor levels of PM_{10}. Based on this PM_{10} reduction rate, implementation of Voluntary Measure AIR-1 would reduce the cancer risk experienced indoors at the most impacted location to 98.0 per million persons, which is within the threshold of 100 per million from cumulative sources located within 1,000 feet of the project site. Therefore, with implementation of Voluntary Measure AIR-4a, the proposed residents would be exposed to a less than 100 in a million cancer risk from cumulative TAC concentrations.

Diesel Particulate Matter Cancer Risks from Stationary Sources and Freeways

ARB requires all stationary source facilities in California that emit TAC emissions to inventory emissions of toxic pollutants, to assess the risks from those emissions, to inform the public if risks are greater than specified levels, and to reduce risks if specific risk levels are exceeded. ARB provides a Facility Search Engine at its website that can be used to identify facilities that emit TACs in different areas of the State. The project study area was analyzed in the Facility Search Engine and the stationary sources of TACs for year 2013 (most current year available) are shown in the HRA.

- Exhibit 5: Jane Addams Neighborhoods TAC Sources
- Exhibit 6: Edison Neighborhoods TAC Sources
- Exhibit 7: Lowell and Jefferson Neighborhoods TAC Sources
- Exhibit 8: Southeast Neighborhoods TAC Sources
- Exhibit 9: Downtown and South Van Ness Neighborhoods TAC Sources

Each exhibit shows the company name and address of each stationary TAC source, as well as a map with the approximate location of the source. According to the Health Risk Assessment for Proposed Land Use Projects (CAPCOA 2009), the siting of new sensitive receptors should adhere to the setback recommendations as detailed in Table 5.3-7. If a residential use is proposed to be located within the setback distance from a stationary source of TAC emissions as detailed in Table 5.3-7, the City recommends that a project-level screening analysis or HRA be prepared to identify the cancer risk and for the developer to consider implementing voluntary measures to reduce impacts on future residents.

Table 5.3-7: CAPCOA Recommendations on Siting New Sensitive Receptors near TAC Sources

Source Category	Advisory Recommendation
Distribution centers	Avoid siting new sensitive land uses within 1,000 feet of a distribution center (that accommodates more than 100 trucks per day, more than 40 trucks with operating transport refrigeration units (TRUs) per day, or where TRU unit operations exceed 300 hours per week). Take into account the configuration of existing distribution centers and avoid locating residences and other new sensitive land uses near entry and exit points.

Table 5.3-7 (cont.): CAPCOA Recommendations on Siting New Sensitive Receptors near TAC Sources

Source Category	Advisory Recommendation
Rail yards	Avoid siting new sensitive land uses within 1,000 feet of a major service and maintenance rail yard. Within one mile of a rail yard, consider possible siting limitations and mitigation approaches.
Chrome platters	Avoid siting new sensitive land uses within 1,000 feet of a chrome plater.
Dry cleaners using perchloroethylene	Avoid siting new sensitive land uses within 300 feet of any dry cleaning operation. For operations with two or more machines, provide 500 feet. For operations with 3 or more machines, consult with the local air district. Do not site new sensitive land uses in the same building with perc dry cleaning operations.
Gasoline dispensing facilities	Avoid siting new sensitive land uses within 300 feet of a large gas station (defined as a facility with a throughput of 3.6 million gallons per year or greater). A 50 foot separation is recommended for typical gas dispensing facilities.
Source: CAPCOA, 2009.	

Voluntary Measure AIR-4b is provided, which recommends that any new residential development that is located within the recommended setback distances detailed in Table 5.3-7 from a stationary source of TAC emissions should prepare a screening level analysis or a project-specific HRA. If the screening criteria or HRA exceed cancer risk criteria, the projects should install a positive static pressure forced air heating, ventilation, and air conditioning (HVAC) system into each residential unit. Each HVAC system should install a high efficiency Minimum Efficiency Reporting Value (MERV) filter of MERV 13 or better in the air intake for the HVAC system, and the air intake will be installed with a fan designed to force air through the MERV 13 filter in order to create positive static pressure.

Non-Cancer Risks

In addition to the cancer risk from exposure to DPM there is also the potential that DPM exposure may exceed $PM_{2.5}$ thresholds and result in adverse health impacts from acute and chronic illnesses, which are detailed below.

Chronic Health Impacts

Chronic health effects are characterized by prolonged or repeated exposure to a TAC over many days, months, or years. Symptoms from chronic health impacts may not be immediately apparent and are often irreversible. The chronic hazard index is based on the most impacted sensitive receptor from the proposed project and is calculated from the annual average concentrations of DPM equivalent emissions.

The relationship for non-cancer chronic health effects is given by the equation:

$$HI_{DPM} = C_{DPM}/REL_{DPM}$$

Where:

HI_{DPM} = Hazard Index; an expression of the potential for non-cancer health effects
C_{DPM} = Annual average diesel particulate matter concentration in $\mu g/m^3$
REL_{DPM} = Reference Exposure Level (REL) for diesel particulate matter; the diesel particulate matter concentration at which no adverse health effects are anticipated

The REL_{DPM} is 5 $\mu g/m^3$. The OEHHA, as protective for the respiratory system, has established this concentration. The AERMOD model found that the highest annual concentration at the proposed homes is 0.98 $\mu g/m^3$ for DPM equivalent chronic non-cancer risk emissions. The resulting Hazard Index is:

$$HI_{DPM} = 0.98/5 = 0.196$$

Although now not required for CEQA compliance, the criterion for significance for new residential uses from existing TAC sources was a non-cancer health risk of 10.0 or greater. Since proposed sensitive receptors would experience a chronic risk from the nearby freeways that is below the cumulative threshold for new homes, the proposed project is not anticipated to expose new sensitive receptors to unacceptable non-cancer chronic risk levels from TAC emissions.

Acute Health Impacts

Acute health effects are characterized by sudden and severe exposure and rapid absorption of a TAC. Normally, a single large exposure is involved. Acute health effects are often treatable and reversible. According to the OEHHA, no acute risk has been found to be directly created from DPM, so there is no AREL assigned to DPM, and therefore the proposed project is not anticipated to expose new sensitive receptors to unacceptable non-cancer acute risk levels from TAC emissions.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Odors

Impact AIR-5: **The project would not create objectionable odors affecting a substantial number of people.**

Program-Level Impact Analysis of the DNCP and FCSP

Thresholds of Significance

Odor impacts on residential areas and other sensitive receptors, such as hospitals, day-care centers, schools, etc. warrant the closest scrutiny, but consideration should also be given to other land uses where people may congregate, such as recreational facilities, worksites, and commercial areas.

The project-level odor impacts of the Fulton Mall Reconstruction Project were assessed in an Environmental Impact Report prepared by the City (State Clearinghouse Number 2013101046). The DEIR found the Fulton Mall project would result in less than significant impacts related to odors.

Two situations create a potential for odor impact. The first occurs when a new odor source is located near an existing sensitive receptor. The second occurs when a new sensitive receptor locates near an existing source of odor. The *CBIA v. BAAQMD* court opinion described earlier also applies to the impacts of existing odor sources on new sensitive receptors. The second impact in this situation is not subject to CEQA analysis or an obligation to mitigate potential impacts. The following analysis discloses the potential impacts from existing odor sources on future sensitive receptors, but does not make a conclusion regarding its significance in a CEQA context.

The District has determined the common land use types that are known to produce odors in the Air Basin. These types are shown in Table 5.3-8.

Table 5.3-8: Screening Levels for Potential Odor Sources

Odor Generator	Screening Distance
Wastewater Treatment Facilities	2 miles
Sanitary Landfill	1 mile
Transfer Station	1 mile
Composting Facility	1 mile
Petroleum Refinery	2 miles
Asphalt Batch Plant	1 mile
Chemical Manufacturing	1 mile
Fiberglass Manufacturing	1 mile
Painting/Coating Operations (e.g., auto body shop)	1 mile
Food Processing Facility	1 mile
Feed Lot/Dairy	1 mile
Rendering Plant	1 mile
Source: SJVAPCD, 2015.	

According to the SJVAPCD GAMAQI, analysis of potential odor impacts should be conducted for the following two situations:

- **Generators:** projects that would potentially generate odorous emissions proposed to locate near existing sensitive receptors or other land uses where people may congregate, and
- **Receivers:** residential or other sensitive receptor projects, or other projects built for the intent of attracting people locating near existing odor sources (not subject to CEQA).

Formerly, if the project were to result in sensitive receptors being located closer than the recommended distances to an odor generator included within Table 5.3-8, a more detailed analysis including a review of SJVAPCD odor complaint records is recommended. The detailed analysis would involve contacting the SJVAPCD's Compliance Division for information regarding odor complaints. For a project locating near an existing source of odors, the potential for exposure of future residents to odors should be disclosed to the public. The criteria for requiring disclosure of potential exposure to odors are if a project is proposed for a site that is closer to an existing odor source than any location where there have been:

- More than one *confirmed* complaint per year averaged over a three-year period, or
- Three *unconfirmed* complaints per year averaged over a three-year period.

Potential Odor Sources in the DNCP and FCSP

The City of Fresno has many sources with the potential to generate odors including wastewater treatment facilities, landfills, transfer stations, recycling centers, manufacturing plants, food processors, painting operations, and rendering plants. The implementation of the DNCP and FCSP could result in the odor sources identified in Table 5.3-8 being located within the screening threshold distances, and could result in significant impacts on sensitive receptors.

The DNCP and FCSP could also result in sensitive receptors being constructed within the screening level distances from existing odor sources. Under this situation, these potential odor impacts on new sensitive receptors are not subject to CEQA review. However, when potential odor impacts on these new sensitive receptors occur, the SJVAPD has authority under Rule 4102 to require the owner of the odor-generating source to take actions that would reduce impacts to less than significant.

Odor Complaints in DNCP and FCSP

Odor impacts from waste and recycling facilities is one of the primary factors considered in the location decision and are regulated by the State of California through CalRecycle and the Local Enforcement Agency delegated by the State. The SJVAPCD addresses odor issues through Rule 4102—Nuisance. Facilities creating nuisance odors generating public complaints can result in SJVAPCD enforcement action. Individual development projects are required to determine if odors would be a potentially significant impact as part of CEQA review. The DNCP and FCSP does not identify specific projects that are likely to result in an increase in odors. However, projects meeting the screening criteria are likely to be proposed in the planning areas. In addition, projects containing sensitive receptors are likely to be proposed near existing odor sources. Projects proposing new receptors within screening level distances will reduce the impact to less than significant through

procedures provided by Rule 4102. Proposal of a new source within the screening distance would require the applicant to demonstrate that the proposed facility includes odor controls within its design and through implementation of odor management practices to reduce odors to less than significant. Therefore, impacts from the project are potentially significant.

Cumulative Impact Analysis

The geographic scope of the cumulative odor analysis is the local area. Impacts relative to objectionable odors are generally limited to the area in close vicinity to the source and are not cumulative in nature. As the emissions that cause odors disperse, the odor becomes less and less detectable. Odor impacts can occur when a project is an odor generator with the potential to impact sensitive receptors. There are no specific land uses or policies proposed in the DNCP and FCSP that would result in a concentration of odor sources at any particular location. With the buildout of the planning areas, impact from projects could result in a cumulative impact. Therefore, cumulative odor impacts are potentially significant.

Mitigation Measures

Project-specific

Odor source types listed in Table 5.3-8 may result in a potentially significant impact that would require mitigation to ensure that the impact is reduced to less than significant. The following mitigation measure was included in the MEIR and remains applicable to this project:

MM AIR-5 Require developers of projects with the potential to generate significant odor impacts as determined through review of SJVAPCD odor complaint history for similar facilities and consultation with the SJVAPCD to prepare an odor impact assessment and to implement odor control measures recommended by the SJVAPCD or the City to the extent needed to reduce the impact to less than significant.

Cumulative

Implementation of Mitigation Measure AIR-3 is required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

5.4 - Biological Resources

5.4.1 - Introduction

This section describes how project development associated with the Downtown Neighborhoods Community Plan (DNCP), the Fulton Corridor Specific Plan (FCSP), and the Downtown Development Code (DDC) may affect sensitive biological resources, including sensitive plants and wildlife and their associated habitats. This section also addresses local, state, and federal regulations as they pertain to project impacts on sensitive biological resources. Mitigation measures are prescribed herein to offset potential impacts to a less than significant level.

Information in this section is based on the following sources:

- Downtown Neighborhoods Community Plan. 2016. The complete report is contained in Appendix A.
- Fulton Corridor Specific Plan. 2016. The complete report is contained in Appendix B.
- Downtown Development Code. 2016. The complete code is contained in Appendix C.
- California Department of Fish and Wildlife's California Natural Diversity Database Rarefind program (CDFW 2015a).
- California Natural Diversity Database online QuickViewer (CDFW 2015b).
- California Native Plant Society online inventory (CNPS 2015).
- United States Fish and Wildlife Service's Information, Planning, and Conservation System (USFWS 2015a).
- United States Fish and Wildlife Service's Critical Habitat Data Portal (USFWS 2015b).
- Fresno General Plan Map Atlas (City of Fresno 2011).
- Fresno General Plan and related Master EIR (MEIR 2014)
- U.S. Department of Agriculture, Forest Service—Pacific Southwest Region, Remote Sensing Lab's Calveg Tiles Ecoregions database (USDA 2015)
- Western Arid Regions Jurisdictional Determinations (USACE 2001)
- Wetlands Delineation Manual (USACE 1987)

Special-status Species

Special-status species, also referred to as species at risk, is a broad term used to refer to all of the plant or animal taxa tracked by the California Department of Fish and Wildlife's (CDFW's) California Natural Diversity Database (CNDDB), regardless of their legal or protection status. The CDFW considers the taxa on this list to be those of greatest conservation need.

Listed Species

"Listed species" includes those species that are:

1. Listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (FESA) or candidates for possible future listing as threatened or endangered under the ESA (50 CFR §17.12); and/or
2. Listed or candidates for listing by the State of California as threatened or endangered under the California Endangered Species Act (CESA) (Fish and Game Code Section 2050, et seq.).

"Other" Special-status Species

"Other special-status species" include those species that:

1. Are listed as rare under the California Native Plant Protection Act (Fish and Game Code Section 1900, et seq.).
2. Meet the definition of rare or endangered under California Environmental Quality Act (CEQA) Section 15380(b) and (d). Species that may meet the definition of rare or endangered include the following:
   - Species considered by the California Native Plant Society (CNPS) to be "rare, threatened or endangered in California" (California Rare Plant Ranks [CRPR] 1A, 1B, 2A, and 2B);
     - CRPR 1A: Plants Presumed Extirpated in California and Either Rare or Extinct Elsewhere. Plants with a California Rare Plant Rank of 1A are presumed extirpated or extinct because they have not been seen or collected in the wild in California for many years.
     - CRPR 1B: Plants Rare, Threatened, or Endangered in California and Elsewhere. CRPR 1B plants are rare throughout their range with the majority of them endemic to California.
     - CRPR 2A: Plants Presumed Extirpated in California, But Common Elsewhere. CRPR 2A plants are presumed extirpated because they have not been observed or documented in California for many years.
     - CRPR 2B: Plants Rare, Threatened, or Endangered in California, But More Common Elsewhere. Except for being common beyond the boundaries of California, CRPR 2B plants would have been ranked 1B.1
   - Species that may warrant consideration on the basis of local significance or recent biological information;
   - Some species included on the CDFW's Special Plants, Bryophytes, and Lichens List (CDFW 2015a).
3. Considered a locally significant species, that is, a species that is not rare from a statewide perspective but is rare or uncommon in a local context such as within a county or region (CEQA Section 15125 (c)) or is so designated in local or regional plans, policies, or ordinances. Examples include a species at the outer limits of its known range or a species occurring on an uncommon soil type.

[1] Impacts proposed to CRPR 1B, 1B, 2A, or 2B plants or their habitat must be analyzed during preparation of CEQA environmental documents, as these species meet the definition of Rare or Endangered under CEQA Guidelines Section 15125 (c) and/or Section 15380.

4. Listed as "Species of Special Concern" or as California Fully Protected Species by the CDFW;
5. Listed as "Species of Concern" by the United States Fish and Wildlife Service (USFWS).

Special-status Natural Communities

In general, "special-status natural communities" include those communities that are of limited distribution statewide or within a county or region; communities that are of special concern to resource agencies; and communities that, because they are vulnerable to the environmental effects of projects, are assessed or protected under Section 1600 of the California Fish and Game Code, and/or Section 404 of the Clean Water Act, among others. The most current version of the CDFW's List of Vegetation Alliances and Associations (or Natural Communities List) (2010) indicates which natural communities are considered "special-status" in the State of California.

5.4.2 - Environmental Setting

The following information is provided in accordance with CEQA Section 15125. The environmental setting discussion provides a baseline discussion of the existing conditions within the DNCP and FCSP areas and the surrounding area.

Study Area for Project Impacts

The study area for project impacts to biological resources includes the DNCP and FCSP areas and areas immediately adjacent to the DNCP and FCSP, because implementation of the DNCP, FCSP, and DDC could have either direct or indirect effects on biological resources occurring within these areas.

The DNCP and FCSP are located within the Downtown portion of the City of Fresno and are surrounded by urban development to the north, south, east, and west. Specifically, the DNCP and FCSP are located within a disturbed and developed area characterized by concrete pavement and buildings with scattered ornamental trees and landscaped grass sod, which are primarily used for landscaping along paved pedestrian paths and adjacent to existing buildings. No native vegetation or habitats occur within the DNCP or FCSP.

The vegetation present within the DNCP and FCSP areas, including the former Fulton Mall, consists of landscaped ornamental trees such as fig (*Ficus* sp.), pine (*Pinus* sp.), and gum (*Eucalyptus* sp.), with scattered non-native grasses and ruderal (weedy) species, including red brome (*Bromus rubens*), barley (*Hordeum murinum*), and Bermuda grass (*Cynodon dactylon*). These ornamental trees, non-native grasses, and ruderal species occur within landscaped and disturbed areas associated with the paved pedestrian paths.

Wildlife species expected to occur within the DNCP and FCSP, including the former Fulton Mall, include common avian species typically observed in disturbed settings and urban environments, such as northern mockingbird (*Mimus polyglottos*), house finch (*Carpodacus mexicanus*), common raven (*Corvus corax*), and mourning dove (*Zenaida macroura*), and wildlife species such as western fence lizard (*Sceloporus occidentalis*) and domestic dog (*Canis familiaris*). Buildings within the DNCP and FCSP areas, including the former Fulton Mall, may provide suitable roosting habitat for bat species such as California myotis (*Myotis californicus*). The trees located within the DNCP and FCSP

areas do not provide suitable habitat for tree roosting bat species; therefore, no tree roosting bat species are expected to occur within the DNCP and FCSP areas.

Study Area for Cumulative Impacts

The cumulative impacts analysis is based on a summary of projections approach for applicable projects in the vicinity of the DNCP and FCSP, within the Fresno city limits.

Existing Conditions

Vegetation Communities

The CDFW categorizes and designates vegetation communities in the state of California. The DNCP and FCSP areas predominantly consist of one general CDFW vegetation community: urban/developed land (CDFW 2015c). Urban (or developed) lands have been constructed upon or otherwise covered with a permanent, unnatural surface (concrete, asphalt, buildings, homes, etc.) or a large amount of debris or other materials. Urban land provides poor quality habitat for special-status species. No special-status species are expected to occur within this vegetation community. A few small fragments of two additional CDFW vegetation communities are categorized within the DNCP (not within the FCSP). These are in the "Irrigated Row and Field Crops" and "Lacustrine" categories. It should be noted that because of the urban nature of the Plan areas, the CDFW vegetation community categorization may not match the actual land use occurring at any given location. There two small freshwater ponds are mapped in the National Wetlands Inventory database. The vegetation communities present in the DNCP and FCSP areas are discussed below.

Irrigated Row and Field Crops

Irrigated row and field crops account for approximately 23.8 acres of the approximately 7,230-acre DNCP area and occur in the southwest corner of the DNCP (not within the FCSP). This vegetation community categorization frequently occurs in floodplains or upland areas with high soil quality. Irrigated row and field crows include annual and perennial crops, grown in rows, with open space between the rows. Row and field crops are artificially irrigated and feature a moderate disturbance rate by vehicle and pedestrian encroachment typically associated with farming activities. Species composition changes frequently, both by season and by year.

However, it is unlikely that these acres are in active agricultural use. The Fresno General Plan depicts existing farmland within the City's Sphere of Influence (SOI) in the Map Atlas for the General Plan. According to the Atlas's associated Important Farmland map, the DNCP and FCSP areas are designated as "Urban Developed" land. Furthermore, the current General Plan describes the area containing the Farmland of Local Importance as "Vacant," indicating that there are no active agricultural uses on-site. Therefore, although the DNCP does contain approximately 23.8 acres of Farmland of Local Importance, which is categorized by the CDFW as irrigated row and field crops, it is no longer under active agriculture and is not considered important on a local level.

Since irrigated row and field crops contain active agriculture and are therefore significantly disturbed with altered substrates, this vegetation community does not provide suitable habitat for any special-status plant species and provides only limited habitat for special-status wildlife species. Special-status wildlife species that typically occur within this vegetation community include burrowing owl

(*Athene cunicularia*), California horned lark (*Eremophila alpestris actia*), and Swainson's hawk (*Buteo swainsoni).* Because of the urbanized nature of these acres, although not categorized as such, they more closely fit the CDFW vegetation community categorization, "vacant, disturbed," which includes land cleared of vegetation; land containing a preponderance of non-native plant and disturbance-tolerant species; or land showing signs of past or present usage that removes any capability of providing viable habitat.

Lacustrine

Lacustrine communities consist of standing/open waters in topographic depressions (such as lakes) or dammed river channels. Lacustrine communities lack persistent emergent vegetation but may have submerged or floating-leaved aquatic vegetation. Generally, lacustrine systems are surrounded by hydrophytic plants, grasses, and trees. Lacustrine systems account for approximately 6.3 acres of the 7,230-acre DNCP area and occur in the northern and eastern portions of the DNCP (outside of the FCSP). In some instances within the DNCP plan area, this categorization may also include freshwater ponds (Exhibit 5.4-1).

Special-status species with the potential to occur within a lacustrine community include:

- western yellow-billed cuckoo (*Coccyzus americanus occidentalis*);
- western mastiff bat (*Eumops perotis californicus*);
- American badger (*Taxidea taxus*);
- western pond turtle (*Actinemys marmorata*);
- dwarf downingia (*Downingia pusilla*); and
- Sanford's arrowhead (*Sagittaria sanfordii*).

Special-status Natural Communities

Critical habitat for succulent owl's-clover (*Castilleja campestris* var. *succulenta*) occurs approximately 10 miles northeast of the Plan areas (USFWS 2015b). No critical habitat for this species occurs within the Plan areas.

Special-status Species

Special-status plant and wildlife species were determined from a U.S. Geological Survey (USGS) quadrangle search (CDFW 2015a); CNDDB QuickViewer search of unprocessed data (CDFW 2015b); a CNPS nine quadrangle search using the Fresno North 7.5-minute quadrangle (CNPS 2015); and USFWS's Information, Planning, and Conservation System list of special-status species that are known to occur in the vicinity of the Plan areas (USFWS 2015a).

A full listing of plant species with potential to occur in the vicinity of the Plan areas was obtained from the CNPS Inventory of Rare and Endangered Plants, and a full listing for wildlife species was obtained from the CNDDB and the USFWS's Information, Planning, and Conservation System list of special-status species. Each special-status species identified within the database search is addressed in Table 1 and Table 2 of Appendix F. Assessment of the potential for each special-status species to occur within the Plan areas was based on historical occurrences, suitability of habitat within the Plan areas, and professional expertise.

The Plan areas contain potentially suitable habitat for a total of nine special-status species (including two plant species and seven wildlife species). Each special-status species with the potential to occur (or that are known to occur) within the Plan areas is described in more detail below.

Plant Species

Two special-status plant species have the potential to occur within the DNCP and FCSP areas. Impacts to these species should be avoided to the greatest extent possible.

Dwarf Downingia

Dwarf downingia is a CNPS list 2B.2 species[2] that occurs within vernal pools and valley and foothill grasslands located between one to 445 meters in elevation. There are no historically known occurrences of this species within the Plan areas, but there is some potential for the species to be present within lacustrine habitat, which is sparsely located in the Plan areas.

Sanford's Arrowhead

Sanford's arrowhead is a CNPS list 1B.1 species that occurs in marshes and swamps. It is historically known to occur in the Central Valley and Carrizo Plain at locations between zero and 650 meters in elevation. There is one historical occurrence north of the Plan areas, but it is located within an area that has been converted to urban use.

Wildlife Species

A total of seven special-status wildlife species have the potential to occur or are known to occur within the DNCP and/or FCSP areas. Project impacts to these species should be avoided to the greatest extent possible. Consultation with state and/or federal agencies would be required in the event that a development project occurring under the plans had the potential to affect a federally or state listed wildlife species.

Western Yellow-Billed Cuckoo

Western yellow-billed cuckoo is a federally threatened and a state endangered species that breeds in large blocks of riparian habitat (willow and cottonwood stands in river floodplains). While this species was identified in the database search, it is unlikely that there is breeding, foraging, or nesting habitat for the species in the Plan areas. This is due to a lack of riparian habitat in the Plan areas and to the proximity of the Plan areas to riparian habitat. The nearest river floodplains are located 6.3 miles west and 12 miles east of the outermost DNCP boundary.

This bird feeds primarily on large insects, including caterpillars and cicadas, and occasionally feeds on small frogs and lizards. Breeding coincides with the emergence of cicadas and tent caterpillars. Historically, yellow-billed cuckoos nested primarily in coastal counties from San Diego County, near the Mexican border, to Sonoma County, in the Central Valley from Kern through Shasta Counties, and along the lower Colorado River. Primary threats to its habitat include conversion of riparian habitat

[2] CNPS/CRPR Threat Ranks
0.1—Seriously threatened in California (over 80% of occurrences threatened/high degree and immediacy of threat).
0.2—Moderately threatened in California (20-80% occurrences threatened/moderate degree and immediacy of threat).
0.3—Not very threatened in California (less than 20% of occurrences threatened/low degree and immediacy of threat or no current threats known).

to agriculture, urban development, and flood control, as well as disease, predation, and lack of regulatory mechanisms. Additionally, marginal habitat for the Western yellow-billed cuckoo may be present in the lacustrine communities within the DNCP area (not the FCSP).

Swainson's Hawk

Swainson's hawk is a state threatened species that breeds regularly from southwestern Canada to northern Mexico. Typical foraging habitat includes open desert, grassland, or croplands near scattered, large trees or small groves. This species nests in open riparian habitat or in scattered trees or small groves in sparsely vegetated flatlands. While it typically roosts in large trees, it will also roost on the ground in areas of suitable habitat, if no large trees are available. The nesting/breeding period for this species is from late March to mid-August, with peak activity in late May to late July. Swainson's hawks build their nests on a platform of sticks, bark, and fresh leaves in a tree, bush, or utility pole from 1.3 to 30 meters (4 to 100 feet) above ground. The Swainson's hawk forages in shrub-steppe habitats and agricultural lands. Swainson's hawk populations have declined markedly since the 1920s, with steep declines in the 1950s. There have been losses of 90 to 95 percent of past populations in some areas. Suitable foraging habitat for the Swainson's hawk may be available in the 23.8 acres classified in the plan area as irrigated row and field crops vegetation, but this is somewhat unlikely because of the discontinuous nature of this vegetation type in the plan area, and the likelihood that these acres are more typical of the disturbed, vacant vegetation community. Nesting habitat for Swainson's hawk is not available in the Plan areas, due to a lack of riparian habitat and proximity to riparian habitat.

American Badger

American badger is a California Species of Special Concern that is known to occur within a variety of open, arid habitats, most commonly associated with grasslands, savannas, mountain meadows, and open areas of desert scrub. Principal habitat requirements include sufficient prey base, friable soils, and relatively open, uncultivated ground. American badger is typically found in areas from below sea level to over 12,000 feet in elevation. American badger is threatened by habitat conversion to urban and agricultural uses, farming operations, shooting and trapping, poisoning, and reduction of prey base due to rodent control activities. Because of the highly urbanized nature of the Plan areas, it is unlikely that suitable habitat is available for this species in the Plan areas. This species occurs as far north as Canada and as far south as central Mexico. In the United States, it currently extends east from the Pacific coast to Texas, Oklahoma, Missouri, Illinois, Indiana, and Ohio. In California, American badger is an uncommon, permanent resident throughout most of the State, with the exception of the North Coast area.

Burrowing Owl

Burrowing owl is designated as a California Species of Special Concern. Burrowing owls require large open expanses of sparsely vegetated areas on gently rolling or level terrain with an abundance of active small mammal burrows. Typical communities associated with the species include short-grass prairies, grasslands, lowland scrub, agricultural lands (particularly rangelands), prairies, coastal dunes, desert floors, and some artificial, open areas. Burrowing owls may also use golf courses, cemeteries, road easements and rights-of-way within cities, airports, vacant lots in residential areas, and irrigation ditches. Burrowing owls often use existing rodent burrows (or other burrows) for roosting and nesting. They may also use pipes and culverts where burrows are scarce. Burrowing

owls are also directly associated with other burrowing mammals such as prairie dogs, ground squirrels, and tortoises. If left undisturbed, a burrowing owl pair will use the same burrow year after year for nesting. While suitable habitat may be available for the burrowing owl because of its ability to utilize semi-urban features, it is unlikely due to the intensity level of urbanization, and the dispersed nature of the available vacant land in the Plan areas. The lack of related species and vacant vegetative land would make the plan areas within the City less than suitable.

Western Mastiff Bat

The western mastiff bat is a California Species of Special Concern and a High Priority species as designated by the Western Bat Working Group. The western mastiff bat occurs throughout California in a wide range of habitat types, typically below 9,000 feet in elevation. Distribution is correlated with suitable rock features required for roosting. Western mastiff bats are non-migratory; however, they may move short distances within their home ranges. This bat species does not hibernate and is active periodically throughout the winter. Western mastiff bat is generally a cliff-dwelling species but also uses building crevices for day roosts. This species forages most frequently in broad open areas such as floodplains, chaparral, oak woodlands, open ponderosa pine forest, grasslands, montane meadows, and agricultural areas, and it requires large lakes or ponds at least 100 feet long for drinking. Western mastiff bat generally roosts high above the ground, allowing a clear vertical drop of at least 7 feet for flight. Maternity colonies range from 30 to several hundred individuals and generally include adult males. This species has an audible echolocation call and is easily detected while foraging. This bat forages primarily on moths but also consumes crickets and katydids. Breeding occurs from October to March, from which pups are born primarily in July and are volant at 4 to 6 weeks of age. Suitable habitat for the western mastiff bat may be present in the Plan areas, but suitable water features for foraging do not exist in the Plan areas.

Western Pond Turtle

The western pond turtle is a California Species of Special Concern that inhabits ponds, lakes, rivers, streams, creeks, marshes and irrigation ditches containing abundant vegetation and either rocky or muddy bottoms in woodlands, forests, and grasslands. It can be found basking on logs, rocks, cattail mats, and exposed banks within brackish water and seawater. This turtle feeds primarily on aquatic plants, invertebrates, worms, frog and salamander eggs and larvae, crayfish, and carrion, and occasionally on frogs and fish. It mates in April and May, eggs are laid sometime between April and August, and hatchlings emerge in early fall or overwinter in the nest. Suitable habitat for the western pond turtle may be present in the lacustrine vegetation communities within the Plan area, particularly those that may have permanent water features.

California Horned Lark

The California horned lark is a California Fully Protected species that inhabits a variety of open habitats, usually where trees and large shrubs are absent (such as row-crop fields). Horned larks are a ground-dwelling species. Resident populations of horned larks are found in the stubble, grass, and fallow lands near cultivated fields. The majority of the birds live in the wide expanses of the deserts, foothills, and dry grasslands that encircle the farming areas. Horned larks also frequent areas cleared by humans, such as plowed fields and mowed expanses around airstrips. The food of the horned lark consists largely of seeds picked up from the ground and some insects. In certain parts of California the horned lark is a serious crop pest. The damage occurs mostly in the interior valleys

from Sacramento south to the Imperial Valley, and along the coast from San Francisco south to San Diego. Damage also occurs to crops in the Mojave Desert region and other desert valleys in southeastern California. Large numbers of horned larks leave agricultural areas in the spring and migrate into foothills, dry grasslands, and desert, where nesting and rearing of the young takes place. Nests are depressions in the ground, heavily lined with grasses, weed stems, and flower heads. Usually three to four eggs are laid with an incubation period of 11 to 14 days. The nesting season extends from March to June with two or three broods commonly raised each year. In June and July, the juvenile birds move from the open country into the general farming areas. Bird numbers increase throughout the remainder of the summer and early fall as additional bands move in from the foothills. A moderate potential for foraging and nesting habitat exists for this species in the lands designated by the CDFW as irrigated row and field crop in the southwest corner of the DNCP area, depending on the condition of those lands.

5.4.3 - Regulatory Setting

The regulatory setting section describes relevant federal, state, and local (County and City) laws, regulations, and policies pertaining to biological resources within the Plan areas. The following list provides a full range of policies applicable to the Plan areas.

Federal Regulations

Federal Endangered Species Act

The USFWS administers the FESA, which provides a process for listing species as either threatened or endangered and methods of protecting listed species. The FESA defines as "endangered" any plant or animal species that is in danger of extinction throughout all or a significant portion of its known geographic range. A "threatened" species is a species that is likely to become endangered. A "proposed" species is one that has been officially proposed by the USFWS for addition to the federal threatened and endangered species list.

According to Section 9 of the FESA, "take" of threatened or endangered species is prohibited. The term "take" means to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in such conduct. Take can include disturbance to habitats used by a threatened or endangered species during any portion of its life history. The presence of any federally threatened or endangered species in a project area generally imposes severe constraints on development, particularly if development would result in "take" of the species or its habitat. Under the regulations of the FESA, the USFWS may authorize "take" when it is incidental to, but not the purpose of, an otherwise lawful act.

Federal Clean Water Act—Section 404

The United States Army Corps of Engineers (USACE) administers Section 404 of the federal Clean Water Act (CWA). This section regulates the discharge of dredge and fill material into waters of the U.S. The USACE has established a series of nationwide permits that authorize certain activities in waters of the U.S., if a proposed activity can demonstrate compliance with standard conditions. Normally, the USACE requires an individual permit for an activity that will affect an area equal to or in excess of 0.5 acre of waters of the U.S. Projects that result in impacts to less than 0.5 acre can normally be conducted pursuant to one of the nationwide permits, if consistent with the standard

permit conditions. The USACE also has discretionary authority to require an Environmental Impact Statement for projects that result in impacts to an area between 0.1 and 0.5 acre. Use of any nationwide permit is contingent on the activities having no impacts to endangered species.

Clean Water Act—Section 401

As stated in Section 401 of the CWA, "any applicant for a Federal permit for activities that involve a discharge to waters of the State, shall provide the Federal permitting agency a certification from the State in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the Federal CWA." Therefore, before the USACE will issue a Section 404 permit, applicants must apply for and receive a Section 401 water quality certification from the appropriate Regional Water Quality Control Board (RWQCB). The proposed project is under the jurisdiction of the Central Valley RWQCB.

Waters of the United States

Waters of the U.S. as defined in the Code of Federal Regulations (CFR) Section 328.3 include all waters or tributaries to waters such as lakes, rivers, intermittent and perennial streams, mudflats, sand-flats, natural ponds, wetlands, wet meadows, and other aquatic habitats. Frequently, waters of the U.S., with at least intermittently flowing water or tidal influences are demarcated by an ordinary high water mark (OHWM). The OHWM is defined in CFR Section 328.3(e) as the line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas. In this region, the OHWM is typically indicated by the presence of an incised streambed with defined bank shelving.

In June 2001, the USACE South Pacific Division issued Guidelines for Jurisdictional Delineations for Waters of the United States in the Arid Southwest (USACE 2001). The purpose of this document was to provide background information concerning physical characteristics of dryland drainage systems. These guidelines were reviewed and used to identify jurisdictional drainage features within the Plan areas.

Wetlands

According to the USACE Wetlands Delineation Manual (USACE 1987), Technical Report, three criteria must be satisfied to classify an area as a jurisdictional wetland:

- A predominance of plant life that is adapted to life in wet conditions (hydrophytic vegetation)
- Soils that saturate, flood, or pond long enough during the growing season to develop anaerobic conditions in the upper part (hydric soils)
- Permanent or periodic inundation or soils saturation, at least seasonally (wetland hydrology)

Wetland vegetation is characterized by vegetation in which more than 50 percent of the composition of dominant plant species are obligate wetland, facultative wetland, and/or facultative species that occur in wetlands. As a result of the 2001 Solid Waste Agency of North Cook County (SWANCC) case,

a wetland must show connectivity to a stream course in order for such a feature to be considered jurisdictional. Although wetland criteria was used to identify if areas were considered wetlands, the exact limits of jurisdiction were not measured based on the standard wetland delineation protocol as described in the 1987 USACE manual.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) protects all common wild birds found in the United States except the house sparrow, starling, feral pigeon, and resident game birds such as pheasant, grouse, quail, and wild turkey. Resident game birds are managed separately by each state. The MBTA makes it unlawful for anyone to kill, capture, collect, possess, buy, sell, trade, ship, import, or export any migratory bird including feathers, parts, nests, or eggs.

California Regulations

California Endangered Species Act

The CDFW administers the California Endangered Species Act (CESA). The State of California considers an "endangered" species one whose prospects of survival and reproduction are in immediate jeopardy. A "threatened" species is one present in such small numbers throughout its range that it is likely to become an endangered species in the near future in the absence of special protection or management. A "rare" species is one present in such small numbers throughout its portion of its known geographic range that it may become endangered if its present environment worsens. The rare species designation applies to California native plants. State threatened and endangered species are fully protected against take, as defined above. The term "species of special concern" is an informal designation used by CDFW for some declining wildlife species that are not state candidates for listing. This designation does not provide legal protection, but signifies that these species are recognized as sensitive by the CDFW.

California Fish and Game Code—Sections 1600 to 1603

The California Fish and Game Code (CFG Code) mandates that "it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds, without first notifying the department of such activity." CDFW jurisdiction includes ephemeral, intermittent, and perennial watercourses, including dry washes, characterized by the presence of hydrophytic vegetation, the location of definable bed and banks, and the presence of existing fish or wildlife resources.

Furthermore, CDFW jurisdiction is often extended to habitats adjacent to watercourses, such as oak woodlands in canyon bottoms or willow woodlands that function as part of the riparian system. Historic court cases have further extended CDFW jurisdiction to include watercourses that seemingly disappear, but re-emerge elsewhere. Under the CDFW definition, a watercourse need not exhibit evidence of an OHWM to be claimed as jurisdiction. However, CDFW does not regulate isolated wetlands; that is, those that are not associated with a river, stream, or lake.

Porter-Cologne Water Quality Act

The RWQCBs regulate actions that would involve "discharging waste, or proposing to discharge waste, within any region that could affect the water of the state" (water code Section 13260(a)), pursuant to provisions of the Porter-Cologne Water Quality Act. "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (water code Section 13050 (e)).

Regional Water Quality Control Board Regulated Activities

Under Section 401 of the CWA, the RWQCB regulates all activities that are regulated by the USACE. Additionally, under the Porter-Cologne Water Quality Act, the RWQCB regulates all activities, including dredging, filling, or discharge of materials into waters of the State that are not regulated by the USACE, due to a lack of connectivity with a navigable water body and/or lack of an OHWM.

California Fish and Game Code—Sections 3503 and 3511

The CDFW administers the CFG Code. There are particular sections of the CFG Code that are applicable to natural resource management. For example, Section 3503 of the CFG Code states it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird that is protected under the MBTA. CFG Code Section 3503.5 further protects all birds in the orders Falconiformes and Strigiformes, birds of prey such as hawks and owls, and their eggs and nests from any form of take. CFG Code Section 3511 lists fully protected bird species where the CDFW is unable to authorize the issuance of permits or licenses to take these species.

Natural Community Conservation Planning Act

The State of California has adopted the Natural Community Conservation Planning and Habitat Conservation Planning (NCCP/HCP) program to focus on creating a multiple-species, multiple-habitat subregional Reserve System and implementing a long-term "adaptive management" program. To accomplish this, the NCCP/HCP creates a subregional habitat Reserve System and implements a coordinated program to manage biological resources within the habitat reserve. The creating of a defined Reserve System provides certainty to the public and to affected landowners with respect to the location of future development and open space within the subregion. The NCCP/HCP was developed with coordination through the CDFW and the USFWS, in order to account for the CESA and the FESA. The Plan areas do not occur within any NCCP/HCP designated area.

City of Fresno Regulations

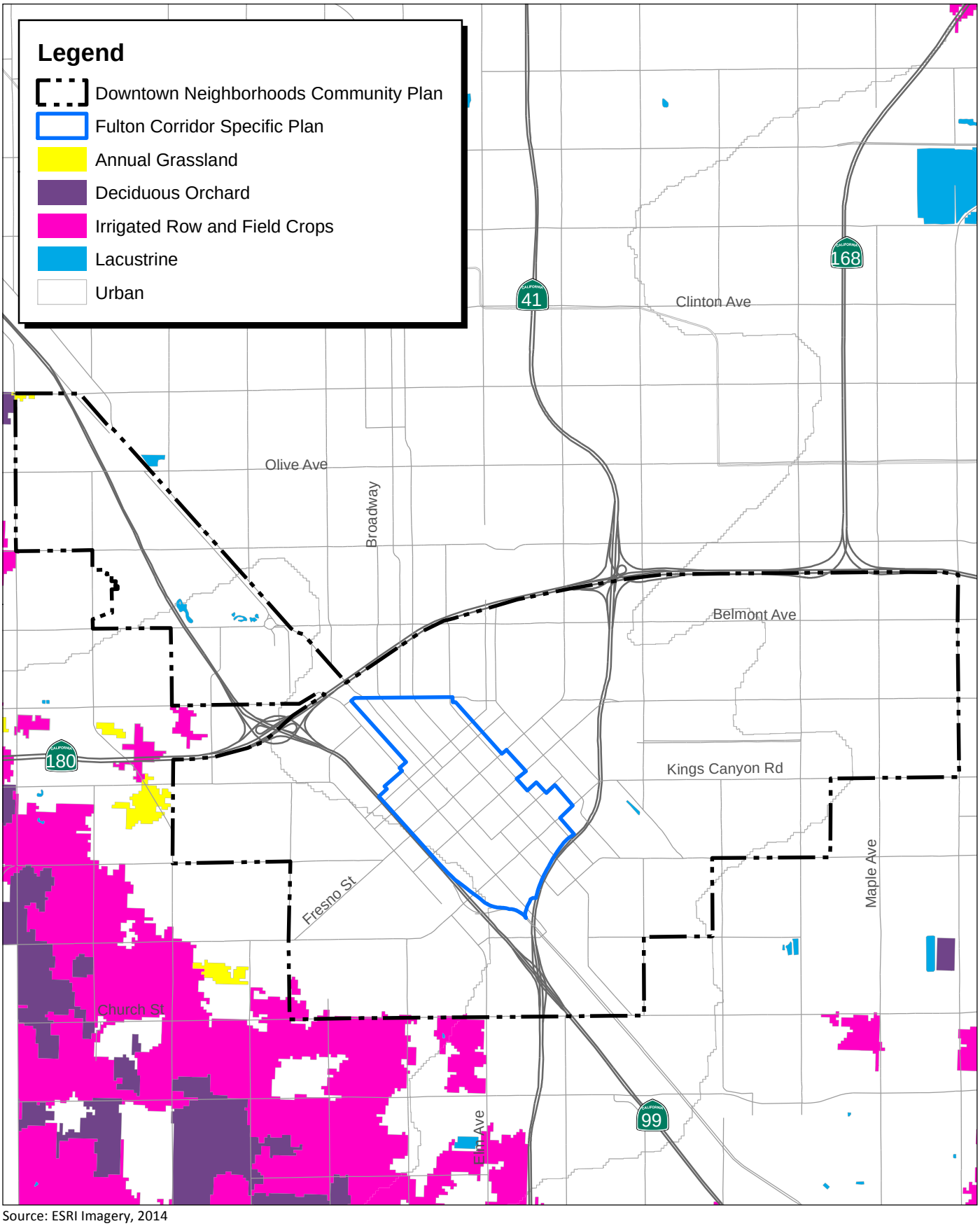
The following objectives and policies outlined in the Fresno General Plan and ordinances contained within the Fresno Municipal Code would apply to development projects proposed within the Plan areas.

General Plan

The Fresno General Plan (City of Fresno 2014) serves as a guide to enable government at all levels, private enterprise, community groups, and individual citizens to make decisions and utilize community resources in a manner that will realize progress toward a common vision, as established in the plan through a community visioning process. The current General Plan includes the following policies that are applicable to biological resources within the City of Fresno:

- **Policy POSS-5-a: Habitat Area Acquisition.** Support state, federal, and local programs to acquire significant habitat areas for permanent protection and/or conjunctive educational and recreational use.
- **Policy POSS-5-b: Habitat Conservation Plans.** Participate in cooperative, multi-jurisdictional approaches for area-wide habitat conservation plans to preserve and protect rare, threatened, and endangered species.
- **Policy POSS-5-c: Buffers for Natural Areas.** Require development projects, where appropriate and warranted, to incorporate natural features (such as ponds hedgerows and wooded strips) to serve as buffers for adjacent natural areas with high ecological value.
- **Policy POSS-5-d: Guidelines for Habitat Conservation.** Establish guidelines for habitat conservation and mitigation programs. These programs will include:
  - An evaluation of the site's environmental setting and proposed design and operating parameters of proposed mitigation measures.
  - A graphic depiction of land to be acquired or set aside for mitigation activities.
  - Mitigation site preparation plans.
  - Specification of the types and sources of plant material used for any revegetation.
  - Water irrigation plans.
  - Post-planting maintenance and other operational measures to ensure successful mitigation.
  - Monitoring at an appropriate frequency by qualified personnel and reporting of data collected to permitting agencies.
- **Policy POSS-5-e:** Pursue development of conjunctive habitat and recreational trail uses in flood control and drainage projects.
- **Policy POSS-5-f: Regional Mitigation and Habitat Restoration.** Coordinate habitat restoration programs with responsible agencies to take advantage of opportunities for a coordinated regional mitigation program.
- **Objective POSS-6:** Maintain and restore, where feasible, the ecological values of the San Joaquin River corridor.
- **Policy POSS-6-a: San Joaquin River Parkway Master Plan**. Support the San Joaquin River Conservancy in its efforts to update the San Joaquin River Parkway Master Plan by working with the other jurisdictions and the River Conservancy to create a comprehensive and feasible plan for preservation, conservation, and Parkway development.
- **Policy POSS-6-b:** Effects of Stormwater Discharge. Support efforts to identify and mitigate cumulative adverse effects on aquatic life from stormwater discharge to the San Joaquin River.
  - Avoid discharge of runoff from urban uses to the San Joaquin River or other riparian corridors.
  - Approve development on sites having drainage (directly or indirectly) to the San Joaquin River or other riparian areas upon a finding that adequate measures for preventing pollution of natural bodies of water from their runoff will be implemented.
  - Periodically monitor water quality and sediments near drainage outfalls to riparian areas. If unacceptable levels of contaminant(s) occur, remedial measures shall be promptly instituted.
- **Object POSS-7:** Support the San Joaquin River Conservancy in its collaborative, multiagency efforts to develop the San Joaquin River Parkway.

- **Policy POSS-7-a: Preserve Wildlife Corridors.** Acquire and expand natural reserves and wildlife corridors through purchase, easements, mitigation for proposed activities, or other mutually satisfactory transactions.
- **Policy POSS-7-b: Wildlife Corridor along San Joaquin River.** Create a wildlife corridor to provide continuous open space land and water areas parallel to the San Joaquin River within the jurisdiction of the City.
  - Preserve a minimum width of 200 feet of riparian vegetation on both sides of the river.
  - Require the corridor to be wider when possible and/or necessary to protect additional areas of native plants and critical habitat (such as wildlife breeding areas). Re-establishment of a 200-foot or wider band of native plants is recommended in areas where 200 feet of riparian vegetation no longer exists along the river bank, to the maximum extent feasible from topologic and hydrologic standpoints.
  - Allow exceptions where the minimum-width corridor is infeasible due to topography, hydrology, or other constraints. An offsetting expansion may be approved in those instances on the opposite side of the river. Incorporate the bluff face into the wildlife corridor where steep bluffs drop directly into or close to the river.
- **Policy POSS-7-c: Monitoring River Corridor Conditions.** Undertake periodic monitoring to determine the status of conditions and mitigation measures required for projects within, and in the vicinity of, the river corridor.
  - Pursue a Memorandum of Understanding (MOU) or other agreement so that the San Joaquin River Conservancy can perform, or participate in, this monitoring program in order to furnish additional expertise, provide for cost efficiency, and to ensure consistency throughout the river corridor.
  - Based on information obtained from monitoring, modifications in special permits, reclamation plans, and other documents, operating parameters for uses may be necessary to insure human health and safety and the well-being of riparian plants and wildlife.
- **Policy POSS-7-d: Buffer Zones near Intensive Uses.** Protect natural reserve areas and the wildlife corridor areas in the River Corridor whenever more intensive human uses exist or are proposed on adjacent lands. Buffer zones will allow multiple uses on parts of the parkway while still protecting wildlife and native plants.
  - Require studies of appropriate buffer widths to be approved by State and federal wildlife agencies before variances from standard buffer zone widths are granted.
  - Maintain natural riparian buffer zones with appropriate native plants (seed material and cuttings locally derived).
  - Incorporate open space uses such as pasture, low-intensity agricultural activities, and the "rough" or marginal areas of golf courses, into buffer zones when they constitute an improvement in habitat over a previous use or degraded area. Evaluate and address the potential impacts of construction, cultural, and operational practices (such as grading, number of livestock per acre, lighting, and use of pesticides, herbicides, and fertilizers) before these uses are be approved for buffering.
  - For nearby areas of the San Joaquin River corridor outside of the exclusive jurisdiction of the City, support efforts to work with other jurisdictions to achieve this policy.



Source: ESRI Imagery, 2014

FirstCarbon SOLUTIONS

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Exhibit 5.4-1
Vegetation Communities

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Fresno Municipal Code (Section 13-305-Tree Preservation)

The Fresno Municipal Code (FMC) Section 13-305 protects all public trees in the City including, but not limited to, trees which are affecting surface improvements or underground facilities or which are diseased, or located where construction is being considered or will occur. No person, except authorized City personnel, shall remove, destroy, deface or injure any tree on public property by any means including but not limited to: pouring material on or immediately adjacent to any tree, attaching any sign or notice to a tree without supervision of the Director, causing or encouraging fire around any tree, or covering the ground within a 4-foot-radius around any tree with concrete or other unnatural surface. Any removal of trees shall be conducted only after an evaluation and inspection by the Director, and with written authorization.

5.4.4 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether impacts to biological resources are significant environmental effects, the following questions are analyzed and evaluated.

Would the project:

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service?

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites?

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

5.4.5 - Impact Analysis, Mitigation Measures, and Level of Significance After Mitigation

Effect on Species

Impact BIO-1:	**The project could have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.**

Project-specific Impact Analysis

Potentially significant impact. Development within the Plan areas could result in the loss of natural vegetation communities that provide suitable habitat for nine special-status species (two plants and seven wildlife species) that have the potential to occur within or adjacent to the Plan areas. As described above, under "Environmental Setting," the bulk of the Plan areas are categorized as urban/developed land. However, there are small dispersed patches of land categorized by the CDFW as irrigated row and field crops (agricultural) and lacustrine habitats within the DNCP plan area that, depending on the condition of the land, could provide suitable habitat for these special-status species, as described above (Exhibit 5.4-1).

Implementation of the DNCP and FCSP could result in the loss or degradation of these habitat types, which could result in a substantial adverse effect to a special-status plant or animal species, if it is determined that a special-status species exists on-site and will be impacted, either directly or through habitat modifications.

Direct project impacts to species listed as a candidate, sensitive, or special-status species by local, state, and federal agencies should be avoided to the greatest extent feasible; however, it is acknowledged that future projects may not be able to fully avoid these species. Project-related impacts that result in the direct take of a special-status species would be considered a significant impact. The presence/absence of a special-status species on a project site and the potential to impact a special-status species must be determined prior to project construction. Development within the Plan areas that results in the direct take or loss of suitable habitat for any special-status species would require project-level mitigation to avoid such loss. Project impacts to special-status species listed as threatened or endangered by CDFW and/or USFWS would also require agency consultation and/or take permits.

To reduce potential impacts on biological resources within the Community Plan area, the DNCP includes the following provisions for the protection of biological resources (figures and tables referenced are located in the DNCP):

- **Goal 4.2:** Regenerate the urban forest to promote ecological sustainability, increase human comfort, and reduce energy costs.

  Intent: To introduce new and replace missing street trees in order to provide shade; reduce solar heat gain and local ambient air temperature; reduce stormwater runoff; extend the life of the streets they cover; improve local air, soil, and water quality; reduce atmospheric carbon

dioxide; provide wildlife habitats; increase property values; and enhance the attractiveness and walkability of the community.

- **Policy 4.2.1:** Introduce new and reintroduce missing street trees in the Community Plan Area's neighborhoods, districts, and corridors with the goal of providing a minimum of 50 percent landscape canopy cover (the layer of leaves, branches, and stems that cover the ground when viewed from above) for each street in the Community Plan Area within 15 years. Trees should provide shade, visual identity for residents, and reflect the individual character of each community. Trees planted within the Chandler Airport Overlay area shall be planted in conformance with Federal Aviation Regulations Part 77, particularly in terms of height and potential to attract wildlife. The recommended street trees for the Plan Area's neighborhood streets are shown in Figure 4-3 (Neighborhood Street Landscape Character) and described in Table 4.1 (Neighborhood Street Tree Planting List) of the DNCP (see Appendix A). The recommended street trees for each of the prominent corridors in the Plan Area are shown in Figure 4-4 (Corridor Landscape Character) and described in Table 4.2 (Corridor Street Tree Planting List) of the DNCP (see Appendix A).
- **Policy 4.2.2:** Partner with as many private, public, or non-profit groups as possible to support tree planting and maintenance. Consider using portions of community gardens to grow street tree seedlings and saplings until they are large enough to be planted along City streets.
- **Policy 4.2.3:** Require the retention and protection of existing, mature, non-agricultural trees within the Downtown Neighborhoods.
- **Policy 4.2.4:** Encourage the use of large shade street trees by implementing broad parkways, structural soils, or other systems to accommodate their root systems.
- **Policy 4.2.5:** Encourage the proper tree selection for the site in response to above ground or underground infrastructure and parkway constraints (such as telephone wires).
- **Policy 4.2.6:** Use a well-balanced variety and uniform spacing of deciduous or evergreen trees to establish visual continuity for streetscapes, to help reduce energy costs of adjacent buildings, and to define unique public or private open spaces.
- **Policy 4.2.7:** Spread the cost of tree planting and maintenance among a variety of entities and funding sources, including special improvement districts, permit fees and surcharges, an optional customer-directed one-year or multi-year maintenance cycle paid by adjacent property owners, Adopt-a-Tree or Adopt-a-Street programs, a community tree and street tree endowment, and/or donations from businesses, utility companies, service clubs, and individuals.
- **Policy 4.2.8:** Continue to apply the City's 50 percent shade tree ordinance on all mixed-use and non-residential surface parking lots.
- **Policy 4.2.9:** Ensure a long life for the urban forest through proper soil drainage and by limiting the installation of lights, hardscape, and amenities in and around trees.
- **Goal 4.3:** Promote sustainable landscapes, native habitats, and natural hydrological function.

  Intent: Use landscape and hardscape to enhance the character of both the public and private realms, respond to Fresno's climate, improve human comfort, reduce energy costs, facilitate sustainable water use and drainage strategies, and reduce energy costs.

- **Policy 4.3.1:** Introduce pervious surfaces within parks and open spaces to reduce storm water runoff.

- **Policy 4.3.2:** Incentivize property owners to use drought tolerant adaptive and native landscapes to reduce water usage and decrease reliance on fertilizers and pesticides. Possible strategies include:
  - Working with the City of Fresno's Water Division to educate property owners about the cost savings that drought tolerant plants produce;
  - Creating incentives for property owners to replace turf and/or water-hungry landscape with drought-tolerant landscape.
- **Policy 4.3.3:** Provide access to sun and shade in public parks and open spaces by introducing climate attenuation elements such as deciduous canopy trees and trellises.
- **Policy 4.3.4:** Encourage green walls and rooftop landscapes to reduce heat sink islands in the Community Plan Area's office and commercial districts.
- **Policy 4.4.8:** Use parks to protect resources and wildlife, enhance water and air quality, and improve sustainability for new and existing parks. Develop smart irrigation systems using the latest Certus Management Information System (CMIS) data, plan to use reclaimed water systems for parks where and when available, limit turf grass to recreational areas, and offset water needs by using low water plant material in non-recreational areas.
- **Policy 5.3.4:** In order to minimize conflicts between aircraft and wildlife, limit the construction of new retention/recharge basins within 10,000 feet of the Fresno Chandler Executive Airport runways and/or introduce mitigation measures that discourage wildlife from congregating around or inhabiting retention/recharge basins within 10,000 feet of the Fresno Chandler Executive Airport runways.

Compliance with the policies of the Fresno General Plan, as well as with the DNCP goals and policies would help minimize potential impacts to special-status species in the Plan areas. Project-specific site inspections conducted prior to development would also reduce the likelihood of impacts. However, because a potentially significant impact to sensitive-status species within the Plan areas could result from implementation of the DNCP and FCSP, impacts to special-status species are considered to be potentially significant, and implementation of Mitigation Measures BIO-1a through BIO-1d is required.

Cumulative Impact Analysis

Potentially significant impact. The continued urbanization of the Plan areas and vicinity could result in a cumulatively considerable effect on suitable habitat for sensitive species, if development encroaches into undisturbed natural communities. Development within the City of Fresno over a 20-year period primarily focuses on the conversion of agricultural land to development, which will reduce the availability of suitable habitat for sensitive species, including suitable foraging habitat for raptor species. Additionally, agricultural land and open space conversion will also reduce the potential for wildlife movement corridors, due to habitat fragmentation of undeveloped open space areas within the San Joaquin Valley.

The loss of potentially suitable habitat for sensitive species, primarily resulting from the total conversion of agricultural and undeveloped land to development in the region, is considered a cumulatively considerable effect. However, the direct impact to special-status species from development within the Plan areas is not deemed cumulatively considerable, because the majority

of the Plan areas are already urbanized and provide very little marginal habitat for special-status species. Continued development of the Plan areas would not result in a substantial adverse effect on any species identified as a candidate, sensitive, or special-status species with the implementation of mitigation measures BIO-1a through BIO-1d.

Mitigation Measures

The following mitigation measures were included in the MEIR and remain applicable to this project:

Project-specific

MM BIO-1a Construction of a proposed project would avoid, where possible, vegetation communities that provide suitable habitat for a special-status species known to occur within the Plan areas. If construction within potentially suitable habitat must occur, the presence/absence of any special-status plant or wildlife species must be determined prior to construction, to determine if the habitat supports any special-status species. If a special-status species is determined to occupy any portion of a project site, avoidance and minimization measures shall be incorporated into the construction phase of a project to avoid direct or incidental take of a special-status species to the greatest extent feasible. Avoidance and minimization measures include and are not limited to removing vegetation communities to be replanted off-site.

MM BIO-1b Direct or incidental take of any state or federally listed species would be avoided to the greatest extent feasible. If construction of a proposed project will result in the direct or incidental take of a listed species, consultation with the resource agencies and/or additional permitting may be required. Agency consultation through the California Department of Fish and Wildlife Section 2081 and United States Fish and Wildlife Service Section 7 or Section 10 permitting processes must take place prior to any action that may result in the direct or incidental take of a listed species. Specific mitigation measures for direct or incidental impacts to a listed species will be determined on a case-by-case basis through agency consultation.

MM BIO-1c Development within the Plan areas would avoid, where possible, special-status natural communities and vegetation communities that provide suitable habitat for special-status species. If a proposed project will result in the loss of a special-status natural community or suitable habitat for special-status species, compensatory habitat-based mitigation may be required under the California Environmental Quality Act and the California Endangered Species Act. Mitigation will consist of preserving on-site habitat, restoring similar habitat, or purchasing off-site credits from an approved mitigation bank. Compensatory mitigation will be determined through consultation with the City and/or resource agencies. An appropriate mitigation strategy and ratio will be produced by the developer and lead agency to reduce project impacts to special-status natural communities to a less than significant level. Agreed-upon mitigation ratios will depend on the quality of the habitat and presence/absence of a special-status species. The specific mitigation for project level impacts will be determined on a case-by-case basis.

MM BIO-1d Proposed projects within the Plan areas would avoid, if possible, construction within the general nesting season of February through August for avian species protected under Fish and Game Code Section 3500 and the Migratory Bird Treaty Act, if it is determined that suitable nesting habitat occurs on a project site. If construction cannot avoid the nesting season, a pre-construction clearance survey must be conducted to determine if any nesting birds or nesting activity is observed on or within 500 feet of a project site. If an active nest is observed during the survey, a biological monitor must be present on-site to ensure that no proposed project activities would impact the active nest. A suitable buffer will be established around the active nest until the nestlings have fledged and the nest is no longer active. Project activities may continue in the vicinity of the nest only at the discretion of the biological monitor.

Cumulative

Implementation of Mitigation Measures BIO-1a through BIO-1d is required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Riparian Habitat

Impact BIO-2:	**The project would not have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service.**

Project-specific Impact Analysis

Less than significant impact. The Plan areas do not contain riparian habitats or other sensitive natural communities (CDFW 2015a). All drainage facilities within the DNCP and FCSP consist of inlets and underground piping that are part of the City's municipal storm drain system. The DNCP and FCSP would not disrupt any riparian habitats or other sensitive natural community identified in local or regional plans, policies, and regulations or by the CDFW or USFWS. As such, impacts to such habitats are considered to be less than significant.

Cumulative Impact Analysis

Less than significant impact. Implementation of cumulative development within the City of Fresno could result in potential impacts to riparian habitats and other sensitive natural communities. Cumulative development could encroach into areas adjacent to existing rivers and streams that could contain riparian habitat. Future development that occurs in the vicinity of the San Joaquin River or Kings River, their tributaries, any lakes or streams, and/or open grasslands with seasonal wetlands may result in a significant impact to riparian habitat or sensitive natural community. The

presence of riparian habitat and/or a special-status natural community on a project site must be evaluated prior to project approval.

Cumulative impacts to riparian habitat and/or a sensitive natural community resulting from development occurring under the proposed DNCP and FSCP would not be cumulatively considerable because the DNCP and FCSP would not disrupt any riparian habitats or other sensitive natural community. As such, this cumulative impact is considered less than significant.

Mitigation Measures

Project-specific

Mitigation measures are not required.

Cumulative

Mitigation measures are not required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Federally Protected Wetlands

Impact BIO-3:	**The project could have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.**

Project-specific Impact Analysis

Potentially significant impact. Development within the Plan areas, particularly in previously undeveloped areas containing freshwater ponds or lacustrine habitats, could have a substantial adverse effect on federally or state protected wetlands through direct removal, filling, hydrological interruption, or other means. Any project-related impacts that result in the significant alteration or fill of a federally protected wetland is considered a significant impact. Additionally, special-status species associated with wetlands and vernal pool habitats may be impacted as a result of project impacts to protected wetlands. Project-specific agency (such as CDFW, RWQCB, USACE) coordination and/or regulatory permitting would be required to first identify and then avoid, reduce, or minimize project impacts to jurisdictional wetlands. Compliance with General Plan Policies POSS-6-a through POSS-7-d, as listed above in the "Regulatory Setting" section, would reduce potential project impacts to wetland features, but implementation of Mitigation Measures BIO-3a and BIO-3b is also required.

Cumulative Impact Analysis

Potentially significant impact. The development of agricultural, lacustrine, and/or undeveloped/undisturbed areas within the City of Fresno may result in adverse effects on federally or state protected wetland habitats. For example, cumulative development that encroaches into wetland habitat areas or indirectly impacts wetland habitats through the increase of upstream urban runoff could result in significant impacts to protected wetland habitats. While implementation of the DNCP and FCSP could increase impacts on wetland habitats, continued development of the Plan areas would not result in a substantial adverse effect on federally or state protected wetlands with the implementation of Mitigation Measures BIO-3a and BIO-3b.

Mitigation Measures

The following mitigation measures were included in the MEIR and remain applicable to this project:

Project-specific

MM BIO-3a If a proposed project will result in the significant alteration or fill of a federally protected wetland, a formal wetland delineation conducted according to United States Army Corps of Engineers (USACE) accepted methodology is required for each project to determine the extent of wetlands on a project site. The delineation shall be used to determine if federal permitting and mitigation strategy are required to reduce project impacts. Acquisition of permits from USACE for the fill of wetlands and USACE approval of a wetland mitigation plan would ensure a "no net loss" of wetland habitat within the planning area. Appropriate wetland mitigation/creation shall be implemented in a ratio according to the size of the impacted wetland.

MM BIO-3b In addition to regulatory agency permitting, Best Management Practices identified from a list provided by the USACE shall be incorporated into the design and construction phase of the proposed project to ensure that no pollutants or siltation drain into a federally protected wetland. Project design features such as fencing, appropriate drainage, and incorporating detention basins shall help to ensure that project-related impacts to wetland habitat are minimized to the greatest extent feasible.

Cumulative

Implementation of Mitigation Measures BIO-3a and BIO-3b is required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Wildlife Corridors and Nursery Sites

Impact BIO-4: **The project would not interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of wildlife nursery sites.**

Project-specific Impact Analysis

Less than significant impact. While development within the Plan areas could have local effects on the dispersal and movement of some wildlife species, the majority of the channels within the Plan areas are man-made concrete channels with little habitat value, which are not wildlife nursery sites or established wildlife corridors. Planned land use within the DNCP and FCSP areas includes residential, commercial, industrial, and associated infrastructure. Open space areas, undeveloped land, and previously disturbed/agricultural land are sparsely located throughout this predominantly urban area. Because of the fragmentation and relative isolation of these areas, as well as the availability of established wildlife corridors to the west (San Joaquin River) and east (Kings River), development of these areas in association with the DNCP and FCSP would not interfere substantially with native, resident or migratory fish or wildlife species movement or with established migratory corridors. Further, there is the potential impact of wildlife congregating in/around retention/ recharge basins near the Fresno Chandler Airport. The United States Department of Agriculture Wildlife Services (USDA/WS) provides guidance to wildlife biologists in order to help prevent any conflicts between wildlife and aviation. Referencing the Wildlife Services Directive 2.305 would provide clarification to the protection of wildlife. The DNCP also contains a policy related to the protection of this potential wildlife corridor:

- **Policy 5.3.5:** In order to minimize conflicts between aircraft and wildlife, limit the construction of new retention/recharge basins within 10,000 feet of the Fresno Chandler Downtown Airport runways and/or introduce mitigation measures that discourage wildlife from congregating around or inhabiting retention/recharge basins within 10,000 feet of the Fresno Chandler Downtown Airport runways. The potential for Implementation of the DNCP and FCSP would therefore result in less than significant impacts on wildlife movement corridors and nursery sites.

Implementation of Policy 5.3.5, referencing the Wildlife Services Directive 2.305, and the limited likelihood of animal migration in the Plan areas would reduce impacts to wildlife corridors and nursery sites resulting from the implementation of the DNCP, FCSP, and DDC less than significant.

Cumulative Impact Analysis

Less than significant impact. The City of Fresno is characterized by existing disturbed and developed lands surrounded by open areas for wildlife movement, particularly along the San Joaquin River and Kings River corridors, connected open space, and the foothills along the east and west sides of the San Joaquin Valley. Because implementation of the DNCP and FCSP would not interfere with these established corridors and/or nursery sites, the project's potential contribution to this impact is less than cumulatively considerable. Therefore, the DNCP and FCSP's cumulative impacts to potential wildlife movement corridors or wildlife nursery sites are considered to be less than significant.

Mitigation Measures

Project-specific

Mitigation measures are not required.

Cumulative

Mitigation measures are not required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Local Policies or Ordinances Protecting Biological Resources

Impact BIO-5: The project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

Project-specific Impact Analysis

Less than significant impact. Development occurring as infill within the Plan areas may initially result in the removal or alteration of existing street and public trees within the Plan area boundaries, but provisions within the DNCP and FCSP require the addition of trees to the urban landscape. Other DNCP provisions relate to the use of native landscaping and the protection of wildlife. Following are the relevant provisions of the DNCP and FCSP that relate to biological resources:

DNCP Goals and Policies

- **Goal 4.1:** Use landscaping to generate unique and distinct character for each of the Community Plan Area's various neighborhoods, districts, and corridors.
- **Policy 4.1.1:** As resources become available, infill missing street trees according to the unique character of each of the Community Plan Area's neighborhoods, districts, and corridors.
- **Policy 4.1.4:** Use street trees and landscape to define principle gateways into each subarea within the Downtown Neighborhoods.
- **Goal 4.2:** Regenerate the urban forest to promote ecological sustainability, increase human comfort, and reduce energy costs.
- **Policy 4.2.1:** Introduce new and reintroduce missing street trees in the Community Plan Area's neighborhoods, districts, and corridors with the goal of providing a minimum of 50 percent landscape canopy cover (the layer of leaves, branches, and stems that cover the ground when viewed from above) for each street in the Community Plan Area within 15 years. Trees should provide shade, visual identity for residents, and reflect the individual character of each community. Trees planted within the Chandler Airport Overlay area shall be planted in conformance with Federal Aviation Regulations Part 77, particularly in terms of height and potential to attract wildlife. The recommended street trees for the Community Plan Area's neighborhood streets are shown in Figure 4-3 (Neighborhood Street Landscape Character) and described in Table 4.1 (Neighborhood Street Tree Planting List) of the DNCP (see Appendix A).

The recommended street trees for each of the prominent corridors in the Community Plan Area are shown in Figure 4-4 (Corridor Landscape Character) and described in Table 4.2 (Corridor Street Tree Planting List) of the DNCP (see Appendix A).

- **Policy 4.2.2:** Partner with as many private, public, or non-profit groups as possible to support tree planting and maintenance. Consider using portions of community gardens to grow street tree seedlings and saplings until they are large enough to be planted along City streets.
- **Policy 4.2.3:** Require the retention and protection of existing, mature non-agricultural trees within the Downtown Neighborhoods.
- **Policy 4.2.4:** Encourage the use of large shade street trees by implementing broad parkways, structural soils, or other systems to accommodate their root systems.
- **Policy 4.2.5:** Encourage the proper tree selection for the site in response to above ground or underground infrastructure and parkway constraints (such as telephone wires).
- **Policy 4.2.6:** Use a well-balanced variety and uniform spacing of deciduous or evergreen trees to establish visual continuity for streetscapes, to help reduce energy costs of adjacent buildings, and to define unique public or private open spaces.
- **Policy 4.2.7:** Spread the cost of tree planting and maintenance among a variety of entities and funding sources, including special improvement districts, permit fees and surcharges, an optional customer-directed one-year or multi-year maintenance cycle paid by adjacent property owners, Adopt-a-Tree or Adopt-a-Street programs, a community tree and street tree endowment, and/or donations from businesses, utility companies, service clubs, and individuals.
- **Policy 4.2.8:** Continue to apply the City's 50 percent shade tree ordinance on all mixed use and non-residential surface parking lots.
- **Policy 4.2.9:** Ensure a long life for the urban forest through proper soil drainage and by limiting the installation of lights, hardscape, and amenities in and around trees.
- **Goal 4.3:** Promote sustainable landscapes, native habitats, and natural hydrological function.

  Intent: Use landscape and hardscape to enhance the character of both the public and private realms, respond to Fresno's climate, improve human comfort, reduce energy costs, facilitate sustainable water use and drainage strategies, and reduce energy costs.

- **Policy 4.3.1:** Introduce pervious surfaces within parks and open spaces to reduce storm water runoff.
- **Policy 4.3.2:** Incentivize property owners to use drought tolerant adaptive and native landscapes to reduce water usage and decrease reliance on fertilizers and pesticides. Possible strategies include:
  - Working with the City of Fresno's Water Division to educate property owners about the cost savings that drought tolerant plants produce;
  - Creating incentives for property owners to replace turf and/or water-hungry landscape with drought-tolerant landscape.
- **Policy 4.3.3:** Provide access to sun and shade in public parks and open spaces by introducing climate attenuation elements such as deciduous canopy trees and trellises.
- **Policy 4.3.4:** Encourage green walls and rooftop landscapes to reduce heat sink islands in the Community Plan Area's office and commercial districts.
- **Policy 4.4.8:** Use parks to protect resources and wildlife, enhance water and air quality, and improve sustainability for new and existing parks. Develop smart irrigation systems using the

latest Certus Management Information System (CMIS) data, plan to use reclaimed water systems for parks where and when available, limit turf grass to recreational areas, and offset water needs by using low water plant material in nonrecreational areas.

- **Policy 5.3.4:** In order to minimize conflicts between aircraft and wildlife, limit the construction of new retention/recharge basins within 10,000 feet of the Fresno Chandler Executive Airport runways and/or introduce mitigation measures that discourage wildlife from congregating around or inhabiting retention/recharge basins within 10,000 feet of the Fresno Chandler Executive Airport runways.

FCSP Goals and Policies

- **Goal 6-8:** Support new development in Downtown through investment in public infrastructure.
- **Policy 6-8-1:** Prioritize systematic investment in public infrastructure that serves all users (water and sewer lines; new sidewalks, bulbouts, street trees, street furniture, street lights; road diets that introduce bike lanes and on-street parking) as opposed to the current practice of investing in individual private development projects in order to stimulate revitalization.
- **Goal 8-1:** Increase access to and improve the quality of Downtown's existing parks, plazas, and open spaces.
- **Policy 8-1-2:** Add trees or other shading devices to regulate the amount of shade and sunlight.
- **Goal 8-4:** Enhance the Downtown streetscape through the introduction of appropriate street trees.
- **Policy 8-4-1:** Add new and replace missing street trees according to the Street Tree Master Plan.
- **Policy 8-4-2:** Use street trees to emphasize connections to retail, transit centers, and other downtown amenities.
- **Policy 8-4-3:** Evaluate the palette of compatible trees on streets on a regular basis.

Table 4.1, Neighborhood Street Tree Planting List of the DNCP identifies appropriate street trees to be planted in the DNCP's neighborhoods, including the Downtown Neighborhood that encompasses the FCSP (see Appendix A). Table 4.2, Corridor Street Tree Planting List of the DNCP identifies appropriate tree species for improvements to the street corridors in the Community Plan area (see Appendix A). The FCSP describes desired conditions for street trees and enhancements to the urban forest and design parameters involving tree planting throughout the Specific Plan area (see Appendix B). Future development within the Plan areas would be required to comply with the relevant DNCP and/or FCSP policies, as well as the tree provisions within the Fresno General Plan and the Fresno Municipal Code.

It is anticipated that implementation of the DNCP and FCSP will enhance the existing biological resource policies and ordinances governing the Plan areas and contribute to the overall enhancement of the urban forest. Therefore, the project would not conflict with any local policies or ordinances protecting biological resources. This impact is considered less than significant.

Cumulative Impact Analysis

Less than significant impact. Other development projects in the City of Fresno would also be required to comply with local policies and ordinances protecting biological resources. Development within the DNCP and FCSP areas, as well as development in the vicinity of the DNCP and FCSP areas,

would be required to comply with Article 3 of Section 13 of the Fresno Municipal Code and relevant policies from the Fresno General Plan, and development within the DNCP and FCSP would also be required to comply with the DNCP and FCSP policies discussed above, the project would not have a cumulatively considerable impact. Therefore, implementation of the DNCP and FCSP would result in a less than significant cumulative impact that relate to local policies and ordinances protecting biological resources.

Mitigation Measures

Project-specific

Mitigation measures are not required.

Cumulative

Mitigation measures are not required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Conservation Plans

Impact BIO-6:	**The project would not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.**

Project-specific Impact Analysis

No impact. The DNCP and FCSP are not located within the boundaries of any approved or drafted Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP), or other adopted local, regional or state HCP (CDFW 2015c). Therefore, development within the Plan areas will not conflict with the provisions of an adopted HCP or NCCP.

Cumulative Impact Analysis

No impact. Within the San Joaquin Valley, there is currently only one HCP, the Metropolitan Bakersfield Habitat Conservation Plan (MBHCP). Since the City of Fresno is not located within the boundaries of the MBHCP or any other adopted or drafted HCP, development in accordance with the DNCP and FCSP would not contribute to any potential conflicts with an HCP or NCCP. Therefore, the proposed project would not result in cumulative impacts.

Mitigation Measures

Project-specific

Mitigation measures are not required.

Cumulative

Mitigation measures are not required.

Level of Significance After Mitigation

Project-specific

No impact.

Cumulative

No impact.

5.5 - Cultural Resources

5.5.1 - Introduction

Previous Investigations and Reports

This section describes how project development associated with the Downtown Neighborhoods Community Plan (DNCP), the Fulton Corridor Specific Plan (FCSP), and the Downtown Development Code (DDC) may affect historical, cultural, and paleontological resources in the project area. This section also addresses local, state, and federal regulations as they pertain to project impacts on cultural resources. Mitigation measures are prescribed herein to offset potential impacts to a less than significant level.

Information in this section is based on the following sources:

- Downtown Neighborhoods Community Plan. 2016. The complete report is contained in Appendix A.
- Fulton Corridor Specific Plan. 2016. The complete report is contained in Appendix B.
- Downtown Development Code. 2016. The complete code is contained in Appendix C.
- Fresno General Plan and related Master EIR (MEIR 2014)
- Fresno Fulton Corridor Specific Plan and Downtown Neighborhoods Community Plan Project Archaeological Resources Assessment Report, Greenwood and Associates. February 2012.
- Fulton Mall Reconstruction Project Environmental Impact Report, FirstCarbon Solutions, November 2013 (Cultural Resources section findings in Fulton Mall Reconstruction Project EIR based entirely upon Greenwood and Associates, 2012).
- Downtown Fresno (Fulton Corridor) Historic Resources Survey, Historic Resources Group. December 2011.

Terminology for Evaluation of Cultural Resources

For the purposes of this analysis, "cultural resource" is a term used to describe various different types of sites or features including both prehistoric and historical archaeological sites; architectural properties such as buildings, bridges, and infrastructure; and resources of importance to Native Americans. Cultural resources can also be more ephemeral elements of culture that are not so easily categorized, such as landscapes, folklore, oral histories, and traditional vegetation. The term "archaeological resource" can refer to either a prehistoric or a historic element, but is generally used to describe physical objects or features with a tangible presence in the archaeological record.

A "prehistoric resource" is considered any cultural resource that was deposited before Europeans established a Franciscan Mission in California (1769), although it has long been recognized that Europeans plied the coast as early as the mid-16th century and landed on the Coast on several occasions. Buried resources deposited after 1769 are technically considered historical resources. Such resources would also include Native American resources deposited after that date. A "historic

resource" or "historical archaeological as defined in CEQA Guidelines Section 15064.5, may include, but is not limited to, buildings, sites, structures, objects, or districts, that may have historical, prehistoric, architectural, archaeological, cultural, or scientific importance, and is considered eligible for listing, or is already listed, in the California Register of Historical Resources (CRHR). Potential eligibility and/or listing within the CRHR is based on four criteria and is discussed below. Listed resources are protected by all applicable state-level preservation laws and both listed and potentially eligible resources may or may not also be considered a "historic property" under the National Historic Preservation Act (NHPA).

A "historic property" is defined by Section 106 of the NHPA as "any prehistoric or historic district, site, building, structure, or object, included in, or eligible for inclusion on, the National Register of Historic Places (NRHP)." Potential eligibility and/or listing within the NRHP is based on four criteria and is discussed below. Listed resources are protected by all applicable federal-level preservation laws and both listed and potentially eligible resources generally also qualify as a historical resource under CEQA.

5.5.2 - Environmental Setting

The following information is provided in accordance with CEQA Section 15125. The environmental setting discussion provides a baseline discussion of the existing conditions within the DNCP and FCSP areas and the surrounding area.

Study Area for Project Impacts

The study area for project impacts on cultural resources includes the DNCP and FCSP areas. The FCSP Area is completely surrounded by the DNCP plan area. The FCSP covers approximately 655 acres and is generally bounded to the north by Divisadero Street; to the west by State Route (SR-99); to the south by SR-41; and to the east by N Street, O Street, and the alley between M and N Streets. The DNCP plan area is divided by the Union Pacific railroad right-of-way.

The DNCP boundaries embrace those Fresno neighborhoods, districts, and corridors that were laid out prior to the Second World War. Encompassing approximately 7,290 acres, the DNCP is roughly bounded by SR-180 to the north; Chestnut Street to the east; and Marks, West, and Thorne Avenues to the west. Church and Butler Avenues and Kings Canyon Road form the principal southern boundaries. These approximately 7,290 acres of urban land make up most of the City's historic core.

Study Area for Cumulative Impacts

The cumulative impacts analysis is based on a summary of projections approach for applicable projects in the vicinity of the DNCP and FCSP.

Existing Setting

Prior to historical development, the general area of present-day downtown Fresno was known as the "Sinks of Dry Creek," a low-lying semi-arid grassland. The nearest perennial waterway, the San Joaquin River, flows 5 miles to the north of the project limits. Currently, the FCSP/DNCP project area manifests a densely built-up urban environment incorporating a broad spectrum of uses and

neighborhood types, with residential, commercial, municipal/governmental, and industrial development being best represented.

The Fresno area was once covered with native annual and perennial grasses such as needlegrass (*Stipa* spp.), bluegrass (*Poa* spp.), and poverty threeawn (*Aristida divaricata*) commonly found in the Valley Grassland Community (Munz and Keck 1973). Over the past 150 years, farming and ranching activities have severely compromised the natural vegetation of the San Joaquin Valley and introduced species are now dominant. Faunal populations have been impacted by Euro-American settlement as well. Prior to colonization, the valley floor was occupied by diverse resident and migratory mammals, birds, and fish. Historical and modern land use has greatly reduced the size and number of native habitats, and decimated numerous indigenous species.

The natural topography of the project area is generally flat, ranging from approximately 275 feet above mean sea level (amsl) at the southwest boundary of the Downtown Neighborhoods project area along Church Avenue, to 310 feet amsl along the eastern project area boundary at Chestnut Avenue.

Residential development occurs throughout the project area but is concentrated in the eastern and western sections of the Downtown Neighborhoods project area. Single-family residences dominate and, while a number of 19th century dwellings survive, development of the majority of residential structures dates to the era between World War I and the 1950s. Later residential development is more common in the peripheral sections of the DNCP area.

Commercial uses are primarily concentrated within the Fulton Corridor portion of the project area, but commercial strip development extends through the DNCP area along the Ventura Avenue, Blackstone Avenue, and Belmont Avenue corridors, among others. The established Fulton District of Fresno is defined by the City as the area bounded by Inyo Street on the southeast, the Union Pacific railroad tracks on the southwest, Tuolumne Street on the northwest, and N Street on the east. This area is developed with commercial and office functions, and it also takes in the County government offices. The Fulton Mall forms the primary commercial axis within downtown, and Van Ness, Tulare, and Fresno are the principal vehicular commercial streets, incorporating many different types of retail establishments and services.

Industrial development is most heavily concentrated in the south-central and north central sections of the DNCP plan area, particularly in those sections bordering the railroad corridor alignments southeast of SR-41, and north of SR-180, between the railroad corridor and SR-99.

While there are several small parks, playgrounds, and public open spaces scattered throughout the project area, the most significant of these is Roeding Park/Fresno Chaffee Zoo, a 148-acre park located in the northwest section (Jane Addams Neighborhoods planning area) of the DNCP area.

Historic Context and Cultural Setting

Cultural resources include prehistoric-era archaeological sites, historic-era archaeological sites, Native American traditional cultural properties, sites of religious and cultural significance, and historical buildings, structures, objects, and sites. The importance of any single cultural resource is

defined by the context in which it was first created, current public opinion, and modern yet evolving analysis. From the analytical perspective, temporal and geographic considerations help to define the historical context of the plan areas. National Park Service Bulletin 16a describes a historic context as "information about historic trends and properties grouped by an important theme in prehistory or history of a community, state, or the nation during a particular period of time" (NPS 1997). A context links an existing property to important historic trends, which creates a framework for determining the significance of a property. Given this, a major goal of the historian is to determine accurate themes of analysis, a task that can only be undertaken by a thorough review of previous researchers' thoughts and ideas, as well as reviewing the literature of the resources.

In California, historians have divided the past into broad categories based on climate models, archaeological dating, and written histories. Paleontologists divide time into much larger segments, with defined and named periods of time shortening in timespan as the modern era is reached. For the purposes of this analysis, these periods in history have been summarized below.

Prehistoric Era

Numerous archaeological investigations have been conducted in the San Joaquin Valley; some of the most important work has been undertaken in the area of the Buena Vista and Tulare Lakes. These investigations reveal a complex prehistory of cultural groups that occupied this region. Through the study of their artifacts, archaeologists have come to form numerous chronologies that collectively offer a framework for interpreting the prehistory of the San Joaquin Valley.

Early Period (~12000 Before Present [B.P.] to 8000 B.P.)

The material culture of the Early Period is characterized by large, fluted projectile points that imply heavy reliance on large games for subsistence, probably supplemented with smaller game and collected plant foods. Few sites from this period have been discovered, and substantial evidence comes mostly from the former shores of Tulare Lakes, especially at the Witt Site in southern Kings County. Artifacts are represented in the form of Clovis-like projectile points made from chert, similar to other Pleistocene period sites in North America, as well as various scrapers, chipped crescents, and other stone tools associated with the Fluted-Point and/or Western Pluvial Lakes Traditions. Horse, bison, ground sloth, and human bones were also found at the Witt Site, along with the tusk of mammoth or mastodon (Greenwood and Associates 2012). These bones have been radiocarbon-dated to about 11000 to 13000 B.P.

Middle Period (8000 B.P. to 2500 B.P.)

An examination of lithic tools form the Early and Middle Periods shows little difference between the two. Stone tools form the Middle Period, in fact, look very similar to the Western Pluvial Lakes Tradition associated with the Great Basin. However, the Middle Period is associated with an increase of groundstone tools, such as metates and manos, reflecting an increased dependence on vegetative species requiring processing, such as seeds and nuts. Lithic technology, for the most part, remains relatively unchanged (Greenwood and Associates 2012).

Late Period (2500 B.P. to Ethnohistoric Present)

During the Late Period, patterns in material culture experience dramatic change, much of which was observed and recorded, but simultaneously caused, by Europeans during the latter part of the period. The Late Period also marked the increase of diversity in material culture. Both the *Olivella* shell bead and bow-and-arrow technology made their first appearances in the area. People buried their dead in a flex position much more frequently, and burial goods were numerous compared with previous periods. Occupation sites were larger, reflecting semi-sedentism, and there were great reliance on groundstone, particularly mortars and pestles, indicative of increased dependence on nuts, seeds, and acorns. Mortars and pestles during this period were much more finely produced compared with the Middle Period. Objects such as bird-bone whistles, steatite pipes, very small serrated projectile points, obsidian from eastern California, and rectangular *Olivella* beads appeared for the first time (Greenwood and Associates 2012).

Assessing the region's prehistoric settlement patterns has been problematic, since most of the excavations done in the San Joaquin Valley have been restricted to later-period Yokut burial sites. Larger-scale projects have been limited to Buena Vista Lake and San Luis, Los Banos, and Little Panoche reservoirs. Wallace has stated that this area "remains one of the least-known archaeological areas in California" (Greenwood and Associates 2012). Nonetheless, evidence points to the likelihoods that most occupations were on or near now-extinct lake shorelines to maintain resources, with interruption related to dry climatic intervals, particularly A.D. 1000 to A.D. 1500. After A.D. 1500, most populations settled in the southern and western parts of the San Joaquin Valley (Greenwood and Associates 2012).

Ethnographic Overview

Fresno is located in the San Joaquin Valley on land once inhabited by the Northern Valley Yokuts, very near their terrestrial boundary with the Southern Valley Yokuts. They occupied an area that extended to the Sacramento River Delta on the north, the crest of the Diablo Range to the west, and the lower foothills of the Sierra Nevada to the east. Their disappearance was brought about by disease and dislocation that were due to aggressive missionization during the later 1700s and early 1800s, the Gold Rush of the 1840s and 1850s, and American expansion thereafter. The little that is known of them today is based mostly on the accounts of non-Native explorers and missionaries (Greenwood and Associates 2012).

The Northern Valley Yokuts subsisted primarily on resources present along the San Joaquin River and its associated channels. The vegetation was sparse in the valley, aside from marsh grass and tules, and trees were limited to small patches of sycamores, cottonwoods, and willows. Tule roots and seeds found throughout the valley served as important food staples. In addition, valley oaks could be found in groves in areas of great water abundance and nutrient-rich soil. Acorns from these oaks formed an important dietary staple; they were ground into a powder using a mortar and pestle and subsequently leached of toxins in waterways. The leftover resulting paste was then cooked and consumed. Fauna was abundant in the riverine areas, and fish, freshwater molluscs, turtles, and waterfowl were important food sources. Tule elk, pronghorn antelope, jackrabbit, squirrels, reptiles, and a variety of birds were also consumed (Greenwood and Associates 2012).

The Northern Valley Yokuts lived in semi-autonomous patrilineal villages that were led by a headman and typically averaged around 300 persons. They spoke various dialects of the Penutian language stock. The Yokuts' dwellings were small, round structures formed of light wooden poles covered with woven tule mats. Villages often included a lodge for community functions, as well as a sweathouse. The local village economy involved the production of baskets and mats made of tule stalks; stone mortars and pestles; projectile points and stone tools made from local chert, jasper, chalcedony, and imported obsidian; and bone tools such as the awl. Ceramic production was likely not emphasized and secondary to other goods (Greenwood and Associates 2012).

Trade was active with neighboring groups, as the Northern Valley Yokuts transported goods on watercraft made of tule along the San Joaquin River and its tributaries. Overland trails to the territory of the Salinan and Costanoan tribes on the Central California coast were also maintained. Domesticated dogs were given to the Miwok in exchanged for baskets, bows, and arrows, and the Costanoans supplied the Yokuts with mussels and abalone shells (Greenwood and Associates 2012).

The population of the Northern Valley Yokuts dramatically declined after European contact. Contact with Spanish explorers and missionaries during the Spanish-Mexican period (1769–1846) brought on disease, erosion of traditional native culture, and displacement of natives from their lands. Remaining populations were eventually incorporated in the Mission system, which further continued the devastation of the native cultures. Some Yokuts escaped the mission system and became fugitives at risk of being captured or killed. Even with the transfer of land from Spain following Mexican Independence in 1822, native populations were pushed into marginal parts of the land, and food becomes scarce. Relationships between native groups and encroaching ranchers became even more strained as natives began stealing livestock and horses in desperation. The incorporation of California as a state in 1846 and the California Gold Rush of 1849 only hastened the decline of Native American culture. The remaining Yokuts were pushed from their lands, usually in the face of violent opposition from white settlers, who eventually took some of the Indians for laborers on ranches and farms. By the time the United States government set aside land in the Fresno and Tule River Reserve, the Yokuts and other native peoples had nearly disappeared. Few descendants of Northern Valley Yokuts survive today (Greenwood and Associates 2012).

Historic Era

The 19th century opened with a wave of exploration into the San Joaquin Valley that eventually led to the settlement of Fresno County. Members of an 1806 expedition led by Spanish explorer Lieutenant Gabriel Moraga were perhaps the first Europeans to pass through present-day Fresno County. Between 1806 and 1813, Moraga guided several additional expeditions during which he discovered and named the County's two major waterway, the San Joaquin and Kings Rivers. However, Moraga's search for potential new mission sites ultimately proved fruitless and the region remained well beyond the administrative reach of the established missions. Others soon followed Moraga, including the explorer and mountain man Jedediah Strong Smith, who in 1826 was the first American to arrive in California overland; Peter Skene Ogden, leader of Hudson Bay Company trapping operations in California; and John C. Fremont, who led an 1845 expeditionary force through what would become Fresno County (Greenwood and Associates 2012).

Despite these early forays, the valley's inhospitable environment deterred permanent settlement. With the onset of the Mexican War in 1846, Central California came under the control of the United States. However, it was not until the discovery of gold in California that miners and other settlers were ultimately drawn to the region in search of riches. In the early 1850s, minor quantities of gold were discovered along the San Joaquin and Kings Rivers and their tributaries in the Sierra foothills and the resulting gold camps and mining districts became part of the southernmost Mother Lode gold region. The County's first substantial settlements rose in the foothills; foremost among them was Millerton. When Fresno County was created from portions of Mariposa, Merced, and Tulare counties in 1856, Millerton served as the first governmental seat. It remained the county seat until 1874 when it was moved to the rising, and more centrally located, City of Fresno (Greenwood and Associates 2012). By the early 1850s, many miners had begun to explore the possibility of farming as a livelihood. In the 1850s through the early 1870s, cattle and sheep grazing and dry-farming of grains, along with mining, represented the major economic activities of Fresno County (Greenwood and Associates 2012).

The low-lying area now occupied by downtown Fresno was once known as the "Sinks of Dry Creek." Near the Sinks of Dry Creek, rancher Anthony Easterby purchased 5,000 acres of land bounded by what are now Chestnut, Belmont, Clovis, and California Avenues in 1867. Easterby and neighboring rancher, Moses J. Church, were convinced that with irrigation, the parched soil of Fresno County was fertile enough to support crops. They conceived an irrigation system that would convey water from the Sierras to the Fresno plain. In 1871, Easterby hired Church to complete the County's first canals, known as "Church's Ditches." Easterby's bountiful crop of wheat that year laid to rest most doubts about the County's agricultural potential (Greenwood and Associates 2012).

Cognizant of Easterby's success and recognizing the area's potential for commercial agriculture, the Central Pacific Railroad selected a site west of the Easterby ranch for a depot location as it charted the path of its new "Southern Pacific" rail line through the San Joaquin Valley in 1871. The line would become the first to connect northern and southern California. The Contract and Finance Company, real estate arm of the Central Pacific, soon acquired 4,480 acres around the depot site with the intention of developing an agricultural center. A street grid oriented parallel to the northwest-southeast running tracks was platted and land donated for the new community's courthouse (Greenwood and Associates 2012). The name for the depot and new town was Fresno. "Fresno" is derived from the Spanish word for ash tree. Numerous regional features were so named by early Spanish explorers who found many such trees growing along the waterways in the otherwise desolate region (Greenwood and Associates 2012).

Early Development of Fresno

Fresno, or "Fresno Station" as it was first known, began to rise even before the Central Pacific's tracks had been laid. The town site was surveyed and divided into "302- by 400-foot blocks, with 25-by 150-foot lots and twenty-foot alleys" (Greenwood and Associates 2012). The rail alignment bisected the street grid and Silvia Avenue (present-day Divisadero Street) formed the northern boundary. The Court House and Civic Center were centrally located and took up four city blocks. The streets running northwest to southeast were given letter names, while the southwest to northeast running avenues were named for California counties. The asking price of individual lots

ranged from $60 to $250 depending on their proximity to the civic center and the railroad tracks. Due in part to the new town's isolated location in a desert region of the San Joaquin Valley, there were few buyers initially. The railroad resorted to allowing the first new settlers to take up residence on selected land and pay later if they decided to remain on it. The incentive proved effective; the town grew and land values rose quickly.

Historian W. W. Elliott noted that Fresno's first settler was A. J. Massen who, being an enterprising individual and observing the growing demand for water, erected the first "public water works"—a well and a watering trough in front of his dwelling (Greenwood and Associates 2012). Following Massen's lead, Schultz and Roemen opened a saloon; the Larquier Brothers established the French Hotel; Russell Fleming began a livery stable; and in August 1872, the town's first post office was established. In the spring of 1872, the railroad tracks to Fresno were completed, connecting it with the outside world. By 1874, the town boasted 55 buildings, including "four general stores, two fruit stores, one drugstore, three hotels, two restaurants, six saloons, two law offices, two physicians, one tinsmith, one saddle shop, two butcher shops, three blacksmiths, one tailor, the Expositor (newspaper), and twenty-five private residences" (Greenwood and Associates 2012). In 1875, the first brick building in town was constructed on Mariposa Street by Otto Froelich (Greenwood and Associates 2012).

The first commercial district emerged along Front Street (present day H Street) and the railroad tracks at the heart of the area that is now referred to as the Central Area or Fulton District. The original train station was located on H Street at Tulare. It was replaced in 1889 with a larger station located on the same site. Largely because of its position on the new railroad line, Fresno quickly grew in population and stature. County residents called for a change in the county seat from Millerton to Fresno, and this was accomplished with a special election on March 23, 1874.

In 1873, Fresno's prospects were further elevated when horticulturalist Francis T. Eisen discovered that Fresno's soil was ideally suited to viticulture. In 1875, he produced the area's first wine and in 1877 processed the first Fresno raisins. As a result of his experiments, the County would become world renowned for its Muscatel, Angelica, Tokay, Claret, Riesling and Sauterne grapes and raisins. Peaches, nectarines, apricots, figs, and almonds also thrived and the City of Fresno eventually grew to become the San Joaquin Valley's leading agricultural center. While the City's position on the railroad was a key factor in this achievement, the reaping of significant profits from vineyard and orchard cultivation was intrinsically linked to the ability to bring water to the Fresno Plains. In this regard, the agricultural colony system would play a major role (Greenwood and Associates 2012).

By the early 1870s, when farming was gaining importance in the region, speculators viewed the Fresno Plains as an untapped source of potential profits and began to devise a systematic approach to marketing vast acres of what was essentially barren and arid land. In 1875, the Central California Colony was created south of Fresno, establishing the paradigm for a system of development that was used throughout the San Joaquin Valley. Investors purchased large tracts of land cheaply, which they then subdivided into 20- to 40-acre parcels and marketed to small-scale farmers. To enhance the appeal of their offerings, the stakeholders typically built irrigation canal systems and roads—often attractively landscaped with rows of palms, eucalyptus, or other trees—which improved the colony's appearance while also aiding agricultural production and shipping. Although the first colonies were

established in 1875 and 1878, the major period of colonization in Fresno County was the 1880s. The colonies ranged from undertakings that were communal in nature, ideological and altruistic, to pure business arrangements. Advertisements and marketing pamphlets made their way around the world and farmers and their families drawn from Scandinavia, other parts of Europe, Asia, and from/across the United States contributed to Fresno's steady rise. By 1903, there were 48 separate agricultural colonies in Fresno County (Greenwood and Associates 2012).

Late 19th Century Growth

The agricultural richness of the surrounding region fueled Fresno's growth and importance as a shipping hub. Incorporated as a city in 1885, Fresno experienced rapid expansion of its urban core during the last two decades of the 19th century. From 1880 to 1885, the population more than tripled from 1,112 to 3,464 inhabitants, and by 1900 it had bounded to 12,470. Lands surrounding the original town site boundaries were quickly snapped up by speculators and subdivided as a result (Greenwood and Associates 2012).

The first major expansion of Fresno's street grid occurred in 1880, when the Villa Homestead Tract was added to the northeast of the original town site. This addition and all subsequent ones were laid out aligned with the cardinal directions rather than oriented to the Central Pacific's tracks, resulting in the many oddly shaped parcels and skewed intersections that today demark the boundaries of the City's historic core. Subdivisions within what is now the Fulton-Lowell subarea developed beginning in 1884. Chief among the next waves of development were North Park, and West Fresno. In 1910, the Alta Vista Tract, bounded by Balch, Cedar, and Platt Avenues, and First Street was added east of the downtown (Greenwood and Associates 2012).

Fresno has a history of strong immigrant communities. Many of the immigrants that were first attracted to Fresno were ethnic minorities, who settled over time in neighborhoods such as Chinatown, Armenian Town, Germantown, and Italian Town.

Underlying every incentive for immigration was the remarkable agricultural development of the plains, which, once stimulated by the colony settlements, attracted even more people from abroad. In 1878, the Scandinavian Colony was established several miles northeast of Fresno city. Its settlers were mostly Danish, but also included Swedes and Norwegians, lured by a well-organized international marketing campaign that emphasized Fresno's farming opportunities. Evidence suggests that many of the Scandinavians, after adjusting to their new homeland in an established colony branched out to start settlements elsewhere. The Whites Bridge Road area of West Fresno was one of the places in which numerous Danes settled in the 1880s and 1890s, as underscored by the names in the area such as Teilman Ditch and Nielsen Avenue. There, they planted land in vines and trees and successfully harvested raisins, vegetables and berries (Greenwood and Associates 2012).

Sanborn insurance maps recorded land use in Fresno from the beginning of 1885. The earliest maps depict scattered development throughout an approximately six-block radius of the Southern Pacific Railroad depot, which was located along H Street between Mariposa and Tulare Streets. Mariposa Street had emerged as the principal commercial thoroughfare, and the 1885 maps illustrate fully built out blocks of brick and wood frame row buildings housing shops, lodging houses, banks, offices,

restaurants, and saloons beginning at H Street near the train depot and extending to the northeastward for three full blocks to K Street (Van Ness). Additional commercial row development along H Street faced the train station. Residential development in early Fresno was concentrated in the area between Mariposa and Merced Streets, and between Tulare and Inyo Streets to the southeast.

As might be expected, the town's early industry was predominantly oriented to agriculture. Among the more prominent enterprises were Moses Church's Champion Flour Mill at the corner of N and Fresno Streets; J.W. Williams and B.L. Smith's wagon shop near the corner of K and Fresno Streets; Kutner & Goldstein's Grain & Agricultural Implements Warehouse and M.J. Donohoo's Lumber Yard, both situated along the railroad tracks; the Fresno Fruit Packing Company at the corner of G and Mono Streets; and the Fresno Agricultural Works at the corner of L and Tulare Streets. A 12-foot-wide irrigation canal ran through the center of town along Fresno Street.

Fresno's historic "Chinatown" was also well established by 1885, located immediately southwest of the Southern Pacific tracks. By the 1890s, there was a substantial Japanese population in this area as well.

Fresno's economy was flourishing in 1887 and real estate transactions during that year reflected the impact of the statewide boom of the late 1880s. During the month of April alone, the County Recorder reported 375 deed transactions totaling in excess of one million dollars. Relatively inexpensive land prices continued to draw new settlers to the area and played a role in the ongoing economic prosperity. The last 70 original Central Pacific town site holdings were purchased by Jefferson Guy Rhodes in August 1887, and by November over 1,100 deeds had been filed with the Fresno County Recorder. Land sales began to move beyond the city limits, especially to the north and east, and there was expansion of both the residential and commercial areas of the City (Vandor 1919: 359-366).

By 1888, additional residential development had occurred north of Merced Street along Tuolumne, Stanislaus, Calaveras, and H, I, J, and K Streets. At that time, dwellings had also gone up along Tulare, Kern, Inyo, Mono, and Ventura Streets, and H, I, J, K, L, M, and N Streets, east of Mariposa Street. Between 1887 and 1890, the Fresno Water Company integrated and substantially expanded the town's loose patchwork of water supply infrastructure, building Fresno's first pumping station and water tower, and laying out 4-inch wrought iron water mains. Some of these original "permanent pipes" are still in use (Greenwood and Associates 2012).

The community's growth and prosperity persisted through the end of the decade and commercial building within the business district went on unabated. In 1889, there was nearly one million dollars' worth of new construction along Mariposa Street alone. The Fresno Morning Republican noted that it was hard for any business to fail during this period (Greenwood and Associates 2012). By 1890, the city population was estimated at just under 11,000 (Greenwood and Associates 2012). As the downtown area filled out during the late 1880s, both commercial and residential buildings could be found along K Street (later Van Ness), between Tulare and Inyo streets. More outlying residential areas, such as those along O Street, were still in relatively rural settings. With land within the city limits bringing premium prices, the City began to annex additional property for commercial

and residential development. In 1887, the City annexed the first addition, the Woodward Addition, which was located at the southern end of the community; however, the greatest growth during this period was directed to the north and west of the city limits. Higher land prices and the demand for new housing brought numerous land speculators and established farm owners alike to subdivide their land in the outlying areas into housing tracts (Greenwood and Associates 2012).

The Lowell neighborhood developed north of Divisadero Street during Fresno's rapid growth period, from the mid-1880s through 1910. Demographically, the area was unique in that upper, middle, and working class families all resided within it. Working class enclaves developed bordering the more affluent areas of the Lowell neighborhood. Contrary to the social and economic segregation typical of many parts of the country, Fresno saw affluent families residing only one street away from working class enclaves (Greenwood and Associates 2012).

The land in the western portion of the study area, west of the original town site of Fresno began to be developed in the 1880s. The Western Addition of Fresno was subdivided in February 1882. The Western Addition included lands extending from Belmont Avenue on the north to Whites Bridge Road on the south, and west from Tehama Street to Thorne Avenue. In 1888, the West Fresno Addition was annexed, and in the ensuing years, more tracts were developed, marketed, and eventually annexed to the City of Fresno (Greenwood and Associates 2012).

When the dry white wine produced from the area's vineyards proved less than satisfactory, the grapes were cultivated for raisins, which were naturally produced by the continuous sunlight in the valley. Following an unusually large yield of more than one million pounds of raisins that drove the price down to 2 cents a pound in 1894, the Raisin Growers Association was organized in 1898 to protect the industry. In 1886, Frank Roeding and his son began growing figs in the area, spawning another successful industry.

By 1900, the population of Fresno had reached 12,470 people, and the City drafted its first charter. During the following decade agriculture continued to flourish, with cotton growing and sweet wine production emerging as new industries. Fresno became the residential and commercial center of an increasingly prosperous region. With the expansion of manufacturing along with agriculture, Fresno was by the end of World War II a major metropolitan area (Greenwood and Associates 2012).

Key to Fresno's further outward expansion was the introduction of streetcar and trolley lines that carried passengers to different parts of the City and attracted business to the area. In 1889, the Fresno Street Railroad franchise first introduced service. Other franchises followed, carrying passengers in horse- and mule-drawn, mostly antiquated, second-hand trolley cars from San Francisco.

In 1903, the Fresno Traction Company introduced Fresno's first electric streetcar line, and in 1909 the City's first double track line was installed on J Street (now Fulton Street). The Fresno Traction Company operated an interurban line north of Fresno to the new State Normal School and beyond to the banks of the San Joaquin River by 1915. Promotional material produced in 1909 by the Fresno County Chamber of Commerce advertised Fresno as the largest city in Fresno County with a

population of 30,000 and one of the most important cities in the State (Greenwood and Associates 2012).

During the peak years of streetcar travel—between 1902 and 1929—trolleys and street cars carried tens of thousands of riders along almost 200 miles of track. By the end of the 1920s, automobiles began to compete with trolleys for space and ridership. Accordingly, streetcar revenues fell as more and more people chose to drive. In 1939, streetcar service ended as the last two lines were abandoned and National City Lines took over the trolley routes and switched their service to buses. Fresno continued to expand rapidly after the turn of the century, and between 1913 and 1929, 11 high-rise buildings rose to create a distinct Fresno skyline. The pace of downtown growth slowed during the Great Depression, although several notable Public Works Administration (PWA) buildings and some housing was built (Greenwood and Associates 2012).

In the eastern reaches of Fresno, early development was concentrated in the vicinity of the Fresno County Fairgrounds, particularly north of Ventura Avenue. There were fully built-out residential tracts in that area, extending as far east as Chestnut Avenue, by the early 1920s.

Roeding Park, in the northwest portion of the DNCP area, came into being with the donation of 118 acres of land to the City by German immigrant, farmer, and nurseryman Frederick Roeding and his wife Marianne between 1903 and 1908. An adjoining 40 acres, the present location of the zoo, was acquired by the City in 1924.

Fresno Chaffee Zoo began casually as a collection of unwanted pets and other animals around 1908. It received accreditation as the Roeding Park Zoo in 1929 and continued to expand through the 1970s.

SR-99, the main north-south route through Fresno and the San Joaquin Valley, had its origins as Route 4 in the 1910s. Built to accommodate the growing number of automobiles, it was among the state's first paved overland routes. It was officially designated US Highway 99 in 1926 and acquired the title "Golden State Highway" in 1927. The early highway followed the present alignment of Golden State Boulevard northwest of the downtown, and prior to World War II, its path north of Roeding Park emerged as an early "motel row," lined with motor courts and tourist camps.

Following World War II, the passage of the G.I. Bill enabled returning veterans to purchase homes and establish businesses, prompting another period of rapid expansion. The Mayfair subdivision, completed in 1947 northeast of the Project Area, included Fresno's first suburban shopping mall and ushered in an era of development at the suburban fringe. Between 1940 and 1950, the City's population grew by 30,000, with much of the growth accommodated in new auto-oriented suburbs. The city government attempted to remedy the decline of the Downtown in the 1960 General Plan.

To implement the General Plan goals, Victor Gruen was commissioned to generate an Urban Renewal Plan for the revitalization of Downtown. The centerpiece of the Gruen Plan was the Fulton Pedestrian Mall, completed in 1964. Six blocks on Fulton Street and three cross-streets were closed to automobile traffic and transformed into wide walkways with public art, fountains, street trees, and seating areas. Meanwhile, in 1957, the California Department of Highways proposed

construction of State Route 99 (SR-99), SR-41, and SR-180 to form a freeway loop around downtown, redirecting traffic around the City's core rather than into it. The construction of the freeway loop system ultimately had a devastating impact on Downtown Fresno and its surrounding neighborhoods. Formerly unified neighborhoods were cut in two by freeways without surface crossings. Facilitated by the freeways, the City continued to stretch onto inexpensive land to the north and east, aiding the flight of people and businesses away from the center of the City. By 2009, Fresno had reached a population exceeding 480,000 in an area of 105 square miles (Greenwood and Associates 2012).

Existing Historic Resources

Downtown Fresno and its immediately surrounding neighborhoods contain some of the City's oldest and most historically significant areas, and has been the subject of numerous previous surveys and studies. These earlier efforts have identified both individual historic resources and several historic districts, and include resources found eligible for the National Register of Historic Places (NRHP) and the CRHR. Many resources have also been designated as local historic resources by the City of Fresno. The FCSP plan area encompasses the oldest portion of the City and contains over 110 of the City's designated historic resources, representing a wide range of property types and periods of development (Greenwood and Associates 2012).

The historic resources in the plan areas are discussed in this section first by DNCP subareas, of which the FCSP plan area is a part, then in terms of several important historic themes that influenced the physical development of Downtown Fresno since 1872. These themes provide a way of evaluating important resources by highlighting shared history, important property types, and common development patterns.

DNCP Subareas

Jane Addams Neighborhoods

The Jane Addams neighborhoods contain Roeding Park, which is a public park that houses the Fresno Chaffee Zoo. Roeding Park dates back to the first decade of the 20th century and was determined eligible for listing on the NRHP as a historic district and possesses many characteristics of a historic cultural landscape. Other than Roeding Park, the Jane Addams Neighborhoods contain few previously identified historic or potentially historic properties (DNCP 2015).

Edison Neighborhood

The Edison Neighborhoods area contains some previously identified historic and potentially historic properties including one of Fresno's designated historic districts. Important historic properties include:

a. **Chandler Field/Fresno Municipal Airport.** The Chandler Field/Fresno Municipal Airport Historic District is located approximately 2 miles west of Downtown Fresno, along the north side of historic Kearney Boulevard. The Works Progress Administration (WPA)-era buildings are clustered in a campus setting that includes landscaping, several Beaux Arts-style lampposts, and surface parking.

b. Kearney Boulevard. This tree-lined boulevard with a Deco/Moderne gateway has been determined eligible for the National Register of Historic Places. Kearney Boulevard was originally developed as part of M. Theo Kearney's "Chateau Fresno" property, located outside the Community Plan Area, which was never completed (DNCP 2016).

Lowell Neighborhood

The Lowell Neighborhood is one of the oldest residential neighborhoods in Fresno, and is the most intact and cohesive early neighborhood within the Community Plan area. It contains significant concentrations of late-19th and early 20th century homes. Over 40 of the City's designated historic properties are located there; many other neighborhood properties (both individual properties and historic districts) have been previously identified through survey or environmental review.

In 2008, a portion of the Lowell area west of N. Park Avenue was surveyed by Galvin Preservation Associates (GPA). GPA identified three areas as potential historic districts. The GPA Survey identified several individual buildings as potential historic resources. Historic Surveys are the starting point in making a determination as to the eligibility of a particular building for listing on a national, state, or local historic register. Prior to making a final determination regarding eligibility, additional intensive research must be performed.

The 2008 GPA survey identified three areas as potentially eligible for designation on the local historic register as Historic Districts, one of which was also found eligible for the NRHP. These are as follows:

a. Yosemite Avenue Worker's Cottage Historic District. Identified as eligible for local designation, the potential Yosemite Avenue Worker's Cottage Historic District contains excellent examples of turn-of-the-century worker's cottages constructed between 1898 and 1906, with one property constructed in 1915. This potentially eligible local historic district is located on the 100 block of N. Yosemite Avenue and includes 14 contributing properties on the west and east side of the block, just south of Nevada Avenue.

b. Lower Van Ness Historic District. Identified as eligible for local designation, the potential Lower Van Ness Historic District contains a collection of residential properties constructed between 1898 and 1919 in the Neo-classical cottage, Queen Anne, and Craftsman styles. This potentially eligible local historic district is located on the 100 block of N. Van Ness Avenue and includes 21 contributing properties and 2 non-contributing properties. The district boundaries include the east and west sides of the 100 block of N. Van Ness Avenue between Nevada Avenue to the north and Voorman Avenue to the south.

c. North Park Historic District. This large collection of early 20th-century and Craftsman homes constructed between 1902 and 1919 was found eligible for the National Register as a potential historic district. The potential district is bounded by State Route 180 to the north, the west facing side of Yosemite Avenue to the west, the east facing side of N. Van Ness Avenue to the east, and Nevada Avenue to the south. The district boundaries include approximately 66 parcels, with 49 contributing buildings, nine non-contributing buildings, and eight vacant lots (DNCP 2016).

It should be made clear that reference to the survey does not indicate the City is adopting the survey under the City's Historic Preservation Ordinance for inclusion in the State Historic Resources Survey Inventory as described in Public Resources Code, section 5024.1 (g).

Jefferson Neighborhood

Several properties in Jefferson have been designated by the City as historic resources. The neighborhood also contains two previously identified potential historic districts.

The Jefferson area contains over 20 previously identified properties and two potential historic districts. Thirteen properties have been designated by the City as historic resources. In addition to the properties that have been identified as individually significant, the Jefferson neighborhood was also surveyed in 1994 as part of the Ratkovich Plan, which identified two potential historic districts:

a. **Bellevue Bungalow District.** This potential historic district consists of 15 Craftsman style residences on Howard Avenue and Thesta Street south of Belmont Avenue, dating from 1920 to 1922. The potential district was identified in 1994. Therefore, the evaluation can no longer be considered current as conditions have most likely changed and survey methodology and evaluation criteria have evolved considerably over the past 22 years. For these reasons, the potential Bellevue Bungalow District needs to be re-evaluated.

b. **East Madison District.** Located on Madison between Fresno and Angus streets, the potential East Madison Historic District contains Craftsman style homes developed between 1910 and the early 1920s. Like the Bellevue Bungalow District, East Madison was identified in 1994 and needs to be re-evaluated to acknowledge any condition changes and incorporate more recent survey methodology and evaluation criteria (DNCP 2015).

Once again, it should be noted that reference to the Ratkovich Plan does not indicate the City is adopting the plan under the City's Historic Preservation Ordinance for inclusion in the State Historic Resources Survey Inventory as described in Public Resources Code, section 5024.1 (g).

Southeast Neighborhoods

The Southeast Neighborhoods contain a considerable grouping of industrial properties in the southwestern portion of the planning area near the railroad and SR-41. Several of these properties represent Fresno's early industrial history and have been designated as historic properties by the City.

Historic integrity throughout the Southeast area is somewhat fragmented, due to alterations and large areas that have been more recently developed. Several neighborhoods have retained their original character from the early 20th century, including the trees and landscape features that remain from their initial periods of development. While these neighborhoods may not meet criteria for designated historic districts, they deserve special planning consideration to protect historic elements and to guide infill.

The Southeast Neighborhoods contain over 30 previously identified potentially historic properties; 26 properties have been designated by the City as historic resources, including a high school and a

collection of industrial buildings and outstanding residential properties. The area includes one designated historic district:

- **Huntington Boulevard Historic District.** The Fresno City Council designated the Huntington Boulevard Historic District, with 80 contributing properties, on May 21, 2015. It consists of early 20th Century residential properties located on Huntington Boulevard from First Street on the west to Cedar Avenue on the east.

South Van Ness

South Van Ness contains a considerable grouping of industrial properties, several of which represent Fresno's early industrial history. Several of these have been designated as historic properties by the City of Fresno (DNCP 2015). The majority of such structures are pre-World War II brick warehouses, many of which have been adaptively reused as commercial, retail, residential, and mixed-use properties. In many places within South Van Ness, more recent industrial mega-blocks interrupt the late 19th century street network and the area is lacking in street trees and other original landscaping.

Special Property Types

In addition to the planning areas described above, the DNCP discusses special property types with regard to the City's development history. Several property types have been identified as potentially historically significant to Fresno's development history and can be found in several areas of the City. The four different property types are described below.

a. **Bungalow Courts/Courtyard Housing.** Bungalow courts and courtyard housing are identified as an important residential type in Fresno. In 2004, 127 courts were identified through a citywide reconnaissance level survey.

b. **Garden Offices Complexes.** Regional office park design of the post-World War period incorporated a series of low-rise, office buildings connected by open-air gardens and atriums. Architects Robert Stevens and Gene Zellmer are notable pioneers of this building type, and often used Hans Sumpf stabilized adobe bricks in construction.

c. **Early Housing and Associated Structures.** Early folk/vernacular housing types including Shotgun Houses and Hall & Parlor Houses are increasingly rare in Fresno. Ancillary buildings such as Carriage Houses and the summer kitchens of the Volga German community should also be treated with special attention.

d. **Sites, Structures, and Objects.** Within the City, properties other than buildings may also be historically significant, including signs, lampposts, street furniture, fountains, statues, public art, and infrastructure such as bridges and canals (DNCP 2015).

Historic Themes

The historic themes discussed below include railroad development, early residential development, ethnic communities, Late-19th and Early 20th Century Commercial Development (1872–1945), Late-19th and Early 20th Century Civic and Institutional Development (1872–1930), Industrial, Depression Era Civic and Institutional Development**,** Mid-20th Century Civic and Institutional Development

(1945–1970), and Mid-20th Century Commercial Development (1945–1970) (Greenwood and Associates 2012).

Railroad Development

Railroad properties that have been designated by the City as historic resources include the Southern Pacific Depot (1889) at 1713 Tulare Street, the Santa Fe Depot (1899) at 2650 Tulare Street, and the Southern Pacific Lines Pullman Shed (1917) at 1713 Tulare Street.

Early Residential Development

Outstanding examples of Fresno's early residential properties are within the St. John's Cathedral District and the northern portions of the Cultural-Arts District. The majority of these have been previously identified as potential individual resources or as contributors to a potential historic district. Many have been designated as local historic resources. Residential properties also exist in and around Chinatown; many of these are of poor integrity because of alteration or extreme disrepair. Outside of the areas mentioned above, only isolated examples of Fresno's early residential neighborhoods remain.

Over 30 single-family residential properties located in the Downtown area have been designated by the City as historic resources. Examples include the Vartanian Home (1891) at 362 F Street; the Kutner Home (1901) at 1651 L Street; and the Van Valkenburg Home (1903) at 1125 T Street. Multiple-family residential properties that have been designated by the City as historic resources include the Maubridge Apartment Building (1911) at 2344 Tulare Street.

Ethnic Communities

Historic ethnic neighborhoods within or overlapping the Plan Area include Chinatown, located between SR-99 and the railroad along F Street; Fresno's historic Germantown roughly bounded by California Street, Ventura Street, and G Street; the historic Armenian Town located in the southeastern portion of the Plan Area; and the historic Italian community, located southwest of Downtown, spanning the Plan Area and further southwest beyond SR-99.

Properties with important ethnic community associations that have been designated by the City as historic resources include the Bing Kong Tong Association Building (1900) at 921 China Alley; the Holy Trinity Armenian Apostolic Church (1914) at 2226 Ventura Street; and the First Mexican Baptist Church (1924) at 1061 Kern Street.

Late-19th and Early 20th Century Commercial Development (1872–1945)

The majority of the large and architecturally distinguished buildings have been designated on the Local Register of Historic Resources, and several are listed on the CRHR and NRHP. Early commercial properties that have been designated by the City as historic resources include the Bank of Italy (1917) at 1001 Fulton Mall; the Rustigian Building (1919) at 701 Fulton Street; and the Radin-Kamp Department Store (1924) at 959 Fulton Mall.

Late-19th and Early 20th Century Civic and Institutional Development (1872–1930)

Important early civic buildings such as the first County Courthouse (1874), the first City Hall (1907), and the Carnegie Library (1904) no longer exist. Early civic and institutional properties that remain and have been designated by the City as historic resources include the Old Fresno Water Tower (1894) at 2444 Fresno Street; the Old Post Office Sub-Station (1921) at 2422 Kern Street; and St. John's Cathedral (1902) at 2814 Mariposa Street.

Industrial Fresno

Industrial properties that have been designated by the City as historic resources include the Hobbs Parsons Produce Company Warehouse (1903) at 903 H Street; the Berven Rug Mills building (1917) at 616 P Street; and the State Center Warehouse (1918) at 747 R Street.

Depression Era Civic and Institutional Development

Depression-era civic and institutional properties that have been designated by the City as historic resources include the Fresno Memorial Auditorium (1936) at 1235 O Street; Fresno Fire Station No. 3 (1939) at 1406 Fresno Street; and Fresno City Hall (Annex) (1941) at 1406 Fresno Street.

Mid-20th Century Commercial Development (1945–1970) and Mid-20th Century Civic and Institutional Development (1945–1970)

Some of downtown Fresno's modern commercial buildings and modern civic and institutional buildings were previously surveyed by the Fulton Corridor Historic Survey, which encompassed these resources.

5.5.3 - Regulatory Setting

The regulatory setting section describes relevant federal, state, and local (county and city) laws, regulations, and policies pertaining to cultural resources within the Plan areas. The following list provides a full range of policies applicable to the Plan areas.

State and local laws, regulations, plans, or guidelines that are potentially applicable to the Planning Area are summarized below. The federal Section 106 compliance process is commonly discussed within EIRs, but the process holds no regulatory requirement within the City unless cultural resources listed on the NRHP are adversely affected by a City-approved project. Therefore, a review of the federal process is necessary here only to provide background. Cultural resource law and regulations associated with the CEQA process are based upon, but are statutorily distinct from, the Section 106 process.

Federal

National Historic Preservation Act

The National Historic Preservation Act of 1966 (NHPA) coordinates public and private efforts to identify, evaluate, and protect the nation's historic and archaeological resources. It applies to federal activities. Its influence is most commonly felt at the state and local level when a state or local agency is seeking federal funding and the federal lead agency is subject to Section 106 regulations, or when the state or local agency is determining the significance of cultural resources under CEQA.

The NHPA established the NRHP as the official federal list for cultural resources that are considered important for their historic significance at the local, state, or national level. The NRHP includes districts, sites, buildings, structures, and objects that are significant in American history, architecture, archaeology, engineering, and culture. The NRHP is wholly maintained by the National Park Service, the Advisory Council on Historic Preservation, and the State Office of Historic Preservation (SHPO) and grants-in-aid programs.

According to the National Park Service (NPS) and the SHPO, the City is a Certified Local Government (CLG). The CLG program is a preservation partnership between local, state, and national governments focused on promoting historic preservation at the grass roots level. The program is jointly administered by NPS and SHPO, with each local community working through a certification process to become recognized as a CLG. CLGs become an active partner in the Federal Historic Preservation Program and the opportunities (and funding) it provides.

Historic District Determination

According to the National Park Service, "a [historic] district possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development." Historic districts are not collections of individually significant features; instead, districts are made up of components that achieve significance when grouped together. Districts must work together to tell the story of their significance and must have distinguishable boundaries. Boundaries of a historic district are frequently defined by use (e.g., a theater district), connection to an event (e.g., a commercial district), or architectural style (e.g., a Craftsman Bungalow district).

Historic districts include both contributing and non-contributing features, and not all resources need to be of the same historical or architectural quality. As discussed in more detail below, contributing features include those features that were constructed within the period of significance, contribute to the historic character of the Historic District, and retain sufficient historic integrity to convey the property's significance. Non-contributing features include those features that were either constructed after the period of significance, which is defined as within or before 1953, do not contribute to the historic character of the property, or are historic features that do not retain sufficient historic integrity to convey their significance.

National Register of Historic Places

The NRHP is the nation's most comprehensive inventory of historic resources. The NRHP is administered by the National Park Service and includes buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level. Typically, resources over 50 years of age are eligible for listing in the NRHP if they meet any one of the four criteria of significance and if they sufficiently retain historic integrity. However, resources under 50 years of age can be determined eligible if it can be demonstrated that they are of "exceptional importance," or if they are contributors to a potential historic district. NRHP criteria are defined in depth in National Register Bulletin Number 15: How to Apply the National Register Criteria for Evaluation.

Four basic criteria determine whether a structure, site, building, district, or object can be considered eligible for listing in the NRHP:

- **Criterion A (Event):** Properties associated with events that have made a significant contribution to the broad patterns of our history;
- **Criterion B (Person):** Properties associated with the lives of persons significant in our past;
- **Criterion C (Design/Construction):** Properties that embody the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant distinguishable entity whose components lack individual distinction; and
- **Criterion D (Information Potential):** Properties that have yielded, or may be likely to yield, information important in prehistory or history.

A resource can be considered significant on a national, state, or local level to American history, architecture, archaeology, engineering, and culture.

Section 106 (Protection of Historic Properties) of the NHPA requires federal agencies to take into account the effect of their undertakings on historic properties. Section 106 Review refers to the federal review process designed to endure that historic properties are considered during federal project planning and implementation. The Advisory Council on Historic Preservation, an independent federal agency, administers the review process with assistance from state historic preservation offices.

Archaeological Resources Protection Act

The Archaeological Resources Protection Act of 1979 regulates the protection of archaeological resources and sites that are on federal and Indian lands.

Native American Graves Protection and Repatriation Act

The Native American Graves Protection and Repatriation Act (NAGPRA) is a federal law passed in 1990 that provides a process for museums and federal agencies to return certain Native American cultural items, such as human remains, funerary objects, sacred objects, or objects of cultural patrimony, to lineal descendants and culturally affiliated Indian tribes.

State of California

California Register of Historical Resources

The CRHR is an inventory of significant architectural, archaeological, and historical resources in the State of California. Resources can be listed in the CRHR through a number of methods. State Historical Landmarks and NRHP-listed properties are automatically listed in the CRHR. Properties can also be nominated to the CRHR by local governments, private organizations, or citizens. The evaluative criteria used by the CRHR for determining eligibility are closely based on those developed by the National Park Service for the NRHP.

In order for a property to be eligible for listing in the CRHR, it must be found significant under one or more of the following criteria:

- **Criterion 1 (Events):** Resources that are associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.
- **Criterion 2 (Persons):** Resources that are associated with the lives of persons important to local, California, or national history.
- **Criterion 3 (Architecture):** Resources that embody the distinctive characteristics of a type, period, region, or method of construction, or represent the work of a master, or possess high artistic values.
- **Criterion 4 (Information Potential):** Resources or sites that have yielded or have the potential to yield information important to the prehistory or history of the local area, California, or the nation.

California Environmental Quality Act

CEQA is the primary mandate governing projects under state jurisdiction that may affect cultural resources. Other laws governing cultural resources that may also pertain include Public Resources Code (PRC) Section 97.9, et seq. (Native American Heritage) and Health and Human Safety Code 7050.5, et seq. (Human Remains). Records about Native American graves, cemeteries, and sacred places, as well as information about the location of archaeological sites, are exempt from being disclosed to the public under California's equivalent of the Freedom of Information Act (also known as "Sunshine Laws" [California Government Code (CGC) 6254.10]). Such information is considered sensitive and confidential, and should not be contained in a public document. CEQA requires that public agencies assess the effects on historical resources of public or private projects the agencies finance or approve. Historical resources are defined as buildings, sites, structures, objects, or districts, that may have historical, prehistoric, architectural, archaeological, cultural, or scientific importance, and is considered eligible for listing, or is already listed, in the CRHR.

CEQA requires that if a project would result in an effect that would cause a substantial adverse change in the significance of a historical resource, the project may be considered to have a significant effect on the environment and alternative plans or mitigation measures must be considered. However, only those impacts to significant historical resources as defined by CEQA need to be addressed. Therefore, before the assessment of effects or potential development of mitigation measures, identification and evaluation of historic resources must be conducted. The steps that are normally taken in a cultural resources investigation for CEQA compliance are as follows:

1. Identify potential historical resources,
2. Evaluate the eligibility of historical resources for standing in the CRHR, and
3. Evaluate the effects of the project on all eligible historical resources.

The CEQA Guidelines define three ways that a property may qualify as a historical resource for the purposes of CEQA review:

1. The resource is listed in or determined eligible for listing in the CRHR.
2. The resource is included in a local register of historical resources, as defined in Public Resources Code (PRC) Section 5020.1(k), or identified as significant in a historical resource survey that meets the requirements of PRC Section 5024.1(g), unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
3. The lead agency determines the resource to be significant as supported by substantial evidence in light of the whole record (CEQA Guidelines 15064.5(a)).

These conditions are related to the eligibility criteria for inclusion in the CRHR (PRC Sections 5020.1[k], 5024.1, 5024.1[g]). A cultural resource may be eligible for inclusion in the CRHR if it:

- Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
- Is associated with the lives of persons important in our past;
- Embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of an important creative individual; or possesses high artistic values; or
- Has yielded, or may be likely to yield, information important in prehistory or history.

In addition, properties that are listed in or eligible for listing in the NRHP are considered eligible for listing in the CRHR and thus are significant historical resources for the purposes of CEQA (PRC Section 5024.1[d][1]). According to CEQA, a project may cause a substantial adverse change in the significance of a historical resource and thus may have a significant impact on the environment (CEQA Guidelines 15064.5(b)). CEQA also states that a substantial adverse change in the significance of a resource means the physical demolition, destruction, relocation, or alternation of the resource or its immediate surroundings such that the significance of the resource would be materially impaired. Actions that would materially impair the significance of a historic resource are any actions that would demolish or adversely alter the physical characteristics of a historic resource that convey its historical significance and qualify it for inclusion in the CRHR or in a local register or survey that meet the requirements of PRC Sections 5020.1(k) and 5024.1(g).

Paleontological Resources under CEQA

Protection of paleontological resources, which are geological in nature rather than cultural, are provided for indirectly within the cultural resource sections of the CEQA Guidelines. PRC Section 21002 states that:

> It is the policy of the state that public agencies should not approve projects as proposed if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental effects of such projects, and that the procedures required are intended to assist public agencies in systematically identifying both the significant effects of proposed projects and the feasible alternatives or feasible mitigation measures which will avoid or substantially lessen such significant effects.

CEQA Guidelines, Article 1, Section 15002(a)(3) states that CEQA is intended to "Prevent significant, avoidable damage to the environment by requiring changes in projects through the use of alternatives or mitigation measures when the governmental agency finds the changes to be feasible."

Appendix G of CEQA Guidelines provides a checklist of questions that a lead agency will normally address if relevant to a project's environmental impacts. Section (V)(c) of the checklist asks if the project will directly or indirectly destroy a unique paleontological resource, site, or unique geological feature.

If paleontological resources, or the potential for paleontological resources, are identified during initial project scoping studies as being within the project area, the lead agency must take such resources into consideration when evaluating project effects. The level of consideration may vary with the importance of the resource.

State Health and Safety Code

The discovery of human remains is regulated by California Health and Safety Code Section 7050.5, which states that:

> If human remains are encountered, no further disturbance shall occur until the County Coroner has made a determination of origin and disposition pursuant to Public resources Code Section 5097.98. The County Coroner must be notified of the find immediately. If the remains are determined to be prehistoric, the Coroner will notify the Native American Heritage Commission (NAHC), which will determine and notify Most Likely Descendant (MLD). With the permission of the landowner or his or her authorized representative, the MLD may inspect the site of the discovery. The MLD shall complete the inspection within 24 hours of notification by the NAHC. The MLD may recommend scientific removal and nondestructive analysis of human remains and items associated with Native American burials.

California Public Resources Code

Archaeological, paleontological, and historical sites are protected pursuant to a wide variety of state policies and regulations enumerated under the California Public Resources Code. In addition, cultural and paleontological resources are recognized as nonrenewable resources and therefore receive protection under the California Public Resources Code, including CEQA, as follows:

- California Public Resources Code Sections 5020–5029.5 continued the former Historical Landmarks Advisory Committee as the State Historical Resources Commission. The Commission oversees the administration of the CRHR of Historical Resources and is responsible for the designation of State Historical Landmarks and Historical Points of Interest.
- California Public Resources Code Sections 5079–5079.65 define the functions and duties of the Office of Historic Preservation (OHP). The OHP is responsible for the administration of federally and state-mandated historic preservation programs in California and the California Heritage Fund.

- California Public Resources Code Sections 5097.9–5097.998 provide protection to Native American historical and cultural resources, and sacred sites and identify the powers and duties of the Native American Heritage Commission (NAHC). They also require notification of descendants regarding discoveries of Native American human remains and provide for treatment and disposition of human remains and associated grave goods.

California Government Code 65352.3-5: Local Government-Tribal Consultation

As of March 1, 2005, California Government Codes 65092; 65351; 65352; 65352.3; 65352.4; 65352.5 and 65560, formerly known as Senate Bill 18, require city and county governments to consult with California Native American tribes before individual site-specific, project-level land use decisions are made. In particular, this process applies to General Plan Amendments and adoptions of Specific Plans. The intent of this legislation is to provide all tribes, whether federally recognized or not, an opportunity to consult with local governments for the purpose of preserving and protecting their sacred places.

City of Fresno

Municipal Code (Historic Preservation Ordinance)

The City of Fresno has established a Historic Preservation Commission and a Local Register of Historic Resources (Fresno Municipal Code, Chapter 12, Article 16). First established in 1979, the Ordinance had its last major overhaul in 1999 and has also adopted amendments in 2010, 2012, and 2015. The Ordinance is used to provide local levels of control over the historical aesthetics of cultural resources within the City, and to ensure that the potential impact to locally significant historical resources that may be the subject of redevelopment are given reasonable consideration. The purpose of the Ordinance is to:

> . . . continue to preserve, promote and improve the historic resources and districts of the City of Fresno for educational, cultural, economic and general welfare of the public; to continue to protect and review changes to these resources and districts which have a distinctive character or a special historic, architectural, aesthetic or cultural value to this city, state and nation; to continue to safeguard the heritage of this city by preserving and regulating its historic buildings, structures, objects, sites and districts which reflect elements of the city's historic, cultural, social, economic, political and architectural history; to continue to preserve and enhance the environmental quality and safety of these landmarks and districts; to continue to establish, stabilize and improve property values and to foster economic development (Article 16 Section 12-1602(a)).

The Ordinance provides legislative mechanisms to protect certain historical resources. Locally identified historical resources include:

1. **Heritage Properties.** This category is used for properties that may not qualify for inclusion in the National Register of Historic Places or Local Register of Historic Resources, but that still are deserving of recognition and protection. These resources maintain historical,

architectural or aesthetic merit, but which may not be designated as an Historic Resource under the Ordinance.

2. **Historic Resources.** These are defined as any building, structure, object or site that has been in existence more than fifty years and possesses integrity of location, design, setting, materials, workmanship, feeling and association, and is associated with events that have made a significant contribution to the broad patterns of City history, or is associated with the lives of persons significant in our past, or embodies the distinctive characteristics of a type, period or method of construction, or represents the work of a master or possesses high artistic values; or has yielded, or may be likely to yield, important information in prehistory or history; and has been designated as such by the Council pursuant to the provisions of the Ordinance.

3. **Local Historic Districts.** These are defined as any finite group of resources related to one another in a clearly distinguishable way or any geographically definable area which possesses a significant concentration, linkage or continuity of sites, buildings, structures or objects united historically or aesthetically by plan or physical development. The Local Historic District must be significant as well as identifiable and it must meet Local Register Criteria for listing on that Register. Contributors to Historic Districts are defined as any Historic Resource that contributes to the significance of the specific Local Historic District or a proposed National Register Historic District under the criteria set forth in the Ordinance.

4. **National Register Historic Districts**, which shall mean any finite group of resources related to one another in a clearly distinguishable way or any geographically definable area which possesses a significant concentration, linkage or continuity of sites, buildings, structures or objects united historically or aesthetically by plan or physical development. A National Register Historic District must be significant as well as identifiable and it must meet National Register Criteria for listing on that Register. Contributors to a National Register Historic District are defined as any individual Historic Resource which contributes to the significance of a National Register Historic District under the criteria set forth in the Ordinance.

Certified Local Government

The CLG Program is administered by the OHP. When a Lead Agency becomes a CLG, it agrees to carry out the intent of and serve as a local steward of the NHPA and the Secretary of the Interior's Standards. In meeting those standards, OHP serves as an advisor. The use of the NRHP/CRHR criteria and the Secretary of the Interior Standards integrates local, state, and federal levels of review. It brings clarity to the question of what resources are significant when it comes to CEQA and Section 106 of the NHPA. Adopting the Secretary of the Interior's Standards will allow the use of categorical exemptions under CEQA, and will likely result of findings of no adverse effect under Section 106. The use of these criteria and standards make environmental review faster, more efficient, and reduces costs and delays. The City has been certified as a CLG since September 1996.

Fresno General Plan

Following are the objectives and policies related to cultural resources have been taken directly from the existing Fresno General Plan.

General Plan goals related to cultural resources include:

6. Protect, preserve, and enhance natural, historic, and cultural resources.

   Emphasize the continued protection of important natural, historic and cultural resources in the future development of Fresno. This includes both designated historic structures and neighborhoods, but also "urban artifacts" and neighborhoods that create the character of Fresno.

15. Improve Fresno's visual image and enhance its form and function through urban design strategies and effective maintenance.

17. Recognize, respect, and plan for Fresno's cultural, social, and ethnic diversity, and foster an informed and engaged citizenry.

    Emphasize shared community values and genuine engagement with and across different neighborhoods, communities, institutions, businesses and sectors to solve difficult problems and achieve shared goals for the success of Fresno and all its residents.

The Citywide Historic and Cultural Preservation subsection of the General Plan (8.2) states the following:

> The following policies are intended to maintain and enhance a citywide program for historic and cultural preservation, consistent with the State and Federal Certified Local Government program and State laws and regulations related to historic and cultural resources.
>
> Nothing in the General Plan is intended to identify or designate any significant resources, potential significant resources, significant districts or potential significant districts. Identification and designation of resources and districts shall be done consistent with the City's Historic Preservation Ordinance and State and federal law.

The Citywide Historic and Cultural Preservation subsection of the General Plan (8.2) includes the following cultural resources objectives and policies:

- **Objective HCR-1:** Maintain a comprehensive, citywide preservation program to identify, protect and assist in the preservation of Fresno's historic and cultural resources.
  - **Policy HCR-1-a: Certified Local Government.** Maintain the City's status as a Certified Local Government (CLG), and use CLG practices as the key components of the City's preservation program.
  - **Policy HCR-1-b: Preservation Office, Commission and Program.** Maintain the Preservation Office, Historic Preservation Commission, and preservation program to administer the City's preservation functions and programs.
  - **Policy HCR-1-c: Historic Preservation Ordinance.** Maintain the provisions of the City's Historic Preservation Ordinance, as may be amended, and enforce the provisions as appropriate.

- **Objective HCR-2:** Identify and preserve Fresno's historic and cultural resources that reflect important cultural, social, economic, and architectural features so that residents will have a foundation upon which to measure and direct physical change.
  - **Policy HCR-2-a: Identification and Designation of Historic Properties.** Work to identify and evaluate potential historic resources and districts and prepare nomination forms for Fresno's Local Register of Historic Resources and California and National registries, as appropriate.
  - **Policy HCR-2-b: Historic Surveys.** Prepare historic surveys according to California Office of Historic Preservation protocols and City priorities as funding is available.
  - **Policy HCR-2-c: Project Development.** Prior to project approval, continue to require a project site and its Area of Potential Effects (APE), without benefit of a prior historic survey, to be evaluated and reviewed for the potential for historic and/or cultural resources by a professional who meets the Secretary of Interior's Qualifications. Survey costs shall be the responsibility of the project developer. Council may, but is not required, to adopt an ordinance to implement this policy.
  - **Policy HCR-2-d: Native American Sites.** Work with local Native American tribes to protect recorded and unrecorded cultural and sacred sites, as required by State law, and educate developers and the community-at-large about the connections between Native American history and the environmental features that characterize the local landscape.
  - **Policy HCR-2-e: Alternate Public Improvement Standards.** Develop and adopt Alternate Public Improvement Standards for historic landscapes to ensure that new infrastructure is compatible with the landscape; meets the needs of diverse users, including motorists, cyclists, and pedestrians; and provides for proper traffic safety and drainage.
  - **Policy HCR-2-f: Archaeological Resources.** Consider State Office of Historic Preservation guidelines when establishing CEQA mitigation measures for archaeological resources.
  - **Policy HCR-2-g: Demolition Review.** Review all demolition permits to determine if the resource scheduled for demolition is potentially eligible for listing on the Local Register of Historic Resources. Consistent with the Historic Preservation Ordinance, refer potentially eligible resources to the Historic Preservation Commission and as appropriate to the City Council.
  - **Policy HCR-2-h: Minimum Maintenance Standards.** Continue to support enforcement of the minimum maintenance provisions of the Historic Preservation Ordinance, as may be amended, and enforce the provisions as appropriate.
  - **Policy HCR-2-i: Preservation Mitigation Fund.** Consider creating a Preservation Mitigation Fund to help support efforts to preserve and maintain historic and cultural resources.
  - **Policy HCR-2-j: Window Replacement.** City staff will evaluate potential opportunities for identification of window replacements to ensure historic integrity is maintained while encouraging sustainability. In addition, city staff will evaluate window replacements in federally funded housing projects on a project-by-project basis with consideration for health, safety, historic values, sustainability, and financial feasibility.
  - **Policy HCR-2-k: City-Owned Resources.** Maintain all City-owned historic and cultural resources in a manner that is consistent with the U.S. Secretary of the Interior's Standards for the Treatment of Historic Properties, as appropriate.
  - **Policy HCR 2-l: City Historic Preservation Team.** Establish an inter-departmental Historic Preservation team to coordinate on matters of importance to history and preservation.

- **Policy HCR-2-m: Local Register Listing.** Recommend that property owners, who receive funds from the City of Fresno for rehabilitation of a property, consent to listing it on the Local Register of Historic Resources if the property meets the criteria for age, significance, and integrity. Publicly funded rehabilitation properties which may meet Local Register criteria will be presented to the City's Historic Preservation Commission for review.
- **Policy HCR-2-n: Property Database and Informational System.** Identify all historic resources within the city designated on the Local, State, or National register, and potential significant resources (building, structure, object or site) in existence for at least 45 years, and provide this information on the City's website.

- **Objective HCR-3:** Promote a "New City Beautiful" ethos by linking historic preservation, public art, and planning principles for Complete Neighborhoods with green building and technology.
  - **Policy HCR-3-a: Adaptive Reuse.** Promote the adaptive reuse and integration of older buildings into new projects as part of the City's commitment to nurturing a sustainable Fresno.
  - **Policy HCR-3-b: Public Art.** Collaborate with the arts community to promote the integration of public art into historic buildings and established neighborhoods. Link arts activities (such as Art Hop) with preservation activities.
  - **Policy HCR-3-c: Context Sensitive Design.** Work with architects, developers, business owners, local residents and the historic preservation community to ensure that infill development is context-sensitive in its design, massing, setbacks, color, and architectural detailing.
- **Objective HCR-4:** Foster an appreciation of Fresno's history and cultural resources.
  - **Policy HCR-4-a: Inter-Agency Collaboration.** Foster cooperation with public agencies and non-profit groups to provide activities and educational opportunities that celebrate and promote Fresno's history and heritage.
  - **Policy HCR-4-b: Heritage Tourism and Public Education.** Promote heritage tourism and the public's involvement in preservation through conferences, walking tours, publications, special events, and involvement with the local media.
  - **Policy HCR-4-c: Training and Consultation.** Provide training, consultation, and support in collaboration with Historic Preservation Commissioners to community members regarding Fresno's history, use of the U.S. Secretary of the Interior's Standards, and the California Historical Building Code, as time and resources allow.
  - **Policy HCR-4-d: Public Archives.** Maintain public archives that include information on all designated historic properties, as well as historic surveys, preservation bulletins, and general local history reference materials. Post survey reports, Historic Preservation Commission minutes and agendas, and other information of public interest on the historic preservation page of the City's website.
  - **Policy HCR-4-e: Preservation Awards.** Continue to recognize the best work in preservation and neighborhood revitalization as may be appropriate through programs such as the biennial Mayoral Preservation Awards program.
  - **Policy HCR-4-f: Economic Incentives.** Investigate the potential for developing a Mills Act program and possible sources of funding for the Historic Rehabilitation Financing Program.

Downtown Neighborhood Community Plan (DNCP)

The Downtown Neighborhoods Community Plan (DNCP) is the community's tool for guiding the successful regeneration of Downtown Fresno and its surrounding neighborhoods. It is a visionary document that lays out the community's long-term goals for the Plan Area and provides detailed policies concerning a wide range of topics, including land use and development, transportation, the public realm of streets and parks, infrastructure, historic resources, and health and wellness. Along with the accompanying form based Downtown Development Code, the DNCP is intended to protect Fresno's oldest neighborhoods, while encouraging and accommodating future development, in a manner that contributes to a stronger and healthier community for everyone.

Chapter 6, Historic and Cultural Resources, of the DNCP contains the following Goals and Policies related to the preservation of cultural resources:

- **Goal 6.1:** Identify potential historic resources through context development, survey, evaluation, and designation.
  - **Policy 6.1.1:** As resources become available, identify, document and promote all historic and cultural resources, and potential resources within the Downtown Neighborhoods. (CAP Urb 7-3)
  - **Policy 6.1.2:** As resources become available, enhance the City's database of all designated, evaluated, and potential historic resources and make it easily accessible to the community and affected property owners.
  - **Policy 6.1.3:** Understand the types and locations of historic resources and potential historic resources throughout the City.
  - **Policy 6.1.4:** Promote awareness of resources important to the City's history within the community.
  - **Policy 6.1.5:** Incorporate knowledge of historic and potentially historic resources into planning and development.
- **Goal 6.2:** Protect historic and cultural resources from demolition and inappropriate alterations.
  - **Policy 6.2.1:** Preserve, rehabilitate, and reuse historic resources with materials and finishes consistent with their original design.
  - **Policy 6.2.2:** As resources become available, protect the unique historic resources in each of Downtown Fresno's subareas as a means of enhancing the unique identity and character of each planning area.
  - **Policy 6.2.3:** Provide educational forums for policy makers that stress the role of preservation as an economic tool in revitalization.
  - **Policy 6.2.4:** Discourage the demolition or inappropriate alteration of potential historic resources and encourage their appropriate renovation by providing guidance and incentives for rehabilitation and compatible alterations.
  - **Policy 6.2.5:** As funds become available, provide more Historic Preservation staff to manage a more robust Historic Preservation program.
  - **Policy 6.2.6:** Encourage salvaging of architectural elements that would otherwise be transported to landfills as a result of alterations or demolition.

- **Policy 6.2.7:** Encourage sympathetic rehabilitation and assist owners with adapting their homes to current needs while retaining historic integrity
- **Policy 6.2.8:** Protect historic and cultural resources in each of the planning areas in the Downtown Neighborhoods.
  - Use Roeding Park and its historic features as a focal point for redevelopment of the Jane Addams area.
  - Ensure that Roeding Park and the Fresno Chaffee Zoo are preserved and enhanced as regional destinations.
  - Rehabilitate the historic portions of Roeding Park according to the Secretary of the Interior's Standards to preserve this outstanding example of landscape design and historically-significant arboretum.
  - Preserve, rehabilitate, and reuse the historic industrial buildings in the South Van Ness planning area.
  - Designate Kearney Boulevard as a Scenic Route to further protect its scenic qualities and reestablish the Boulevard as an important address within Fresno.
  - Begin the process to designate the three potential districts in Lowell that were determined to be eligible for listing on the local register as historic districts in the 2008 GPA survey. Designation of historic districts requires the consent of a majority of the property owners within the proposed district. (See FMC, section 12-1610(c).)
  - Complete the local designation process for the potential Huntington Boulevard Historic District.
- **Policy 6.2.9:** Sponsor a regular "State of Historic Preservation" colloquium for policy makers, city staff, and community members to address and discuss preservation and cultural heritage issues.

- **Goal 6.3:** Protect historic resources and their setting from incompatible new development within historically sensitive areas.
  - **Policy 6.3.1:** As resources become available, preserve, rehabilitate, and reuse historic resources consistent with their original design.
  - **Policy 6.3.2:** As resources become available, restore and maintain the historic character of neighborhoods.
  - **Policy 6.3.3:** Require new development to be compatible with the massing, scale, setbacks, and pedestrian-oriented disposition of adjacent historic resources.
  - **Policy 6.3.4:** Pursue stricter code enforcement to eliminate inappropriate alterations (including "stucco wraps").
- **Goal 6.4:** Promote the preservation of historic and cultural resources through financial incentives and technical assistance.
  - **Policy 6.4.1:** As resources become available, provide technical assistance and financial incentives for property owners to rehabilitate their properties in a manner that doesn't degrade historic integrity. Promote and make accessible the available resources—including the Community Development Block Grants program, the Mills Act, and technical assistance—to owners of historic buildings.
  - **Policy 6.4.2:** Identify and promote funding sources for the rehabilitation of historic properties. Promote, and where possible provide, low-cost funding for revitalization of residential properties.

- **Policy 6.4.3:** Re-establish and fund as resources are available the City's low interest loan program for historic property owners.
- **Policy 6.4.4:** Sponsor preservation workshops at the neighborhood level to provide technical assistance to property owners concerning the maintenance, rehabilitation and restoration of historic resources and potential historic resources.
- **Policy 6.4.5:** Work with construction trade groups to support apprenticeship programs that teach restoration techniques such as lead paint remediation, historic woodworking and finishing.
- **Policy 6.4.6:** Expand the existing facade improvement program to incorporate guidelines for the rehabilitation of historic storefronts.

- **Goal 6.5:** Integrate historic preservation into the community and economic development strategies.
  - **Policy 6.5.1:** Capitalize on Fresno's historic landmarks and resources.
    - Work with local agencies to better incorporate preservation and historic sites into heritage tourism programs.
    - Install the "Preserve America" signs in downtown Fresno.
    - Develop wayfinding signs from SR 99 that advertise Fresno's "historic downtown."
    - Prepare an updated walking tour of downtown Fresno which highlights historic sites and neighborhoods.
    - Make available the New Deal walking tour brochure of Fresno prepared by the National Trust in 2008.
  - **Policy 6.5.2:** Use historic preservation as a basic tool for neighborhood improvements and community development.
  - **Policy 6.5.3:** Engage community members and groups to gather information regarding historic resources.
  - **Policy 6.5.4:** Encourage maintenance of both designated and potential historic resources to help restore the historic character of neighborhoods.
  - **Policy 6.5.5:** Support neighborhood revitalization programs designed to foster an appreciation of Fresno's distinctive housing types.
- **Goal 6.6:** Protect archeological resources from the impacts of new development.
  - **Policy 6.6.1:** Require that all mitigation measures for archeological resources fully comply with the requirements of CEQA.

Local Register of Historic Resources (Fresno Municipal Code, Chapter 12, Article 16)

As stated in Section 12-1607 (Designation Criteria), sub-section (b), Local Historic Districts: Any finite group of resources (buildings, structures, objects or sites) may be designated as a Local Historic District if it meets the definition set forth in Section 12-1602(s) of this article, its designation is consented to by the majority of the property owners within the Local Historic District, at least 50 percent of the resources within the proposed Local Historic District are 50 years of age or older, and it is found by the Commission and Council to meet one or more of the following criteria:

- **Criterion 1:** It exemplifies or reflects special elements of the city's cultural, social, economic, (1) political, aesthetic, engineering, or architectural heritage, or

- **Criterion 2:** It is identified with a person or group that contributed significantly to the culture and development of the city, or (2)
- **Criterion 3:** It embodies distinctive characteristics of a style, type, period or method of construction, or is a valuable example of the use of indigenous materials or craftsmanship, or (3)
- **Criterion 4:** Structures within the area exemplify a particular architectural style or way of life important to the city, or (4)
- **Criterion 5:** The area is related to a designated historic resource or district in such a way that its preservation is essential to the integrity of the designated resource or Local Historic District, or (5)
- **Criterion 6:** The area has potential for yielding information of archaeological interest.

5.5.4 - Thresholds of Significance

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in significant adverse impact on the environment. The criteria used to determine the significance of an impact to cultural resources are based on the Environmental Checklist in Appendix G of the CEQA Guidelines and identified below. Accordingly, cultural resources impacts resulting from the proposed project are considered significant if the project would:

a) Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5? (See Historical Resource, Impact CUL-1.)

b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5? (See Archaeological Resource, Impact CUL-2.)

c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? (See Paleontological Resource or Geologic Feature, Impact CUL-3.)

d) Disturb any human remains, including those interred outside of formal cemeteries? (See Human Remains, Impact CUL-4.)

CEQA Guidelines Section 15064.5 defines "substantial adverse change" as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of a historical resource would be materially impaired. CEQA Section 15064.5(b)(2) defines "materially impaired" for purposes of the definition of substantial adverse change as follows:

The significance of an historical resource is materially impaired when a project:

a) Demolishes or materially alters in an adverse manner those physical characteristics of an historical resource that conveys its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources; or

b) Demolishes or materially alters in an adverse manner those physical characteristics that account for its inclusion in a local register of historical resources pursuant to PRC Section 5020.1(k) or its identification in an historical resource survey meeting the requirements of

PRC Section 5024.1(g), unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant; or

c) Demolishes or materially alters in an adverse manner those physical characteristics of a historical resource that convey its historical significance and that justify its eligibility for inclusion in the California Register of Historical Resources by a lead agency for the purposes of CEQA.

5.5.5 - Impact Analysis, Mitigation Measures, and Level of Significance After Mitigation

Historical Resources

Impact CUL-1:	**The project could cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5.**

Project-specific Impact Analysis

As discussed above, an abundance of both potential and listed historical resources and historic properties are located in the Downtown Fresno area. The most recent review of cultural resources (both historic and prehistoric) within the DNCP and FCSP areas is contained in the Archaeological Resources Assessment Report prepare by Greenwood and Associates in February of 2012. This report was also the basis for determinations made within the Fulton Mall Reconstruction Project EIR prepared by FCS in November of 2013. General summaries and descriptions of specific plan districts within the DNCP, FCSP, and DDC have been provided above. The findings and determinations as to the historic archaeological sensitivity of both existing and proposed historic districts, as well as proposed changes to specific plan districts within the Project Area, as detailed in the Greenwood and Associates report, will be summarized below.

Records Search Results

As part of the Archaeological Resources Assessment Report prepare by Greenwood and Associates, a records search was conducted at the Southern San Joaquin Valley Information Center (SSJVIC) located at California State University, Bakersfield. The records search included the project area and a 0.25-mile search radius beyond the proposed project boundaries. The results indicated that although 48 previously conducted surveys or studies are on file, no archaeological resources, either prehistoric or historic, have been identified within the search radius. This may be due to the fact that previous investigations were largely limited to transportation corridors and cell sites, with very few large-scale pedestrian surveys.

That no significant sites or features have been recorded for the entirety of the project area is surprising and in no way a true indication of the prehistoric or historic archaeological sensitivity of the area.

Literature and Archival Review

Greenwood and Associates reviewed various archival materials including historical documents and manuscripts, historical aerial photographs, local and regional histories, and historical maps. The

Sanborn Map Company insurance maps for the City of Fresno were determined to be among the most useful resource for investigating historical development of the region and understanding current archaeological sensitivity. The purpose of these maps was to id insurance agents in assessing the degree of fire risk associated with a particular property. They often include such details as each building's use, its size and shape, number of floors, types of construction materials, types of doors and windows present, widths of streets, property boundaries, house and block numbers, etc. Of particular interest for the current investigations, the maps also indicate subsurface features, including basements (labeled B, B'st, or Bst), wells (We), water closets or privies (WC), and hollow spaces understanding structures (OU for "open under"). Additionally, elevators—which typically required pits—are indicated, as are tanks and other buried features. The presence of any of these subsurface features may indicate the potential for intact archaeological deposits. Sanborn Maps for the project area exist for 1885, 1888, 1898, 1906, 1918–1919, and 1948-1950.

Field Investigations

Greenwood and Associates employed a program of limited archaeological field investigations that would focus on assessing a cross-section of parcel types that had been identified in the course of archival, aerial photography, and historical map review as possessing moderate to high sensitivity for the presence of cultural deposits. A total of 18 representative parcels located within both the FCSP and DNCP area were selected for pedestrian surface survey. Selection was based in part on accessibility. The parcels ranged in size from full city blocks to several lots.

The parcels selected were predominantly located within the Downtown area, or within Downtown adjacent subareas of the DNCP. There are several reasons for this distribution pattern. First, because of past urban renewal activities and other forces, Downtown and adjacent areas contain the highest number of historically developed parcels that are now vacant and accessible. Further, the outlying portions of the DNCP tend to be predominantly residential in nature, more recently developed, more intact, more poorly documented by the historical maps, and generally less accessible for survey.

Following a preliminary reconnaissance, the surface survey was performed by Greenwood and Associates archaeologists Dana Slawson, M.Arch., and Michael Kay, M.A., on June 27 and 28, 2011. The standard method of walking parallel transects spaced no more than 5 meters apart was employed. All exposed surface soils were thoroughly inspected for indications of cultural resources, including fortuitous exposures such as landscaped, graded, or cleared areas, and areas of rodent disturbance.

While all of the parcels surveyed produced at least a limited amount of historical cultural material, in two locations (Block 50 and Block 534) the density of cultural material and/or features identified indicated the presence of historic-age archaeological site. The Block 50 site is located in the Chinatown neighborhood and comprises a dense concentration of historical artifacts, primarily Chinese and Japanese in origin. Constituents of the Block 534 site include several discrete structural features, all of which likely relate to an early 20th century building that once stood on the parcel.

Also recorded was one feature isolate a concrete slab believed to correspond with the location of an early twentieth century summer kitchen associated with Volga German residents of Block 1052.

Locations of Archaeological Field Investigations

Fulton Corridor Specific Plan Area

- Block 40E (Mariposa Street, Fagan Alley, Fresno Street, F Street)
- Block 50E (Tulare Street, China Alley, Mariposa Street, G Street)
- Block 50W (Tulare Street, F Street, Mariposa Street, China Alley)
- Block 52E (Inyo Street, China Alley, Kern Street, G Street)
- Blocks 501 and 502 (El Dorado Street, Railroad Tracks, Divisadero Street, H Street)
- Block 504 ([Amador Street], Railroad Tracks, [Sacramento Street], H Street)
- Block 516 (Ventura Street, Railroad Tracks, Mono Street, H Street)
- Block 534 (Inyo Street, G Street, Kern Street, Railroad Tracks)
- Block 535 (Mono Street, G Street, Inyo Street, Railroad Tracks)
- Block 536 (Ventura Street, G Street, Mono Street, Railroad Tracks)
- Block 537 (Santa Clara Street, G Street, Ventura Street, Railroad Tracks)
- Block 538 (San Benito Street, G Street, Santa Clara Street, Railroad Tracks)

Downtown Neighborhoods Community Plan Area

- Block 16 (Kern Street, C Street, Tulare Street, 99 Freeway)
- Block 295 (Fresno Street, A Street, Merced Street, B Street)
- Block 583 (Illinois Avenue, Clark Street, McKenzie Avenue, Valeria Street)
- Block 593 (Illinois Avenue, Effie Street, McKenzie Street, Diana Street)
- Block 1024 (Braly Avenue, Van Ness Avenue, Hamilton Avenue, Sara Street)
- Block 1052 (Belgravia Avenue, Cherry Avenue, Florence Avenue, Anna Street)

Historic Districts and Sensitivity Determinations

The review of historic maps, aerial photographs, and literature conducted for the FCSP/DNCP project encompassed more than 1,480 city blocks. Using Sanborn insurance maps and other sources, an assessment of the level of sensitivity for historic archaeological resources was calculated for every block within the project area. Results of the field investigations were also taken into account. Ratings of sensitivity were divided into five classes: Low, Low-Moderate, Moderate, Moderate-High, and High. Excluding information not derived from the insurance maps, these categories were defined as follows:

Low: no map data available, or; maps indicate that any archaeological deposits have most likely been destroyed or substantially disturbed by existing development, or; historical development as indicted on the maps is substantially intact and no demolished structure locations are present.

Low-Moderate: maps indicate that historic-era buildings/features have been removed and sites disturbed, but some potential survives for the presence of intact archaeological resources, e.g., sites of post-1900 wood frame residences or small commercial/industrial structures that have been paved over.

Moderate: maps indicate that historic-era light framed buildings/features have been removed but no significant post-demolition development or disturbance is evident. There is a potential for presence of intact archaeological resources, e.g., sites of multiple post-1900 wood framed residences or small

commercial/industrial structures that have not been paved over, or; sites of multiple pre-1900 residential properties that are paved over but display potential for buried deposits (privies, wells, cisterns, etc.).

Moderate-High: maps indicate that historic buildings of heavy construction have been removed; site may or may not have surface disturbance, e.g., site of brick commercial/industrial/residential building with basement covered by pavement or, site of brick commercial/industrial building with no basement and no subsequent surface disturbance known.

High: maps indicate that historic building(s) with basement or hollow space has been removed, or residential site with wells, privies, etc., with no subsequent surface disturbance, e.g., brick commercial building with basement, parcel open dirt or grass, or, pre-1891 residential properties with indicated privies or wells and dirt or grass surface cover.

Using the above criteria for assessment of historic archaeological sensitivity, a total of 290 city blocks, or portions thereof (136 in the FCSP area and 154 in the DNCP area) were assessed as possessing Moderate to High potential for the presence of subsurface historic archaeological deposits on the basis of documented historical development and current ground conditions (vacant). Although substantially larger in size, the DNCP area produced only slightly more positive results for archaeological sensitivity than the FCSP area. This outcome is largely due to later, post-1948–1950, development on many parcels within the DNCP, especially in the eastern reaches of the Plan Area. Further, Sanborn map coverage for those later developed areas is less complete.

The following current City-designated historic districts and proposed historic districts were identified within the FCSP/DNCP project limits and are considered to have a moderate to high potential for historic archaeological resources:

- Existing: Fresno Airport/Chandler Field (DNCP)
- Proposed: Street Historic District. Boundaries: Van Ness, Amador, Divisadero, N Street, Stanislaus, M Street to Calaveras (FCSP/DNCP)
- Proposed: St. John's Cathedral Historic District. Boundaries: Tulare, Q Street, Fresno, Divisadero, U Street (DNCP)
- Proposed: Santa Fe Warehouse Historic District. Boundaries: P Street, Tulare, R Street, Ventura (DNCP)
- Proposed: Bellevue Bungalow Historic District. Boundaries: Howard/Thesta Streets south of Belmont (DNCP)
- Proposed: East Madison Avenue Historic District. Boundaries: Madison Avenue South of Belmont, between Fresno and Mariposa (DNCP)
- Proposed: North Park Historic District. Boundaries: Divisadero Street, Blackstone Avenue, SR-180, and Roosevelt Avenue (DNCP)
- Proposed: Lower Fulton-Van Ness Historic District. Boundaries: Voorman Street, Belmont Avenue, Wishon Avenue, Yosemite Street, College Avenue

Additional newly identified historic resources include:

- The Fresno Chinatown Block 50 Site is a dense surface scattering of late 19th and early 20th century artifacts, including glass and ceramic fragments, leather and metal items, and building materials. The deposit appears to be principally associated with the historic occupation of the parcel by Chinese residents. Implementation of the proposed project has the potential to damage or destroy unrecorded subsurface components of this site.
- Also located within the Chinatown subarea, the Fresno Block 534 Site consists of a number of structural features, all believed to relate to the development of a Penny-Newman Grain Company warehouse on the site during the early 20th century. There are also remnants of a railroad siding dating to the late 1800s. Implementation of the proposed project could damage or destroy unrecorded components of this site.
- Additionally, one isolated historic archaeological feature was identified within the Edison Neighborhoods planning subarea of the DNCP. The Fresno Block 1052 Concrete Pad is a structural feature thought to correspond with an early 20th century backyard "Kitchen" indicated on historic maps. Backyard kitchens in this section of Fresno are generally associated with occupation by members of the Volga German community. This feature and related subsurface deposits in the vicinity have not yet been recorded and could therefore be damaged or destroyed should the proposed project be implemented.

Potential Project Impacts

Implementation of the FCSP/DNCP has the potential to damage or destroy as-yet unrecorded subsurface deposits on these parcels identified as archaeologically sensitive. Potential impacts to historic archaeological resources are characterized below by DNCP Subarea or FCSP District.

DNCP Planning Areas

Jane Addams Neighborhoods

The DNCP envisions infilling the Jane Addams Neighborhoods planning area over time, while retaining its informal agricultural character. Among other actions, it would also make Jane Addams Neighborhoods more self-sufficient through the introduction of neighborhood shopping centers. These actions could potentially impact as-yet unidentified archaeological resources.

Edison Neighborhoods

Under the DNCP, vacant neighborhood parcels within the Edison Neighborhoods, such as those west of SR-99, would be infilled with "house-scaled, pedestrian-oriented buildings such as houses, duplexes, triplexes, and 'granny flats,'" with "'more intense building types' developed along Fresno Street." Implementation of the DNCP has the potential to impact the Block 1052 Isolate site, identified by these investigations within the Edison Neighborhoods planning area, along with other, yet-to-be-discovered archaeological resources.

Lowell Neighborhood

The DNCP calls for older building stock within the Lowell Neighborhood to be restored. Vacant parcels would be infilled with "house-scaled, pedestrian-oriented buildings such as houses, duplexes, triplexes, and 'granny flats,'" and "commercial and mixed-use buildings with parking behind or on the

street." These actions have the potential to impact as-yet unidentified archaeological resources within this planning area.

Jefferson Neighborhood

As within the Lowell Neighborhoods planning area, the DNCP envisions older building stock in the Jefferson Neighborhood being restored and vacant parcels infilled with house-scaled, pedestrian-oriented buildings. A new neighborhood shopping center with mixed-use, multi-story buildings would also be developed. Archaeological resources as yet unidentified could be impacted by these efforts.

Southeast Neighborhood.

Under the DNCP, new neighborhood-serving commercial development may be built on principal intersections along the corridors within the Southeast Neighborhoods to create neighborhood centers. This development has the potential to impact yet to be discovered archaeological resources within the planning area.

South Van Ness

Construction activity associated with the adaptive reuse of pre-World War II brick warehouses as commercial, retail, residential, and mixed-use projects within the South Van Ness planning area, as proposed by the DNCP, has the potential to impact as-yet undiscovered archaeological resources within the subarea.

Downtown

Potential impacts to archaeological resources within the Downtown planning area are generally associated with the extensive landscaping activity proposed for the planning area under the DNCP.

FCSP Subareas

Fulton District

Within this Subarea, the FCSP would "prioritize adaptive reuse of Fresno's unique, older buildings, including those listed on the Local, State, and National historic registers" and "infill vacant land rather than tearing down distinctive, older buildings . . . ." These activities have a potential to impact as-yet unidentified archaeological resources within the Fulton District.

Mural District

Of specific concern for archaeological resources, within the Mural District the FCSP proposes to introduce mixed use development and "adaptively reuse buildings along Van Ness Avenue and Fulton Street." These activities have a potential to impact as-yet unidentified archaeological resources.

Civic Center

Within the Civic Center, the FCSP proposes landscaping Mariposa, Merced, Fresno, Tulare, and Kern Streets to direct pedestrian activity toward Fulton Street. Landscaping activity has the potential to impact as-yet unidentified archaeological resources at the building edge areas within the Civic Center.

South Stadium

FCSP goals for the District include its transformation into "a mixed-use district that introduces a diversity of new uses" while also revitalizing and reusing the existing older buildings that currently line Fulton Street. These adaptive reuse and redevelopment activities carry the potential to impact archaeological resources yet to be recorded.

Chinatown

The FCSP proposes to "infill Chinatown's many vacant lots with sensitively scaled, mixed-use, pedestrian-friendly buildings . . . and establish F Street as the districts new main street." The infilling of vacant lots and associated reuse of existing buildings has the potential to impact known and yet to be discovered archaeological resources.

Armenian Town/Convention Center

Within the Armenian Town Subarea, the intention of the FCSP is to "transform this area into a walkable and bikeable mixed-use place by infilling vacant parcels with pedestrian-friendly, mixed use buildings and also introduce larger office buildings." These actions may result in impact to as-yet unidentified archaeological resources.

Divisadero Triangle

As in the Armenian Town Subarea, the FCSP would transform the Divisadero Triangle into "a walkable mixed-use place by infilling vacant parcels with shopper-friendly buildings." Another goal is to "consolidate and relocate isolated older buildings from throughout Downtown within the Divisadero Triangle." These actions may result in impact to as-yet unidentified archaeological resources.

The proposed Fulton Corridor Specific Plan and Downtown Neighborhoods Community Plan will result in new development on vacant parcels and surface parking lots, as well as new development and redevelopment at underutilized sites. As described above, the Fresno Fulton Corridor Specific Plan/Downtown Neighborhoods Community Plan encompasses a wide range of historic land uses and includes areas that are highly sensitive for historic archaeological resources. These resources are likely to be found in a buried context within areas that have been subject to considerable long-term historic development. Future demolition and construction activities that require excavations involving the removal of foundations, excavations into previously undisturbed soils, or other activities that involve excavation or grading in areas of undisturbed soils or early historical development could result in the potential for significant impacts on historic archaeological resources.

As discussed above, the potential for impacts to historic archaeological resources exists within all subareas of both the FCSP and DNCP. With regard to potential impacts, the greater the number of intensity or development projects in the area, the greater the chance for impacts on subsurface resources. As such, those subareas with a greater density of vacant or underutilized parcels, typically also the subareas with earlier historical development, would possess a greater potential for impacts on archaeological resources. The loss of historic archaeological resources as a result of parcel clearance or development activity within any of the plan areas would result in a potentially significant impact.

Cumulative Impact Analysis

Future development in the vicinity of the FCSP and DNCP areas could result in impacts to historic archaeological resources. As described above, many potential cultural resources within the proposed FCSP/DNCP areas have likely been destroyed or have lost integrity in the past due to unmonitored excavation and grading activities. To the extent that other resources with similar cultural value are lost as a result of these activities, a cumulative impact on cultural resources would occur. Additional losses attributable to the proposed DNCP, FCSP, and DDC would contribute to this impact. In addition, construction activities could result in potential significant impacts to unknown buried historical resources. Development within the Planning Area as well as within the greater City of Fresno could result in significant impacts to historical resources. Such losses, which as described above are considered potentially significant project impacts, are also considered potentially significant in a cumulative context.

Level of Significance Before Mitigation

Project Specific

Potentially significant impact.

Cumulative

Potentially significant impact.

Mitigation Measures

The following mitigation measures were included in the MEIR and remain applicable to this project:

Project-specific

MM CUL-1 In accordance with Objective HCR-2 (specifically HCR-2-a through HCR-2-c) of the Fresno General Plan, and in accordance with DNCP Chapter 6 Goal 6.1, all specific development projects within the DNCP, FCSP, and DDC should undergo a standard Cultural Resources Assessment, Archaeological Resource Assessment, Historic Property Evaluation, or equivalent Phase I review.

- This CEQA-level evaluation should include, at minimum, a CHRIS records search for the project area and an appropriate search radius, a historical map/aerial photography and literature review for the project area, a pedestrian survey to identify specific historic-age structures within the project area, and any subsequent building/structure/object evaluations. The report should also address any project-specific archaeological sensitivity determinations and additional project-specific proposed mitigation measures, as necessary.
- Any newly recorded prehistoric or historic resources should be evaluated for significance and potential standing with the CRHR or NRHP, as necessary. Eligibility determinations and proposed mitigation measures should be summarized in the Phase I report.
- To ensure that state and local historic resources databases are updated with new findings, the appropriate Department of Parks and Recreation (DPR) forms are

required to be completed for any newly recorded resources and submitted to the CHRIS Information Center with the completed Phase I report.
- Completed Phase I reports should be submitted to the City for incorporation into their local databases.

MM CUL-2 In accordance with Objective HCR-3 (specifically HCR-3-a) of the Fresno General Plan, and in accordance with DNCP Chapter 6 Goal 6.1 (specifically Policy 6.2.1 through 6.2.7), all efforts should be made (within appropriate safest standards)to preserve, rehabilitate, and re-use historic-age structures (whether determined eligible or not).

MM CUL-3 Subsurface excavations or mass grading for new developments within areas determined to have moderate to high archaeological sensitivity (whether in this Specific Plan or in subsequent Phase I reports) should be monitored by a City-approved archaeologist.

MM CUL-4 If previously unknown cultural resources are encountered during grading activities, construction shall stop in the immediate vicinity of the find and an archaeologist shall be consulted to determine whether the resource requires further study. The qualified archaeologist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to excavation of the finds and evaluation of the finds in accordance with Section 15064.5 of the CEQA Guidelines and the City's Historic Preservation Ordinance.

- Potentially significant cultural resources consist of but are not limited to stone, bone, fossils, wood, or shell artifacts or features, including hearths, structural remains, or historic dumpsites. Any previously undiscovered resources found during construction within the project area should be recorded on appropriate Department of Parks and Recreation (DPR) forms and evaluated for significance in terms of CEQA criteria.
- If the resources are determined to be unique historical resources as defined under Section 15064.5 of the CEQA Guidelines, measures shall be identified by the archaeologist and recommended to the Lead Agency. Appropriate measures for significant resources could include avoidance or capping; incorporation of the site in green space, parks, or open space; or data recovery excavations of the finds.
- No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any historical artifacts recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.

Cumulative

Implementation of Mitigation Measure CUL-1 through CUL-4 is required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Archaeological Resources

Impact CUL-2: The project could cause a substantial adverse change in the significance of a prehistoric archaeological resource pursuant to Section 15064.5.

Project-specific Impact Analysis

Prehistoric archaeological resources are those cultural resources deposited before Europeans established a Franciscan Mission in California (1769) and include any deposits, features, or isolated artifacts. Under PRC 21083.2(h), prehistoric archaeological resources can be divided into two classes, unique and non-unique. Unique resources must be treated as if they are significant and avoidance of those resources is the first choice, while non-unique resources do not meet criteria in 21083.2(g) and therefore need not be avoided under CEQA Guidelines.

The records search conducted by Greenwood and Associates did not identify any previously recorded prehistoric archaeological resources within the project area or a 0.25-mile search radius. However, as there have been few large-scale pedestrian surveys within the project area, and no recorded subsurface testing, this is not an accurate determination of archaeological sensitivity within the region. The region, and the project area itself, contains several geological features that would have been ideal for prehistoric temporary or seasonal encampments.

The northern boundary of the DNCP is several miles from the banks of the San Joaquin River; therefore, no impacts would occur to resources in the vicinity of the river. However, additional sources of fresh water, such as creeks and tributaries, may have permeated the project area in prehistoric times. As such, it is possible that grading and construction activities may uncover previously unrecorded archaeological resources.

Cumulative Impact Analysis

As described above, future development in the vicinity of the FCSP and DNCP areas could result in impacts to previously undiscovered archaeological resources, resulting in a potential cumulatively significant impact when considered in conjunction with other cumulative development projects.

Level of Significance Before Mitigation

Project Specific

Potentially significant impact.

Cumulative

Potentially significant impact.

Mitigation Measures

Mitigation Measure CUL-1 is required in order to assess the prehistoric archaeological sensitivity of specific project developments. If no previously recorded prehistoric resources are identified and no additional mitigation measures re proposed in the Phase I investigation, Mitigation Measure CUL-4 is required to address potential inadvertent finds.

In addition to Mitigation Measure CUL-1 and CUL-4, the following mitigation measures, which were included in the MEIR and remain applicable to this project, are also required:

MM CUL-5 Monitoring by a qualified professional archaeologist shall be conducted during any ground-disturbing activities in the vicinity of the Fresno Chinatown Block 51 Site, Fresno Block 534 Site, and the Block 1052 Isolate, which were identified by the current investigations. ("Vicinity" is defined here as lying within 300 feet of the identified site boundaries.) These are presently the only archaeological sites recorded within the FCSP/DNCP areas.

MM CUL-6 Ground-disturbing activities shall also be monitored in the vicinity of any archaeological sites identified in the future, as follows:

- A qualified professional archaeologist and a Native American representative shall monitor any ground-disturbing activities in the vicinity of known archaeological sites. An archaeological monitoring plan shall be developed in accordance with professional standards by an archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards for Archaeology. The monitors will ensure that any portions of previously identified significant resources are avoided and protected. In addition, they will identify any new cultural resources encountered during ground-disturbing activities. If potentially important cultural resources are discovered, the archaeologist will immediately divert such activity within 100 feet of the find, or a distance determined to be appropriate. The potential significance of the find will be assessed and mitigation measures formulated, if warranted. Appropriate mitigation may include avoidance of the resource, testing, and/or data recovery. Ground disturbance in the area of suspended activity shall not recommence until authorized by the archaeologist.

  Upon completion of the monitoring, an archaeological report will be prepared for the City in accordance with professional standards. A copy of the report will be submitted to the SSJV Information Center. Provisions will be made for curation of any significant cultural materials recovered.

Cumulative

Implementation of Mitigation Measure CUL-1, as well as Mitigation Measures CUL-4, CUL-5, and CUL-6 are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Unique Paleontological Resource/Site or Unique Geologic Feature

Impact CUL-3: The project could directly or indirectly destroy a unique paleontological resource or site or unique geologic feature.

Project-specific Impact Analysis

Based on a review of geologic maps of the Planning Area, there are two primary surficial deposits: (1) Pleistocene non-marine and (2) Quaternary non-marine fan deposits. The Pleistoscene non-marine deposits are considered to have a high potential sensitivity. The Quaternary non-marine deposits consist of Pleistocene-Holocene alluvial sediments. Since these deposits include Pleistocene sediments, they are also considered to have a high potential for sensitivity. Therefore, excavation and/or construction activities within the Planning Area that are associated with the DNCP, FCSP, and DDC have the potential to impact paleontological/geological resources during excavation and construction activities within previously undisturbed soils. Although many areas have been previously disturbed by farming activities or previous structural development, the project could include future development that will require excavations or construction within previously undisturbed soils. The impact to paleontological and geological resources is considered potentially significant.

Cumulative Impact Analysis

Future development in areas outside the plan areas, as well as other cumulative development, could result in impacts to paleontological/geological resources during excavation and/or construction activities within previously undisturbed soils. These potential impacts from cumulative development could be significant.

Level of Significance Before Mitigation

Project Specific

Potentially significant impact.

Cumulative

Potentially significant impact.

Mitigation Measures

The following mitigation measure was included in the MEIR and remains applicable to this project:

Project-specific

MM CUL-7 Subsequent to a preliminary City review of the project grading plans, if there is evidence that a project will include excavation or construction activities within

previously undisturbed soils, a field survey and literature search for unique paleontological/geological resources shall be conducted. The following procedures shall be followed:

- If unique paleontological/geological resources are not found during either the field survey or literature search, excavation and/or construction activities can commence. In the event that unique paleontological/geological resources are discovered during excavation and/or construction activities, construction shall stop in the immediate vicinity of the find and a qualified paleontologist shall be consulted to determine whether the resource requires further study. The qualified paleontologist shall make recommendations to the City on the measures that shall be implemented to protect the discovered resources, including but not limited to, excavation of the finds and evaluation of the finds. If the resources are determined to be significant, mitigation measures shall be identified by the monitor and recommended to the Lead Agency. Appropriate mitigation measures for significant resources could include avoidance or capping; incorporation of the site in green space, parks, or open space; or data recovery excavations of the finds. No further grading shall occur in the area of the discovery until the Lead Agency approves the measures to protect these resources. Any paleontological/geological resources recovered as a result of mitigation shall be provided to a City-approved institution or person who is capable of providing long-term preservation to allow future scientific study.
- If unique paleontological/geological resources are found during the field survey or literature review, the resources shall be inventoried and evaluated for significance. If the resources are found to be significant, mitigation measures shall be identified by the qualified paleontologist. Similar to above, appropriate mitigation measures for significant resources could include avoidance or capping; incorporation of the site in green space, parks, or open space; or data recovery excavations of the finds. In addition, appropriate mitigation for excavation and construction activities in the vicinity of the resources found during the field survey or literature review shall include a paleontological monitor. The monitoring period shall be determined by the qualified paleontologist. If additional paleontological/ geological resources are found during excavation and/or construction activities, the procedure identified above for the discovery of unknown resources shall be followed.

Cumulative

Implementation of Mitigation Measure CUL-3 is required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Human Remains

Impact CUL-4: The project would not disturb any human remains, including those interred outside of formal cemeteries.

Project-specific Impact Analysis

There is currently no evidence that the DNCP or FCSP plan areas contain prehistoric cemeteries or Native American cemeteries, however, various cemeteries are located throughout the City. The General Plan and Development Code Update identifies these cemeteries as Public Facilities on the Land Use Map. Future development within the plan areas would not impact existing cemeteries. Although there is no record of isolated human remains or unknown cemeteries, there is always a possibility that ground-disturbing activities associated with future development may uncover previously unknown buried human remains. In the event that human remains are encountered, this impact is considered potentially significant.

Cumulative Impact Analysis

Although no known prehistoric or Native American human remains have been identified within or in the vicinity of the plan areas, there is a possibility that ground-disturbing activities associated with cumulative development may uncover previously unknown buried human remains. The uncovering of human remains is considered a significant impact. Since there is a possibility for the project to uncover previously unknown buried human remains, the project's contribution to cumulative impacts on human remains would be potentially cumulatively considerable.

Level of Significance Before Mitigation

Project Specific

Potentially significant impact.

Cumulative

Potentially significant impact.

Mitigation Measures

The following mitigation measure was included in the MEIR and remains applicable to this project:

Project-specific

MM CUL-8 In the event that human remains are unearthed during excavation and grading activities of any future development project, all activity shall cease immediately. Pursuant to Health and Safety Code (HSC) Section 7050.5, no further disturbance shall occur until the County Coroner has made the necessary findings as to origin and disposition pursuant to PRC Section 5097.98(a). If the remains are determined to be of Native American descent, the coroner shall within 24 hours notify the Native American Heritage Commission (NAHC). The NAHC shall then contact the most likely descendent of the deceased Native American, who shall then serve as the consultant on how to proceed with the remains. Pursuant to PRC Section 5097.98(b), upon the discovery of Native American remains, the landowner shall ensure that the immediate vicinity, according to generally accepted cultural or

archaeological standards or practices, where the Native American human remains are located is not damaged or disturbed by further development activity until the landowner has discussed and conferred with the most likely descendants regarding their recommendations, if applicable, taking into account the possibility of multiple human remains. The landowner shall discuss and confer with the descendants all reasonable options regarding the descendants' preferences for treatment.

Cumulative

Implementation of Mitigation Measure CUL-4 is required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

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5.6 - Geology and Soils

5.6.1 - Introduction

Purpose

The purpose of this section is to identify the existing geology and soils setting and potential impacts resulting from the resulting from implementation of the Downtown Neighborhoods Community Plan (DNCP), the Fulton Corridor Specific Plan (FCSP), and the Downtown Development Code (DDC). Information in this section was derived from the following sources:

- Fresno General Plan and accompanying EIR. December 2014.
- Downtown Neighborhoods Community Plan. 2016. The complete report is contained in Appendix A.
- Fulton Corridor Specific Plan. 2016. The complete report is contained in Appendix B.
- Downtown Development Code. 2016. The complete report is contained in Appendix C.
- Comments received in response to the Notice of Preparation. These comments are summarized in Section 1, Introduction, of this Draft EIR. Copies of these comments are contained in Appendix D.
- Comments made during the public scoping meeting. These comments are summarized in Section 1, Introduction, of this Draft EIR. Copies of these comments are contained in Appendix D.

5.6.2 - Environmental Setting

The following information is provided in accordance with CEQA Guidelines Section 15125. The environmental setting discussion provides a baseline discussion of the existing geologic conditions within the DNCP and FCSP areas.

Study Area for Project Impacts

The study area for project impacts related to geology includes the DNCP and FCSP areas.

Study Area for Cumulative Impacts

The study area for the analysis of cumulative impacts is the City of Fresno.

The DNCP area, including the FCSP area, is located along the east margin of the southern San Joaquin Valley portion of the Great Valley Geomorphic Province of California. The San Joaquin Valley is bordered to the north by the Sacramento Valley portion of the Great Valley, to the east by the Sierra Nevada, to the west by the Coast Ranges, and to the south by the Transverse Ranges. The San Joaquin sedimentary basin is separated from the Sacramento basin to the north by the buried Stockton arch and associated Stockton Fault. The 450-mile-long Great Valley is an asymmetric structural trough that has been filled with a prism of Mesozoic and Cenozoic sediments up to 5 miles thick.

The Sierra Nevada Mountains, located east of the San Joaquin Valley, is gently southwesterly tilted fault block consisting of igneous and metamorphic rocks of pre-Tertiary age that form the basement beneath the San Joaquin Valley. The Coast Ranges, located west of the San Joaquin Valley, consist of folded and faulted sedimentary and metasedimentary rocks of Mesozoic and Cenozoic age.

The San Joaquin River and the Kings River are the principal rivers in the area. Alluvial fans formed by these rivers are the predominant geomorphic features in the Fresno area. The DNCP and FCSP areas are characterized by low alluvial fans and plains, which constitute a belt of coalescing alluvial fans of low relief between the dissected uplands, adjacent to the Sierra Nevada and the valley trough. According to the Limited Geologic Hazards Summary, the site is located in the "Compound Alluvial Fan of Intermittent Streams North of the Kings River Geomorphic Area." Recent alluvial fan deposits from streams emerging from highlands surrounding the Great Valley and Pleistocene non-marine sedimentary deposits (Riverbank Formation) composed of older alluvium and dissected fan deposits underlie the DNCP and FCSP areas.

The DNCP and FCSP areas are generally underlain by a homoclinal series of Cenozoic deposits dipping 4 to 6 degrees to the southwest toward the center of the San Joaquin Valley. The contact between the Cenozoic and basement rocks dips nearly 8 degrees southwest, or at a slightly greater inclination than does the on-lapping homoclinal Cenozoic sequence.

The Sierra Nevada and Coast Ranges are geologically young mountain ranges that possess active and potentially active fault zones. Major active faults and fault zones occur at some distance to the east, west, and south of the project site. Numerous active faults are present within the central Coast Ranges west of the site, including the San Andreas Fault (located approximately 65 miles west of the DNCP and FCSP areas). One of the nearest seismotectonic sources is the Great Valley Fault zone (Coast Ranges-Central Valley boundary zone), located approximately 39 miles west of the site. The Great Valley Fault zone is the geomorphic boundary of the Coast Ranges and the Central Valley and is underlain by a 300-mile-long, seismically active fold and thrust belt that has been the source of recent earthquakes, such as the 1983 magnitude 6.5 Coalinga and the 1985 magnitude 6.1 Kettleman Hills earthquakes.

Nearly the entire thrust system is concealed or "blind." The basal detachment of this thrust system dips at a shallow angle to the west. East-directed thrusting over ramps in the detachment and west-directed thrusting on backthrusts are responsible for the uplift along the eastern range front of the Coast Ranges. Based on earthquake focal mechanisms, movement on the thrust zone is generally perpendicular to the strike of the geomorphic boundary and trend of the San Andreas Fault system. Shortening along the geomorphic boundary is driven by a component of the Pacific-North American Plate motion that is normal to the plate boundary. The Great Valley Fault zone is considered the dominant seismic feature with potential for affecting the DNCP and FCSP areas.

Regional structure within the Western Sierra Nevada north of the DNCP and FCSP areas is complex and generally consists of blocks separated by steeply eastward-dipping, north and northwest striking reverse faults of the Foothills Fault System. The Foothills Fault system is located approximately 37 miles north of the subject site. Based on mapping and historical seismicity, the seismicity of the Sierra Nevada foothills has been generally considered low by the scientific community. However, on

August 1, 1975, a 5.7-magnitude earthquake occurred near Oroville within the northern Sierra Nevada. Surface rupture along the Cleveland Hill Fault (part of the Foothills Fault System) was associated with 1975 Oroville earthquake. As a result of this event, numerous studies were undertaken to further evaluate the seismicity of the Sierra Nevada foothills. Of particular note are the geologic and seismicity studies conducted by Woodward-Clyde Consultants (WCC) to evaluate the proposed Auburn Dam site. Based on these studies, WCC concluded that seismic events in the Sierra Nevada foothills are associated with very small, geologically infrequent, incremental displacements having minor geomorphic surface expression.

In addition, the eastern border of the southern San Joaquin Valley is cut by a series of enechelon range-front faults. These faults are mainly northwest-trending normal faults, down dropped to the west and with a near vertical dip. One of the range-front faults, the Clovis Fault, is mapped approximately 13 miles northeast of the DNCP and FCSP areas. These range-front faults have generally been considered inactive; however, a September 1973 magnitude 4.4 earthquake that occurred approximately 4.3 miles north of the DNCP and FCSP areas may be related to this fault system.

The Sierra Nevada and Owens Valley Fault Zones bound the eastern edge of the Sierra Nevada block nearly 85 miles east of the site.

Tensional forces resulting in normal faults are reported to be related to crustal stress relief in the southeast portion of the San Joaquin Valley. Numerous relatively short, normal faults traverse this region. Creep activity is the prominent mode of slip on those faults in this region that are active. These movements have continued on an intermittent basis from the early Miocene to Recent time. This faulting is directly related to and controls the accumulation of oil in several oil fields within the easterly portion of the valley. Most authors agree that current creep movements can be ascribed to subsidence promoted by extensive withdrawal of petroleum, and in some cases, groundwater. Those faults considered to be active in the southern valley are Kern Front and Pond Faults located at least 90 miles south of the DNCP and FCSP areas.

White Wolf Fault (responsible for a 1952 earthquake that caused extensive damage in the Bakersfield area) is located in the tectonically active Tehachapi Mountains at the southerly terminus of the valley, over 100 miles south of the DNCP and FCSP areas.

5.6.3 - Regulatory Setting

Federal

National Earthquake Hazards Reduction Program

The National Earthquake Hazards Reduction Program (NEHRP) was established by the U.S. Congress when it passed the Earthquake Hazards Reduction Act of 1977, Public Law 95–124. In establishing the NEHRP, Congress recognized that earthquake-related losses could be reduced through improved design and construction methods and practices, land use controls and redevelopment, prediction techniques and early-warning systems, coordinated emergency preparedness plans, and public education and involvement programs. The four basic goals remain unchanged:

- Develop effective practices and policies for earthquake loss reduction and accelerate their implementation.
- Improve techniques for reducing earthquake vulnerabilities of facilities and systems.
- Improve earthquake hazards identification and risk assessment methods, and their use.
- Improve the understanding of earthquakes and their effects.

Several key federal agencies contribute to earthquake mitigation efforts. There are four primary NEHRP agencies:

- National Institute of Standards and Technology of the Department of Commerce
- National Science Foundation
- US Geological Survey (USGS) of the Department of the Interior
- Federal Emergency Management Agency (FEMA) of the Department of Homeland Security

Implementation of NEHRP priorities is accomplished primarily through original research, publications, and recommendations to assist and guide state, regional, and local agencies in the development of plans and policies to promote safety and emergency planning.

State

California Building Code

The California Building Code (CBC), which is certified in the California Code of Regulations, Title 24, Part 2, is a portion of the California Building Standards Code. (Title 24 is assigned to the California Building Standards Commission, which by law is responsible for coordinating all building standards.)

Alquist-Priolo Earthquake Fault Zone Act

The Alquist-Priolo Earthquake Fault Zone Act of 1972 requires that special geologic studies be conducted to locate and assess any active fault traces in and around known active fault areas before development of structures for human occupancy.

Seismic Hazards Mapping Act of 1990

The Seismic Hazards Mapping Act of 1990 addresses non-surface fault rupture earthquake hazards, including liquefaction and seismically induced landslides.

Local Regulations

Fresno General Plan

Objectives and policies of the City's General Plan regarding geologic hazards are listed below.

- **Objective NS-2:** Minimize risks of property damage and personal injury posed by geologic and seismic risks.
- **Policy NS-2:** Soil Analysis Requirement. Identify areas with potential geologic and/or soils hazards, and require development in these areas to conduct a soil analysis and mitigation plan by a registered civil engineer (or engineering geologist specializing in soil geology) prior to

allowing on-site drainage or disposal for wastewater, stormwater runoff, or swimming pool/spa water.

5.6.4 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether impacts to geology and soils are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:
   i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.
   ii. Strong seismic ground shaking?
   iii. Seismic-related ground failure, including liquefaction?
   iv. Landslides?

b) Result in substantial soil erosion or the loss of topsoil?

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

e) Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater?

5.6.5 - Impact Analysis, Mitigation Measures, and Level of Significance After Mitigation

Earthquakes

Impact GEO-1: **The project would not expose people or structures to potential substantial adverse effects, including the risk of loss, injury or death involving:**
- **i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault. Refer to Division of Mines and Geology Special Publication 42.**
- **ii) Strong seismic ground shaking.**
- **iii) Seismic-related ground failure, including liquefaction.**
- **iv) Landslides.**

Project-specific Impact Analysis

Rupture of a Known Earthquake Fault—No impact. According to the Limited Geologic Hazards Summary prepared for the DNCP and FCSP, the project site does not lie on a Fault Rupture Hazard

Zones Map. The nearest zoned fault is a portion of the Ortigalita Fault, located approximately 58 miles west of the DNCP and FCSP areas. Therefore, no impacts related to rupture from a known earthquake fault would result.

Strong Seismic Ground Shaking—Less than significant impact. According to the Limited Geologic Hazards Summary prepared for the DNCP and FCSP, the area encompassed within both planning areas has historically experienced a low-to-moderate degree of seismicity. The report reviewed historic earthquakes and concluded that no events exceeding magnitude 6.0 occurred within 40 miles of the planning area, representing the approximate threshold for potential damage related to seismically induced ground shaking. Moreover, the magnitude 6.7 event that occurred in May 1983 approximately 50 miles southwest of the planning areas did not result in any structural or architectural damage. Therefore, impacts from seismic ground shaking would result in less than significant impacts.

Seismic-Related Ground Failure and Liquefaction—Less than significant impact. According to the Limited Geologic Hazards Summary prepared for the DNCP and FCSP, based on the nature of the subsurface materials, the relatively level site conditions, and the low-to-moderate degree of seismicity, seismically induced settlement would result in a less than significant geologic hazard. Based on these findings, it appears that the potential for soil liquefaction within the project site is very low, due to the type of soils anticipated to be within the upper layer, the relatively low levels of expected groundshaking at the site, and the lack of groundwater. Therefore, impacts associated with seismic ground shaking and liquefaction would result in less than significant impacts.

Landslides—No impact. According to the Limited Geologic Hazards Summary prepared for the DNCP and FCSP, the relatively level nature of the planning area would not result in the potential for landslides, and no impacts would result.

Cumulative Impact Analysis

Rupture of a Known Earthquake Fault—Less than significant impact. As discussed in the Master EIR (MEIR) for the City's General Plan, since the nearest zoned fault is located approximately 48 miles from the planning areas, cumulative development within the City of Fresno would experience less than significant fault rupture impacts. Future development within the City would not be exposed to a zoned fault, and fault ruptures are site-specific; consequently, the implementation of the proposed project would not contribute to cumulative impacts associated with a fault rupture. Therefore, the project's contribution to fault rupture impacts would be less than cumulatively considerable and less than cumulatively significant.

Strong Seismic Ground Shaking—Less than significant impact. Future development within the City of Fresno has already been analyzed and accounted for in the MEIR for the City's General Plan. As discussed in the MEIR, the implementation of cumulative projects would not increase the potential for impacts associated with seismic ground shaking. Cumulative projects would be exposed to similar ground shaking during seismic events but would not increase the potential for impacts to occur within the City. Cumulative projects will also be required to comply with state and federal regulations, including the CBC, which would reduce potential seismic ground shaking impacts to less than significant levels. Since implementation of the DNCP and FCSP would not contribute to, or

increase the potential for, cumulative seismic ground shaking impacts, the project's contribution to cumulative impacts would be less than cumulatively considerable and therefore less than cumulatively significant.

Seismic-Related Ground Failure and Liquefaction—Less than significant impact. Future development within the City of Fresno has already been analyzed and accounted for in the MEIR for the City's General Plan. As discussed in the MEIR, the implementation of cumulative projects could expose people or structures to seismic-related ground failures such as liquefaction and lateral spread; however, cumulative projects will also be required to comply with the same federal, state, and local regulations. Adherence to these standards would reduce potential seismic-related ground failure impacts associated with cumulative development to less than significant levels. Since the proposed project would also result in less than significant impacts, the project's contribution to effects associated with seismic-related ground failure would be less than cumulatively considerable and thus less than cumulatively significant.

Landslides—No Impact. Future development within the City of Fresno has already been analyzed and accounted for in the MEIR for the City's General Plan. As discussed in the MEIR, the implementation of cumulative projects could be proposed in areas immediately adjacent to the DNCP and FCSP plan areas, which are primarily relatively flat. There are areas elsewhere in the City that have steep hillsides, such as the areas adjacent to the San Joaquin River, or in areas near the slopes of unlined basins and canals. Cumulative projects will be required to adhere to federal and state regulations, including the foundation support and grading parameters of the CBC, as well as to the requirements of the City of Fresno Municipal Code. Adherence to these federal, state, and local requirements would ensure that potential landslide impacts from cumulative development remain less than significant. Since implementation of the General Plan Update would result in less than significant impacts pertaining to landslides, and because cumulative projects would also result in less than significant impacts pertaining to landslides, the project's contribution to cumulative landslide impacts would be less than cumulatively considerable, and therefore less than cumulatively significant.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Soil Erosion or Topsoil Loss

Impact GEO-2: The project would not result in substantial soil erosion or the loss of topsoil.

Project-specific Impact Analysis

The DNCP and FCSP planning areas are fully developed with urban land uses and infrastructure, with a small number of undeveloped parcels. Because the project would include grading, excavation, and other necessary ground-disturbing activities, the potential exists for soil erosion during construction activities. Because the proposed project would be required to comply with the mandatory obligations under the National Pollution Discharge Elimination System by preparing a Storm Water Pollution Prevention Program for construction activities, less than significant impacts would result.

The DNCP and FCSP planning areas are generally level and therefore are not subject to a high erosion potential that would result in down cutting, sheet wash, slumping, or bank failures from heavy rain events. Moreover, the proposed project does not propose significant changes in site elevations that would result in a high erosion potential. Therefore, less than significant impacts to loss of topsoil would result from project implementation.

Cumulative Impact Analysis

Future development within the City of Fresno has already been analyzed and accounted for in the MEIR for the City's General Plan. As discussed in the MEIR, the implementation of cumulative projects throughout the City would result in similar construction and operational erosion impacts and impacts to topsoil. However, individual cumulative projects would also be required to comply with mandatory regulations during construction and operation. The implementation of these regulations would reduce potential soil erosion and minimize the loss of topsoil associated with cumulative projects, thus ensuring that impacts to such resources remain less than significant. Since future development in accordance with the General Plan Update would also result in less than significant soil erosion and loss of topsoil impacts, the project's contribution to cumulative soil impacts would be less than cumulatively considerable and thus less than cumulatively significant.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Unstable Geologic Location

Impact GEO-3: **The project would not be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse.**

Program-Level Impact Analysis of the DNCP and FCSP

According to the Limited Geologic Hazards Summary prepared for DNCP and FCSP, the planning areas are not subject to subsidence resulting from fluid or petroleum withdrawal. According to the Limited Geologic Hazards Summary, based on the nature of the subsurface materials, the relatively level site conditions, and a low to moderate degree of seismicity, lateral spreading would not result in a significant geologic hazard. Refer to Impact GEO-1 for a discussion related to liquefaction and landslides. Therefore, the project would not be located on an unstable geologic unit or a geologic unit that would become unstable. Impacts would be less than significant impacts.

Cumulative Impact Analysis

As discussed in Impact GEO-3 above and Impact GEO-4 below, the project's contribution to cumulative liquefaction, lateral spreading, and landslides is less than cumulatively considerable. As discussed above, subsidence or collapse occurs in the southern part and west side of the San Joaquin Valley, where rainfall is sparse and groundwater recharge is minimal. Neither the DNCP nor the FCSP plan areas, nor the areas within 1 mile of the plan areas are subject to such subsidence or collapse. Since all projects must comply with the federal, state, and pertinent local regulations regarding structural stability, less than significant subsidence or collapse impacts would occur as cumulative development occurs. Since the proposed project would experience less than significant impacts associated with subsidence or collapse impacts and these potential impacts are site-specific, the project's contribution to cumulative subsidence or collapse is less than cumulatively considerable and thus less than cumulatively significant.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Expansive Soil

Impact GEO-4: The project would not be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property.

Program-Level Impact Analysis of the DNCP and FCSP

According to the Limited Geologic Hazards Summary prepared for DNCP and FCSP, the surface and near-surface soils observed consist of sandy silts, silty sands, sandy silt or silty sand with trace clay, and sands. These materials are considered to have a very low to moderate expansion potential. Therefore, impacts related to expansive soils would be less than significant.

Cumulative Impact Analysis

Cumulative projects could be associated with expansive soils. However, individual cumulative projects would be required to comply with the same mandatory federal and state regulations. Compliance with these regulations would reduce potential expansive soil impacts associated with cumulative projects to less than significant. Since implementation of the DNCP and FCSP would result in less than significant expansive soil impacts, the project's contribution to cumulative soil impacts would be less than cumulatively considerable and thus less than cumulatively significant.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Wastewater Disposal Systems

Impact GEO-5: The project would not have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater.

Program-Level Impact Analysis of the DNCP and FCSP

The project does not propose alternative wastewater disposal systems or septic tank wastewater disposal systems. Therefore, no impacts related to soils incapable of supporting wastewater systems would result from project implementation.

Cumulative Impact Analysis

Cumulative projects could propose to install septic tank systems in the future. While it is possible that soils in the vicinity of future cumulative projects that use septic systems could be incapable of adequately supporting the use of septic tanks, development under the DNCP and FCSP would not contribute to potential impacts on the soils. Since the proposed project would not involve the installation of new septic tanks, the implementation of the proposed project would not contribute to potential cumulative impacts related to soils supporting septic systems. Therefore, the proposed project would result in no cumulative impacts related to soils that are incapable of supporting septic systems.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

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5.7 - Greenhouse Gases

5.7.1 - Introduction

This section addresses the potential impacts to greenhouse gas emissions and local air quality associated with implementation of the project. Descriptions and analysis in this section are based on analysis performed by FirstCarbon Solutions in October 2015.

Sources

Information in this section is based on the following sources:

- Downtown Neighborhood Community Plan. June 2016. The complete report is contained in Appendix A.
- Fulton Corridor Specific Plan. May 2016. The complete report is contained in Appendix B.
- Downtown Development Code. June 2016. The complete report is contained in Appendix C.
- Greenhouse Gas Analysis, FirstCarbon Solutions, October 2015.
- Fresno General Plan and related Master EIR (MEIR 2014)

5.7.2 - Environmental Setting

Study Area for Project Impacts

The study area for project impacts regarding air quality consists of the DNCP and FCSP. However, the buildout of the DNCP and FCSP is the cumulative result of hundreds of separate projects requiring separate approvals that add to emissions generated from existing development. It should be noted that greenhouse gas impacts are inherently cumulative impacts.

Study Area for Cumulative Impacts

The study area for the analysis of cumulative greenhouse gas impacts is the State of California. This analysis will be based on a summary of projections approach as provided in Section 15130(b)(1)(B) of the CEQA Guidelines. The applicable projections include those provided by the State pursuant to AB 32 and the ARB Scoping Plan prepared to address AB 32 requirements and the City of Fresno Greenhouse Gas Reduction Plan (GHG Plan), which is based upon projected growth under General Plan buildout and SB 375 vehicle miles traveled assumptions.

Regional Setting and Overview

The City of Fresno is located in the County of Fresno in the San Joaquin Valley Air Basin (Air Basin). The Air Basin consists of Kings, Madera, San Joaquin, Merced, Stanislaus, and Fresno counties, as well as a portion of Kern County. The local agency with jurisdiction over air quality in the Basin is the San Joaquin Valley Air Pollution Control District (the District or SJVAPCD).

Gases that trap heat in the atmosphere are referred to as greenhouse gases. The effect is analogous to the way a greenhouse retains heat. Common greenhouse gases include water vapor, carbon

dioxide, methane, nitrous oxides, chlorofluorocarbons, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, ozone, and aerosols. Natural processes and human activities emit greenhouse gases. The presence of greenhouse gases in the atmosphere affects the earth's temperature. It is believed that emissions from human activities, such as electricity production and vehicle use, have elevated the concentration of these gases in the atmosphere beyond the level of naturally occurring concentrations.

Climate change is driven by forcings and feedbacks. Radiative forcing is the difference between the incoming energy and outgoing energy in the climate system. Positive forcing tends to warm the surface while negative forcing tends to cool it. Radiative forcing values are typically expressed in watts per square meter. A feedback is a climate process that can strengthen or weaken a forcing. For example, when ice or snow melts, it reveals darker land underneath which absorbs more radiation and causes more warming. The global warming potential is the potential of a gas or aerosol to trap heat in the atmosphere. The global warming potential of a gas is essentially a measurement of the radiative forcing of a greenhouse gas compared with the reference gas, carbon dioxide.

Individual greenhouse gas compounds have varying global warming potential and atmospheric lifetimes. Carbon dioxide, the reference gas for global warming potential, has a global warming potential of one. The global warming potential of a greenhouse gas is a measure of how much a given mass of a greenhouse gas is estimated to contribute to global warming. To describe how much global warming a given type and amount of greenhouse gas may cause, the carbon dioxide equivalent is used. The calculation of the carbon dioxide equivalent is a consistent methodology for comparing greenhouse gas emissions, since it normalizes various greenhouse gas emissions to a consistent reference gas, carbon dioxide. For example, methane's warming potential of 21 indicates that methane has 21 times greater warming effect than carbon dioxide on a molecule-per-molecule basis. A carbon dioxide equivalent is the mass emissions of an individual greenhouse gas multiplied by its global warming potential. Greenhouse gases defined by Assembly Bill (AB) 32 (see the Climate Change Regulatory Environment section for a description of AB 32) include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. They are described in Table 5.7-1. A seventh greenhouse gas, nitrogen trifluoride (NF_3) was added to Health and Safety Code section 38505(g)(7) as a greenhouse gas of concern. California's latest emission inventory does not include NF_3.; however, future state inventories will likely include it. This chemical is used in electronics manufacture for semiconductors and liquid crystal displays and has a high global warming potential of 17,200. Little or no manufacturing using NF_3 is expected in Fresno.

Table 5.7-1: Description of Greenhouse Gases

Greenhouse Gas	Description and Physical Properties	Sources
Nitrous oxide	Nitrous oxide (laughing gas) is a colorless greenhouse gas. It has a lifetime of 114 years. Its global warming potential is 310.	Microbial processes in soil and water, fuel combustion, and industrial processes.
Methane	Methane is a flammable gas and is the main component of natural gas. It has a lifetime of 12 years. Its global warming potential is 21.	Methane is extracted from geological deposits (natural gas fields). Other sources are landfills, fermentation of manure, and decay of organic matter.

Table 5.7-1 (cont.): Description of Greenhouse Gases

Greenhouse Gas	Description and Physical Properties	Sources
Carbon dioxide	Carbon dioxide (CO_2) is an odorless, colorless, natural greenhouse gas. Carbon dioxide's global warming potential is 1. The concentration in 2005 was 379 parts per million (ppm), which is an increase of about 1.4 ppm per year since 1960.	Natural sources include decomposition of dead organic matter; respiration of bacteria, plants, animals, and fungus; evaporation from oceans; and volcanic outgassing. Anthropogenic sources are from burning coal, oil, natural gas, and wood.
Chlorofluorocarbons	These are gases formed synthetically by replacing all hydrogen atoms in methane or ethane with chlorine and/or fluorine atoms. They are nontoxic, nonflammable, insoluble, and chemically unreactive in the troposphere (the level of air at the earth's surface). Global warming potentials range from 3,800 to 8,100.	Chlorofluorocarbons were synthesized in 1928 for use as refrigerants, aerosol propellants, and cleaning solvents. They destroy stratospheric ozone. The Montreal Protocol on Substances that Deplete the Ozone Layer prohibited their production in 1987.
Hydrofluorocarbons	Hydrofluorocarbons are a group of greenhouse gases containing carbon, chlorine, and at least one hydrogen atom. Global warming potentials range from 140 to 11,700.	Hydrofluorocarbons are synthetic manmade chemicals used as a substitute for chlorofluorocarbons in applications such as automobile air conditioners and refrigerants.
Perfluorocarbons	Perfluorocarbons have stable molecular structures and only break down by ultraviolet rays about 60 kilometers above Earth's surface. Because of this, they have long lifetimes, between 10,000 and 50,000 years. Global warming potentials range from 6,500 to 9,200.	Two main sources of perfluorocarbons are primary aluminum production and semiconductor manufacturing.
Sulfur hexafluoride	Sulfur hexafluoride is an inorganic, odorless, colorless, and nontoxic, nonflammable gas. It has a lifetime of 3,200 years. It has a high global warming potential, 23,900.	This gas is man-made and used for insulation in electric power transmission equipment, in the magnesium industry, in semiconductor manufacturing, and as a tracer gas.
Sources: Compiled from a variety of sources, primarily Intergovernmental Panel on Climate Change 2007a and 2007b.		

Other greenhouse gases include water vapor, ozone, and aerosols. Water vapor is an important component of our climate system and is not regulated. Ozone and aerosols are short-lived greenhouse gases; global warming potentials for short-lived greenhouse gases are not defined by the Intergovernmental Panel on Climate Change (IPCC). Aerosols can remain suspended in the atmosphere for about a week and can warm the atmosphere by absorbing heat, and can cool the atmosphere by reflecting light.

Short-Lived Greenhouse Gases

The State has begun the process of addressing pollutants referred to as short-lived climate pollutants. According to ARB, short-lived climate pollutants are powerful climate forcers that remain in the atmosphere for a much shorter period of time than longer-lived climate pollutants, such as carbon dioxide (CO_2). Their relative potency, when measured in terms of how they heat the atmosphere, can be tens, hundreds, or even thousands of times greater than that of CO_2. Reducing these emissions can make an immediate beneficial impact on climate change (ARB 2015a). Senate Bill 605, approved by the Governor on September 14, 2014 requires the ARB to complete a comprehensive strategy to reduce emissions of short-lived climate pollutants by January 1, 2016. ARB will complete an emission inventory of these pollutants, identify research needs, identify existing and potential new control measures that offer co-benefits, and coordinate with other state agencies and districts to develop measures. The draft emission inventory and strategy were released on September 30, 2015. The ARB released the Proposed Short Lived Climate Pollutant Strategy on April 11, 2016. Public comment ended May 26, 2016.

The short-lived climate pollutants include three main components: black carbon, fluorinated gases, and methane. Fluorinated gases and methane are described in Table 3.3-3 and are already included in the California GHG inventory. Black carbon has not been included in past GHG inventories; however, ARB will include it in its comprehensive strategy (ARB 2015a).

Ozone is another short-lived climate pollutant that will be part of the strategy. Ozone affects evaporation rates, cloud formation, and precipitation levels. Ozone is not directly emitted so its precursor emissions—volatile organic compounds (VOC) and oxides of nitrogen (NO_x) on a regional scale and CH_4 on a hemispheric scale—will be subject of the strategy (ARB 2015b). Black carbon is a component of fine particulate matter. Black carbon is formed by incomplete combustion of fossil fuels, biofuels, and biomass. Sources of black carbon within a jurisdiction may include exhaust from diesel trucks, vehicles, and equipment, as well as smoke from biogenic combustion. Biogenic combustion sources of black carbon include the burning of biofuels used for transportation, the burning of biomass for electricity generation and heating such as fireplaces, prescribed burning of agricultural residue, and natural and unnatural wildfires. Black carbon is not a gas but an aerosol—particles or liquid droplets suspended in air. Black carbon only remains in the atmosphere for days to weeks, as opposed to other greenhouse gases that can remain in the atmosphere for years. Black carbon can be deposited on snow, where it absorbs sunlight, reduces sunlight reflectivity, and hastens snowmelt. Direct effects include absorbing incoming and outgoing radiation; indirectly, black carbon can also affect cloud reflectivity, precipitation, and surface dimming (cooling).

Although there could be health effects resulting from changes in the climate and the consequences that climate change can bring about, inhalation of greenhouse gases at levels currently in the atmosphere would not result in adverse health effects, with the exception of ozone and aerosols (particulate matter). The potential health effects of ozone and particulate matter are discussed in criteria pollutant analyses in the Fresno General Plan Master Environmental Impact Report Air Quality Section. At very high indoor concentrations (not at levels existing outside), carbon dioxide, methane, sulfur hexafluoride, and some chlorofluorocarbons can cause suffocation, as the gases can

displace oxygen (Centers for Disease Control and Prevention 2010, Occupational Safety and Health Administration 2003).

Global warming potentials for black carbon were not defined by the IPCC in its Fourth Assessment Report. The ARB has identified a global warming potential of 3,200 using a 20-year time horizon and 900 using a 100-year time horizon from the IPCC Fifth Assessment. Sources of black carbon are already regulated by ARB, and by air district criteria pollutant and toxic regulations that control fine particulate emissions from diesel engines and other combustion sources (ARB 2015). Additional controls on the sources of black carbon specifically for their GHG impacts beyond those required for toxic and fine particulates are not likely to be needed.

Consequences of Climate Change in California

In California, climate change may result in consequences such as the following (from California Climate Change Center 2006 and Moser et al. 2009):

- **A reduction in the quality and supply of water from the Sierra snowpack.** If heat-trapping emissions continue unabated, more precipitation will fall as rain instead of snow, and the snow that does fall will melt earlier, reducing the Sierra Nevada spring snowpack by as much as 70 to 90 percent. This can lead to challenges in securing adequate water supplies. It can also lead to a potential reduction in hydropower.
- **Increased risk of large wildfires.** If rain increases as temperatures rise, wildfires in the grasslands and chaparral ecosystems of southern California are estimated to increase by approximately 30 percent toward the end of the 21st century because more winter rain will stimulate the growth of more plant "fuel" available to burn in the fall. In contrast, a hotter, drier climate could promote up to 90 percent more northern California fires by the end of the century by drying out and increasing the flammability of forest vegetation.
- **Reductions in the quality and quantity of certain agricultural products.** The crops and products likely to be adversely affected include wine grapes, fruit, nuts, and milk.
- **Exacerbation of air quality problems.** If temperatures rise to the medium warming range, there could be 75 to 85 percent more days with weather conducive to ozone formation in Los Angeles and the San Joaquin Valley, relative to today's conditions. This is more than twice the increase expected if rising temperatures remain in the lower warming range. This increase in air quality problems could result in an increase in asthma and other health-related problems.
- **A rise in sea levels resulting in the displacement of coastal businesses and residences.** During the past century, sea levels along California's coast have risen about seven inches. If emissions continue unabated and temperatures rise into the higher anticipated warming range, sea level is expected to rise an additional 22 to 35 inches by the end of the century. Elevations of this magnitude would inundate coastal areas with salt water, accelerate coastal erosion, threaten vital levees and inland water systems, and disrupt wetlands and natural habitats.

- **An increase temperature and extreme weather events.** Climate change is expected to lead to increases in the frequency, intensity, and duration of extreme heat events and heat waves in California. More heat waves can exacerbate chronic disease or heat-related illness.
- **A decrease in the health and productivity of California's forests.** Climate change can cause an increase in wildfires, an enhanced insect population, and establishment of non-native species.

Human Health Effects of GHG Emissions

The U.S. Global Change Research Program in its report, Global Climate Change Impacts in the U.S. (2009), has analyzed the degree to which climate change could impact public health.

Potential effects of climate change on public health include:

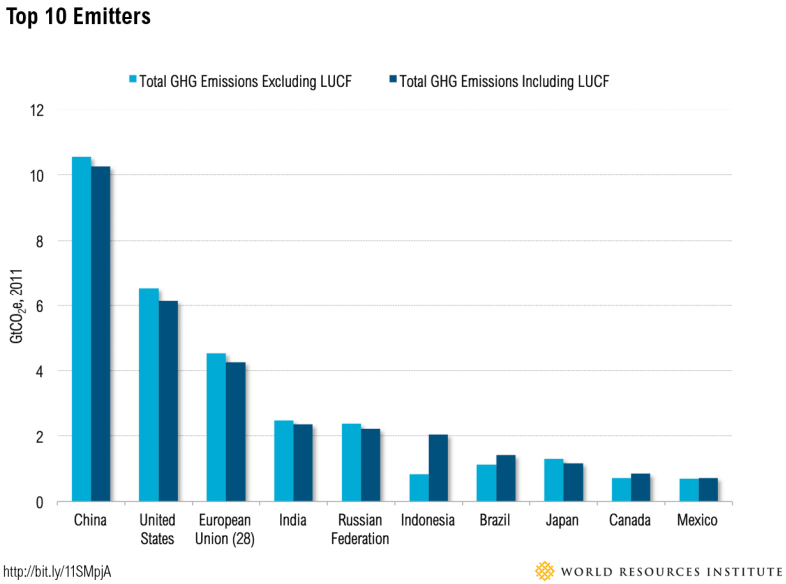
- Direct Temperature Effects: Climate change may directly affect human health through increases in average temperatures, which are predicted to increase the incidence of extreme heat and heat waves.
- Extreme Events: Climate change may affect the frequency and severity of extreme weather events, such as hurricanes and extreme heat and floods, which can be destructive to human health and well-being.
- Climate-Sensitive Diseases: Climate change may increase the risk of some infectious diseases, particularly those diseases that appear in warm areas and are spread by mosquitoes and other insects, such as malaria, dengue fever, yellow fever, and encephalitis.
- Air Quality: Respiratory disorders may be exacerbated by warming-induced increases in the frequency of smog (ground-level ozone) events and particulate air pollution (EPA 2009a).

Although there could be health effects resulting from changes in the climate and the consequences that can occur, inhalation of GHGs at levels currently in the atmosphere would not result in adverse health effects, with the exception of ozone and aerosols (particulate matter). The potential health effects of ozone and particulate matter are discussed in criteria pollutant analyses and are separately regulated. At very high indoor concentrations (not at levels existing outside), CO_2, CH_4, sulfur hexafluoride, and some chlorofluorocarbons can cause suffocation as the gases can displace oxygen. For example, outdoor concentrations of CO_2 are about 300 ppm and the Occupational Safety and Health Administration (OSHA) reference exposure level (REL) is a time weighted average of 5,000 ppm for an 8-hour work shift (CDC 2010 and OSHA 2003).

Emissions Inventories

An emissions inventory is a database that lists, by source, the amount of air pollutants discharged into the atmosphere of a geographic area during a given time period. Emissions worldwide were approximately 43,286 million metric tons of carbon dioxide equivalents ($MMTCO_2e$) in 2012. As shown in Figure 5.7-1, China was the largest GHG emitter with over 10 billion metric tons of CO_2e, and the United States was the second largest GHG emitter with over 6 billion metric tons of CO_2e (WRI 2014).

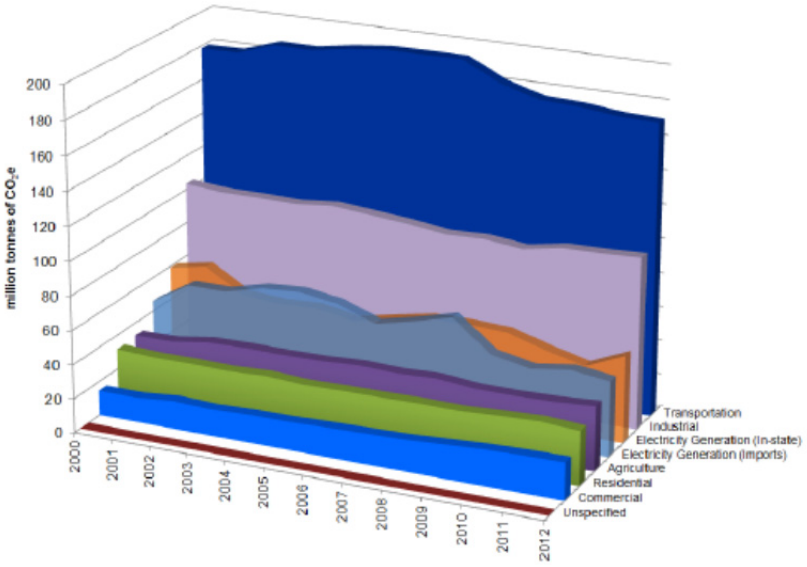
Figure 5.7-1: Greenhouse Gas Emissions Trends



Source: WRI 2014.

Figure 5.7-2 shows the contributors of GHG emissions in California between years 2000 and 2012 by economic sector. The main contributor was transportation. The second highest sector was industrial, which includes sources from refineries, general fuel use, oil and gas extraction, cement plants, and cogeneration heat output. ARB reported that California's GHG emissions inventory was 459 $MMTCO_2e$ in 2012 (ARB 2014a).

Figure 5.7-2: Greenhouse Gas Emission Trends by Sector in California



Source: ARB 2014a.

Local Emissions Inventory

The City of Fresno baseline inventory for 2010 from the Fresno Greenhouse Gas Reduction Plan is provided in Table 5.7-2.

Table 5.7-2: City of Fresno 2010 Baseline Emission Inventory

Sector	2010 ($MTCO_2e$/year)
Motor vehicles	1,795,666
Electricity—residential	263,134
Electricity—commercial	280,954
Natural gas—residential	362,832
Natural gas—commercial	394,417
Waste	123,945
Offroad equipment	1,051
Ozone depleting substance (ODS) substitutes	273,422
Total	3,495,422
Source: City of Fresno General Plan Update, Greenhouse Gas Reduction Plan, 2014.	

5.7.3 - Regulatory Setting

International

Climate change is a global issue involving greenhouse gas emissions from all around the world; therefore, countries such as the ones discussed below have made an effort to reduce greenhouse gases.

Intergovernmental Panel on Climate Change. In 1988, the United Nations and the World Meteorological Organization established the Intergovernmental Panel on Climate Change to assess the scientific, technical and socio-economic information relevant to understanding the scientific basis of risk of human-induced climate change, its potential impacts, and options for adaptation and mitigation.

United Nations Framework Convention on Climate Change (Convention). On March 21, 1994, the United States joined a number of countries around the world in signing the Convention. Under the Convention, governments gather and share information on greenhouse gas emissions, national policies, and best practices; launch national strategies for addressing greenhouse gas emissions and adapting to expected impacts, including the provision of financial and technological support to developing countries; and cooperate in preparing for adaptation to the impacts of climate change.

Kyoto Protocol. The Kyoto Protocol is an international agreement linked to the United Nations Framework Convention on Climate Change. The major feature of the Kyoto Protocol is that it sets binding targets for 37 industrialized countries and the European community for reducing greenhouse

gas emissions at average of 5 percent against 1990 levels over the 5-year period 2008–2012. The Convention (as discussed above) encouraged industrialized countries to stabilize emissions; however, the Protocol commits them to do so. Developed countries have contributed more emissions over the last 150 years; therefore, the Protocol places a heavier burden on developed nations under the principle of "common but differentiated responsibilities."

In 2001, President George W. Bush indicated that he would not submit the treaty to the U.S. Senate for ratification, which effectively ended American involvement in the Kyoto Protocol. In December 2009, international leaders met in Copenhagen to address the future of international climate change commitments post-Kyoto. No binding agreement was reached in Copenhagen; however, the Committee identified the long-term goal of limiting the maximum global average temperature increase to no more than 2°C above pre-industrial levels, subject to a review in 2015. The UN Climate Change Committee held additional meetings in Durban, South Africa in November 2011; Doha, Qatar in November 2012; and Warsaw, Poland in November 2013. The meetings are gradually gaining consensus among participants on individual climate change issues.

On September 23, 2014, more than 100 heads of state and government, and leaders from the private sector and civil society met at the Climate Summit in New York hosted by the United Nations. At the Summit, heads of government, business and civil society announced actions in areas that would have the greatest impact on reducing emissions, including climate finance, energy, transport, industry, agriculture, cities, forests, and building resilience.

Parties to the U.N. Framework Convention on Climate Change (UNFCCC) reached a landmark agreement on December 12 in Paris, charting a fundamentally new course in the two-decade-old global climate effort. Culminating a four-year negotiating round, the new treaty ends the strict differentiation between developed and developing countries that characterized earlier efforts, replacing it with a common framework that commits all countries to put forward their best efforts and to strengthen them in the years ahead. This includes, for the first time, requirements that all parties report regularly on their emissions and implementation efforts, and undergo international review.

The agreement and a companion decision by parties were the key outcomes of the conference, known as the 21st session of the UNFCCC Conference of the Parties, or COP 21. Together, the Paris Agreement and the accompanying COP decision:

- Reaffirm the goal of limiting global temperature increase well below 2 degrees Celsius, while urging efforts to limit the increase to 1.5 degrees;
- Establish binding commitments by all parties to make "nationally determined contributions" (NDCs), and to pursue domestic measures aimed at achieving them;
- Commit all countries to report regularly on their emissions and "progress made in implementing and achieving" their NDCs, and to undergo international review;
- Commit all countries to submit new NDCs every five years, with the clear expectation that they will "represent a progression" beyond previous ones;

- Reaffirm the binding obligations of developed countries under the UNFCCC to support the efforts of developing countries, while for the first time encouraging voluntary contributions by developing countries too;
- Extend the current goal of mobilizing $100 billion a year in support by 2020 through 2025, with a new, higher goal to be set for the period after 2025;
- Extend a mechanism to address "loss and damage" resulting from climate change, which explicitly will not "involve or provide a basis for any liability or compensation";
- Require parties engaging in international emissions trading to avoid "double counting"; and
- Call for a new mechanism, similar to the Clean Development Mechanism under the Kyoto Protocol, enabling emission reductions in one country to be counted toward another country's NDC (C2ES 2015a).

National

Prior to the last decade, there were no concrete federal regulations of GHGs or major planning for climate change adaptation. Since then, federal activity has increased. The following are actions regarding the federal government, GHGs, and fuel efficiency.

Greenhouse Gas Endangerment. *Massachusetts v. EPA* (Supreme Court Case 05-1120) was argued before the United States Supreme Court on November 29, 2006, in which it was petitioned that the EPA regulate four GHGs, including carbon dioxide, under Section 202(a)(1) of the Clean Air Act. A decision was made on April 2, 2007, in which the Supreme Court found that GHGs are air pollutants covered by the Clean Air Act. The Court held that the Administrator must determine whether emissions of GHGs from new motor vehicles cause or contribute to air pollution, which may reasonably be anticipated to endanger public health or welfare, or whether the science is too uncertain to make a reasoned decision. On December 7, 2009, the EPA Administrator signed two distinct findings regarding GHGs under section 202(a) of the Clean Air Act:

- Endangerment Finding: The Administrator finds that the current and projected concentrations of the six key well-mixed greenhouse gases—carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride—in the atmosphere threaten the public health and welfare of current and future generations.
- Cause or Contribute Finding: The Administrator finds that the combined emissions of these well-mixed greenhouse gases from new motor vehicles and new motor vehicle engines contribute to greenhouse gas pollution, which threatens public health and welfare.

These findings do not impose requirements on industry or other entities. However, this was a prerequisite for implementing GHG emissions standards for vehicles, as discussed in the "Clean Vehicles" section below. After a lengthy legal challenge, the U.S. Supreme Court declined to review an Appeals Court ruling which upheld the EPA Administrator findings (EPA 2009).

Clean Vehicles. Congress first passed the Corporate Average Fuel Economy law in 1975 to increase the fuel economy of cars and light duty trucks. The law has become more stringent over time. On

May 19, 2009, President Obama put in motion a new national policy to increase fuel economy for all new cars and trucks sold in the United States. On April 1, 2010, the EPA and the Department of Transportation's National Highway Safety Administration announced a joint final rule establishing a national program that would reduce GHG emissions and improve fuel economy for new cars and trucks sold in the United States.

The first phase of the national program applies to passenger cars, light-duty trucks, and medium-duty passenger vehicles, covering model years 2012 through 2016. They require these vehicles to meet an estimated combined average emissions level of 250 grams of CO_2 per mile, equivalent to 35.5 miles per gallon if the automobile industry were to meet this CO_2 level solely through fuel economy improvements. Together, these standards would cut CO_2 emissions by an estimated 960 million metric tons and 1.8 billion barrels of oil over the lifetime of the vehicles sold under the program (model years 2012–2016). The EPA and the National Highway Safety Administration issued final rules on a second-phase joint rulemaking establishing national standards for light-duty vehicles for model years 2017 through 2025 in August 2012 (EPA 2012). The new standards for model years 2017 through 2025 apply to passenger cars, light-duty trucks, and medium duty passenger vehicles. The final standards are projected to result in an average industry fleetwide level of 163 grams/mile of CO_2 in model year 2025, which is equivalent to 54.5 miles per gallon (mpg) if achieved exclusively through fuel economy improvements.

The EPA and the U.S. Department of Transportation issued final rules for the first national standards to reduce GHG emissions and improve fuel efficiency of heavy-duty trucks and buses on September 15, 2011, effective November 14, 2011. For combination tractors, the agencies are proposing engine and vehicle standards that began in the 2014 model year and achieve up to a 20-percent reduction in CO_2 emissions and fuel consumption by the 2018 model year. For heavy-duty pickup trucks and vans, the agencies are proposing separate gasoline and diesel truck standards, which phase in starting in the 2014 model year and achieve up to a 10-percent reduction for gasoline vehicles and a 15-percent reduction for diesel vehicles by 2018 model year (12 and 17 percent respectively if accounting for air conditioning leakage). Lastly, for vocational vehicles, the engine and vehicle standards would achieve up to a 10-percent reduction in fuel consumption and CO_2 emissions from the 2014 to 2018 model years.

Mandatory Reporting of Greenhouse Gases. The Consolidated Appropriations Act of 2008, passed in December 2007, requires the establishment of mandatory GHG reporting requirements. On September 22, 2009, the EPA issued the Final Mandatory Reporting of Greenhouse Gases Rule, which became effective January 1, 2010. The rule requires reporting of GHG emissions from large sources and suppliers in the United States, and is intended to collect accurate and timely emissions data to inform future policy decisions. Under the rule, suppliers of fossil fuels or industrial GHGs, manufacturers of vehicles and engines, and facilities that emit 25,000 metric tons or more per year of GHG emissions are required to submit annual reports to the EPA.

New Source Review. The EPA issued a final rule on May 13, 2010 that establishes thresholds for GHGs that define when permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. This final rule "tailors" the requirements of these Clean Air Act permitting programs to

limit which facilities will be required to obtain Prevention of Significant Deterioration and Title V permits. In the preamble to the revisions to the federal code of regulations, the EPA states:

> This rulemaking is necessary because without it the Prevention of Significant Deterioration and Title V requirements would apply, as of January 2, 2011, at the 100 or 250 tons per year levels provided under the Clean Air Act, greatly increasing the number of required permits, imposing undue costs on small sources, overwhelming the resources of permitting authorities, and severely impairing the functioning of the programs. EPA is relieving these resource burdens by phasing in the applicability of these programs to greenhouse gas sources, starting with the largest greenhouse gas emitters. This rule establishes two initial steps of the phase-in. The rule also commits the agency to take certain actions on future steps addressing smaller sources, but excludes certain smaller sources from Prevention of Significant Deterioration and Title V permitting for greenhouse gas emissions until at least April 30, 2016.

The EPA estimates that facilities responsible for nearly 70 percent of the national GHG emissions from stationary sources will be subject to permitting requirements under this rule. This includes the nation's largest GHG emitters—power plants, refineries, and cement production facilities.

Standards of Performance for Greenhouse Gas Emissions for New Stationary Sources: Electric Utility Generating Units. As required by a settlement agreement, the EPA proposed new performance standards for emissions of carbon dioxide for new, affected, fossil fuel-fired electric utility generating units on March 27, 2012. New sources greater than 25 megawatt would be required to meet an output based standard of 1,000 pounds of carbon dioxide per megawatt-hour, based on the performance of widely used natural gas combined cycle technology.

Cap and Trade. Cap and trade refers to a policy tool where emissions are limited to a certain amount and can be traded, or provides flexibility on how the emitter can comply. Examples in the United States include the Acid Rain Program and the NO_x Budget Trading Program and Clean Air Interstate Rule in the northeast. The Clean Air Interstate Rule (CAIR) and the Acid Rain Program (ARP) are both cap and trade programs designed to reduce emissions of sulfur dioxide (SO_2) and nitrogen oxides (NO_x) from power plants. The ARP, established under Title IV of the 1990 Clean Air Act (CAA) Amendments, requires power plants to make major emission reductions of SO_2 and NO_x, the primary precursors of acid rain. CAIR addresses regional interstate transport of soot (fine particulate matter) and smog (ozone) pollution. CAIR requires certain eastern states to limit annual emissions of SO_2 and NO_x, which contribute to the formation of fine particulate matter. It also requires certain states to limit ozone season NO_x emissions, which contribute to the formation of ozone during the summer ozone season (May through September). There is no federal GHG cap-and-trade program currently; however, some states have joined to create initiatives to provide a mechanism for cap and trade.

The Regional Greenhouse Gas Initiative is an effort to reduce GHGs among the states of Connecticut, Delaware, Maine, Maryland, Massachusetts, New Hampshire, New York, Rhode Island, and Vermont. Each state caps carbon dioxide emissions from power plants, auctions carbon dioxide emission

allowances, and invests the proceeds in strategic energy programs that further reduce emissions, save consumers money, create jobs, and build a clean energy economy. The Initiative began in 2008.

The Western Climate Initiative partner jurisdictions have developed a comprehensive initiative to reduce regional GHG emissions to 15 percent below 2005 levels by 2020. The partners are California, British Columbia, Manitoba, Ontario, and Quebec. Its cap and trade program is estimated to be fully implemented in 2015 (C2ES 2015).

State

Legislative Actions to Reduce GHGs

The State of California legislature has enacted a series of bills that constitute the most aggressive program to reduce GHGs of any state in the nation. Some legislation such as the landmark AB 32 California Global Warming Solutions Act of 2006 was specifically enacted to address GHG emissions. Other legislation such as Title 24 and Title 20 energy standards were originally adopted for other purposes such as energy and water conservation, but also provide GHG reductions. This section describes the major provisions of the legislation.

AB 32. The California State Legislature enacted AB 32, the California Global Warming Solutions Act of 2006. AB 32 requires that GHGs emitted in California be reduced to 1990 levels by the year 2020. "Greenhouse gases" as defined under AB 32 include carbon dioxide, methane, NO_x, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Since AB 32 was enacted, a seventh chemical, nitrogen trifluoride, has also been added to the list of GHGs. The ARB is the state agency charged with monitoring and regulating sources of GHGs. AB 32 states the following:

> Global warming poses a serious threat to the economic well-being, public health, natural resources, and the environment of California. The potential adverse impacts of global warming include the exacerbation of air quality problems, a reduction in the quality and supply of water to the state from the Sierra snowpack, a rise in sea levels resulting in the displacement of thousands of coastal businesses and residences, damage to marine ecosystems and the natural environment, and an increase in the incidences of infectious diseases, asthma, and other human health-related problems.

The ARB approved the 1990 GHG emissions level of 427 $MMTCO_2e$ on December 6, 2007 (ARB 2007). Therefore, to meet the State's target, emissions generated in California in 2020 are required to be equal to or less than 427 $MMTCO_2e$. Emissions in 2020 in a Business as Usual (BAU) scenario were estimated to be 596 $MMTCO_2e$, which do not account for reductions from AB 32 regulations (ARB 2008). At that rate, a 28 percent reduction was required to achieve the 427 $MMTCO_2e$ 1990 inventory. In October 2010, ARB prepared an updated 2020 forecast to account for the effects of the 2008 recession and slower forecasted growth. The 2020 inventory without the benefits of adopted regulation is now estimated at 545 $MMTCO_2e$. Therefore, under the updated forecast, a 21.7 percent reduction from BAU is required to achieve 1990 levels (ARB 2010). The ARB also prepared updated emission inventories for 2000 through 2012 to show progress achieved to date (ARB 2014a). Executive Order S-3-05 includes a target for 2010 of reducing GHG emissions to 2000 levels.

As shown below, the 2010 emission inventory achieved this target. Also shown are the average reductions needed from all statewide sources (including all existing sources) to reduce GHG emissions back to 1990 levels.

- 1990: 427 million $MTCO_2e$
- 2000: 463 million $MTCO_2e$ (an average 8-percent reduction needed to achieve 1990 base)
- 2010: 450 million $MTCO_2e$ (an average 5-percent reduction needed to achieve 1990 base)
- 2020: 545 million $MTCO_2e$ BAU (an average 21.7-percent reduction needed to achieve 1990 base)

ARB Scoping Plan. The ARB's Climate Change Scoping Plan (Scoping Plan) contains measures designed to reduce the State's emissions to 1990 levels by the year 2020 to comply with AB 32 (ARB 2008). The Scoping Plan identifies recommended measures for multiple GHG emission sectors and the associated emission reductions needed to achieve the year 2020 emissions target—each sector has a different emission reduction target. Most of the measures target the transportation and electricity sectors. As stated in the Scoping Plan, the key elements of the strategy for achieving the 2020 GHG target include:

- Expanding and strengthening existing energy efficiency programs as well as building and appliance standards;
- Achieving a statewide renewables energy mix of 33 percent;
- Developing a California cap-and-trade program that links with other Western Climate Initiative partner programs to create a regional market system;
- Establishing targets for transportation-related GHG emissions for regions throughout California and pursuing policies and incentives to achieve those targets;
- Adopting and implementing measures pursuant to existing State laws and policies, including California's clean car standards, goods movement measures, and the Low Carbon Fuel Standard; and
- Creating targeted fees, including a public goods charge on water use, fees on high global warming potential gases, and a fee to fund the administrative costs of the State's long-term commitment to AB 32 implementation.

In addition, the Scoping Plan differentiates between "capped" and "uncapped" strategies. Capped strategies are subject to the proposed cap-and-trade program. The Scoping Plan states that the inclusion of these emissions within the cap-and trade program will help ensure that the year 2020 emission targets are met despite some degree of uncertainty in the emission reduction estimates for any individual measure. Implementation of the capped strategies is calculated to achieve a sufficient amount of reductions by 2020 to achieve the emission target contained in AB 32. Uncapped strategies that will not be subject to the cap-and-trade emissions caps and requirements are provided as a margin of safety by accounting for additional GHG emission reductions (ARB 2008).

The ARB approved the First Update to the Scoping Plan (Update) on May 22, 2014. The Update identifies the next steps for California's climate change strategy. The Update shows how California continues on its path to meet the near-term 2020 GHG limit, but also sets a path toward long-term, deep GHG emission reductions. The report establishes a broad framework for continued emission reductions beyond 2020, on the path to 80 percent below 1990 levels by 2050. The Update identifies progress made to meet the near-term objectives of AB 32 and defines California's climate change priorities and activities for the next several years. The Update does not set new targets for the State, but describes a path that would achieve the long term 2050 goal of Executive Order S-05-03 for emissions to decline to 80 percent below 1990 levels by 2050.

The ARB has no legislative mandate to set a target beyond the 2020 target from AB 32 or to adopt additional regulations to achieve a post-2020 target. The Update estimates that reductions averaging 5.2 percent per year would be required after 2020 to achieve the 2050 goal. With no estimate of future reduction commitments from the State, identifying a feasible strategy including plans and measures to be adopted by local agencies is not currently possible (ARB 2014b).

Cap-and-Trade Program. The Cap-and-Trade Program is a key element of the Scoping Plan. It sets a statewide limit on sources responsible for 85 percent of California's greenhouse gas emissions, and establishes a price signal needed to drive long-term investment in cleaner fuels and more efficient use of energy. The program is designed to provide covered entities the flexibility to seek out and implement the lowest cost options to reduce emissions. The program conducted its first auction in November 2012. Compliance obligations began for power plants and large industrial sources in January 2013. Other significant milestones include linkage to Quebec's cap and trade system in January 2014 and starting the compliance obligation for distributors of transportation fuels, natural gas, and other fuels in January 2015 (ARB 2015d).

The Cap-and-Trade Program provides a firm cap, ensuring that the 2020 statewide emission limit will not be exceeded. An inherent feature of the Cap-and-Trade program is that it does not guarantee GHG emissions reductions in any discrete location or by any particular source. Rather, GHG emissions reductions are only guaranteed on an accumulative basis. As summarized by ARB in the First Update:

> The Cap-and-Trade Regulation gives companies the flexibility to trade allowances with others or take steps to cost-effectively reduce emissions at their own facilities. Companies that emit more have to turn in more allowances or other compliance instruments. Companies that can cut their GHG emissions have to turn in fewer allowances. But as the cap declines, aggregate emissions must be reduced. In other words, a covered entity theoretically could increase its GHG emissions every year and still comply with the Cap-and-Trade Program if there is a reduction in GHG emissions from other covered entities. Such a focus on aggregate GHG emissions is considered appropriate because climate change is a global phenomenon, and the effects of GHG emissions are considered cumulative (ARB 2014).

The Cap-and-Trade Program works with other direct regulatory measures and provides an economic incentive to reduce emissions. If California's direct regulatory measures reduce GHG emissions more

than expected, then the Cap-and-Trade Program will be responsible for relatively fewer emissions reductions. If California's direct regulatory measures reduce GHG emissions less than expected, then the Cap-and-Trade Program will be responsible for relatively more emissions reductions. Thus, the Cap-and-Trade Program assures that California will meet its 2020 GHG emissions reduction mandate:

> The Cap-and-Trade Program establishes an overall limit on GHG emissions from most of the California economy—the "capped sectors." Within the capped sectors, some of the reductions are being accomplished through direct regulations, such as improved building and appliance efficiency standards, the [Low Carbon Fuel Standard] LCFS, and the 33 percent [Renewables Portfolio Standard] RPS. Whatever additional reductions are needed to bring emissions within the cap is accomplished through price incentives posed by emissions allowance prices. Together, direct regulation and price incentives assure that emissions are brought down cost-effectively to the level of the overall cap. The Cap-and-Trade Regulation provides assurance that California's 2020 limit will be met because the regulation sets a firm limit on 85 percent of California's GHG emissions. In sum, the Cap-and-Trade Program will achieve aggregate, rather than site specific or project-level, GHG emissions reductions. Also, due to the regulatory architecture adopted by ARB in AB 32, the reductions attributed to the Cap-and-Trade Program can change over time depending on the State's emissions forecasts and the effectiveness of direct regulatory measures (ARB 2014).

SB 375. Senate Bill (SB) 375 was signed into law on September 30, 2008. According to SB 375, the transportation sector is the largest contributor of GHG emissions, which emits over 40 percent of the total GHG emissions in California. SB 375 states, "Without improved land use and transportation policy, California will not be able to achieve the goals of AB 32." SB 375 does the following: (1) requires metropolitan planning organizations to include sustainable community strategies in their regional transportation plans for reducing GHG emissions, (2) aligns planning for transportation and housing, and (3) creates specified incentives for the implementation of the strategies.

Concerning CEQA, SB 375, as codified in Public Resources Code Section 21159.28 states that CEQA findings determinations for certain projects are not required "to reference, describe, or discuss (1) growth inducing impacts or (2) any project-specific or cumulative impacts from cars and light-duty truck trips generated by the project on global warming or the regional transportation network" if the project:

1. Is in an area with an approved sustainable communities strategy or an alternative planning strategy that the ARB accepts as achieving the greenhouse gas emission reduction targets;
2. Is consistent with that strategy (in designation, density, building intensity, and applicable policies); and
3. Incorporates the mitigation measures required by an applicable prior environmental document.

SB 350. Senate Bill (SB) 375 was enacted on October 7, 2015. This bill enacts the "Clean Energy and Pollution Reduction Act of 2015" and establishes targets to increase sales of renewable electricity to 50% by 2030. Also, the bill aims to double the energy efficiency of buildings in the next 15 years and cut petroleum usage in transportation by half.

The 50 percent renewable energy standard will be implemented by the CA Public Utilities Commission for the private utilities and by the CA Energy Commission for municipal utilities, as per current law. Each utility submits a procurement plan showing it will purchase clean energy to displace other non-renewable resources. Each state agency then reviews the plan, ensures it complies with the law and approves the plan. California has more than doubled renewable capacity installed in the last four years (adding over 11,000 megawatts) and has more than 21,000 megawatts online, which includes 2,300 megawatts on 245,000 homes, businesses, and schools (CA Climate Leadership 2015).

The 50 percent increase in energy efficiency in buildings will be done through the use of existing energy efficiency retrofit funding and regulatory tools already available to state energy agencies under existing law. The addition made by this measure requires state energy agencies to plan for, and implement those programs in a manner that achieves the energy efficiency target (CA Climate Leadership 2015).

AB 1493 Pavley Regulations and Fuel Efficiency Standards. California AB 1493, enacted on July 22, 2002, required the ARB to develop and adopt regulations that reduce GHGs emitted by passenger vehicles and light duty trucks. Implementation of the regulation was delayed by lawsuits filed by automakers and by the EPA's denial of an implementation waiver. The EPA subsequently granted the requested waiver in 2009, which was upheld by the by the U.S. District Court for the District of Columbia in 2011 (ARB 2013).

The standards are to be phased in during the 2009 through 2016 model years. When fully phased in, the near-term (2009–2012) standards will result in an approximately 22-percent reduction compared with the 2002 fleet, and the mid-term (2013–2016) standards will result in about a 30-percent reduction. Several technologies stand out as providing significant reductions in emissions at favorable costs. These include discrete variable valve lift or camless valve actuation to optimize valve operation rather than relying on fixed valve timing and lift as has historically been done; turbocharging to boost power and allow for engine downsizing; improved multi-speed transmissions; and improved air conditioning systems that operate optimally, leak less, and/or use an alternative refrigerant (ARB 2013).

The second phase of the implementation for the Pavley bill was incorporated into Amendments to the Low-Emission Vehicle Program referred to as LEV III or the Advanced Clean Cars program. The Advanced Clean Car program combines the control of smog-causing pollutants and GHG emissions into a single coordinated package of requirements for model years 2017 through 2025. The regulation will reduce GHGs from new cars by 34 percent from 2016 levels by 2025. The new rules will reduce pollutants from gasoline and diesel-powered cars, and deliver increasing numbers of zero-emission technologies, such as full battery electric cars, newly emerging plug-in hybrid electric vehicles and hydrogen fuel cell cars. The regulations will also ensure adequate fueling infrastructure

is available for the increasing numbers of hydrogen fuel cell vehicles planned for deployment in California (ARB 2011).

SB 1368. In 2006, the State Legislature adopted SB 1368, which was subsequently signed into law by the Governor. SB 1368 directs the California Public Utilities Commission to adopt a performance standard for GHG emissions for the future power purchases of California utilities. SB 1368 seeks to limit carbon emissions associated with electrical energy consumed in California by forbidding procurement arrangements for energy longer than 5 years from resources that exceed the emissions of a relatively clean, combined cycle natural gas power plant. Because of the carbon content of its fuel source, a coal-fired plant cannot meet this standard because such plants emit roughly twice as much carbon as natural gas, combined cycle plants. Accordingly, the new law will effectively prevent California's utilities from investing in, otherwise financially supporting, or purchasing power from new coal plants located in or out of the State. Thus, SB 1368 will lead to dramatically lower GHG emissions associated with California's energy demand, as SB 1368 will effectively prohibit California utilities from purchasing power from out-of-state producers that cannot satisfy the performance standard for GHG emissions required by SB 1368. The California Public Utilities Commission adopted the regulations required by SB 1368 on August 29, 2007.

SB 1078. Renewable Electricity Standards. On September 12, 2002, Governor Gray Davis signed SB 1078 requiring California to generate 20 percent of its electricity from renewable energy by 2017. SB 1078 changed the due date to 2010 instead of 2017. On November 17, 2008, Governor Arnold Schwarzenegger signed Executive Order S-14-08, which established a Renewable Portfolio Standard target for California requiring that all retail sellers of electricity serve 33 percent of their load with renewable energy by 2020. Governor Schwarzenegger also directed the ARB (Executive Order S-21-09) to adopt a regulation by July 31, 2010, requiring the State's load serving entities to meet a 33 percent renewable energy target by 2020. The ARB Board approved the Renewable Electricity Standard on September 23, 2010 by Resolution 10-23.

***Center For Biological Diversity, et al. v. California Department of Fish and Wildlife (The Newhall Land and Farming Company, Real Party in Interest)* (2015) 62 Cal.4th 204.** On November 30, 2015, the California Supreme Court held that it is inappropriate for an EIR to utilize reductions from projected "business as usual" (BAU) emissions consistent with AB 32's statewide reductions mandate without substantial evidence to demonstrate that consistency with the statewide percentage reduction is an appropriate threshold of significance to utilize for an **individual** development project. The majority opinion emphasized the narrowness of its decision on this point: "[W]e hold only that DFW erred in failing to substantiate its assumption that the Scoping Plan's statewide measure of emissions reduction can also serve as the criterion for an individual land use project." The court went on to state that appropriate documentation or substantial evidence to support the use of the statewide percentage reduction as a threshold for an individual development may consist of using a geographically specific GHG reduction plan (e.g., a climate action plan) to provide a basis for tiering or streamlining the project-level analysis. The City of Fresno prepared its Greenhouse Gas Reduction Plan in July 2014, which is incorporated into this analysis.

Executive Orders Related to GHG Emissions

California's Executive Branch has taken several actions to reduce GHGs through the use of Executive Orders. Although not regulatory, they set the tone for the State and guide the actions of state agencies.

Executive Order S-13-08. Executive Order S-13-08 states that "climate change in California during the next century is expected to shift precipitation patterns, accelerate sea level rise and increase temperatures, thereby posing a serious threat to California's economy, to the health and welfare of its population and to its natural resources." Pursuant to the requirements in the order, the 2009 California Climate Adaptation Strategy (California Natural Resources Agency 2009) was adopted, which is the ". . . first statewide, multi-sector, region-specific, and information-based climate change adaptation strategy in the United States." Objectives include analyzing risks of climate change in California, identifying and exploring strategies to adapt to climate change, and specifying a direction for future research.

Executive Order S-3-05. Former California Governor Arnold Schwarzenegger announced on June 1, 2005, through Executive Order S-3-05, the following reduction targets for GHG emissions:

- By 2010, reduce greenhouse gas emissions to 2000 levels.
- By 2020, reduce greenhouse gas emissions to 1990 levels.
- By 2050, reduce greenhouse gas emissions to 80 percent below 1990 levels.

The 2050 reduction goal represents what some scientists believe is necessary to reach levels that will stabilize the climate. The 2020 goal was established to be a mid-term target. Because this is an executive order, the goals are not legally enforceable for local governments or the private sector.

Executive Order B-30-15. On April 29, 2015, Governor Edmund G. Brown Jr. issued an executive order to establish a California GHG reduction target of 40 percent below 1990 levels by 2030. The Governor's executive order aligns California's GHG reduction targets with those of leading international governments ahead of the United Nations Climate Change Conference in Paris late 2015. The executive order sets a new interim statewide GHG emission reduction target to reduce GHG emissions to 40 percent below 1990 levels by 2030 in order to ensure California meets its target of reducing GHG emissions to 80 percent below 1990 levels by 2050 and directs the ARB to update the Climate Change Scoping Plan to express the 2030 target in terms of $MMCO_2e$. The executive order also requires the State's climate adaptation plan to be updated every 3 years and for the State to continue its climate change research program, among other provisions. As with Executive Order S-3-05, this executive order is not legally enforceable against local governments and the private sector. Legislation that would update AB 32 to make post-2020 targets and requirements a mandate is in process in the State Legislature.

Executive Order S-01-07—Low Carbon Fuel Standard. The Governor signed Executive Order S 01-07 on January 18, 2007. The order mandates that a statewide goal shall be established to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. In particular, the executive order established a Low Carbon Fuel Standard (LCFS) and directed the Secretary for Environmental Protection to coordinate the actions of the California Energy Commission, the ARB,

the University of California, and other agencies to develop and propose protocols for measuring the "life-cycle carbon intensity" of transportation fuels. This analysis supporting development of the protocols was included in the State Implementation Plan for alternative fuels (State Alternative Fuels Plan adopted by California Energy Commission on December 24, 2007) and was submitted to ARB for consideration as an "early action" item under AB 32. The ARB adopted the Low Carbon Fuel Standard on April 23, 2009.

The Low Carbon Fuel Standard was subject to legal challenge in 2011. Ultimately, on August 8, 2013, the Fifth District Court of Appeal (California) ruled that ARB failed to comply with CEQA and the Administrative Procedure Act (APA) when adopting regulations for Low Carbon Fuel Standards. In a partially published opinion, the Court of Appeal directed ARB to set aside Resolution 09-31 and two executive orders of ARB approving LCFS regulations promulgated to reduce GHG emissions. However, the court tailored its remedy to protect the public interest by allowing the LCFS regulations to remain operative while ARB complies with the procedural requirements it failed to satisfy.

To address the Court ruling, ARB was required to bring a new LCFS regulation to the Board for consideration in February 2015. The proposed LCFS regulation was required to contain revisions to the 2010 LCFS as well as new provisions designed to foster investments in the production of the low-carbon fuels, offer additional flexibility to regulated parties, update critical technical information, simplify and streamline program operations, and enhance enforcement. The second public hearing for the new LCFS regulation is scheduled for September 24, 2015 (ARB 2015a).

California Regulations and Building Codes

California has a long history of adopting regulations to improve energy efficiency in new and remodeled buildings. These regulations have kept California's energy consumption relatively flat even with rapid population growth.

Title 24. California Code of Regulations Title 24 Part 6: California's Energy Efficiency Standards for Residential and Nonresidential Buildings, was first adopted in 1978 in response to a legislative mandate to reduce California's energy consumption. The standards are updated periodically to allow consideration and possible incorporation of new energy efficient technologies and methods. Energy efficient buildings require less electricity; therefore, increased energy efficiency reduces fossil fuel consumption and decreases GHG emissions. The newest version of Title 24 was adopted by the California Energy Commission (CEC) on May 31, 2012. The standards became effective on July 1, 2014. The CEC has completed the process of preparing the 2016 Building Energy Efficiency Standards that are scheduled to go into effect on January 1, 2017.

Title 20. California Code of Regulations, Title 20: Division 2, Chapter 4, Article 4, Sections 1601-1608: Appliance Efficiency Regulations regulates the sale of appliances in California. The Appliance Efficiency Regulations include standards for both federally regulated appliances and non-federally regulated appliances. Twenty-three categories of appliances are included in the scope of these regulations. The standards within these regulations apply to appliances that are sold or offered for sale in California, except those sold wholesale in California for final retail sale outside the State and those designed and sold exclusively for use in recreational vehicles or other mobile equipment (CEC 2012).

California Green Building Standards Code (California Code of Regulations Title 24, Part 11 code) is a comprehensive and uniform regulatory code for all residential, commercial, and school buildings that went into effect on January 1, 2011. The code is updated on a regular basis, with the most recent update consisting of the 2013 California Green Building Code Standards that became effective January 1, 2014. Local jurisdictions are permitted to adopt more stringent requirements, as state law provides methods for local enhancements. The Code recognizes that many jurisdictions have developed existing construction and demolition ordinances, and defers to them as the ruling guidance, provided they provide a minimum 50-percent diversion requirement. The code also provides exemptions for areas not served by construction and demolition recycling infrastructure. State building code provides the minimum standard that buildings need to meet in order to be certified for occupancy, which is generally enforced by the local building official.

The California Green Building Standards Code (California Code of Regulations Title 24, Part 11 code) requires:

- **Short-term bicycle parking**. If a commercial project is anticipated to generate visitor traffic, provide permanently anchored bicycle racks within 200 feet of the visitors' entrance, readily visible to passers-by, for 5 percent of visitor motorized vehicle parking capacity, with a minimum of one two-bike capacity rack (5.106.4.1.1).
- **Long-term bicycle parking**. For buildings with over 10 tenant-occupants, provide secure bicycle parking for 5 percent of tenant-occupied motorized vehicle parking capacity, with a minimum of one space (5.106.4.1.2).
- **Designated parking**. Provide designated parking in commercial projects for any combination of low-emitting, fuel-efficient and carpool/van pool vehicles as shown in Table 5.106.5.2 (5.106.5.2).
- **Recycling by Occupants**. Provide readily accessible areas that serve the entire building and are identified for the depositing, storage and collection of nonhazardous materials for recycling. (5.410.1).
- **Construction waste**. A minimum 50-percent diversion of construction and demolition waste from landfills, increasing voluntarily to 65 and 80 percent for new homes and 80-percent for commercial projects. (5.408.1, A5.408.3.1 [nonresidential], A5.408.3.1 [residential]). All (100 percent) of trees, stumps, rocks and associated vegetation and soils resulting from land clearing shall be reused or recycled (5.408.3).
- **Wastewater reduction**. Each building shall reduce the generation of wastewater by one of the following methods:
  1. The installation of water-conserving fixtures or
  2. Using non-potable water systems (5.303.4).
- **Water use savings**. 20-percent mandatory reduction in indoor water use with voluntary goal standards for 30, 35 and 40-percent reductions (5.303.2, A5303.2.3 [nonresidential]).
- **Water meters**. Separate water meters for buildings in excess of 50,000 square feet or buildings projected to consume more than 1,000 gallons per day (5.303.1).

- **Irrigation efficiency**. Moisture-sensing irrigation systems for larger landscaped areas (5.304.3).
- **Materials pollution control**. Low-pollutant emitting interior finish materials such as paints, carpet, vinyl flooring and particleboard (5.404).
- **Building commissioning**. Mandatory inspections of energy systems (i.e., heat furnace, air conditioner, mechanical equipment) for nonresidential buildings over 10,000 square feet to ensure that all are working at their maximum capacity according to their design efficiencies (5.410.2).

Model Water Efficient Landscape Ordinance. The Model Water Efficient Landscape Ordinance (Ordinance) was required by AB 1881, the Water Conservation Act. The bill required local agencies to adopt a local landscape ordinance at least as effective in conserving water as the Model Ordinance by January 1, 2010. Reductions in water use of 20 percent consistent with the (SBX-7-7) 2020 mandate are expected upon compliance with the Ordinance. Governor Brown's Drought Executive Order of April 1, 2015 (EO B-29-15) directed the Department of Water Resources (DWR) to update the Ordinance through expedited regulation. The California Water Commission approved the revised Ordinance on July 15, 2015, effective December 15, 2015. New development projects that include landscape areas of 500 square feet or more are subject to the Ordinance. The update requires:

- More efficient irrigation systems
- Incentives for graywater usage
- Improvements in on-site stormwater capture
- Limiting the portion of landscapes that can be planted with high water use plants
- Reporting requirements for local agencies.

SB 97 and the CEQA Guidelines Update. Passed in August 2007, SB 97 added Section 21083.05 to the Public Resources Code. The code states "(a) On or before July 1, 2009, the Office of Planning and Research shall prepare, develop, and transmit to the Resources Agency guidelines for the mitigation of GHG emissions or the effects of GHG emissions as required by this division, including, but not limited to, effects associated with transportation or energy consumption. (b) On or before January 1, 2010, the Resources Agency shall certify and adopt guidelines prepared and developed by the Office of Planning and Research pursuant to subdivision (a)." Section 21097 was also added to the Public Resources Code, which provided an exemption until January 1, 2010 for transportation projects funded by the Highway Safety, Traffic Reduction, Air Quality, and Port Security Bond Act of 2006 or projects funded by the Disaster Preparedness and Flood Prevention Bond Act of 2006, in stating that the failure to adequately analyze the effects of GHGs from such projects would not violate CEQA. The Natural Resources Agency completed the approval process and the Amendments became effective on March 18, 2010.

The 2010 CEQA Amendments provide guidance to public agencies regarding the analysis and mitigation of the effects of GHG emissions in CEQA documents. The CEQA Amendments fit within the existing CEQA framework by amending existing CEQA Guidelines to reference climate change.

Section 15064.4(b) of the CEQA Guidelines provides direction for lead agencies for assessing the significance of impacts of GHG emissions:

- The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting;
- Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project; or
- The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must include specific requirements that reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

The CEQA Guidelines amendments do not identify a threshold of significance for GHG emissions, nor do they prescribe assessment methodologies or specific mitigation measures. Instead, they call for a "good-faith effort, based on available information, to describe, calculate, or estimate the amount of greenhouse gas emissions resulting from a project." The amendments encourage lead agencies to consider many factors in performing a CEQA analysis and preserve lead agencies' discretion to make their own determinations based upon substantial evidence. The amendments also encourage public agencies to make use of programmatic mitigation plans and programs from which to tier when they perform individual project analyses.

Also amended were CEQA Guidelines Sections 15126.4 and 15130, which address mitigation measures and cumulative impacts respectively. GHG mitigation measures are referenced in general terms, but no specific measures are championed. The revision to the cumulative impact discussion requirement (Section 15130) simply directs agencies to analyze GHG emissions in an EIR when a project's incremental contribution of emissions may be cumulatively considerable; however, it does not answer the question of when emissions are cumulatively considerable.

Section 15183.5 permits programmatic GHG analysis and later project-specific tiering, as well as the preparation of Greenhouse Gas Reduction Plans. Compliance with such plans can support a determination that a project's cumulative effect is not cumulatively considerable, according to proposed Section 15183.5(b).

In addition, the amendments revised Appendix F of the CEQA Guidelines, which focuses on Energy Conservation. The sample environmental checklist in Appendix G was amended to include GHG questions.

CEQA emphasizes that the effects of GHG emissions are cumulative, and should be analyzed in the context of CEQA's requirements for cumulative impacts analysis (see CEQA Guidelines Section 15130(f)).

San Joaquin Valley Air Pollution Control District

On December 17, 2009, the SJVAPCD Governing Board adopted "Guidance for Valley Land-use Agencies in Addressing GHG Emission Impacts for New Projects under CEQA," and the policy "District Policy—Addressing GHG Emission Impacts for Stationary Source Projects Under CEQA When Serving as the Lead Agency." The SJVAPCD concluded that the existing science is inadequate to support quantification of the impacts that project-specific GHG emissions have on global climatic change. The SJVAPCD found the effects of project-specific emissions to be cumulative, and without mitigation, their incremental contribution to global climatic change could be considered cumulatively considerable. The SJVAPCD found that this cumulative impact is best addressed by requiring all projects to reduce their GHG emissions, whether through project design elements or mitigation.

The SJVAPCD's approach is intended to streamline the process of determining if project-specific GHG emissions would have a significant effect. Projects exempt from the requirements of CEQA, and projects complying with an approved plan or mitigation program would be determined to have a less than significant cumulative impact. Such plans or programs must be specified in law or adopted by the public agency with jurisdiction over the affected resources, and must have a certified final CEQA document.

For non-exempt projects, those projects for which there is not applicable approved plan or program, or those projects not complying with an approved plan or program, the lead agency must evaluate the project against performance-based standards and would require the adoption of design elements, known as Best Performance Standards (BPS), to reduce GHG emissions. The BPS have not yet fully been established, though they must be designed to effect a 29-percent reduction when compared with the BAU projections identified in ARB's AB 32 Scoping Plan.

BAU represents the emissions that would occur in 2020 if the average baseline emissions during the 2002–2004 period were grown to 2020 levels, without control. These standards thus would carry with them pre-quantified emissions reductions, eliminating the need for project-specific quantification. Therefore, projects incorporating BPS would not require specific quantification of GHG emissions, and automatically would be determined to have a less than significant cumulative impact for GHG emissions.

For stationary source permitting projects, BPS means, "The most stringent of the identified alternatives for control of GHG emissions, including type of equipment, design of equipment and operational and maintenance practices, which are achieved-in-practice for the identified service, operation, or emissions unit class." The SJVAPCD has identified BPS for the following sources: boilers; dryers and dehydrators; oil and gas extraction, storage, transportation, and refining operations; cogeneration; gasoline dispensing facilities; volatile organic compound control technology; and steam generators.

For development projects, BPS means, "Any combination of identified GHG emission reduction measures, including project design elements and land use decisions that reduce project-specific GHG emission reductions by at least 29 percent compared with business as usual."

Projects not incorporating BPS would require quantification of GHG emissions and demonstration that BAU GHG emissions have been reduced or mitigated by 29 percent. As stated earlier, ARB's adjusted inventory reduced the amount required by the State to achieve 1990 emission levels from 29 percent to 21.7 percent to account for slower growth experienced since the 2008 recession. According to SJVAPCD guidance, quantification of GHG emissions would be required for all projects for which the lead agency has determined that an environmental impact report is required, regardless of whether the project incorporates BPS.

San Joaquin Valley Carbon Exchange

The SJVAPCD initiated work on the San Joaquin Valley Carbon Exchange in November 2008. The purpose of the carbon exchange is to quantify, verify, and track voluntary GHG emissions reductions generated within the San Joaquin Valley. However, the SJVAPCD has since pursued an alternative strategy that incorporates the GHG emissions into its existing Rule 2301—Emission Reduction Credit Offset Banking that formerly only addressed criteria pollutants. Rule 2301 replaces the San Joaquin Valley Carbon Exchange.

- Alternatives to the development of a District-administered GHG emission reduction registration program were discussed, including the District's possible role in California Climate Action Reserve as an emission reduction project verifier and/or providing technical assistance to project proponents quantify and mitigate their projects' GHG emissions as part of the CEQA process.

Rule 2301

While the Climate Change Action Plan indicated that the GHG emission reduction program would be called the San Joaquin Valley Carbon Exchange, the District incorporated a method to register voluntary GHG emission reductions into its existing Rule 2301—Emission Reduction Credit Banking through amendments of the rule. Amendments to the rule were adopted on January 19, 2012. The purposes of the amendments to the rule include the following:

- Provide an administrative mechanism for sources to bank voluntary GHG emission reductions for later use.
- Provide an administrative mechanism for sources to transfer banked GHG emission reductions to others for any use.
- Define eligibility standards, quantitative procedures, and administrative practices to ensure that banked GHG emission reductions are real, permanent, quantifiable, surplus, and enforceable.

The SJVAPCD is also participating with the California Air Pollution Control Officers Association (CAPCOA), of which it is a member, in the CAPCOA Greenhouse Gas Reduction Exchange (GHG Rx). The GHG Rx is operated cooperatively by air districts that have elected to participate. Participating districts have signed a Memorandum of Understanding with CAPCOA and agree to post only those credits that meet the Rx standards for quality. The objective is to provide a secure, low-cost, high-quality greenhouse gas exchange for credits created in California. The GHG Rx is intended to help

fulfill compliance obligations, or mitigation needs of local projects subject to environmental review, reducing the uncertainty of using credits generated in distant locations. The SJVAPCD currently has no credits posted to the GHG Rx.

Fresno Council of Governments

2014 Regional Transportation Plan

The Fresno Council of Governments (Fresno COG) is the Regional Transportation Planning Agency (RTPA) for the Fresno County region. The Fresno COG is in the process of preparing the 2014 Regional Transportation Plan/Sustainable Community Strategy (RTP/SCS). The 2014 RTP is a planning document in cooperation with the Federal Highway Administration (FHWA), Federal Transit Administration (FTA), the California Department of Transportation (Caltrans), and other stakeholders, including transportation system users. Following the passage of Assembly Bill 32 to reduce GHG emissions within the State to 1990 levels by 2020, SB 375 includes the following four primary findings related to the RTP/SCS development process:

- That the ARB develop regional GHG emission reduction targets for cars and light trucks for each of the 18 Metropolitan Planning Organizations (MPOs) in California, including Fresno COG. ARB approved targets for the San Joaquin Valley in January 2013. The target for Fresno is a per capita reduction in GHG emissions from passenger vehicle travel of 5 percent by 2020 and 10 percent by 2035 relative to 2005 levels. However, the 2014 RTP/SCS includes a target of 9 percent per capita reduction by 2020 and an 11 percent reduction by 2035 relative to 2005 levels (ARB 2015b).
- That the Fresno COG, during the next RTP update, is required to prepare an SCS that specifies how the GHG emission reduction target set by ARB will be achieved. If the target cannot be met through the SCS, then an Alternative Planning Strategy (APS) shall be prepared by Fresno COG. Chapter 4 of the 2014 RTP includes the SCS for Fresno COG.
- Streamlines CEQA requirements for specific residential and mixed-use developments that are consistent with the Fresno County SCS or APS (as determined by ARB) to achieve regional GHG emissions reduction target.

Local

City of Fresno

The following objectives and policies outlined in the Fresno General Plan would apply to planning areas.

General Plan

The City of Fresno General Plan sets forth the following guiding and implementing policies that are relevant to greenhouse gases.

- **Policy ED-1-c:** Promote, educate, and market the benefits of a "Buy Local" campaign. Explores a "Buy Local" target for Public Works and other City purchasing decisions.
- **Policy UF-1-c:** Legible City Structure. Focus integrated and ongoing planning efforts to achieve an identifiable city structure, comprised of a concentration of buildings, people and pedestrian-oriented activity in Downtown; among a small number of prominent east-west and

north-south transit-oriented, mixed-use corridors with distinctive and strategically located Activity Centers; and in existing and new neighborhoods augmented with parks and connected by multi-purpose trails and tree lined bike lands and streets.

- **Policy UF-12-a:** BRT Corridors. Design land uses and integrate development site plans along BRT corridors, with transit-oriented development that supports transit ridership and convenient pedestrian access to bus stops and BRT station stops.
- **Policy UF-12-b:** Activity Centers. Mixed-use designated areas along BRT and/or transit corridors are appropriate for more intensive concentrations of urban uses. Typical uses could include commercial areas; employment centers; schools; compact residential development; religious institutions; parks; and other gathering points where residents may interact, work, and obtain goods and services in the same place.
- **Policy UF-12-d:** Appropriate Mixed-Use. Facilitate the development of vertical and horizontal mixed-uses to blend residential, commercial, and public land uses on one or adjacent sites. Ensure land use compatibility between mixed-use districts in Activity Centers and the surrounding residential neighborhoods.
- **Policy UF-12-e:** Access to Activity Centers. Promote adoption and implementation of standards supporting pedestrian activities and bicycle linkages from surrounding land uses and neighborhoods into Activity Centers and to transit stops. Provide for priority transit routes and facilities to serve the Activity Centers.
- **Policy UF-12-f:** Mixed-Use in Activity Centers. Update the Development Code to include use regulations and standards to allow for mixed uses and shared parking facilities, including multi-story and underground parking facilities, within Activity Centers.
- **Policy UF-12-g:** Impacts on Surrounding Uses. Establish design standards and buffering requirements for high-intensity Activity Centers to protect surrounding residential uses from increased impacts from traffic noise and vehicle emissions, visual intrusion, interruption of view and air movement, and encroachment upon solar access.
- **Policy UF-13-a:** Future Planning to Require Design Principles. Require future planning, such as Specific Plans, neighborhood plans or Concept Plans, for Development Areas designated by the General Plan to include urban design principles and standards consistent with the Urban Form, Land Use, and Design Element.
- **Objective UF-14:** Create an urban form that facilitates multi-modal connectivity.
- **Policy UF-14-a:** Design Guidelines for Walkability. Develop and use design guidelines and standards for a walkable and pedestrian-scaled environment with a network of streets and connections for pedestrians and bicyclists, as well as transit and autos.
- **Policy UF-14-b:** Local Street Connectivity. Design local roadways to connect throughout neighborhoods and large private developments with adjacent major roadways and pathways of existing adjacent development. Create access for pedestrians and bicycles where a local street must dead end or be designed as a cul-de-sac to adjoining uses that provide services, shopping, and connecting pathways for access to the greater community area.
- **Policy UF-4-c:** Block Length. Create development standards that provide desired and maximum block lengths in residential, retail, and mixed-use districts order to enhance walkability.
- **Objective LU-2:** Plan for infill development that includes a range of housing types, building forms, and land uses to meet the needs of both current and future residences.

- **Policy LU-2-a:** Infill Development and Redevelopment. Promote development of vacant, underdeveloped, and redevelopable land within the City Limits where urban services are available by considering the establishment and implementation of supportive regulations and programs.
- **Policy LU-2-b:** Infill Development for Affordable Housing. Consider a priority infill incentive program for residential infill development of existing vacant lots and underutilized sites within the City limits as a strategy to help to meet the affordable housing needs of the community.
- **Policy LU-2-c:** Infill Design Toolkit. Develop and distribute an infill design toolkit, consistent with the City's Infill Development Act to support and encourage infill development.
- **Policy LU-2-d:** Infrastructure Upgrades. Facilitate urban infill by building and upgrading community and neighborhood public infrastructure and services in order to enhance public health and convenience, and the overall experience and quality of city living.
- **Policy LU-3-b:** Mixed-Use Urban Corridors that Connect the Downtown Planning Area. Support the development of mixed-use urban corridors that connect the Downtown Planning Area with the greater Fresno-Clovis Metropolitan Area with functional, enduring, and desirable urban qualities along the Blackstone Avenue, Shaw Avenue, California Avenue, and Ventura Avenue/Kings Canyon Road corridors, as shown on Figure LU-1: General Plan Land Use Diagram.
- **Policy LU-3-c:** Zoning for High Density on Major BRT Corridors. Encourage adoption of supportive zoning regulations for compact development along BRT corridors leading to the Downtown Core that will not diminish the long-term growth and development potential for Downtown.
- **Policy LU-5-f:** High Density Residential Uses. Promote high-density residential uses to support Activity Centers and BRT Corridors, affordable housing, and walkable access to transit stops.
- **Policy LU-6-b:** Commercial Development Guidelines. Consider adopting commercial development guidelines to assure high quality design and site planning for large commercial developments, consistent with the Urban Form policies of this Plan.
- **Policy LU-6-g:** Lodging Facilities Location. Site lodging facilities and related accommodations near major transportation facilities.
- **Policy LU-8-b:** Access to Public Facilities. Ensure that major public facilities and institutions have adequate multi-modal access and can be easily reached by public transit.
- **Policy D-1-g:** Reducing Surface Parking. Consider adopting and implementing incentives to replace existing large surface parking lots in centers with parking structures, and incorporated them into high-density mixed-use developments.
- **Objective D-3:** Create unified plans for Green Streets, using distinctive features reflecting Fresno's landscape heritage.
- **Policy D-3-a:** Green Street Tree Planting. Create a Green Street Tree Planting Program, with a well-balanced variety and spacing of trees to establish continuous shading and visual continuity for each streetscape. Strive to achieve coherent linkages between public and private spaces, prioritizing tree planting along tree-deficient Arterial and Collector Roadways in neighborhoods characterized by lower per capita rates of vehicle ownership.
- **Policy D-3-b:** Funding for Green Street Tree Planting Program. Pursue funding for the Green Street Tree Planting Program, including landscaping of median islands.

- **Policy D-3-c:** Local Streets as Urban Parkways. Develop local streets as "urban parkways," where appropriate, with landscaping and pedestrian spaces.
- **Policy D-4-b:** Incentives for Pedestrian-Oriented Anchor Retail. Consider adopting and implementing incentives for new pedestrian-friendly anchor retail at intersections within Activity Centers and along corridors to attract retail clientele and maximize foot traffic.
- **Policy D-4-f:** Development Code Update for Design Concepts. Ensure that standards in the Development Code implement General Plan design concepts for each land use type.
- **Objective MT-1:** Create and maintain a transportation system that is safe, efficient provides access in an equitable manner, and optimizes travel by all modes.
- **Policy MT-1-g:** Complete Streets Concept Implementation. Provide transportation facilities based upon a Complete Streets concept that facilitates the balanced use of all viable travel modes (pedestrians, bicyclists, motorists, and transit users), meeting the transportation needs of all ages and abilities and providing mobility for a variety of trip purposes, while also supporting other City goals. Implementation actions will include:
  - Meeting the needs of all users within the street system as a whole; each individual street does not need to provide all modes of travel, but travel by all modes must be accommodated throughout the Planning Area;
  - Continuing to adopt refined street cross-section standards as appropriate in response to needs identified;
  - Encourage conversion of one-way streets to two-way streets to improve location circulation, access, and safety;
  - Considering the impact of streets on public health by addressing storm water runoff quality, air quality, and water conservation among other factors; and
  - Adhering to the water efficient landscape standards adopted by the City for median and streetscape plantings and irrigation methods.
- **Policy MT-1-j:** Transportation Improvements Consistent with Community Character. Prioritize transportation improvements that are consistent with the character of surrounding neighborhoods and supportive of safe, functional and Complete Neighborhoods; minimize negative impacts upon sensitive land uses such as residences, hospitals, schools, natural habitats, open space areas and historic and cultural resources. In implementing this policy, the City will design improvements to:
  - Facilitate provision of multi-modal transportation opportunities;
  - Provide added safety, including appropriate traffic calming measures;
  - Promote achievement of air quality standards;
  - Provide capacity in a cost effective manner; and
  - Create improved and equitable access with increased efficiency and connectivity.
- **Policy MT-1-e:** Ensure Interconnectivity Across Land Uses. Update development standards and design guidelines applicable to public and private property to achieve Activity Centers, neighborhoods and communities which are well connected by pedestrian, bicycle, appropriate public transportation and automobile travel facilities.
- **Policy MT-2-c:** Reduce VMT through Infill Development. Provide incentives for infill development that would provide jobs and services closer to housing and multi-modal transportation corridors, and vice versa, in order to reduce citywide vehicle miles travelled.

- **Policy MT-2-d:** Street Redesign where Excess Capacity Exists. Evaluate opportunities to reduce right of way and/or redesign streets to support non-automobile travel modes along streets with excess roadway capacity where adjacent land use is not expected to change over the planning period.
- **Policy MT-2-f:** Optimization of Roadway Operations. Optimize roadway operations by continuing to expand the use of techniques such as the City's intelligent transportation system (ITS) to manage traffic signal timing coordination in order to improve traffic operations and increase traffic-carrying capacity, while reducing unnecessary congestion and decreasing air pollution emissions. In order to facilitate roadway optimization and as a potential revenue source for the optimization, the following strategies need to be implemented:
  - Dig Once Policy. Install conduit for telecommunications use when trenching or construction occurs.
  - Telecommunications Strategy. Develop a costing mechanism for allowing the use of excess conduit within the City for use by communication carriers. The Policy shall follow regulations of the California Public Utilities Commission.
  - Grant Funding. Pursue grant funding to assist in construction and/or implementation of fiber-optic or other telecommunication infrastructure for additional public services such as education, economic development, reaching underserved populations, and public safety communications.
- **Policy MT-2-g:** Transportation Demand Management and Transportation System Management. Pursue the implementation of Transportation Demand Management and Transportation System Management strategies to reduce peak hour vehicle traffic demands and supplement the capacity of the transportation system.
- **Policy MT-2-b:** Reduce Vehicle Miles Traveled and Trips. Partner with major employers and other responsible agencies, such the San Joaquin Valley Air Pollution Control District and the Fresno Council of Governments, to implement trip reduction strategies, such as eTRIP, to reduce total vehicle miles traveled and the total number of daily and peak hour vehicle trips, thereby making better use of the existing transportation system.
- **Objective MT-2:** Make efficient use of the City's existing and proposed transportation system and strive to ensure the planning and provision of adequate resources to operate and maintain it.
- **Policy MT-1-k:** Multi-Modal Level of Service Standards. Develop and use a tiered system of flexible, multi-modal Level of Service standards for streets designated by the Circulation Diagram (Figure MT-1). Strive to accommodate a peak hour vehicle LOS of D or better on street segments and at intersections, except where Policies MT-1-m through MT-1-p provide greater specificity. Establish minimum acceptable service levels for other modes and use them in the development and environmental review process.
- **Policy MT-1-l:** Level of Service in the Downtown Area. Within the Downtown Planning Area accept vehicle LOS F conditions during peak hours for street segments and intersections specified in community and Specific plans as may be adopted by the City. Where there is an overlap in policies regarding LOS in the Downtown Planning Area, this policy shall supersede.
- **Policy MT-1-m:** Standards for Planned Bus Rapid Transit Corridors and Activity Centers. Strive to maintain the following vehicle LOS standards on major roadway segments and intersections along Bus Rapid Transit Corridors and in Activity Centers:

  - LOS E or better at all times, including peak travel times, unless the City Traffic Engineer determines that mitigation to maintain this LOS would be infeasible and/or conflict with the achievement of other General Plan policies.
  - Accept LOS F conditions in Activity Centers and High Intensity Transit Corridors only if provisions are made to improve the overall system and/or promote non-vehicular transportation and transit as part of a development project or a City-initiated project. In accepting LOS F conditions, the City Traffic Engineer may request limited analyses of operational issues at locations near Activity Centers and along Bus Rapid Transit Corridors, such as queuing or left-turn movements.
  - Give priority to maintaining pedestrian service first, followed by transit service and then by vehicle LOS, where conflicts between objectives for service capacity between different transportation modes occur.
  - Identify pedestrian-priority and transit-priority streets where these modes would have priority in order to apply a multi-modal priority system, as part of the General Plan implementation
- **Policy MT-2-n.** Peak Hour Vehicle LOS. Maintain a peak-hour vehicle LOS standard of D or better for all roadway areas outside of identified Activity Center and Bus Rapid Transit Corridor districts, unless the City Traffic Engineer determines that mitigation to maintain this LOS would be infeasible and/or conflict with the achievement of other General Plan policies.
- **Policy MT-2-o:** LOS Deviations Outside of Activity Centers and Areas Designated for Mixed-Use. Accept vehicle LOS E or F conditions outside of identified multi-modal districts only if provisions commensurate with the level of impact and approved by the City Traffic Engineer are made to sufficiently improve the overall transportation system and/or promote non-vehicular transportation as part of a development project or City-initiated project.
- **Policy MT-2-i:** Local Street Standards. Establish and implement local roadway standards addressing characteristics such as alignment, width, continuity and traffic calming to provide efficient neighborhood circulation; to allow convenient access by residents, visitors and public service and safety providers; and to promote neighborhood integrity and desired quality of life by limiting intrusive pass-through traffic.
- **Policy MT-3-b:** Preserve street trees lining designated scenic corridors or boulevards. Replace trees of the predominant type and in a comparable patter to existing plantings if there is no detriment to public safety.
- **Objective MT-4:** To establish and maintain a continuous, safe, and easily accessible bikeways system throughout the metropolitan area to reduce vehicle use, improve air quality and the quality of life, and provide public health benefits.
- **Policy MT-4-a:** Bicycle, Pedestrian, and Trails Master Plan. To the extent consistent with this General Plan, continue to implement and periodically update the Bicycle, Pedestrian, and Trails Master Plan to meet State standards and requirements for recommended improvements and funding proposals as determined appropriate and feasible.
- **Policy MT-4-d:** Prioritization of Bikeway Improvements. Prioritize bikeway components that link existing separated sections of the system, or that are likely to serve the highest concentration of existing or potential cyclists, particularly in those neighborhoods with low vehicle ownership rates, or that are likely to serve destination areas with the highest demand such as schools, shopping areas, recreational trail heads, and employment centers.

- **Policy MT-4-h:** Bicycle Parking Facilities. Promote the installation of bicycle locking racks and bicycle parking facilities at public buildings, transit facilities, public and private parking lots, and recreational facilities. Establish and adopt standards for bicycle parking in the Development Code update.
- **Policy MT-4-i:** Bicycling and Public Transportation. Promote the integration of bicycling with other forms of transportation, including public transit. Continue to provide bike racks or space for bicycles on FAX buses.
- **Policy MT-4-j:** Street Maintenance for Bicycle Safety. Provide regular sweeping and other necessary maintenance to clear bikeways of dirt, glass, gravel, and other debris and maintain the integrity of the bicycling network.
- **Policy MT-4-k:** Bicycle Safety, Awareness, and Education. Promote bicycle ridership by providing secure bicycle facilities, promoting traffic safety awareness for both bicyclists and motorists, promoting the air quality benefits, promoting non-renewable energy savings, and promoting the public health benefits of physical activity.
- **Policy MT-6-l:** Environmentally Sensitive Path and Trail Design. Develop paths and trails with minimum environmental impact by taking the following actions.
  - Surface paths and trails with materials that are conducive to maintenance and safe travel, choosing materials which blend in with the surrounding area whenever possible;
  - Design paths and trails to follow contour lines where the least amount of grading (fewest cuts and fills) and least disturbance of the surrounding habitat would occur;
  - Beautify trail rights-of-way in a manner consistent with intended use, safety, and maintenance;
  - Use landscaping to stabilize slopes, create physical or visual barriers, and provide shaded areas.
  - Preserve and incorporate native plant species into the landscaping.
- **Objective MT-8:** Provide public transit options that serve existing and future concentrations of residences, employment, recreation and civic uses and are feasible, efficient, safe, and minimize adverse environmental impacts.
- **Policy MT-9-e:** Area Specific Transit Improvements. Continue to evaluate and pursue where appropriate the planning and implementation of special area specific transit improvements, such as street car facilities.
- **Policy MT-8-g:** High Speed Train. If the State moves forward with HST, ensure it is constructed through Fresno in a manner that minimizes impacts to surrounding property owners and creates the most opportunity for redevelopment around the HST Station.
- **Policy MT-8-h:** Move Forward with High Speed Train Station Area Planning. Work with local residents, property and business owners, and other stakeholders to develop a station area plan to provide the most opportunity for growth and prosperity in concert with the development of the Fresno HST station.
- **Objective MT-9:** Provide public transit opportunities to the maximum number and diversity of people practicable in balance with providing service that is high in quality, convenient, reliable, cost-effective service and financially feasible.
- **Policy MT-8-a:** Street Design Coordinated with Transit. Coordinate the planning, design and construction of the major roadway network with transit operators to facilitate efficient direct transit routing throughout the Planning Area.

- **Policy MT-9-a:** Equitable Transit Provision. Provide transit that can serve all residents, including older residents and persons with disabilities.
- **Policy MT-9-b:** Transit Service Productivity Evaluation. Continue to evaluate transit service productivity and cost efficiency indicators in the City's Short-Range Transit Plan, and make necessary and appropriate service adjustments when operationally and financially feasible.
- **Policy MT-9-c:** Addressing Unmet Transit Needs. Continue to participate in the Council of Fresno County Governments' annual unmet transit needs evaluation process, particularly with respect to identifying need for access to medical and educational services; perform market analysis to identify potential transit choice riders; and pursue public education and information programs to identify changes in demand characteristics and opportunities to increase ridership.
- **Policy MT-8-d:** Coordination of Transportation Modes. Plan, design and implement transportation system improvements promoting coordination and continuity of transportation modes and facilities, such as shared parking or park and ride facilities at Activity Centers.
- **Policy MT-8-b:** Transit Serving Residential and Employment Nodes. Identify the location of current and future residential and employment concentrations and Activity Centers throughout the transit service area in order to facilitate planning and implementation of optimal transit services for these uses. Work with California State University, Fresno to determine locations within the campus core for bus stops.
- **Policy MT-8-e:** Regional Coordination. Continue to work with local and regional governmental institutions to promote efficient transportation policies and coordinated programs.
- **Policy MT-8-i:** Legislative Support. Monitor State and federal legislation that creates incentives to reduce auto dependency and support the use of alternatives to the single occupant vehicle that is consistent with the City's General Plan.
- **Policy MT-9-f:** Encourage Telecommuting. Support measures that will facilitate the expanded use of telecommunications technologies to reduce congestion, expansion of regional transportation facilities consistent with this General Plan, energy use, and air emissions (i.e., work at home, dispersed telecommute work centers, teleconferencing).
- **Policy MT-11-b:** Railroad Improvements. Continue to participate in and advocate for collaborative efforts to improve railroad transportation facilities and reduce conflicts with the street system, including relocation and/or consolidation of the BNSF and UP mainline railroad track facilities.
- **Policy POSS-3-c:** Link Parks with Walkways. Link public open space to adjacent schools and Activity Centers through a series of landscaped linear walkways and bikeways that enhance and encourage pedestrian use.
- **Policy POSS-3-f:** Park Design Guidelines. Create, maintain, and enforce park design guidelines, including provisions for:
  - Minimum and maximum shade.
  - Protections from shading by adjacent buildings.
  - Accessibility to persons with disabilities.
  - Street trees and landscaped median strips in adjacent arterial roads.
  - Art and points of attraction.
  - Landscape and hardscape features.
  - Street furniture, signage, and lighting.

  - Food sales and entertainment.
  - Restroom facilities, play structures, and picnic shelters.
  - Landscape design synthesis with input from civil engineers and hydrologists, educators and daycare providers, fitness trainers and coaches, police officers and experts in crime prevention through environmental design, as appropriate.
  - Sports field areas designed to allow periodic changes in field locations to minimize wear areas and provide sufficient fields to host regional, state, or national tournaments.
  - Using topography to create interesting and visually appealing spaces and forms.
  - Use of waterways as a key design influence, a focus of restoration, and an opportunity to provide for public enjoyment of views.
  - Reflecting the agricultural and horticultural heritage of the site or area.
  - Connecting with surrounding areas in a way that encourages expanded pedestrian activity.
  - Creating individual places within a park that respond to the needs of a broad range of park users, from youth to the elderly.
  - Creating places of delight that engage the senses, such as water features or moving installations.
  - Creating places that engage the mind, by treating park features as opportunities for interpretation and questioning.
  - Using sustainable design practices, and highlighting these as opportunities for learning.
- **Objective POSS-5:** Provide for long-term preservation, enhancement, and enjoyment of plant, wildlife, and aquatic habitat.
- **Policy POSS-5-a:** Habitat Area Acquisition. Support federal, State, and local programs to acquire significant habitat areas for permanent protection and/or conjunctive educational and recreational use.
- **Policy POSS-5-c:** Buffers for Natural Areas. Require development projects, where appropriate and warranted, to incorporate natural features (such as ponds hedgerows and wooded strips) to serve as buffers for adjacent natural areas with high ecological value.
- **Policy POSS-5-d:** Guidelines for Habitat Conservation. Establish guidelines for habitat conservation and mitigation programs including:
  - Protocols for the evaluation of the site's environmental setting and proposed design and operating parameters of proposed mitigation measures.
  - Methodology for the analysis depiction of land to be acquired or set aside for mitigation activities.
  - Parameters for specification of the types and sources of plant material used for any revegetation, irrigation requirements, and post-planting maintenance and other operational measures to ensure successful mitigation.
  - Monitoring at an appropriate frequency by qualified personnel and reporting of data collected to permitting agencies.
- **Objective PU-7:** Promote reduction in wastewater flows and develop facilities for beneficial reuse of reclaimed water and biosolids for management and distribution of treated wastewater.
- **Policy PU-7-a:** Reduce Wastewater. Identify and consider implementing water conservation standards and other programs and policies, as determined appropriate, to reduce wastewater flows.

- **Policy PU-7-b:** Reduce Stormwater Leakage. Reduce storm water infiltration into the sewer collection system, where feasible, through a program of replacing old and deteriorated sewer collection pipeline; eliminating existing stormwater sewer cut-ins to the sanitary sewer system; and avoiding any new sewer cut-ins except when required to protect health and safety.
- **Policy PU-7-c:** Biosolid Disposal. Investigate and consider implementing economically effective and environmentally beneficial methods of biosolids handling and disposal.
- **Policy PU-7-d:** Pursue the development of a recycled water system and the expansion of beneficial wastewater recycling opportunities, including a timely technical, practicable, and institutional evaluation of treatment, facility siting and water exchange elements.
- **Policy PU-8-e:** Repairs. Continue to evaluate existing water production and distribution systems and facilitate necessary repair or enhancement of damaged or antiquated facilities.
- **Policy PU-8-g:** Review Project Impact on Supply. Mitigate the effects of development and capital improvement projects on the long-range water budget to ensure an adequate water supply for current and future uses.
- **Objective PU-9:** Provide adequate solid waste facilities and services for the collection, transfer, recycling, and disposal of refuse.
- **Policy PU-9-a:** New Techniques. Continue to collaborate with affected stakeholders and partners to identify and support programs and new techniques of solid waste disposal such as recycling, composting, and waste separation, to reduce the volume and toxicity of solid wastes that must be sent to landfill facilities.
- **Policy PU-9-b:** Compliance with State Law. Continue to pursue programs to maintain conformance with the Solid Waste Management Act of 1989 or as otherwise required by law and mandated diversion goals.
- **Objective RC-2:** Promote land uses that conserve resources.
- **Policy RC-2-a:** Link Land Use to Transportation. Promote mixed-use, higher density infill development in multi-modal corridors. Support land use patterns that make more efficient use of the transportation system and plan future transportation investments in areas of higher-intensity development. Discourage investment in infrastructure that would not meet these criteria.
- **Policy RC-4-a:** Support Regional Efforts. Support and lead, where appropriate, regional, State and federal programs and actions for the improvement of air quality, especially the SJVAPCD's efforts to monitor and control air pollutants from both stationary and mobile sources and implement Reasonably Available Control Measures in the Ozone Attainment Plan.
- **Policy RC-4-c:** Evaluate Impacts with Models. Continue to require the use of computer models used by SJVAPCD to evaluate the air quality impacts of plans and projects that require such environmental review by the City.
- **Policy RC-4-d:** Forward Information. Forward information regarding proposed General Plan amendments, community plans, Specific Plans, neighborhood plans, Concept Plans, and development proposals that require air quality evaluation, and amendments to development regulations to the SJVAPCD for their review of potential air quality and health impacts.
- **Policy RC-4-e:** Support Employer-Based Efforts. Support and encourage employer implementation of staggered work hours and employee incentives to use carpools, public transit and other measures to reduce vehicular use and traffic congestion.

- **Policy RC-4-f:** Continue to control and reduce air pollution emissions from vehicles owned by the City and municipal operations and facilities by undertaking the following:
  - Expand the use of alternative fueled and electric vehicles in City fleets.
  - Create preventive maintenance schedules that will ensure efficient engine operation.
  - Include air conditioning recycling and charging stations in the City vehicle maintenance facilities, to reduce freon gases being released into the atmosphere and electrostatic filtering systems in City maintenance shops, when feasible or when required by health regulations.
  - Use satellite corporation yards for decentralized storage and vehicle maintenance.
  - Convert City-owned emergency backup generators to natural gas fuels whenever possible, and create an advanced energy storage system.
- **Policy RC-4-g:** FAX Actions. Continue to improve Fresno Area Express (FAX) bus transit system technical performance, reduce emission levels, streamline system operations, and implement BRT where supportive land uses are proposed by Figure LU-1: Land Use Diagram.
- **Policy RC-4-i:** Methane Capture. Continue to pursue opportunities to reduce air pollution by using methane gas from the old City landfill and the City's wastewater treatment process.
- **Policy RC-4-j:** All Departments. Continue to develop and implement in all City departments operational policies to reduce air pollution.
- **Objective RC-5:** In cooperation with other jurisdictions and agencies in the San Joaquin Valley Air Basin, take timely, necessary, and the most cost-effective actions to achieve and maintain reductions in greenhouse gas emissions and all strategies that reduce the causes of climate change in order to limit and prevent the related potential detrimental effects upon public health and welfare of present and future residents of the Fresno community.
- **Policy RC-5-b:** Greenhouse Gas Reduction Plan. As is consistent with State law, prepare and adopt a Greenhouse Gas Reduction Plan as part of the Master Environmental Impact Report to be concurrently approved with the Fresno General Plan in order to achieve compliance with State mandates, assist development by streamlining the approval process, and focus on feasible actions the City can take to minimize the adverse impacts of growth and development on global climate change. The Greenhouse Gas Reduction Plan shall include, but not be limited to:
  - A baseline inventory of all known or reasonably discoverable sources of GHGs that currently exist in the city and sources that existed in 1990.
  - A projected inventory of the GHGs that can reasonably be expected to be emitted from those sources in the year 2035 with the implementation of this General Plan and foreseeable communitywide and municipal operations.
  - A target for the reduction of emissions from those identified sources.
  - A list of feasible GHG reduction measures to meet the education target, including energy conservation and "green building" requirements in municipal buildings and private development.
  - Periodically update municipal and community-wide GHG emissions inventories to determine the efficacy of adopted measures and to guide future policy formulation needed to achieve and maintain GHG emissions reduction targets.

- **Policy RC-5-c:** Increase efforts to incorporate requirements for GHG emission reductions in land use entitlement decisions, facility design, and operational measures subject to City regulation through the following measures and strategies:
  - Promote the expansion of incentive-based programs that involve certification of projects for energy and water efficiency and resiliency. These certification programs and scoring systems may include public agency "Green" and conservation criteria, Energy Star™ certification, CALGreen Tier 1 or Tier 2, Leadership in Energy Efficient Design (LEED™) certification, etc.
  - Promote appropriate energy and water conservation standards and facilitate mixed-use projects, new incentives for infill development, and the incorporation of mass transit, bicycle and pedestrian amenities into public and private projects.
  - Require energy and water audits and upgrades for water conservation, energy efficiency, and mass transit, pedestrian, and bicycle amenities at the time of renovation, change in use, change in occupancy, and change in ownership for major projects meeting review thresholds specified in an implementing ordinance.
  - Incorporate the City's "Guidelines for Ponding Basin/Pond Construction and Management to Control Mosquito Breeding" as conditions of approval for any project using an on-site stormwater basin to prevent possible increases in vector-borne illnesses associated with global climate change.
  - Periodically evaluate the City's facility maintenance practices to determine whether there are additional opportunities to reduce GHGs through facility cleaning and painting, parks maintenance, road maintenance, and utility system maintenance.
  - Periodically evaluate standards and mitigation strategies for highly vehicle-dependent land uses and facilities, such as drive-through facilities and auto-oriented development.
- **Policy RC-5-d:** SCS and CAP Conformity Analysis. Ensure that the City includes analysis of a project's conformity to an adopted regional Sustainable Community Strategy or Alternative Planning Strategy (APS), an adopted Climate Action Plan (CAP), and any other applicable City and regional greenhouse gas reduction strategies in affect at the time of project review.
- **Policy RC-5-e:** Ensure Compliance. Ensure ongoing compliance with GHG emissions reduction plans and programs by requiring that air quality measures are incorporated into projects' design, conditions of approval, and mitigation measures.
- **Policy RC-4-g:** Toolkit. Provide residents and project applicants with a "toolkit" of feasible measures that can be used to reduce GHG emissions, including educational materials on energy-efficient and "climate-friendly" products.
- **Policy RC-6-b:** Water Plans. Adopt and implement ordinances, standards, and policies to achieve the intent of the City of Fresno Urban Water Management Plan, Fresno-Area Regional Groundwater Management Plan, and City of Fresno Metropolitan Water Resources Management Plan to ensure a sustainable supply of water.
- **Policy RC-6-d:** Prepare, adopt, and implement the City of Fresno Recycled Water Master Plan.
- **Policy RC-6-h:** Conditions of Approval. Include in the Development Code standards for imposing conditions of approval for development projects to ensure long-term maintenance of adequate clean water resources. Require findings that adequate water supply must exist prior to any discretionary project approval for residential and commercial development requiring annexation (excluding County Islands), as required by law.

- **Objective RC-7:** Promote water conservation through standards, incentives and capital investments.
- **Policy RC-7-a:** Water Conservation Program Target. Maintain a comprehensive conservation program to help reduce per capita water usage in the city's water service area to 243 gallons per capita per day (gpcd) by 2020 and 190 gpcd by 2035, by adopting conservation standards and implementing a program of incentives, design and operation standards, and user fees:
  - Support programs that result in decreased water demand, such as landscaping standards that require drought-tolerant plants, rebates for water conserving devices and systems, turf replacement, xeriscape landscape for new homes, irrigation controllers, commercial/industrial/institutional water conserving programs, prioritized leak detection program, complete water system audit, landscape water audit and budget program, and retrofit upon resale ordinance.
  - Implement the U.S. Bureau of Reclamation Best Management Practices for water conservation as necessary to maintain the City's surface water entitlements.
  - Adopt and implement policies in the event that an artificial lake is proposed for development.
  - Work cooperatively toward effective uniform water conservation measures that would apply throughout the Planning Area.
  - Expand efforts to educate the public about water supply issues and water conservation techniques.
- **Policy RC-7-b:** Water Pricing and Metering. Develop a tiered water cost structure for both residential and commercial users that will properly price water based on its true cost; require all new development to be metered for water use; and charge all customers the true, full cost of their water supply, including costs of acquisition, initial treatment, conveyance, and wastewater treatment, operations, and maintenance, and remediation.
- **Policy RC-7-c:** Best Practices for Conservation. Require all City facilities and all new private development to follow U.S. Bureau of Reclamation Best Management Practices for water conservation as warranted and appropriate.
- **Policy RC-7-h:** Landscape Water Conservation Standards. Refine landscape water conservation standards that will apply to new development installed landscapes, building on the State Model Water Efficient Landscape Ordinance and other State regulations.

  Evaluate and apply, as appropriate, augmented xeriscape, "water-wise," and "green gardening" practices to be implemented in public and private landscaping design and maintenance.

  Facilitate implementation of the State's Water Efficient Landscape Ordinance by developing alternative compliance measures that are easy to understand and observe.
- **Policy RC-7-e:** Retrofit City Facilities, and Consider Incentives Programs to Encourage Retrofitting of Other Existing Public and Private Residential and Non-Residential Facilities and Sites. Reduce water use in municipal buildings and City operations by developing a schedule and budget for the retrofit of existing municipal buildings with water conservation features, such as auto shut-off faucets and water saving irrigation systems. Prepare a comprehensive incentive program for other existing public and private residential and non-residential buildings and irrigation systems.

- **Policy RC-7-h:** Landscape Water Conservation Standards. Refine landscape water conservation standards that will apply to new development installed landscapes, building on the State Model Water Efficient Landscape Ordinance and other state regulations.

  Evaluate and apply, as appropriate, augmented xeriscape, "water-wise," and "green gardening" practices to be implemented in public and private landscaping design and maintenance.

  Facilitate implementation of the State's Water Efficient Landscape Ordinance by developing alternative compliance measures that are easy to understand and observe.
- **Objective RC-8:** Reduce the consumption of non-renewable energy resources by requiring and encouraging conservation measures and the use of alternative energy sources.
- **Policy RC-8-a:** Existing Standards and Programs. Continue existing beneficial energy conservation programs, including adhering to the California Energy Code in new construction and major renovations.
- **Policy RC-8-b:** Energy Reduction Targets. Strive to reduce per capita residential electricity use to 1,800 kWh per year and non-residential electricity use to 2,700 kWh per year per capita by developing and implementing incentives, design and operation standards, promoting alternative energy sources, and cost-effective savings.
- **Policy RC-8-d:** Incentives. Consider providing an incentive program for residential developers who commit to building all of their homes to ENERGY STAR performance guidelines.
- **Policy RC-7-i:** PACE Financing. Develop a residential Property Assessed Clean Energy (PACE) program, if it is determined to be a feasible option, to help finance water efficiency and energy efficiency upgrades for property owners.
- **Policy RC-8-e:** Energy Use Disclosure. Promote compliance with State law mandating disclosure of a building's energy data and rating of the previous year to prospective buyers and lessees of the entire building or lenders financing the entire building.
- **Policy RC-8-f:** City Heating and Cooling. Reduce energy use at City facilities by updating heating and cooling equipment and installing "smart lighting" where feasible and economically viable.
- **Policy RC-8-g:** Revolving Energy Fund. Create a City Energy Fund, which uses first year savings and rebates from completed City-owned energy efficiency projects to provide resources for additional energy projects. Dedicate this revolving fund to the sole use of energy efficiency projects that will pay back into the fund.
- **Policy RC-8-h:** Solar Assistance. Identify and publicize information about financial mechanisms for private solar installations and provide over-the-counter permitting for solar installations meeting specified standards, which may include maximum size (in kV) of units that can be so approved.
- **Policy RC-8-i:** Renewable Target. Adopt and implement a program to increase the use of renewable energy to meet a given percentage of the city's peak electrical load within a given time frame.
- **Policy RC-8-j:** Alternative Fuel Network. Create a network of integrated charging and alternate fuel station for both public and private vehicles, and if feasible, open up municipal stations to the public as part of network development.
- **Objective RC-11:** Strive to reduce the solid waste going to landfills to zero by 2035

- **Policy RC-11-a:** Waste Reduction Strategies. Maintain current targets for recycling and re-use of all types of waste material in the city, and enhance waste and wastewater management practices to reduce natural resource consumption through the following measures:
  - Continue to require recyclable material collection and storage areas in all residential development.
  - Establish recycling collection and storage area standard for commercial and industrial facilities to the recycling areas according to the anticipated types and amounts of recyclable material generated.
  - Provide educational materials to residents on how and what to recycle and how to dispose of hazardous waste.
  - Provide recycling canisters and collection in public areas where trashcans are also provided.
  - Institute a program to evaluate major waste generators and identify recycling opportunities for their facilities and operations.
  - Continue to partner with the California Integrated Waste Management Board on waste diversion and recycling programs and the CalMax (California Materials Exchange) program.
  - Evaluate the feasibility of a residential, restaurant, and institutional food waste segregation and recycling program, to reduce the amount of organic material sent to landfill and minimize the emissions generated by decomposing organic material.
  - Evaluate the feasibility of "carbon footprinting" for the City's wastewater treatment facilities, biomass and composting operations, solid waste collection and recycling programs.
  - Expand yard waste collection to divert compostable waste from landfills.
  - Study the feasibility and cost-benefit analysis of a municipal composting program to collect and compost food and yard waste, including institutional food and yard waste, using the resulting compost matter for City park and median maintenance.
- **Policy RC-11-b:** Zero Waste Strategy. Create a strategic and operations plan for fulfilling the City Council resolution committing the City to a Zero Waste goal.
- **Policy HCR-2-j:** Window Replacement. Evaluate window replacements in federally funded housing projects on a project-by-project basis with consideration for health, safety, historic values, sustainability, and financial feasibility.
- **Policy HCR-3-a:** Adaptive Reuse. Promote the adaptive reuse and integration of older buildings into new projects as part of the City's dedication to nurturing a sustainable Fresno.
- **Policy HC-3-f:** New Drive-Through Facilities. Include in the Citywide Development Code design review to reduce vehicle emissions resulting from queued idling vehicles at drive-through facilities in proximity to residential neighborhoods.
- **Policy HC-3-d:** Green Standards for Affordable Housing. Provide appropriate incentives for affordable housing providers, agencies, non-profit, and market rate developers to use LEED and CALGreen Tier 1 or Tier 2 standards or third-party equivalents.
- **Policy HC-5-f:** Urban Agriculture. Promote a full range of urban agriculture activities, including farmers' markets, farm stands, community gardens, on-site garden produce market stands, and urban farms. Support associations involved in these activities, and undertake the following:
  - Amend the zoning ordinance and streamline permitting procedures to include provisions for Community Gardens, On-site Garden Produce Market Stands and Urban Farms that allow sale of foods grown locally.

- Permit community gardens as land uses allowable by right under the following conditions:
  - On vacant residentially zoned lots under two acres in size through the filing of an agreement with the City between a community group, or other persons(s), and the land owner; or
  - On developed land operated and owned or leased by a community institution; or
  - On City-owned or other public land, subject to City or agency approval
- Create a policy of reduced planning application and plan check fees for urban agriculture projects.
- Make publically available an inventory of City-owned surplus land that could be used for urban agriculture.
- Continue to allow and promote community gardens in City-owned parks.
- Support the planning of community gardens within walking distance of high-density residential areas to compensate for the reduced amount of open space in these areas.
- Emphasize opportunities for urban agriculture in all areas of the city, schools, parks, residential food deserts, and especially in areas of the city with a relatively high proportion of 'food insecure' individuals.

City of Fresno Greenhouse Gas Reduction Plan

The General Plan includes a Greenhouse Gas Reduction Plan (GHG Plan) that provides the City's primary strategy for reductions greenhouse gas emissions. The intent of the GHG Plan is to achieve compliance with state GHG reduction mandates by focusing on feasible actions the City can take to minimize the adverse impacts of growth and development on climate change. The GHG Plan does not reinvent the wheel; rather, it builds on the General Plan policies and implementation measures. Where needed, the GHG Plan provides more details to clarify and focus action and to ensure implementation (Fresno 2014).

The GHG Plan shows that the City will achieve a reduction of 26.8 percent from BAU by 2020 through compliance with regulations only, which exceeds the 21.7 percent required to show consistency with AB 32 targets. The local measures contained in the GHG Plan are expected to achieve an additional 3.0 percent reduction from BAU for a total reduction of 29.8 percent from BAU by 2020.

The GHG Plan includes criteria that would allow projects to qualify for permit streamlining provisions and incentives and would receive a less than significant finding for GHG impacts. For example, projects that meet the Fresno Green Checklist point totals receive the following incentives:

- 25 percent fee reductions of many planning fees (Site Plans, CUPs, EAs etc.)
- 20 percent minor deviation from development standards, if needed (25% if public art is incorporated into the project)
- Expedited processing through the "Green Team"
- Eligibility for a Fresno Green award and use of the Fresno Green brand for the project.

In addition, projects that meet the criteria listed below do not need a quantitative greenhouse gas analysis in some cases. The GHG Plan describes options for determining the significance of direct

project GHG emissions depending on the project approval and the project's CEQA compliance process. Projects exempt from CEQA would not require GHG assessment. Projects that require a discretionary approval can take advantage of a streamlined approach, whereby projects that comply with the four actions listed below would not need to prepare a quantitative GHG analysis to demonstrate consistency with the GHG Plan. Projects requiring a General Plan Amendment would require a quantitative analysis. A project may also determine if it is consistent with the GHG Plan's provisions and demonstrate that the project would achieve at least a 21.7 percent GHG emission reduction compared to business as usual (BAU) in 2020 to be considered less than significant.

The GHG Plan includes the following guidance for determining project consistency with the GHG Plan under its streamlined approach:

1. Review General Plan Policies listed in the GHG Plan to determine applicability to the project.
2. Incorporate design features or mitigation measures into the project as needed to demonstrate consistency.
    a. Street and pedestrian design complies with complete streets concepts.
    b. Review project against Citywide Development Code for mandatory design features required for the project.
    c. Consider alternative energy generation (solar) if appropriate for the project and site. (The State is working towards zero net energy development that will require increasing efficiency and self generation over time).
    d. Review water conservation building and landscape design features for compliance with City water conservation standards.
3. Implement project design features suitable for the development type and location.
    e. Projects within core/center areas and BRT corridors should meet minimum density and design requirements to ensure pedestrian and transit orientation is met.
    f. Maintain and enhance connections to regional bikeways and trail system.
4. Complete the latest version of the Fresno Green Residential or Non-Residential Checklist
    g. Meet the Fresno Green checklist point requirements.
    h. Alternatively, meet the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Programs, or qualify for Build It Green's GreenPoint rating system for residential building.

5.7.4 - Thresholds of Significance

Section 15064.4(b) of the CEQA Guideline amendments for greenhouse gas emissions states that a lead agency may take into account the following three considerations in assessing the significance of impacts from greenhouse gas emissions.

- **Consideration #1**: The extent to which the project may increase or reduce greenhouse gas emissions as compared to the existing environmental setting.
- **Consideration #2**: Whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project.

- **Consideration #3**: The extent to which the project complies with regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions. Such regulations or requirements must be adopted by the relevant public agency through a public review process and must reduce or mitigate the project's incremental contribution of greenhouse gas emissions. If there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with the adopted regulations or requirements, an EIR must be prepared for the project.

The following excerpt is from the District's 2015 Guide for Assessing and Mitigating Air Quality Impacts (GAMAQI). The excerpt restates information from the guidance document: Guidance for Valley Land-Use Agencies in Addressing GHG Emission Impacts for New Projects Under CEQA adopted by the SJVAPCD Governing Board on December 17, 2009.

- Projects complying with an approved GHG emission reduction plan or GHG mitigation program, which avoids or substantially reduces GHG emissions within the geographic area in which the project is located would be determined to have a less than significant individual and cumulative impact for GHG emissions. Such plans or programs must be specified in law or approved by the lead agency with jurisdiction over the affected resource and supported by a CEQA compliant environmental review document adopted by the lead agency. Projects complying with an approved GHG emission reduction plan or GHG mitigation program would not be required to implement Best Performance Standards (BPS).
- Projects implementing BPS would not require quantification of project specific GHG emissions. Consistent with CEQA Guidelines, such projects would be determined to have a less than significant individual and cumulative impact for GHG emissions.
- Projects not implementing BPS would require quantification of project specific GHG emissions and demonstration that project specific GHG emissions would be reduced or mitigated by at least 29 percent, compared to Business as Usual (BAU), including GHG emission reductions achieved since the 2002-2004 baseline period consistent with GHG emission reduction targets established in ARB's AB 32 Scoping Plan. Projects achieving at least a 29 percent GHG emission reduction compared to BAU would be determined to have a less than significant individual and cumulative impact for GHG.

Threshold Based on ARB Updated Inventory and Projections

The ARB prepared an update to the state GHG inventory and 2020 projections accounting for revised growth projections and progress achieved to date. The 2020 BAU inventory was revised from 596 $MMTCO_2e$ to 545 $MMTCO_2e$. Based on this revised projection, a 21.7 percent decrease in emissions from BAU statewide from all sources will be required to achieve 1990 emission levels (427 $MMTCO_2e$). The SJVAPCD threshold of 29 percent is no longer required to show consistency with AB 32 targets. Therefore, this analysis is based on whether the growth projected for the City of Fresno General Plan is consistent with the State's updated 21.7 percent reduction target.

Progress Beyond 2020

The AB 32 targets and Scoping Plan focus on achieving reductions that are adequate to reduce business as usual emissions in 2020 to 1990 levels. The 2020 planning horizon was viewed as a near term target for which specific strategies and measures could be implemented to achieve the target. There are no legislated targets for years beyond 2020. However, Executive Order S-3-05 includes a goal of reducing emissions to 80 percent below 1990 levels by 2050. With General Plan buildout predicted for 2056, a post-2020 framework for determining impacts is necessary. SB 375 includes targets for 2035; however, they only apply to passenger car and light truck emissions and include no mandates that apply directly to the City.

The ARB Scoping Plan did not set targets for the State beyond 2020; however, as 2020 approaches, the State has begun the process to adopt targets for a later year or years. The ARB adopted the First Update to the Climate Change Scoping Plan (Update) in May 2014 (ARB 2014). The Update provides a discussion of what types of actions would be required to achieve the 2050 goal. Without a new legislative mandate, it is unclear if the ARB will be able to pursue a new round of regulatory reductions to achieve a target for 2030 or 2050. The Legislature has a bill in process that would provide authority for affected state agencies to pursue the next round of regulations to reduce greenhouse gases, but the final provisions and outcome of the bill are uncertain.

The ARB has assessed several studies to identify the types of strategies that could be implemented to achieve the 2050 target (ARB 2012). The ARB found that studies generally show that 80 percent reductions are technically achievable, mostly with technologies that are commercially available today, but that rapid market penetration will be required to significantly accelerate emission reductions through the following:

- Energy demand reduction via efficiency and activity changes.
- Large-scale electrification of on-road vehicles and building and industrial appliances.
- Decarbonization of electricity and fuel supplies through renewable or other near zero carbon technologies.

Each study explores varying combinations of strategies within these three categories, with some common trends:

- Large, ongoing efficiency improvements in transportation, buildings, and industry can be readily achieved.
- A large amount of electrification for light-duty vehicles, rail, buses, and a few heavy-duty categories is necessary.
- A large amount of electrification of space and water heating in buildings and machinery in industrial operations is also necessary.
- Near-zero carbon electricity supply is essential, particularly as the electricity grid supplies energy for transportation and traditional residential, commercial, and industrial activities.

- Advanced, low carbon liquid fuels and reduced vehicle travel are important and highly influential in reducing transportation sector emissions.
- While energy and transportation represent the largest emission sources that will need to be addressed, better use of natural carbon sinks and pursuing reductions within many other GHG-emitting sectors is also needed.
- Aggressive strategies in all areas need to be coordinated and initiated immediately to enable sufficient market uptake by 2050.

Development anticipated during the buildout of the DNCP and FCSP can support the implementation of the above listed strategies, through the land use and transportation policies that reduce mobile source emissions, and resource conservation policies that reduce energy use and encourage alternative energy sources. The Greenhouse Gas Reduction Plan will provide details regarding local actions that implement the policies. Although the Greenhouse Gas Reduction Plan focuses on the near term 2020 target, it also accounts for post-2020 reductions from existing regulations and local measures to the extent possible.

Continued improvements in energy efficiency will primarily be achieved through periodic tightening of energy efficiency standards, but also through local programs and voluntary measures. The California Public Utilities Commission adopted the Long Term Energy Efficiency Strategic Plan that aims to achieve wide spread implementation of zero-net energy buildings by 2020 for new residential construction and by 2030 for new commercial construction, among other goals. Net zero energy consumption is achieved through a combination of increased energy efficiency and on-site power production using clean distributed generation (primarily solar panels and solar water heating) (CPUC 2011).

After building regulations are in place that require net-zero energy consumption, there will still be a need to improve energy efficiency so that excess building energy production will be available to accommodate increased demand throughout the grid. As technology advances, the State can be expected to continue tightening energy efficiency regulations. The State encourages but does not require local government to exceed energy efficiency requirements. The rapid pace of regulatory energy efficiency standards with updates proceeding about every 3 years makes it very difficult for local agencies and developers to adapt to the changes. For example, the latest changes to Title 24 provide a 25 percent reduction in energy consumption by residential development and 30 percent by commercial development compared to the previous 2008 Title 24 standards (CEC 2012). The feasibility for developers to exceed these standards on a consistent basis remains to be determined. In the interim, voluntary incentive and recognition programs such as Energy Star and LEED certification encouraged by the General Plan can be used to demonstrate that exceeding the new standards is technically and economically feasible.

A GHG threshold approach based on CEQA Guidelines Section 15064.4(b) consideration #3 requires that projects comply with "regulations or requirements adopted to implement a statewide, regional, or local plan for the reduction or mitigation of greenhouse gas emissions." Until such a time as the applicable regulations or requirements are adopted by the relevant public agency through a public review process that include specific requirements that reduce or mitigate the project's incremental

contribution of greenhouse gas emissions, no post-2020 reduction thresholds should be applied under this CEQA provision.

Under GHG threshold approach Consideration #2, the Lead Agency can determine whether the project emissions exceed a threshold of significance that the lead agency determines applies to the project. For the DNCP and FCSP, such a threshold based on absolute project emissions is not a suitable measure. However, the City could identify a quantitative threshold applicable to individual projects implementing the General Plan that would provide an amount of emissions that would not result in a significant impact. This is sometimes referred to as a small project exemption where the cumulative effect of the predicted number of small projects would not interfere with achieving a larger plan goal or target. A threshold that results in 90 percent of emissions being subject to additional mitigation has been used in other locales.

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in significant adverse impact on the environment. The Environmental Checklist in Appendix G of the State CEQA Guidelines is used as a framework for determining whether greenhouse gas emissions impacts are significant. Accordingly, greenhouse gas emissions resulting from the proposed project are considered significant if the project would:

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? (See Greenhouse Gas Emissions Impact GHG-1.)

b) Conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases? (See Conflict with Plan, Policy, or Regulation that Reduces Emissions Impact GHG-2.)

5.7.5 - Impact Analysis, Mitigation Measures, and Level of Significance After Mitigation

Greenhouse Gas Emissions

Impact GHG-1:	**The project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.**

Program-Level Impact Analysis of the DNCP and FCSP

Significant and unavoidable impact. The DNCP and the FCSP planning areas would allow for increased land available for residential, commercial, industrial and public facilities, which may increase greenhouse gas emissions in the City.

Greenhouse gas emissions in the DNCP and FCSP for BAU and 2020 are shown in Table 5.7-3. The modeling assumptions and results are provided in Appendix G. Construction emissions are not included because the buildout of the DNCP and FCSP is the cumulative result of hundreds of separate projects of which the level of detail is not known, and therefore construction and operational GHG emissions could not be accurately estimated for this analysis.

Table 5.7-3: DNCP and FCSP Business as Usual Compared to 2020 Emissions with Reductions

Source	2020 BAU ($MTCO_2e$/year)	2020 Emissions with Regulations ($MTCO_2e$/year)
Downtown Neighborhood Community Plan		
Area	348	276
Energy	5,352	3,562
Mobile	23,742	12,491
Waste	709	505
Water	747	551
Subtotal	*30,898*	*17,385*
Fulton Corridor Specific Plan		
Area	1,205	470
Energy	5,145	3,712
Mobile	24,432	18,368
Waste	633	317
Water	716	471
Subtotal	*32,131*	*23,338*
Total	**63,029**	**40,723**
	Percent Reduction	**35.39%**
	Threshold for Consistency with AB 32 Targets	**21.7%**
	Significance in 2020?	**LTS**

Note:
LTS = Less than significant impact
Source: FirstCarbon Solutions and CalEEMod.

The emission reductions described below were used to adjust the business as usual inventory to determine emissions with adopted regulations applied. The results of the analysis show that compliance with regulations applicable to development projects in the plan area will achieve a reduction of 35.39 percent compared to the business as usual scenario. The reduction exceeds the 21.7 percent reduction required to show consistency with AB 32 targets, and would be considered less than significant for growth occurring through 2020 (see Table 5.7-3). The reduction from BAU also exceeds the SJVAPCD threshold of 29 percent by a substantial margin providing additional evidence that the project would provide it fair share of reductions required by the State to meet its AB 32 goals.

Emission Reductions from State of California Regulations

The following discussion describes the state regulations that result in emission reductions within the City of Fresno. For details regarding the reduction estimates, see the calculations in Appendix G.

Motor Vehicles

Pavley I and LEV III. Regulations reducing motor vehicle emissions include Pavley I and LEV III, which reduce emissions from light duty cars and trucks. Pavley I applies to vehicles sold between 2009 and 2016. LEV III, also known as the Advanced Clean Cars Program, applies to vehicles sold between 2017 and 2025. Reductions from Pavley I are incorporated into the mobile source modeling assumptions in ARB's EMFAC 2011. LEV III reductions have not been incorporated into the EMFAC model and are estimated based on ARB analysis accomplished to support adoption of the regulation. These regulations provide an incremental improvement as old less efficient vehicles are retired and new more efficient vehicles meeting the new standards are purchased. For this reason, reductions will continue to accrue well after 2025 even if new regulations are not adopted in the future. EMFAC only includes modeling years through 2040, so later years assume the 2040 rate will remain flat pending adoption of the next round of vehicle standards.

Low Carbon Fuel Standard (LCFS). The LCFS mandates a statewide goal to reduce the carbon intensity of California's transportation fuels by at least 10 percent by 2020. The LCFS is incorporated into EMFAC 2011 and is reflected in the modeling results. The LCFS provides reductions for all vehicle classifications.

Energy Generation and Efficiency Regulations

The State has adopted regulations that result in greenhouse gas reductions from the utilities on the production side and from consumers on the demand side. The following regulations are included in the assessment.

Renewable Portfolio Standard (RPS). The RPS requires utilities to increase the amount of power generated from renewable sources to 33 percent by 2020. Reductions are estimated by taking PG&E's 2010 emission rate and comparing it to their rate predicted for 2020. The differential is applied as an emission reduction compared to business as usual. PG&E reported its renewable power sales at 23.8 percent in 2013 and expects to exceed the 33 percent mandate by 2020.

Title 24 Energy Efficiency Standards. Title 24 reduces emissions through energy conservation in new and remodeled buildings. The latest version of Title 24 provides a 25 percent reduction in residential energy consumption and a 30 percent reduction in non-residential energy consumption.

Title 24 California Green Building Code Standards. The Green Building Code Standards include measures requiring mandatory water conservation and other measures not addressed under Title 24 Energy Efficiency Standards.

Title 20 Appliance Efficiency Standards. Title 24 requires certain appliances to meet energy efficiency standards. No reductions are included below because a methodology to capture the reductions has not been identified.

Model Water Efficient Landscape Ordinance. The Model Water Efficient Landscape Ordinance requires water conservation measures that must achieve at least a 20 percent reduction in outdoor water use.

Waste. The City of Fresno is required to achieve the mandatory waste diversion and recycling mandates. Individual projects in the plan area will participate in City programs designed to achieve the mandated reductions.

Emissions Resulting from the DNCP and FCSP Buildout

Emissions were assessed for years beyond 2020 to ensure that the full impact of the project was disclosed. Buildout of the DNCP and FCSP is expected to occur by 2039.

Many of the regulations provide cumulative reductions that accrue each year. For example, new vehicles compliant with LEV III standards replace older higher emitting vehicles each year until most old vehicles are no longer in service. Once most or all older vehicles have been retired, reductions become flat and growth begins to offset the reductions achieved.

The year 2035 coincides with one of the regional target years from SB 375. SB 375 only applies to emissions from light duty cars and trucks. No comprehensive regulatory milestones exist that would define a reduction equivalent to the 2020 target which is based on consistency with the State's plan to reduce emissions to 1990 levels by 2020. Without a similar legislated goal for later years, the amount of emission reductions needed from the City would be speculative. However, the project is consistent with the Fresno COG Sustainable Communities Strategy, which relies upon increases in development densities and increased use of alternative transportation supported by the higher densities to achieve the regional targets.

The DNCP and FCSP projected emissions for BAU and at project buildout in 2039, which include reductions accounting for state regulations, are presented in Table 5.7-4. The results show a 26.85 percent reduction compared to 2035 BAU emissions. The reductions accrue primarily from full implementation of the LEV III motor vehicle regulation, Low Carbon Fuel Standard, Renewable Portfolio Standard, and the Title 24 Energy Efficiency Regulation.

Table 5.7-4: DNCP and FCSP at Project Buildout in 2039

Source	2039 BAU ($MTCO_2e$/year)	2039 Emissions with Regulations ($MTCO_2e$/year)
Downtown Neighborhood Community Plan		
Area	2,089	1,657
Energy	26,418	19,117
Mobile	77,868	58,444
Waste	3,423	1,712
Water	4,040	2,673
Subtotal	113,838	83,603

Table 5.7-4 (cont.): DNCP and FCSP at Project Buildout in 2039

Source	2039 BAU ($MTCO_2e$/year)	2039 Emissions with Regulations ($MTCO_2e$/year)
Fulton Corridor Specific Plan		
Area	3,253	2,821
Energy	30,984	22,352
Mobile	137,201	103,149
Waste	3,816	1,908
Water	4,316	2,836
Subtotal	179,570	133,066
Total	**293,408**	**216,669**
	Percent Reduction	**26.15%**
Source: FirstCarbon Solutions and CalEEMod.		

Since no comprehensive state target has been adopted for 2035, it is not known if additional reductions would be required by state regulations or local measures. If the State ultimately sets targets based on achieving 80 percent reduction below 1990 levels by 2050, additional reductions beyond currently adopted regulations will almost certainly be needed by 2035. Therefore, impacts in 2035 are potentially significant.

Policies or Ordinances Related to Greenhouse Gas Emissions

The DNCP and FCSP sets the City on a course of action that will provide substantial decreases in greenhouse gas emissions through redeveloping downtown which would promote walkability, and use of public transportation which would serve to reduce greenhouse gas impacts. In addition, the General Plan contains the following objectives and policies that would reduce emissions in the following categories:

- Motor vehicle emissions, through encouraging infill development and increasing pedestrian, transit, and bicycle usage: ED-1-c, UF-1-c, UF-12-a, UF-12-b, UF-12-d, UF-12-e, UF-12-f, UF-12-g, UF-13-a, UF-14, UF-14-a, UF-14-b, UF-14-c, LU-2, LU-2-a, LU-2-b, LU-2-c, LU-2-d, LU-3-b, LU-5-f, LU-6-b, LU-6-g, LU-8-b, D-1-g, D-4-b, D-4-f, MT-1, MT-1-g, MT-1-j, MT-1-c, MT-1-l, MT-1-m, MT-2-n, MT-2-o, MT-2-c, MT-2-d, MT-2-f, MT-2-g, MT-2-b, MT-2, MT-1-k, MT-2-i, MT-4, MT-4-a, MT-4-d, MT-4-h, MT-4-i, MT-4-j, MT-4-k, MT-6-l, MT-9-e, MT-8-g, MT-8-h, MT-9, MT-8-a, MT-9-a, MT-9-b, MT-9-c, MT-8-d, MT-8-b, MT-8-e, MT-8-i, MT-9-f, MT-11-b, POSS-3-c, POSS-3-f, RC-2-a, RC-4-e, RC-4-g, RC-5-c, RC-8-j, HCR-3-f, and HC-5-f.
- Electricity and natural gas emissions through energy efficiency and green building: RC-5-c, RC-4-g, RC-8-a, RC-8-b, RC-8-d, RC-7-i, RC-8-e, RC-8-g, HCR-2-j, and HC-3-f. Policies RC-8-h and RC-8-i encourage solar and renewable energy use.

- Policies to reduce water usage, thereby reducing energy required to transport and treat water: PU-8-e, PU-8-b, RC-6-b, RC-6-d, RC-6-h, RC-7, RC-7-a, RC-7-b, RC-7-c, RC-7-h, RC-7-e, and RC-7-h.
- Waste: PU-9, PU-9-a, PU-9-b, RC-4-i, RC-11, RC-11-a, RC-11-b, and HCR-3-a.

City of Fresno Greenhouse Gas Reduction Plan

The City of Fresno GHG Plan provides a comprehensive strategy that demonstrates that the City will achieve the AB 32 2020 targets through compliance with regulation and the implementation of the General Plan policies listed above. The DNCP and FCSP fulfill the objectives of the GHG Plan and are a vital part of the City's land use and transportation strategy to reduce trips and vehicle miles traveled and to create more sustainable development. Individual projects approved within the plan area will be required to demonstrate consistency with the General Plan and the GHG Plan. The GHG Plan relies on the same General Plan policies listed above to achieve land use related GHG reductions.

Specific City Policies and Programs that Will Achieve Emission Reductions

The City has already taken actions and is planning for new actions that will provide additional reductions. The City includes programs that are intended to stand on their own merit, which support the City's goals of reducing the amount of greenhouse gas emissions through greater level of detail for transportation infrastructure, specific plan areas, communities, and neighborhoods. Brief descriptions of these programs and actions are provided below.

Bus Rapid Transit (currently under construction). The overall vision of the BRT Master Plan is to demonstrate how improved efficiency, speed, and service can attract new transit ridership, improve customer satisfaction, and benefit the broader community by providing a quality of service similar to light rail systems through the use of bus technology. "Bus Rapid Transit" (BRT) is an integrated system of facilities, equipment, services, and amenities that improve the speed, reliability, and identity of bus transit. BRT is, in many respects, rubber-tired light rail transit (LRT) with greater operating flexibility and potentially lower costs. The BRT mode is quickly becoming an effective way to move people efficiently and in a cost effective manner—in terms of both capital and operating costs. Full implementation of the BRT system is estimated to increase daily ridership along the corridor served by 14,000 to 28,000 riders per day depending on the level of service ultimately provided.

Fresno Area Express (FAX) Transit Plan. The Fresno Area Express (FAX), a department of the City, operates both fixed bus routes and paratransit service seven days a week. The system consists of 20 bus routes carrying over 12 million passenger per year. Many routes currently operate on 30-minute headways in the peak hour; however, recently several routes have been increased to 15-minute headways because of passenger demand. Three of FAX's routes currently serve more than 4,500 passengers each on a daily basis. Passenger demand on Route 28 is approaching 8,000 passengers per day and is quickly filling buses now operating every 15 minutes during the peak hour.

2010 City of Fresno Bicycle, Pedestrian and Trails Master Plan (Active Transportation Program). The Bicycle, Pedestrian, and Trails Master Plan (BMP) is currently being updated to an Active Transportation Program (ATP) and is intended to guide and influence bikeway policies, programs, and

development standards to make bicycling in the City of Fresno more safe, comfortable, convenient, and enjoyable for all bicyclists. In 2010, the City of Fresno had 137 miles of bikeways: 14 miles of Class I Bike Paths, 116 miles of Class II Bike Lanes, and 7 miles of Class III Bike Routes. Fresno Area Express (FAX) is currently equipped to accommodate bicyclists through their provision of bike racks on every bus, although they have identified that additional bicycle capacity is needed. Short term and long-term bicycle parking is provided at certain locations throughout the City, although bicyclists are not guaranteed bike parking at a majority of destinations. According to Census 2000 Journey to Work data, 0.9 percent of Fresno residents currently use the bicycle as their primary means of commuting to work. Although the BMP is a separate document not part of this Plan, the General Plan recognizes that the BMP identifies more detailed implementation strategies with cost estimates and prospective funding sources, evaluates priorities of prospective improvements, and identifies a complete inventory of both short and long-range bicycle improvements.

Fresno Green. The City is committed to building "green," thus constructing buildings and communities that are "sustainable" and environmentally responsible. The benefits are not easily quantified: cleaner air, pedestrian friendly neighborhoods, support for local businesses and agriculture, more green spaces, preservation of natural resources and our local architectural heritage, and healthier indoor environments. The City prepared the document, Creating a Sustainable Community, Handbook for Fresno Green Residential and Non-Residential Checklists. There are three routes that one can take to become a branded Fresno Green project:

1. Satisfy the requirements of one of the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED) Programs;
2. Qualify for Build It Green's GreenPoint rating system for residential building; or
3. Follow the Fresno Green checklists. Fresno Green has in fact borrowed from these national and state programs but was specifically developed to be more holistic in approach to the "greening of communities." Thus, credits exist for historic preservation, historic landscapes and public art. Many credits are also specifically tied to the City's 2025 General Plan.

Fresno Green includes a Tree Program that requires development to achieve 50 percent shade coverage in 5 years to qualify for credits under the program. Shade programs can reduce the urban heat island effect and reduce energy consumption from building cooling.

SB 375 Sustainable Communities Strategy. The ARB set passenger vehicle GHG emission reduction targets for 2020 and 2035 for each of the 18 MPO regions in California under the Sustainable Communities and Climate Protection Act of 2008 (SB 375). The City participated with Fresno COG in developing a Sustainable Community Strategy (SCS) to help meet the targets and to qualify for the CEQA streamlining provisions contained in SB 375. The SCS is included in the 2014 Regional Transportation Plan and Sustainable Communities Strategy adopted by the Fresno COG Board on June 26, 2014. The targets for Fresno County are a percent reduction in passenger vehicle CO_2 per capita from 2005 levels of 4.7 percent in 2020, and 7.6 percent in 2035. Modeling was conducted by Fresno COG using land use scenarios consistent with the proposed General Plan and Policies to determine that the reductions were feasible. Fresno COG developed new travel models to estimate the changes in travel. The new models are designed to better evaluate the types of land use and

transportation policies likely to be considered in the RTP/SCSs. The models provide sensitivity to changes in land use and travel estimates.

Although the DNCP and FCSP would be consistent with the City's GHG Plan and General Plan policies related to reduction of GHG emissions, the MEIR prepared for the General Plan concluded that the City of Fresno does not have regulatory authority that would allow requisite reductions after year 2020 to be achieved with its own actions. The State is likely to pursue reductions that make continued progress toward the goal over the next several decades, but the outcome is uncertain, due to economic and technological considerations. Therefore, impacts from GHG emissions after 2020 are considered significant and unavoidable.

Cumulative Impact Analysis

Significant and unavoidable impact. Greenhouse gas impacts are by their nature cumulative impacts. Localized impacts of climate change are the result of the cumulative impact of global emissions. The combined benefits of reductions achieved by all levels of government help to slow or reverse the growth in greenhouse gas emissions. In the absence of comprehensive international agreements on appropriate levels of reductions achieved by each country, another measure of cumulative contribution is required. California has defined reductions required by the State in AB 32 (1990 emission levels by 2020). This serves to define California's share of the reductions regardless of the activities or lack of activities of other areas of the U.S. or the world. Therefore, a cumulative threshold based on consistency with state targets and actions to reduce greenhouse gases is an appropriate standard of comparison for significance determinations at the program level of analysis, as supported by data contained within the City's GHG Plan.

The cumulative impacts of DNCP and FCSP implementation after 2020 has no comprehensive state target that provides a similar basis of comparison. The regional targets adopted to comply with SB 375 only apply to a fraction of the mobile source inventory in 2020 and 2035. The GHG Plan includes an interim target of a 40 percent reduction from BAU for 2035. Continued implementation and reductions from the City's strategy are predicted to achieve the interim target. As described earlier, the State is in the process of identifying a reduction target for 2030, but the actual strategy required to reach a target has not been determined. Finally, in preliminary assessments of options to achieve the 2050 goal, the State concluded that reliance on technical advancements and accelerated market penetration of new technologies would be required. Developing a community 2050 target without an adopted state strategy would be highly speculative. The General Plan and GHG Plan will likely be updated several times before 2050. Each update will provide an opportunity to identify community targets to coincide with state targets and to adjust the strategy to ensure that the City of Fresno does its part in achieving greenhouse gas reductions.

The General Plan policies and GHG Plan strategies will continue to provide greenhouse gas reductions beyond 2020 since they apply to all development that will occur between adoption and buildout unless superseded by new policies. Although the interim targets contained in the GHG Plan are expected to be achieved, the actual amount of local reductions needed beyond 2020 is uncertain pending adoption of state targets for later years. In addition, the long-term effectiveness of the General Plan policies and programs that avoid, reduce, or minimize greenhouse gas emissions is not

known. Therefore, cumulative impacts related to the growth under the DNCP and FCSP are significant and unavoidable.

Mitigation Measures

Project Specific

No mitigation measures beyond implementation of General Plan policies are feasible.

Cumulative

No mitigation measures beyond implementation of General Plan policies are feasible.

Level of Significance After Mitigation

Project Specific

Significant and unavoidable impact.

Cumulative

Significant and unavoidable impact.

Conflict with Plan, Policy, or Regulation that Reduces Emissions

Impact GHG-2:	**The project would not conflict with any applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of greenhouse gases.**

Project Specific Impact Analysis

Less than significant impact. Currently, there are two applicable plans, policies or regulations for the City of Fresno that work hand in hand to reduce greenhouse gas emissions. These are the Air Resources Board's Scoping Plan implementing AB 32 and the GHG Plan. The GHG Plan is designed to provide a comprehensive strategy that demonstrates consistency with AB 32 and the Scoping Plan.

Scoping Plan

The California State Legislature adopted AB 32 in 2006. AB 32 focuses on reducing greenhouse gases (carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride) to 1990 levels by the year 2020. In addition to the greenhouse gases listed in AB 32, a seventh greenhouse gas, nitrogen trifluoride (NF3) was added to Health and Safety Code section 38505(g)(7) as a greenhouse gas of concern. Pursuant to the requirements in AB 32, the ARB adopted the Climate Change Scoping Plan (Scoping Plan) in 2008, which outlines actions recommended to obtain that goal. The Scoping Plan calls for an "ambitious but achievable" reduction in California's greenhouse gas emissions, cutting approximately 29 percent from business-as-usual emission levels projected for 2020, or about 10 percent from today's levels. On a per-capita basis, that means reducing annual emissions of 14 tons of carbon dioxide for every man, woman and child in California down to about 10 tons per person by 2020.

The ARB's First Update to the Scoping Plan (ARB 2014c) does not include any new reduction measures; therefore, the 2008 Scoping Plan will be used in this analysis.

The Scoping Plan contains a variety of strategies to reduce the State's emissions. As shown in Table 5.7-5, the strategies are generally not applicable to the project, but reduce emissions from development that will occur within the planning areas.

Table 5.7-5: Scoping Plan Reduction Measures

Scoping Plan Reduction Measure	City Applicability
1. California Cap-and-Trade Program Linked to Western Climate Initiative. Implement a broad-based California Cap-and-Trade program to provide a firm limit on emissions. Link the California cap-and-trade program with other Western Climate Initiative Partner programs to create a regional market system to achieve greater environmental and economic benefits for California. Ensure California's program meets all applicable AB 32 requirements for market-based mechanisms.	**Not Applicable.** When this cap-and-trade system begins, products or services (such as electricity) would be covered and the cost of the cap-and-trade system would be transferred to the consumers.
2. California Light-Duty Vehicle Greenhouse Gas Standards. Implement adopted standards and planned second phase of the program. Align zero-emission vehicle, alternative and renewable fuel and vehicle technology programs with long-term climate change goals.	**Consistent.** This is a statewide measure that cannot be implemented by a project applicant or lead agency. When this measure is initiated, the standards would be applicable to the light-duty vehicles in the City.
3. Energy Efficiency. Maximize energy efficiency building and appliance standards; pursue additional efficiency including new technologies, policy, and implementation mechanisms. Pursue comparable investment in energy efficiency from all retail providers of electricity in California.	**Consistent.** This is a measure for the State to increase its energy efficiency standards in new buildings. Projects within the DNCP and the FCSP are required to build to the new standards and would increase energy efficiency through compliance.
4. Renewable Portfolio Standard. Achieve 33 percent renewable energy mix statewide. Renewable energy sources include (but are not limited to) wind, solar, geothermal, small hydroelectric, biomass, anaerobic digestion, and landfill gas.	**Consistent.** This is a statewide measure that cannot be implemented by a project applicant or lead agency. PG&E obtains 19 percent of its power supply from renewable sources such as solar and geothermal. It is required to increase this percentage to 33 percent by the year 2020 pursuant to various regulations. The owners of residences within the project would purchase power that is composed of a greater amount of renewable sources, and could install renewable solar power systems that will assist the utility in achieving the mandate.
5. Low Carbon Fuel Standard. Develop and adopt the Low Carbon Fuel Standard.	**Consistent**. This is a statewide measure that cannot be implemented by a project applicant or lead agency. When this measure is initiated, the standard would be applicable to the fuel used by vehicles in the City.
6. Regional Transportation-Related Greenhouse Gas Targets. Develop regional greenhouse gas emissions reduction targets for passenger vehicles. This measure refers to SB 375.	**Consistent.** SB 375 has no requirements that apply directly to development projects; however, the development and density proposed by the project will contribute to achieving SB 375 regional targets.

Table 5.7-5 (cont.): Scoping Plan Reduction Measures

Scoping Plan Reduction Measure	City Applicability
7. Vehicle Efficiency Measures. Implement light-duty vehicle efficiency measures.	**Consistent.** When this measure is initiated, the standards would be applicable to the light-duty vehicles in the City.
8. Goods Movement. Implement adopted regulations for the use of shore power for ships at berth. Improve efficiency in goods movement activities.	**Not applicable.** The project does not propose any changes to maritime, rail, or intermodal facilities or forms of transportation.
9. Million Solar Roofs Program. Install 3,000 MW of solar-electric capacity under California's existing solar programs.	**Consistent.** This measure is to increase solar throughout California, which is being done by various electricity providers and existing solar programs. The project would comply with Title 24, which requires new buildings to be "solar ready." The project would not preclude the implementation of this strategy.
10. Medium/Heavy-Duty Vehicles. Adopt medium and heavy-duty vehicle efficiency measures.	**Not applicable.** This is a statewide measure that cannot be implemented by a project applicant or lead agency. When this measure is initiated, the standards would be applicable to the vehicles that access the project site.
11. Industrial Emissions. Require assessment of large industrial sources to determine whether individual sources within a facility can cost-effectively reduce greenhouse gas emissions and provide other pollution reduction co-benefits. Reduce greenhouse gas emissions from fugitive emissions from oil and gas extraction and gas transmission. Adopt and implement regulations to control fugitive methane emissions and reduce flaring at refineries.	**Consistent.** Industrial sources achieve consistency with the Scoping Plan through compliance with SJVAPCD permitting, Cap-and-Trade, and RPS regulations. The SJVAPCD requires industrial projects subject to Air Permits to include best practice standards (BPS) to reduce emissions by amounts consistent with Scoping Plan targets.
12. High Speed Rail. Support implementation of a high-speed rail system.	**Consistent.** The project is expected to be the location of a high-speed rail station. The DNCP and FCSP promote land use that is supportive of a vibrant and successful station area that would help ridership and provide synergy with revitalization efforts.
13. Green Building Strategy. Expand the use of green building practices to reduce the carbon footprint of California's new and existing inventory of buildings.	**Consistent.** Development within the DNCP and FCSP would comply with the California Energy Code, and thus incorporate applicable energy efficiency features designed to reduce project energy consumption.
14. High Global Warming Potential Gases. Adopt measures to reduce high global warming potential gases.	**Consistent.** Projects using high global warming potential gases (such as in air conditioning and refrigerators) will comply with ARB regulations developed to implement this measure.

Table 5.7-5 (cont.): Scoping Plan Reduction Measures

Scoping Plan Reduction Measure	City Applicability
15. Recycling and Waste. Reduce methane emissions at landfills. Increase waste diversion, composting, and commercial recycling. Move toward zero-waste.	**Consistent**. The DNCP and FCSP would utilize City of Fresno recycling services.
16. Sustainable Forests. Preserve forest sequestration and encourage the use of forest biomass for sustainable energy generation.	**Not applicable.** The DNCP and FCSP are not forested; therefore, this measure is not applicable.
17. Water. Continue efficiency programs and use cleaner energy sources to move and treat water.	**Consistent.** Development within the DNCP and FCSP would comply with Green Building Code regulations and would implement required water conservation features.
18. Agriculture. In the near-term, encourage investment in manure digesters and at the five-year Scoping Plan update determine if the program should be made mandatory by 2020.	**Not applicable.** The DNCP and FCSP are not designated for agriculture purposes. No dairies or feedlots that would generate manure are proposed to be implemented by the project.
Source of ARB Scoping Plan Reduction Measure: Air Resources Board 2008. Source of Project Consistency or Applicability: FirstCarbon Solutions.	

Greenhouse Gas Reduction Plan

The City of Fresno General Plan GHG Reduction Plan is also an applicable plan. As discussed under Impact GHG-1, the project reduces emissions by amounts that exceed requirements of the GHG Plan to demonstrate consistency with AB 32 targets identified in the First Scoping Plan Update. In addition, future projects constructed will be required to meet the following GHG Plan requirements:

A. The project must be consistent with the applicable General Plan policies listed in Section 3.3.2—City of Fresno.

B. The project must incorporate design features that meet the requirements of the GHG Plan Section 6.2.1.

C. The project will be required to submit a Fresno Green Non-Residential or Residential Checklist prior to issuance of building permits using the latest version of the checklist in place at that time.

The DNCP and FCSP were not found to conflict with or obstruct any of the Scoping Plan and GHG Plan strategies listed above. The Scoping Plan future year inventories include growth projected for development throughout the State, including Fresno. The GHG Plan strategies will ensure that the City will achieve 2020 targets and is on a trajectory to achieve post-2020 targets when adopted by the State. This impact is considered less than significant.

Cumulative Impact Analysis

The analysis provided above is applicable to project level and cumulative impacts.

Mitigation Measures

Project Specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project Specific

Less than significant impact.

Cumulative

Less than significant impact.

5.8 - Hazards and Hazardous Materials

5.8.1 - Introduction

This section provides information on safety hazards within the City of Fresno, including environmental effects associated with hazardous materials, emergency response, and potential aircraft crash hazards in the City. Information used to prepare this section is based on the City of Fresno General Plan, applicable Airport Land Use Compatibility Plans (ALUCPs), and data from federal, state, and local agencies containing information regarding hazardous materials use, wastes, and environmental contamination. The study area for project impacts regarding hazards and hazardous materials is the City of Fresno, the Downtown Neighborhoods Community Plan (DNCP) area and the Fulton Corridor Specific Plan (FCSP) area.

Sources

Information in this section is based on the following sources:

- Downtown Neighborhood Community Plan. 2016. The complete plan is contained in Appendix A.
- Fulton Corridor Specific Plan. 2016. The complete plan is contained in Appendix B.
- Downtown Development Code. 2016. The complete code is contained in Appendix C.
- City of Fresno General Plan (and the associated EIR). December 2014.
- Limited Geologic Hazards Summary, Fulton Corridor Specific Plan Area, Krazan & Associates, Inc., September 21, 2011.
- Limited Geologic Hazards Summary, Downtown Neighborhoods Community Plan, Krazan & Associates, Inc., September 21, 2011.
- Phase I Environmental Site Assessment Downtown Neighborhoods Community Plan Area, Krazan & Associates, Inc., October 7, 2011 (Appendix H.1).
- Phase I Environmental Site Assessment Fulton Corridor Specific Plan Area, Krazan & Associates, Inc., October 7, 2011 (Appendix H.2).
- Fresno-Chandler Executive Airport Land Use Compatibility Plan, 2014.

5.8.2 - Environmental Setting

Study Area for Project Impacts

The study area for project impacts regarding hazards and hazardous materials is the DNCP area and the FCSP area.

Study Area for Cumulative Impacts

The cumulative context for analysis of potential hazards and hazardous materials is generally site-specific. However, there could be contamination in some areas that is conveyed through soil or the

groundwater that could cumulatively affect areas within the City of Fresno. Thus, the study area for cumulative impacts is the City of Fresno.

Existing Conditions

Existing land uses within the DNCP area generally consist of industrial, residential, and commercial uses (DNCP 2016). Existing land uses in the FCSP generally consist of residential, office, public facility, and retail uses (FCSP 2016). The industrialization of society in the United States and the advent of internal combustion engine vehicles and machinery in the 19th and 20th centuries correspond with the City of Fresno's growth beginning in the late-1800s and accelerating through the 1900s.

Downtown Neighborhoods Community Plan

The majority of the following analysis is directly based upon the Phase I Environmental Site Assessment (Phase I ESA) prepared for the DNCP by Krazan & Associates (refer to Appendix H.1). The DNCP area consists of the "first ring" of residential growth around central Downtown Fresno in an area designated as the "Downtown Neighborhoods," the approximate boundaries of which are delineated in Exhibit 3-2. Approximately 23,000 properties are located within the DNCP area. The DNCP area primarily comprises pre-WWII residential neighborhoods with some areas of concentrated industrial/commercial uses, which are bisected and surrounded by major corridors of commercial usage.

Groundwater lies approximately 90 to 110 feet below ground surface. The regional groundwater flow direction in the area is variable and has been observed to vary towards the northwest to southwest (Krazan & Associates 2011a). The site reconnaissance conducted for the DNCP area revealed the presence of underground pipelines, underground storage tanks (USTs) or evidence of USTs, and heating/ventilation/air conditions systems. Other features such as drums, polychlorinated biphenyl (PCB)-containing equipment, lagoons, soil piles, etc. were not encountered during the reconnaissance survey.

The Phase I ESA prepared for the DNCP divides the area into five subareas "A-E," based on the historical community plans in order to create manageable areas of investigation. Refer to Exhibit 5.8-1 Corresponding Community Plan Areas, and Exhibit 5.8-2 Areas of Concern. To meet the regional screening standards, the Phase I conducted a windshield survey for each study area, with special attention given to commercial clusters. Each subarea is described below, and recommendations contained in the Phase I ESA are analyzed in the Impact Analysis.

Area A—Lowell/Jefferson Area Residential Neighborhoods

This area is located north of the downtown Fresno Fulton Corridor Specific Plan Area and within the downtown Fresno "triangle" formed by State Route 99 (SR-99), SR-41, and SR-180, and is characterized by predominantly older residential neighborhoods surrounding the following major streets: North Van Ness Avenue, North San Pablo Avenue, and Blackstone Avenue and Abbey Street trending north to south. Minimal commercial/retail uses were observed in this area. However, a number of automotive-related facilities were noted to be located along the following major thoroughfares:

- Divisadero at Blackstone and Abbey Streets
- Blackstone and Abbey Streets north of Divisadero
- North Fresno Street north of Divisadero
- Belmont Avenue from San Pablo Avenue to SR-41

Consequently, based upon the density of residential uses in this area, the potential for significant hazardous materials releases would be limited to the listed thoroughfares.

Area B—Roosevelt Area Residential Neighborhoods

The Roosevelt area to the east of the commercial downtown Fresno triangle is also characterized by predominantly older residential neighborhoods surrounding the following major streets: North First Street, North Maple Avenue, North Cedar Avenue, and North Chestnut Avenue, trending north to south, and East Belmont Avenue, East Tulare Avenue, Ventura Avenue, and East Kings Canyon Road trending east to west. However, a significant number of predominantly automotive-related uses were noted to be located along the following major thoroughfares:

- **East Belmont Avenue between SR-41 and North Chestnut Avenue**—Commercial uses primarily related to vehicle servicing, repair and fueling dominate virtually the entire length of East Belmont Avenue in this area. The majority of the businesses appear to occupy very old structures suggesting evidence of similar uses for many decades.
- **East Tulare Avenue between SR-41 and North Chestnut Avenue**—Commercial uses dot the length of Tulare Avenue in this area, sometimes in clusters, but are interrupted by significant sections of residential neighborhoods and large facilities such as retail shopping centers, strip malls, and Roosevelt High School at North Cedar Avenue. Observed commercial uses include retail and service businesses, used car dealerships, and automotive-related facilities occupying very old facilities similar to those observed in very high concentrations on East Belmont Avenue.
- **Ventura Avenue/East Kings Canyon Road between High 41 and North Chestnut Avenue**—These major streets, which represent the same passageway, but make a transition at North Cedar Avenue, share development characteristics which fall somewhere between those of East Belmont Avenue and East Tulare Avenue as described above. A large variety of commercial uses line these streets, including large shopping centers and smaller strip malls, retail stores, restaurants, and motels. However, a moderate number of automobile-related businesses are spread along the length of this thoroughfare, many occupying facilities that are very old and rundown in condition. There are large interruptions in commercial development at the locations of University Medical Center north of North Cedar Avenue and the Fresno County Fairgrounds to the West of North Maple Avenue. Minimal commercial/retail development was observed in the neighborhoods south of Ventura Avenue/East Kings Canyon Road in this area.
- **South Orange Avenue between East Butler Avenue and East California Avenue**—This length of South Orange Avenue is primarily bordered by residential properties with some occasional retail/commercial development, which included a number of automotive-related businesses occupying old structures.

Consequently, similar to the Lowell/Jefferson neighborhood, based upon the density of residential uses in this area, the potential for significant hazardous materials releases would be limited to the listed thoroughfares. However, given the density and age of potential hazardous materials handling businesses along East Belmont Avenue, East Tulare Street, Ventura Street, and East Kings Canyon Road, these areas represent the highest potential for significant impacts to the study area subsurface soils and groundwater in the event of significant releases of hazardous substances.

Area C—South Van Ness Industrial Commercial Area

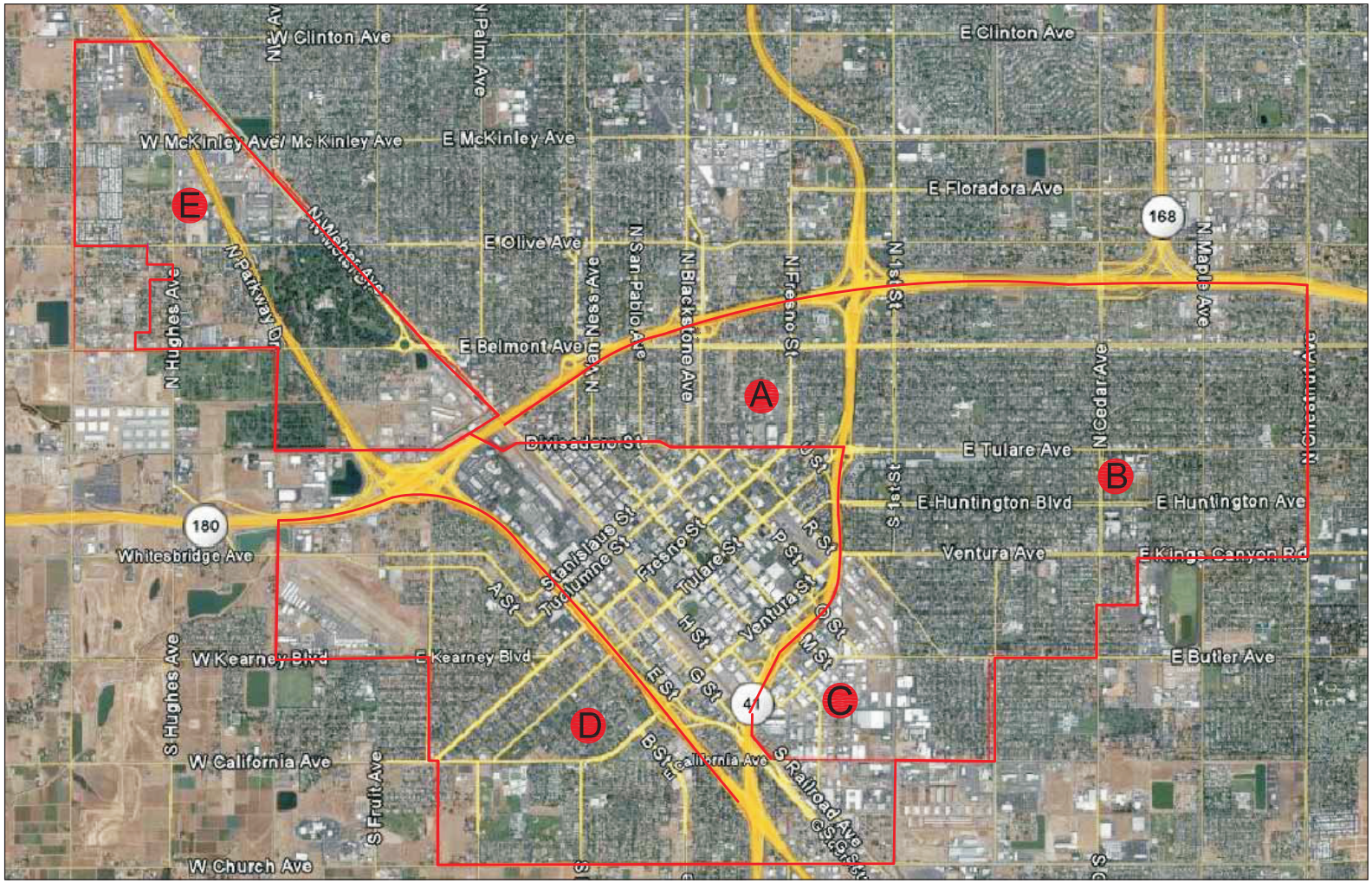
As its name implies, this area was observed to feature dense heavy industrial development roughly centered around South Van Ness Avenue trending north to south through the downtown Fresno area. The area is characterized by predominantly older industrial facilities, many of which appear to have changed occupancy over the years. Consequently, many newer modern facilities were observed to be variously scattered among many dilapidated and rundown facilities. Ample evidence of the potential use and storage of hazardous materials were noted throughout this area, such as the presence of fuel tanks and fueling stations, and a significant presence of railroad lines and spurs. The eastern and western extremities of the area, along East Street and Railroad Avenue, respectively, were observed to be occupied by very old, abandoned facilities. Consequently, based upon the long-term historical use of this area for heavy industry, the potential for the use, storage and disposal of a wide range of hazardous materials over many years related to heavy industry, coupled with the unknown site circumstances and subsurface conditions of the many rundown and/or abandoned facilities observed in this area, the potential for contamination of the subsurface in this area appears to be high.

Area D—Edison Area Residential Neighborhoods

This area is located to the west of the commercial downtown Fresno triangle and is characterized by predominantly older residential neighborhoods. Little or no commercial/retail development was observed along the major thoroughfares transecting this area, including South Thorne Avenue and Martin Luther King Boulevard trending north to south, West Church Avenue and West California Avenue trending east to west, and Tulare and Fresno Streets trending diagonally to the southwest. However, minimal isolated commercial/retail development with a number of properties exhibiting the potential for current and historical hazardous materials usage was observed on the following thoroughfares:

- Elm Avenue trending north to south
- C Street trending north to south
- B Street trending north to south

Consequently, despite the predominance of residential uses in the Edison area, current and historical concentrations of hazardous materials usage are located along major commercial corridors. Commercial/retail development ranged from a modern gasoline station on Elm Avenue, to a number of old and apparently abandoned structures whose features suggested possible historical use for automobile-related activities. The Edison area includes the Fresno Chandler Executive Airport to the west, which is generally surrounded by residential neighborhoods.



EXPLANATION

SUBJECT SITE BOUNDARY

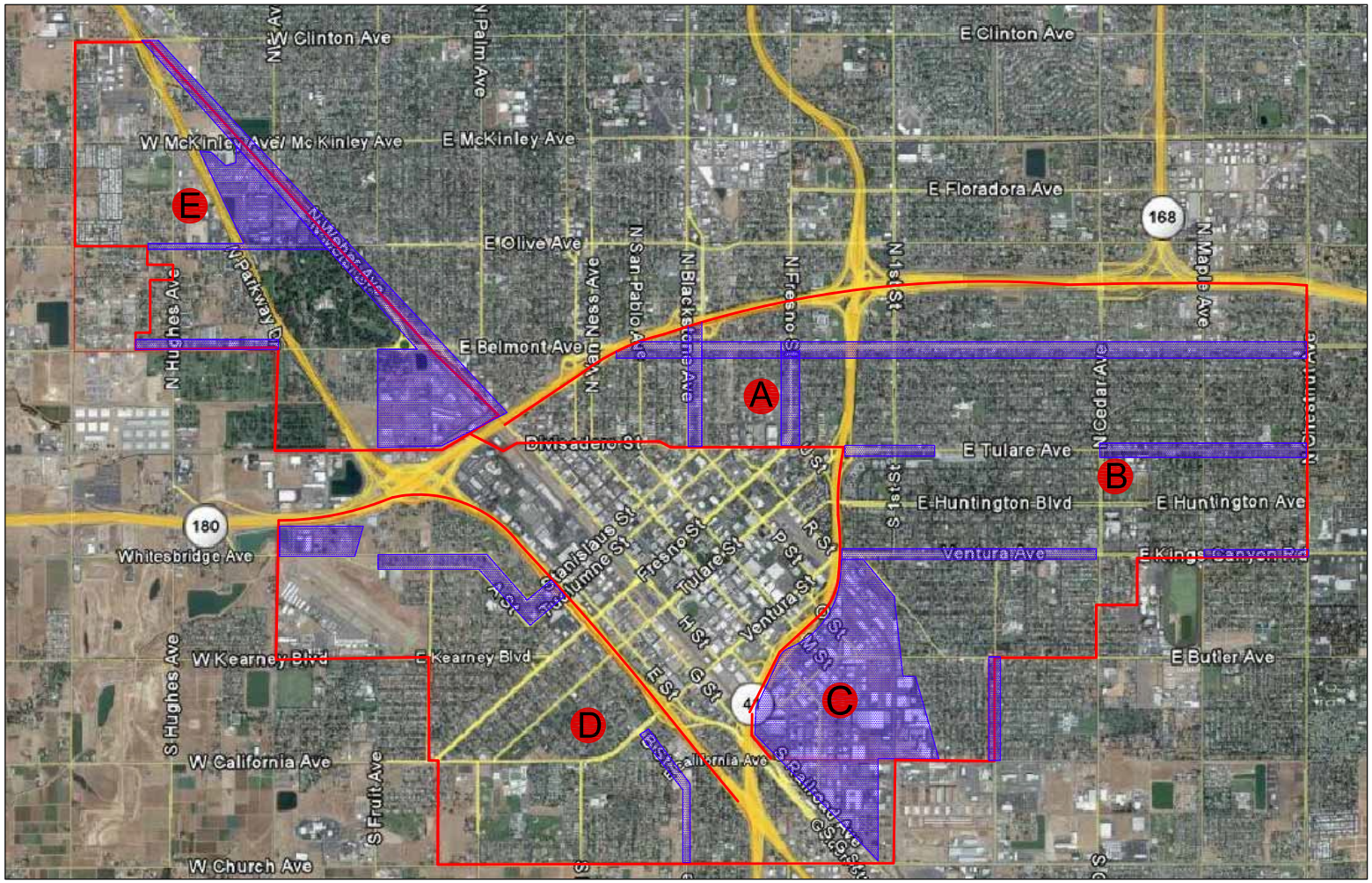
AREA A- LOWELL/JEFFERSON
AREA B- ROOSEVELT
AREA C- SOUTH VAN NESS INDUSTRIAL
AREA D- EDISON
AREA E- ROEDING

Source: Krazan & Assoc, Inc, 2011

FirstCarbon® SOLUTIONS

Exhibit 5.8-1
Corresponding Community Plan Areas

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Source: Krazan & Assoc, Inc, 2011

FirstCarbon® SOLUTIONS

Exhibit 5.8-2
Hazardous Materials Areas of Concern

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Area E—Roeding Area Commercial/Residential Neighborhoods

This area is named for Roeding Park, which occupies the area between West Olive Avenue to the north and East Belmont Avenue to the south between North Motel Drive to the east and SR-99 to the west. This area is characterized by a mix of areas of dense commercial/industrial development surrounded by large residential neighborhoods. The southern part of the Roeding area, south of Roeding Park, comprises of dense industrial/commercial uses and vacant land uses, visible along Motel Drive to the east. However, this area transitions into residential neighborhoods to the west followed by the Belmont Memorial Park cemetery. Numerous evidences of the potential use and storage of hazardous materials were noted throughout this area, such as the presence of automotive-related businesses as well as various manufacturing and service-oriented industries.

The central portion of the Roeding area to the west of SR-99 is primarily residential in nature, with the exception of the majority of properties along the north side of East Belmont Avenue. Numerous evidences of the potential use and storage of hazardous materials were noted along the north side of East Belmont Avenue, such as the presence of automotive related businesses.

The northern portion of the Roeding area, north of Roeding Park, between West Olive Avenue and East McKinley Avenue, west of Motel Drive and east of SR-99, is also primarily commercial/industrial property with the remainder of uses in this area primarily consisting of single-family, apartment and mobile home residential neighborhoods punctuated by occasional commercial/industrial uses. Numerous gasoline stations surround the intersection of SR-99 with East Belmont, East Olive, East McKinley, and East Clinton Avenues. Commercial/industrial properties are spread along North Weber Avenue on the eastern extremity of this area to the east of the UPRR alignment.

Railroad Corridors

The DNCP area is occupied by a number of railroad corridors from which numerous track spurs branch off to service various industrial/commercial properties. The presence of railroads has been most significant in the South Van Ness Industrial Area and along the eastern side of the Roeding area. Railroads may represent the potential for historical use and storage of hazardous materials related to the maintenance of track lines, as well as for purposes of servicing the operations of the current or former industries/businesses located adjacent to the railroad tracks. For example, railroad companies have historically utilized herbicides to control weed growth around tracks, and they may have built up in concentration over time. Another example would be the movement of trains over tracks for many years, which creates a condition where lead and other metals can be deposited as dust on the ground surface (refer to Appendix H.1 for additional examples of railroad-related hazardous materials). Elevated concentrations of such hazardous materials can potentially build up in shallow soils around train tracks, which could represent a potential threat to human health. Health threats would be related to the exposure to, or ingestion of, these constituents of concern by individuals, particularly in residential settings (Krazan & Associates 2011a).

Additionally, because railroad lines service industrial/commercial businesses by transporting materials and products into and out of facility properties, it is not historically uncommon for USTs to be installed along railroad lines—and particularly along railroad spurs- for storage of fuel and/or other hazardous materials. Reasons for locating USTs and subsurface pipelines near railroad tracks include the convenience of fueling of loading and transport equipment, such as forklifts and trucks,

or for dispensing lubricants or cleaning solutions that could be utilized in the industrial/commercial processes conducted on-site (Krazan & Associates 2011a).

Asbestos-Containing Construction Materials

According to the United States Environmental Protection Agency (EPA), asbestos is the name given to a number of naturally occurring fibrous minerals with high tensile strength, the ability to be woven, and resistance to heat and most chemicals. Because of these properties, asbestos fibers have been used in a wide range of manufactured goods, including many asbestos-containing construction materials (ACCMs), paper and cement products, textiles, and coatings. Potential ACCMs would include ceiling tiles, blown ceiling material ("popcorn"), floor tiles, mastic, drywall tape/compound, thermal pipe insulation, and roofing materials (Krazan & Associates 2011a). When building maintenance, repair, use, renovation, or other activities disturb or damage asbestos-containing materials, asbestos fibers may be released, creating a potential hazard.

Given the age of the community comprising the DNCP area, the commercial and residential structures located within this area were constructed from approximately the late 1800s to the present day. It is unknown if the on-site structures contain ACCMs. During the Phase I ESA's March-May 2010 and June-August 2011 site reconnaissance, damaged building materials, which have the potential to pose a health hazard, were noted in various structures observed to be in states of disrepair throughout the area (Krazan & Associates 2011a).

Lead-Based Paint

According to the EPA, lead is a toxic metal that was used for many years in products found in and around homes and businesses. Lead exposure may cause a range of health effects, from behavioral problems and learning disabilities, to seizures and death. Children 6 years old and under are most at risk because of the potential for eating paint chips and dust on surfaces around windows, window sills, doors, stairs and railings. Lead dust can form when lead-based paint (LBP) is dry scraped, dry sanded, or heated, or when painted surfaces bump or rub together. In the United States, regulations exist that prohibit use of lead in paint manufacture, although LBP may still be found in older properties painted prior to the introduction of such regulations. The federal government banned LBP from housing in 1978; therefore, many homes built before 1978 may have LBP. However, age alone cannot rule out the presence of LBP in newer structures, as the source of paints and the circumstances related to their application would be inconclusive in the absence of sampling and analysis of materials. It is unknown if structures within the Plan area contain LBP (Krazan & Associates 2011a).

Potable Water and Sewage Disposal Systems

The water purveyor for the Plan area is the City of Fresno Public Utilities Department (CFPUD). The City of Fresno's water quality monitoring is an ongoing program with water samples obtained on a regular basis. Active domestic water wells are not expected to be in use in the subject area, since the City is responsible for providing drinking water to the public. However, inactive and/or abandoned domestic water wells may exist in the DNCP area.

Municipal sewage disposal service historically has been supplied to the Plan area since at least the early 1900s. The purveyor of such services is the City of Fresno CFPUD. Given the age of the Plan

area, septic systems were likely associated with on-site structures. It is unknown if septic systems are currently located in the vicinity of on-site structures (Krazan & Associates 2011a).

Historical Business Directory Review

Historical business directories were reviewed using ten-year increments. Businesses having the potential to use, store, and dispose of hazardous materials were compiled to reveal any potential environmental concerns (PECs) (refer to Appendix H.1 and H.2 for a complete list).

Trends in the data indicate that peak commercial activity in the DNCP area, along with the anticipated related presence of businesses representing PECs, occurred in approximately 1961. Based on further review of the business directory data, the listed commercial corridors in the DNCP area were the location of the largest number of PECs for all business types, expressed as a percentage of the total PECs as follows:

- East and West Belmont Avenue—22%
- Tulare Street—9%
- Ventura Street—8%
- Kings Canyon Avenue—8%
- Whitesbridge Road—5%
- Fresno Street—4%
- Butler Avenue—4%
- Blackstone Avenue—3%
- B Street—3%
- California Avenue—3%
- C Street—2%
- Orange Avenue—2%

The remaining historical businesses that represent PECs in the Plan areas were sparsely distributed such that concentrations of PECs in any one area did not exceed 1 percent of the total historical businesses representing PECs (Krazan & Associates 2011a).

Sanborn Fire Insurance Maps

Trending indicates that peak commercial activity in the DNCP area occurred in approximately 1950, along with the anticipated related presence of businesses representing PECs. Based upon further review of the business directory data, the listed commercial corridors in the DNCP area were the location of the largest number of PECs for all business types, expressed as a percentage of the total PECs as follows:

- East and West Belmont Avenue—13%
- Ventura Street—9%
- Tulare Street—8%
- Fresno Street—5%
- Broadway—4%
- Railroad Avenue—4%
- B Street—3%
- Cherry Avenue—3%
- Divisadero Street—3%
- California Avenue—3%
- Whitesbridge Road—3%
- C Street—2%
- Blackstone Avenue—2%
- Van Ness Avenue—2%
- Butler Avenue—2%
- Fulton Street—2%

The balance of historical businesses revealed from Sanborn Fire Insurance Map review to represent PECs in the DNCP area were sparsely distributed such that concentrations of PECs in any one area did not exceed 1 percent of the total historical businesses representing PECs (Krazan & Associates 2011a).

Agricultural Chemicals

Historical aerial photographs from numerous environmental assessment projects for properties in the DNCP area, as well as general background knowledge of the subject area and vicinity indicates that the area was not utilized for agricultural purposes from at least the late 1800s through the early 1900s as urban development in and surrounding the Downtown Fresno area progressed. Thus, the use, storage, and application of agricultural chemicals in the DNCP area is not considered an environmental concern. However, it is unknown whether concentrated uses of various agricultural chemicals was historically conducted within the DNCP area in conjunction with specific properties formerly utilized for the storage, manufacture, retail sale, or disposal of agricultural chemicals. Recently, the City updated the Development Code, which now permits Community and Urban gardens within residential uses. The code limits equipment use only to "household garden tools and equipment," meaning that commercial chemical use is not permitted. Based on the length of time since the plan area or portions of the plan area were used for agricultural purposes, it is not anticipated that elevated concentrations of environmentally persistent pesticides/herbicides would be found in the near-surface soils of the DNCP area. Based on past experience, sampling and analysis of surface soils from properties with similar histories have typically yielded non-detectable results for analysis of environmentally persistent pesticides/herbicides. Therefore, the potential for elevated concentrations of environmentally persistent pesticides/herbicides to exist in the near-surface soils of the DNCP area (which would require regulatory action) appears to be low (Krazan & Associates 2011b).

South Fresno Regional Groundwater Plume

A co-mingled groundwater plume identified as the "South Fresno Regional Groundwater Plume" (SFRGWP) is present in the southeastern portion of the DNCP area. The plume generally is estimated to occupy the area south of East Church Avenue, north of East California Avenue, west of South Orange Avenue, and east of Golden State Boulevard at a depth of approximately 90 feet below ground surface. The SFRGWP is located within the South Van Ness Industrial Area, which lies in a highly industrialized area of South Fresno. Many of the industrial facilities within the South Van Ness Industrial Area have been operating since before World War II, and some of the properties have been used for industrial purposes since the early 1900s. Constituents of concern identified in association with the SFRGWP include dissolved chromium, volatile organic compounds such as 1,2,3-trichlorpropane (TCP), trichloroethylene (TCE), tetrachlorethylene (PCE), Freon-11, Cis-1,2-dichloroethene (DCE), toluene, and 1,1-dichloroethene (1,1-DCE), pesticide-related compounds such as 1,2-dibromo-3-chloropropane (DBCP) and TCP, Dinoseb, Monuran, and nitrates.

Groundwater monitoring wells and groundwater extraction systems have been implemented in order to address and remediate the groundwater plume. Previous investigations to characterize the extent of impacts have shown that drinking water sources have not been affected. According to records on file with the Department of Toxic Substance Control (DTSC), the groundwater extraction system is working effectively to remove contaminants from the leading edge of the groundwater plume. The responsible parties are currently involved in the active investigation and remediation of the SFRGWP.

Additional hazardous sites known to occur within the DNCP area are discussed further under Impact HAZ-4, below. Because of the size of the DNCP and number of listings, please refer to the Phase I ESA prepared for the DNCP contained in Appendix H.1 for a more detailed description of each listing.

Fulton Corridor Specific Plan

The majority of the following analysis is directly based upon the Phase I ESA prepared for the FCSP by Krazan & Associates (Appendix H.2).

The FCSP consists of approximately 655 acres and is divided by the Union Pacific right-of-way. The Phase I ESA divided the FCSP into four numbered study "areas" corresponding to their historical community plan designations, in order to divide the area into manageable units. It should be noted that the street grid of the FCSP area is canted or tilted from a north-south trend to a northwest-southeast trend following the alignment of the Union Pacific Railroad track corridor. The study areas are organized in a clockwise circular fashion around the FCSP area. Because there is a likelihood for businesses that might utilize hazardous materials generally to be located along major thoroughfares within a community, transecting commercial corridors are identified and described as below.

Area 1—Fulton Area Mixed-Use Neighborhoods

The Fulton area is the northern portion of the FCSP area and is characterized by commercial/industrial uses on its western side, primarily along the H Street and Broadway corridors, with commercial uses throughout the balance of the area, many incorporating adapted reuse of older commercial buildings and classic residence structures. The Fresno Courthouse Square and other municipal/government buildings are included in this area. Evidence of potential hazardous materials use was almost exclusively limited to the aforementioned H Street and Broadway corridors, where some automotive service businesses were noted among numerous older industrial buildings. Former auto dealership buildings that now house commercial businesses were also noted along Tuolumne Street.

Area 2—Convention Center Area Commercial/Civic Center Neighborhoods

The Convention Center area of the FCSP occupies the eastern portion of the plan area and is characterized by a number of government and municipal buildings, including the Fresno Convention Center complex for which it is named, professional office buildings, the BNSF railroad corridor in the eastern portion of this area, and residential neighborhoods in the far northeastern corner of the area. This portion of the plan area also encompasses the industrial/commercial areas south of the former Fulton Mall that share many characteristics of the South Van Ness Industrial Area located farther to the south across SR-41. Many automotive-related industrial business and various commercial facilities occupy this area and represent the highest potential for the use, storage, and disposal of hazardous materials.

Area 3—Fulton District Mixed-Use Commercial Area

The Fulton District area of the FCSP area is so named because of the presence of the highest density of business and commercial uses in the downtown area. This urban center is characterized by its numerous multi-story high-rise buildings, urban streetscapes, and absence of current industrial uses. The former Fulton Mall, which bisects this area represents the densest concentration of large

commercial and professional buildings and constitutes the City's urban core. In addition to commercial and professional businesses, this area is home to various government offices, high-rise residential buildings, the Fresno Grizzlies Chukchansi Park baseball stadium, and the UPRR railroad alignment on its western side. Consequently, current hazardous materials use, storage, and disposal potential in the Fulton District is not anticipated to be high. However, a number of old, classic multi-story structures that have not been occupied for many years and have remained un-redeveloped are present in this area. Experience has shown that such structures may harbor historical hazardous materials issues related to former heating fuel storage, automotive fuel storage in the case of historical parking garages, and historical businesses that utilized hazardous materials; but because they departed long ago, these structures have not been investigated from an environmental perspective).

Area 4—Chinatown Area Mixed-Use Commercial and Residential Neighborhoods

The Chinatown area of the FCSP area derives its name from the historic designation of the southern portion of this area. This rectangular area occupies the far-southwestern side of the FCSP area and is characterized by commercial/industrial uses to the north of Tulare Street and commercial/ residential uses to the south of Tulare Street. The heaviest industrial/commercial uses where the potential for impacts from hazardous materials is the most likely were observed along the UPRR alignment to the east of G Street, north and south of Tulare Street. However, evidence of potential historical hazardous materials usage was observed in the older southern neighborhoods of Chinatown, particularly historic former gasoline service stations and commercial properties, primarily on E and F Streets to the south of Ventura Street.

For information regarding the South Fresno Regional Groundwater Plume, railroad corridors, potential ACCMs, LBP, and potable water and sewage disposal systems within the FCSP area, please refer to the discussion of these topics relative to the DNCP, above.

Hazardous sites known to occur within the FCSP area (which is contained within the boundaries of the DNCP) are discussed further under Impact HAZ-4, below. Because of the size of the area and the number of listings, please refer to the Phase I ESA prepared for the FCSP contained in Appendix H.2 for a more detailed description of each listing.

Hazardous Materials

Hazardous Materials Definitions

Hazardous materials, as defined by the California Code of Regulations, are substances with certain physical properties that could pose a substantial present or future hazard to human health or the environment when improperly handled, disposed, or otherwise managed. Hazardous materials are grouped into the following four categories, based on their properties:

- Toxic—causes human health effects
- Ignitable—has the ability to burn
- Corrosive—causes severe burns or damage to materials
- Reactive—causes explosions or generates toxic gases

A hazardous waste is any hazardous material that is discarded, abandoned, or slated to be recycled. The criteria that define a material as hazardous also define a waste as hazardous. If improperly handled, hazardous materials and hazardous waste can result in public health hazards if released into the soil or groundwater or through airborne releases in vapors, fumes, or dust. Soil and groundwater having concentrations of hazardous constituents higher than specific regulatory levels must be handled and disposed of as hazardous waste when excavated or pumped from an aquifer. The California Code of Regulations, Title 22, Sections 66261.20-24 contains technical descriptions of toxic characteristics that could cause soil or groundwater to be classified as hazardous waste.

Hazardous Materials Use

Hazardous materials are routinely used, stored, and transported within the City of Fresno, and are associated with industrial and commercial/retail businesses, as well as in educational facilities, hospitals, and households. Hazardous waste generators in the City include industries, businesses, public and private institutions, and households. Federal, state, and local agencies maintain comprehensive databases that identify the location of facilities using large quantities of hazardous materials, as well as facilities generating hazardous waste. Some of these facilities use certain classes of hazardous materials that require risk management plans to protect surrounding land uses.

The Fresno County Health Department's Certified Unified Program Agency (CUPA) is responsible for implementing a unified hazardous materials and hazardous waste management regulatory program. The agency provides oversight of businesses that:

- Require Hazardous Materials Business Plans;
- Require California Accidental Release Prevention plans or Federal Risk Management Plans;
- Operate Underground Storage Tanks;
- Operate Aboveground Storage Tanks;
- Generate Hazardous Waste(s);
- Have On-site Treatment of Hazardous Waste(s)/Tiered Permits.

Compliance is achieved through routine inspections of all regulated facilities, and investigation of citizen-based complaints and inquiries regarding improper handling and/or disposal of hazardous materials and/or hazardous wastes. Hazardous waste source reduction is a primary goal of the CUPA. Additionally, the agency provides oversight for the remediation of contaminated sites.

Regulatory Agency Comments

The DTSC responded to Krazan & Associates' invitation for comments on March 23, 2010, stating that because of the size of the development area, individual Phase I ESAs for properties under acquisition should be reviewed by the DTSC. Additionally, the individual Phase I ESAs conducted for properties should consider indoor air from intruding volatile organic compounds (VOCs) from past site usage, asbestos and LBPs). The DTSC also provided recommendations for the preparation of the DNCP and FCSP Phase I ESA.

The Fresno County Department of Community Health, Environmental Health System (FCEHS) responded to Krazan & Associates invitation for comments on March 23, 2010, stating that the area

of analysis is too large for them to provide specific comments. However, the FCEHS did provide CUPA and Solid Waste Programs Resources List for use by Krazan & Associates.

The Regional Water Quality Control Board (RWQCB) responded on April 15, 2015, stating that because of the large site area, individual site-specific or regional hazardous materials contamination issues would need to be addressed over the course of future development throughout the DNCP area.

Hazardous Waste Storage and Leaking Sites

State laws relating to the storage of hazardous materials in USTs include permitting, monitoring, closure, and cleanup requirements. Regulations set forth construction and monitoring standards, monitoring standards for existing tanks, release reporting requirements, and closure requirements. A Permit to Operate from Fresno County Environmental Health Department is required in order to operate a UST system in within the City of Fresno. Environmental Health staff inspect UST facilities on an annual basis to ensure compliance with applicable laws and regulations. The purpose of this program is to assure that hazardous materials stored in USTs are not released into the groundwater and/or the environment. The Permit to Operate incorporates a set of conditions for operation and continuous monitoring of the UST system.

Sites within the City of Fresno that have been previously contaminated by hazardous materials are required to be identified and cleaned up. These contaminated sites are mainly associated with leaking USTs and are predominately clustered south of Downtown, Fresno Yosemite International Airport, Palm Bluffs Corporate Center (located in northwest Fresno), and along the Union Pacific railroad tracks. Releases, leaks, or disposal of chemical compounds, such as petroleum, on or below ground surface can cause contamination in underlying soil and groundwater. Disturbance of previously contaminated areas may expose the public to hazards from physical or airborne contact. Because of these threats from hazardous materials, the City of Fresno coordinates with local, state, and federal agencies to ensure that potential threats are minimized.

The DTSC EnviroStor California cleanup sites database was reviewed for the DNCP area, which revealed three active cleanup sites (two within the FCSP area, which is contained within the boundaries of the DNCP). A total of 21 active leaking underground fuel tank (LUFT) and cleanup sites were also revealed (11 of which were within the FCSP area). No Federal Superfund National Priorities List (NPL) sites were determined to be located within a 1-mile radius of the DNCP or FCSP areas.

Other potentially hazardous sites known to occur within the DNCP and FCSP areas are discussed further under Impact HAZ-4, below. Because of the large geographic size of the area and the number of listings, please refer to the Phase I ESA prepared for the DNCP contained in Appendix H.1 for a more detailed description of each listed site.

Hazardous Materials Incidents Emergency Response

The unauthorized releases of hazardous materials into the environment could create many environmental impacts including impacts to properties, natural environment, and human health. The significance of these impacts could vary according to the location and quantity of the substance

released. Hazardous releases can occur in area that treats, stores, transports and uses hazardous materials; however, certain areas are at higher risk for releases. In the event of an unauthorized release of hazardous materials/substances, emergency response measures must be implemented to ensure the protection of human and natural environmental health from risk.

The City of Fresno includes a developed urban area with industrial uses concentrated in the southern portion of the City. There are also agricultural uses located within the City's Sphere of Influence (SOI). However, there are no known active agricultural uses located within the Plan areas. Nonetheless, it is possible that at least 10.70 acres of existing agricultural land could still contain residual pesticides other hazardous materials. More recently, the City has promoted a transition to urban agricultural uses, which could employ the use of traditional farming methods, potentially including the use of pesticides and other hazardous materials. Thus, the potential for hazardous materials incidents is heightened. Accidental releases of pesticides, fertilizers, and other agricultural chemical may be harmful to the public's health, safety, and the environment. In addition, the Plan areas contain major transportation routes, such as SR-99, SR-180, SR-41, and SR-168 (terminus).

Varieties of chemicals are transported utilizing one of the two railroad lines. The Fresno Chandler Executive Airport is located within the Plan areas. This facility, along with the transportation routes and industrial uses listed above, transport hundreds of thousands of tons of hazardous materials through and into the City Sphere of Influence each year. Because of the urban nature of the Plan area and its location among several routes that regularly transport hazardous materials through and around the Plan areas, the area faces risks associated with the potential for hazardous materials emergencies.

The City of Fresno Fire Department recognizes the potential for a large chemical release to occur which could expose thousands of people to hazardous or toxic vapors. The City of Fresno Fire Department Hazardous Materials Response Team (HMRT) has embraced an all-hazards approach to emergency response to ensure that the City receives effective protection from the risk of hazardous materials releases.

The Fire Department HMRT comprises 60 personnel trained to the Hazardous Materials Technician and/or Specialist requirements. Fourteen personnel are on duty each day with a minimum of nine staff members trained to the Technician/Specialist level. The Fresno City Hazardous Materials Response Teams have partnered with the State Office of Emergency Services (OES) to deploy regionally or statewide to support any jurisdiction through the State Master Mutual Aid System.

The HMRT utilizes two OES Type 1 Hazmat response rigs, and a Mass Decontamination trailer. The HMRT is deployed from two strategically located fire stations. The HMRT OES Type 1 response rig is assigned to a fire station with a fire engine and a fire truck. The second Type 1 response rig is assigned to a station staffed with HMRT personnel assigned to a fire engine. The second station is also the location of the Mass Decontamination trailer. The deployment plan requires the dispatch of the closest response company in conjunction with the HMRT to hazardous materials emergencies (City of Fresno 2015).

Emergency Response

In addition to emergency response to hazardous materials incidents, both the City of Fresno and the County of Fresno implement programs to facilitate emergency preparedness for other types of incidents within the Planning Area. Specifically, the City of Fresno has an Emergency Operations Plan that describes what the City's actions will be during a response to an emergency. This plan also describes the role of the Emergency Operations Center (EOC) and the coordination that occurs between the EOC, city departments, and other response agencies. The plan establishes a requirement for the emergency management organization to mitigate any significant emergency disaster affecting the City of Fresno. The plan also identifies the policies, responsibilities, and procedures required to protect the health and safety of city communities, public and private property, and the environmental effects of natural or technological disasters. In addition, the plan establishes the operation concepts and procedures associated within initial response operations (field response) to emergencies, the extended response operations (City of Fresno Emergency Operations Center Activities), and the recovery process. Furthermore, the plan complies with the State of California Emergency Operations Plan "Cross Walk" checklist for determining whether an emergency plan has addressed critical elements of California's Standardized Emergency Management System (SEMS) and the National Incident Management System (NIMS).

The County of Fresno has a Multi-Hazard Mitigation Plan, a multi-jurisdictional plan that aims to reduce or eliminate long-term risk to people or property from natural disasters and their effects, that is applicable to the City and areas outside of the City but within the Plan areas.

Airport Hazards

There are two public airports in or near the Plan areas: Fresno-Yosemite International Airport (FYI) and Fresno Chandler Executive Airport (FCH). In conjunction with FYI, the Air National Guard maintains an airbase for military flight and training purposes. Each airport has its own airport land use plan, and the Fresno County Airport Land Use Commission (ALUC) provides guidance to local jurisdictions on adjacent land uses through Airport Land Use Compatibility Plans (ALUCPs).

Fresno Yosemite International Airport

Fresno Yosemite International Airport (FYI) occurs in the eastern portion of the City along East Clinton Way. FYI is a joint use civilian/military airport. It is used by commercial air carriers, air cargo operators, charter operators, the State of California, general aviation, and the United States military. The California Air National Guard occupies a 58-acre area adjacent to McKinley Avenue in the southeast portion of FYI. A helicopter repair and maintenance unit of the Army National Guard, the California Division of Forestry, and a number of corporate aviation businesses occupy facilities north of the runways. About 250 general aviation aircrafts are based at FYI and two Fixed Base Operators offer a wide range of aeronautical services.

Fresno Chandler Executive Airport

Fresno Chandler Executive Airport occurs in the southwestern portion of the City at the intersection of Kearny Boulevard and Thorne Avenue. The airport is designated as a general aviation reliever airport for FYI. One small cargo carrier operates out of the facility, and nine general aviation businesses operate out of the airport. Approximately 180 general aviation aircraft are based at

Fresno Chandler Executive Airport. There are currently no plans to expand the airport (FirstCarbon Solutions 2014). According to the Fresno-Chandler Executive Airport Environs Plan map, the Plan areas are located within various safety zones, such as the runway protection zone and outer approach/departure zone, etc. (Fresno Chandler Executive Airport Land Use Compatibility Plan 2014).

Fire Hazards

The City of Fresno is located within the Central Valley, and is relatively flat. The majority of the City contains developed properties. Similar uses surround the City with the City of Clovis to the east, and mostly agricultural properties to the north, west, and south. The Sierra Nevada foothills to the north and east of the Cities of Fresno and Clovis provide the nearest areas where large expanses of undeveloped properties occur. Because of the topography and the distance between the City and undeveloped areas, the primary fire hazard concern within the City of Fresno consists of fire from existing structures and buildings, as there are no wildlands within the City that would be subject to wildland fires.

As detailed in the City of Fresno Map Atlas Existing Conditions Report, dated August 2011, although the City of Fresno is close to high and very high fire hazard designated areas, the City is largely categorized as little or no threat or moderate fire hazard, largely attributed to paved areas. Some small areas along the San Joaquin River Bluff area in northern Fresno are prone to wildfires because of the relatively steep terrain/vegetation and are classified as high fire hazard areas (Map Atlas Existing Conditions Report 2011).

5.8.3 - Regulatory Setting

Federal, state, and local city regulations pertain to the use and storage of hazardous materials. This section discusses each of the agency's roles in regulating hazardous materials.

Potential hazards and the use and transportation of hazardous substances are regulated by an overlapping set of adopted city, county, state, and federal plans, policies and regulations. In general, federal and State legislation empowers regulation by local agencies; however, both state and federal agencies such as the Federal Aviation Administration (FAA [airports]) and Regional Water Quality Control Boards (RWQCBs) (ground and surface water contamination) retain a substantial direct regulatory role. The City addresses these issues primarily in its Municipal Code and to a lesser extent in its 2025 General Plan. Hazardous materials are also regulated by the City of Fresno Fire Department and the San Joaquin Valley Air Pollution Control District (SJVAPCD). The Fresno Council of Governments maintains the Airport Land Use Plan (ALUP), and the City Municipal Code contains the Airport Zoning Ordinance that addresses land use and safety regulations in the airport zone.

Federal

Toxic Substances Control Act

Established in 1976 and amended on December 31, 2002, the Toxic Substances Control Act (TSCA) (15 United States Code [USC] Section 2601-2692) grants the EPA power to require proper reporting, record-keeping, and testing requirements related to chemical substances and/or mixtures. Specifically, the TSCA addresses the production, importation, use, and disposal of specific chemicals,

including PCBs, asbestos, radon, and LBPs. The TSCA establishes the EPA's authority to require the notification of the use of chemicals, require testing, maintain a TSCA inventory, and require those importing chemicals under Sections 12(b) and 13 to comply with certification and/or other reporting requirements. This federal legislation also phased out the use of asbestos-containing materials in new building materials and sets requirements for the use, handling, and disposal of asbestos-containing materials. Disposal standards for LBP wastes are also detailed in the TSCA.

The Emergency Planning and Community Right-To-Know Act

The Emergency Planning and Community Right-To-Know Act (also known as Title III of the Federal Superfund Amendments and Reauthorization Act, or "SARA III") (42 United States Code 11001, et seq.), was established by the EPA to allow for emergency planning at the state and local level regarding chemical emergencies, to provide notification of emergency release of chemicals, and to address community right-to-know regarding hazardous and toxic chemicals. SARA III was designed to increase community access and knowledge about chemical hazards as well as facilitate the creation and implementation of state/Native American tribe emergency response commissions, responsible for coordinating certain emergency response activities and for appointing local emergency planning committees. Section 1910.1200(c) Title 29 of the CFR defines "chemicals or hazardous materials" for the purposes of SARA III.

Federal Aviation Regulations, -14 CFR Part 77 (FAR Part 77)

The FAA is charged with the review of construction or alterations that occur in the vicinity of airports. Its role in reviewing these activities is to identify potential aeronautical hazards and prevent or minimize adverse impacts to the safe and efficient use of navigable airspace. The regulations in the FAR Part 77 are designed to ensure that no permanent or temporary obstructions are allowed to exist in the navigable air space that would endanger the public or limit the efficient use of airspace. Proposed structures are also evaluated against Terminal En Route Procedures, which ensure that an object does not adversely impact flight procedures. Tall structures, including buildings, construction cranes, and cell towers in the vicinity of an airport can be hazardous to the navigation of airplanes. FAR Part 77 identifies the maximum height at which a structure would be considered an obstruction based on its proximity to the airport. All objects over 200 feet above ground level (AGL) are impacted by these regulations and any object less than 200 feet AGL within 20,000 feet of an airport must be evaluated based on height and location relative to the airport.

Federal Insecticide, Fungicide, and Rodenticide Act

The Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) (7 United States Code 136, et seq.) was originally passed in 1947. It has been amended several times, most extensively in 1972, and most recently by the Food Quality Protection Act of 1996. The purpose of FIFRA is to establish federal jurisdiction over the distribution, sale, and use of pesticides. It also gives EPA the authority to study the effects of pesticide use. Other key provisions of FIFRA require pesticide applicators to pass a licensing examination for status as "qualified applicators," create a review and registration process for new pesticide products, and ensure thorough and understandable labeling that includes instructions for use.

Hazardous Materials Transportation Act (HMTA)—Safe Transport of Hazardous Materials

The United States Department of Transportation regulates hazardous materials transportation between states under Title 49, Chapter 1, Part 100-185 of the Code of Federal Regulations. Within California, Caltrans and the California Highway Patrol enforce federal law related to the transport of hazardous materials. Together, these agencies determine driver training requirements, load labeling procedures, and specifications for container types to be used.

Federal Emergency Management Agency (FEMA)

With respect to emergency planning, FEMA is responsible for ensuring the establishment and development of policies and programs for emergency management at the federal, state, and local levels. Enforcement of these laws and regulations is delegated to state and local environmental regulatory agencies.

Resource Conservation and Recovery Act

The 1976 Federal Resource Conservation and Recovery Act (RCRA) and the 1984 RCRA Amendments regulate the treatment, storage, and disposal of hazardous and non-hazardous wastes. The legislation mandated that hazardous wastes be tracked from the point of generation to their ultimate fate in the environment. This includes detailed tracking of hazardous materials during transport and permitting of hazardous material handling facilities.

The 1984 RCRA amendments provided the framework for a regulatory program designed to prevent releases from USTs. The program establishes tank and leak detection standards, including spill and overflow protection devices for new tanks. The tanks must also meet performance standards to ensure that the stored material will not corrode the tanks. Owners and operators of USTs had until December 1998 to meet the new tank standards. As of 2001, an estimated 85 percent of USTs complied with the required standard.

Comprehensive Environmental Response, Compensation and Liability Act

The Comprehensive Environmental Response, Compensation, and Liability Act of 1980 introduced active federal involvement to emergency response, site remediation, and spill prevention, most notably the Superfund program. The act was intended to be comprehensive in encompassing both the prevention of, and response to uncontrolled hazardous substances releases. The act deals with environmental response, providing mechanisms for reacting to emergencies and chronic hazardous material releases. In addition to establishing procedures to prevent and remedy problems, it establishes a system for compensating appropriate individuals and assigning appropriate liability. It is designed to plan for and respond to failure in other regulatory programs and to remedy problems resulting from action taken before the era of comprehensive regulatory protection.

State

California Health and Safety Code

The California Environmental Protection Agency has established rules governing the use of hazardous materials and the management of hazardous wastes. California Health and Safety Code Sections 25531, et seq. incorporate the requirement of Superfund Amendments and Reauthorization Act and the Clean Air Act as they pertain to hazardous materials. Health and Safety Code Section

25534 directs facility owners storing or handling acutely hazardous materials in reportable quantities to develop a Risk Management Plan (RMP). The RMP must be submitted to the appropriate local authorities, the designated local administering agency, and the EPA for review and approval.

San Joaquin Valley Air Pollution Control District (SJVAPCD)

The SJVAPCD has regulations that require compliance with the asbestos demolition and renovation requirements developed by the United States Environmental Protection Agency in the National Emission Standards for Hazardous Air Pollutants (NESHAP) regulation, 40 CFR, Part 61, Subpart M. (San Joaquin Valley Pollution Control District Asbestos Bulletin 2012).

Local

City of Fresno Municipal Code

Chapter 10, Article 14 and Chapter 15, Article 27 of the City of Fresno Municipal Code pertains to the recovery of expenses associated with hazardous spills. Specifically, this section states that "Any person causing a release or threatened release which results in an emergency action shall be liable to the City of Fresno for the recoverable costs resulting from the emergency action."

Fresno County Environmental Health Department—Hazardous Materials Business Plans

Facilities that store, use or handle hazardous materials above reportable amounts are required to prepare and file a Hazardous Materials Business Plan for the safe storage and use of chemicals. In the event of an emergency firefighters, health officials, planners, public safety officers, health care providers and others rely on the Business Plan. Implementation of the Business Plan should prevent or reduce damage to the health and safety of people and the environment when a hazardous material is released (Fresno County Department of Environmental Health 2012).

A Business Plan must be submitted by businesses that handle a hazardous material, or a mixture containing a hazardous material, in quantities equal to or greater than:

1. 500 pounds of a solid.
2. 55 gallons of a liquid.
3. 200 cubic feet of a compressed gas at standard temperature and pressure
4. The federal Threshold Planning Quantity (TPQ) for Extremely Hazardous Substances
5. Radioactive materials in quantities for which an Emergency Plan is required as per Parts 30, 40, or 70, Chapter 1 of Title 10 of Code of Federal Regulations.

The Business Plan must include (1) the type and quantity of hazardous materials; (2) site map; (3) risks of using these materials; (4) spill prevention; (5) emergency response; (6) employee training, and (7) emergency contacts (Fresno County Department of Environmental Health 2012).

City of Fresno General Plan

The City of Fresno General Plan, Noise and Safety Element contains objectives and policies to reduce Hazards and impacts from the use of Hazardous Materials that pertain to the project.

- **Objective NS-4:** Minimize the risk of loss of life, injury, serious illness, and damage to property resulting from the use, transport, treatment, and disposal of hazardous materials and hazardous wastes.
- **Policy NS-4-a: Processing and Storage.** Require safe processing and storage of hazardous materials, consistent with the California Building Code and Uniform Fire Code, as adopted by the City.
- **Policy NS-4-c: Soil and Groundwater Contamination Reports.** Require an investigation of potential soil or groundwater contamination whenever justified by past site uses. Require appropriate mitigation as a condition of project approval in the event soil or groundwater contamination is identified or could be encountered during site development.
- **Policy NS-4-e: Compliance with County Program.** Require that he production, use, storage, disposal, and transport of hazardous materials confirm to the standards and procedures established by the County Division of Environmental Health. Require compliance with the County's Hazardous Waste Generator Program, including the submittal and implementation of a Hazardous Materials Business Plan, when applicable.
- **Policy NS-4-f: Hazardous Materials Facilities**. Require facilities that handle hazardous materials or hazardous wastes to be designed, constructed, and operated in accordance with applicable materials and waste management laws and regulations.

Airport Safety

- **Objective NS-5:** Protect the safety, health, and welfare of persons and property on the ground and in aircraft by minimizing exposure to airport-related hazards.
- **Policy NS-5-a: Land Use and Height:** Incorporate and enforce all applicable Airport Land Use Compatibility Plans (ALUCPs) through land use designations, zoning, and development standards to support the continued viability and flight operations of Fresno's airports and to protect public safety, health, and general welfare.
  - Limit land uses in airport safety zones to those uses listed in the applicable ALUCPs as compatible uses, and regulate compatibility in terms of location, height, and noise.
- Ensure that development, including public infrastructure projects, within the navigable airspace of Fresno's Airports complies with Federal Aviation Regulation (FAR) 14 CFR Part 77—Safe Efficient Use and Preservation of the Navigable Airspace.
- **Policy NS-5-b: Airport Safety Hazards:** Ensure that new development, including public infrastructure projects, does not create safety hazards such as glare from direct or reflective sources, smoke, electrical interference, hazardous chemicals, fuel storage, or from wildlife, in violation of adopted safety standards.
- **Policy NS-5-d: Disclosure:** As a condition of approval for residential development projects, require sellers to prepare and provide State Department of Real Estate Disclosure statements to property buyers notifying of noise and safety issues related to airport operations.
- **Policy NS-5-e: Planned Expansion:** Allow for the orderly expansion and improvement of publicly-owned airports, while minimizing adverse environmental impacts associated with these facilities.
  - Periodically update airport facility master plans in accordance with FAA regulations.
  - Require land use within the Airport Influence Area of FYI and FCH to conform to designations and policies specified in adopted City of Fresno Land Use Compatibility Plans.

- Provide local jurisdictions surrounding the City's publicly owned airports with specific guidelines for effectively dealing with the presence and operation of these airports.

Emergency Response

- **Objective NS-6:** Foster an efficient and coordinated response to emergencies and natural disasters.
- **Policy NS-6-a: County Multi-Jurisdiction Hazard Mitigation Plan.** Adopt and implement the Fresno County Multi-Jurisdiction Hazard Mitigation Plan and City of Fresno Local Hazard Mitigation Plan Annex.
- **Policy NS-6-e: Critical Use Facilities**. Ensure critical use facilities (e.g. City Hall, police and fire stations, schools, hospitals, public assembly facilities, transportation services) and other structures that are important to protecting health and safety in the community remain operational during an emergency.
  - Site and design these facilities to minimize their exposure and susceptibility to flooding, seismic and geological effects, fire, and explosions.
  - Work with the owners and operators of critical use facilities to ensure they can provide alternate sources of electricity, water, and sewerage in the even that regular utilizes are interrupted in a disaster.
- **Policy NS-6-f: Emergency Vehicles Access**. Require adequate access for emergency vehicles in all new development, including adequate widths, turning radii, hard standing areas, and vertical clearance.

5.8.4 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether hazards and hazardous materials impacts are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the hazardous materials into the environment?

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

5.8.5 - Impact Analysis, Mitigation Measures, and Level of Significance After Mitigation

Routine Use

Impact HAZ-1:	**The project would not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.**

Project-specific Impact Analysis

Potentially significant impact. It is anticipated that implementation of development under the proposed DNCP and FCSP could result in the exposure of persons to hazards and/or hazardous materials during construction as well as from buildout of the DNCP and FCSP. Thus, potential construction-related and long-term (i.e. operational) hazards impacts are discussed below.

Potential Short-Term Construction Impacts

Development of the proposed DNCP and FCSP plan areas includes infill development and intensification of land uses within the plan areas. Therefore, existing structures within the DNCP and FCSP plan areas may need to be demolished and new buildings will be constructed. Demolition of existing buildings and construction of new buildings could expose persons working or living in the plan areas to potentially hazardous materials, including, but not limited to asbestos and lead from LBP s. However, there are regulatory requirements that pertain to both lead based paint and asbestos containing materials. Additionally, the California Occupational Safety and Health Administration has regulations that pertain to hazardous materials and the safety of workers who handle such materials.

In addition, sites containing hazardous materials are located throughout the City which pose potential health hazards (City of Fresno Map Atlas Existing Conditions Report 2011). Additionally, within the FCSP and DNCP plan areas, there are sites which could pose potential hazardous materials threats due to previous land uses (Krazan and Associates 2011a). New development that would occur as a result of implementation of the DNCP and/or FCSP would be required to be remediated (cleaned up) prior to the commencement of construction activities.

If existing or yet undiscovered soil or groundwater contamination were to be discovered during construction activities for development in the DNCP and FCSP plan areas, this contamination could pose a hazard to those persons who are exposed. The Phase I ESAs prepared for the FCSP and DNCP recommend specific measures to reduce potential impacts from the creation of a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

Grading and construction activities may involve limited transport, storage, usage, or disposal of hazardous materials, such as the use of petroleum products for fueling/servicing of construction equipment. This activity would occur for short-term periods during each project, and all such hazardous materials would be removed from the project site and disposed of pursuant to applicable federal, state, and local regulations. Because the construction activities are required to comply with the applicable regulations and laws pertaining to the transport, storage, use, and disposal of potentially hazardous materials associated with the project, health hazards from construction activities would be less than significant.

Potential Long-Term Operational Impacts

New development associated with the proposed DNCP and FCSP would result in the addition of new buildings and infrastructure as well as population to the plan areas. Development under the proposed DNCP and FCSP would result in the addition of land uses types that could generate hazardous materials, as well as added population that could be exposed to future hazardous materials releases. Furthermore, new development that would be constructed under the proposed DNCP and FCSP that involves routine transport, use, or disposal of hazardous materials will be required to conform to City of Fresno laws and regulations regarding the transport, use, and disposal of hazardous materials.

Unless determined to be exempt, new businesses under the proposed DNCP and FCSP that would handle a hazardous material, or a mixture containing a hazardous material, in quantities equal or greater than 500 pounds of a solid, 55 gallons of a liquid, 200 cubic feet of a compressed gas at a standard room temperature and pressure, the federal Threshold Planning Quantity (TPQ) for Extremely Hazardous Substances, and radioactive materials in quantities for which an Emergency Plan is required in accordance with Parts 30, 40, or 70, Chapter 1 of Title 10 of Code of Federal Regulation (CFR) will be required to conform to the City of Fresno approved Hazardous Materials Business Plan.

The Hazardous Materials Business Plan includes a business owner/operator identification form, business activities form, hazardous materials inventory, site map and building diagram(s), written emergency response plans, and written employee training programs. Less than significant impacts are anticipated because all generation, transport, and treatment of hazardous materials are required to comply with applicable federal, state and local requirements. Mitigation is also required to reduce potential impacts; see MM HAZ-1a through MM HAZ-1e below.

Cumulative Impact Analysis

Potentially significant impact. Less than significant cumulative impacts are anticipated regarding the routine transport, use, or disposal of hazardous materials because both the City and County of Fresno have their own manpower/facilities to handle hazardous materials. The County of Fresno Environmental Health Department (the larger governing body) inspects businesses' Business Plans, which must be submitted by businesses that handle a hazardous material, or a mixture containing a hazardous material, in certain quantities (County of Fresno Hazardous Materials Business Plans 2012). Additionally, the project would be required to implement the following mitigation measures, thereby reducing project-specific impacts to less than significant. Therefore, development in the

City of Fresno as a whole would be required to comply with applicable federal, state, and local requirements. With implementation of mitigation, less than significant cumulative impacts are anticipated regarding the routine transport, use, or disposal of hazardous materials.

Mitigation Measures

The following mitigation measures were not included in the MEIR and are new for this project:

Project-specific

The following recommendations from the Phase I ESAs for the DNCP and the FCSP have been incorporated as mitigation measures and are anticipated to reduce potential impacts regarding hazardous materials to a less than significant level.

The following mitigation measures shall be implemented on a property-by-property basis as development and/or redevelopment progresses throughout the DNCP and FCSP areas:

MM HAZ-1a Prior to the issuance of a grading permit, the property owners and/or developers of properties shall ensure that a Phase I ESA shall be conducted for each individual property prior to development or redevelopment to ascertain the presence or absence of Recognized Environmental Conditions, Historical Recognized Environmental Condition, and Potential Environmental Concerns as defined in the Phase I Environmental Site Assessment for the Downtown Neighborhoods Community Specific Plan and the Fulton Corridor Specific Plan relevant to the property under consideration. The findings and conclusions of the Phase I ESA shall become the basis for potential recommendations for follow-up investigation, if found to be warranted.

MM HAZ-1b In the event that the findings and conclusions of the Phase I ESA for a property result in evidence of RECs, HRECs and/or PECs warranting further investigation, the property owners and/or developers of properties shall ensure that a Phase II ESA shall be conducted to determine the presence or absence of a significant impact to the subject site from hazardous materials.

The Phase II ESA may include but may not be limited to the following: (1) Collection and laboratory analysis of soils and/or groundwater samples to ascertain the presence or absence of significant concentrations of constituents of concern; (2) Collection and laboratory analysis of soil vapors and/or indoor air to ascertain the presence or absence of significant concentrations of volatile constituents of concern; and/or (3) Geophysical surveys to ascertain the presence or absence of subsurface features of concern such as USTs, drywells, drains, plumbing, and septic systems. The findings and conclusions of the Phase II ESA shall become the basis for potential recommendations for follow-up investigation, site characterization, and/or remedial activities, if found to be warranted.

MM HAZ-1c In the event the findings and conclusions of the Phase II ESA reveal the presence of significant concentrations of hazardous materials warranting further investigation,

the property owners and/or developers of properties shall ensure that site characterization shall be conducted in the form of additional Phase II ESAs in order to characterize the source and maximum extent of impacts from constituents of concern. The findings and conclusions of the site characterization shall become the basis for formation of a remedial action plan and/or risk assessment.

MM HAZ-1d If the findings and conclusions of the Phase II ESAs, site characterization and/or risk assessment demonstrate the presence of concentrations of hazardous materials exceeding regulatory threshold levels, prior to the issuance of a grading permit, property owners and/or developers of properties shall complete site remediation and potential risk assessment with oversight from the applicable regulatory agency including, but not limited to, the Cal-EPA Department of Toxic Substances Control (DTSC) or Regional Water Quality Control Board (RWQCB), and Fresno County Department of Environmental Health Services (FCEHS). Potential remediation could include the removal or treatment of water and/or soil. If removal occurs, hazardous materials shall be transported and disposed at a hazardous materials permitted facility.

MM HAZ-1e In the event of planned renovation or demolition of residential and/or commercial structures on the subject site, prior to the issuance of demolition permits, asbestos and LBP surveys shall be conducted in order to determine the presence or absence of asbestos-containing construction materials and/or LBP. Removal of friable and non-friable ACCMs that have the potential to become friable during demolition and/or renovation shall conform to the standards set forth by the National Emissions Standards for Hazardous Air Pollutants.

The San Joaquin Valley Unified Air Pollution Control District is the responsible agency on the local level to enforce the National Emission Standards for Hazardous Air Pollutants and shall be notified by the property owners and/or developers of properties (or their designee(s)) prior to any demolition and/or renovation activities. If asbestos-containing materials are left in place, an Operations and Maintenance Program (O&M Program) shall be developed for the management of asbestos-containing materials.

Cumulative

Implementation of Mitigation Measures HAZ-1a through HAZ-1f would reduce potential cumulative impacts to less than significant. Thus, no additional mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Potential Short Term Construction Impacts

During project construction/development, compliance with all applicable regulations combined with implementation of Mitigation Measures HAZ-1a through HAZ-1e are anticipated to mitigate potential hazardous materials impacts to construction workers and the general public. Therefore, related impacts are anticipated to be reduced to a level of less than significant.

Potential Long-Term Operational Impacts

Impacts from the proposed DNCP and FCSP related to hazards and hazardous materials transport, use, and disposal are anticipated to be less than significant because all new development under the General Plan that handles, stores, generates or disposes of hazardous materials must be in compliance with City of Fresno regulations/laws regarding hazardous materials, as well as state and federal laws regarding hazardous materials. It is anticipated that implementation of Mitigation Measures HAZ-1a through HAZ-1e will further reduce impacts to a less than significant level. As such, the proposed DNCP and FCSP are anticipated to have a less than significant impact.

Cumulative

The contribution of the proposed DNCP's and FCSP's impacts on the routine transport, use, or disposal of hazardous materials are anticipated to be less than significant and would not be cumulatively considerable because all generation, transport, and treatment of hazardous materials are required to comply with applicable federal, state and local requirements. Additionally, with implementation of mitigation measures listed above, impacts are anticipated to be less than significant.

Accident Conditions

Impact HAZ-2:	**The project would not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment.**

Project-specific Impact Analysis

Less than significant impact. The Fresno City Fire Department recognizes the potential for a large chemical release to occur which could expose thousands of people to hazardous/toxic vapors. A variety of chemicals are transported via the two railroad lines or the four freeways which transect the City. The Fresno City Fire Department Hazardous Materials Response Team has embraced an all-hazards approach to emergency response to ensure that the community receives a robust, competent level of service to all hazardous materials events (City of Fresno Hazardous Materials Team 2012). Impacts from development of the proposed DNCP and FCSP related to the creation of a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment are anticipated to be less than significant. All new development under the proposed plans that would handle, store, generate or dispose of hazardous materials must comply with City of Fresno regulations/laws regarding hazardous materials as well as state and federal laws regarding hazardous materials. As such, development of the proposed DNCP and FCSP is anticipated to have a less than significant impact.

Cumulative-Level Analysis

Less than significant impact. The contribution of the proposed DNCP and FCSP impact on the creation of a significant hazard to the public or environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment is anticipated to less than significant and not be cumulatively considerable. All generation, transport, and treatment of hazardous materials are required to comply with applicable federal, state, and local

requirements. Additionally, mitigation measures would be required to reduce potential project-specific impacts to less than significant levels. Therefore, a less than significant cumulative impact is anticipated with mitigation incorporated.

Mitigation Measures

Project-specific

The following project-specific mitigation measures (listed earlier in this section) regarding hazardous materials are anticipated to reduce potential impacts regarding the creation of a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving release of hazardous materials into the environment: Mitigation Measures HAZ-1a, HAZ-1b, HAZ-1c, HAZ-1d and HAZ-1e.

Cumulative

No additional mitigation measures have been identified for cumulative impacts beyond the project-specific mitigation required and identified above.

Level of Significance After Mitigation

Project-specific

Impacts from the proposed DNCP and FCSP related to the creation of a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving release of hazardous materials into the environment are anticipated to be less than significant. All new development under the DNCP and/or FCSP that would handle, store, generate or dispose of hazardous materials must be in compliance with City of Fresno regulations/laws regarding hazardous materials as well as state and federal laws regarding hazardous materials. Additionally, with the implementation of the mitigation measures listed above that apply to hazardous materials and the prevention of their release into the environment, the proposed DNCP and FCSP are anticipated to have a less than significant impact.

Cumulative

The contribution of the DNCP's and FCSP's impacts on the creation of a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving release of hazardous materials into the environment are anticipated to be less than significant and would not be cumulatively considerable. All generation, transport, and treatment of hazardous materials are required to comply with applicable federal, state, and local requirements.

Schools

Impact HAZ-3:	**The project would not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school.**

Project-specific Impact Analysis

Less than significant impact. According to the Public Services section of this document, all of the schools within the DNCP plan area are within the Fresno Unified School District. There are 14 elementary schools, two middle schools, two high schools, an adult school, and the New Millennium

Institute of Education within the boundaries of the DNCP area. This FCSP area does not have any existing schools except for Kepler Charter School; additionally, the plan area falls entirely within the Fresno Unified School District.

Development under the proposed DNCP and FCSP could include land uses that have the potential to emit hazardous emissions or handle hazardous or acutely hazardous materials and substances. It is anticipated that future development under the General Plan and Citywide Development Code could occur within 0.25 mile of an existing or proposed school. However, all generation, transport, and treatment of hazardous materials would be required to comply with applicable federal, state, and local requirements. Additionally, any future projects would be reviewed by the City of Fresno in light of their potential impacts and location in relation to existing and/or proposed schools. Therefore, impacts are anticipated to be less than significant.

Cumulative Impact Analysis

Less than significant impact. Impacts from hazards are generally site-specific, and do not result in cumulative impacts. Less than significant cumulative impacts are anticipated regarding hazardous materials within 0.25 mile of a school, because project level mitigation would be required that would reduce impacts from each proposed project. Thus, the same mitigation would be required to reduce impacts on a cumulative level. Additionally, all generation, transport, and treatment of hazardous materials are required to comply with applicable federal, state, and local requirements, and the greater City of Fresno has its own manpower/facilities to handle hazardous materials. Therefore, less than significant impacts are anticipated.

Mitigation Measures

The following mitigation measures were not included in the MEIR and are new for this project:

Project-specific

MM HAZ-3a A Business Plan must be submitted by businesses that handle a hazardous material, or a mixture containing a hazardous material, in quantities equal to or greater than 500 pounds of a solid, 55 gallons of a liquid, 200 cubic feet of a compressed has at standard room temperature and pressure, the Federal Threshold Planning Quantity (TPQ) for Extremely Hazardous Substances, radioactive materials in quantities for which an Emergency Plan is required in accordance with Parts 30, 40, or 70, Chapter 1 of Title 10 of Code of Federal Regulations. A Risk Management Plan shall be completed for any business that has more than a threshold quantity of a regulated substance in a process included any use, storage, manufacturing, handling, or on-site movement or any combination of these activities. Regulated substances are those chemicals on either the Federal list or the State list.

MM HAZ-3b In the event that unknown soil contamination is discovered during grading activities, the property owners and/or developers of properties shall ensure that site characterization shall be conducted in the form of a Phase II ESA in order to characterize the source and maximum extent of impacts from constituents of concern. The findings and conclusions of the site characterization shall become the basis for formation of a remedial action plan and/or risk assessment.

MM HAZ-3c If the findings and conclusions of the Phase II ESA, site characterization and/or risk assessment demonstrate the presence of concentrations of hazardous materials exceeding regulatory threshold levels, property owners and/or developers of properties shall complete site remediation and potential risk assessment with oversight from the applicable regulatory agency, including but not limited to the Cal-EPA DTSC or RWQCB, and Fresno County Department of Environmental Health Services. Potential remediation could include the removal or treatment of water and/or soil. If removal occurs, hazardous materials shall be transported and disposed at a hazardous materials permitted facility.

Cumulative

No additional mitigation measures are required for cumulative impacts regarding emission of hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school.

Level of Significance After Mitigation

Project-specific

The DNCP and FCSP's potential impacts on the emission of hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school are anticipated to be less than significant and would not be cumulatively considerable because all generation, transport, and treatment of hazardous materials are required to comply with applicable federal, state and local requirements.

Implementation of mitigation for the project will further reduce impacts to a less than significant level.

Cumulative

Impacts from hazards are generally site-specific, and do not result in cumulative impacts. The cumulative contribution of the DNCP's and FCSP's potential impacts on the emission of hazardous emissions or handling of hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school are anticipated to be less than significant and would not be cumulatively considerable. All generation, transport, and treatment of hazardous materials are required to comply with applicable federal, state, and local requirements.

Hazardous Materials Site Listing

Impact HAZ-4: The project could potentially be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment.

Project-specific Impact Analysis

Potentially significant impact. Separate Phase I ESAs were conducted for the DNCP and FCSP plan areas. Because of the location of the FCSP boundaries within the DNCP boundaries, the information below is from the DNCP Phase I ESA because the geographical area for the DNCP covers both plan areas.

A review was conducted of local, state, and federal governmental regulatory agency lists compiled by Environmental FirstSearch (EFS) of published documents that list businesses or properties which have handled hazardous materials or waste or may have experienced site contamination in the DNCP project area. However, no site-specific regulatory agency file review for individual properties was conducted as a matter of practicality, due to the size of the project area and the time/expense associated with this type of analysis (given the huge number of individual properties that are included in the DNCP area (approximately 23,000), it is unreasonable and impractical to conduct property-specific research tasks in light of the investigative goals of the Phase I ESA (Krazan & Associates 2011). Therefore, this analysis conservatively assumes that all of the listed properties discussed below could potentially represent hazardous materials sites.

Because of the size of the DNCP project area, the DNCP was divided into three sections for the purpose of compiling the three EFS reports. Therefore, within the Phase I ESA, information regarding the northern/eastern area is provided in the first EFS report, followed by the southeastern area in the second report and the southwestern area in the third report. The northern/eastern EFS area includes roughly the region to the north of Divisadero/Neilson and to the east of SR-41 (Roeding, Lowell/Jefferson and Roosevelt plan areas); the southeastern EFS area includes roughly the region to the southeast of SR-41 (South Van Ness Industrial Area); and the southwestern EFS area includes roughly the region to the south of SR-180 west of SR-99 (Edison plan area) (Krazan & Associates 2011).

A summary of the environmental conditions for each of the three sections described in the Phase I ESA is provided below (Phase I ESA DNCP 2011). Because of the large number of records found, please refer to the DNCP Phase I ESA contained in Appendix H.1 for details.

Section 1—Northern/Eastern Area Environmental FirstSearch Listed Properties Summary: A total of 1,250 sites were listed in the northern/eastern DNCP area on the EFS database report, 909 within the DNCP area, 340 sites within one-eighth mile of the DNCP boundaries, and one formerly proposed NPL site greater than one-half mile from the DNCP boundaries.

Section 2—Southeastern Area Environmental FirstSearch Listed Properties Summary: A total of 220 sites were listed in the southeastern DNCP area on the EFS database report, 56 within the DNCP area, 72 sites within one-eighth mile of the DNCP boundaries, and one National Priorities List (NPL) site within one-eighth mile of the DNCP boundaries.

Section 3—Southwestern Area Environmental FirstSearch Listed Properties Summary: A total of 215 sites were listed in the southwestern DNCP area on the EFS database report, 126 within the DNCP area, 87 sites within one-eighth mile of the DNCP boundaries, and two NPL sites greater than one-half mile from the DNCP boundaries.

Based on the information provided in the Phase I ESA for the DNCP, development under the proposed DNCP and FCSP has the potential to be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5. However, before development would occur on such a site, the project would be required to remediate and mitigate for on-site hazardous materials to a level that would permit development on-site. Additionally,

recommendations from the Phase I ESA report have been incorporated as mitigation measures. Prior to mitigation, potentially significant impacts are anticipated.

Cumulative

Less than significant impact. The contribution of the DNCP's and FCSP's impacts regarding development being located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 are anticipated to be less than significant and would not be cumulatively considerable. This is because any development that is proposed on a hazardous material site (pursuant to Government Code Section 65962.5) within an area surrounding the City of Fresno, such as the City of Clovis and the County of Fresno, would also be required to comply with applicable federal, state, and local requirements and undergo site-specific investigation and remediation. Therefore, cumulative impacts are anticipated to be less than significant.

Mitigation Measures

Project-specific

The following mitigation measures are anticipated to reduce potential impacts regarding hazardous materials sites compiled pursuant to Government Code Section 65962.5: Mitigation Measures HAZ-1a, HAZ-1b, HAZ-1c, HAZ-1d, and HAZ-1e.

Cumulative

No mitigation measures have been identified for cumulative impacts regarding inclusion on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5

Level of Significance After Mitigation

Project-specific

Impacts from the proposed DNCP and FCSP related to hazardous materials sites compiled pursuant to Government Code Section 65962.5 are anticipated to be less than significant with mitigation because pursuant to the mitigation measures, property owners and/or developers of properties shall complete site remediation and potential risk assessment with oversight from the applicable regulatory agency. As such, with implementation of the mitigation measures listed above, the proposed DNCP and FCSP are anticipated to have a less than significant impact.

Cumulative

The contribution of the DNCP's and FCSP's impacts related to hazardous materials sites compiled pursuant to Government Code Section 65962.5 are anticipated to be less than significant and would not be cumulatively considerable. This is because any development that is proposed on a hazardous material site (pursuant to Government Code Section 65962.5) within an area surrounding the City of Fresno, such as the City of Clovis and the County of Fresno, would also be required to comply with applicable federal, state, and local requirements and undergo site-specific investigation and remediation.

The project-level analysis concluded that impacts regarding hazardous materials sites compiled pursuant to Government Code Section 65962.5 would result in no or less than significant impact. While it is plausible that the development of future related projects could potentially result in

significant impacts related to the inclusion on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5, the project's contribution to such impacts would be less than cumulatively considerable, and thus less than significant.

Airports

Impact HAZ-5:	**For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, the project would not result in a safety hazard for people residing or working in the project area.**

Project-specific Impact Analysis

Less than significant impact. The City of Fresno has three airports within its boundaries: The Fresno-Yosemite International Airport, the Fresno Chandler Executive Airport, and the Sierra Sky Park Airport.

Fresno-Yosemite International Airport—The DNCP and the FCSP are not within the airport influence area or the safety compatibility zones for this airport. The DNCP is within 2 miles of this airport, and the FCSP is over 2 miles from this airport. Therefore, this airport is not discussed in further detail.

Fresno Chandler Executive Airport—This airport is located within the boundaries of the DNCP, and the FCSP is within two miles of this airport. The Traffic Pattern Zone for FCH covers areas of the FCSP. Additionally, portions of each of the six FCH Safety Zones fall within the boundaries of the DNCP.

Sierra Sky Park Airport. This airport is located more than 2 miles from the plan areas. Thus it is not analyzed further within this EIR. Implementation of the proposed DNCP and FCSP are anticipated to increase the population within the plan areas, and as such may expose those working or living in the area to potential safety hazards associated with airport operations. As detailed in the Safety Element of the current City of Fresno General Plan, each airport has its own City specific plan and airport land use plan designed to provide for public safety. Information about the Fresno Chandler Executive Airport's land use plan is provided below.

> Fresno Chandler Executive Airport: The land use policy plan for this airport sets forth the criteria which the Airport Land Use Commission (ALUC) will use in evaluating amendments of general, community and specific plans, airport master plans, rezoning applications, zoning ordinance text amendments, and building code amendments proposed in the vicinity of the Fresno Chandler Executive Airport. Additionally, as stated in the airport's land use plan, "The following projects, if located within the Airport Review Area, shall be referred to the ALUC for a determination of consistency with the airport's land use policy plan: the adoption or amendment of general, community and specific plans, airport master plans, rezoning applications, zoning ordinance text amendments, and building code amendments. ALUC determination of consistency does not apply to conditional use permits, variances, subdivision or parcel maps although the ALUC may be requested

to review these projects and make a recommendation" (Fresno Chandler Executive Airport Land Use Compatibility Plan, 2014).

The Fresno-Chandler Executive Airport Land Use Policy Plan contains restrictions of land uses within the vicinity of the airport which restrict noise, light, and height as follows. The airport's plan contains noise policies related to the land uses proposed in the vicinity of the airport. The relative acceptability or unacceptability of particular land uses with respect to the noise levels to which they would be exposed is indicated in the "Noise Compatibility Criterion Matrix." These criteria shall be the principal determinants of whether a proposed land use is compatible with the noise impact from the airport. Special circumstances, which would affect the specific proposal's noise sensitivity (e.g., the extent or lack of outdoor activity) shall also be taken into account (Fresno Chandler Executive Airport Land Use Compatibility Plan, 2014).

As detailed in the Avigation Easement and Agreement section of the land use plan, except when overriding circumstances exist, a condition for approval of any residential development proposal within the Airport Review Area, as subsequently defined herein, shall be the dedication of an avigation easement. Avigation easements shall be required for all development proposals (commercial, industrial or residential) within the 60 CNEL contour. Among other things listed, the avigation easement shall contain: the right to prohibit creation of electrical interference, unusual light sources, and other hazards to aircraft flight (Fresno Chandler Executive Airport Land Use Compatibility Plan, 2014).

As detailed in the airspace protection section of the Airport Land Use Compatibility Plan, no structure, tree or other object shall be permitted to exceed the height limits established in accordance with Part 77, Subpart C, of the Federal Aviation Regulations (FAR), with certain exceptions, depending on existing conditions (Fresno Chandler Executive Airport Land Use Compatibility Plan, 2014).

Finally, the Fresno Chandler Executive Airport is planned public facility. In addition, Section 15-104-B-4-b of the Citywide Development Code regarding priority of plans states that in the event of a conflict between airport plans and other city plans, the airport plans shall govern.

The DNCP contains policies related to the Fresno Chandler Executive Airport as well as airports in general, reproduced below:

- **Policy 5.3.4:** In order to minimize conflicts between aircraft and wildlife, limit the construction of new retention/recharge basins within 10,000 feet of the Fresno Chandler Downtown Airport runways and/or introduce mitigation measures that discourage wildlife from congregating around or inhabiting retention/recharge basins within 10,000 feet of the Fresno Chandler Downtown Airport runways.
- **Policy 4.2.1:** Introduce new and reintroduce missing street trees in the Community Plan Area's neighborhoods, districts, and corridors with the goal of providing a minimum of 50 percent landscape canopy cover (the layer of leaves, branches, and stems that cover the ground when viewed from above) for each street in the Plan Area within 15 years. Trees should provide

shade, visual identity for residents, and reflect the individual character of each community. Trees planted within the Chandler Airport Overlay area shall be planted in conformance with Federal Aviation Regulations Part 77, particularly in terms of height and potential to attract wildlife. The recommended street trees for the Community Plan Area's neighborhood streets are shown in Figure 4-3 (Neighborhood Street Landscape Character) and described in Table 4.1 (Neighborhood Street Tree Planting List). The recommended street trees for each of the prominent corridors in the Community Plan Area are shown in Figure 4-4 (Corridor Landscape Character) and described in Table 4.2 (Corridor Street Tree Planting List).

As described above, the airport plans contain policies pertaining to noise, light, and height. Based on the information provided above about each airport's land use plan and based on the policies/goals in the DNCP related to airport compatibility, it is not anticipated that development under the proposed DNCP and FCSP would result in safety hazards for people residing or working in the plan areas. Each land use plan for the airports within the City of Fresno contains criteria that the City of Fresno will use in the evaluation of individual development proposals. Therefore, a less than significant impact is anticipated.

Cumulative

No impact. No cumulative impact is anticipated from development under the proposed DNCP and FCSP because each airport in the City of Fresno (as well as in the surrounding County of Fresno and City of Clovis) has its own land use plan, which plans for a compatible relationship between the airport and development surrounding the airport. Therefore, a less than significant cumulative impact is anticipated.

Mitigation Measures

Project-specific

No mitigation measures have been identified for project-specific impacts regarding airports.

Cumulative

No mitigation measures have been identified for cumulative impacts regarding airports.

Level of Significance After Mitigation

Project-specific

No project-specific mitigation measures have been identified. Conformance to the applicable airport land use plan for future development under the DNCP and FCSP will ensure a less than significant impact.

Cumulative

The contribution of development under the DNCP and FCSP regarding airports and potential safety hazards for people residing or working in the plan areas is not considered cumulatively significant because each airport—whether it is located in the plan areas, the County of Fresno or the City of Clovis, or other surrounding areas—is required to develop a plan that addresses each airport's potential impact to the area/land uses surrounding each airport. Individual development projects

would be required to comply with the height and design restrictions imposed by the applicable plan. Therefore, the project's contribution would not result in a significant cumulative impact.

Private Airstrip

Impact HAZ-6: For a project within the vicinity of a private airstrip, the project would not result in a safety hazard for people residing or working in the project area.

Project-specific Impact Analysis

No impact. There are no private airstrips located in the City of Fresno (Airnav.com 2012). Additionally, the Safety Element of the General Plan does not identify any private airstrips in the City. A review of aerial images (from Google Earth) for Fresno does not show any private airstrips in the City of Fresno. Development under the proposed DNCP and FCSP does not include private airstrips. Therefore, there will be no impacts, and no further analysis of this issue is necessary.

Cumulative

Less than significant impact. On a cumulative basis, potential impacts from hazards resulting from private airstrips is considered to be less than significant.

The project-specific analysis concluded that impacts related to the creation of a safety hazard for people residing or working in the project area because of their proximity to a public airstrip would result in no impact. While it is plausible that the development of future related projects could potentially result in significant impacts related to creation of safety hazard for people residing or working in the project area because of their proximity to a public airstrip, the project would not contribute to potential cumulative impacts. Therefore, the proposed project's impacts related to private airstrips would not be cumulatively considerable and would result in no cumulative impacts.

Mitigation Measures

Project-specific

No mitigation measures have been identified for project-specific impacts related to private airstrips.

Cumulative

No mitigation measures have been identified for cumulative impacts related to private airstrips.

Level of Significance After Mitigation

Project-specific

As described above, no private airstrips have been identified within the City of Fresno or its vicinity. Therefore, no project-specific impacts are anticipated.

Cumulative

No private airstrips currently exist or are proposed in the DNCP or FCSP plan areas. The contribution of the DNCP's and FCSP's impacts regarding private airstrips and potential safety hazards for people residing or working in the plan areas is not considered cumulatively significant. Future development of private airstrips, whether they are located in the City of Fresno, the County of Fresno or the City

of Clovis, or other surrounding areas, would be required to comply with applicable laws and safety standards. Therefore, less than significant cumulative impacts are anticipated.

Emergency Plans

Impact HAZ-7: The project would not impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan.

Project-specific Impact Analysis

Less than significant impact. The City's Police and Fire Departments are the lead agencies for all local emergency response efforts. The City's full-time Emergency Preparedness Officer (EPO) is responsible for ensuring that Fresno's emergency response plans are up-to-date and implemented properly. The EPO also facilitates cooperation between city departments and other local, state, and federal agencies that would be involved in emergency response operations (City of Fresno Emergency Response Plan Overview 2012).

Development of the DNCP and FCSP area would increase the development of residential, office, retail, industrial, and open conservation land uses within the plan areas. Because of the nature of the types of land uses proposed under each plan, it is not anticipated that either plan will impair implementation or physically interfere with adopted emergency response or evacuation plans of the City of Fresno. Each of the plans provides measures to improve the safety of the transportation system, as described below.

The DNCP includes Goal 3.9: Improve the overall safety of the transportation system. The intent is to construct and maintain the transportation system such that safety is maximized for all users of City streets—including pedestrians, bicycles, transit users, automobile passengers, and others—at all times of the day. Additionally, Policy 3.9.8 of the DNCP states:

> For four-way controlled plan area intersections that will serve as primary emergency vehicle response routes, consider intersection control options including roundabouts and traffic signals as options to four-way stop, relative to plan goals, policy, and objectives for improving safety and facilities or service for transit, bicyclists, and pedestrians. If traffic signal control is deemed necessary by Traffic Engineering through appropriate engineering analysis, traffic signal pre-emption must be incorporated into the signal system.

The FCSP includes Goal 9-1: Provide a comprehensive transportation, circulation, and parking system that improves quality of life in Downtown. Policy 9-1-10 of the FCSP states: "Upgrade traffic signal control equipment, interconnect traffic signals, connect all signals to a traffic operations center, and install emergency vehicle traffic signal interruption systems at all existing and new traffic signal-controlled intersections." Policy 9-2-5 states:

> Incorporate the following traffic-calming techniques into the design of streets, of which sections c) and f) state:
>
> c. Plant trees to narrow perceived street width, including trees along sidewalks and/or in on-street planter bulb-outs. Institute an active tree canopy

maintenance program to ensure clear heights and widths for emergency vehicles are maintained.

f. At intersections, reduce excessively wide turning radii to the minimum radii so that the design vehicle will be allowed to turn without crossing the center line in most circumstances, but allow larger vehicles, including emergency response vehicles, to cross the center line to keep the curb radii small. When establishing corner radii, allow turning vehicles to use all receiving lanes. All street and intersection design is subject to Fire Department approval.

Based on the goals and policies listed above from the proposed DNCP and FCSP, development under the proposed plans is not expected to physically interfere with an adopted emergency response plan. Additionally, future specific development in each of the plan areas will be reviewed by the City's police and fire departments to ensure that projects do not conflict with the City's emergency response/evacuation plans. Therefore, a less than significant impact is anticipated.

Cumulative

Less than significant impact. On a cumulative basis, development of the proposed DNCP and FCSP combined with other development in the plan areas' vicinity (such as the City of Fresno, City of Clovis, and County of Fresno) are anticipated to have a less than significant impact on the implementation of, or physical interference with an adopted emergency response plan or emergency evacuation plan. A less than significant impact is anticipated because there are policies in each plan that relate to facilitating emergency response within the plan areas. Additionally, future cumulative development would be reviewed for potential interference with applicable local/area emergency response/emergency evacuation plans and mitigation is anticipated to be implemented to reduce potential interference with plans. Therefore, less than significant cumulative impacts are anticipated.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

As described above, no mitigation measures are required, and less than significant impacts are anticipated.

Cumulative

As described above, no mitigation measures are required, and less than significant impacts are anticipated.

Wildland Fires

Impact HAZ-8:	**The project would not expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.**

Project-specific Impact Analysis

No impact. The DNCP area is located within the southern portion of the City of Fresno. The plan area is generally bounded to the east by Chestnut Avenue; to the south by Church Avenue; to the west by Thorne, West, and Marks Avenues; and to the north by SR-180. Along the western side of the Plan Area, the boundaries extend as far north as Clinton Avenue. The project area is divided by SR-99, SR-41, and SR-180 as well as the Union Pacific and BNSF railroad right-of-ways.

As described in the existing setting section regarding fire hazards, although the City of Fresno is close to high and very high fire hazard designated areas, the City is largely categorized as little or no threat or moderate fire hazard, which is largely attributed to paved areas. Some small areas along the San Joaquin River Bluff area in northern Fresno are prone to wildfires because of relatively steep terrain/vegetation and are classified as high fire hazard areas (Map Atlas Existing Conditions Report 2011). The DNCP is located approximately 7 miles south of the San Joaquin River Bluffs area and as such is not subject to wildland fires posed by vegetation in the bluffs area. Therefore, no impact is anticipated, and no project-specific mitigation measures related to wildland fires are required.

The FCSP area is located within the southern portion of the City, and is completely surrounded by the DNCP Area. As such, the FCSP area is not located within an area of the City that is prone to wildland fires or where wildlands are adjacent to urbanized areas, or where residences are intermixed with wildlands. Therefore, no impact is anticipated, and no project-specific mitigation measures related to wildland fires are required.

Cumulative

No impact. On a cumulative basis, development of the DNCP and FCSP plan areas is not anticipated to have a cumulative impact regarding wildland fires because the plan areas are located approximately 7 miles south of San Joaquin River bluffs area, which is the portion of the City that could be subject to wildland fires. Additionally, because the plan area's locations in a developed/urban area of the City of Fresno, no cumulative impacts to areas within or outside the City related to wildland fires are anticipated, because development of the plan areas would have no impact on the occurrence of wild land fires in or surrounding the City of Fresno. While it is possible that the development of other future projects could potentially result in significant impacts related to wildland fires, the project would not contribute to potential cumulative impacts. Therefore, no impact is anticipated and no mitigation measures are required.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

No impact.

Cumulative

No impact.

5.9 - Hydrology and Water Quality

5.9.1 - Introduction

This section identifies the potentially significant impacts to hydrology and water quality from the implementation of the Downtown Neighborhoods Community Plan (DNCP), the Fulton Corridor Specific Plan (FCSP) and the Downtown Development Code (DDC). This section also identifies mitigation measures to reduce any potentially significant hydrology and water quality impacts and describes the residual impact, if any, after imposition of the mitigation.

Sources

Information in this section is based on the following sources:

- California Department of Water Resources Bulletin 118, groundwater and flood hazard area mapping
- California State Water Resources Control Board 303(d) list
- California Emergency Management Agency (Cal EMA), MyHazards database
- Central Valley Regional Water Quality Control Plan
- City of Fresno General Plan and accompanying EIR. December 2014.
- City of Fresno Department of Public Utilities. 2013. Draft Memorandum.
- Fresno County General Plan
- Fresno Metropolitan Flood Control District, District Services Delivery Plan
- Downtown Neighborhoods Community Plan. 2016. The complete DNCP is contained in Appendix A.
- Fulton Corridor Specific Plan. 2016. The complete FCSP is contained in Appendix B.
- Downtown Development Code. 2016. The complete DDC is contained in Appendix C.
- 2015 Urban Water Management Plan. 2016. Provost & Pritchard Consulting Group.
- 2010 Urban Water Management Plan. 2012. West Yost Associates.

5.9.2 - Environmental Setting

Study Area for Project Impacts

The study area for project impacts regarding hydrology and water quality are the DNCP and FCSP Plan areas.

Study Area for Cumulative Impacts

The study area for the analysis of cumulative hydrology and water quality impacts is the Fresno-Clovis Metropolitan Area because the Fresno Metropolitan Flood Control District (District) includes

an area of approximately 400 square miles and covers the entire portion of the Fresno-Clovis Metropolitan Area. The study area for the analysis of cumulative groundwater impacts is the Kings River Sub-basin.

Climate

The City of Fresno is characterized by a semi-arid climate, with mild, moist winters and hot and dry summers. Temperatures range from an average low of 37.4 degrees Fahrenheit (°F) in January to an average high of 98.6°F in July. Average rainfall is 10.60 inches (Western Regional Climate Center 2015). The majority of precipitation occurs between November and April.

Hydrology

The San Joaquin River and the Kings River are the principal rivers that influence the hydrology in the Plan areas. The western slopes of the Sierra Nevada drain to the west via the San Joaquin and Kings Rivers. The James Bypass, a manufactured canal, connects the Kings River to the San Joaquin River. Floodwater from the Kings River is diverted to the San Joaquin River. Three dams control flows on the two rivers. The Friant and Mendota Dams are located on the San Joaquin River. These two dams provide some flood control; however, they were not designed for the purpose of flood control, but the Pine Flat Dam was built for that purpose.

In addition to the dams on the two rivers, there are reservoirs and detention basins that have been constructed to prevent flooding. These facilities include the Redbank Dam and the Redbank-Fancher Creeks Flood Control Project, which consists of two dams (Big Dry Creek Dam and Fancher Creek Dam); three detention basins (Redbank Creek, Pup Creek, and Alluvial Drain Detention Basins); and canals to convey discharges in and around the City of Fresno. These facilities were designed to protect developed areas from a 200-year storm event (County of Fresno 2000).

Groundwater

The City is dependent upon precipitation and runoff from the Sierra Nevada snow pack to recharge its groundwater supplies and provide surface water for irrigation. A large productive aquifer system exists beneath most of the Plan areas at depths ranging between 159 and 900 feet below the ground surface (DNCP 2016).

The DNCP and FCSP areas are underlain by the Kings River Sub-basin, which, along with six other sub-basins, comprises the San Joaquin Valley Groundwater Basin. In turn, the San Joaquin Basin is located within the Tulare Lake Hydrologic Region. The Tulare Lake Hydrologic Region spans approximately 10.9 million acres (17,000 square miles) and includes most of Fresno County (Kings Basin Water Authority 2012). The Region encompasses the southern one-third of the Central Valley Regional Water Quality Control Board (RWQCB).

The Kings River Sub-basin extends from the Sierra Nevada foothills to the east to the San Joaquin Valley trough to the west, and from the San Joaquin River to the north to roughly the Fresno County line to the south.

The City of Fresno operates approximately 260 municipal supply wells that access groundwater from the Kings Sub-basin of the San Joaquin Valley Groundwater Basin, as well as the Northeast Surface Water Treatment Facility (NESWTF), a 30-million-gallon-per-day (mgd) surface water treatment facility. As growth within the City increases demands, this facility will be expanded by another 30 mgd for a total capacity of 60 mgd. The timing for this expansion is anticipated to occur by approximately 2035; however, the City will monitor system demands and adjust the schedule for this project as is required to meet projected water system demands and maintain the sustainable use of available water resources. Three active wells (PS3A, PS21A, and PS22A) are located near or within the FCSP area. These wells are prone to sanding, air entrainment, and general failure due to receding groundwater levels. Groundwater quality generally meets primary and secondary drinking water standards for municipal use, although chemical contaminant plumes and nitrates pose a threat to the drinking water supply (DNCP 2016).

Historically, water demand within the Plan areas was satisfied by extracting groundwater from the Kings River Sub-basin. According to the 2015 UWMP, groundwater levels since 1990 have declined from less than 0.5 feet per year (ft/yr) in the southwest portion of the downtown area, to a rate of 1.5 ft/yr for northern and southern areas of town, to a maximum of 3 ft/yr in the northeastern area, adjacent to the City of Clovis. Within the City of Fresno there was a cone of depression from Herndon Avenue in the north to Jensen Avenue in the south, and from Maple Avenue to Brawley Avenue in the east-west direction in both the lower and upper aquifer zones (UWMP 2016). A groundwater mound is located near the Fresno-Clovis Regional Wastewater Reclamation Facility (Regional Facility) as a result of the disposal of treated effluent at the FCRWRF percolation basins (UWMP 2016).

Groundwater used by the City to meet its demands is replenished by three different methods:

- Natural recharge
- Subsurface inflow
- Intentional recharge

Natural recharge occurs through rainfall, irrigation, canal and stream flows that seep into the soil and replenish the aquifer below. Based on City data, the natural recharge was approximately 25,400 acre-feet (af) in 2015. According to the Metropolitan Plan Update, the average annual natural recharge is 25,400 af within the City of Fresno Metropolitan Area. As additional development occurs throughout the Plan areas, there will be less pervious surfaces to allow natural recharge to occur. At anticipated buildout of the City of Fresno General Plan Update, the natural recharge is estimated to be approximately 26,100 afy.

Subsurface recharge occurs from the movement of groundwater from external sources such as the Sierra Nevada moving into the local aquifer. Based on the 2015 UWMP, the annual subsurface inflow to the City is approximately 47,100 af in 2015. The City has historically benefitted from the net subsurface inflows and requires these flows in perpetuity for replenishment necessary to maintain the safe and sustainable yield of the groundwater aquifer system.

Intentional recharge is provided by directing surface water into the underground aquifer by means of groundwater recharge basins located throughout the City of Fresno Metropolitan Area. Currently, the City's primary recharge facility is Leaky Acres, located just northwest of Fresno-Yosemite International Airport. Other recharge facilities include Fresno Metropolitan Flood Control District (FMFCD) storm drainage basins and the Alluvial Groundwater Recharge System (AGRS) owned and operated by the City of Clovis. Based on the 2015 Urban Water Management Plan (UWMP), the average intentional recharge between 2000 and 2013 was approximately 50,000 afy. The maximum intentional recharge was approximately 62,000 afy in 2003. Based on information provided in the 2015 UWMP, the "normal year"/planned intentional recharge quantity in 2015 was approximately 53,100 af. However, with the reduction in available surface water supplies, intentional recharge declined to 34,700 af in 2014 and 19,800 af in 2015.

Based on the natural groundwater recharge (25,400 af), subsurface inflow (47,100 af), and intentional recharge (53,100 af) that occurred in 2015, the total groundwater recharge during normal year supply is approximately 125,600 af. At buildout, the City anticipates that the natural groundwater recharge will increase to 25,700 afy, subsurface inflow will be 48,900 afy, and intentional groundwater recharge will increase to 55,800 afy, due to an increase in the capacity of surface water treatment. According to Table 6-3 of the UWMP, the total groundwater recharge at buildout (2040) will be approximately 148,900 afy. Total groundwater recharge would be 135,100 acre-feet per year (af/yr) for 2025, 139,700 af/yr for 2030, and 144,300 af/yr for 2035.

In 2004, the NESWTF located at Chestnut and Behymer Avenues began operation. The NESWTF has reduced the dependence on groundwater pumping by the City needed to meet water demand. Prior to NESWTF operation, 100 percent of the City's water demand was met through groundwater pumping. According to the 2015 UWMP, the City had a high in groundwater pumping of 165,540 afy in 2002. Since the NESWTF went online in 2004, groundwater production has dropped to half this value in 2015. In addition, the City has started construction on a new 80-mgd SWTF in southeast Fresno (SESWTF), a 13-mile, 72-inch-diameter raw water gravity main from the Fresno Irrigation District's Fresno Canal to the proposed SESWTF, and approximately 13-miles of Regional Transmission Mains (RTM) throughout the City. All of these major water system improvements will begin construction in 2016 with planned completion in 2017 and 2018, which will help to alleviate groundwater demand.

The City currently has approximately 260 active wells, which pump an average of 146 mgd. Groundwater pumping data provided by the City indicates that approximately 83,360 af was pumped in 2015. Based on the data presented in Table 6-4 of the UWMP, between 2011 and 2015, the City pumped an average of approximately 111,522 afy. This average groundwater pumping has exceeded the current estimated groundwater safe yield of approximately 72,500 afy, according to the 2015 UWMP. However, higher pumping volumes are permissible by accounting for intentional recharge volumes.

In the near future, groundwater will continue to be an important part of the City's supply but will not be relied upon as heavily as has historically been the case. The 2015 UWMP projects that the total estimated groundwater yield by the City will increase from approximately 125,600 afy in 2015 to approximately 148,900 afy in 2040.

Table 5.9-1: Summary of Groundwater Recharge

Groundwater Basin	Acre-feet per Year (afy)
Projected Natural Recharge in 2035	26,100
Basin Inflow	54,400
Average City Recharge	63,800
Source: City of Fresno 2015 Urban Water Management Plan, 2016.	

Surface Water Quality

San Joaquin River

The primary surface water feature in the vicinity of the Plan areas is the San Joaquin River, approximately 7 miles from the DNCP Plan area boundary. At 366 miles long, the San Joaquin River is the largest river in Central California, spanning from the Sierra Nevada Mountains to the San Francisco Bay via the San Joaquin Valley. Much of the water that flows through the San Joaquin River is used for irrigation purposes.

Other Surface Waters

In addition to these larger surface water features, a network of agricultural canals and flood control channels traverse the City of Fresno. Numerous agricultural ponds, recharge basins, and other similar features dot the City's landscape. There are no distinct or named water features in the DNCP or FCSP Plan areas.

The City began to use surface water as a source of potable water supply in 2004, when the Surface Water Treatment Facility (SWTF) became operational and began delivering approximately 20 mgd of potable water to residents of northeast Fresno. In 2015, the facility produced 25 percent of the City's potable water supply. Surface water starts as snow melt in the Sierra Nevada before traveling down the San Joaquin and Kings Rivers via Millerton Lake and Pine Flat Reservoir. These locations serve as temporary storage locations before the surface water is delivered via the Enterprise Canal to the SWTF, where the water is treated to drinking water standards.

The NESWTF is a 30-million-gallon-per-day (mgd) surface water treatment facility. As growth within the City increases demands, this facility will be expanded by another 30 mgd for a total capacity of 60 mgd. The timing for this expansion is anticipated to occur by approximately 2035; however, the City will monitor system demands and adjust the schedule for this project as is required to meet projected water system demands and maintain the sustainable use of available water resources. To improve delivery reliability and to protect the source water from deleterious impacts from environmental and other malicious acts, the City has just awarded a contract to complete the 5.6-mile-long raw water pipeline that will permit the delivery of United States Bureau of Reclamation water from the Friant-Kern Canal directly to the NESWTF. Once the raw water pipeline is complete, the NESWTF will be capable of year-round operation. This water source is of excellent quality and will be protected as such with completion of the new raw water pipeline.

Stormwater and Drainage

The Fresno Metropolitan Flood Control District (FMFCD) manages urban stormwater runoff in the Fresno metropolitan area. The FMFCD is authorized to control stormwaters within a combined urban and rural watershed of approximately 400 square miles. The watershed extends eastward into the Sierra Nevada foothills to an elevation of approximately 4,500 feet above sea level, covering an area collectively referred to as the Fresno County Stream Group (FCSP 2016).

The FMFCD's local stormwater drainage system provides control and disposal of stormwater runoff generated by local land uses. Stormwater collection in the Plan areas begins in the street gutters that convey runoff to existing storm drain inlets. The gutters, as well as all public streets and sidewalks, are maintained by the City of Fresno Street Maintenance Division. The runoff is then collected in drop inlets and conveyed to the District's pipe networks, pump stations, and infiltration basins that recharge stormwater to the groundwater aquifer (FMFCD 2015b). Typically, all of the runoff from the Plan areas is recharged to the groundwater table. However, when storms generate larger volumes of runoff than these basins can handle, it overflows into a network of relief channels that discharge to the San Joaquin River, its tributary streams, or local agricultural canals (FCSP 2016).

Within the City of Fresno, FMFCD's Storm Drain Master Plan divides the FMFCD into local drainage areas of one to two square miles. All inlets, pipes and pumping stations within each drainage area are maintained by the FMFCD, except for those located within the former Fulton Mall, which are currently maintained for the FMFCD by the City under a system of work authorizations. It is expected that this maintenance arrangement with the City will remain in place for the near future (FCSP 2016).

Many areas throughout the City currently lack complete or adequate storm drain systems. This makes them prone to frequent localized flooding that damages properties and inconveniences residents, resulting in lower property values and higher insurance costs for both homeowners and businesses. Many of these areas have not historically generated sufficient tax revenue to fund the construction of modern drainage facilities, so a number of storm drain improvements are now being constructed with funding provided by the American Recovery and Reinvestment Act (ARRA). One of these projects is located on Divisadero Street, adjacent to an approximately twelve block area with no storm drain facilities that extends south from Divisadero into the Specific Plan area. These improvements will provide little direct relief for this neighborhood, but they will make it feasible to relieve existing flooding conditions by extending this system in the future.

Approximately 50 acres in the southern corner of the FCSP area also lack an existing storm drain network. No facilities are currently planned for this portion of the FCSP, but it is assumed that storm drains will eventually be needed to accommodate redevelopment, and these new facilities would be connected to the major storm drain lines that now serve the central portion of the Specific Plan area or to the lines that serve the neighborhood located immediately north of Divisadero Street. Although there are no indications of significant drainage problems within the areas now served by these facilities, shallow, nuisance flooding has been reported after heavy rains. It is expected the addition of runoff from any newly served areas would exacerbate these problems, potentially limiting the Specific Plan area's development potential. As a result, any increase in runoff resulting

from storm drain extensions may also trigger the need for capacity upgrades on the FMFCD's collection facilities (FCSP 2016).

Flood Zones and Flood Control

Flood Zones

The City of Fresno has participated in the Federal Emergency Management Agency (FEMA) Flood Insurance Program (FIP) since its inception in the early 1970s. Participation on the FIP requires that the community adopt the Flood Insurance Rate Maps (FIRMs), appoint a trained Floodplain Administrator, adopt a floodplain ordinance modeled after the FIP model ordinance, and enforce the ordinance and the requirements of Tile 40 of the Code of Federal Regulations, Part 60. The 40CFR60 regulations and the floodplain ordinance of the City of Fresno require that all new construction and substantial reconstruction of buildings located within an adopted floodplain be flood proofed and that the Community Floodplain Administrator review for conformance with the floodplain ordinance and 40CFR60 and approve the flood proofing. The City of Fresno has a Community Floodplain Administrator and has adopted a floodplain ordinance that complies with the model ordinance promulgated by FEMA.

FEMA has prepared and the City of Fresno has adopted the Flood Insurance Rate Maps (FIRMs). The effective FIRM maps were last revised February 18, 2009. Numerous Letters of Map Revision (LOMRs) have been issued since that revision date. Flood hazard areas identified on the FIRMS are identified as Special Flood Hazard Area (SFHA). SFHA are defined as the area that will be inundated by the flood event having a 1-percent chance of being equaled or exceeded in any given year. The 1-percent annual chance of flood is also referred to as the based flood or the 100-year flood. The FIRMS show portions of the downtown neighborhoods that are within SFHA Zone A (Exhibit 5.9-1). These areas include an approximately 100-acre area located at the southern end of the Downtown Neighborhoods along State Route 99; a smaller area to the northeast of the Union Pacific and San Joaquin Valley rail lines and south of California Avenue; an area along the southwestern edge of the Fulton Corridor Specific Plan boundary. These areas within the Plan areas are defined as SFHA Zone A, as follows, and are identified in Exhibit 5.9-1:

- SPHA Zone A—Areas subject to inundation by the 1-percent-annual-chance flood event determined by detailed methods. Base Flood Elevations (BFEs) not determined
- SPHA Zone AE—Areas subject to inundation by the 1-percent-annual-chance flood event determined by detailed methods. Base Flood Elevations (BFEs) determined
- SPHA Zone AH—Areas subject to inundation by 1-percent-annual-chance shallow flooding (usually areas of ponding) where average depths are between one and three feet

The following Federal Emergency Management Agency's (FEMA) flood zones are within the boundaries of the DNCP and FCSP. Below are the Flood Map ID numbers for the DNCP and FCSP (FEMA 2015):

- DNCP boundaries: FEMA Flood Map: 06019C2110H

- FCSP boundaries FEMA Flood Map Numbers: 06019C2110H, 06019C2105H, 06019C1565H, 06019C2110H, 06019C1570H, 06019C1590H, and 06019C2130H.

Flood Control

Portions of the Plan areas have experienced localized flooding. To mitigate these flood hazards, storm drain improvements (such as replacing or supplementing existing pipes, adding inlets, or updating pump stations) are needed. Neighborhoods with deficient storm drain systems are subject to increased local flooding, lower property values, and higher insurance costs for homeowners and businesses. These areas have not historically generated sufficient tax revenue to fund the construction of modern drainage facilities (DNCP 2016).

The FMFCD's flood control program consists of eight major flood control facilities and related streams and channel features that control the flows from several low-elevation streams (which are collectively referred to as the Fresno County Stream Group)(FMFCD 2015a).

Dam Inundation

Of the 33 dams in Fresno County, the following four dams would present a safety risk from flooding to portions of the City of Fresno should any of these dams fail:

- **Friant Dam—**The Friant Dam is located approximately 18 miles north from the project site.
- **Big Dry Creek Dam—**The Big Dry Creek Dam is located approximately 12 miles northeast from the project site.
- **Pine Flat Dam—**The Pine Flat Dam is located approximately 27 miles northeast from the project site.
- **Redbank-Fancher Creek Projects (Redbank Dam)—**The Redbank-Fancher Creek Projects (Redbank Dam) located approximately 13 miles northeast from the project site.

The sources of flooding in the City of Fresno include the San Joaquin River and a number of foothill creeks. These include Big Dry Creek and its associated Dry Creek Canal, Redbank Creek, and Fancher Creek. Pup Creek, Alluvial Drain, and Dog Creek are tributaries of these three main creeks. Big Dry Creek is regulated by the Big Dry Creek Dam and Reservoir. Fancher Creek is regulated by Fancher Creek Dam and Fancher Creek Detention Basin. Redbank Creek is regulated by Redbank Dam and Redbank Creek Detention Basin.

The San Joaquin River is regulated by Friant Dam, which creates Millerton Lake reservoir. The dam was constructed in 1942 to provide flood control to the San Joaquin River and to harvest runoff from the San Joaquin River for irrigation purposes. The dam is administered by the US Bureau of Reclamation.

Big Dry Creek Dam, located north of Shepherd Avenue on the DeWolf Avenue alignment was originally constructed in 1948 by the U.S. Army Corps of Engineers to protect the cities of Clovis and Fresno from this significant source of flooding. The dam was enlarged in 1993 by the U.S. Army Corps of Engineers as part of the Redbank and Fancher Creek Flood Control Project to provide

protection to the communities from the probable maximum flood event from Big Dry Creek. The dam is administered by the Fresno Metropolitan Flood Control District.

The Redbank Creek Dam, located on the north side of East Shaw Avenue on the North Indianola Avenue alignment, was constructed in 1961 by the Fresno Metropolitan Flood Control District to reduce flood damage to the City of Fresno resulting from Redbank Creek. The dam and reservoir provide a 0.5 percent exceedance probability, also known as the 200-year recurrence interval, level of protection for the community. However, the dam does not control significant inflow to Redbank Creek below the dam. Therefore, the U.S. Army Corps of Engineers constructed the Redbank Creek Detention Basin in 1990, which is located north of East McKinley Avenue and on the west side of North DeWolf Avenue. The Redbank Detention Basin provides the community with a 0.5 percent exceedance probability, also known as the 200-year recurrence interval, level of protection. Fancher Creek Dam located at the intersection of East Bullard Avenue alignment and North Newmark Avenue alignment, and along the east side of the Friant Kern Canal, was constructed by the U.S. Army Corps of Engineers in 1991. It provides protection to the community for the 0.5 percent exceedance probability, also known as the 200-year recurrence interval, level of protection on Fancher Creek upstream of the Friant Kern Canal. Significant watershed exists on Fancher Creek below the dam, which could still produce significant flood flows in Fancher Creek. Therefore, the Fresno Metropolitan Flood Control District constructed the Fancher Creek Detention Basin in 2002. The detention basin provides the community with a 0.5 percent exceedance probability, also known as the 200-year recurrence interval, level of protection.

Annual inspections of the dams and detention basins are conducted by FMFCD personnel and by DSOD personnel of each jurisdictional dam and detention facility. Annual inspection by the U.S. Army Corps of Engineers and FMFCD are conducted of each facility constructed by the U.S. Army Corps of Engineers as part of the Redbank and Fancher Creeks Flood Control Project. Reports prepared for each inspection note deficiencies that are to be rectified. FMFCD personnel or contractors hired by FMFCD make the repairs noted in the inspection reports each year. In addition, annual maintenance operations include mowing of the dams and detention basins to aid in the visual inspection of the facilities, rodent abatement, and repair of eroded areas (FMFCD 2013).

Development within dam inundation areas would be required to be flood proof in accordance with the City of Fresno floodplain ordinance and 40CFR60. Existing structures within these areas would be required to be flood proofed at such time as significant reconstruction of the structures occur. Significant reconstruction is defined as improving the structure to a value that meets or exceeds 50 percent of its assessed value.

5.9.3 - Regulatory Setting

The federal, State, and local (i.e. City of Fresno) regulatory settings are described below. Three agencies regulate activities within inland streams, wetlands, and riparian areas in California: the U.S. Army Corps of Engineers (USACE), the California Department of Fish and Game (CDFG), and the Regional Water Quality Control Board (RWQCB). Any proposal that involves impacts to drainage courses or streams on a project site through filling, stockpiling, conversion to a storm drain,

channelization, bank stabilization, road, or utility crossing, or any other modifications, may require permits from the USACE, CDFG, and/or the RWQCB.

Federal

The water quality standards for all waters in the State are established under the applicable provisions of Section 303 of the Federal Clean Water Act (CWA) and the State Porter-Cologne Water Quality Control Act. The State Water Resources Control Board (SWRCB) and the RWQCB are responsible for assuring implementation of, and compliance with, the provisions of the CWA and the Porter-Cologne Act.

Federal Clean Water Act

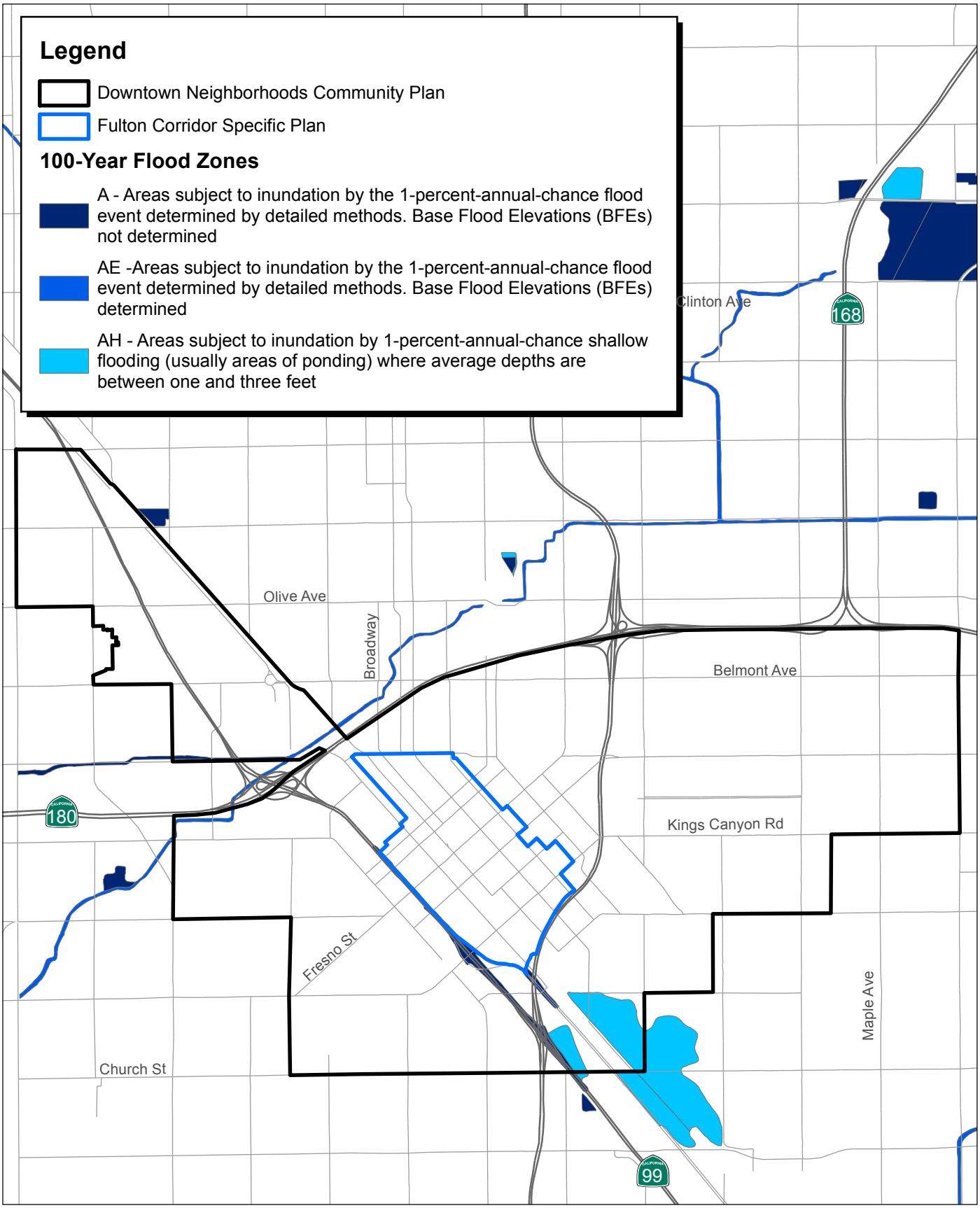
Section 303 of the CWA requires that states adopt water quality standards for all surface waters of the United States. Section 304(a) of the CWA requires that the U.S. Environmental Protection Agency (EPA) publish water quality criteria that accurately reflect the most current scientific knowledge regarding the effects on health and welfare from the presence of pollutants in the surface water. Where multiple uses occur, water quality standards must protect the most sensitive land use. Typically, water quality standards are numeric, although narrative criteria may be used where numerical standards cannot be established or where they are needed to supplement numerical standards. States are required to adopt numerical water quality standards for toxic pollutants for which the EPA has published water quality criteria and which could be expected to interfere with designated uses in a water body.

National Pollutant Discharge Elimination System Permits

The National Pollutant Discharge Elimination System (NPDES) permit system was established in the CWA to regulate municipal and industrial discharges to surface Waters of the United States. Each NPDES permit sets limits on the concentrations and mass emissions of pollutants in discharge. Section 402 of the CWA contains general requirements regarding NPDES permits. Section 307 of the CWA describes the factors the EPA must consider in setting effluent limits for priority pollutants.

The CWA prohibits the discharge of pollutants to navigable waters from a point source (discharge from a single conveyance such as a pipe) unless the discharge is authorized by an NPDES permit. In 1987, in recognition that diffuse or non-point sources were significantly impairing surface water quality, Congress amended the CWA to address non-point source stormwater runoff pollution in a phased program requiring NPDES permits for operators of municipal separate storm sewer systems (MS4s), construction projects, and industrial facilities. Phase I, approved in 1990, required municipal permits for MS4s generally serving populations over 100,000, construction permits for projects five acres or greater and industrial permits determined by certain Standard Industrial Classification Code.

In December 1999, the EPA finalized Phase II of the NPDES program, which requires that operators of MS4s located in urban areas implement programs and policies to control polluted stormwater runoff using NPDES permits. In addition, Phase II includes small construction activities that result in land disturbances of equal to or greater than one acre and less than five acres within the NPDES program.



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Exhibit 5.9-1
100-Year Flood Zones

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The purpose of the NPDES program is to establish a comprehensive water quality program to manage stormwater in order to minimize pollution of the environment to the maximum extent practicable. The NPDES program consists of characterization of the receiving water quality; identification of harmful constituents; identification of potential sources of pollutants; and, implementation of a Comprehensive Stormwater Management Program. One of the primary objectives of water quality regulations, including the NPDES program, is the reduction of pollutants and sediments in stormwater runoff to the maximum extent possible using Best Management Practices (BMPs). Structural BMPs involve the specific construction, modification, operation, maintenance, or monitoring of facilities to minimize the introduction of pollutants from the drainage system. Non-structural BMPs are activities, programs, and other non-physical measures that would contribute to the reduction of pollutants from non-point source pollutants to the drainage system.

In compliance with the CWA and stormwater permit regulations, the FMFCD, the County of Fresno, the City of Fresno, the City of Clovis, and California State University-Fresno developed a stormwater quality management program to be implemented in the Fresno-Clovis metropolitan area as a part of the NPDES municipal stormwater permit process (FMFCD 2015b). The current NPDES permit, which would apply to projects within the DNCP and FCSP areas, was renewed in 2008 (DNCP 2016).

Safe Drinking Water Act (Federal)

The Safe Drinking Water Act (SDWA) was established to protect the quality of drinking water in the United States. This SDWA focuses on all waters either designed or potentially designed for drinking water use, whether from surface water or groundwater sources. The SDWA and subsequent amendments authorized the EPA to establish health-based standards, or maximum contaminant levels (MCLs), for drinking water to protect public health against both natural and anthropogenic contaminants. All owners or operators of public water systems are required to comply with these primary (health-related) standards. State governments, which can be approved to implement these primary standards for the EPA, also encourage attainment of secondary (nuisance-related) standards. At the federal level, the EPA administers the SDWA and establishes MCLs for bacteriological, organic, inorganic, and radiological constituents (United States Code Title 42, and Code of Federal Regulations Title 40). At the state level, California has adopted its own SDWA, which incorporates the federal SDWA standards with some other requirements specific only to California (California Health and Safety Code, Section 116350, et seq.).

The 1996 SDWA amendments established source water assessment programs pertaining to untreated water from rivers, lakes, streams, and groundwater aquifers used for drinking water supply. According to these amendments, the EPA must consider a detailed risk and cost assessment, as well as best available peer-reviewed science, when developing standards for drinking water. These programs are the foundation of protecting drinking water resources from contamination and avoiding costly treatment to remove pollutants. In California, the Drinking Water Source Assessment and Protection (DWSAP) program fulfills these federal mandates. The California Department of Public Health is the primary agency for developing and implementing the DWSAP program, and is responsible for performing the assessments of existing groundwater sources.

National Flood Insurance Act of 1968 (P.L. 90-448) National Flood Insurance Program (FIP)

The National Flood Insurance Program (FIP) is a program created by the Congress of the United States in 1968 through the National Flood Insurance Act of 1968 (P.L. 90-448). The program enables property owners in participating communities to purchase insurance protection from the government against losses from flooding. This insurance is designed to provide an insurance alternative to disaster assistance to meet the escalating costs of repairing damage to buildings and their contents caused by floods. Participation in the FIP is based on an agreement between local communities and the federal government that states that if a community will adopt and enforce a floodplain management ordinance to reduce future flood risks to new construction in SFHAs, the federal government will make flood insurance available within the community as a financial protection against flood losses. The SFHAs and other risk premium zones applicable to each participating community are depicted on Flood Insurance Rate Maps (FIRMs).
The Mitigation Division within the Federal Emergency Management Agency manages the FIP and oversees the floodplain management and mapping components of the Program.

State

In California, the SWRCB and nine California RWCQBs carry out the regulation, protection, and administration of water quality. The State is divided into nine regions due to regional issues related to water quality and quantity. In compliance with Section 303 of the CWA and the Porter-Cologne Water Quality Control Act, each RWQCB is required to adopt a Water Quality Control Plan or Basin Plan which recognizes and reflects regional differences in existing water quality, the beneficial uses of the region's ground and surface water, local water quality conditions and problems, and Total Maximum Daily Loads (TMDL). The DNCP and FSCP areas are located within the boundaries of the Central Valley RWQCB.

States are required to develop a TMDL to address each pollutant causing impairment. A TMDL defines how much of a pollutant a water body can tolerate and still meet water quality standards. Each TMDL must account for all sources of the pollutant, including discharges from wastewater treatment facilities; runoff from homes, forested lands, agriculture, and streets or highways; contaminated soils/sediments, legacy contaminants such as dichlorodiphenyltrichloroethane, or DDT (an insecticide), and polychlorinated biphenyl, or PCBs (coolant fluids), on-site disposal systems (septic systems) and deposits from the air. Federal regulations require that the TMDL, at a minimum, account for contributions from point sources (permitted discharges) and contributions from non-point sources, including natural background. In addition to accounting for past and current activities, TMDLs may consider projected growth that could increase pollutant levels. TMDLs allocate allowable pollutant loads for each source, and identify management measures that, when implemented, will assure that water quality standards are attained.

In 1992, the State adopted a related NPDES General Permit for Storm Water Discharges Associated with Construction Activities (Construction Activities General Permit) for projects greater than 5 acres. The permit required applicable projects to have a Stormwater Pollution Prevention Plan (SWPPP). The SWPPP specifies BMPs that would prevent construction pollutants from contacting stormwater with the intent of keeping all products of erosion from moving off-site into receiving

waters; eliminates or reduces non-stormwater discharges to storm sewer systems and waters of the State; and provides a monitoring program for the routine inspection of all BMPs.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act of 1969, which became Division 7 of the California Water Code, authorized the SWRCB to provide comprehensive protection for California's waters through water allocation and water quality protection. The SWRCB implements the requirement of the CWA Section 303, which states that water quality standards must be established for certain waters through the adoption of water quality control plans under the Porter-Cologne Act. The Porter-Cologne Act established the responsibilities and authorities of the nine RWQCBs, which include preparing water quality plans within the regions, identifying water quality objectives, and instituting waste discharge requirements. Water quality objectives are defined as limits or levels of water quality constituents and characteristics established for reasonable protection of beneficial uses or prevention of nuisance. Beneficial uses consist of all the various ways that water can be used for the benefit of people and wildlife. The Porter-Cologne Act was later amended to provide the authority delegated from the EPA to issue NPDES permits regulating discharges to waters of the United States.

City of Fresno

City of Fresno General Plan Update

The City's current General Plan contains goals, objectives, and policies related to hydrology and water quality. For example, the Safety Element and Resource Conservation Element of the General Plan has objectives related to flood safety and the protection of the hydrology of the San Joaquin River, management provisions for all sources of water available to the City, and policies to protect lives and property and to ensure the protection of the water supply with these objectives in place. The Public Facilities Element has objectives to ensure and manage a safe, reliable supply of water and to implement sustainable infrastructure programs.

City of Fresno Municipal Code

Chapter 6, Municipal Services and Utilities, Article 7, Urban Storm Water Quality Management and Discharge Control, of the Fresno Municipal Code (FMC) establishes provisions regarding stormwater discharges. The purpose of the City's Urban Storm Water Quality Management and Discharge Control Ordinance is to ensure the health, safety, and general welfare of citizens and protect the water quality of watercourses and water bodies in a manner pursuant to and consistent with the CWA (33 U.S.C. §§ 1251, et seq.) by reducing pollutants in urban stormwater discharges to the maximum extent practicable and by effectively prohibiting non-stormwater discharges to the storm drain system.

5.9.4 - Thresholds of Significance

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in significant adverse impacts on the environment. The criteria used to determine the significance of an impact to hydrology and water quality are based on the Environmental Checklist in Appendix G of

the CEQA Guidelines, as identified below. Accordingly, hydrology and water quality impacts resulting from the proposed project are considered significant if the project would:

a) Violate any water quality standards or waste discharge requirements.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted.

c) Substantially alter the existing drainage pattern of the area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.

d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.

f) Otherwise substantially degrade water quality.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.

j) Expose people or structures to inundation by seiche, tsunami, or mudflow.

5.9.5 - Impact Analysis, Mitigation Measures, and Level of Significance After Mitigation

This section discusses potential impacts associated with project implementation and provides mitigation measures to avoid, minimize, or reduce those impacts where appropriate.

Water Quality Standards and Requirements

Impact HYD-1:	**The project would not violate any water quality standards or waste discharge requirements.**

Project-specific Impact Analysis

Short-term Construction Impacts

Less than significant impact. Construction activities associated with buildout of the Plan areas would result in ground-disturbing activities such as grading, excavation, placing fill, trenching, spoil

pile storage, and backfilling of trenches. Such earthmoving activities would increase the potential for erosion and sedimentation, particularly during storm events. Additionally, construction equipment and vehicles could deposit constituents such as diesel fuel, hydraulic fluid, oil, and exhaust into the environment that could be conveyed within stormwater runoff to surface waters (e.g., the San Joaquin River, local creeks, irrigation canals) or groundwater. Construction activities use concrete, solvents, glues, oils, and paints and generate trash, all of which can pollute stormwater if they come into contact with rainfall or stormwater runoff. While temporary in nature, all of these construction activities and associated products, including ground-disturbing construction activities, could contribute to the pollution of stormwater runoff and contribute to the degradation of downstream surface waters or groundwater.

Compliance with existing regulatory mechanisms, including the NPDES Construction General Permit, would reduce the effects of construction activities on water quality. Development within the Plan areas would be required to comply with the requirements of the NPDES Construction General Permit. The NPDES Permit Program, which is administered in the plan area by the Central Valley RWQCB, helps control pollution in stormwater by regulating sources of pollution at construction sites that would result in the discharge of pollutants into the stormwater and subsequent receiving waters during both construction and operation activities.

Any development project disturbing 5 or more acres of soil must obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ). Construction activities subject to the Construction General Permit include clearing, grading, and other ground-disturbing activities such as stockpiling or excavation. The Construction General Permit requires development and implementation of a SWPPP. Among other mandated items that are included in a SWPPP are BMPs designed to eliminate contact of rainfall and stormwater runoff with sources of pollution that occur on construction sites, of which a primary source is soil erosion as a result of unstabilized soils coming in contact with water and wind. Common BMPs to limit pollution in stormwater runoff from construction sites include maintaining or creating drainages to convey and direct surface runoff away from bare areas and installing physical barriers such as berms, silt fencing, waddles, straw bales, and gabions.

Compliance with the Construction General Permit and implementation of the required SWPPP and BMPs would reduce project construction impacts on water quality to less than significant levels. Therefore, short-term construction impacts associated with water quality standards and waste discharge requirements would be less than significant.

Long-term Operational Impacts

Less than significant impact. Development under the DNCP and FCSP would result in new industrial, commercial, residential, and mixed-use land uses as urban infill that would increase the amount of paved impervious surfaces within the Plan areas. This increase in impervious surfaces would ultimately increase stormwater runoff rates and volumes within the Plan areas. The FMFCD is responsible for developing and implementing the Storm Drainage Master Plan for the City of Fresno. As land is developed, the FMFCD works with developers and the City to implement the storm drainage systems that collect and dispose of the increased runoff rates and volumes and prevent them from entering local surface waters. The storm drainage systems that would be implemented

for the Plan areas consist of streets, curbs and gutters that direct runoff to storm drain inlets, which direct runoff to underground pipelines. The underground pipelines convey stormwater to retention and urban detention (water quality) basins located at strategic locations within the Plan areas. The stormwater retention basins dispose of runoff through percolation into the groundwater and, in emergencies, through pumping to designated irrigation canals. The urban detention (water quality) basins discharge to the San Joaquin River. Discharges from the retention basins and the urban detention (water quality) basins could affect water quality in the receiving waters by potentially increasing the concentration of sediment and pollution from stormwater.

Typically, stormwater runoff from urban development contains an array of constituents, including automotive fluids (e.g., fuel, oils, and antifreeze); combustion and exhaust byproducts (e.g., lead, cadmium, and nickel); sediments, fertilizers, pesticides, herbicides, and nutrients; and bacteria pollutants from domestic and agricultural animal waste. These constituents are expelled into the environment throughout the year, where they settle onto the ground surface. During the wet season, stormwater runoff conveys these pollutants downstream, resulting in polluted stormwater runoff, especially during the first storm events of the season.

As previously described, the City of Fresno is a co-permittee with the FMFCD, the County of Fresno, the City of Clovis, and California State University-Fresno in the Phase 1 NPDES Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s). This Phase 1 MS4 Permit requires that the City and its co-permittees implement water quality and watershed protection measures for all development projects. The waste discharge requirements contained in the NPDES Permit have been designed to be consistent with the water quality standards and goals established in the Central Valley RWQCB's Basin Plan. The Phase 1 MS4 Permit prohibits discharges from violating applicable water quality standards or creating a nuisance or water quality impairment in receiving waters. Participation in the Phase 1 MS4 permit and implementation of the Storm Drainage Master Plan would reduce impacts to surface waters to acceptable levels and long-term project impacts to surface or groundwater quality would therefore not exceed acceptable levels.

Additionally, the DNCP, FCSP, and DDC include the following policies, standards, and requirements designed to reduce water quality impacts:

The DNCP includes the following goal and policies that relate to Low Impact Design (LID) as a measure to improve drainage patterns in a way that prevents on- or off-site flooding and reduces water quality impacts. The intent of these provisions in the DNCP is to enhance the existing infrastructure network of the FMFCD and to reduce localized flooding, improve water quality, provide community amenities and enhance aquifer recharge throughout the City.

- **Goal 5.3:** Implement Low Impact Development (LID) stormwater design guidelines that integrate into complete streets, open space, and high-density development.
- **Policy 5.3.2:** Encourage post-development runoff from a site to be less the pre-development runoff condition.
- **Policy 5.3.3:** Ensure the provision of adequate storm drainage facilities to protect residents and property within the Plan Area from flooding caused by storm water runoff.

According to the FCSP, the stormdrain system that serves the Specific Plan area lacks the capacity needed to accommodate peak runoff during major storm events. At present, improvements are needed to fully support the level of redevelopment now under consideration. The FCSP includes the following goal and policies related to water quality:

- **Goal 10-6:** Reduce hydrologic impacts by minimizing impervious surfaces and graded areas.
- **Policy 10-6-3:** Manage stormwater at the source and on the surface by providing increased opportunities for rainfall to soak into the ground within nearby landscaping.
- **Policy 10-6-7:** Require new developments to collect and reuse stormwater for landscape or agricultural purposes where feasible.

Although it is possible to address storm drain deficiencies through capacity improvements and a reduction in impervious surfaces, LID as means of treating rainwater as a resource, facilitating a return to sustainable, more natural conditions, even within an urban setting is an effective way to control stormwater runoff and to prevent flooding (as described above). The FCSP includes the following goal and policies related to the use of LID measures to ensure compliance with the County's NPDES permit and Stormwater Management Plan (FCSP 2016).

- **Goal 10-7:** Improve stormwater quality and minimize associated runoff.
- **Policy 10-7-1:** Promote the use of LID stormwater design guidelines to treat stormwater.
- **Policy 10-7-2:** Subject to the requirements of the Development Code, require infill development in revitalization areas to adhere to LID design guidelines.
- **Policy 10-7-3:** Align implementation of LID stormwater measures and retrofits with priority street improvements projected in the Plan Area.
- **Policy 10-7-4:** Apply LID strategies when right-of-way improvements are made.
- **Policy 10-7-5:** Promote the development and implementation of reproducible and low cost pilot projects.

Compliance with the Phase 1 NPDES Permit requirements and implementation of the aforementioned DNCP, FCSP, and DDC policies, standards, and requirements would reduce long-term project impacts associated with water quality standards and wastewater discharge requirements to a less than significant level.

Cumulative Impact Analysis

Short-term Construction Impacts

Less than significant impact. Buildout of the Plan areas, along with construction of related projects in the vicinity of the Plan areas, would result in activities that could pollute stormwater runoff, particularly ground-disturbing activities that would increase the potential for erosion and sedimentation. These activities, although temporary, could result in the pollution of runoff, including on- and off-site soil erosion, sedimentation, and siltation that could contribute to downstream surface waters or groundwater degradation, ultimately resulting in cumulative impacts.

Other projects developed within the City of Fresno would also be required to comply with the requirements of the NPDES Construction General Permit, including the implementation of a SWPPP

and BMPs. The NPDES Construction General Permit program helps control stormwater pollution by controlling the contact of sources of pollution on construction sites with rainfall and stormwater runoff. Stormwater that is discharged into local receiving waters could also result in the discharge of pollutants from the construction and operations activities into receiving waters. The Construction General Permit requires that any development project disturbing one or more acres of soil must obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ) that is issued by the State Water Resources Control Board. The Construction General Permit requires development and implementation of a SWPPP, which would include implementable features designed to protect rainfall and stormwater runoff from contact with sources of pollution on construction sites, including unstabilized soil that could be eroded by stormwater. The Construction General Permit also requires countermeasure BMPs to protect against wind erosion of unstabilized soils. Compliance with the NPDES Construction General Permit, including the implementation of a SWPPP and BMPs, would therefore reduce construction impacts on water quality, both individually and collectively, to acceptable levels. As a result, no cumulative short-term construction impacts associated with the violation of water quality standards or waste discharge requirements would occur, and implementation of the DNCP and FCSP would not be deemed cumulatively considerable. Cumulative short-term construction impacts are considered to be less than significant.

Long-term Project Impacts

Less than significant impact. Buildout of the Plan areas, along with construction of related projects in the vicinity of the Plan areas, would increase the amount of impervious surfaces within the City. This increase in impervious surfaces would increase stormwater runoff rates and volumes in these areas.

The FMFCD works with the developers of cumulative projects within their jurisdiction to implement storm drainage systems that collect and dispose of increased runoff and prevent it from entering local surface waters, including the San Joaquin River, local creeks, and numerous irrigation canals. Because the City of Fresno is a co-permittee with the FMFCD, the County of Fresno, the City of Clovis, and California State University Fresno in the Phase 1 NPDES Permit for Stormwater Discharges from MS4s, all are required to implement water quality and watershed protection measures for all development projects. The NPDES Permit prohibits discharges from violating applicable water quality during the first storm events of the season. Compliance with the MS4 Permit and the relevant Plan policies regarding water quality would result in less than significant cumulative long-term impacts on water quality standards and waste discharge requirements.

Since the implementation of the DNCP and FCSP would result in less than significant long-term impacts on water quality standards and waste discharge requirements, the contribution of the DNCP and FCSP to cumulative impacts would not be cumulatively considerable and cumulative long-term impacts are considered to be less than significant.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Groundwater Supplies and Recharge

Impact HYD-2:	**The project would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted).**

Project-specific Impact Analysis

Less than significant impact. The City of Fresno relied on groundwater for approximately 75 percent of its domestic water supply in 2015, which is approximately equal to 83,360 af. The groundwater was withdrawn from the Kings Groundwater Sub-basin of San Joaquin Basin Hydrologic Area. The City projects that groundwater withdrawal will be 135,100 afy by the year 2025 and to 148,900 afy by the year 2040 according to the 2015 UWMP. In 2015, natural groundwater recharge (25,400), subsurface inflow (47,100 af), and intentional recharge (19,800 af) occurred for a total groundwater recharge of 92,300 afy.

The City of Fresno is currently updating a key objective of balancing its groundwater operations by the Year 2025 (Provost & Pritchard Consulting Group 2016). According to the 2015 UWMP, achieving this objective includes implementing a host of strategies, which includes increasing the amount of intentional groundwater recharge from 19,800 af in 2015 to 58,500 afy by the Year 2025 and 66,500 afy by the Year 2040. In addition, expansion of tertiary recycled water treatment capacity is anticipated to be implemented from 2016 to 2021 and is expected to increase water supplies by 14,600 afy. The expansion of surface water treatment capacity is anticipated to be implemented from 2018 to 2035 and is expected to increase water supplies by 103,000 afy. Furthermore, the ongoing expansion of the groundwater recharge program allows the City to utilize the surface water supplies to make groundwater use sustainable. Based on the 2015 UWMP, projected water demand which includes development of the General Plan Update is based on a per capita target. For the years of 2020 and after, the per capita target is 247 gallons per day per capita (gpcd). The projected water demand for the City of Fresno in the year 2040, based on a population of 824,000 is 301,100 afy. To accommodate the 2040 water demand, 262,500 afy would need to be provided from potable and raw water, and 38,600 afy would be provided as recycled water. The projected water demand for the City at full buildout of the General Plan Update, based on a population of 824,000 and a per capita water demand of 247 gpcd from the 2015 UWMP, is 301,100 afy. Assuming treated water supplies, recycled water supplies, and pumped groundwater remain the same, the total supply of

water would be 366,200 afy. This water supply would be more than the buildout demand by approximately 65,100 afy. As discussed in Section 5.15, Utilities and Service Systems, groundwater pumping would remain at approximately 148,900 afy in 2040 and beyond.

To accommodate the buildout water demand, the treated surface water supply would need to be increased, the recycled water supply would need to be increased, or the amount of groundwater to be pumped would need to be increased. An increase in water conservation could also accommodate the buildout demand.

On a community-level, the DNCP includes policies to alleviate groundwater burden, including:

- **Policy 5.1.3:** Ensure the continued provision of an adequate supply of potable water to serve all urban development within the planned urban area.
- **Policy 5.1.4**: Implement water conservation programs that will result in decreased per capita water consumption.
- **Policy 5.2.3**: Where practical and cost-effective, require new residential, commercial, industrial, and institutional projects to connect to the City's recycled water distribution system for non-potable uses.

The DNCP also includes policies for water conservation, which, when implemented, would serve to alleviate groundwater burden:

- **Goal 5.1:** Work within the existing water resources portfolio.
- **Policy 5.1.1:** Work within the existing water resources portfolio and accommodate the water use demands for current and new development.
- **Policy 5.1.2:** Consistent with new state law requirements described in the Model Water Efficient Landscape Ordinance (MWELO), work with the community to reduce the use of potable water for outside irrigation through drought tolerant native planting and other landscape that requires less water, and convert as many non-potable water uses to recycled water.
- **Policy 5.1.3:** Ensure the continued provision of an adequate supply of potable water to serve all urban development within the planned urban area. (RCP 4-3)
- **Policy 5.1.4:** Implement water conservation programs that will result in decreased per capita water consumption. (RCP 4-3.6)
- **Goal 5.5:** Minimize natural resource consumption.
- **Policy 5.5.1:** Promote regionally appropriate green building within the Downtown Neighborhoods that implement the goals and strategies of Fresno Green.
- **Policy 5.5.2:** Require solid waste separation at the source for all land uses (compost, recycle, landfill) in order to reduce the volume and toxicity of solid wastes that must be sent to landfill facilities.
- **Policy 5.5.3:** Encourage high albedo materials for roofs and hardscape in order to reduce heat absorption and radiation.
- **Policy 5.5.4:** Develop utility design guidelines that cluster and locate penetration and layout to minimize impacts to lot frontages for stormwater management or other sustainable features.

- **Policy 5.5.5:** Provide green building design resources and material sourcing options to local builders.
- **Goal 5.6:** Ensure collaboration between City of Fresno and outside utility agencies such as P.G.&E. and the Fresno Metropolitan Flood Control District (FMFCD).
- **Policy 5.6.1:** Coordinate with utility providers for new development projects and infrastructure projects during the schematic design phase of each Capital Improvement Project.
- **Policy 5.6.2:** Organize regular meetings between capital improvement departments of FMFCD, the City of Fresno Public Works and Public Utilities Department.
- **Policy 5.6.3:** Appoint a liaison within the City to coordinate meetings between various agencies and utility providers.

In conjunction with the City's Recycled Water Master Plan, establishing a recycled water system within Downtown will allow the new development in the Specific Plan area to be more likely to decrease dependence on groundwater pumping and external water sources. The following goals and policies of the FCSP bolster the City's burgeoning recycled water program and supplement its alternative water resources (FCSP 2016):

- **Goal 10-3:** Develop a downtown recycled water plant adjacent to the water tower at Eaton Plaza and distribution network to offset potable water being used for non-potable purposes, to be integrated into the City's future Recycled Water Master Plan.
- **Policy 10-3-1:** As economically feasible, supply recycled water to street improvements and planting areas within the Plan Area.
- **Policy 10-3-2:** As economically feasible, supply recycled water to both public and private large irrigation users.
- **Policy 10-3-3:**To the greatest extent allowed by local, State and Federal Regulations, supply recycled water to commercial and industrial development projects for nonpotable uses such as boiler feed water, chiller makeup water, urinal and commode flishing (dual –plumbing), decorative fountains, and similar uses.

The FCSP also includes the following policy regarding groundwater, which is included in the Plan's approach to stormwater management:

- **Policy 10-6-4:** Promote infiltration after treatment whenever possible, without compromising groundwater quality, to help recharge the groundwater basin.

Additionally, the Implementation Framework for the FCSP includes projects and action programs to implement these policies, as follows:

- FCSP Implementation Projects
  - Proposed Recycled Water Facility: Design and construct a recycled water facility adjacent to the water tower at Eaton Plaza
  - Potential Recycled Water Improvements: Install recycled water main in coordination with streetscape improvements.

- FCSP Implementation Actions
  - Design a Downtown Recycled Water Distribution Network: Design a downtown recycled water distribution network to be aligned with and integrated into the City's planned recycled water Transmission Grid Main system and instituted with the priority street improvements and planting plan.
  - Align Installation of Downtown Recycled Water Distribution Network with other Projects.
  - Align installation and construction of the downtown recycled water distribution network with priority street improvements, large irrigation users, and planning areas projected in this Specific Plan.

The implementation of the proposed project could result in significant impacts to groundwater levels within the Kings Sub-basin if the increase in water demand is met through an increase of water supply from increased groundwater pumping. Although a reduction of impacts would occur through compliance with General Plan policies and implementation of DNCP and FCSP plans and programs designed to reduce groundwater impacts would serve to reduce impacts, this is considered a potentially significant impact.

Cumulative Impact Analysis

Less than significant impact. The Kings Sub-basin is a source of groundwater for the communities of Clovis, Fresno, Sanger, Del Rey, Orange Cove, East Orosi, Orosi, Cutler, Dinuba, Reedley, Parlier, London, Traver, Kingsburg, Selma, Fowler, Easton, Bowles, Laton, Caruthers, Raisin City, Biola, Kerman, Riverdale, Lanare, and San Joaquin. The aquifer also provides groundwater for agricultural irrigation water and numerous private domestic wells. The Kings Basin Integrated Regional Water Management Plan (IRWMP) was developed by the Kings Basin Water Authority to provide regional planning and management of water resources in the Kings Sub-basin to maintain a sustainable supply of the surface and groundwater resources for the water users within the basin (Kings Basin Water Authority 2012). The first regional goal (RG1) of the Kings Basin IRWMP is to reduce groundwater overdraft in the Kings Sub-basin (Kings Basin Water Authority 2012). To accomplish this goal, the Kings Basin Water Authority has developed Measurable Objective, Resource Strategies, and Project and Programs. The current planning horizon of the Kings Basin IRWMP is the year 2032.

The Kings Basin IRWMP has developed strategies to achieve the regional goal to reduce groundwater overdraft. These include (Kings Basin Water Authority 2012):

1. Increase conjunctive use of water and groundwater storage
2. Precipitation enhancement
3. Increase surface storage
4. Regional conveyance enhancement
5. Increase recycled water use for recharge
6. Remediation of contaminated groundwater and reinjection of the treated water
7. Encourage the use of stormwater runoff for recharge by agencies that collect and discharge stormwater
8. Increasing number and storage capacities of basins to store flood flows

9. Protect recharge areas from urban development

The Kings Basin Water Authority has developed a project review process to identify projects, rank their ability to achieve the goals of the Authority as articulated in the Kings Basin IRWMP. Participating agencies, including the City of Fresno, within the Kings Sub-basin vet projects with the Authority and funds are allocated to finance all or portions of projects that work to achieve the goals, including Goal RG1, reduce groundwater overdraft.

While not an instant solution for the cumulative groundwater overdraft in the Kings Sub-basin, the City has begun to reach its stated goal of reducing groundwater overdraft by providing funding for projects and education as a member agency of the Kings Water Authority. Implementation of the aforementioned actions will result in a no cumulative overdraft impact on the aquifer, and cumulative impacts of the DNCP, FCSP, and DDC are considered to be less than significant.

Mitigation Measures

The following mitigation measures were included in the MEIR and remain applicable to this project:

Project-specific

MM HYD-2a The City shall develop and implement water conservation measures to continue to reduce the per capita water use to 247 gallons per capita per day by General Plan Buildout.

MM HYD-2b The City shall continue to be an active participant in the Kings Water Authority and the implementation of the Kings Basin Integrated Regional Water Management Plan.

Cumulative

Implementation of Mitigation Measures HYD-1, and HYD-2 is required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Drainage Pattern: Erosion or Siltation

Impact HYD-3:	**The project would not substantially alter the existing drainage pattern of area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site.**

Project-specific Impact Analysis

Short-term Construction Impacts

Less than significant impact. The Plan areas are highly urbanized with a significant footprint of impervious surfaces (buildings, parking lots, and roadways). Because of the urban and built-up

nature of the DNCP and FCSP areas, development associated with the project will not alter the course of a stream or river.

The DNCP and FCSP identify vacant, underutilized parcels and target those for underutilized parcels for development and redevelopment. Implementation of the DNCP and FCSP would result in new industrial, commercial, residential, and mixed-use land uses that would increase the amount of paved impervious surfaces within the Plan areas. This increase in impervious surfaces would increase stormwater runoff rates and volumes in the Plan areas. The primary difference in land use between the existing FMC and the proposed DNCP, FCSP and DDC is a shift in residential density from the corridors into the surrounding neighborhoods. Whereas the existing FMC included a higher density of residential uses along the corridors, the proposed DNCP maintains the corridors as primarily commercial centers. Based on a comparison of required setbacks under the current FMC and as set forth for each zoning district under the proposed DNCP and DDC, it was determined that setbacks would decrease primarily along the corridors. Although a decrease in setback would indicate a potential for an overall increase in impervious area of these zones, examination of current conditions within the DNCP through aerial photographs shows that a large percentage of the existing setbacks within the proposed residential zones is currently covered by impervious surfaces. Consequently, little increase in the amount of impervious cover is anticipated in these zones. In addition, since there would be fewer multi-story residential buildings, there would be less need for large new areas of surface parking along the major street corridors under the DNCP. Within the DNCP's remaining zones, setbacks would either increase slightly or remain largely consistent with the existing FMC and existing patterns of development (Sherwood Design Engineers 2011).

In addition to setback conditions, it is noted that the DNCP projects there would be almost 600 fewer housing units at build-out than under the current FMC (3,697 units versus 4,283 units, respectively). This reduction in density would mainly occur by shifting development away from the major street corridors and into multi-family units within the surrounding neighborhoods. As described above, this would lessen the need for new surface parking, because a surplus of on-street parking spaces already exists on neighborhood streets. As a result, it is assumed that while there would be an increase in impervious surfaces in the Plan areas overall, there would be little difference in overall impervious area, and thus total runoff, under the DNCP, FCSP, and DDC (Sherwood Design Engineers 2011).

Although drainage patterns are unlikely to change in the DNCP and FSCP areas, erosion and sedimentation could occur if a storm event were to occur during construction activity. As discussed above, under Impact HYD-1, construction activities associated with buildout of the DNCP and FCSP would result in ground-disturbing activities such as grading, excavation, placing fill, trenching, spoil pile storage, and backfilling of trenches. In these instances, stormwater would continue to be directed towards the City's networks of storm drains. These activities could result in silt laden stormwater that could contribute to downstream surface waters or groundwater degradation.

There are regulatory mechanisms in place that would reduce the effects of construction activities on drainage patterns and erosion caused by stormwater, including:

- The City of Fresno grading plan check process (City of Fresno 2013)
- The Fresno Metropolitan Flood Control District Storm Drainage Master Plan

- The National Pollutant Discharge Elimination System (NPDES) Construction General Permit (State Water Resources Control Board 2013)

Development within the Plan areas would be required to obtain a permit to grade land and comply with the City of Fresno grading plan check process. The grading plan check process is a review process that requires anyone who develops property to:

1. Properly grade their property in accordance with the California Building Code (CBC)
2. Submit a grading plan showing the proposed grading of the development
3. Obtain approval of the Fresno Metropolitan Flood Control District indicating conformance of the grading plan with the Storm Drainage Master Plan
4. Obtain coverage under the NPDES Construction General Permit and comply with the requirements of the permit, including developing an erosion control site plan.

The Storm Drainage Master Plan contains proposed elevations for tops of curbs in undeveloped area, delineation of storm drain inlet watershed areas, collection system pipeline alignments and sizes, and retention basin or urban detention (water quality) basin locations and geometry. The development of land in conformance with the Storm Drainage Master Plan ensures that development within the plan area is graded to drain to storm drainage facilities that are designed to collect and dispose of stormwater from the planned development. Stormwater retention and urban detention (water quality) basins intercept and remove silt from stormwater before it can be discharged to surface water features.

Before any grading activity occurs, the City will require reviews, permits, and agreements be obtained. Such reviews could include the USACE, the US Fish and Wildlife Service, the California Department of Fish and Game, the Central Valley Flood Protection Agency, the SWRCB, The Central Valley RWQCB, the FMFCD, and the Fresno Irrigation District. The list of possible permits and agreements includes the Clean Water 401 and 404 permits, Endangered Species or Habitat Plan, Section 1603 Streambed Alternation Agreement, and Irrigation Canal Encroachment Permit.

The NPDES Construction General Permit program, which is administered in the region by the Central Valley RWQCB, helps control siltation in stormwater by regulating sources of erosion at construction sites that would result in the discharge of silt laden stormwater from the site and into subsequent receiving waters during both construction and operations activities (RWQCB, 2009).

The negligible amount of new impervious surface in the Plan areas together with the requirement to obtain a grading permit and follow the grading plan check process as well as comply with NPDES Construction General Permit requirements and relevant General Plan policies would reduce project impacts on grading patterns and erosion to less than significant levels. Therefore, short-term construction impacts associated with grading land, altering streams, or inducing sedimentation and erosion are considered less than significant.

Long-term Project Impacts

Development allowed under the DNCP and FCSP would result in new industrial, commercial, residential, and mixed-use land uses as urban infill that would regrade undeveloped land to new grading patterns. This increase in impervious surfaces within the Plan areas would ultimately increase stormwater runoff rates. Higher rates of stormwater runoff would increase the potential for erosion of soils. FMFCD works with the developers and the City to implement the storm drainage system to collect and prevent silt laden stormwater from entering local surface waters, including the San Joaquin River, local creeks, and numerous irrigation canals that cross through the Plan areas. The above ground storm drainage infrastructure directs runoff to underground pipelines. The underground pipelines convey stormwater to retention and urban detention (water quality) basins within the Plan areas. Discharges of stormwater from the retention basins and the urban detention (water quality) basins could increase the concentration of sediment in the receiving waters.

Development under the DNCP or FCSP will be required to obtain a grading permit from the City of Fresno and follow the grading plan check process as described above. As a co-permittee in the Phase I NPDES Permit, development associated with the DNCP or FCSP would be reviewed to ensure coverage under the Construction General Permit. Long-term impacts caused by erosion and siltation due to altered drainage pathways are considered to be less than significant.

Cumulative Impact Analysis

Short-term Construction Impacts

Cumulative impacts from erosion and sedimentation due to alteration of existing grading patterns could result from construction activities that occur both within and outside of the DNCP and FCSP areas. Buildout of the FCSP and DNCP areas, along with construction of related projects in the vicinity of the Plan areas, would result in activities that could pollute stormwater runoff, particularly ground-disturbing activities that would increase the potential for erosion and sedimentation and alter existing drainage patterns. Increased erosion and sedimentation would be temporary, but construction activities could still result in on- and off-site soil erosion, sedimentation, and siltation that could contribute to downstream surface waters degradation, ultimately resulting in cumulative impacts.

Construction of projects in or near the Plan areas would comply with the requirements of the City's grading plan check process, which includes preparation of grading plans, review and approval of the grading plan for conformance with the Storm Drainage Master Plan, and conformance with the NPDES Construction General Permit. The NPDES Construction General Permit program helps control stormwater pollution by controlling erosion on construction sites due to rainfall and stormwater runoff. Stormwater that is discharged into local receiving waters would also result in the discharge of siltation from the construction and operations activities into receiving waters. The Construction General Permit requires that any development project disturbing one or more acres of soil must obtain coverage under the General Permit for Discharges of Storm Water Associated with Construction Activity (Construction General Permit Order 2009-0009-DWQ) that is issued by the SWRCB. The Construction General Permit requires development and implementation of a SWPPP, which would include implementable features designed to protect rainfall and stormwater runoff from contact with unstabilized soil that would be eroded by the stormwater. The Construction

General Permit also requires BMPs to protect against wind erosion of unstabilized soils. Compliance with the Construction General Permit, including implementation of the SWPPP and BMPs, would reduce cumulative construction impacts on water quality, both individually and collectively, to acceptable levels. As a result, no cumulative short-term construction impacts associated with silt and sediments in stormwater runoff would occur. Therefore, implementation of the DNCP, FCSP, and DDC is not deemed cumulatively considerable and short-term impacts are considered to be less than significant.

Long-term Impacts

The City of Fresno is a co-permittee with the FMFCD, the County of Fresno, the City of Clovis, and California State University-Fresno in the Phase 1 NPDES Permit for Stormwater Discharges from MS4s. As discussed previously, this Phase 1 MS4 Permit requires that the City and its co-permittees implement procedures that require construction projects obtain coverage under the NPDES Construction General Permit as well as adhere to conditions of the permit and post construction stormwater management practices.

As a result of the grading permit processes and the implementation of the Phase 1 MS4 NPDES Permit requirements, no cumulative long-term project impacts associated with erosion or sedimentation would occur in the Plan areas. Therefore, implementation of the project is not deemed cumulatively considerable and long term impacts are considered to be less than significant.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Drainage Pattern: Flooding

Impact HYD-4:	**The project would not substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site.**

Project-specific Impact Analysis

Less than significant impact. As discussed above under Impact HYD-3, implementation of the DNCP, FCSP, and DDC would not alter the course of a stream or river or substantially alter the existing drainage patterns within the Plan areas. However, due to the age and design of the existing

stormwater system, the Downtown Neighborhoods experiences localized flooding during periods of heavy rains. To mitigate these flood hazards, storm drain improvements (such as replacing or supplementing existing pipes, adding inlets, or updating pump stations) are needed to facilitate conveyance and detention of excess water in these areas (DNCP 2016).

Along with regulatory mechanisms described in Impact HYD-3, Low Impact Development (LID) in the public realm and at individual building sites can help to address issues related to flooding that include water quality issues, deteriorating community amenities, and receding aquifer levels (DNCP 2016). LID mimic the natural hydrologic process by allowing rainfall to slowly infiltrate into plants and soils near where it falls, rather than immediately routing it into storm drains. The use of LID does the following:

- Reduces the burden on storm drains and downstream discharge points (thereby addressing both existing and future capacity constraints);
- Improves the quality of runoff by filtering out many of the pollutants it picks up when flowing across paved surfaces, helping to reduce the concentration of pollutants within the District's infiltration basins, as well as improving the quality of water that is discharged to the San Joaquin River and its tributary streams; and
- Increases percolation into and recharge of the aquifer that underlies Fresno and serves as its principal water source. (FCSP 2016).

The DNCP includes the following goal and policies that relate to LID as a measure to improve drainage patterns in a way that prevents on- or off-site flooding. The intent of these provisions in the DNCP is to enhance the existing infrastructure network of the FMFCD and to reduce localized flooding, improve water quality, provide community amenities and enhance aquifer recharge throughout the City.

- **Goal 5.3:** Implement Low Impact Development (LID) stormwater design guidelines that integrate into complete streets, open space, and high-density development.
- **Policy 5.3.1:** Encourage post-development runoff from a site to be less the pre-development runoff condition.
- **Policy 5.3.3:** Ensure the provision of adequate storm drainage facilities to protect residents and property within the Plan Area from flooding caused by stormwater runoff.

According to the FCSP, the stormdrain system that serves the Specific Plan area lacks the capacity needed to accommodate peak runoff during major storm events. At present, improvements are needed to fully support the level of redevelopment now under consideration. The FCSP includes the following goal and policies related to flooding:

- **Goal 10-6:** Reduce hydrologic impacts by minimizing impervious surfaces and graded areas.
- **Policy 10-6-3:** Manage stormwater at the source and on the surface by providing increased opportunities for rainfall to soak into the ground within nearby landscaping.
- **Policy 10-6-7:** Require new developments to collect and reuse stormwater for landscape or agricultural purposes where feasible.

Although it is possible to address storm drain deficiencies through capacity improvements and a reduction in impervious surfaces, LID as means of treating rainwater as a resource, facilitating a return to sustainable, more natural conditions, even within an urban setting is an effective way to control stormwater runoff and to prevent flooding (as described above). The FCSP includes the following goal and policies related to the use of LID measures to ensure compliance with the County's NPDES permit and Stormwater Management Plan (FCSP 2016).

- **Goal 10-7:** Improve stormwater quality and minimize associated runoff.
- **Policy 10-7-1:** Promote the use of LID stormwater design guidelines to treat stormwater.
- **Policy 10-7-2:** In conformance with the Downtown Development Code, require infill development in revitalization areas to adhere to LID design guidelines.
- **Policy 10-7-3:** Align implementation of LID stormwater measures and retrofits with priority street improvements projected in the Plan Area.
- **Policy 10-7-4:** Apply LID strategies when right-of-way improvements are made.
- **Policy 10-7-5:** Promote the development and implementation of reproducible and low cost pilot projects.

Implementation of the goals and policies of the DNCP and FCSP and compliance with the existing regulatory measures governing stormwater and flooding in the Plan areas would ensure that potential flooding impacts from the alteration of drainage patterns in the Plan areas are less than significant.

Cumulative Impact Analysis

Short-term Construction Impacts

Cumulative impacts from on-site and off-site flooding due to alteration of existing drainage patterns could result from construction activities that occur both within and outside of the Plan areas. Buildout of the Plan areas, along with construction of related projects outside of the Plan areas, could result in activities that could result in on- and off site flooding, particularly ground-disturbing activities that would increase the compaction of the natural ground and alter existing grading patterns. Increased stormwater runoff due to construction activities would be temporary, but these activities could still result in on- and off-site flooding that could ultimately result in cumulative impacts. Alteration of grading patterns would be created by short-term construction projects, but would be long-term in effect.

Construction of projects in and near the Plan areas would be required to comply with the requirements of the City of Fresno grading plan check process, as described in the cumulative impact analysis under Impact HYD-3, above. As a result, no cumulative short-term construction impacts associated with on or off site flooding would occur within the Plan areas. Therefore, implementation of the DNCP, FCSP, and DDC is not deemed cumulatively considerable and short-term impacts are considered to be less than significant.

Long-term Impacts

Buildout of the Plan areas and development within watersheds that are tributary to the Plan areas, but not a part of the Plan areas, could increase the amount of paved impervious surfaces and alter

drainage patterns. The increase in impervious surfaces would increase stormwater runoff rates and volumes over those that occur from undeveloped land. The alteration of drainage patterns would direct stormwater runoff from its existing path of travel to different locations.

Development within the watersheds or drainage areas tributary to the Plan areas that are within the County of Fresno or the City of Clovis are also required to adhere to the grading plan check process of those entities. These processes ensure that the developments within the areas tributary to the Plan areas properly grade the developments in accordance with their respective ordinances, the FMFCD's Storm Drainage Master Plan, the Construction General Permit, and any other permits that are required to alter streams or irrigation canals. Compliance with these regulatory requirements would reduce potential cumulative flooding impacts to a less than significant level. Since development associated with the DNCP, FCSP, and DDC would require compliance with the City's grading plan check process to reduce potential flooding impacts, the project's contribution to cumulative flooding impacts is less than cumulatively considerable and therefore, this impact is less than cumulatively significant.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Runoff Water and Drainage Systems

Impact HYD-5:	**The project would not create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff.**

Project-specific Impact Analysis

Runoff Rates and Volumes

Less than significant impact. Changes to land use can have impacts on stormwater collection and disposal facilities depending on whether the change increases or decreases runoff rates and volumes from a drainage area. Land use changes that increase runoff rates and volumes can have a negative impact on drainage area collection and disposal facilities. Conversely, land use changes that decrease runoff rates and volumes can have a positive impact on drainage area collection and disposal facilities. A prime contributor to runoff rates and volumes is the amount of impervious surface within a drainage area. The amount of impervious surface in a drainage area is calculated as

the sum of all of the individual land use areas times their runoff factors. As water can't infiltrate through impervious surfaces, the greater the amount of impervious surface in a given area, the greater the likelihood that water will run overland in a storm event instead of filtering into the ground, causing runoff that can collect and move pollution from ground surfaces.

Development under the DNCP and FCSP would result in new industrial, commercial, residential, and mixed-use land uses that would occur primarily as infill. Development in the Plan areas would also utilize the City of Fresno's oversized and underutilized parking and street network and in other areas would convert currently paved surfaces into pervious planted areas and prospective LID stormwater treatment sites.

The methodology for determining potential changes in stormwater runoff rates within the Community Plan area involves a comparison of the two primary land use types within the Plan areas. These are the conditions along the corridors and within the adjacent residential neighborhoods (Sherwood Design Engineers 2011). As described above under Impact HYD-3, the primary difference in land use between the existing FMC and the proposed DNCP and DDC is a shift in residential density from the corridors into the surrounding neighborhoods. Whereas the FMC included a higher density of residential uses along the corridors, the proposed DNCP maintains the corridors as primarily commercial centers. Based on a comparison of required setbacks under the current FMC and as set forth for each zoning district under the proposed Community Plan, it was determined that setbacks would decrease primarily along the corridors. Although a decrease in setback would indicate a potential for an overall increase in impervious surface within these zones, examination of current conditions within the DNCP through aerial photographs shows that a large percentage of the existing setbacks within the proposed residential zones is currently covered by impervious surfaces. Consequently, little change in the amount of impervious cover is anticipated in these zones. In addition, since there would be fewer multi-story residential buildings, there would be less need for large new areas of surface parking along the major street corridors under the DNCP. Within the DNCP's remaining zones, setbacks would either increase slightly or remain largely consistent with existing patterns of development (Sherwood Design Engineers 2011).

With regard to stormwater drainage capacity, the Storm Drain Master Plan, developed and maintained by the FMFCD, consists of 134 drainage areas. Each drainage area is a self-contained watershed consisting of a collection system and a disposal system (Blair, Church & Flynn 2013). The infrastructure in the drainage areas capture, retain, and dispose of stormwater. The ability of the drainage areas in the Plan areas to effectively capture, retain, and dispose of stormwater given the land use changes associated with the DNCP and FCSP was evaluated to determine if the expected changes in impervious surfaces in the Plan areas would cause a reduction in the infrastructure's level of service. For the two drainage areas in the Plan areas, "FF" and "II-1," it was found that the land uses proposed under the DNCP and FCSP would not result in an increase in runoff within the plan area boundaries. The proposed land uses are not expected to cause any reduction in service level for the FF and II-1 drainage infrastructure, including the retention basins that provide runoff disposal intended to minimize flooding impacts within the plan area (Sherwood Design Engineers 2011).

There are, however, two areas within the FCSP that currently lack complete or adequate storm drain infrastructure. These areas have not historically generated enough tax revenue to fund the

construction of modern drainage facilities, so a number of storm drain improvements are now being constructed with funding provided by the American Recovery and Reinvestment Act. One of these projects is located on Divisadero Street, adjacent to an approximately 12-block area with no storm drain facilities that extends south from Divisadero Street into the Plan area. The second area, totaling approximately 50 acres, is located in the south corner of the Specific Plan area and lacks an existing storm drain network. No facilities are currently planned for this area, but it is assumed that storm drains will eventually be needed to support the scale and character of redevelopment being considered in the FCSP.

The FCSP's intent is to continue to use the drainage conveyance infrastructure that is owned and operated by the FMFCD. Redevelopment of the Specific Plan area is focused on underutilized parcels. The focus on underutilized parcels combined with an increase in civic open space and a focus on low impact development solutions, is intended to lower the imperviousness of the FCSP area (Sherwood Design Engineers 2014).

Much of the City of Fresno's parking and street network within the Downtown area is oversized and underutilized. These areas will be redefined and reconstructed as part of the transportation and landscape improvements associated with the FCSP. These changes will create an opportunity to convert currently paved surfaces into pervious planted areas and prospective LID stormwater treatment sites (FCSP 2016).

The following goals and policies from the FCSP will enhance the existing infrastructure network of the FMFCD and reduce localized flooding, improve water quality, provide community amenities, and enhance aquifer recharge throughout the City. A key strategy for sustainable stormwater design is mimicking predevelopment site hydrology. This means using site and infrastructure design techniques that filter, store, infiltrate, evaporate, and detain runoff, while also adding urban greenery. These types of efforts can enhance the existing infrastructure network of the FMFCD by separating stormwater from piped underground drainage systems, resulting in decreased costs overall, improving potential capacity deficiencies, and reducing potential pollution and hydrologic impacts from storm drain overflows in the Plan's approach to stormwater management.

- **Goal 10-6:** Reduce hydrologic impacts by minimizing impervious surfaces and graded areas.
- **Policy 10-6-1:** Decrease the use and/or surface area of typical impervious engineering materials such as concrete and asphalt to help reduce initial and long-term infrastructure costs.
- **Policy 10-6-2:** Use alternative materials such as native plants, soil and crushed rock where applicable to reinforce a landscape aesthetic within the urban setting.
- **Policy 10-6-3:** Manage stormwater at the source and on the surface by providing increased opportunities for rainfall to soak into the ground within nearby landscaping.
- **Policy 10-6-4:** Promote infiltration after treatment whenever possible, without compromising groundwater quality, to help recharge the groundwater basin.
- **Policy 10-6-5:** Integrate the stormwater system as habitat, passive recreational space, and/or landscaped areas. Use plants and soil to absorb, slow, filter, and cleanse runoff.
- **Policy 10-6-6:** Encourage stormwater facility designs that are simple, cost-effective, and enhance community aesthetics.

- **Policy 10-6-7:** Require new developments to collect and reuse stormwater for landscape or agricultural purposes where feasible.
- **Policy 10-6-8:** Require stormwater facilities to be designed to, at a minimum, provide water quality treatment for the "first flush" of (typically about 1/4 of an inch).

Sources of Polluted Runoff

The change in land uses occurring from the implementation of the DNCP and FCSP would not substantially increase the sources of pollution in stormwater runoff. However, stormwater runoff from urban development contains an array of constituents, including automotive fluids (e.g., fuel, oils, and antifreeze), combustion and exhaust byproducts (e.g., lead, cadmium, and nickel), sediments, fertilizers, pesticides, herbicides, and nutrients and bacteria pollutants from domestic and agricultural animal waste, and some runoff is expected to occur during the life of the Community and Specific Plan. These constituents are expelled into the environment throughout the year, where they settle onto the ground surface. During the wet season, stormwater runoff conveys these pollutants downstream, resulting in polluted stormwater runoff, especially during the first storm events of the season.

The City of Fresno is a co-permittee with the FMFCD, the County of Fresno, the City of Clovis, and California State University-Fresno in the Phase 1 NPDES Permit for Stormwater Discharges from MS4s. This Phase 1 MS4 Permit requires that the City and its co-permittees implement water quality and watershed protection measures for all development projects. The waste discharge requirements contained in the NPDES Permit have been designed to be consistent with the water quality standards and goals established in the Central Valley RWQCB's Basin Plan. The Phase 1 MS4 Permit prohibits discharges from violating applicable water quality standards or creating a nuisance or water quality impairment in receiving waters. Participation in the Phase 1 MS4 permit and implementation of the Storm Drainage Master Plan would reduce impacts to surface waters to acceptable levels, and long-term project impacts to surface or groundwater quality would not exceed acceptable levels.

Compliance with the requirements of the NPDES Permit and implementation of the aforementioned DNCP and FCSP policies would reduce long-term project impacts on existing storm drain capacities and stormwater quality. The DNCP and FCSP would not create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff, and impacts in this regard would be less than significant.

Cumulative Impact Analysis

Two drainage areas, FF and II-1, have watershed area and drainage systems that convey runoff that originates within the Plan areas. Changes to the land uses within the portions of the drainage areas that are outside of the Plan areas could result in changes to runoff rates and volumes that exceed the capacity of existing or planned stormwater drainage systems. This potential exceedance would be a significant cumulative impact. Since the DNCP and FCSP would result in less than significant impacts on the capacities of existing storm drain facilities, the project's contribution to potential cumulative impacts on the capacities of stormwater facilities would be a less than significant cumulative impact.

It is anticipated that buildout of the Plan areas would result in an increase in the amount of paved impervious surfaces within the Plan areas. The Plans seek to increase pervious surfaces through design elements like LID, and the majority of development occurring in the Plan areas would occur as infill on either existing impervious surfaces, or undeveloped (pervious) surfaces. The increase in runoff from additional impervious surface in the Plan areas would have the potential to increase the amount of polluted runoff; however, all development projects within the region would be required to comply with the MS4 Permit that requires the implementation of water quality and watershed protection measures. Compliance with the MS4 Permit would reduce potential impacts from cumulative projects to a less than significant level. Since the development under the DNCP and FCSP would also need to comply with the MS4 Permit, the project's contribution to potential cumulative impacts would not be considerable, and the project would result in a less than significant cumulative impact.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Water Quality

Impact HYD-6: The project would not otherwise substantially degrade water quality.

Project-specific Impact Analysis

See the water quality discussion under Impact HYD-1. As discussed, short-term construction impacts on water quality would be less than significant because the project is required to comply with the requirements of the Construction General Permit, including the implementation of a SWPPP and BMPs. Long-term impacts to surface water and groundwater would be less than significant because the project must comply with the requirements of the Phase 1 MS4 permit and the Storm Drainage Master Plan. Additionally, the DNCP and FCSP include policies to reduce water quality impacts.

Cumulative Impact Analysis

See the water quality discussion under Impact HYD-1. As discussed, the project's contribution to cumulative short-term construction and cumulative long-term operation impacts on water quality would not be considerable because the project would be required to comply with the NPDES Construction General Permit program and the MS4 Permit to reduce impacts to water quality. Therefore, the project would result in less than cumulatively significant water quality impacts.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Housing Placement: Flood Hazard Area

Impact HYD-7:	**The project would place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map.**

Project-specific Impact Analysis

Less than significant impact. As discussed above, the City of Fresno has participated in the FEMA FIP since its inception in the early 1970s. Participation in the FIP requires that the community adopt the FIRMs, appoint a trained Floodplain Administrator, adopt a floodplain ordinance modeled after the FIP model ordinance, and enforce the ordinance and the requirements of Title 40 of the Code of Federal Regulations, Part 60. The 40 CFR 60 regulations and the City's floodplain ordinance require that all new construction and substantial reconstruction of buildings located within an adopted floodplain be flood proofed and that the Community Floodplain Administrator review plans for conformance with the floodplain ordinance and 40 CFR 60 and approve the flood proofing. The City of Fresno has a Community Floodplain Administrator and has adopted a floodplain ordinance that complies with the model ordinance promulgated by FEMA. Projects in the DNCP and FCSP areas would be required to comply with this process.

Portions of the Downtown Neighborhoods are split between areas outside the floodplain or within the 500-year flood zone. However, there are several areas within DNCP area that are within the 100-year flood zone: an approximately 100 acre area located at the southern end of the DNCP along State Route 99; a smaller area to the northeast of the Union Pacific and San Joaquin Valley railroad lines and south of California Avenue; and an area located along the southwestern edge of the FCSP. According to the FEMA FIRMS, these areas are located with SFHA Zone A (see Figure 5.9-1). SFHA Zone A means that these areas are within the floodplain of the base flood, or 1 percent exceedance probability flood event. The 1 percent exceedance probability flood event is also known as the 100-year recurrence interval flood event (see Exhibit 5.9-1).

Property owners located in an SFHA with federally backed mortgages are required to purchase flood insurance in accordance with the FIRM (DNCP 2016). Developing within these areas would require flood proofing the development in accordance with the City of Fresno floodplain ordinance and 40

CFR 60. Existing housing within these areas would be required to flood proof at such time as significant reconstruction of the housing occurs. Significant reconstruction is defined as improving the house to a value that meets or exceeds 50 percent of its assessed value.

Development under the DNCP and FCSP would be required to comply with the General Plan policies and FMC ordinance regarding flood hazard areas. Thus, impacts with regard to the placement of housing within floodplains are anticipated to be less than significant.

Cumulative Impact Analysis

The participation of the City of Fresno in the FIP and the implementation of the City's General Plan policies and FMC ordinance related to flooding will not place housing that is not flood proofed within documented 100-year floodplains as mapped by the FEMA FIRMs. As a result, no cumulative impacts associated with placing housing in floodplains would occur. Therefore, implementation of the DNCP, FCSP, and DDC would not be cumulatively considerable and the floodplain-related housing impacts would be considered less than significant.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Structures: Flood Hazard Area

Impact HYD-8:	**The project would place within a 100-year flood hazard area structures which would impede or redirect flood flows.**

Project-specific Impact Analysis

Less than significant impact. Placing structures in floodplains puts those structures in danger of repeated flooding from sources of flooding. As discussed under Impact HYD-7, above, the majority of the Downtown Neighborhoods are either outside of the floodplain or within the 500-year flood zone. However, several small areas within the Downtown Neighborhoods do occur within the 100-year flood zone: an approximately 100-acre area located at the southern end of the Downtown Neighborhoods along State Route 99; a smaller area to the northeast of the Union Pacific and San Joaquin Valley rail lines and south of California Avenue; and along the southwestern edge of the FCSP area. These areas are designated by FEMA as SFHAs.

40 CFR 60 and the City's floodplain ordinance require that placement of structures within a floodplain not result in a cumulative change in the floodplain water surface that exceeds one foot. In addition, the regulations under 40 CFR 60 do not allow placement of structures within a regulatory floodway unless that placement will not result in any increase in the floodplain water surface elevation, meaning that there is no displacement or redirection of the floodway. The City's floodplain ordinance requires that a registered Civil Engineer in the State of California certify that no displacement of floodwater will result from the flood proofing of a structure within a floodplain or a regulatory floodway.

Adherence to the Federal flood plain ordinance (40 CFR 60) and the flood policies of the General Plan and FMC (portions of which will be replaced by the DDC) would ensure that implementation of the DNCP and FCSP would reduce impacts associated with structures located in a 100-year flood hazard area to a less than significant level.

Cumulative Impact Analysis

Less than significant impact. As described under Impact HYD-7, above, participation of the City of Fresno in the FIP and compliance with 40 CFR 60 and the City's General Plan policies and ordinances related to flooding would ensure that no cumulative impacts associated with the placement of structures in 100-year floodplains would occur. Therefore, implementation of the DNCP, FCSP, and DDC would not be cumulatively considerable, and this impact would be considered less than significant.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Flooding

Impact HYD-9: **The project would not expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam.**

Project-specific Impact Analysis

Less than significant impact. Refer to the discussion under Impact HYD-8, above, regarding potential impacts related to flood hazards. The following four dams have the potential to result in flooding to portions of the City of Fresno should a failure occur:

- Friant Dam, which is located approximately 18 miles north of the Plan areas
- Big Dry Creek Dam, which is located approximately 12 miles northeast of the Plan areas
- Pine Flat Dam, which is located approximately 27 miles northeast of the Plan areas
- Redbank-Fancher Creek Projects (Redbank Dam), which are located approximately 13 miles northeast of the Plan areas

According to the Fresno Metropolitan Flood Control District Benefit and Cost Analysis,[1] which was conducted for the estimated cost for the toe drain modification at Big Dry Creek Dam, if there were a failure at Big Dry Creek Dam, the estimated inundation would cover 60.7 square miles and flood a large portion of the cities of Fresno and Clovis, and unincorporated areas of Fresno County. Included in this area would be the DNCP and FCSP areas, which would be flooded approximately 8 to 14 hours after dam failure. Participation in the FIP and compliance with the floodplain ordinance, 40 CFR 60, and General Plan policies related to flooding hazards would reduce exposure of buildings and people to loss, injury, or loss of life to a less than significant level.

Cumulative Impact Analysis

Less than significant impact. Regulatory requirements are in place regionally to operate and maintain dams that are jurisdictional, are subject to annual inspections, and undergo ongoing maintenance. The City of Fresno and adjacent municipalities, including Fresno County, participate in the FIP (described above), and these jurisdictions have respective General Plan policies to avoid flood hazards. Compliance with these existing regulatory policies would ensure that no cumulative impacts associated with the exposure of buildings and people to loss, injury, or loss of life due to flooding or dam or levee failure would occur. Therefore, implementation of the DNCP, FCSP, and DDC would not be cumulatively considerable and cumulative impacts are considered to be less than significant.

Mitigation Measures

Project-specific

No mitigation measures are required.

[1] Website: http://www.water.ca.gov/irwm/grants/docs/Archives/Prop1E/Submitted_Applications/P1E_Round2_SWFM/Fresno%20Metropolitan%20Flood%20Control%20District%20(201243210027)/Attachment%208%20-%20Att8_SWF_BenCost_1of1.pdf. Accessed July 31, 2013.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Seiche, Tsunami, or Mudflow

Impact HYD-10:	**The project would not expose people or structures to inundation by seiche, tsunami, or mudflow.**

Project-specific Impact Analysis

No impact. The City of Fresno is located approximately 110 miles from the Pacific Ocean, the source of a potential tsunami. Official Statewide Tsunami Inundation Maps, coordinated by California Emergency Management Agency (Cal EMA), are developed for all populated areas at risk to tsunamis in California. According to Cal EMA's MY HAZARD website and Official Statewide Tsunami Inundation Maps, the Plan areas are located outside a tsunami hazard zone (Cal EMA 2015).

A seiche is a "standing" wave oscillating in a body of water. Seiches can be caused by a seismic event, a wind event, or a sudden change in barometric pressure. This phenomenon can occur in any semi- or fully-enclosed body of water, such as bays and lakes. The nearest body of water capable of producing a seiche is Big Creek Dry Dam and Reservoir located approximately 12 miles northeast of the Plan areas. The DNCP and FCSP would not introduce new land uses near the reservoir that could be inundated. Additionally, this is a relatively small reservoir and would not be subject to strong oscillations during an earthquake event. The intervening distance would preclude any water displaced by oscillation from reaching either the DNCP or FCSP areas.

The City of Fresno is not susceptible to soil erosion, with the exception of the San Joaquin River Bluffs, which are located approximately 7 miles west-northwest of the Plan areas. Because the Plan areas are located within a developed/urban portion of the City of Fresno, these projects would not be exposed to mudflows.

Cumulative Impact Analysis

No impact. Future development in areas outside of the Plan areas would not create a potential for inundation of the Plan areas by seiche, tsunami, or mudflow impacts. Because no impacts from seiche, tsunami, or mudflow hazards would occur with the implementation of the DNCP, FCSP, and DDC, the project's contribution to cumulative impacts would not be considerable. Therefore, no cumulative seiche, tsunami, or mudflow impacts would occur under the proposed project.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

No impact.

Cumulative

No impact.

5.10 - Land Use and Planning

5.10.1 - Introduction

This section describes the environmental setting of the use of land for various activities such as residential, commercial, office, public facilities, mixed use, industrial, open space, agriculture, and other uses. The land use patterns influence the interactions of land uses. In addition, this section discusses the applicable plans and policies. The potential impacts resulting from implementation of the Downtown Neighborhoods Community Plan (DNCP), the Fulton Corridor Specific Plan (FCSP), and the Downtown Development Code (DDC) are described, and mitigation measures provided, if required. Information in this section was derived from the following sources:

- Fresno General Plan. December 2014.
- Downtown Neighborhoods Community Plan. 2016. The complete report is contained in Appendix A.
- Fulton Corridor Specific Plan. Public Draft. 2016. The complete report is contained in Appendix B.
- Downtown Development Code. Public Draft. 2016. The complete report is contained in Appendix C.
- Comments received in response to the Notice of Preparation. These comments are summarized in Section 1, Introduction, of this Draft EIR. Copies of these comments are contained in Appendix D.
- Comments made during the public scoping meeting. These comments are summarized in Section 1, Introduction, of this Draft EIR. Copies of these comments are contained in Appendix D.

5.10.2 - Environmental Setting

The following information is provided in accordance with CEQA Section 15125. The environmental setting discussion provides a baseline discussion of the existing conditions within the DNCP and FCSP areas.

Study Area for Project Impacts

The study area for project impacts on land use and planning includes the DNCP and FCSP areas.

Study Area for Cumulative Impacts

The study area for the analysis of cumulative impacts is the City of Fresno.

The Planning Area

Both the DNCP and the FCSP are located in the City of Fresno. The City of Fresno is located in Fresno County, which is generally located in the center of the San Joaquin Valley. Fresno is situated between San Francisco (184 miles) to the north and Los Angeles (222 miles) to the southwest. The

San Joaquin River runs along the northern edge of the City. The City of Fresno is intersected by State Route 99(SR-99) and SR-41, which run north/south through the City; SR-168 which runs north/east and intersects with SR-180, which runs east/west through the City. In a larger context, the county is bordered by the counties of San Benito, Merced, Madera, Mono, Inyo, Tulare, Kings, and Monterey. The incorporated City is 113 square miles (72,224 acres) and the City's sphere of influence is 157 square miles (100,249 acres). Additionally, there are 11 square miles (31,297 acres) of unincorporated "county islands" inside Fresno's city limits (City of Fresno 2011). The environmental setting for the DNCP and FCSP is discussed below.

Downtown Neighborhoods Community Plan

Planning Area Geographic Boundaries

The DNCP area is located in the southern portion of the City of Fresno and covers 7,290 acres. The Plan Area is generally bounded to the east by Chestnut Avenue, to the south by Church Avenue; to the west by Thorne, West, and Marks Avenues; and to the north by SR-180. Along the western side of the Plan Area, the boundaries extend as far north as Clinton Avenue. The project area is divided by SR-99, SR-41, and SR-180 and by the Union Pacific and BNSF railroad right-of-ways. Within the boundaries of the DNCP is the FCSP. The FCSP provides a vision, detailed goals, policies/actions, and a comprehensive implementation strategy for the Downtown Core (DNCP 2016).

Existing Community and Specific Plans

The DNCP boundary completely overlaps the boundaries of the pre-existing Central Area Community Plan (CACP) and the Fulton Lowell Specific Plan (FLSP). Accordingly, both the CACP and FLSP will be rescinded and the provisions of the DNCP and the accompanying FCSP will completely replace the provisions of the CACP and the FLSP. In addition, the DNCP overlaps portions of the pre-existing West Area Community Plan, the Edison Community Plan, and the Roosevelt Community Plan. The boundaries of these existing Plans will be amended, removing the portions of each respective Plan that are within the DNCP boundary and the provisions of the DNCP and the accompanying Fulton Corridor Specific Plan.

The DNCP boundary also overlaps portions of the preexisting Fresno Chandler Downtown Airport Specific Plan (FCDASP). Upon adoption, the provisions of the DNCP shall take precedence over all of the regulations of the FCDASP, except those regulations related to aircraft noise and safety contours and avigation easements, as outlined in the FCDASP. The FCDASP also takes precedence over the FCSP as it relates to noise and safety contours and avigation easements.

Fulton Corridor Specific Plan

Planning Area Geographic Boundaries

The FCSP Area covers approximately 655 acres and is generally bounded to the north by Divisadero Street, to the west by SR-99, to the south by SR-41, and to the east by N Street, O Street, and the alley between M and N Streets. The Plan Area is divided by the Union Pacific railroad right-of-way (FCSP 2015).

As stated in the DNCP, the FCSP is located completely within the boundaries of the DNCP. The FCSP translates the policy direction of the General Plan and the DNCP into detailed goals, policies, and

actions for the revitalization of the heart of Downtown and its seven districts: the Fulton District and former Fulton Mall, the Mural District, South Stadium, Chinatown, the Civic Center, Armenian Town/Convention Center, and the Divisadero Triangle. The FCSP is more detailed than the DNCP and is drafted to fully implement the goals, policies, and objectives of the DNCP. To the extent there appears to be any conflict between these two Plans, the FCSP takes precedence (DNCP 2015).

Existing Specific and Community Plans

As discussed above, the FCSP boundary overlaps portions of the pre-existing CACP and the pre-existing FLSP. Accordingly, both the CACP and FLSP will be repealed and the provisions completely replaced by those of the FCSP and DNCP. The FCSP boundary also overlaps portions of the pre-existing FCDASP. The FCSP will continue to be subject to the noise contour and hazard zone information that is described in the FCDASP, and together with the DNCP will provide a vision and policies for the development of the applicable plan areas over time, including the portions of those areas included in the FCDASP.

Existing Land Uses

According to the Notice of Preparation dated September 2015 for the proposed EIR for the DNCP, FCSP, and DDC project, the existing land uses for the plan areas are as follows:

> The DNCP and FCSP plan areas are divided up into a variety of planned land-use classifications and one districts, of which residential, commercial, and industrial are the principal ones, as shown in Table 1 in the 2015 Notice of Preparation [Table 5.10-1] (Existing Development by Land Use). The regulation of every private parcel of land is principally controlled by its use.

Table 5.10-1: Existing Development by Land Use[1]

Land Use	DNCP (excl. FCSP)	Quantity FCSP	DNCP + FCSP
Residential (units)	15,953	1,065	17,018
Office (sf)	597,805	3,131,270	3,729,075
Retail (sf)	5,380,247	1,370,687	6,750,934
Hospitality (sf)	1,155,274	856,629	2,011,903
Industrial (sf)	6,932,355	570,222	7,502,577
Public Facilities (sf)	5,478,487	1,570,326	7,048,813
Open Conservation (acres)	251.69	14.78	266.47
Agriculture (acres)	10.70	0	10.70
Vacant Land (acres)	235.83	44.94	280.77

Note:
[1] Residential unit counts provided by Strategic Economics in "Economic and Demographic Overview of Fresno Downtown Neighborhoods," November 2011. Office square footage in FCSP plan area provided by Strategic Economics in "Market Analysis Report: Fulton Corridor Specific Plan," April 25, 2011. Retail, industrial, and public facilities square footage in FCSP and DNCP plan areas and office square footage in DNCP estimated by tracing buildings in AutoCAD from aerial and estimating uses based upon Google Maps birds-eye view. Open space, agriculture, and vacant lands calculated using GIS.

Outside of Downtown, the Community Plan Area is predominantly residential in character, as most of it zoned for single-family housing. The Lowell, Jefferson, and Edison neighborhoods also contain concentrations of multi-family residential uses. Commercial zoning is concentrated in Downtown, Chinatown, and along the Plan Area's automobile-oriented corridors, such as Belmont Avenue, Tulare Avenue, and Kings Canyon Road. The majority of parcels zoned for manufacturing are located along the Union Pacific railroad right-of-way, in South Van Ness, south Chinatown, and in the Edison Neighborhoods near the Fresno Chandler Downtown Airport. Current land uses and zoning designations in the Downtown area are shown in Exhibit 5.10-1 and Exhibit 5.10-2, respectively.

Parcels without any buildings or parking lots can be found throughout the Plan Area. Vacant parcels are especially prevalent along the Union Pacific railroad tracks in Downtown, along the BNSF railroad tracks in the Jefferson Neighborhood, within Chinatown, the Edison Neighborhoods west of SR-99, north of Fresno Chandler Airport, and in the Jane Addams neighborhood. These vacant parcels are prime candidates for infill development.

5.10.3 - Regulatory Setting

Below is a list and summary of applicable major state, and local (county and city) policies. There are no applicable federal policies or regulations related to land use, housing and physical development.

State Policies

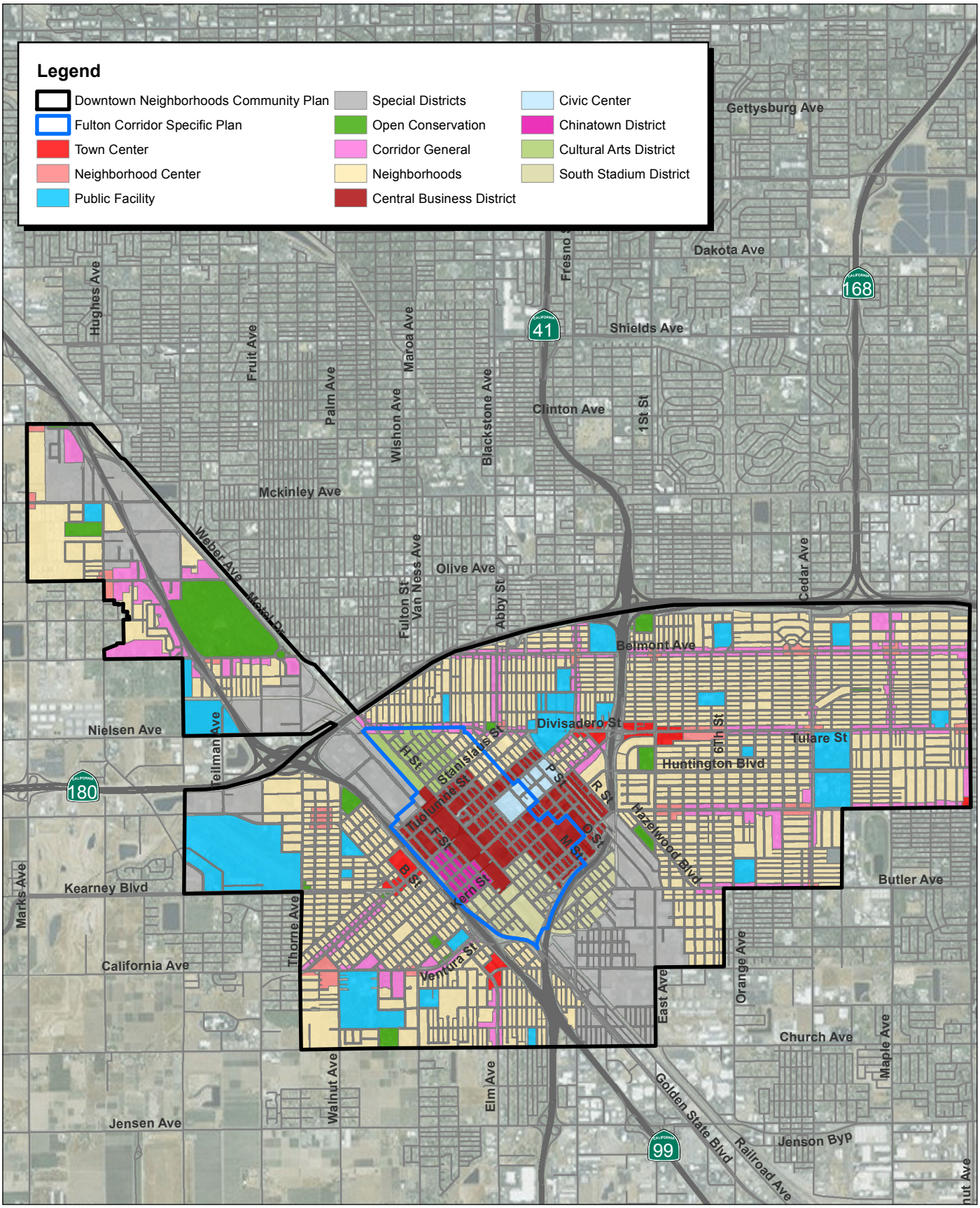
California Land Conservation Act

The California Land Conservation Act, better known as the Williamson Act, was enacted by the State Legislature in 1965 to encourage the preservation of agricultural lands. Under the provisions of the act, landowners agreeing to keep their lands under agricultural production for a minimum of 10 years receive property tax adjustments. Williamson Contracts limit the use of the properties to agricultural, open space, and other compatible use. Williamson Act lands are assessed based on their agricultural value, rather than their potential market value under nonagricultural uses.

Other Governing Bodies

Fresno County Local Agency Formation Commission

Local Area Formation Commissions (LAFCOs) review proposals for the formation of new local governmental agencies and for changes in the organization of existing agencies. The objectives of the Fresno County LAFCO are to encourage orderly formation of local governmental agencies, preserve agricultural land resources, and discourage urban sprawl. The Fresno County LAFCO assists in balancing the competing needs in the region for efficient services, affordable housing, economic opportunity, and conservation of natural resources. In addition, the Fresno County LAFCO considers effects that development may have on existing agricultural land and in doing so guides development toward vacant urban land and away from agricultural preserves. The Fresno County LAFCO also discourages urban sprawl (i.e., irregular and disorganized growth occurring without apparent design or plan) (Fresno County Local Area Formation Commission 2012).

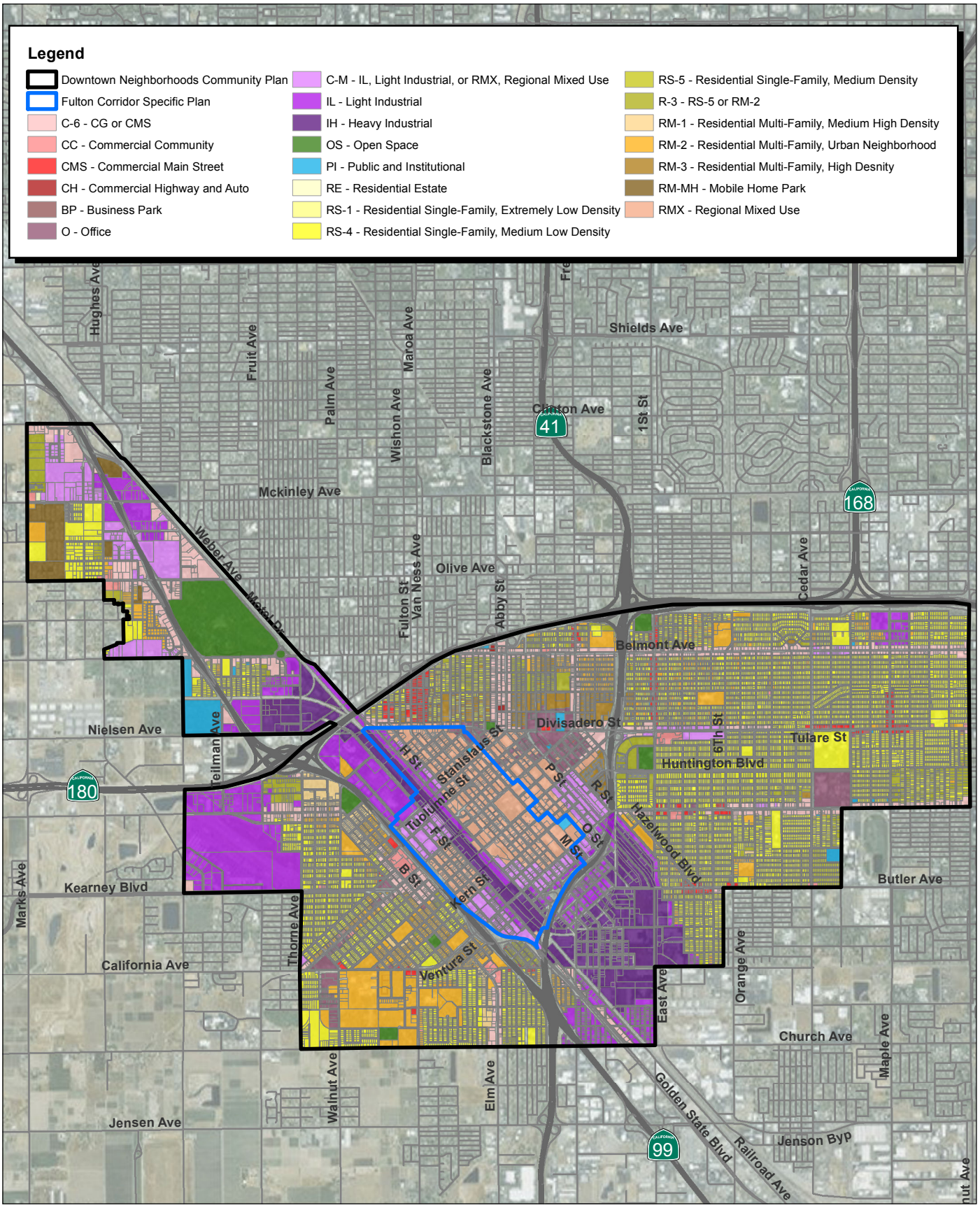


Source: City of Fresno, 07/13/2016

Exhibit 5.10-1
Current General Plan Land Use Designations

FirstCarbon® SOLUTIONS

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Source: City of Fresno GIS, 07/19/2016

FirstCarbon® SOLUTIONS

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Exhibit 5.10-2
Current Zoning Designations

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Fresno Council of Governments

The Fresno Council of Governments (Fresno COG) is a voluntary association of local governments that undertakes comprehensive regional planning with an emphasis on transportation, provides citizens an opportunity to be involved in the planning process, and supplies technical services to its members. Fresno COG's Member Agencies include the following cities: Clovis, Coalinga, Firebaugh, Fowler, Fresno, Huron, Kerman, Kingsburg, Mendota, Orange Cove, Parlier, Reedley, San Joaquin, Sanger, Selma, and the County of Fresno. Fresno COG is a state-designated Regional Transportation Planning Agency and federally designated Metropolitan Planning Organization for Fresno County. Fresno COG prepares a Regional Transportation Plan (RTP) that looks 25 years into the future, and sets policies for a wide variety of transportation options and projects. The RTP guides how/where people and goods will travel by identifying existing and needed transportation facilities. Fresno COG prepares the region's Federal Transportation Improvement Program, which is includes transportation projects consisting of highway, transit, bicycle, and pedestrian projects (Fresno COG 2012).

Airport Land Use Compatibility Plans

Pursuant to Public Utilities Code sections 21670–21679.5, Airport Land Use Commissions (ALUCs) have the authority to regulate land use decisions in the vicinity of airports to "protect public health, safety, and welfare by ensuring the orderly expansion of airports and the adoption of land use measures that minimize the public's exposure to the extent that these areas are not already devoted to incompatible uses." ALUCs protect public health, safety, and welfare by ensuring that orderly development, and prevention of excessive noise and safety hazards near public use airports is followed in accordance with both state and local laws. ALUCs prepare Compatibility Land Use Plans (also referred to as Airport Land Use Compatibility Plans) to ensure that county and city plans are consistent. In addition, ALUCs establish land use policies for areas near airports to ensure that land uses are compatible with airport operations. Additionally, ALUC's review individual development projects to ensure they are within the noise and safety standards in accordance with state laws (Fresno ALUC 2012). The Fresno County ALUC has adopted the following airport land-use compatibility plans: Coalinga Airport Land Use Plan, Fresno-Chandler Executive Airport Land Use Plan, Fresno Yosemite International Airport Land Use Plan, Harris Ranch Land Use Plan, Reedley Airport Land Use Plan, Sierra Sky Park Land Use Plan, and the Selma-Reedley-Firebaugh-Mendota Airports Land Use Plans.

Natural Habitat Planning and Open Space Conservation Programs

The City of Fresno's current General Plan contains a policy regarding Habitat Conservation Plans (HCPs). Policy POSS-5-b states: "Participate in cooperative, multijurisdictional approaches for area-wide habitat conservation plans to preserve and protect rare, threatened, and endangered species" (City of Fresno 2014).

City of Fresno General Plan Objectives and Policies

Below are the objectives and policies that relate to land use from the Urban Form Element of the Fresno General Plan.

- **Objective LU-1.** Establish a comprehensive citywide land use planning strategy to meet economic development objectives, achieve efficient and equitable use of resources and infrastructure, and create an attractive living environment.
- **Policy LU-1-a Promote Development within the Existing City Limits as of December 31, 2012**. Promote new development, infill, and rehabilitation of existing building stock in the Downtown Planning Area, along BRT corridors, in established neighborhoods generally south of Herndon Avenue, and on other infill sites and vacant land within the City.
- **Policy LU-1-b Land Use Definition and Compatibility**. Include zoning districts and standards in the Development Code that provide for the General Plan land use designations and create appropriate transitions or buffers between new development with existing uses, taking into consideration the health and safety of the community.
- **Policy LU-1-c Provision of Public Facilities and Services.** Promote orderly land use development in pace with public facilities and services needed to serve development.
- **Policy LU-1-d Orderly Transition of Existing Uses.** Implement updates to the Fresno Municipal Code to provide for the orderly transition of existing, legal non-conforming uses on the BRT Corridors.
- **Policy LU-1-e Annexation Requirements.** Adopt implementing policies and requirements that achieve annexations to the City that conform to the General Plan Land Use Designations and open space and park system, and are revenue neutral and cover all costs for public infrastructure, public facilities, and public services on an ongoing basis consistent with the requirements of ED-5-b.
- **Objective LU-2.** Plan for infill development that includes a range of housing types, building forms, and land uses to meet the needs of both current and future residents.
- **Policy LU-2-a Infill Development and Redevelopment.** Promote development of vacant, underdeveloped, and re-developable land within the City Limits where urban services are available by considering the establishment and implementation of supportive regulations and programs.
- **Policy LU-2-b Infill Development for Affordable Housing.** Establish a priority infill incentive program for residential infill development of existing vacant lots and underutilized sites within the City as a strategy to help to meet the affordable housing needs of the community.
- **Policy LU-2-c Infill Design Toolkit.** Develop and distribute an infill design toolkit, consistent with the City's Infill Development Act to support and encourage infill development.
- **Policy LU-2-d Infrastructure Upgrades.** Facilitate urban infill by building and upgrading community and neighborhood public infrastructure and services to enhance public health and convenience, and improve the overall experience and quality of city living.
- **Policy LU-2-e Neighborhood Preservation.** Incorporate standards in the Citywide Development Code to preserve the existing residential quality of established neighborhoods.
- **Policy LU-2-f Lot Consolidation.** Include incentives in the Citywide Development Code for streamlining the consolidation of very small, oddly shaped, and difficult to develop lots to create more efficient and developable parcels.
- **Objective LU-3.** Support the successful fulfillment of plans when adopted for the Downtown Planning Area.
- **Policy LU-3-a Downtown Planning Area Plans.** Prepare and adopt community plans and Specific Plans for the revitalization and continued development of the Downtown Planning

Area neighborhoods, including the Fulton Street corridor, accompanied by implementing regulations that will govern future development in the area.

- **Policy LU-3-b Mixed-Use Urban Corridors that Connect the Downtown Planning Area.** Support the development of mixed-use urban corridors that connect the Downtown Planning Area with the greater Fresno-Clovis Metropolitan Area with functional, enduring, and desirable urban qualities along the Blackstone Avenue, Shaw Avenue, California Avenue, and Ventura Avenue/Kings Canyon Road corridors, as shown on Figure LU-1: General Plan Land Use Diagram.
- **Policy LU-3-c Zoning for High Density on Major BRT Corridors.** Encourage adoption of supportive zoning regulations for compact development along BRT corridors leading to the Downtown Core that will not diminish the long-term growth and development potential for Downtown.
- **Objective LU-4.** Enhance existing residential neighborhoods through regulations, code enforcement, and compatible infill development.
- **Policy LU-4-a Neighborhood Nuisance Abatement.** Continue proactive and responsive code enforcement and nuisance abatement programs to improve the attractiveness of residential neighborhoods.
- **Policy LU-4-b Neighborhood Reinvestment.** Promote and consider partnerships with lending institutions that provide a variety of financing alternatives and adhere to the provisions of the federal Community Reinvestment Act.
- **Policy LU-4-c Housing Task Force.** Establish an interagency housing task force to coordinate the housing programs of the City with similar programs of other local jurisdictions and the Fresno Housing Authority to develop a coordinated affordable housing implementation plan.
- **Objective LU-5.** Plan for a diverse housing stock that will support balanced urban growth, and make efficient use of resources and public facilities.
- **Policy LU-5-a Low Density Residential Uses.** Promote low-density residential uses only where there are established neighborhoods with semi-rural or estate characteristics.
- **Policy LU-5-b Medium-Low Density Residential Uses.** Promote medium-low density residential uses to preserve existing uses of that nature or provide a transition between low and medium density residential areas.
- **Policy LU-5-c Medium Density Residential Uses.** Promote medium density residential uses to maximize efficient use of residential property through a wide range of densities.
- **Policy LU-5-d Medium-High Density Residential Uses.** Promote medium-high density residential uses to optimize use of available or planned public facilities and services and to provide housing opportunities with convenient access to employment, shopping, services, and transportation.
- **Policy LU-5-e Urban Neighborhood Residential Uses.** Promote urban neighborhood residential uses to support compact communities and Complete Neighborhoods that include community facilities, walkable access to parkland and commercial services, and transit stops.
- **Policy LU-5-f High Density Residential Uses.** Promote high-density residential uses to support Activity Centers and BRT Corridors, and walkable access to transit stops.
- **Policy LU-5-g Scale and Character of New Development.** Allow new development in or adjacent to established neighborhoods that is compatible in scale and character with the surrounding area by promoting a transition in scale and architectural character between new

buildings and established neighborhoods, as well as integrating pedestrian circulation and vehicular routes.

- **Policy LU-5-h Housing Offering Amenities.** Support housing that offers residents a range of amenities, including public and private open space, landscaping, and recreation facilities with direct access to commercial services, public transit, and community gathering spaces.
- **Policy LU-5-i Housing for Seniors.** Facilitate the development of senior housing projects that are accessible to public transportation and services.
- **Policy LU-5-j Campus-Centered Communities.** Encourage development of campus- centered communities by focusing growth around existing and planned academic facilities and by directing infrastructure to those areas.
- **Objective LU-6.** Retain and enhance existing commercial areas to strengthen Fresno's economic base and site new office, retail, and lodging use districts to serve neighborhoods and regional visitors.
- **Policy LU-6-a Design of Commercial Development.** Foster high quality design, diversity, and a mix of amenities in new development with uses through the consideration of guidelines, regulations and design review procedures.
- **Policy LU-6-b Commercial Development Guidelines.** Consider adopting commercial development guidelines to assure high quality design and site planning for large commercial developments, consistent with the Urban Form policies of this Plan.
- **Policy LU-6-c Appropriate Office Development.** Promote the establishment of development standards for new offices, addressing location, size, and intensity necessary to meet the City's needs. Integrate and support employment in adjacent and proximate neighborhoods.
- **Policy LU-6-d Neighborhood and Community Commercial Center Design.** Plan for neighborhood mixed use and community commercial uses to implement the Urban Form concepts of this Plan, promote the stability and identity of neighborhoods and community shopping areas, and allow efficient access without compromising the operational effectiveness of the street system.
- **Policy LU-6-e Regional Center Planning and Design.** Promote economic growth with regional commercial centers.
- **Policy LU-6-f Auto-Oriented Commercial Uses.** Direct highway-oriented and auto- serving commercial uses to locations that are compatible with the Urban Form policies of the General Plan. Ensure adequate buffering measures for adjacent residential uses, noise, glare, odors, and dust.
- **Objective LU-7.** Plan and support industrial development to promote job growth.
- **Policy LU-7-a Incentives for a Diversity of Industries, Increased Food Processing and Manufacturing, and Related Employment Opportunities in Fresno.** Use the City's Capital Improvement Program to set priorities for locations and timing of water, sewer, and transportation infrastructure investments by the City and initiate implementation programs to encourage development of targeted industries as identified under Policy ED-3-c, in employment.
- **Policy LU-7-b Business and Industrial Parks.** Promote business and industrial park sites that are of sufficient size, unified in design, and diversified in activity to attract a full range of business types needed for economic growth.
- **Policy LU-7-c Efficiency of Industrial Uses.** Promote industrial land use clusters to maximize the operational efficiency of similar activities.

- **Objective LU-8.** Provide for the development of civic and institutional land uses to meet the educational, medical, social, economic, cultural, and religious needs of the community.
- **Policy LU-8-a Civic and Institutional Use Compatibility.** Protect civic and institutional areas from incompatible uses that could affect their vitality and contributions to the city.
- **Policy LU-8-b Access to Public Facilities.** Ensure that major public facilities and institutions have adequate multi-modal access and can be easily reached by public transit.
- **Policy LU-8-c Zoning for Public Facilities.** Allow public facility uses in zoning districts where appropriate.
- **Policy LU-8-d Public Facilities and Institutions Meeting City Standards.** Request that federal, State, and local agencies locating public facilities and institutions in the City or designated growth area, meet City standards for public streets and sidewalks, access, parking, water supply, wastewater disposal, landscaping, and amenities.
- **Objective LU-9.** Plan land uses, design, and development intensities to supplement and support, and not compete with, the Downtown.
- **Policy LU-9-a Residential Locations.** Plan for new residential uses and types in a manner that help make the Downtown Planning Area a convenient destination for employment and regional retail shopping.
- **Policy LU-9-b Activity Centers.** Plan for future Activity Centers at appropriate locations that avoid competition with Downtown businesses.
- **Policy LU-9-c Primacy of Downtown.** Maintain the Downtown mixed-use areas as the Primary Activity Center within the city with the tallest buildings to enhance its profile and visibility.
- **Policy LU-9-d Directional Signage.** Direct travelers to the Downtown with directional signage throughout the city and along regional routes.
- **Policy LU-9-e Downtown Sightline.** Require new development to preserve existing sightlines to Downtown to the extent feasible.
- **Policy LU-9-f View Corridors.** Promote new view corridors that highlight the Downtown skyline.
- **Policy LU-9-g Improve Access.** Provide opportunities to enhance the existing physical accessibility of Downtown in order to encourage the inclusion of individuals with disabilities.
- **Objective LU-10.** Promote regional cooperation and coordination on land use and planning issues among local jurisdictions.
- **Policy LU-10-a Regional Land Use and Transportation Planning Program.** Continue participation efforts in a coordinated Regional Land Use and Transportation Planning Program with the City of Clovis, Fresno and Madera counties, and other cities in the region.
- **Policy LU-10-b Integrity of the General Plan.** Urge neighboring jurisdictions to support the integrity and implementation of the General Plan.
- **Policy LU-10-c Memorandum of Understanding (MOU).** Comply with the most recent Master Settlement Agreement and Amended and Restated MOU between the City of Fresno and County of Fresno. Update the existing MOU and Agreement as necessary to implement the goals of this Plan.
- **Objective LU-11.** Encourage coordination with adjacent jurisdictions in providing public services, infrastructure and cooperative economic development.
- **Policy LU-11-c General Plan Consistency.** Pursue coordinated planning and development project reviews with relevant federal, State, and local public agencies to ensure consistency with this General Plan.

City of Fresno Development Code

The City of Fresno adopted a new Citywide Development Code on December 3, 2015. The Development Code is contained within Chapter 15 of the City's Municipal Code and provides regulation of land and structures in order to protect and promote health, safety, and welfare of the public, and to ensure the orderly development of the City.

5.10.4 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether land use and planning impacts are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

a) Physically divide an established community?

b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

c) Conflict with any applicable habitat conservation plan or natural communities conservation plan?

5.10.5 - Impact Analysis, Mitigation Measures, and Level of Significance After Mitigation

Divide Established Community

Impact LUP-1: The project would not physically divide an established community.

Project-specific Impact Analysis

Less than significant impact. The physical division of an established community typically refers to the construction of a linear feature, such as an interstate highway or railroad tracks, or removal of a means of access, such as a local bridge that would impact mobility within an existing community of between a community and an outlying area. The project does not involve any such features, and would not remove any means of access or impact mobility. Development in accordance with the DNCP, FCSP, and DDC would result in a substantial amount of additional development throughout the Downtown area. This development would include infill and underutilized development within the existing city limits, revitalization of existing neighborhoods, and new activity centers with mixed uses and neighborhoods within the DNCP and FCSP area.

DNCP

Within the DNCP there are the following planning areas, each of which is briefly described below with information from the DNCP: Jane Addams Neighborhoods, Edison Neighborhoods, Lowell Neighborhood, Jefferson Neighborhood, Southeast Neighborhoods, South Van Ness, and Downtown (DNCP 2014). Refer to the DNCP for additional details regarding each of the planning areas.

Jane Addams Neighborhoods

- 1,155 acres.
- More rural in character than other subareas.
- Largely disconnected from the east and south by freeways. Few pedestrian or vehicular crossings across SR-99 and SR-180.
- Residential buildings consist primarily of small houses on large lots.
- Auto-oriented motels have fallen into serious disrepair, occupied by transitional housing.

Edison Neighborhoods

- 1,560 acres.
- Disconnected from Chinatown and Downtown by SR-99.
- Primarily residential in character.
- Contains some of Fresno's oldest residential neighborhoods.
- Contains many dilapidated buildings.

Lowell Neighborhood

- 225 acres.
- Downtown-adjacent neighborhood.
- Disconnected from north and west neighborhoods by SR-99 and SR-180.
- Contains some of Fresno's oldest homes, and has strong historic character.
- Characterized by a proliferation of vacant lots and incompatible post WWII apartment buildings.

Jefferson Neighborhood

- 290 acres.
- Downtown-adjacent neighborhood.
- Disconnected from north and east neighborhoods by SR-41 and SR-180.
- Divided in two by BNSF railroad right-of-way.
- Has a proliferation of single family house demolition, vacant lots, and incompatible post WWII apartment buildings.

Southeast Neighborhoods

- 2,400 acres.
- Primarily residential in character.
- Strong historic character along Huntington Boulevard.
- Comprised primarily of single-family houses with isolated concentrations of multi-family houses.
- Has many dilapidated multifamily houses.

South Van Ness

- 390 acres.
- Old warehousing and industrial area.
- The eastern area is immediately adjacent to the Southeast neighborhoods.
- Lots in the western and central portions of the subarea are smaller than those in the eastern area.
- Mega-blocks interrupt the late 19th-century street network.

Downtown

- 1,000 acres.
- Comprised of seven distinct subdistricts that are discussed in the FCSP.
- Is disconnected from the east, south, and southwest by SR-41 and SR-99.
- Contains many visitor-serving uses including Fresno Convention Center, Chukchansi Park, and several hotels.
- Contains a mix of under-performing retail, restaurant, and entertainment uses.

The majority of the neighborhoods within the DNCP Area consist predominantly of single-family houses, although some neighborhoods, such as Lowell, Jefferson, and portions of Southwest and Southeast Fresno contain a mix of single-family and multi-family housing types. The majority of the post-World War II multi-family buildings are too large for their site, do not face the street, overwhelm their neighbors, are typically poorly maintained, lack sufficient amenities such as usable private outdoor space, provide substandard living conditions for many residents, and have had a severe negative impact on the economic value of these neighborhoods (DNCP 2016).

The DNCP includes goals and policies to reduce these land use conflicts and provide for future orderly development to reduce the potential to divide established communities.

- **Goal 7.4:** Increase safety in the Downtown Neighborhoods.

FCSP

There are seven distinct subareas within the FCSP boundaries. These are among the oldest, most diverse, and most densely developed areas in the City of Fresno (FCSP 2016). Each of the FCSP's seven subareas is described briefly below with information from the FCSP. Refer to the FCSP for additional details regarding each of the districts.

Fulton District

The Fulton District comprises rectangular blocks oriented parallel to the Union Pacific Railroad tracks. The historic interconnected street network is disrupted by the railroad tracks, and has been closed down to traffic at several locations, most notably Mariposa Street east of the County Courthouse. The Fulton Mall Reconstruction Project is currently underway and will reopen the Fulton Mall and cross streets to vehicular traffic. All of the streets within the Fulton District are two-way, with the exception of M Street, which is one-way. This street and block pattern, coupled with inadequate way-finding signage, confuses many Downtown drivers, especially those not familiar with the Downtown.

Mural District

The Mural District's street grid comprises pedestrian-scaled blocks oriented parallel to the Union Pacific Railroad tracks. Like the majority of Downtown, the Mural District's streets are wide, have multiple lanes in each direction, and can accordingly be easily transformed to accommodate bike lanes and on-street, angled parking. Stanislaus Street, Tuolumne Street, and M Street are one-way streets. The District also sits at the junction between the railroad street grid and the due

north/south and east/west grid, opening up many opportunities on corner lots to introduce buildings and facades that mark entrances into Downtown.

The majority of the buildings within the Mural District are commercial or industrial in character and are sited in a pedestrian friendly manner, that is, built to the sidewalk with parking located at the side or at the rear. As with the rest of Downtown, there are significant numbers of vacant lots and parking lots that offer opportunities for infill development.

South Stadium

South Stadium's street and block network is oriented to the railroad tracks and consists for the most part of rectangular, pedestrian-scaled blocks with alleys down their centers. Though well connected to the Fulton District, South Stadium is isolated from Chinatown by the Union Pacific Railroad tracks and from South Van Ness by SR-41.

South Stadium is occupied mainly by one- and two-story buildings that house primarily industrial, warehousing, manufacturing, auto repair, and sales uses. Over the years, many buildings have been demolished and replaced with parking lots and service yards. Numerous buildings have historic associations with the automotive industry, functioning over the years as auto repair or service garages, manufacturers or distributors of automotive parts and supplies, or automobile showrooms and dealerships. The South Stadium area is also home to many social service organizations. There is currently no public open space in the South Stadium subarea.

Chinatown

One of the oldest areas of Fresno, Chinatown truly represents the great ethnic, cultural, and architectural diversity of Fresno. Although it is one of the most historically significant areas of Fresno, Chinatown has also experienced the greatest abandonment and dilapidation. Less than 20 percent of Chinatown's original buildings remain, many in a very poor state of repair—although several are listed on the Local Register of Historic Resources. In addition, it is isolated from the Fulton District by the Union Pacific railroad tracks and from Southwest Fresno by SR-99.

Chinatown is built upon a well-connected network of pedestrian-scaled blocks with alleys servicing most blocks. However, because of the freeway and railroad tracks, Chinatown is isolated from both Downtown and Southwest Fresno's residential neighborhoods.

Civic Center

The heart of the Civic Center is the Civic Mall that connects the County Courthouse to City Hall along Mariposa Street. Today, the Civic Mall is an assortment of municipal buildings, some with immense architectural value, and others with minimal architectural character that have been haphazardly placed without any architectural or landscape element to unify them.

The Civic Center's street grid consists of rectangular blocks oriented parallel to the railroad tracks. Portions between M Street and N Street and between O and P Street are pedestrian only, while the portion between and N and O Street is open to vehicular traffic. This hampers vehicular connectivity by forcing cars to drive a further distance to go around each block. The lack of vehicular traffic also

reduces the real and perceived safety of pedestrians who walk along the Mall, especially at night and on weekends.

Armenian Town/Convention Center

The Armenian Town/Convention Center's street and block network is oriented to the railroad tracks and consists for the most part of rectangular blocks, although the pedestrian-scale of its blocks has been compromised by the creation of several megablocks. Mono Street between L and P Streets and N Street between Capitol Street and Ventura Street have been closed in order to accommodate the Fresno Entertainment and Convention Center and the Doubletree Hotel.

As a consequence of applying, suburban zoning standards on traditional urban fabric, much of it has been developed with buildings located at the center of the block, surrounded by large surface parking lots. In addition, several streets have been removed, creating megablocks that inhibit both vehicular and pedestrian access. Meanwhile, the portion south of Ventura Avenue has been harmed by the construction of SR-41, which cuts through what was once the heart of Armenian Town, and more recently by the delay of the Old Armenian Town redevelopment project.

Divisadero Triangle

The area around Van Ness Avenue and L Street originally was one of Fresno's wealthiest residential neighborhoods. Several residences from the neighborhood's early years remain along L Street, including the Helm Home; the Bean Home; the Kutner Home; and the Swift Home (now Lisle Funeral Home). Many are on the local Historic Register. Like much of the Plan Area, many of the older buildings within the Divisadero Triangle have been demolished and replaced by parking or vacant lots.

The DNCP includes the following goals and policies to ensure connectivity between neighborhoods and communities and reduce these land use conflicts to provide for future orderly development to reduce the potential to divide established communities.

- **Goal 2.1:** Enhance the unique sense of character and identity of the Downtown Neighborhoods' different planning areas.
- **Policy 2.1.1:** Create and maintain an urban form comprised of walkable neighborhoods, districts, and corridors that are supported by mixed-use neighborhood centers and the Downtown.
- **Goal 2.2:** Revitalize Downtown Fresno to be the economic and cultural heart of the city and the region.
- **Policy 2.2.2:** Prioritize the transformation of Downtown into a clean and safe multi-use place by introducing and mixing high-density housing, office, retail, restaurants and entertainment uses.
- **Policy 2.2.8:** In concert with the introduction of the proposed High Speed Rail station, redevelop and infill Chinatown while preserving existing cultural character.
- **Goal 2.6:** Develop each of Downtown's subarea, as established by the Fulton Corridor Specific Plan, according to its unique character.
- **Policy 2.6.6:** Transform Armenian Town/Convention Center into a walkable and bikable mixed-use neighborhood.
- **Policy 2.6.7:** Transform the Divisadero Triangle—the FCSP Subareas roughly bounded by Merced Street to the south, the BNSF railroad tracks to the east, Divisadero Street to the

north, and the alley between L Street and Van Ness Avenue to the west—into a walkable and bikable mixed-use place.

- **Policy 2.6.8:** Infill Chinatown, South Stadium, and the Mural District with one-, two-, and some three-story buildings that are in scale with their original building stock.
- **Policy 2.6.9:** Complete the Civic Center Mall (Mariposa Mall) by infilling vacant parcels, parking lots, and general sites abutting the Mall in order to create a coherent continuous urban fabric along its axis.
- **Goal 2.11:** Revitalize the corridors to strengthen neighborhood identity and appeal.
- **Policy 2.11.1:** Allow the character, intensity, and use mix along corridors to change in relation to the character of the neighborhoods and districts in which they pass through.
- **Policy 2.11.2:** Ensure that new corridor development is compatible with that of adjacent neighborhoods or other sensitive uses, particularly in regards to noise, parking, and business hours.
- **Policy 2.11.3:** Plan the Downtown Neighborhoods' corridors as amenities for the adjacent neighborhoods as well as for the community at large.
- **Policy 2.11.4:** Convert major thoroughfares from single-use commercial corridors into mixed-use areas with a diversity of retail, office, and residential uses, including mixed-use, multifamily housing in a variety of densities.
- **Goal 2.18:** Interconnect the Downtown Neighborhoods with great streets and beautiful public spaces.
- **Policy 2.18.1:** Provide streets and open spaces that are designed as an integral part of the entire neighborhood or district and that relate to the buildings that surround them.
- **Policy 2.18.2:** Promote plaza and public space designs that are safe, comfortable, and attractive to users. (CAP Urb 5-3)
- **Policy 2.18.3:** Design streets as memorable places, not just automobile conduits.
- **Policy 2.18.4:** Conceive of open spaces as large outdoor rooms that are viewed as places to be enjoyed, not just traversed.
- **Policy 2.18.5:** Promote a hierarchy of streetscapes for visual identity and reinforcement of the physical character of each thoroughfare.
- **Policy 2.18.6:** Promote neighborhood identity by coordinating the streetscape and open spaces with the physical character of the areas being served.
- **Policy 2.18.7:** Encourage the regeneration and maintenance of the public realm of the center city as one continuous network.
- **Policy 2.18.8:** As existing resources allow, provide easy access and connection to public parks and open spaces from adjacent sidewalks.

Cumulative Impact Analysis

Less than significant impact. Development of cumulative projects would occur primarily outside of the Planning Area. The High Speed Rail project is a cumulative project that will be extended along the existing railroad tracks that currently separate communities within the Planning Area. The implementation of the DNCP, FCSP, and DDC would revitalize the downtown area, further integrating it into the surrounding City by providing new pedestrian amenities that will facilitate alternative transportation and promote community cohesion. The goals and policies of the DNCP and FCSP promote a more cohesive and economically sound community. As discussed above, the project will involve infill and under-utilized development within the existing city limits and revitalization of

existing neighborhoods, which will improve community connectivity. The project does not include new linear features or removal of any existing means of access that would impact mobility within an existing community of between a community and outlying area. Therefore, the project's contribution to cumulative impacts associated with dividing established communities is less than cumulatively considerable, and thus less than cumulatively significant.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

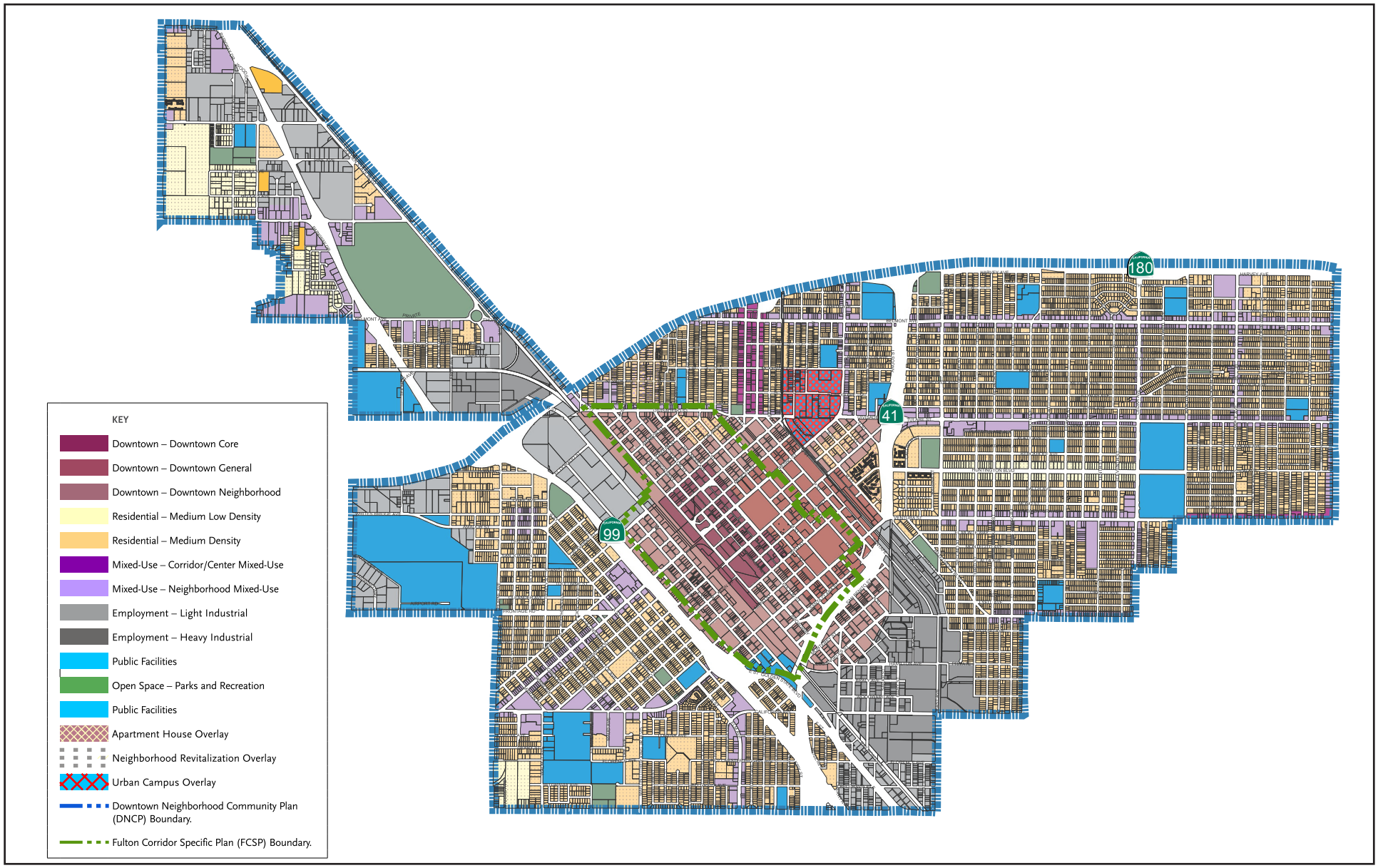
Less than significant impact.

Conflict with Applicable Plans, Policies, or Regulations

Impact LUP-2:	**The project would not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect.**

Project-specific Impact Analysis

Less than significant impact. The General Plan anticipates that the Downtown Planning Area will be further refined through the implementation DNCP and the FCSP, and further implemented through the adoption of the DDC for regulations specific to the Downtown Planning Area. The General Plan, as well as these proposed plans, envisions a new focus on land use and design along major streets and in neighborhoods that support Downtown, with an emphasis on the Fulton Corridor. Planned Land Uses proposed by the DNCP and FCSP are shown in Exhibit 5.10-3a and 5.10-3b, respectively.

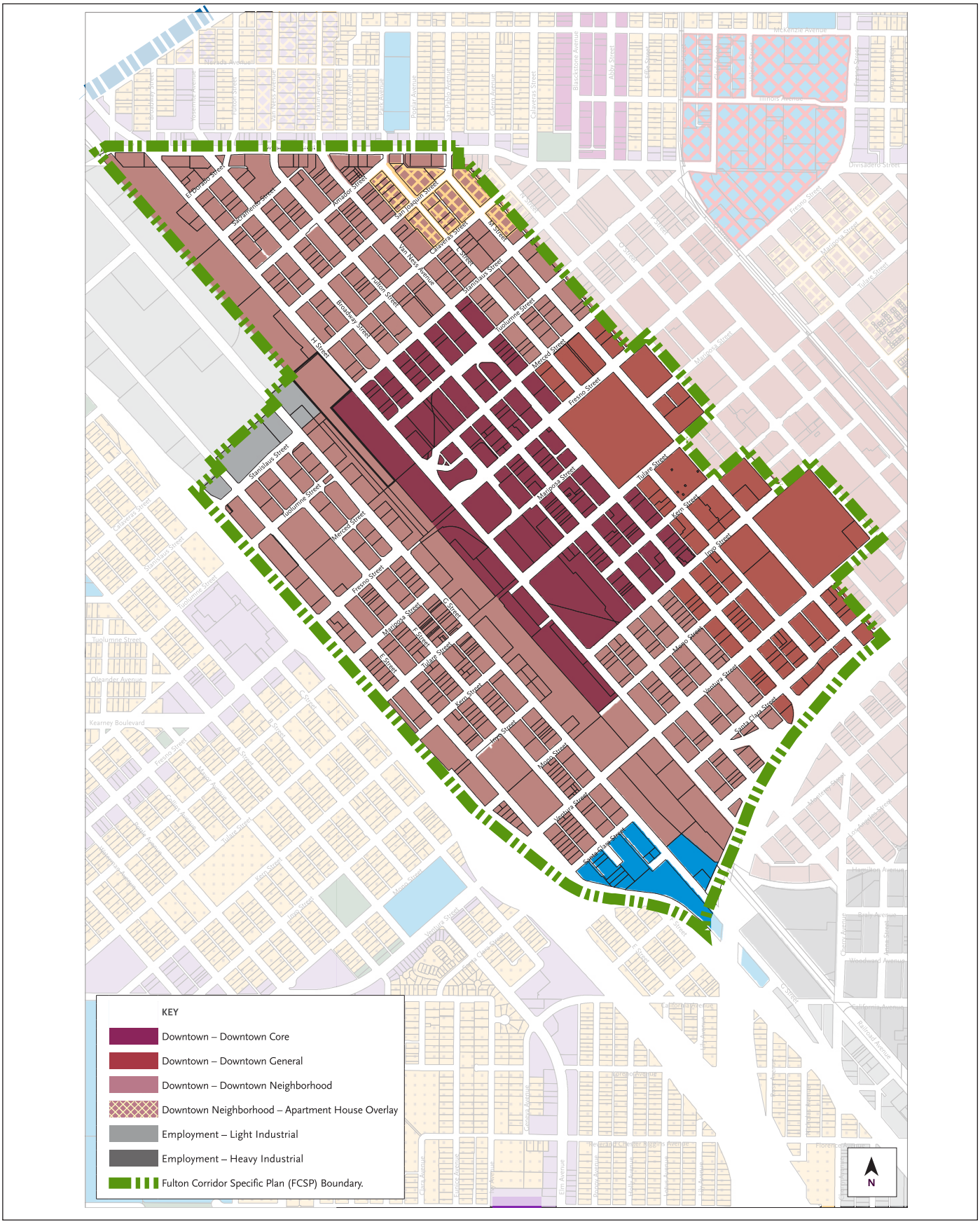


Source: Moule & Polyzoides, 2016

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Exhibit 5.10-3a
Proposed DNCP Land Use and Zoning Designations

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Source: Moule & Polyzoides, 2016

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Exhibit 5.10-3b
Proposed FCSP Land Use and Zoning Designations

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Table 5.10-2 summarizes the DNCP and FCSP's consistency with all applicable goals and policies of the General Plan. As shown in the table, the DNCP and FCSP would be consistent with all applicable goals and policies of the General Plan. Impacts would be less than significant.

Table 5.10-2: General Plan Consistency Analysis

Element	General Plan Objective	Consistency Summary
Economic Development	**ED-1**. Support economic development by maintaining a strong working relationship with the business community and improving the business climate for current and future businesses.	**Consistent.** The DNCP and FCSP envision and will create an environment that supports economic development and improves the business climate in the City of Fresno by attracting investment, businesses, and entrepreneurship and creating and retaining jobs in the Downtown area. By creating an accessible, revitalized, and vibrant city center, the DNCP and FCSP will Reinforce the Fulton District as the City's dominant job center by encouraging large employers to locate Downtown.
	ED-2. Support local business start-ups and encourage innovation by improving access to resources and capital and help overcome obstacles hampering economic development.	**Consistent.** The DNCP and FCSP include goals and policies to promote the Downtown as a location for business incubators and start-up companies.
	ED-3. Attract and recruit businesses and offer incentives for economic development.	**Consistent.** The DNCP and FCSP seek to guide the redevelopment of the Downtown Fresno area to create a vibrant community with a mix of new retail, office, and residential uses. The plans identify desired commercial end uses (mid and large floor plate retail; commercial mixed uses, etc.) and, in this sense, promotes Fresno as a potential location for these types of businesses.
	ED-4. Cultivate a skilled, educated, and well-trained workforce by increasing educational attainment and the relevant job skill levels in order to appeal to local and non-local businesses.	**Consistent.** The DNCP and FCSP identify strategies to attracting, creating, and retaining jobs within Downtown and the surrounding neighborhoods including: • Developing job training that will increase the employability of the Plan Area's residents; • Supporting existing businesses and incubating new businesses in order to increase the economic output of the Plan Area.
Urban Form, Land Use, and Design	**UF-1.** Emphasize the opportunity for a diversity of districts, neighborhoods, and housing types.	**Consistent.** The DNCP and FCSP seek to create and maintain an urban form comprised of walkable neighborhoods, districts, and corridors that are supported by mixed-use neighborhood centers and the Downtown.

Table 5.10-2 (cont.): General Plan Consistency Analysis

Element	General Plan Objective	Consistency Summary
		Implementation of the DNCP and FCSP will result in the creation of a diverse mix of uses in Downtown Fresno. The plans envision a broad diversity of housing choices and building types.
	UF-2. Enhance the unique sense of character and identity of the different subareas of the Downtown neighborhoods.	**Consistent.** The intent of the DNCP and FCSP is to preserve the distinct neighborhood character of the different areas within the Downtown Neighborhoods including Lowell, Southwest Fresno, Southeast Fresno, Jefferson, and Jane Addams, Downtown Fresno and South Van Ness.
	UF-3. Revitalize the Downtown to be the economic and cultural heart of Fresno and the region.	**Consistent.** The primary purpose of the DNCP, FCSP, and DDC are to provide a vision and framework for the revitalization of Downtown Fresno into the economic and cultural heart of the City and the surrounding region.
	UF-4. Support and encourage arts and culture in the Downtown neighborhoods.	**Consistent.** The DNCP and FCSP seek to create a rich artistic and cultural dimension of the community's identity, to enhance social interaction, build community trust, and to advance the City's economic development goals and priorities.
	UF-5. Promote a greater concentration of buildings and people in the Downtown.	**Consistent.** Both the DNCP and FCSP include goals and policies to promote a greater concentration of buildings and people in Downtown Fresno.
	UF-6. Support new development in the Downtown through investment in public infrastructure.	**Consistent.** The DNCP and FCSP contain goals and policies to support new development through investment in existing and new public infrastructure.
	UF-7. Promote a diverse mix of uses in the Downtown in order to create a community with a 24 hour entertainment district.	**Consistent.** The DNCP, FCSP, and DDC promote a diverse mix of uses in Downtown Fresno by encouraging the location of specialty destinations that serve as regional and citywide attractors and to promote walking as a viable mode of everyday transportation in order to support retail and commercial activity.
	UF-8. Develop each of Downtown's neighborhoods and districts, according to its unique character.	**Consistent.** A primary planning goal of both the DNCP and FCSP is to preserve the distinct neighborhood character of the different areas within the Downtown neighborhoods.
	UF-9. Capitalize on the High Speed Rail system to help revitalize the Downtown neighborhoods.	**Consistent.** The DNCP and FCSP seek to capitalize on the High Speed Rail system to help revitalize the Downtown neighborhoods

Table 5.10-2 (cont.): General Plan Consistency Analysis

Element	General Plan Objective	Consistency Summary
		by using the future High Speed Rail station to catalyze change in the Downtown Neighborhoods and creating a new, high-density transit-oriented development district near the future High Speed Rail station.
	UF-10. Calibrate parking according to the Downtown's parking needs and make it efficient and easy to find.	**Consistent.** The DNCP, FCSP, and DDC all contain policies and regulations designed to calibrate parking to Downtown's needs and make it efficient and easy to find.
	UF-11. Revitalize the Fulton Corridor consistent with the reconstruction project.	**Consistent.** The purpose of the FCSP is to revitalize the Fulton Corridor in a way consistent with the General Plan.
	UF-12. Locate roughly one-half of future residential development in infill areas—defined as being within the City on December 31, 2012—including the Downtown core area and surrounding neighborhoods, mixed-use centers and transit-oriented development along major BRT corridors, and other non-corridor infill areas, and vacant land.	**Consistent.** The DNCP and FCSP concentrate residential development within the Downtown core area and surrounding neighborhoods.
	UF-13. Locate roughly one-half of future residential development in the Growth Areas—defined as unincorporated land as of December 31, 2012 SOI—which are to be developed with Complete Neighborhoods that include housing, services, and recreation; mixed-use centers; or along future BRT corridors.	**Consistent.** The DNCP and FCSP concentrate residential development within the Downtown core area, an identified Growth Area.
	UF-14. Create an urban form that facilitates multi-modal connectivity.	**Consistent.** The DNCP, FCSP, and DDC seek to create an urban form that facilities multi-modal connectivity throughout the City of Fresno and surrounding region.
	LU-2. Plan for infill development that includes a range of housing types, building forms, and land uses to meet the needs of both current and future residents.	**Consistent.** The DNCP and FCSP provide for the development of a range of housing types, building forms, and land uses to meet the needs of both current and future residents.
	LU-3. Support the successful fulfillment of plans when adopted for the Downtown Planning Area.	**Consistent.** Implementation of the DNCP, FCSP, and DDC would equate to the successful fulfillment of plans for the Downtown Planning Area.
	LU-4. Enhance existing residential neighborhoods through regulations, code enforcement, and compatible infill development.	**Consistent.** The DNCP, FCSP, and DDC would allow for the enhancement of existing residential neighborhoods through regulations, code enforcement, and infill development.

Table 5.10-2 (cont.): General Plan Consistency Analysis

Element	General Plan Objective	Consistency Summary
	LU-5. Plan for a diverse housing stock that will support balanced urban growth, and make efficient use of resources and public facilities.	**Consistent.** The DNCP and FCSP create a diversity of housing types that will support balanced urban growth and the efficient use of resources and facilities.
	LU-6. Retain and enhance existing commercial areas to strengthen Fresno's economic base and site new office, retail, and lodging use districts to serve neighborhoods and regional visitors.	**Consistent.** DNCP Policy 2.2.4 and FCSP Goal 6-6 seek to allow for a wide variety of commercial businesses in the Downtown to support the vision of making Downtown the commercial heart of the Region.
	LU-7. Plan and support industrial development to promote job growth.	**Consistent.** The DNCP and the FCSP would allow for a wide diversity of non-residential, job-producing uses, including industrial development in the appropriate locations in the Downtown Neighborhoods, promote economic development, and increase residents' access to jobs.
	LU-8. Provide for the development of civic and institutional land uses to meet the educational, medical, social, economic, cultural, and religious needs of the community.	**Consistent.** DNCP Policy 2.5.4 and FCSP Goal 6-7 seek to promote Downtown Fresno as the government center for city, county, state, federal, and other public agencies, and continue to encourage local, state, and federal government offices to locate Downtown.
	LU-9. Plan land uses, design, and development intensities to supplement and support, and not compete with, the Downtown.	**Consistent.** The purpose of the DNCP and FCSP is to guide development in the Downtown Fresno and its surrounding neighborhoods. The plans seek to capitalize on the positive momentum for Downtown revitalization and put specific policies and actions into place to guide the rejuvenation of the Downtown neighborhoods that brings about lasting prosperity and improvements.
	D-1. Provide and maintain an urban image that creates a "sense of place" throughout Fresno.	**Consistent.** DNCP Goal 2.14 seeks to create a safe and attractive environment for residents and visitors to the Downtown Neighborhoods. FCSP Goal 6.10 will generate high-quality, pedestrian-oriented public space in Downtown.
	D-3. Create unified plans for Green Streets, using distinctive features reflecting Fresno's landscape heritage.	**Consistent.** Both the DNCP and FCSP seek to interconnect the Downtown Neighborhoods with great streets and beautiful public spaces, including green streets. Chapter 4 of the DNCP and Chapter 8 of the FCSP include policies and guidelines for the creation of green streets.

Table 5.10-2 (cont.): General Plan Consistency Analysis

Element	General Plan Objective	Consistency Summary
	D-4. Preserve and strengthen Fresno's overall image through design review and create a safe, walkable and attractive urban environment for the current and future generations of residents.	**Consistent.** The DNCP and FCSP seek to create a Downtown that is a safe and attractive place to live, work, and visit. All future development within the DNCP and FCSP will be required to comply with the design regulations and policies of the DNCP, FCSP, and DDC.
	D-5. Maintain and improve community appearance through programs that prevent and abate blighting influences	**Consistent.** The intent of DNCP Goal 2.14 is to reduce or minimize conditions of blight and take steps necessary to address the significant number of code violations in the Downtown Neighborhoods.
	D-6. Encourage design that celebrates and supports the cultural and ethnic diversity of Fresno.	**Consistent.** The DNCP and FCSP encourage design that celebrates and supports the cultural and ethnic diversity of Fresno.
	D-7. Continue applying local urban form, land use, and design policies to specific neighborhoods and locations.	**Consistent.** The DNCP and FCSP seek to create a Downtown that is a safe and attractive place to live, work, and visit. All future development within the DNCP and FCSP will be required to comply with the regulations and policies of the DNCP, FCSP, and DDC.
Mobility and Transportation	**MT-1.** Create and maintain a transportation system that is safe, efficient, provides access in an equitable manner, and optimizes travel by all modes.	**Consistent.** The DNCP and FCSP will create a network of complete streets and multi-modal transportation strategies that will provide streets and programs to enable pedestrians, bicyclists, motorists, and transit users of all ages and abilities to safely move along and across streets.
	MT-2. Make efficient use of the City's existing and proposed transportation system and strive to ensure the planning and provision of adequate resources to operate and maintain it.	**Consistent.** The DNCP and FCSP seek to make efficient use of the City's existing transportation system and well as capitalizing on proposed improvements, such as Downtown's proximity to the future High-Speed Rail Station.
	MT-4. Establish and maintain a continuous, safe, and easily accessible bikeways system throughout the metropolitan area to reduce vehicle use, improve air quality and the quality of life, and provide public health benefits.	**Consistent.** The intent of DNCP Goal 3.6 is to create a comprehensive, well-connected bicycle network that provides residents with a viable mode of citywide transportation and increases health and physical activity.
	MT-5. Establish a well-integrated network of pedestrian facilities to accommodate safe, convenient, practical, and inviting travel by walking, including for those with physical mobility and vision impairments.	**Consistent.** The intent of DNCP Goal 3.7 is to broadly promote walking as a preferred mode of transportation, create a sense of vibrancy Downtown and in the Downtown Neighborhoods, and encourage health through physical activity by maintaining and enhancing Downtown's pedestrian network.

Table 5.10-2 (cont.): General Plan Consistency Analysis

Element	General Plan Objective	Consistency Summary
	MT-6. Establish a network of multi-purpose pedestrian and bicycle paths, as well as limited access trails, to link residential areas to local and regional open spaces and recreation areas and urban Activity Centers in order to enhance Fresno's recreational amenities and alternative transportation options.	**Consistent.** The DNCP and FCSP seek to provide a network of multi-use trails and linear parks in the downtown neighborhoods in conformance with the Active Transportation Program (ATP).
	MT-10. Establish parking standards that are strategically tuned to support neighborhoods, shopping districts and employment centers that have a complete range of transportation choices.	**Consistent.** The DNCP and FCSP seek to introduce parking policies that focus on attracting customers to Downtown. These include parking standards in the DDC.
Parks, Open Space, and Schools	**POSS-1.** Provide an expanded, high quality and diversified park system, allowing for varied recreational opportunities for the entire Fresno community.	**Consistent.** The DNCP and FCSP prioritize increasing access to parks and open spaces, aiming for all residences to be within walking distance of a park or open space facility.
	POSS-2. Ensure that adequate land, in appropriate locations, is designated and acquired for park and recreation uses in infill and growth areas.	**Consistent.** The DNCP and FCSP encourage the City to partner with other agencies, including the Fresno Unified School District, and adopt joint-use agreements to share school fields, playgrounds, gyms, auditoriums, and aquatic facilities in order to provide a wider range of recreation programs and maximize the efficient use, maintenance, and supervision of public facilities. These additional facilities can increase the amount of park amenities without the need to purchase and develop additional park facilities.
	POSS-8. Work cooperatively with school districts to find appropriate locations for schools to meet the needs of students and neighborhoods.	**Consistent**. Impacts to school service and performance were evaluated by this EIR and determined to be less than significant. Refer to Section 5.13, Public Services for further discussion.
Public Utilities and Services	**PU-1.** Provide the level of law enforcement and crime prevention services necessary to maintain a safe, secure, and stable urban living environment through a Police Department that is dedicated to providing professional, ethical, efficient and innovative service with integrity, consistency and pride.	**Consistent**. Impacts to law enforcement and crime prevention services were evaluated by this EIR and determined to be less than significant. Refer to Section 5.13, Public Services for further discussion.
	PU-2. Ensure that the Fire Department's staffing and equipment resources are sufficient to meet all fire and emergency service level objectives and are provided in an efficient and cost effective manner.	**Consistent**. The Fresno Fire Department will review all development applications for compliance with applicable Fire Code standards. Refer to Section 5.13, Public Services for further discussion.

Table 5.10-2 (cont.): General Plan Consistency Analysis

Element	General Plan Objective	Consistency Summary
	PU-4. Ensure provision of adequate trunk sewer and collector main capacities to serve existing and planned urban development, consistent with the Wastewater Master Plan.	**Consistent**. Impacts to trunk sewer capacity were evaluated by this EIR and determined to be less than significant. Refer to Section 5.15, Utilities for further discussion.
	PU-6. Ensure the provision of adequate sewage treatment and disposal by utilizing the Fresno-Clovis Regional Wastewater Reclamation Facility as the primary facility, when economically feasible, for all existing and new development within the Metropolitan Area.	**Consistent**. Impacts to sewage treatment and disposal were evaluated by this EIR and determined to be less than significant. Refer to Section 5.15, Utilities for further discussion.
	PU-7. Promote reduction in wastewater flows and develop facilities for beneficial reuse of reclaimed water and biosolids for management and distribution of treated wastewater.	**Consistent**. Impacts related to wastewater flows and treatment and reuse of wastewater were evaluated by this EIR and determined to be less than significant. Refer to Section 5.15, Utilities for further discussion.
	PU-9. Provide adequate solid waste facilities and services for the collection, transfer, recycling, and disposal of refuse.	**Consistent**. Impacts to solid waste facilities were evaluated by this EIR and determined to be less than significant. Refer to Section 5.15, Utilities for further discussion.
Historic and Cultural Resources	**HCR-2.** Identify and preserve Fresno's historic and cultural resources that reflect important cultural, social, economic, and architectural features so that residents will have a foundation upon which to measure and direct physical change.	**Consistent.** The DNCP and FCSP promote the preservation and rehabilitation of historic buildings and resources in the Downtown Neighborhoods.
Noise and Safety	**NS-1**. Protect the citizens of the City from the harmful and annoying effects of exposure to excessive noise.	**Consistent.** This EIR evaluates potential noise impacts and sets forth mitigation measures to ensure that sensitive receptors (such as residential uses) are not exposed to excessive noise levels. Refer to Section 5.11, Noise for further discussion.
	NS-2. Minimize risks of property damage and personal injury posed by geologic and seismic risks.	**Consistent.** This EIR requires standard mitigation for geologic and seismic hazards. Refer to Section 5.6, Geology, Soils, and Seismicity for further discussion.
	NS-3. Minimize the risks to property, life, and the environment due to flooding and stormwater runoff hazards.	**Consistent.** This EIR requires construction stormwater quality control measures to prevent flooding due to stormwater runoff. Refer to Section 5.10 Hydrology and Water Quality for further discussion
	NS-4. Minimize the risk of loss of life, injury, serious illness, and damage to property resulting from the use, transport, treatment, and disposal of hazardous materials and hazardous wastes.	**Consistent.** The DNCP and FCSP do not contemplate any end uses with the potential to handle large quantities of hazardous materials. Regardless, any use, transport, or storage of hazardous materials would be

Table 5.10-2 (cont.): General Plan Consistency Analysis

Element	General Plan Objective	Consistency Summary
		required to comply with applicable state and local regulations, including those of the Fresno County Health Services Hazardous Materials Program. As such, the risk of property damage and personal injury resulting from the hazardous materials would be minimized.
Healthy Communities	**HC-1.** Work with neighborhood associations of local residents, businesses, and institutions on neighborhood and community health initiatives.	**Consistent.** Goal 7.2 of the DNCP seeks to actively involve and engage all members of the community to improve health and quality of life in the Downtown Neighborhoods by ensuring that the wide diversity of residents and businesses in the Downtown Neighborhoods are involved in civic life and engaged through a process that is sensitive to diverse cultures, education levels and linguistic abilities.
	HC-2. Create complete, well-structured, and healthy neighborhoods and transportation systems.	**Consistent.** The DNCP and FCSP seek to improve health outcomes through land use and transportation decisions by promoting land use and transportation decisions that reduce air pollution and encourage residents to lead physically active lifestyles.
	HC-3. Create healthy, safe, and affordable housing.	**Consistent.** The DNCP and FCSP will introduce additional, pedestrian-friendly, contextually appropriate housing in the Downtown Neighborhoods in order to revitalize existing neighborhoods, generate a well-rounded resident population, and restore the late 19th and early-20th century neighborhood pattern of the Plan Area's residential areas.
	HC-5. Promote access to healthy and affordable food.	**Consistent.** The DNCP and FCSP promote access to healthy and affordable food through policies designed to ensure that all residents and employees in the Downtown Neighborhoods have convenient access to safe, affordable, and nutritious foods.
Source: City of Fresno, General Plan, 2014; First Carbon Solutions, 2015.		

Cumulative Impact Analysis

Less than significant impact. All cumulative projects will be subject to review by the City of Fresno and will be required to demonstrate consistency with all plans and policies, or provide mitigation as appropriate. For example, cumulative projects that are not consistent with existing General Plan and zoning designations would require discretionary approval of General Plan and/or Citywide

Development Code Amendments by the City of Fresno. Such approvals would serve to reconcile any inconsistencies between existing land use designations and the cumulative projects. Cumulative projects would similarly be required to comply with all applicable development standards that are intended to address and reduce land use and planning impacts, which will be enforced through the City's permit and approval processes. As discussed above, the implementation of the DNCP, FCSP, and DDC would be consistent with federal, state, regional, and local plans. Since the proposed FCSP, DNCP, and DDC would be consistent with these plans, the potential environmental impacts associated with these plans from buildout would be less than significant. Therefore, the project's contribution to potential cumulative impacts on these plans would be less than cumulatively considerable. Thus, the project would result in a less than significant cumulative impact.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Conflict with Conservation Plans

Impact LUP-3:	**The project would not conflict with any applicable habitat conservation plan or natural communities conservation plan.**

Project-specific Impact Analysis

No impact. The DNCP and FCSP planning areas are not within the boundaries of any approved or draft Habitat Conservation Plan (HCP), Natural Community Conservation Plan (NCCP) or other adopted local, regional, or state HCP. Therefore, development within the Planning Area will not result in any impacts to an adopted HCP or NCCP.

Cumulative Impact Analysis

No impact. The nearest NCCP is the Metropolitan Bakersfield Habitat Conservation Plan (MBHCP), although it is located outside of the cumulative impact study area for land use and planning. No City of Fresno development activities are proposed that would conflict with the goals of the MBHCP. There are no HCPs or NCCPs occur within the cumulative impact study area, thus cumulative development within the cumulative impact study area would not result in an impact to any HCP/NCCP. Therefore, the proposed project and cumulative projects would not result in any cumulative impacts related to conflicts with any HCP/NCCP.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

No impact.

Cumulative

No impact.

5.11 - Noise

5.11.1 - Introduction

This section addresses potential noise impacts that may result from implementation of the Downtown Neighborhoods Community Plan (DNCP), Fulton Corridor Specific Plan (FCSP), and the Downtown Development Code (DDC). Information obtained from the City of Fresno has been used to characterize the existing noise setting of the Plan areas and to identify and address potential noise impacts.

Sources

Information in this section is based on the following sources:

- Downtown Neighborhoods Community Plan. 2016. The complete plan is contained in Appendix A.
- Fulton Corridor Specific Plan. 2016. The complete plan is contained in Appendix B.
- Downtown Development Code. 2016. The complete code is contained in Appendix C.
- Fresno General Plan (and the associated Master Environmental Impact Report (MEIR)). December 2014.
- Fresno Municipal Code, specifically Chapter 10, Article 1 Noise. Updated 2015.
- Fresno-Chandler Executive Airport Land Use Compatibility Plan. September 2014.
- Fresno Yosemite International Airport Land Use Compatibility Plan. August 2012.

Fundamentals of Noise

Noise is generally defined as unwanted sound. Noise consists of any sound that may produce physiological or psychological damage or interfere with communication, work, rest, recreation, and sleep.

Several noise measurement scales exist which are used to describe noise in a particular location. The standard unit of measurement of the loudness of sound is the decibel (dB). The 0 point on the dB scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Changes of 3 dB or less are only perceptible in laboratory environments. Audible increases in noise levels generally refer to a change of 3 dB or more, as this level has been found to be barely perceptible to the human ear in outdoor environments. While a change of 5 dBA is considered to be the minimum readily perceptible change to the human ear in outdoor environments.

Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a 10-fold increase in acoustic energy, while 20 dB is 100 times more intense, 30 dB is 1,000 times more intense. Each 10-dB increase in sound level is perceived as approximately a doubling of loudness. Sound intensity is normally measured through the A-weighted sound level (dBA). This scale gives

greater weight to the frequencies of sound to which the human ear is most sensitive. Table 5.11-1 shows some representative noise sources and their corresponding noise levels in dBA.

Table 5.11-1: Typical A-Weighted Noise Levels

Indoor Noise Source	Noise Level (dBA)	Outdoor Noise Sources
(Threshold of Hearing in Laboratory)	0	—
Library	30	Quiet Rural Nighttime
Refrigerator Humming	40	Quiet Suburban Nighttime
Quiet Office	50	Quiet Urban Daytime
Normal Conversation at 3 feet	60	Normal Conversation at 3 feet
Vacuum Cleaner at 10 feet	70	Gas Lawn Mower at 100 feet
Hair Dryer at 1 foot	80	Freight Train at 50 feet
Food Blender at 3 feet	90	Heavy-duty Truck at 50 feet
Inside Subway Train (New York)	100	Jet Takeoff at 2,000 feet
Smoke Detector Alarm at 3 feet	110	Unmuffled Motorcycle
Rock Band near stage	120	Chainsaw at 3 feet
—	130	Military Jet Takeoff at 50 feet
—	140	(Threshold of Pain)
Source: FCS, 2014.		

As noise spreads from a source, it loses energy so that the farther away the noise receiver is from the noise source, the lower the perceived noise level would be. Geometric spreading causes the sound level to attenuate or be reduced, resulting in a 6-dB reduction in the noise level for each doubling of distance from a single point source of noise to the noise-sensitive receptor of concern. Transportation noise sources such as roadways are typically analyzed as line sources, since at any given moment the receiver may be impacted by multiple vehicles at various locations along the roadway. Because of the geometry of a line source, the noise drop-off rate associated with the geometric spreading of a line source is 3 dBA per doubling of distance.

There are many ways to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound, including during sensitive times of the day and night. The predominant rating scales in the State of California are the L_{eq}, the community noise equivalent level (CNEL), and the day-night average level (L_{dn}) based on A-weighted decibels (dBA). The equivalent continuous sound level (L_{eq}) is the total sound energy of time varying noise over a sample period. CNEL is the time varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale, but without the adjustment for events occurring during the evening relaxation hours. CNEL and L_{dn} are within one dBA of each other

and are normally exchangeable. These additions are made to the sound levels at these times because there is a decrease in the ambient noise levels during the evening and nighttime hours, which creates an increased sensitivity to sounds. For this reason, sound is perceived to be louder in the evening and nighttime hours as compared with daytime hours, and is weighted accordingly. Many cities rely on the CNEL noise standard to assess transportation-related impacts on noise-sensitive land uses.

Other noise rating scales of importance when assessing the annoyance factor include the maximum noise level (L_{max}), which is the highest exponential time-averaged sound level that occurs during a stated time period. The noise environments discussed in this analysis are specified in terms of maximum levels denoted by L_{max} for short-term noise impacts. L_{max} reflects peak operating conditions and addresses the annoying aspects of intermittent noise.

Noise standards in terms of percentile exceedance levels, L_n, are often used together with the L_{max} for noise enforcement purposes. When specified, the percentile exceedance levels are not to be exceeded by an offending sound over a stated time period. For example, the L_{10} noise level represents the level exceeded 10 percent of the time during a stated period. The L_{50} noise level represents the median noise level (which means that the noise level exceeds the L_{50} noise level half of the time, and is less than this level half of the time). The L_{90} noise level represents the noise level exceeded 90 percent of the time and is considered the lowest noise level experienced during a monitoring period. The L_{90} noise level is normally referred to as the background noise level. For a relatively steady noise, the measured L_{eq} and L_{50} are approximately the same.

Construction Noise Fundamentals

Construction is performed in discrete steps or phases, each of which has its own mix of equipment and, consequently, its own noise characteristics. Typical phases of construction include demolition, excavation, grading, and building construction. These various sequential phases would change the character of the noise generated on each construction site and, therefore, would change the noise levels as construction progresses. Despite the variety in the type and size of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction related noise ranges to be categorized by work phase. Construction-period noise levels are higher than background ambient noise levels, but eventually cease once construction is complete. The Federal Highway Administration (FHWA) has compiled noise measurement data regarding the noise generating characteristics of various types of construction equipment. Table 5.11-2 provides a summary of these typical noise levels of construction equipment as measured at a distance of 50 feet from the operating equipment.

Table 5.11-2: Typical Construction Equipment Maximum Noise Levels, L_{max}

Type of Equipment	Impact Device? (Yes/No)	Specification Maximum Sound Levels for Analysis (dBA at 50 feet)
Pickup Truck	No	55
Pumps	No	77

Table 5.11-2 (cont.): Typical Construction Equipment Maximum Noise Levels, L_{max}

Type of Equipment	Impact Device? (Yes/No)	Specification Maximum Sound Levels for Analysis (dBA at 50 feet)
Air Compressors	No	80
Backhoe	No	80
Front-End Loaders	No	80
Portable Generators	No	82
Dump Truck	No	84
Tractors	No	84
Auger Drill Rig	No	85
Concrete Mixer Truck	No	85
Cranes	No	85
Dozers	No	85
Excavators	No	85
Graders	No	85
Jackhammers	Yes	85
Man Lift	No	85
Paver	No	85
Pneumatic Tools	No	85
Rollers	No	85
Scrapers	No	85
Concrete/Industrial Saws	No	90
Impact Pile Driver	Yes	95
Vibratory Pile Driver	No	95
Source: FHWA, 2006.		

Groundborne Vibration Fundamentals

Groundborne vibrations consist of rapidly fluctuating motions within the ground that have an average motion of zero. Vibrating objects in contact with the ground radiate vibration waves through various soil and rock strata to the foundations of nearby buildings.

Although groundborne vibration can be felt outdoors, it is typically only an annoyance to people indoors where the associated effects of the shaking of a building can be notable. When assessing annoyance from groundborne vibration, vibration is typically expressed as root mean square (rms)

velocity in units of decibels of 1 micro-inch per second. To distinguish these vibration levels from noise levels, the unit is written as "VdB."

In extreme cases, excessive groundborne vibration has the potential to cause structural damage to buildings. Common sources of groundborne vibration include construction activities such as blasting, pile driving and operating heavy earthmoving equipment. However, construction vibration impacts on building structures are generally assessed in terms of peak particle velocity (PPV). For purposes of this analysis, project-related impacts are expressed in terms of PPV. Typical vibration source levels from construction equipment are shown in Table 5.11-3.

The vibration level at a distance from a source can be calculated using the following propagation formula (this formula is based on point sources with normal propagation conditions) (FTA, 2006):

$$PPV_{equip} = PPV_{ref} \times (25/D)^{n}$$

Where:

PPV (equip) is the peak particle velocity in inches per second of the equipment adjusted for distance;
PPV (ref) is the reference vibration level in inches per second at 25 feet from Table 5.11-3;
D is the distance from the equipment to the receiver; and
n is the vibration attenuation rate through ground.

According to Chapter 12 of the Federal Transit Administration (FTA) Transit Noise and Vibration Impact Assessment manual (2006), an "n" value of 1.5 is recommended to calculate vibration propagation through typical soil conditions.

Because vibration propagates in waves through the soil, multiple pieces of equipment operating simultaneously would each produce vibration waves in different phases that typically would not increase the magnitude of the vibration; instead, multiple pieces of equipment would just lengthen the duration of the vibration impact.

Table 5.11-3: Vibration Levels of Construction Equipment

Construction Equipment	PPV at 25 Feet (inches/second)	RMS Velocity in Decibels (VdB) at 25 Feet
Water Trucks	0.001	57
Scraper	0.002	58
Bulldozer—small	0.003	58
Jackhammer	0.035	79
Concrete Mixer	0.046	81
Concrete Pump	0.046	81
Paver	0.046	81
Pickup Truck	0.046	81
Auger Drill Rig	0.051	82

Table 5.11-3 (cont.): Vibration Levels of Construction Equipment

Construction Equipment	PPV at 25 Feet (inches/second)	RMS Velocity in Decibels (VdB) at 25 Feet
Backhoe	0.051	82
Crane (Mobile)	0.051	82
Excavator	0.051	82
Grader	0.051	82
Loader	0.051	82
Loaded Trucks	0.076	86
Bulldozer—Large	0.089	87
Caisson drilling	0.089	87
Vibratory Roller (small)	0.101	88
Compactor	0.138	90
Clam shovel drop	0.202	94
Vibratory Roller (large)	0.210	94
Pile Driver (impact-typical)	0.644	104
Pile Driver (impact-upper range)	1.518	112
Source: Compilation of scientific and academic literature, generated by FTA and FHWA.		

5.11.2 - Environmental Setting

Study Area for Project Impacts

The study area for project-related noise impacts includes the DNCP and FCSP areas.

Study Area for Cumulative Impacts

The study area for the analysis of cumulative noise impacts is the City of Fresno.

Existing Noise Levels

Generally, the three primary sources of substantial noise that affect the City of Fresno and its residents are all transportation-related and consist of local streets and regional highways; airport operations at the Fresno Yosemite International, the Fresno-Chandler Downtown, and the Sierra Sky Park Airports; and railroad operations along the BNSF Railway and the Union Pacific railroad lines.

The existing noise conditions in the General Plan Update Planning Area were measured at nine locations throughout the City of Fresno from May 30 to June 1, 2012. Noise monitoring sites were selected to be representative of residential, commercial, and industrial land uses within the DNCP and FCSP areas, as well as arterial roadways, elevated and below-grade freeways, and railroad crossings with and without train horn soundings. At each of the nine long-term 24-hour noise monitoring sites, day-night statistical noise level trends were recorded to develop DNL values. Descriptions of each location and the measured noise levels are provided in Table 5.11-4. These

noise measurements provide a baseline for the noise environment throughout the City of Fresno to which noise levels within the DNCP and FCSP areas can be compared.

Table 5.11-4: Measured Existing Noise Levels from General Plan Update

Location	Distance from Noise Source Centerline (feet)	Measured Noise Level (dBA L_{dn})
Railroad crossing at Shields Avenue	100	84
Along Railroad near W Barstow Avenue	100	74
SR 41 between W Barstow Avenue and W Shaw Avenue	100	76
SR 180 near N Peach Avenue	100	76
E Shaw Avenue near N Cedar Avenue	100	72
N Blackstone Avenue near E Ashlan Avenue	100	70
S Elm Avenue near E Jensen Avenue	100	68
N Valentine Avenue between W Ashlan Avenue and W Holland Avenue	100	67
S Fruit Avenue north of Church Avenue	100	65
Source: City of Fresno General Plan 2014.		

In addition to the above noise measurements, FirstCarbon Solutions took noise measurements at 27 locations throughout the City and the results are shown in Table 5.11-5. The locations indicated with an asterisk (*) in Table 5.11-5 are the noise measurements located within the DNCP area. The results show that daytime hourly average noise levels within the DNCP area range from 62.3 dBA to 78.3 dBA L_{eq}.

Table 5.11-5: Additional Measured Existing Noise Levels

Location	Distance from Noise Source (feet)	Measured Noise Level (dBA L_{eq})
Shaw Avenue (Polk Avenue to SR-99)	25	66.5
Grantland Avenue (W Ashland Avenue to E Shields Avenue)	20	64.8
Golden State Boulevard (W Shaw Avenue to W Santa Ana Avenue)	25	72.2
N Brawley Avenue (W Clinton Avenue to McKinley Avenue)	20	65.5
W Belmont Avenue (Marks Avenue to Hughes Avenue)*	20	65.9
E McKinley Avenue (West Avenue to N Fruit Avenue)*	25	64.2
W Kearney Boulevard (West Avenue to S Fruit Avenue)*	20	63.3
Jensen Avenue (Fruit Avenue to Walnut Avenue)	20	71.0

Table 5.11-5 (cont.): Additional Measured Existing Noise Levels

Location	Distance from Noise Source (feet)	Measured Noise Level (dBA L_{eq})
N Friant Road (E Audubon Avenue to Blackstone Avenue)	20	73.3
E Herndon Avenue (SR-41 NB Off Ramp to N Fresno Street)	30	57.0
W Ashlan Avenue (N Fruit Avenue to N Palm Avenue)	20	70.4
W Bullard Avenue (West Avenue to N Palm Avenue)	20	68.7
Fresno Street (B Street to A Street)*	20	69.7
Ventura Avenue (M Street to O Street)*	20	67.4
Divisadero Street (Van Ness Avenue to San Pablo Avenue)*	20	64.5
Blackstone Avenue (Belmont Avenue to Divisadero Street)*	20	65.5
P Street (Divisadero Street to Tuolumne Street)*	25	62.3
Tulare Street (U Street to SR-41)*	20	78.3
First Street (Belmont Avenue to SR-180)*	25	66.1
S Peach Avenue (E Kings Canyon Road to Lane Avenue)	20	61.7
E Jensen Avenue (S Clovis Avenue to S Peach Avenue)	25	70.8
S Temperance Avenue (E Butler Avenue to E Kings Canyon Road)	20	64.9
N Clovis Avenue (E Olive Avenue to E McKinley Avenue)	20	66.3
E McKinley Avenue (SR-168 to N Maple Avenue)	25	71.2
E Shaw Avenue (SR-168 to N Chestnut Avenue)	20	67.6
Willow Avenue (E Bullard Avenue to E Barstow Avenue)	20	70.5

Note:
* = noise measurements located within the DNCP area
Source: FCS, 2013.

Roadways

Those areas in the City that experience sound levels greater than 60 dBA L_{dn} are typically near major vehicular traffic corridors. Highway traffic noise levels typically depend on three factors: (1) the volume of traffic, (2) the average speed of traffic, and (3) the vehicle mix (i.e., the percentage of trucks versus automobiles in the traffic flow). Vehicle noise includes noises produced by the engine, exhaust, tires, and wind generated by taller vehicles. Other factors that affect the perception of traffic noise include the distance from the highway, terrain, vegetation, and natural and structural obstacles. While tire noise from automobiles is generally located at ground level, truck noise sources can be located as high as 10 to 15 feet above the roadbed due to tall exhaust stacks and higher engines.

Freeway traffic is the dominant noise source in Fresno. The freeways in the downtown Fresno area consist of State Route 41 (SR-41), which has up to 76,800 vehicles per day, State Route 99 (SR-99), which has up to 58,100 vehicles per day, and SR-180, which has up to 68,740 vehicles per day. Although most noise-sensitive land uses adjacent to these freeways are mitigated by existing sound walls, topography or buildings, there are still some noise-sensitive land uses that currently exceed the City's noise standard for the receiving land use. In addition to the freeways, there are places throughout the City where traffic volumes on every roadway classification are high enough to create noise levels that currently exceed the City's noise standard for the adjacent receiving land uses.

Airport Operations

There are currently three airports located within the City of Fresno and consist of Fresno Yosemite International Airport, Fresno-Chandler Downtown Airport (also known as the Fresno-Chandler Executive Airport), and Sierra Sky Park Airport. CNEL Noise contours have been developed and are provided in the Land Use Policy Plan prepared for each airport (refer to the heading "Airport Land Use Commission of Fresno County" under Section 5.11.3, Regulatory setting, below). Each of the Environs Plans includes CNEL noise contours based on projected airport and aircraft operations. These noise contours are used to determine land use compatibility and locations for noise mitigation measures.

Railroad Operations

The two major rail lines that traverse the City are the Union Pacific Railroad line, which is generally located along SR-99, and the BNSF Railway, which diverges from SR-99 in the southwest and travels through the downtown (behind City Hall) to the northwest. The Union Pacific line is generally located within a heavy commercial and industrial corridor, although residential uses occur in the vicinity of the line north of Shaw Avenue. The Union Pacific line limits its use to only freight traffic.

South of the Central Area, the BNSF Railway is bound by industrial uses, while north of the Central Area the line is generally located within a residential area. The BNSF Railway carries both freight and passenger traffic (Amtrak).

Stationary Noise Sources

Stationary noise sources can also have an effect on the population, and unlike mobile, transportation-related noise sources, these sources generally have a more permanent and consistent impact on people. These stationary noise sources involve a wide spectrum of uses and activities, including various industrial uses, commercial operations, agricultural production, school playgrounds, high school football games, HVAC units, generators, lawn maintenance equipment, and swimming pool pumps.

Even with incorporation of the best available noise control technology, noise emanating from industrial uses can be substantial and exceed local noise standards. These noise sources can be continuous and may contain tonal components that may be annoying to nearby receptors. Although industrial uses in the City of Fresno are typically located in industrial districts near freeways and commercial uses, and away from residences and other sensitive noise receptors, noise sources associated with commercial uses such as automotive repair facilities, recycling centers, and loading docks may occur in the vicinity of residential uses.

5.11.3 - Regulatory Setting

The General Plan Planning Area encompasses the City of Fresno and its SOI. Noise regulations are addressed through the efforts of various federal, state, and local government agencies. The agencies responsible for regulating noise are discussed below.

Federal Regulations

The adverse impact of noise was officially recognized by the federal government in the Noise Control Act of 1972, which serves three purposes:

- Promulgating noise emission standards for interstate commerce
- Assisting state and local abatement efforts
- Promoting noise education and research

The Federal Office of Noise Abatement and Control (ONAC) was initially tasked with implementing the Noise Control Act. This act authorized the Environmental Protection Agency (EPA) to publish descriptive data on the effects of noise and establish levels of sound "requisite to protect the public welfare with an adequate margin of safety." These levels are separated into health (hearing loss levels) and welfare (annoyance levels) categories, as shown in Table 5.11-6. The EPA cautions that these identified levels are not standards because they do not take into account the cost or feasibility of achieving the levels.

Table 5.11-6: Summary of EPA Recommended Noise Levels to Protect Public Welfare

Effect	Level	Area
Hearing loss	$L_{eq}(24) \leq 70$ dB	All areas
Outdoor activity interference and annoyance	$L_{dn} \leq 55$ dB	Outdoors in residential areas and farms and other outdoor areas where people spend widely varying amounts of time and other places in which quiet is a basis for use.
	$L_{eq}(24) \leq 55$ dB	Outdoor areas where people spend limited amounts of time, such as schoolyards, playgrounds, etc.
Indoor activity interference and annoyance	$L_{eq} \leq 45$ dB	Indoor residential areas
	$L_{eq}(24) \leq 45$ dB	Other indoor areas with human activities such as schools, etc.
Source: EPA, 1974.		

For protection against hearing loss, 96 percent of the population would be protected if sound levels are less than or equal to an $L_{eq(24)}$ of 70 dBA. The "(24)" signifies an L_{eq} duration of 24 hours. The EPA activity and interference guidelines are designed to ensure reliable speech communication from a distance of approximately 5 feet in the outdoor environment. For outdoor and indoor environments,

interference with activity and annoyance should not occur if levels are below 55 dBA and 45 dBA, respectively.

However, in 1981, the then current federal administration concluded that noise issues were best handled at the state and local level. As a result, federal funding for ONAC was terminated in 1982 and no funds have been provided since. With the closure of ONAC, primary responsibility of addressing noise issues was transferred to state and local governments—to the extent the noise standards are not regulated by federal law. For example, the Occupational Safety and Health Administration (OSHA) agency limits noise exposure of workers to 90 dB L_{eq} or less for 8 continuous hours, or 105 dB L_{eq} or less for 1 continuous hour. The Department of Transportation assumed a significant role in noise control through its various operating agencies. The Federal Aviation Administration regulates noise of aircraft and airports. Surface transportation system noise is regulated by a host of agencies, including the Federal Transit Administration (FTA). Transit noise is regulated by the federal Urban Mass Transit Administration, while freeways that are part of the interstate highway system are regulated by the FHWA.

Finally, the federal government actively advocates that local jurisdictions use their land use regulatory authority to arrange new development in such a way that "noise-sensitive" uses are either prohibited from being sited adjacent to a highway or, alternately, that the developments are planned and constructed in such a manner that potential noise impacts are minimized.

The federal role in regulating noise is now predominately limited to transportation, workplace activities, and certain types of machinery. State and local governments determine the extent to which all other sources of noise are controlled, and regulations for such sources can vary widely among localities. The applicable state and local regulations are further described below.

In addition to establishing noise standards for surface transportation system projects, the FTA has also established vibration impact criteria that are accepted industrywide as the best vibration impact guidelines when a local governing agency does not have vibration standards of its own.

The FTA's vibration impact criteria and impact assessment guidelines are published in its Transit Noise and Vibration Impact Assessment document. The FTA guidelines include thresholds for construction vibration impacts for various structural categories as shown in Table 5.11-7.

Table 5.11-7: FTA's Construction Vibration Damage Criteria

Structure and Condition	Maximum Peak Particle Velocity (inches/second)
Reinforced-concrete, steel or timber structures (i.e., industrial buildings)	0.5
Engineered concrete and masonry	0.3
Non-engineered timber and masonry buildings (i.e., residential)	0.2
Buildings extremely susceptible to vibration damage (i.e., historic or very old buildings)	0.12
Source: FTA, 2006.	

For assessing annoyance from groundborne noise, the FTA guidelines also include criteria for acceptable groundborne-vibration expressed in terms of rms velocity levels in decibels (VdB) according to specified land use categories and the frequency of vibration events, as shown in Table 5.11-8.

Table 5.11-8: FTA's Vibration Impact Criteria

Land Use Category	Vibration Impact Levels (VdB)		
	Frequent Events	Occasional Events	Infrequent Events
Category 1: buildings where vibration would interfere with interior operations	65	65	65
Category 2: residences and buildings where people normally sleep	72	75	80
Category 3: Institutional land uses with primarily daytime use	75	78	83

Notes:
[1] "Frequent Events" is defined as more than 70 vibration events of the same source per day. Most rapid transit projects all into this category.
[2] "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day. Most commuter trunk lines have this many operations.
[3] "Infrequent Events" is defined as fewer than 30 vibration events of the same kind per day. This category includes most commuter rail lines.
Source: FTA, 2006.

State Regulations

Freedom from excessive noise is a legislative environmental concern (Cal Pub. Res. Code 21001(b); Cal Health & Saf Code 118825). Government agencies at all levels are required to consider qualitative factors, as well as economic and technical factors, regarding noise.

The California Noise Control Act of 1973 (Cal Health & Saf Code 46000, et seq.) makes provisions for noise control programs. The Act establishes the Office of Noise Control (Cal Health & Saf Code 46040), the duties of which include studying and monitoring noise (Cal Health & Saf Code 46050, et seq.), assisting local agencies in the enactment and enforcement of noise control ordinances (Cal Health & Saf Code 46060, et seq.), and coordinating the noise control activities of state and federal agencies (Cal Health & Saf Code 46070, et seq.).

The following are among the additional statutes that address noise pollution:

- California Vehicle Code 27150, et seq. (muffler requirements).
- California Streets and Highways Code Section 216 (abatement program for highway noise affecting schools).
- California Health & Safety Code Sections 17922.6, 17922.7 (noise insulation standards in multi-occupant buildings).

- California Harbors and Navigation Code Sections 654.05, 654.06 (motorboat noise regulation).
- Airport Noise. California Health and Safety Code Section 118830 prohibits nonemergency takeoffs and landings by aircraft that fail to meet federal noise limits.

A city may adopt and enforce additional regulations imposing further restrictions as long as they are not in conflict with the Noise Control Act or ruling of the Office of Noise Control, and the Act or rulings do not limit or expand the a city to declare, prohibit, and abate nuisances (Cal Health & Saf Code, 46001(a)).

Title 24, Chapter 1, Article 4 of the California Administrative Code (California Noise Insulation Standards) requires noise insulation in new transient (e.g., hotels, motels) and multi-family dwellings (other than single-family detached housing) that provides an annual average noise level of no more than 45 dB CNEL. When such structures are located within a 60 dB CNEL (or greater) noise contour, an acoustical analysis is required to ensure that interior levels do not exceed the 45 dB CNEL annual threshold. In addition, Title 21, Chapter 6, Article 1 of the California Administrative Code requires that all habitable rooms, hospitals, convalescent homes, and places of worship shall have an interior CNEL of 45 dB or less due to aircraft noise.

Government Code Section 65302 mandates that the legislative body of each county and city in California adopt a noise element as part of its comprehensive general plan. The local noise element must recognize the land use compatibility guidelines published by the State Department of Health Services. The guidelines rank noise land use compatibility in terms of normally acceptable, conditionally acceptable, normally unacceptable, and clearly unacceptable. These guidelines are shown in Exhibit 5.11-1, the "Land Use Compatibility for Community Noise Environments Matrix," which allows a local jurisdiction to clearly delineate compatibility of sensitive uses with various incremental levels of noise.

Local Regulations

The City of Fresno addresses noise and vibration in the goals, policies, and standards of the City's General Plan and the Municipal Code. The existing City of Fresno regulations regarding noise and vibration are presented below.

City of Fresno General Plan

The Fresno General Plan contains goals, objectives, and policies that address noise within the City of Fresno. The following General Plan goals, objectives, and policies are applicable to the proposed project:

- **Goal 9:** Promote a city of healthy communities and improve quality of life in established neighborhoods.
- **Goal 16:** Protect and improve public health and safety.
- **NS-1 Objective:** Protect the citizens of the city from the harmful and annoying effects of exposure to excessive noise.
- **Policy NS-1-a:** Desirable and Generally Acceptable Exterior Noise Environment. Establish 65 dBA L_{dn} or CNEL as the standard for the desirable maximum average exterior noise levels for

defined usable exterior areas of residential and noise-sensitive uses for noise, but designate 60 dBA L_{dn} or CNEL (measured at the property line) for noise generated by stationary sources impinging upon residential and noise sensitive uses. Maintain 65 dBA L_{dn} or CNEL as the maximum average exterior noise levels for non-sensitive commercial land uses, and maintain 70 dBA L_{dn} or CNEL as maximum average exterior noise level for industrial land uses, both to be measured at the property line of parcels where noise is generated which may impinge on neighboring properties.

- **Policy NS-1-b:** Conditionally Acceptable Exterior Noise Exposure Range. Establish the conditionally acceptable noise exposure level range for residential and other noise sensitive uses to be 65 dBA L_{dn} or require appropriate noise reducing mitigation measures as determined by a site specific acoustical analysis to comply with the desirable and conditionally acceptable exterior noise level and the required interior noise level standards set in Table 9-2 [Table 5.11-9].
- **Policy NS-1-c:** Generally Unacceptable Exterior Noise Exposure Range. Establish the exterior noise exposure of greater than 65 dBA L_{dn} or CNEL to be generally unacceptable for residential and other noise sensitive uses for noise generated by sources in Policy NS-1-a, and study alternative less noise-sensitive uses for these areas if otherwise appropriate. Require appropriate noise reducing mitigation measures as determined by a site specific acoustical analysis to comply with the generally desirable or generally acceptable exterior noise level and the required 45 dBA interior noise level standards set in Table 9-2 [Table 5.11-9] as conditions of permit approval.
- **Policy NS-1-d:** Allowable Exterior Noise Environment for BRT and Activity Centers. Exclude residential and noise sensitive uses located along Bus Rapid Transit corridors or within Activity Centers identified by this General Plan, from exterior noise standards in Policies NS-1-a through NS-1-c where it is determined application of noise mitigation measures will be detrimental to the realization of the General Plan's mixed use policies.
- **Policy NS-1-e:** Update Noise Ordinance. Update the Noise Ordinance to ensure that noise exposure information and specific standards for both exterior and interior noise and measurement criteria are consistent with this General Plan and changing conditions within the city and with noise control regulations or policies enacted after the adoption of this element.
- **Policy NS-1-f:** Performance Standards. Implement performance standards for noise reduction for new residential and noise sensitive uses exposed to exterior community noise levels from transportation sources above 65 dBA L_{dn} or CNEL, as shown on Figure NS-3: Future Noise Contours, or as identified by a project-specific acoustical analysis based on the target acceptable noise levels set in Table 9-2 [Table 5.11-9] and Policies NS-1-a through NS-1-c.
- **Policy NS-1-g:** Noise mitigation measures which help achieve the noise level targets of this plan include, but are not limited to, the following:
  - Façades with substantial weight and insulation;
  - Installation of sound-rated windows for primary sleeping and activity areas;
  - Installation of sound-rated doors for all exterior entries at primary sleeping and activity areas;
  - Greater building setbacks and exterior barriers;
  - Acoustic baffling of vents for chimneys, attic and gable ends;
  - Installation of mechanical ventilation systems that provide fresh air under closed window conditions.

The aforementioned measures are not exhaustive and alternative designs may be approved by the City, provided that a qualified Acoustical Consultant submits information demonstrating that the alternative design(s) will achieve and maintain the specific targets for outdoor activity areas and interior spaces.

- **Policy NS-1-h:** Interior Noise Level Requirement. Comply with the Code requirement that any new multifamily residential, hotel, or dorm buildings must be designed to incorporate noise reduction measures to meet the 45 dBA L_{dn} interior noise criterion, and apply this standard as well to all new single-family residential and noise sensitive uses.
- **Policy NS-1-i:** Mitigation by New Development. Require an acoustic analysis where new development of industrial, commercial or other noise generating land uses (including transportation facilities such as roadways, railroads, and airports) may result in noise levels that exceed the noise level exposure criteria established by Tables 9-2 and 9-3 [Tables 5.11-7 and 5.11-8]to determine impacts, and require developers to mitigate these impacts in conformance with Tables 9-2 and 9-3 [Table 5.11-9 and Table 5.11-10] as a condition of permit approval through appropriate means. Noise mitigation measures may include:
  - The screening of noise sources such as parking and loading facilities, outdoor activities, and mechanical equipment;
  - Providing increased setbacks for noise sources from adjacent dwellings;
  - Installation of walls and landscaping that serve as noise buffers;
  - Installation of soundproofing materials and double-glazed windows; and
  - Regulating operations, such as hours of operation, including deliveries and trash pickup.

  Alternative acoustical designs that achieve the prescribed noise level reduction may be approved by the City, provided a qualified Acoustical Consultant submits information demonstrating that the alternative designs will achieve and maintain the specific targets for outdoor activity areas and interior spaces. As a last resort, developers may propose to construct noise walls along roadways when compatible with aesthetic concerns and neighborhood character. This would be a developer responsibility, with no City funding.
- **Policy NS-1-j:** Significance Threshold. Establish, as a threshold of significance for the City's environmental review process, that a significant increase in ambient noise levels is assumed if the project would increase noise levels in the immediate vicinity by 3 dBA L_{dn} or CNEL or more above the ambient noise limits established in this General Plan.
- **Policy NS-1-k:** Proposal Review. Review all new public and private development proposals that may potentially be affected by or cause a significant increase in noise levels, per Policy NS-1-i, to determine conformance with the policies of this Noise Element. Require developers to reduce the noise impacts of new development on adjacent properties through appropriate means.
- **Policy NS-1-l:** Enforcement. Continue to enforce applicable State Noise Insulation Standards and Uniform Building Code noise requirements, as adopted by the City.
- **Policy NS-1-m:** Transportation Related Noise Impacts Related Noise Impacts. For projects subject to City approval, require that the project sponsor mitigate noise created by new transportation and transportation-related stationary noise sources, including roadway improvement projects, so that resulting noise levels do not exceed the City's adopted standards for noise sensitive land uses.
- **Policy NS-1-n:** Best Available Technology. Require new noise source to use best available control technology to minimize noise emissions.

- **Policy NS-1-o:** Sound Wall Guidelines. Acoustical studies and noise mitigation measures for projects shall specify the heights, materials, and design for sound walls and other noise barriers. Aesthetic considerations shall also be addressed in these studies and mitigation measures such as variable noise barrier heights, a combination of a landscaped berm with wall, and reduced barrier height in combination with increased distance or elevation differences between noise source and noise receptor, with a maximum allowable height of 15 feet. The City will develop guidelines for aesthetic design measures of sound walls, and may commission area wide noise mitigation studies that can serve as templates for acoustical treatment that can be applied to similar situations in the urban area.
- **Policy NS-1-p:** Airport Noise Compatibility. Implement the land use and noise exposure compatibility provisions of the adopted Fresno Yosemite International Airport Land Use Compatibility Plan, the Fresno Chandler Executive Airport Master and Environs Specific Plan, and the Sierra Sky Park Land Use Policy Plan to assess noise compatibility of proposed uses and improvements within airport influence and environs areas.

Table 5.11-9: Transportation (Non-Aircraft) Noise Source

Noise Sensitive Land Use[1]	Outdoor Activity Areas[2] L_{dn} dB	Interior Spaces	
		L_{dn} dB	L_{dn} dB[3]
Residential	65	45	—
Transient Lodging	65	45	—
Hospitals, Nursing Homes	65	45	—
Theaters, Auditoriums, Music Halls	—	—	35
Churches, Meeting Halls	65	—	45
Office Buildings	—	—	45
Schools, Libraries, Museums	—	—	45

Notes:
[1] Where the location of outdoor activity areas is unknown or is not applicable, the exterior noise level standard shall be applied to the property line of the receiving land use.
[2] As determined for a typical worst-case hour during periods of use.
[3] As determined for a typical worst-case hour during periods of use.
Source: Fresno General Plan, Noise and Safety Element, December 2014, p. 9-17.

Table 5.11-10: Stationary Noise Sources

Category	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Hourly Equivalent Sound Level (L_{eq}), dB	50	45
Maximum Sound Level (L_{max}), dB	70	65

Notes:
[1] The Department of Development and Resource Management Director, on a case-by-case basis, may designate land uses other than those shown in this table to be noise-sensitive, and may require appropriate noise mitigation measures.
[2] As determined at outdoor activity areas. Where the location of outdoor activity areas is unknown or not applicable, the noise exposure standard shall be applied at the property line of the receiving land use. When ambient noise levels exceed or equal the levels in this table, mitigation shall only be required to limit noise to the ambient plus five dB
Source: Fresno General Plan Noise and Safety Element, December 2014, p. 9-17.

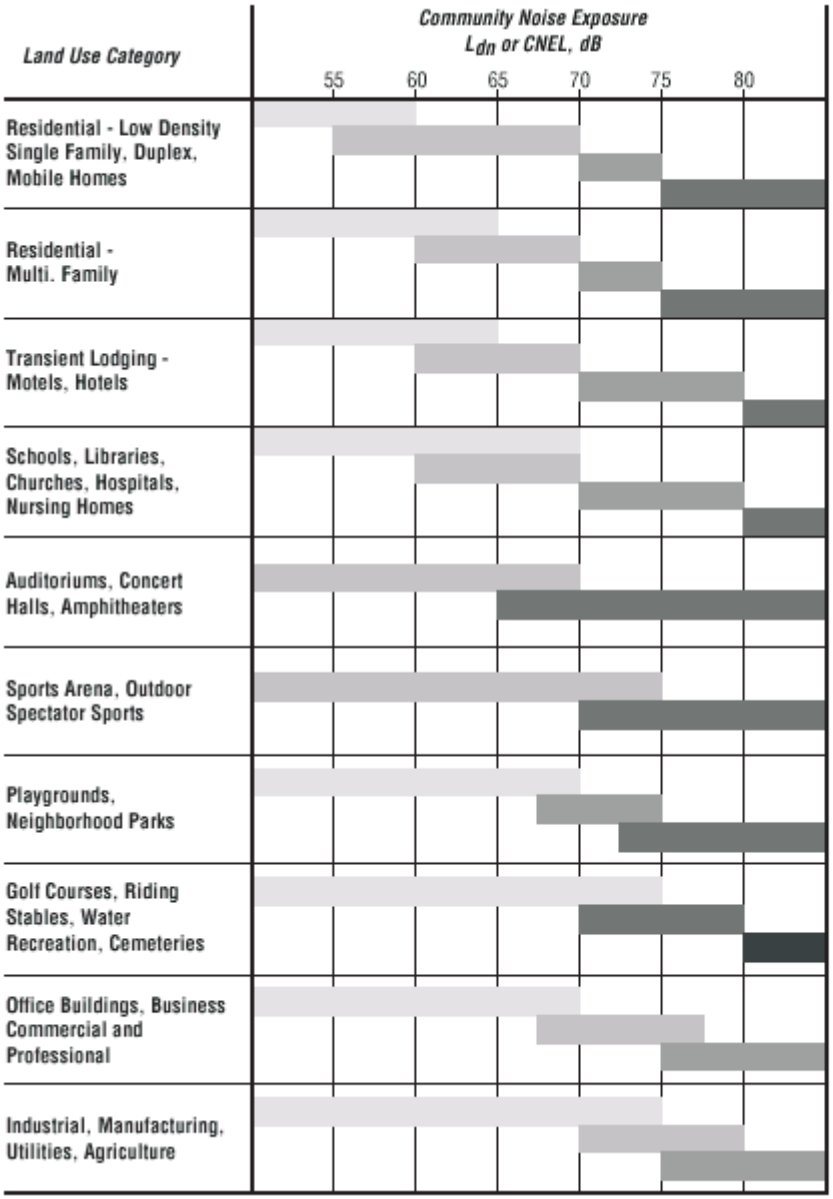


Exhibit 5.11-1
Land Use Compatibility for Community Noise Environments Matrix

FirstCarbon® SOLUTIONS

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City of Fresno Municipal Code

Chapter 10e, Article 1 (Noise Regulations), of the Fresno Municipal Code establishes excessive noise guidelines and exemptions. The following portions of the Municipal Code are applicable to the proposed project:

SEC. 10-102: Definitions

(b) Ambient Noise. "Ambient noise" is the all-encompassing noise associated with a given environment, being usually a composite of sounds from many sources near and far. For the purpose of this ordinance, ambient noise level is the level obtained when the noise level is averaged over a period of fifteen minutes, without inclusion of the offending noise, at the location and time of day at which a comparison with the offending noise is to be made. Where the ambient noise level is less than that designated in this section, however, the noise level specified herein shall be deemed to be the ambient noise level for that location.

District	Time	Sound Level Decibels
Residential	10 pm to 7 am	50
Residential	7 pm to 10 pm	55
Residential	7 am to 7 pm	60
Commercial	10 pm to 7 am	60
Commercial	7 am to 10 pm	65
Industrial	anytime	70

SEC. 10-105: Excessive Noise Prohibited

No person shall make, cause, or suffer or permit to be made or caused upon any premises or upon any public street, alley, or place within the city, any sound or noise which causes discomfort or annoyance to any reasonable person of normal sensitiveness residing or working in the area, unless such noise or sound is specifically authorized by or in accordance with this article. The provisions of this section shall apply to, but shall be limited to, the control, use, and operation of the following noise sources:

(a) Radios, musical instruments, phonographs, television sets, or other machines or devices used for the amplification, production, or reproduction of sound or the human voice.
(b) Animals or fowl creating, generating, or emitting any cry or behavioral sound.
(c) Machinery or equipment, such as fans, pumps, air conditioning units, engines, turbines, compressors, generators, motors or similar devices, equipment, or apparatus.
(d) Construction equipment or work, including the operation, use or employment of pile drivers, hammers, saws, drills, derricks, hoists, or similar construction equipment or tools.

SEC. 10-107: School, Hospitals, and Churches

No person shall create any noise on any street, sidewalk, or public place adjacent to any school, institution of learning, or church while the same is in use, or adjacent to

any hospital, which noise unreasonably interferes with the workings of such institution or which disturbs or unduly annoys patients in the hospital, provided conspicuous signs are displayed in such street, sidewalk, or public place indicating the presence of a school, church, or hospital.

SEC. 10-109: Exceptions

The provisions of this article shall not apply to:

(a) Construction, repair or remodeling work accomplished pursuant to a building, electrical, plumbing, mechanical, or other construction permit issued by the city or other governmental agency, or to site preparation and grading, provided such work takes place between the hours of 7:00 a.m. and 10:00 p.m. on any day except Sunday.
(b) Emergency work.
(c) Any act or acts which are prohibited by any law of the State of California or the United States.

Downtown Neighborhood Community Plan

The Downtown Neighborhood Community Plan contains policies that address noise within the City of Fresno. The following policies are applicable to the proposed project:

- **Policy 2.8.3:** Work with the California High-Speed Rail Authority (or other implementing agency) to minimize and mitigate the negative impacts of the High-Speed Train system through the Downtown Neighborhoods. Such impacts may include, but not be limited to:
  - Noise and vibration impacts to residents and businesses during construction of the High-Speed Rail system.
  - Noise and vibration impacts to residents and businesses that result from the ongoing operation of the High-Speed Rail system.
  - Negative impacts to business operations as a result of construction of the High-Speed Rail System.
  - Air quality issues due to construction.
  - Negative impacts on property values or property access due to adjacent elevated railway viaduct or roadway bridges.
- **Policy 2.11.2:** Ensure that new corridor development is compatible with that of adjacent neighborhoods or other sensitive uses, particularly in regards to noise, parking, and business hours.

Airport Land Use Commission of Fresno County

The Fresno Yosemite International Airport Land Use Compatibility Plan (ALUCP), the Fresno-Chandler Downtown Airport ALUCP, and the Sierra Sky Park ALUCP include policies designed to regulate the compatibility of land uses surrounding the airport and associated operations. The following ALUCP policies are applicable to the proposed project:

Fresno Yosemite International Airport Compatibility Land Use Plan

Chapter 3: Compatibility Policies and Criteria

- **3.1 Noise:** The purpose of noise compatibility policies is to avoid establishment of new noise-sensitive land uses and exposure of the users to levels of aircraft noise that can disrupt

activities involved. The noise contours established for the purpose of evaluating noise compatibility of land use. The state law (Public Utilities Code Section 21675(a)) requires that noise contours reflect the anticipated growth of the airport during at least the next 20 years. The AMP, 2011 EA/EIR, and 2012 EA/MND provided the activity forecast used in the contour calculations.

(1) Airport land use noise compatibility shall be evaluated in terms of the Community Noise Equivalent Level (CNEL), as defined in Title 21, Subchapter 6, of the California Code of Regulations (noise standards). Wherever used in this plan, the term CNEL shall be assumed to be an annual average.

(2) The maximum noise exposure which shall be considered normally acceptable for residential areas is 65 [dBA] CNEL. The residential area criterion establishes the baseline from which noise compatibility for other land uses shall be evaluated.

(3) The relative acceptability or unacceptability of particular land uses with respect to the noise levels to which they would be exposed is indicated in the "Airport/Land Use Noise Compatibility Criteria" matrix, Table E l. These criteria shall be the principal determinants of whether a proposed land use is compatible with the noise impact from the FYI [Fresno Yosemite International Airport]. Special circumstances which would affect the specific proposal's noise sensitivity (e.g., the extent or lack of outdoor activity) also shall be taken into account.

(4) As determined by the ALUC, a condition for approval of a proposed land use identified as "Conditional" for a given noise environment shall be that the building intended for habitation or occupation provide a satisfactory degree of noise attenuation.

(5) New residential development and new schools shall be prohibited within the adopted 65 [dBA] CNEL contour of FYI [the Fresno Yosemite International Airport] unless it is determined that there is no feasible alternative to such development of the subject property and provided that the following conditions are met:

(a) The record property owner grants an aviation easement to the City of Fresno.

(b) The record property owner executes an agreement in favor of the City of Fresno, whereby the property owner shall indemnify, hold harmless and defend the City and the ALUC, and every officer and employee thereof from any and all loss, liability, damages, costs, suits or claims arising out of the location of the development within the 65 [dBA] CNEL contour.

(c) New residential structures shall incorporate noise insulation in compliance with Title 24 of the California Code of Regulations such that interior noise levels are reduced to no more than 45 [dBA] CNEL.

(6) An acoustical analysis shall be required prior to the approval of a special permit (site plan or conditional use permit) for any new residential use, transient lodging, school, library, hospital, nursing home, day nursery, church, auditorium or a concert hall located within a 65 [dBA] or greater CNEL contour. For single family residential proposals, an acoustical analysis shall be required as a condition of subdivision map approval, said analysis to be submitted prior to the issuance of building permits. The acoustical analysis shall be completed in a manner consistent with Title 24 of the California Code of Regulations. A special permit for the uses listed above shall not be approved unless the acoustical analysis demonstrates that interior noise levels attributable to exterior

sources does not exceed 45 [dBA] CNEL in any habitable room with windows and doors closed. In quantifying aircraft noise exposure of the project site, the acoustical analysis shall include consideration of engine run up noise where applicable. A single report may suffice for all similar proposals within the same CNEL contour.

(7) Within the 70 [dBA] CNEL contour, new or redeveloped schools, hospitals, nursing homes, libraries, day nurseries, churches, auditoriums, and amphitheaters shall be prohibited. New residential uses (excluding transient lodging) shall be prohibited, except as provided for in Policy No. (8), below.

(8) Existing residential uses lying within the 70 [dBA] CNEL contour, that conform to the land use designations of this plan, may be remodeled in such a way that does not increase the floor space of the residence, or rebuilt if destroyed by fire, explosion or other catastrophic means, consistent with regulations adopted by the local jurisdiction consistent with regulations adopted by the local jurisdiction.

Fresno-Chandler Downtown Airport Land Use Policy Plan

- **Policy 1:** Airport land use noise compatibility shall be evaluated in terms of the Community Noise Equivalent Level (CNEL), as defined in Title 21, Subchapter 6, of the California Code of Regulations (noise standards). Wherever used in this plan, the term CNEL shall be assumed to be an annual average.
- **Policy 2:** The maximum noise exposure which shall be considered normally acceptable for residential areas is 65 [dBA] CNEL. The residential area criterion establishes the baseline from which noise compatibility for other land uses shall be evaluated.
- **Policy 3:** The relative acceptability or unacceptability of particular land uses with respect to the noise levels to which they would be exposed is indicated in the "Airport Land Use Noise Compatibility Criteria" matrix, Table 1 [of the Fresno-Chandler Downtown Airport Land Use Policy Plan]. These criteria shall be the principal determinants of whether a proposed land use is compatible with the noise impact from FCH. Special circumstances which would affect the specific proposal's noise sensitivity (e.g., the extent or lack of outdoor activity) shall also be taken into account.
- **Policy 4.** A condition for approval of a proposed land use identified on table one as "Conditional" for a given noise environment shall be that the building intended for habitation or occupation provide a satisfactory degree of noise attenuation. Table 2 [of the Fresno-Chandler Downtown Airport Land Use Policy Plan] sets forth the permitted interior noise levels. If the structure can reduce the noise exposure to the outlined noise levels, the use may be deemed compatible.
- **Policy 5.** New residential development and new schools shall be prohibited within the 65 [dBA] CNEL contour of FCH unless it is determined that there is no feasible alternative to such development of the subject property and provided that the following conditions are met:
  (a) The property owner of record grants an avigation easement to the City of Fresno.
  (b) The record property owner executes an agreement in favor of the City of Fresno, whereby the property owner shall indemnify, hold harmless and defend the City, and every officer and employee thereof from any and all loss, liability, damages, costs, suits or claims arising out of the location of the development within the 65 db CNEL contour.

(c) New residential structures shall incorporate noise insulation in compliance with Title 24 of the California Code of Regulations such that interior noise levels are reduced to no more than 45 [dBA] CNEL.

- **Policy 6:** An acoustical analysis shall be required prior to the approval of a special permit (site plan or conditional use permit) for any new residential use, transient lodging, school, library, hospital, nursing home, day nursery, church, auditorium or a concert hall located within a 65 or greater CNEL contour. For single family residential proposals, an acoustical analysis shall be required as a condition of subdivision map approval, said analysis to be submitted prior to the issuance of building permits. The acoustical analysis shall be completed in a manner consistent with Title 24 of the California Code of Regulations. A special permit for the uses listed above shall not be approved unless the acoustical analysis demonstrates that interior noise levels attributable to exterior sources does not exceed 45 [dBA] CNEL in any habitable room with windows and doors closed. In quantifying aircraft noise exposure of the project site, the acoustical analysis shall include consideration of engine run up noise where applicable. A single report may suffice for all similar proposals within the same CNEL contour.
- **Policy 7:** Within the 70 CNEL contour, new or redeveloped schools, hospitals, nursing homes, libraries, day nurseries, churches, auditoriums, and amphitheaters shall be prohibited. New residential uses (excluding transient lodging) shall be prohibited, except as provided for in Policy No. (8), below.
- **Policy 8:** Existing residential uses lying within the 70 CNEL contour, that conform to the land use designations of this plan, may be remodeled in such a way that does not increase the floor space of the residence, or rebuilt if destroyed by fire, explosion or other catastrophic means. A use is considered to be destroyed if the cost of reconstruction, repairing or rebuilding would exceed fifty percent of the reasonable replacement value of the building immediately prior to destruction.
- **Policy 9:** When applying the noise compatibility criteria listed in Table 1 [of the Fresno-Chandler Downtown Airport Land Use Policy Plan] to a given location, the basis for evaluation shall be the maximum CNEL contour shown in the Compatibility Plan.
- **Policy 10:** If a noise analysis, including noise monitoring, indicates that project noise exposure may be higher or lower than indicated by the Airport Land Use Noise Compatibility Criteria, Table 1 [of the Fresno-Chandler Downtown Airport Land Use Policy Plan], due to site-specific conditions or changes in Airport/aircraft operations, the noise exposure used for project evaluation may be adjusted at the discretion of the City of Fresno.

Sierra Sky Park Land Use Policy Plan

- **Policy 1:** The airport/aircraft noise exposure which shall be considered normally acceptable for residential areas is 65 dBA CNEL as defined by Title 21, Subchapter 6 of the California Administrative Code (Noise Standards).
- **Policy 2:** The Maximum noise exposure which shall be considered normally acceptable for residential areas is 60 dBA CNEL. The residential area criterion establishes the baseline form which noise compatibility for other land uses shall be evaluated.
- **Policy 3:** The relative acceptability or unacceptability of a particular land use with respect to the noise levels to which it would be exposed is indicated in the "Airport Noise Compatibility Criteria" matrix, Table 1 [of the Sierra Sky Park Land Use Policy Plan]. These criteria shall be

the principal determinants of whether a proposed land use is compatible with a given airport/aircraft noise exposure. Special circumstances which could affect a specific proposal's noise sensitivity (e.g., the extent or lack of outdoor activity) shall also be taken into account.

- **Policy 4:** As determined by the Commission, a condition for approval of the proposed land use to be "marginal" or "normally unacceptable" for a given noise environment shall be that any building intended for habitation or occupation will provide a satisfactory degree of noise attenuation. Interior Noise level Criteria, sets forth the maximum acceptable interior noise levels for commonly occurring noises from exterior sources. If the structure can reduce the noise exposure to the indicated level, the use may be acceptable.
- **Policy 5:** In addition to the interior noise level criteria for individual exterior noises, the Interior CNEL attributable to exterior sources shall not exceed 45 dBA, with windows closed, in any habitable room of a residential dwelling.
- **Policy 6:** In applying the interior noise level criteria, engine run-up noise shall be considered as a source of commonly occurring exterior noise.
- **Policy 7:** When a proposed project will involve a land use to be "marginal" or "normally unacceptable" within a noise environment in excess of 60 dBA CNEL, analysis shall be done in a manner indicated in the California Noise Insulation Standards (California Administrative Code, Title 25, Chapter 1, Subchapter 1, Article 4, Section 28).
- **Policy 8:** When applying the noise compatibility criteria to a given location, the basis for evaluation shall be the maximum CNEL to which the location is or is forecast to be exposed. For Sierra Sky Park, the 60-CNEL and above contours are depicted.
- **Policy 9:** If a noise analysis, including noise monitoring, is conducted for a particular location and the results indicate that the maximum CNEL will be less than shown herein, the lower exposure level may be used for land use evaluation at the discretion of the Airport land Use Commission.

5.11.4 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether noise impacts are significant environmental effects, the following questions are analyzed and evaluated. Would the project result in:

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?

f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?

5.11.5 - Impact Analysis, Mitigation Measures, and Level of Significance After Mitigation

Noise Levels in Excess of Standards

Impact NOI-1:	**The project would result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.**

Project-specific Impact Analysis

Short-Term Construction Impacts

Less than significant impact. Construction noise generated from development activities associated with buildout of the DNCP and the FCSP and implementation of the DDC would typically occur intermittently and vary depending upon the nature or phase (e.g., demolition, land clearing, grading, excavation, erection) of construction. Noise impacts from construction activities would be a function of the noise generated by construction equipment, equipment location, sensitivity of nearby land uses, and the timing and duration of the construction activities.

Short-term noise impacts would occur during site preparation and project construction of development activities associated with buildout of the DNCP and the FCSP and implementation of the DDC. Construction is performed in discrete steps, each of which has its own mix of equipment and, consequently, its own noise characteristics. These various sequential phases would change the character of the noise generated on-site. Therefore, the noise levels vary as construction progresses. Despite the variety in the types and sizes of construction equipment, similarities in the dominant noise sources and patterns of operation allow construction related noise ranges to be categorized by work phase. Table 5.11-2 lists the maximum noise levels recommended for noise impact assessments for typical construction equipment based on a distance of 50 feet between the equipment and a noise receptor. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full-power operation followed by 3 or 4 minutes at lower power settings. Because the noisiest construction equipment is earthmoving equipment, the site preparation phase is generally the loudest phase of construction.

Development activities associated with buildout of the DNCP and the FCSP and implementation of the DDC would include the demolition and construction of various uses throughout the Plan Areas, including single- and multi-family residential, commercial, industrial, mixed use, and public facilities, as well as ancillary infrastructural improvements such as roadways and water delivery and wastewater conveyance pipelines. The Fulton Mall Reconstruction Project, located within the FCSP, is included in these buildout plans.

As set forth by Chapter 10, Article 1, Section 10-109—Exemptions, the provisions of Article 1—Noise Regulations of the Fresno Municipal Code shall not apply to:

> Construction, repair or remodeling work accomplished pursuant to a building, electrical, plumbing, mechanical, or other construction permit issued by the city or other governmental agency, or to site preparation and grading, provided such work takes place between the hours of 7:00 a.m. and 10:00 p.m. on any day except Sunday.

Thus, although development activities associated with buildout of the DNCP and the FCSP could potentially result in a temporary or periodic increase in ambient noise levels in the project vicinity (as addressed below in Impact NOI-4), construction activity would be exempt from City of Fresno noise regulations, as long as such activity is conducted pursuant to an applicable construction permit and occurs between 7:00 a.m. and 10:00 p.m., excluding Sunday. Therefore, short-term construction impacts associated with the exposure of persons to or the generation of noise levels in excess of standards established in the local general plan or noise ordinance or applicable standards of other agencies would be less than significant.

Long-Term Project Impacts

Significant and unavoidable impact. Based on existing noise measurements taken in the City (Table 5.11-5 and Table 5.11-6), as well as on existing and future noise modeling (Figures NS-2 and NS-3 of the General Plan), noise levels in excess of existing standards set forth by the City of Fresno currently occur and would continue to occur throughout the City, potentially affecting residential and other noise-sensitive uses.

Based on the traffic noise levels shown in Figure NS-3 of the General Plan, future noise levels along many major roadway segments in the Plan Areas currently exceed, or would exceed with implementation of the project, the City's desirable and generally acceptable exterior noise standard of 65 dBA L_{dn} for transportation noise sources, as shown in Table 5.11-9. Future development activities within the Plan Areas would result in higher land use densities, which would result in increased traffic volumes and increases in commercial and industrial uses that would incrementally increase noise levels in some areas. Substantial noise level exposures can also be expected for project-related, noise-sensitive development that could occur near existing railroad lines.

Roadway Noise Sources

The FHWA highway traffic noise prediction model (FHWA RD-77-108) was used to evaluate traffic noise impacts related to implementation of the project. Traffic data used in the model were obtained from the traffic impact analysis prepared by Fehr & Peers for the proposed project. The existing, existing with project, and cumulative with project traffic volumes are based on the maximum traffic volumes anticipated to be experienced for each roadway classification.

In order to determine the proposed project's contribution to roadway noise contours, each of the City of Fresno's roadway classifications were modeled by applying the FHWA's noise modeling procedure, using roadway, speed, and traffic mix data, and the greatest project increase anticipated for each roadway type, which have been based on traffic volume levels provided by the engineering firm of Fehr & Peers. Noise contours represent the distance to noise levels of a constant value and are measured from the center of the roadway. For analysis comparison purposes, the noise levels are calculated at the right-of-way of each roadway type, which is the nearest location where development may occur to each roadway. In establishing noise contours for land use planning, it is customary to ignore noise attenuation afforded by buildings, roadway elevations, and depressions, and to minimize the barrier effect of natural terrain features. The result is a worst-case estimate of the existing and future noise environment. The developed noise contours are conservative, meaning that the contours are modeled with minimal noise attenuation by natural barriers and buildings.

Table 5.11-11 shows the anticipated noise levels for each roadway type for existing, existing with project, cumulative with project, and other representative traffic volume levels at the right-of-way. The distance from the centerline to the 55-, 60-, 65-, and 70-dBA noise levels have been calculated and are also shown in Table 5.11-11 with the noise calculation spreadsheets provided in Appendix I.

Table 5.11-11: Traffic Noise Contours

Roadway	Scenario	dBA CNEL at Right-of-Way	Increase over Existing (dBA)	Distance to Contour (feet)			
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
2-Lane Collector	Existing	66	NA	36	79	169	365
2-Lane Collector	Existing Plus Project	66	0	39	84	182	391
2-Lane Collector	Cumulative Plus Project	66	0	41	89	191	412
4-Lane Collector	Existing	61	NA	RW	51	109	235
4-Lane Collector	Existing Plus Project	62	1	RW	55	119	257
4-Lane Collector	Cumulative Plus Project	62	1	RW	56	120	258
4-Lane Arterial	Existing	67	NA	62	133	287	619
4-Lane Arterial	Existing Plus Project	68	1	78	169	363	782
4-Lane Arterial	Cumulative Plus Project	69	2	81	175	376	811
4-Lane Super Arterial	Existing	66	NA	64	137	295	636
4-Lane Super Arterial	Existing Plus Project	68	2	96	208	448	965
4-Lane Super Arterial	Cumulative Plus Project	68	2	97	209	450	970
6-Lane Arterial	Existing	68	NA	89	192	414	893
6-Lane Arterial	Existing Plus Project	69	1	101	217	468	1,009
6-Lane Arterial	Cumulative Plus Project	69	1	106	229	494	1,063
Scenic Arterial	Existing	61	NA	RW	70	151	326
Scenic Arterial	Existing Plus Project	63	2	RW	95	204	439
Scenic Arterial	Cumulative Plus Project	63	2	RW	96	207	446
6-Lane Expressway	Existing	70	NA	119	256	551	1,188
6-Lane Expressway	Existing Plus Project	71	1	138	296	639	1,376
6-Lane Expressway	Cumulative Plus Project	72	2	141	304	655	1,410
Scenic Expressway	Existing	68	NA	97	208	448	966
Scenic Expressway	Existing Plus Project	69	1	122	262	565	1,218
Scenic Expressway	Cumulative Plus Project	70	2	132	284	613	1,320
SR-41 Freeway	Existing	73	NA	251	540	1,164	2,508
SR-41 Freeway	Existing Plus Project	75	2	308	663	1,427	3,075
SR-41 Freeway	Cumulative Plus Project	75	2	316	680	1,465	3,155

Table 5.11-11 (cont.): Traffic Noise Contours

Roadway	Scenario	dBA CNEL at Right-of-Way	Increase over Existing (dBA)	Distance to Contour (feet)			
				70 dBA CNEL	65 dBA CNEL	60 dBA CNEL	55 dBA CNEL
SR-180 Freeway	Existing	72	NA	263	566	1,220	2,628
SR-180 Freeway	Existing Plus Project	74	2	332	716	1,542	3,322
SR-180 Freeway	Cumulative Plus Project	74	2	337	725	1,563	3,367
SR-99 Freeway	Existing	73	NA	202	435	937	2,019
SR-99 Freeway	Existing Plus Project	76	3	287	619	1,334	2,875
SR-99 Freeway	Cumulative Plus Project	76	3	298	642	1,383	2,979
SR-168 Freeway	Existing	71	NA	194	418	901	1,941
SR-168 Freeway	Existing Plus Project	72	1	235	505	1,089	2,345
SR-168 Freeway	Cumulative Plus Project	73	2	257	554	1,195	2,574

Notes:
RW = Noise contour is located within right-of-way of roadway.
Source: FirstCarbon Solutions, 2014.

Table 5.11-11 shows that the majority of roadway classification scenarios currently exceed or would exceed (under plus project conditions) the City's 65 dBA CNEL standard for sensitive land uses as measured at the right-of-way of the modeled roadways. This would be considered a significant impact.

General Plan Policies NS-1-a through NS-1-o establish exterior and interior noise level standards, require the incorporation of noise reduction design features, use of best available technology, and require site-specific acoustical studies, among other measures, as requirements that would assist in reducing transportation noise impacts for new noise-sensitive land use development. However, development may occur in areas exposed to excessive traffic noise levels, such as adjacent to freeways in the Plan Areas. It is possible for such future projects that, even with implementation of the best technology measures and compliance with the policies of the General Plan (including Policy NS-1-I: Mitigation by New Development, requiring site-specific acoustical analysis for proposed projects that would be exposed to traffic noise levels in excess of the City's standards) it may not be feasible to reduce traffic noise impacts to below the City's exterior transportation noise level standard for the proposed land use. Therefore, similar to the findings of the General Plan MEIR, this impact would remain significant and unavoidable.

Project-related traffic noise impacts to existing land uses are discussed under Impact NOI-3: Permanent Increase in Ambient Noise Levels, below.

Railroad Noise Sources

As shown in the existing conditions discussion above, existing railroad operations in the Plan Areas could expose proposed development that could occur with implementation of the project to noise levels in excess of the City's transportation noise standard shown in Table 5.11-9.

Implementation of the project is not expected to directly result in expanded railroad operations and therefore would not result in increased railroad noise impacts. General Plan Policies NS-1-a through NS-1-o establish exterior and interior noise level standards, require the incorporation of noise reduction design features, use of best available technology, and require site-specific acoustical studies, among other measures, as requirements that would assist in reducing railroad noise impacts for new noise-sensitive land use development. However, development may occur in areas exposed to excessive railroad noise levels that, even with implementation of the best technology measures and compliance with the policies of the General Plan it may not be feasible to reduce railroad noise impacts to below the City's exterior transportation noise level standard for the receiving land use. Therefore, similar to the findings of the General Plan MEIR, this impact would remain significant and unavoidable.

Stationary Noise Sources

Stationary noise sources can also have an effect on existing or future development. Stationary noise sources can involve a wide spectrum of uses and activities, including various industrial uses, commercial operations, agricultural production, school playgrounds, high school football games and marching bands, HVAC units, generators, lawn maintenance equipment, and swimming pool pumps.

Even with incorporation of the best available noise control technology, noise emanating from industrial uses can be substantial and exceed the daytime or nighttime noise standards shown in Table 5.11-10. These noise sources can be continuous and may contain tonal components that may be annoying to nearby receptors. Although new industrial uses in the Plan Area would typically be located in industrial districts near freeways and commercial uses and away from residences and other sensitive noise receptors, noise sources associated with new commercial uses such as automotive repair facilities, recycling centers, and loading docks may occur in the vicinity of residential uses.

General Plan Policies NS-1-a through NS-1-I, and NS-1-n and NS-1-o establish exterior and interior noise level standards, require the incorporation of noise reduction design features, use of best available technology, and require site-specific acoustical studies, among other measures, as requirements that would assist in reducing stationary source noise impacts for new land use development. In addition, the proposed DDC includes setback requirements for new mechanical equipment that would assist in reducing noise impacts to off-site sensitive uses. However, even with implementation of the best technology measures and compliance with all of the policies of the General Plan it may not be feasible to reduce stationary source noise impacts to below the City's exterior noise level standards (shown in Table 5.11-10) for receiving land uses. Therefore, similar to the findings of the General Plan MEIR, stationary source noise impacts would remain significant and unavoidable.

Cumulative Impact Analysis

Short-Term Construction Impacts

Less than significant impact. Similar to the Project-specific Impact Analysis above, development activities associated with buildout of the DNCP and the FCSP and implementation of the DDC could result in noise impacts from short-term construction activities. However, as described above, such construction activity would be exempt from City of Fresno noise regulations, as long as such activity is conducted pursuant to an applicable construction permit and occurs between 7:00 a.m. and 10:00 p.m., excluding Sunday. Therefore, the proposed project contributions to cumulative construction noise would be less than cumulatively considerable and thus would result in a less than significant cumulative impact.

Long-Term Project Impacts

Significant and unavoidable impact. Similar to the Project-specific Impact Analysis above, development that could occur with implementation of the DNCP, the FCSP and the DDC, could result in exposure of new receptors to traffic and railroad noise levels in excess of the City's transportation noise standard. In addition, such development could also result in new stationary noise sources or introduction of new noise-sensitive land uses to existing stationary noise sources that could result in exposure of persons to noise levels in excess of the City's stationary noise source standards.

In most instances, compliance with the General Plan Policies NS-1-a through Policy NS-1-o, as provided above, would reduce long-term project noise impacts to less than significant levels. However, these policies and measures that individual projects would implement are ultimately limited, as even advanced policies and measures are limited in what they can do to remediate or reduce the magnitude of noise effects on many existing noise-sensitive land uses in areas with current high noise exposures or where substantial noise increases are expected. Thus, the continuing exposure of existing noise-sensitive land uses to noise levels in excess of standards established by the City, or to substantial noise increases as a result of future growth that could occur with implementation of the project, would be deemed a cumulatively considerable impact that could not in all cases be reduced to less than significant. Therefore, similar to the findings of the General Plan MEIR, traffic, railroad, and stationary source noise impacts would remain a significant and unavoidable cumulatively considerable impact.

Mitigation Measures

Project-specific

No feasible mitigation measures are available.

Cumulative

No feasible mitigation measures are available.

Level of Significance After Mitigation

Project-specific

Significant and unavoidable impact.

Cumulative

Significant and unavoidable impact.

Excessive Groundborne Vibration

Impact NOI-2: The project would result in exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels.

Project-specific Impact Analysis

Less than significant impact. Buildout associated with implementation of the proposed project could result in introduction of new groundborne vibration sources or introduction of new sensitive land use development near existing sources of groundborne vibration. Common sources of groundborne vibration that could occur in the Plan Areas include construction activities and railroad operations.

Similar to the discussion of potential noise impacts associated with railroad activities under Impact NOI-1 above, implementation of the project is not expected to directly result in expanded railroad operations or expansion of existing rail lines and therefore would not result in expanded railroad groundborne vibration impacts on existing receptors along the railroad alignment. However, with buildout associated with implementation of the project, new development could occur in areas currently exposed to excessive railroad groundborne vibration or noise levels. Compliance with General Plan Policies NS-1-a through NS-1-o would assist in reducing railroad groundborne vibration and noise impacts for new noise-sensitive land use development that could occur in the vicinity of existing railroad right-of-way by requiring compliance with exterior noise level standards, including groundborne noise, and by requiring compliance with noise performance standards for new land use development exposed to exterior community noise levels from transportation sources (including railroads) above 65 dBA CNEL.

Table 5.11-8 shows the FTA's vibration impact criteria for transportation-related vibration events. For example, the vibration impact criteria for infrequent events, defined as fewer than 30 vibration events of the same source per day, is 80 VdB for receiving residential land uses. The maximum expected range for locomotive powered passenger or freight trains traveling at 50 miles per hour can range up to approximately 80 VdB at 80 feet from the centerline of the tracks (FTA 2006). Therefore, any residential or other noise-sensitive development that would occur within 80 feet of existing freight or passenger line tracks would be exposed to potentially significant groundborne vibration levels and mitigation must be incorporated.

Construction activities associated with buildout of the Planning Area would likely require the use of heavy construction equipment. Based on the vibration levels provided in Table 5.11-3, groundborne vibration generated by common construction equipment would be less than 0.21 inch per second PPV at 25 feet. Since much of the construction activities would occur on vacant parcels in sparsely to moderately developed areas, the nearest off-site structures to a particular project site would likely be located in excess of 25 feet from construction activities. As a result, predicted vibration levels at the nearest off-site structures would not exceed even the conservative threshold of 0.2 inch per second PPV for buildings of non-engineered timber and masonry construction. The project would allow for

infill development in more densely developed areas where off-site structures would be more prevalent. Even during these occurrences, the mandatory buffers set forth by the City of Fresno Development Code (e.g., setbacks, easements, rights-of-way) would ensure that in most cases on-site and off-site structures would be separated by at least 25 feet, and thus construction activities would be buffered by at least 25 feet from existing off-site structures. Development projects where a 25-foot buffer is not feasible would be subject to case-by-case review by the City of Fresno through the permitting process and/or CEQA review, as applicable, to ensure that sensitive receptors are not adversely impacted by vibration impacts. In addition, as noted in Impact NOI-1 discussion above, construction activity would be exempt from City of Fresno noise regulations, as long as such activity is conducted pursuant to an applicable construction permit and occurs between 7:00 a.m. and 10:00 p.m., excluding Sunday. Compliance with these permissible hours of construction activities would further reduce construction-related groundborne vibration impacts at nearby sensitive receptors. Therefore, similar to the findings of the General Plan MEIR, short-term construction impacts associated with groundborne vibration would be less than significant.

Cumulative Impact Analysis

Potentially significant impact. Similar to the Project-specific Impact Analysis above, development activities that could occur under cumulative conditions could result in groundborne vibration impacts from railroad and short-term construction activities. As described above, construction activity would be exempt from City of Fresno noise regulations, as long as such activity is conducted pursuant to an applicable construction permit and occurs between 7:00 a.m. and 10:00 p.m., excluding Sunday. In addition, mandatory buffers set forth by the City of Fresno Development Code (e.g., setbacks, easements, rights-of-way) would ensure that in most cases on-site and off-site structures would be separated by at least 25 feet, and thus construction activities would be buffered by at least 25 feet from existing off-site structures. Furthermore, if several different projects were constructed simultaneously within 25 feet of an existing structure, there would be potential for cumulative ground vibration effects. However, this scenario is highly unlikely. A more reasonable assumption is that future construction activities would occur at different locations throughout the Plan Area. Although scheduling of some of these construction activities would likely overlap, projects would not be constructed simultaneously but instead would occur over a number of years. As a result, no cumulative impacts associated with ground vibration would occur in the Plan Area vicinity, and, therefore, similar to the findings of the General Plan MEIR, the proposed project contributions to cumulative construction groundborne vibration and noise would be less than cumulatively considerable and thus would result in a less than significant cumulative impact.

Under cumulative conditions, expanded railroad operations within or in the vicinity of the Plan Areas could occur with projected implementation of the high-speed rail line. These existing and projected railroad activities could result in exposure of sensitive land use development to excessive groundborne vibration and noise levels. Therefore, implementation of MM NOI-2 would be required to reduce these potential impacts to meet the FTA's recommended vibration impact criteria for transportation events.

Mitigation Measures

The following mitigation measures were not included in the MEIR but are applicable to this project:

Project-specific

MM NOI-2 Any noise-sensitive land use development that would construct structures within 80 feet of the edge of existing or future rail lines within the Plan Areas shall be required to prepare a vibration impact analysis to determine potential vibration impacts from railroad operations and to mitigate any impacts to below the FTA's significance criteria shown in Table 5.11-8.

Cumulative

Implement MM NOI-2.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Permanent Increase in Ambient Noise Levels

Impact NOI-3:	**The project would not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.**

Project-specific Impact Analysis

Significant and unavoidable impact. According to General Plan Policy NS-1-j, a significant increase in ambient noise levels is assumed if the project would increase noise levels in the immediate vicinity of a project by 3 dBA L_{dn} or CNEL or more above the ambient noise levels existing without the project. Permanent increases in ambient noise levels could result from new traffic and stationary noise sources resulting from buildout associated with implementation of the project. Implementation of the project is not expected to directly result in expanded railroad operations and therefore would not result in project-related permanent increases in railroad noise impacts.

As addressed in Impact NOI-1, future development activities within the Plan Areas would result in increased traffic volumes, thus incrementally increasing noise levels in some areas. As is shown in Table 5.11-11, all but one modeled roadway segment would result in a less than 3 dBA increase compared to ambient noise conditions existing without the project. The greatest noise increase for the modeled roadway segments would occur along portions of the SR-99 Freeway. For this segment, existing plus project traffic noise levels would result in a maximum increase of 3 dBA over existing traffic noise level conditions. This would be considered a significant impact.

Implementation of the project could also result in the introduction of new stationary noise sources that could result in substantial permanent increases in ambient noise levels at existing noise-sensitive land uses. Even with incorporation of the best available noise control technology, noise emanating from industrial uses can be substantial and exceed the daytime or nighttime noise standards shown in Table 5.11-10. Stationary noise sources can be continuous and may contain

tonal components that may be annoying to nearby receptors. Although new industrial uses in the Plan Area would typically be located in industrial districts near freeways and commercial uses and away from residences and other sensitive noise receptors, noise sources associated with new commercial uses such as automotive repair facilities, recycling centers, and loading docks may occur in the vicinity of residential uses. Thus, new stationary noise sources that could be developed with implementation of the project could result in increases in ambient noise levels by 3 dBA CNEL or greater as measured at adjacent land uses which would be considered a significant impact.

General Plan Policies NS-1-a through NS-1-o establish exterior and interior noise level standards, require the incorporation of noise reduction design features, use of best available technology, and require site-specific acoustical studies, among other measures, as requirements that would assist in reducing stationary source noise impacts for new land use development. In addition, the proposed DDC includes setback requirements for new mechanical equipment that would assist in reducing noise impacts to off-site sensitive uses. However, even with implementation of the best technology measures and compliance with all of the policies of the General Plan it may not be feasible to reduce new traffic and stationary source noise impacts to not result in a substantial permanent increase in ambient noise levels at existing land uses. Therefore, similar to the findings of the General Plan MEIR, new traffic and stationary noise source impacts that could occur with implementation of the proposed project would remain significant and unavoidable.

Cumulative Impact Analysis

Significant and unavoidable impact. Cumulative conditions in the Plan Areas are expected to result in increased traffic volumes, thus incrementally increasing noise levels in some areas. Substantial noise level exposures can also be expected from railroad operations, as well as new stationary noise sources under cumulative conditions.

Table 5.11-11 shows that under cumulative plus project conditions, some roadway segments would experience increases in traffic noise by as much as 3 dBA CNEL over existing conditions. This would be considered a significant impact.

While implementation of the project is not expected to directly result in expanded railroad operations, under cumulative conditions, expanded railroad operations are expected to occur within the Plan Areas. While these future cumulative projects would be required to complete their own environmental review in compliance with CEQA requirements, they may still result in substantial permanent increases in ambient noise levels along the existing or future railroad alignments. Therefore, new development that could occur with implementation of the project could result in the exposure of new noise-sensitive land uses to substantial increases in railroad noise operations.

Substantial cumulative noise level exposures could also be expected from stationary noise sources. Even with incorporation of the best available noise control technology, noise emanating from new stationary noise sources, such as industrial uses, can be substantial and could result in increases in ambient noise levels by 3 dBA CNEL or greater as measured at adjacent land uses. This would be considered a significant impact.

In most instances, compliance with the General Plan Policies NS-1-a through Policy NS-1-o, as provided above, would reduce long-term cumulative noise impacts to less than significant levels. However, these policies and measures that individual projects would implement are ultimately limited, as even advanced policies and measures are limited in what they can do to remediate or reduce the magnitude of noise effects on many existing noise-sensitive land uses in areas with current high noise exposures or where substantial noise increases are expected. Thus, the continuing exposure of existing noise-sensitive land uses to substantial noise increases as a result of future growth that could occur with implementation of the project, would be deemed a cumulatively considerable impact that could not in all cases be reduced to less than significant. Therefore, similar to the findings of the General Plan MEIR, traffic, railroad, and stationary source noise impacts would remain a significant and unavoidable cumulatively considerable impact.

Mitigation Measures

Project-specific

No feasible mitigation measures are available.

Cumulative

No feasible mitigation measures are available.

Level of Significance After Mitigation

Project-specific

Significant and unavoidable impact.

Cumulative

Significant and unavoidable impact.

Temporary or Periodic Increase in Ambient Noise Levels

Impact NOI-4:	**The project would not result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project.**

Project-specific Impact Analysis

Less than significant impact. Potentially significant temporary or periodic noise increases that could result from implementation of the proposed project would primarily be related to short-term construction noise impacts.

Construction noise impacts were analyzed in the Impact NOI-1 discussion above. As shown in the discussion, construction from development activities associated with buildout of the DNCP and the FCSP and implementation of the DDC would result in noise impacts on nearby sensitive receptors. Noise produced by construction equipment such as earthmovers, material handlers, and portable generators can reach high levels. Typical construction equipment noise levels are provided in Table 5.11-9. Generally, the grading phase of construction involves the most equipment and generates the highest noise levels, although noise ranges are usually similar across all construction phases. Implementation of the project would include the demolition and construction of various divergent

uses throughout the Plan Areas, including single- and multi-family residential, commercial, industrial, mixed use, and public facilities, as well as ancillary infrastructural improvements such as roadways and water delivery and wastewater conveyance pipelines.

As addressed in Impact NOI-1, site preparation, grading, and other construction activity conducted pursuant to a building or other construction permit issued by the City of Fresno or other governmental agency would be exempt for the provisions of Chapter 10, Article 1—Noise Regulations, of the Fresno Municipal Code, provided such work occurs between 7:00 a.m. and 10:00 p.m., excluding Sunday. However, although exempt, construction noise can still result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project to the extent that there is potential for physical harm to surrounding noise-sensitive receptors.

Because of the nature of the project, which could include construction activity within and adjacent to previously developed areas within the City, including densely populated residential areas, there would be potential for a temporary or periodic increase in ambient noise levels in the Planning Area as measured at noise-sensitive receptors.

The Occupational Safety and Health Administration (OSHA) has adopted noise exposure thresholds, which establish the highest permissible exposure limit based on periods of exposure. The permissible noise exposure limit increases with shorter periods of exposure. OSHA allows a noise exposure level of 90 dBA over an 8-hour exposure period. The highest permissible noise exposure limit increases to 92 dBA for a 6-hour exposure period, 95 dBA for 4 hours of exposure, 97 dBA for a 3-hour period, and 105 dBA for 1 hour of exposure. The highest permissible noise exposure level for periods of 15 minutes or less is 115 dBA. Exposure to impulsive or impact noise cannot exceed 140 dBA peak sound pressure level. It is important to note that these noise exposure limits apply only to employees in the workplace, but are useful in understanding noise exposure levels with regard to potential hearing loss and physiological damage.

As provided in Table 5.11-2, maximum noise levels associated operation of heavy construction equipment typically ranges from roughly 55 dBA to 95 dBA L_{max} at 50 feet. Typical operating cycles for these types of construction equipment may involve 1 or 2 minutes of full-power operation followed by 3 or 4 minutes at lower power settings. Therefore, hourly-average noise levels during the loudest phases of construction can range up to 90 dBA L_{eq} as measured at 50 feet from multiple pieces of heavy construction equipment operating simultaneously at full power. These average-hourly noise levels would conform to the noise thresholds adopted by OSHA for exposure periods ranging from 115 dBA over 15 minutes to 90 dBA over 8 hours (i.e., a full construction workday). As such, the various construction activity associated with buildout of the Planning Area would not exceed noise levels recognized as causing harm to nearby receptors. Therefore, impacts associated with a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project would be less than significant.

Cumulative Impact Analysis

Less than significant impact. Similar to the Project-specific Impact Analysis above, development activities associated with buildout of the DNCP and the FCSP and implementation of the DDC could result in noise impacts from short-term construction activities. Hypothetically, if several different

projects were constructed simultaneously within the same immediate vicinity, there would be potential for cumulative temporary noise effects, since construction noise from individual projects could compound. However, this scenario is highly unlikely. A more reasonable assumption is that future construction activities would occur at different locations throughout the Planning Area and the Planning Area vicinity. Although scheduling of some of construction activities would likely overlap, projects would not be constructed simultaneously, but instead would occur over a number of years. This distribution of individual projects would reduce the potential for compounding of construction noise.

As described in impact discussion NOI-1 above, such construction activity would be exempt from City of Fresno noise regulations, as long as such activity is conducted pursuant to an applicable construction permit and occurs between 7:00 a.m. and 10:00 p.m., excluding Sunday. In addition, as addressed in the Project-specific Impact Analysis above, typical construction noise levels would fall within those noise exposure limits established by OSHA. As a result, considering that buildout within the Plan Areas and construction of related projects would occur at different locations and over several years, temporary noise levels would not exceed those limits recognized as causing harm to nearby receptors. As a result, no cumulative impacts associated with a temporary or periodic increase in ambient noise levels would occur in the Plan Areas with implementation of the project, and thus would result in a less than significant cumulative impact.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Level of Significance After Mitigation

Airport Noise Levels

Impact NOI-5:	**For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, the project would not expose people residing or working in the project area to excessive noise levels.**

Project-specific Impact Analysis

Less than significant impact. One public general aviation airport, Fresno-Chandler Downtown Airport, is located in the Plan Areas. While implementation of the project is not expected to directly

result in expanded public airport operations, new development that could occur with implementation of the project could expose new noise-sensitive uses to excessive noise levels related to public airport operations.

General Plan Policy NS-1-p requires new development to be evaluated for compliance with the land use and noise exposure compatibility provisions of the adopted the Fresno Chandler Executive Airport Master and Environs Specific Plan to assess noise compatibility of proposed uses and improvements within airport influence and environs areas. In the event that new residential or similar noise-sensitive land uses are proposed for areas susceptible to aircraft noise levels exceeding levels that are typically considered acceptable, Policy NS-1-p would conditionally allow development of such uses following preparation of a noise study and implementation of mitigation measures that would reduce such impact to less than significant.

Therefore, compliance with the applicable policies of the Fresno Chandler Executive Airport Master and Environs Specific Plan, the Fresno Chandler Executive Airport Land Use Compatibility Plan, and compliance with the City's Policy NS-1-p would reduce noise impacts from public airport operations on new noise-sensitive land uses to acceptable levels. Therefore, impacts associated with noise produced by public and public use airports in the Plan Areas would be less than significant.

Cumulative Impact Analysis

Less than significant impact. As noted in the project-specific impact analysis above, there is only one public general aviation airport located in the Plan Areas, the Fresno-Chandler Downtown Airport. Under cumulative conditions, expanded public airport operations within or in the vicinity of the Plan Areas is not projected to occur. However, new development that could occur with implementation of the project could expose new noise-sensitive uses to excessive noise levels related to public airport operations.

In the event that new residential or similar noise-sensitive land uses are proposed for areas susceptible to aircraft noise exceeding levels that are typically considered acceptable, Policy NS-1-p of the General Plan would require the preparation of a noise study and implementation of mitigation measures that would reduce such impacts to less than significant. As a result, no cumulative noise impacts associated with public airport operations are expected to occur within the Plan Areas, and therefore, implementation of the project is not deemed cumulatively considerable.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Private Airstrip Noise Levels

Impact NOI-6:	**For a project within the vicinity of a private airstrip, the project would not expose people residing or working in the project area to excessive noise levels.**

Project-specific Impact Analysis

Less than significant impact. Currently, there are no private airstrips operating within the Plan Areas or within 2 miles of the borders of the Plan Areas. The closest airstrip to the Plan borders is the Sierra Sky Park, located approximately 4.6 miles to the north. In addition, implementation of the DNCP, the FCSP, and the DDC is not expected to directly result in expanded private airstrip operations. Therefore, implementation of the project would not expose people residing or working in the Plan Areas to excessive noise levels impacts associated with noise produced by private airstrips, and noise impacts from private airstrip operations would be less than significant.

Cumulative Impact Analysis

Less than significant impact. As noted in the project-specific impact analysis above, there are currently no private airstrips operating within the Plan Areas or within 2 miles of the borders of the Plan Areas. In addition, under cumulative conditions, development of new private airstrips within or in the vicinity of the Plan Areas is not expected. As a result, no cumulative impacts associated with airstrip noise would occur in the Plan Areas, and therefore, implementation of the project is not deemed cumulatively considerable relative to potential noise impacts from private airstrip operations.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

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5.12 - Population and Housing

5.12.1 - Introduction

This section provides existing population and housing characteristics of the City of Fresno, the Downtown Neighborhoods Community Plan (DNCP) and the Fulton Corridor Specific Plan (FCSP) and evaluates potential population and housing impacts created by the project.

Sources

Information in this section is based on the following sources:

- Fresno General Plan. December 2014 (Housing Element updated April, 2016).
- Downtown Neighborhoods Community Plan. Public Draft. 2016. The complete report is contained in Appendix A.
- Fulton Corridor Specific Plan. Public Draft. 2016. The complete report is contained in Appendix B.
- Downtown Development Code. Public Draft. 2016. The complete report is contained in Appendix C.
- Comments received in response to the Notice of Preparation. These comments are summarized in Section 1, Introduction, of this Draft EIR. Copies of these comments are contained in Appendix D.
- Comments made during the public scoping meeting. These comments are summarized in Section 1, Introduction, of this Draft EIR. Copies of these comments are contained in Appendix D.

5.12.2 - Environmental Setting

This section describes the existing environmental setting regarding population and housing for the City of Fresno and the DNCP and FCSP areas. The following information is provided in accordance with the California Environmental Quality Act (CEQA) Section 15125.

Study Area for Project Impacts

The study area for project impacts on Population and Housing includes the DNCP and FCSP areas.

Study Area for Cumulative Impacts

The study area for the analysis of cumulative impacts is the City of Fresno.

Population and Housing Summary

The Department of Finance indicates that the population of the City of Fresno is estimated to be 520,159 as of January 2015 (State of California Department of Finance 2015).

The Department of Finance indicates that the total number of housing units in the City as of January 2015 is estimated to be 176,915 (State of California Department of Finance 2015).

The following table provides a summary of the existing housing and population.

Table 5.12-1: Existing Population and Households in DNCP and FCSP Plan Areas, City of Fresno, Fresno County, and State of California

Category	DNCP	FCSP	City of Fresno	County of Fresno	State of California
Population[1]	66,344	3,877	520,159	972,297	38,714,725
Households	16,181[2]	2,041[3]	176,915	324,941	13,914,715

Notes:
[1] Source: Claritas, Inc.; American Community Survey 2006-2008; Strategic Economics 2010.3
[2] Population was calculated using an estimate of 4.1 persons per household
[3] Population was calculated using an estimate of 1.9 persons per household.
Sources: City of Fresno, Notice of Preparation, Table 1 for households.
Economic and Demographic Overview of Fresno Downtown Neighborhoods Community Plan, Strategic Economics, November 2011.
State of California, Department of Finance. 2015.

Downtown Neighborhoods Community Plan

Population

As shown in the FCSP and DNCP, the existing population within the FCSP is estimated to be 3,877 persons, and 66,344 persons within the DNCP, for a combined total of 70,221 persons. In 2008, the estimated population of the DNCP area comprised approximately 15 percent of the City's total population, of which more than half were living in the Southeast Neighborhoods (see Table 5.12-1). With 13,000 residents, the Edison Neighborhood had the second largest population. Downtown and the Jane Addams, Lowell, and Jefferson Neighborhoods were more comparable in size, with populations ranging from 4,700 to 5,300 (DNCP 2016).

Within the DNCP area, there is a considerable amount of demographic variation by neighborhood. For example, the Jefferson neighborhood is primarily composed of large families, and the Downtown has a much larger proportion of single person households (see Table 5.12-2). In the Jefferson Neighborhood, 21 percent of households are singles or non-families, compared with 67 percent in the Downtown District area (DNCP 2016).

Table 5.12-2: Population and Households by Type in Downtown Neighborhoods Community Plan Area by Neighborhood

Category	Jefferson	Lowell	Jane Addams	Southeast	Edison	Downtown
Population	4,741	4,628	4,970	37,267	13,329	5,296
Households	1,093	1,258	1,488	8,718	3,388	1,065

Table 5.12-2 (cont.): Population and Households by Type in Downtown Neighborhoods Community Plan Area by Neighborhood

Category	Jefferson	Lowell	Jane Addams	Southeast	Edison	Downtown
% Households that are families	79%	67%	70%	82%	76%	33%
Household Type						
Singles and other non-family households	21%	33%	30%	18%	24%	67%
Married Couple Family with Children	35%	26%	26%	37%	27%	7%
Married Couple Family, no children	9%	8%	15%	13%	9%	7%
Other Family	35%	33%	29%	32%	40%	19%
Share of households with Children	65%	54%	49%	62%	58%	23%
Average Household Size	4.4	3.5	3.3	4.2	3.9	1.9
Source: Downtown Neighborhoods Community Plan, Introduction, Table 4 2013.						

Housing

According to the DNCP, vacancy rates in the Downtown Neighborhoods are high, and most dwellings are rental units. Overall, 10 percent of units are vacant, and vacancy rates are highest in the Downtown, Lowell, and Jefferson neighborhoods and lowest in the Edison and Southeast neighborhoods. The DNCP Plan Area has an owner occupancy rate of 36 percent, which is 13 percent lower than the overall 49 percent owner occupancy rate in the City of Fresno. The lowest owner occupancy rates are in the Downtown and Lowell neighborhoods. Jane Addams and the Southeast neighborhoods have the highest owner occupancy rates of 46 and 44 percent, respectively (DNCP 2016).

The majority of the neighborhoods within the Plan Area consist primarily of single-family houses; however, some neighborhoods (for example, Lowell, Jefferson, and portions of Edison and Southeast Fresno) contain a mix of single-family and multi-family housing. The DNCP Area contains older, established neighborhoods with the vast majority of housing units built before 1980 and almost 20 percent built before 1939. The Lowell, Jefferson, and Southeast neighborhoods have the greatest share of units built before 1980. The residential vacancy rate is above the City of Fresno average as shown in Table 5.12-3.

Table 5.12-3: Housing Unit Age, Tenure, and Vacancy Status

Category	Downtown	Lowell	Jefferson	Jane Addams	Edison	Southeast	Plan Area Total	City of Fresno	Fresno County	California
Total Housing Units	1,258	1,450	1,250	1,678	3,709	9,463	18,808	164,334	304,156	13,295,476
Occupied Units	1,065	1,256	1,093	1,488	3,388	8,718	17,008	152,350	279,029	12,177,852

Table 5.12-3 (cont.): Housing Unit Age, Tenure, and Vacancy Status

Category	Downtown	Lowell	Jefferson	Jane Addams	Edison	Southeast	Plan Area Total	City of Fresno	Fresno County	California
Vacancy Rate	15%	13%	13%	11%	9%	8%	10%	7%	8%	8%
Owner-Occupied	97	151	205	685	1,121	3,814	6,073	73,978	152,525	7,038,202
Owner Occupancy Rate	9%	12%	19%	46%	33%	44%	36%	49%	55%	58%
Median Year Housing Built	1958	1959	1978	1956	1966	1969	n/a	1976	1977	1973
Source: Downtown Neighborhoods Community Plan, Introduction, Table 5, 2013										

Existing Physical Conditions

Downtown Neighborhoods Community Plan

The majority of the neighborhoods within the Plan Area consist primarily of single-family houses, although some neighborhoods—such as Lowell, Jefferson, and portions of Edison and Southeast Fresno—contain a mix of single-family and multi-family housing types. The majority of the post-World War II multi-family buildings are too large for their site, do not face the street, overwhelm their neighbors, are poorly maintained, lack sufficient amenities such as usable private outdoor space, provide substandard living conditions for many residents, and have had a severe negative impact on the economic value of these neighborhoods.

The corridors that separate the various neighborhoods are difficult to differentiate from one another and are designed to move traffic quickly and efficiently without regard to pedestrians, cyclists, or transit users. Their rights-of-way are uniformly wide, devoid of street trees, and the majority of the buildings that line them have parking lots located between the building and the street. The urban fabric at the intersections between major streets is unassuming. Streets are typically lined by parking lots or buildings that are set back from the street. There are, however, several places, such as along Tulare Avenue and Belmont Avenue between Cedar and Barton Avenues, where pedestrian oriented buildings are built close to the street and accessed from the adjacent sidewalk. These places were traditionally neighborhood centers and will be revitalized. This Plan and the accompanying Downtown Development Code will enable their revitalization and expansion.

The Community Plan Area contains older, established neighborhoods with the vast majority of housing units built before 1980 and nearly 20 percent built before 1939. The Lowell, Jefferson, and Southeast neighborhoods have the greatest share of units built before 1980.

The residential vacancy rate is well above the City average and most dwellings are rental units. Overall, 10 percent of units are vacant, well above what is considered by the real estate market to be a healthy rate of 5 percent.

The quality, quantity, and type of parks and open space in the Community Plan Area are mixed, and access to existing park space is generally limited. The Plan Area contains Roeding Park, located in the Jane Addams neighborhoods—one of Fresno's three regional City parks. It is home to the Chaffee Zoological Gardens, and the Storyland and Playland amusement parks. In the western half of the Community Plan Area there are many public parks located within 0.5 mile of most residences and businesses. Public parks in the eastern half of the Plan Area and within the Jane Addams Neighborhoods (other than Roeding Park) are noticeably absent. The Downtown Neighborhoods are served by many schools, but access to their playing fields and playgrounds has historically been limited to children attending the schools and only during school hours. However, recently the City of Fresno and two local school districts entered into a joint use agreement allowing 16 school campuses to remain open to the public for use on weekends.

Street tree coverage in the Plan Area is uneven. The neighborhoods and districts south of State Route 180 have a relatively good street tree character, with many of them having more than 50 percent of their street length lined by mature street trees. In the Jane Addams Neighborhoods, however, street trees are noticeably absent. Moreover, there are almost no street trees within the areas zoned for commercial, manufacturing, and industrial use, or along major thoroughfares such as Belmont, Tulare, and Cedar Avenues.

Fulton Corridor Specific Plan

Downtown is the oldest part of Fresno and contains the highest number of historic resources in the region. It is also home to some of the most important civic and entertainment resources in the San Joaquin Valley, including city, county, state, and federal office buildings; the Fresno Convention & Entertainment Center; several museums; and Chukchansi Park. It is one of the largest job centers in the region with approximately 30,000 jobs, and it continues to be an attractive location for government offices, legal, and medical services. The Downtown area features a stable base of office employment, which is due to its concentration of public sector employment. However, despite these venues, attractions, and jobs, Downtown currently suffers from a very high retail vacancy rate and low office and retail lease rates, and is inactive outside of business hours. As with the former Fulton Mall, the area had a dramatically higher office vacancy rate than those found in the rest of Downtown and the region.

The most common building types are mixed-use buildings, theaters, civic/institutional buildings, and industrial warehouses. With the exception of the Mural District, which features several recently built multi-family and mixed-use projects, there are relatively few residential buildings within the Downtown area.

Over the years, many urban buildings have been demolished and have been replaced with vacant land and parking lots. Vacant parcels are especially prevalent along the Union Pacific railroad tracks, within Chinatown and in the Mural District. These vacant parcels contribute to further disinvestment and abandonment, as they advertise the fact that Downtown is in a declining state.

The Downtown street network, like that of Southwest Fresno, is distinguished from that of the rest of the City by its 45-degree orientation in relation to the cardinal directions. The meeting of the two grids at Divisadero Street generates a number of visually prominent building sites, but also

particularly challenging traffic patterns. This, along with several one-way and discontinuous streets throughout the Downtown area creates a particularly disorienting environment for some motorists to navigate.

As with other parts of the Community Plan Area, Downtown is separated from the rest of the City by freeways and railroad tracks, hampering vehicular and especially pedestrian connectivity. The freeways also encourage motorists to bypass Downtown altogether. In general, Downtown streets are wide and often absent of street trees and pedestrian traffic-supporting amenities.

Downtown Fresno contains a number of thoroughfares that have been vacated to create pedestrian-only streets. The Fulton Mall was a network of pedestrian streets comprising Merced Mall, Mariposa Mall including Mariposa Plaza, and Kern Mall. The Fulton Mall is currently undergoing reconstruction as part of the Fulton Mall Reconstruction Project, which will reopen the network of streets to vehicular traffic, facilitating travel through the downtown. Other street closures include Mariposa Street between M and N Streets, and between O and P Streets. These pedestrian malls were originally installed to concentrate pedestrian activity and bolster the retail performance of Downtown, but over time have failed at generating a vibrant street life and commercial success. The lack of concentrated downtown housing and ongoing urban sprawl also contributed to the reasons as to why pedestrian malls by themselves were not successful at saving downtowns.

Much of Downtown's existing water distribution system is over 50 years old, and improvements are needed to strengthen its sufficiency and reliability for existing customers, as well as to provide adequate water supply and fire flow for the projected population growth engendered in this Plan. Sewer capacity upgrades are also needed to accommodate the projected population growth and associated wastewater demand increases.

5.12.3 - Regulatory Setting

Federal

Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (Uniform Act)

The Uniform Act (42 U.S. Code, Section 4601, et seq.), passed in 1970 and amended in 1987, is intended to provide for uniform and equitable treatment for persons displaced through federally-funded or assisted transportation and redevelopment projects that require property acquisition. The act sets forth rules for notification, relocation counseling, social services or assistance for disabled residents, and compensation for replacement housing and moving costs. The rules stipulate that replacement housing must be comparable to previous housing in terms of location, size, access to employment and public facilities, and must be "decent, safe, and sanitary." The rules apply if federal funds are used in any phase of the program or project, even if the property acquisition itself is not federally funded.

State

California Relocation Assistance Act

The California Relocation Assistance Act (Government Code Section 7260, et seq.) establishes uniform policies to provide for the fair and equitable treatment of people displaced from their

homes or businesses as a direct result of state and/or local government projects or programs. The California Relocation Assistance Act requires that comparable replacement housing be made available to displaced persons within a reasonable period of time prior to the displacement. Displaced persons or businesses are assured payment for their acquired property at fair market value. Relocation assistance in the form of advisory assistance and financial benefits would be provided at the local level. This includes aid in finding a new home location, payments to help cover moving costs, and additional payments for certain other costs.

State Housing Element Law

The State of California housing law requires localities to prepare and adopt a housing element as part of its General Plan. Additionally, the law requires that the State Department of Housing and Community Development administer the law by reviewing local Housing Element documents for compliance with state law and by reporting its written findings to the local governing body (City of Fresno Housing Element Draft 2016).

Regional Housing Needs Assessment

State Housing Element Law, Government Code Chapter 1143, Article 10.6, Sections 65580 and 65589, requires development of a Regional Housing Needs Allocation Plan (RHNA). The RHNA, which was adopted by the Council of Fresno County Governments (FCOG) in July 2014, defines local housing market areas. Each jurisdiction within a market area is then assigned and is responsible for, a proportional share of the area's non-market rate housing needs. According to the 2013 Fresno County RHNA Plan, the City of Fresno falls into the Fresno-Clovis Metropolitan Market Area (FCMA) and receives an allocation of units based on the City's share of the housing need within that boundary. The FCMA also includes the City of Clovis, the unincorporated communities of Easton and Friant, and several unincorporated neighborhoods such as Calwa, Fig Garden, Malaga, and Sunnyside (City of Fresno Housing Element Draft 2016).

The 2013 Fresno County RHNA Plan covers an 11-year planning period (January 1, 2013 to December 31, 2023) and is divided into four income categories: very-low, low, moderate, and above-moderate. As determined by FCOG, the City of Fresno's total housing unit capacity allocation is 22,813. (Note that this figure is adjusted with credits for affordable housing already built and with "debits" for additional units due to a carry-over from the previous Housing Element planning cycle.) This allocation translates into sites that could accommodate housing affordable to households that fall within the various income categories as follows:

- Extremely and Very Low Income: 6,432 dwelling units
- Low Income: 5,491 dwelling units
- Moderate Income: 2,733 dwelling units
- Above-Moderate: 8,157 (City of Fresno Housing Element Draft 2016)

City of Fresno General Plan

The Fresno General Plan provides community-wide policy direction for the entire city through its eleven elements, is currently in the process of being updated to refine Fresno's vision of itself in the future. The Fresno General Plan is the City's primary policy planning document. Through its

elements, the General Plan provides the framework for the management and utilization of the City's physical, economic, and human resources. Each element contains goals, policies, and implementation measures that guide development within the City. Relevant provisions of the Housing Element are discussed below.

City of Fresno General Plan Housing Element

The housing element is intended to provide an understanding of the City's housing needs and what goals, policies, and programs have been developed to help meet those needs. The Housing Element is one of seven State-mandated elements of a General Plan. According to state law, these elements must be updated every 8 years. The Fresno Housing Element has been updated and adopted by the City Council, and is currently awaiting certification from the State.

The Fresno Housing Element identifies strategies and programs to (1) encourage the development of a variety of housing opportunities; (2) provide housing opportunities for persons of lower and moderate incomes; (3) address the quality of the existing housing stock in Fresno; (4) minimize governmental constraints; and (5) promote equal housing opportunities for all residents (City of Fresno Housing Element, 2016).

Housing Element—Affordable Housing

This section includes the goals, policies and programs from the City of Fresno Housing Element, Chapter 6, which pertain specifically to affordable housing (City of Fresno Draft 2016).

- **Objective H-1:** Provide adequate sites for housing development to accommodate a range of housing by type, size, location, price, and tenure.
- **Policy H-1-a:** Implement land use policies and standards that allow for a range of residential densities and products that will enable households of all types and income levels the opportunity to find suitable ownership or rental housing.
- **Policy H-1-b:** Encourage development of residential uses in strategic proximity to employment, recreational facilities, schools, neighborhood commercial areas, and transportation routes.
- **Policy H-1-c:** Promote the development of affordable and special needs housing near transit and/or smart growth areas.
- **Objective H-2:** Assist in the development of adequate housing to meet the needs of extremely low-, very low-, and moderate-income households.

To support these goals, the City of Fresno will take the following actions:

- **Policy H-2-a:** Facilitate housing development that is affordable to extremely low-, very low-, low-, and moderate-income households by providing technical assistance, regulatory incentives and concessions, and financial resources as funding permits.
- **Policy H-2-b:** Encourage both the private and public sectors to produce or assist in the production of housing with particular emphasis on housing affordable to persons with disabilities, elderly, large families, female-headed households with children, and people experiencing homelessness.

- **Policy H-2-c:** Continue to utilize federal and State subsidies to the fullest extent to meet the needs of lower-income residents, including extremely low-income residents.
- **Policy H-2-d:** Support regional efforts to address homelessness including the Fresno-Madera Continuum of Care.
- **Policy H-2-e:** Support and coordinate with agencies and service providers offering foreclosure services.
- **Policy H-2-f:** Promote and encourage sustainable development and green building practices for all new residential development and for the retrofitting of existing housing.
- **Objective H-3:** Address, and where possible, remove any potential governmental constraints to housing production and affordability.
- **Policy H-3-a:** Review and adjust as appropriate residential development standards, regulations, ordinances, departmental processing procedures, and residential fees related to rehabilitation and construction that are determined to be a constraint on the development of housing.
- **Policy H-3-b:** Educate applicants on how to navigate the development approval process and otherwise facilitate building permit and development plan processing for residential construction.
- **Policy H-3-c:** Facilitate timely development plan and building permit processing for residential construction.
- **Policy H-3-d:** Provide incentives and regulatory concessions for residential projects constructed specifically for lower- and moderate-income households.
- **Policy H-3-e:** Encourage the new construction of housing in the Central City, Inner City, and other targeted areas. A specific program under this Policy calls for implementation of the Downtown Development Code to encourage higher density housing.
- **Policy H-2-f:** Prioritize infrastructure improvements, code enforcement, and public services provision in high-need areas.
- **Objective H-4:** Conserve and improve the condition of Fresno's existing housing stock.
- **Policy H-4-a:** Enforce adopted code requirements that set forth acceptable health and safety standards for the occupancy of existing housing.
- **Policy H-4-b:** Advocate and facilitate the conservation and rehabilitation of substandard residential properties by homeowners and landlords.
- **Policy H-4-c:** Utilize Code compliance to bring substandard units into compliance with City codes and to improve overall housing conditions in Fresno.
- **Policy H-4-d:** Educate the public regarding the need for property maintenance and rehabilitation, code enforcement, crime watch, neighborhood conservation and beautification, and other related issues.
- **Policy H-4-e:** Continue to facilitate access to rehabilitation programs that provide financial and technical assistance to low- and moderate-income households for the repair and rehabilitation of existing housing with substandard conditions.
- **Policy H-4-f:** Facilitate the removal of existing housing, including illegal, nonconforming, and blighted properties, that poses serious health and safety hazards to residents and adjacent structures.
- **Policy H-4-g:** Assist in the preservation of all units at risk of converting from affordable housing to market rate housing.

- **Objective H-5:** Continue to promote equal housing opportunity in the City's housing market regardless of age, disability/medical condition, race, sex, marital status, ethnic background, source of income, and other factors.
- **Policy H-5-a:** Prohibit discrimination in the sale, rental, or financing of housing based on race, color, ancestry, religion, national origin, sex, sexual orientation, gender identity, age, disability/medical condition, familial status, marital status, source of income, or any other arbitrary factor.
- **Policy H-5-b:** Assist in the enforcement of fair housing laws by providing support to organizations that can receive and investigate fair housing allegations, monitor compliance with fair housing laws, and refer possible violations to enforcing agencies.
- **Policy H-5-c:** Provide equal access to housing for special needs residents such as people experiencing homelessness, elderly individuals, and persons with disabilities.
- **Policy H-5-d:** Promote the provisions of disabled-accessible units and housing for persons with mental and physical disabilities.
- **Policy H-5-e:** Ensure that all development applications are considered, reviewed, and approved without prejudice to the proposed residents, contingent on the development application's compliance with all entitlement requirements.
- **Policy H-5-f:** Accommodate persons with disabilities who seek reasonable waiver or modification of land use controls and/or development standards pursuant to procedures and criteria set forth in the Development Code.
- **Policy H-5-g:** Create equitable and affordable housing options throughout the City that provide incentives to residents for finding housing in high opportunity areas and to developers for building affordable housing in high opportunity areas.
- **Policy H-5-h:** Consult with a wide range of groups throughout the community and consider environmental justice issues in the development and update of regulations, guidelines and other local programs.
- **Policy H-5-i:** Increase or maintain resources to establish and support outreach, public education and community development activities through community-based and neighborhood organizations.

5.12.4 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether impacts to population and housing are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

5.12.5 - Impact Analysis, Mitigation Measures, and Level of Significance After Mitigation

Population Growth

Impact POP-1: **The project would not induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure).**

Program-Level Impact Analysis of the DNCP and FCSP

Less than significant impact. Implementation of the DNCP and FCSP would result in a population increase. These two plans anticipate that by the year 2035, the residential population of the DNCP area (which includes the population of the FCSP area) could increase by as many as 27,225 people for a total 97,446 residents. The residential population for each Plan Area, as well as the combined population for both Plan Areas, is shown in Table 5.12-4.

Table 5.12-4: Residential Population Potential

Land Use	DNCP (excluding FCSP)	FCSP	DNCP + FCSP
Existing Population	66,344	3,877	70,221
New Population	15,268	11,958	27,225
Total Residential Population	81,612	15,834	97,446
Source: City of Fresno, Notice of Preparation, Table 3.			

The DNCP boundary completely overlaps the boundaries of the pre-existing Central Area Community Plan (CACP) and the Fulton Lowell Specific Plan (FLSP). Accordingly, both the CACP and FLSP will be rescinded, and the provisions of the DNCP and the accompanying FCSP will completely replace the provisions of the CACP and the FLSP. In addition, the DNCP overlaps portions of the pre-existing West Area Community Plan, the Edison Community Plan, and the Roosevelt Community Plan. The boundaries of these existing Plans will be amended, removing the portions of each respective Plan that are within the DNCP boundary of the DNCP and the accompanying FCSP. The FCSP will completely replace the regulations of the portions of the West Area, Edison, and Roosevelt Community Plans that are within the boundaries of the DNCP.

The previous CACP only contemplated 12,845 additional residents, but the DNCP and FCSP propose to allow as many as 14,733 additional residents within the previous CACP area. This increase is based upon the DNCP's—and the accompanying FCSP's—goals of generating a vibrant, mixed-use Downtown by introducing the maximum number of residents within the heart of Downtown. To accommodate this increase, the DNCP applies the aggregate allowed residential population increase for each portion of the existing community plan areas to the entire combined DNCP boundary, as shown in Table 5.12-4 above.

The population potential for the entire DNCP area is within the population growth contemplated by the Fresno General Plan, which anticipates growth of up to 99,393 additional residents, as shown in Table 5.12-5, consistent with the DNCP and FCSP.

Table 5.12-5: 2025 General Plan Allowed Population Increase by Existing Community Plan Area

Existing Community Plan	Allowed Population Increase		Population Increase within Proposed DNCP/FCSP Boundary	
	Within Each Community Plan Boundary	Within Proposed DNCP/FCSP Boundary	Year 2000	Year 2035
Central	12,845	12,845	14,927	27,772
Edison	43,826	7,657	12,356	20,013
Roosevelt	39,036	5,809	35,598	41,407
West Area	73,913	5,447	4,754	12,201
Total	**169,080**	**31,758**	**67,635**	**99,393**

Source: City of Fresno, Notice of Preparation, Table 4.

The residential population for each plan area, as well as the combined population for both the DNCP and FCSP plan areas, is shown in Table 5.12-6. Together, the DNCP and FCSP anticipate that by the year 2035, the residential population of the plan areas could increase by as many as 28,860 people, to a total population of 99,081 residents, which is within the growth contemplated by the Fresno General Plan.

Table 5.12-6: Residential Population Potential

Land Use	DNCP (excl. FCSP)	FCSP	DNCP + FCSP
Existing Population (persons)[a]	66,344	3,877	70,221
New Population (persons)[b]	15,268	13,593	28,860
Total Residential Population (persons)	**81,612**	**15,834**	**99,081**
Existing Population Density (persons/acre)	9.98	5.92	9.62
Population Density in Year 2035 (persons/acre)	12.28	24.17	13.35

Notes:
[a] Source: Claritas, Inc.; American Community Survey 2006-2008; Strategic Economics 2010.
[b] Assumes 4.1 persons per household for the DNCP and 1.9 persons per household for the FCSP. The citywide average for persons per household is 3.0. Source: Claritas, Inc.; American Community Survey 2006–2008; Strategic Economics 2010. The DNCP is composed primarily of large families, while the FCSP is home to a much larger proportion of single person households.

Because the population is within the growth contemplated by the Fresno General Plan, the population growth resulting from the DNCP (including the FCSP) does not represent substantial population growth. Therefore, implementation of the proposed project would not induce substantial growth and impacts would be less than significant.

Cumulative Impact Analysis

Development facilitated by the DNCP and FCSP, together with other projected citywide growth, would result in additional residential and non-residential development by the year 2035. This additional development would result in increased population. The Fresno General Plan anticipates up to approximately 425,000 additional persons for a total of 970,000 persons within the City by the buildout year 2056. In addition, development under the General Plan buildout scenario is projected to accommodate approximately 145,000 additional housing units for a total of approximately 332,000 units by 2056. Development of the DNCP and FCSP would add approximately 9,990 housing units, which represents a small percentage of this projected growth. The MEIR for the Fresno General Plan has already analyzed and accounted for this increase in population. Because the DNCP and FCSP population increase is within the population growth analyzed within the Fresno General Plan, the project impacts are not deemed cumulatively considerable. Therefore, less than significant cumulative impacts are anticipated related to population growth.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Housing Displacement/Replacement Housing

Impact POP-2:	**The project would not displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere.**

Project-specific Impact Analysis

Less than significant impact. Implementation of the DNCP and FCSP would allow for development on vacant land in accordance with the General Plan. Development could also occur within areas that would be redeveloped or in buildings that would be renovated and/or adaptively reused. Implementation of the DNCP and FCSP could potentially result in removal of existing residential units. However, the proposed project includes a substantial number of new residential units as shown in Table 5.12-7. Up to 9,990 housing units will be developed with the implementation of both

the DNCP and FCSP. Therefore, implementation of the project would result in an increase in total available housing units, including replacement units for those residences that would be removed during development. Prior to displacement of any dwelling units, a relocation analysis must be prepared in accordance with federal and/or state law. Implementation of the proposed project would not necessitate construction of replacement housing in addition to the housing that is already planned as part of the DNCP and FCSP; impacts would be less than significant.

Table 5.12-7: Maximum Development Potential by Land Use[1]

Land Use	Quantity DNCP (excl. FCSP)	Quantity FCSP	DNCP + FCSP
Residential (dwelling units)	3,697	6,293	9,990
Office (sf)	2,000,000	3,900,000	5,900,000
Retail (sf)	350,000	1,600,000	1,950,000
Industrial (sf)	2,900,000	150,000	3,050,000
Public Facilities (sf)	0	0	0
Agriculture (acres)	0	0	0
Open Conservation (acres)	33	31	64
Vacant Land (acres)	0	0	0

Note:
[1] To examine the level of development allowed within the FCSP area, individual underutilized parcels were identified within the FCSP area. These consisted of vacant lots, parking lots, lots that contain underutilized non-historic buildings, and buildings with parking lots in front of them. For the DNCP area, vacant parcels were identified. A floor area ratio (FAR) range, derived from the FAR of each proposed building type allowed within each parcel's respective zone in the Downtown Development Code, was then applied to each of the underutilized parcels, resulting in a total gross new building square footage.
This gross square footage was then apportioned among the uses projected within the plan area according to the land use proportions of the market demand development potential. Since the Market Analysis did not evaluate the industrial market, the industrial development potential was assumed to be approximately 10% of the total building square footage for the combined plan areas. The existing building square footage currently present within these parcels was then subtracted, by use from the proposed square footage.
Note that the allowed development potential within the FCSP area included 1.5 million square feet (sf) of space within existing vacant buildings. As with new development potential, this 1.5 million sf of existing vacant space was apportioned according to the market demand potential, adding up to approximately 860 residential units 390,975 sf of office space, 119,233 sf of retail space, and a reduction of 42,587 sf of industrial space. This existing vacant space is considered new development potential, not existing development. Thus, the FCSP determines the allowed development that can occur within the FCSP area, regardless of whether it is a new building on vacant land or new uses in an existing vacant building.

Cumulative Impact Analysis

Less than significant impact. Cumulative development within the City of Fresno is projected to occur on vacant land and in areas that would be redeveloped. Based on housing projections, the City is anticipated to substantially increase the number of housing units under General Plan buildout conditions. Therefore, cumulative development would not be expected to result in significant impacts related to the displacement of existing housing that would necessitate the development of more housing than is already projected for the City of Fresno. As described above, the implementation of

the DNCP and FCSP would result in a less than significant housing impact because they contemplate the development of additional dwelling units, and future development under the General Plan is projected to provide adequate housing for future employees and their families within the City. Therefore, the project's contribution to potential cumulative housing impacts within the City would not be considerable, and thus would be less than significant.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Population Displacement/Replacement Housing

Impact POP-3:	**The project would not displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.**

Project-specific Impact Analysis

Less than significant impact. As described in Impact POP-2 above, implementation of the proposed project could potentially result in removal of existing residential units. However, implementation of the DNCP and FCSP would include up to 9,990 additional dwelling units. Therefore, implementation of the project would result in an overall increase in housing units available for residences, which would offset the number of any units that are removed. Prior to any displacement of any residents, a relocation analysis must be prepared in accordance with federal and/or state law. Implementation of the proposed project would not displace a substantial number of people, and would not necessitate the construction of replacement housing in addition to the housing that is already planned as part of the DNCP and FCSP; impacts would be less than significant.

Cumulative Impact Analysis

Less than significant impact. Cumulative development within the City of Fresno is projected to occur on vacant land and in areas that would be redeveloped. Based on housing projections, the City is anticipated to substantially increase the number of housing units under General Plan buildout conditions. Therefore, cumulative development would result in less than significant impacts related to the displacement of substantial numbers of people, such that additional housing would be required within the City. As described above, the implementation of the proposed project would also result in less than significant impacts related to the displacement of a substantial number of people, as the number of new dwelling units provided under the DNCP and FCSP would offset any

dwelling units that are removed during development. Therefore, the project's contribution to potential cumulative displacement of people would not be considerable, and thus would be less than significant.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

5.13 - Public Services

5.13.1 - Introduction

This section addresses potential impacts to public services such as police protection, fire protection, schools, parks/recreation, and libraries resulting from implementation of the Downtown Neighborhoods Community Plan (DNCP), the Fulton Corridor Specific Plan (FCSP), and the Downtown Development Code (DDC). Information in this section was derived from the following sources:

- Fresno General Plan. December 2014.
- Downtown Neighborhoods Community Plan. Public Draft. 2016. The complete report is contained in Appendix A.
- Fulton Corridor Specific Plan. Public Draft. 2016. The complete report is contained in Appendix B.
- Downtown Development Code. Public Draft. 2016. The complete report is contained in Appendix C.
- Comments received in response to the Notice of Preparation. These comments are summarized in Section 1, Introduction, of this Draft EIR. Copies of these comments are contained in Appendix D.
- Comments made during the public scoping meeting. These comments are summarized in Section 1, Introduction, of this Draft EIR. Copies of these comments are contained in Appendix D.

5.13.2 - Environmental Setting

The following information is provided in accordance with CEQA Guidelines Section 15125. The environmental setting discussion examines the existing conditions within the DNCP and FCSP areas.

Study Area for Project Impacts

The study area for project impacts on public services includes the DNCP and FCSP areas.

Study Area for Cumulative Impacts

The study area for the analysis of cumulative impacts is the City of Fresno.

Police Protection

The City of Fresno Police Department (FPD) provides police protection services within the Fresno city limits. The FPD provides a full range of police services, including uniformed patrol response to calls for service, crime prevention, tactical crime enforcement (such as gang/violent crime suppression), and traffic enforcement/accident prevention. The FPD also contains the Investigative Services Division, which investigates crimes against persons/property, collects intelligence information, and deals with vice/narcotics control and enforcement. The California Highway Patrol (CHP) provides law

enforcement services for the state highway system and assists the City of Fresno by providing enforcement within the City under special programs (City of Fresno 2014).

Patrol services are divided into four policing districts. The Southwest Policing District is located south of McKinley Avenue, and west of East Avenue and State Route 99 (SR-99). The Northwest Policing District is located north of McKinley Avenue to the San Joaquin River and west of Blackstone Avenue to the western city limits. The Southeast Policing District is located south of Ashlan Avenue (east of Clovis Avenue), south of McKinley Avenue between East Avenue and Clovis Avenue, east of SR-99 (south of Church Avenue) to the southern city limits. The Northeast Policing District is located north of McKinley Avenue to the San Joaquin River and east of Blackstone Avenue to the City of Clovis.

The FCSP falls entirely within the Southwest Policing District (District 1). The DNCP falls within three policing districts: Southwest (District 1), Northwest (District 2), and Southeast (District 3).

In addition to the Fresno Police Headquarters, located at 2323 Mariposa Mall, the FPD operates four police stations within the City:

- Southwest: 1211 Fresno Street, Fresno, CA 93706
- Southeast: 1617 S. Cedar Avenue, Fresno, CA 93702
- Northeast: 1450 E. Teague Avenue, Fresno, CA 93720
- Northwest: 3781 N. Hughes Avenue, Fresno, CA 93705

Fire Protection

The Fresno Fire Department offers the following services within the Fresno city limits: fire prevention, fire suppression, hazardous material mitigation, rescue, and emergency medical services (City of Fresno 2014). The City has instant aid agreements with surrounding agencies and districts whereby the nearest fire station responds to an emergency regardless of the jurisdiction within which it is located. These agreements, in addition to the City's own resources, provide a high quality of fire suppression and emergency medical care services. Emergency medical service is provided to all City residents by the Fire Department; however, emergency transport is provided by private carriers (such as private ambulance companies) (City of Fresno 2014).

The Fresno Fire Department employs 304 uniformed firefighters operating from 24 fire stations and serves a population of more than 550,000 in the City of Fresno, the North Central Fire Protection District, and the Fig Garden Fire Protection District (over 325 square miles), including the Airport Rescue Fire Fighting station. The Fire Department recently merged operational services with two other County departments and now has 19 fire stations within the City that serve a 336-square-mile area. The companies are divided into three battalions: two for the City and one for the North Central Fire Protection District, each supervised by a battalion chief. Daily staffing consists of 66 firefighters and one 24-hour arson investigator (City of Fresno 2014). The Fire Department also has hazardous materials, swift water rescue, and heavy rescue apparatus.

The Fire Department's target response time is 5 minutes and 20 seconds from the time the station receives notification of an emergency. In 2013, the average response time for the Department was

6 minutes and 26 seconds, over a minute longer than the target response time. The Fire Department has been unable to meet target response times because of cuts in the number of units available to respond. In 2009, the Fire Department had 25 operational units available to respond; however, as a result of the economic downturn in 2010, the Fire Department had to reduce the number of responding units to 19 (a 24-percent reduction in available work force) though the service level demands remained the same or higher. Industry standard defines an effective firefighting force as having 15 firefighters on a residential fire ground within 8 minutes, 90 percent of the time. Today, the department continues to provide service with 19 responding units, providing an effective firefighting force on scene within 8 minutes 64 percent of the time.

Fresno has a staffing level of 0.41 firefighter per 1,000 people; the state average is 0.81 and the national standard is 1 to 1.5 per 1,000 residents. The National Fire Protection Association Standard (NFPA) 1710 provides recommendations of minimum workforce standards to accomplish provisions of fire suppression and emergency medical services. Fresno Fire Department uses NFPA 1710 as a guidance document to establish its own minimum staffing standards to ensure that sufficient workforce is present in emergencies. The Fire Department's long-term planning target is to match daily staffing levels to service level demands.

The City requires that all new residential development be within a 3-mile "running distance" of a fire station (City of Fresno 2015). All development within the DNCP and FCSP areas would be within 3 miles of an existing fire station. Table 5.13-1 provides Fire Department statistics for 1980–2011.

Table 5.13-1: Fresno Fire Department Statistics 1980–2011

Year	1980	1990	2000	2009	2010	2011
Firefighters	273	221	243	323	282	260
Calls for Service	15,887	28,780	23,792	41,034	30,001	Information not provided
Fire Fighters per/1,000 Residents	1.3	0.71	0.6	0.68	0.6	0.54
Minimum Daily Staffing	88	Information not provided	Information not provided	85	66	66
Engines	12	14	16	19	16	15
Trucks	5	4	5	6	4	4
Source: City of Fresno, 2011.						

Table 5.13-2 shows the fire stations located in and near the DNCP and FCSP boundaries.

Table 5.13-2: Existing City of Fresno Fire Stations in the DNCP and FCSP Areas

Station No.	Address (Fresno)	Plan Area	Equipment/Personnel
3	1406 Fresno Street	DNCP FCSP	The block occupied by Station No. 3 is also home to the Fresno Fire Department's Training Section and Drill Tower, as well as the Repair and Maintenance section that is responsible for maintaining fire department apparatus. Engine No. 3—The engine is operated by a crew of four. Truck No. 3—The truck is operated by a crew of four. Water Tender No. 3—The water tender holds 3,000 gallons of water and is staffed by a firefighter from Station 3.
4	3065 East Iowa Avenue	DNCP	Engine No. 4—The engine is operated by a crew of four.
8	1428 South Cedar Avenue	South of DNCP[1]	Engine No. 8—The engine is operated by a crew of four. Brush Rig No. 8—Staffed by the crew of engine 8.

Note:
[1] This station is located just south of the DNCP boundary, at the southwest intersection of Cedar and Butler.
Source: City of Fresno, 2015.

Parks/Recreation

This section describes the Open Space areas within the DNCP and FCSP areas.

Downtown Neighborhoods Community Plan—Open Space

The quality, quantity, and type of parks and open space in the DNCP area is unbalanced, and access to existing park space is generally limited. The DNCP area contains Roeding Park, located in the Jane Addams Neighborhoods, one of Fresno's three regional city parks. Roeding Park is home to the Chaffee Zoological Gardens and the Storyland and Playland amusement parks. The DNCP area also contains Courthouse Park, a civic park in the center of Downtown, as well as many neighborhood parks that are dispersed throughout the Community Plan area. In the western half of the DNCP area, there are public parks located within 0.5 mile of most residences and businesses. However, public parks are noticeably absent in the eastern half of the Plan area, and the majority of the residents in the DNCP area are located further than 0.5 mile from a usable park or open space area (Moule and Polyzoides 2015a).

The DNCP area is served by many schools, but access to their playing fields and playgrounds has historically been limited to children attending the schools and only during school hours. Recently, however, the City of Fresno and two local school districts entered into a joint use agreement allowing 16 school campuses to remain open to the public for use on weekends.

Dickey Playground, located at the northwest corner of Blackstone Avenue and Divisadero Street, includes tennis courts, basketball courts, a splash park, and a softball field. Dickey Youth Center is located at the corner of Divisadero Street and Glenn Avenue. A tot lot under the freeway near Poplar and Belmont Avenues serves children and families (2016).

Overall, the DNCP area currently has approximately 2.8 acres of park space per 1,000 people, which is slightly lower than the City as a whole, at 3.1 acres of parks per 1,000 people. However, approximately three-quarters of the total parks acreage is in Roeding Park. If Roeding Park is not included in the calculation, the parks per 1,000 ratio for the DNCP area is significantly lower than the City as a whole (DNCP 2016).

Fulton Corridor Specific Plan—Open Space

The FCSP area has historically contained one public park, Courthouse Park, until recently, when funding was obtained to construct an additional park at the corner of Fulton and Calaveras Streets. The long-established Courthouse Park has been the largest green space within Downtown and was dedicated as open space during the late 1800s. Removal of existing barriers would open the park to surrounding streets, sidewalks, and buildings to create a more inviting environment. The FCSP area also contains Densmore Skate Park. Eaton Plaza, Dickey Park, Frank H. Ball Park, and the Fink-White Park are located outside of—but within walking distance of—the FCSP area. Eaton Plaza expansion will encompass the entire block bounded by O Street, Mariposa Street, N Street and Fulton Street. However, South Stadium, Chinatown, and much of the Mural District have no public parks and lack open space in general. Moreover, all of the open space within the FCSP area is urban or civic in nature and is not suited for recreational activities such as basketball, baseball, or other active uses (FCSP 2016).

Libraries

The Fresno County Public Library provides services through its Central Resource Library and 34 branches. The Fresno County Library serves the ninth-largest service population in California within the fourth-largest square area. It is third in the number of outlets, with only the enormous Los Angeles Public Library and Los Angeles County Library having more outlets. The Fresno County Library is part of the San Joaquin Valley Library System, a cooperative network of nine public library jurisdictions in the counties of Fresno, Kern, Kings, Madera, Mariposa, and Tulare. The Fresno County Public Library offers a variety of classes, events, and other enrichment opportunities to the citizens of Fresno County. Services include but are not limited to computer classes, job and career services, story hours for preschoolers and toddlers, teen outreach programs that encourage reading, senior services including large print books, and a literacy program that offers tutoring services for non-English-speaking adults. There are 12 library branches in the Fresno-Clovis Metropolitan area. The nearest branch to the project site, the Central Library at 2420 Mariposa Street, is located within the DNCP area.

In 1998, over two-thirds of Fresno County voters approved Measure B, a local one-eighth of one percent sales tax measure, to improve library services throughout Fresno County. It was renewed by voters in 2004, with an anticipated expiration of 2013, but was renewed during the fall 2012 elections extending the sales tax for an additional 7 years. Measure B funds currently provide 55 percent of the library's operating revenue (and nearly all of its capital revenue). Both sales tax revenue (Measure B) and property tax revenue are subject to fluctuations due to external economic pressures. The third major source of revenue, various state funding sources, is also subject to external economic and budgetary forces. During the recent economic downturn, the Fresno County

Library has seen its revenues decline significantly, while experiencing an increase in visitors to the libraries.

Despite the infusion of revenue provided by Measure B, according to the most recent Organizational Assessment report (Goodrich 2008), the library is still below the state per capita expenditure average. According to data published by the California State Library, the average per capita level for Fiscal Year 2007 was $31.74, whereas the Fresno County Library expenditure per capita was $23.37. This places the library at about the 37th percentile in the State. Materials expenditure per capita are also less than the state average, with the Fresno County Library at $2.88 compared with the state average of $3.41. This places the Fresno County Library at the 42nd percentile.

The Facilities Development Plan 2002–2020, adopted by the Fresno County Supervisors in 2003, identified a list of projects to expand and/or construct new library facilities throughout the County. The Plan determined that without any changes to the existing system several facilities would be inadequate to serve population growth and additional communities would have grown to the point of needing facilities to serve their community. Several projects in the Development Plan have been implemented; however, much work remains and an update to the Plan is anticipated, since Measure B was renewed by voters in the 2012 election. By the year 2025, Fresno County will have grown to a population of over 1.3 million. Because of this, most branch libraries and the Central Library will need to expand. Even with Measure B's continuation, additional revenues will be needed to allow for the expansion necessary to serve the population growth.

Schools

The Fresno Unified School District (FUSD) is a consolidated district that contains seven sub-districts. FUSD is the fourth-largest school district in California and has an enrollment of 72,357 students dispersed among 95 existing schools. A District Master Plan was completed in 2009 that will aid in alleviating overcrowding in the schools. The Master Plan calls for a new high school in the southern edge of the City of Fresno, which would accommodate new growth and lessen overcrowding at existing high schools in the City.

Table 5.13-3 shows the current enrollment capacities of the FUSD (City of Fresno 2011).

Table 5.13-3: Capacity and Enrollment Figures for Fresno Unified School District

Grade Level	Elementary School		Middle School		High School		Various Grades		Total	
School District	Max	Current	Max	Current	Max	Current	Max	Current	Max	Current
Fresno Unified	41,210	38,406	11,271	9,860	20,807	20,759	5,360	3,332	78,648	72,357
Fresno Unified (Charter)	(all grades and school districts combined)		2,247		2,981		2,247		2,981	
Source: City of Fresno, 2011.										

Downtown Neighborhoods Community Plan—Schools

The schools within the DNCP are all within the FUSD boundaries. Table 5.13-4 lists the FUSD schools within the DNCP area.

Table 5.13-4: Schools within the DNCP Area (Fresno Unified School District)

School Name[1]	Address (Fresno)	DNCP Subarea
Jane Addams Elementary School	2117 W. McKinley Avenue	Jane Addams Neighborhoods
Edison High School	540 E. California Avenue	Edison Neighborhoods
Computech Middle School	555 E. Belgravia Avenue	Edison Neighborhoods
King Elementary School	1001 E. Florence Avenue	Edison Neighborhoods
Kirk Elementary School	2000 N. Belgravia Avenue	Edison Neighborhoods
Lincoln Elementary School	1100 E. Mono Street	Edison Neighborhoods
Columbia Elementary School	1025 S. Trinity Street	Edison Neighborhoods
New Millennium Institute of Education[2]	830 Fresno Street	Edison Neighborhoods
Lowell Elementary School	171 N. Poplar Avenue	Lowell Neighborhood
Jefferson Elementary School	202 N. Mariposa Street	Jefferson Neighborhood
Yokomi Elementary School	2323 E. McKenzie Avenue	Jefferson Neighborhood
Tehipite Middle School	630 N. Augusta Street	Jefferson Neighborhood
Hidalgo Elementary School	3550 E. Thomas Avenue	Southeast Neighborhoods
Rowell Elementary School	3460 E. McKenzie Avenue	Southeast Neighborhoods
Jackson Elementary School	3750 E. Platt Avenue	Southeast Neighborhoods
Winchell Elementary School	3722 E. Lowe Avenue	Southeast Neighborhoods
Burroughs Elementary School	166 N. Sierra Vista Avenue	Southeast Neighborhoods
Leavenworth Elementary School	4420 E. Thomas Avenue	Southeast Neighborhoods
Roosevelt High School	4250 E. Tulare Street	Southeast Neighborhoods
Cesar Chavez Adult School	2500 Stanislaus Street	Downtown

Notes:
[1] Source: FUSD, 2012.
[2] This school serves grades 7-12

Fulton Corridor Specific Plan—Schools

Kepler Neighborhood School is located within the FCSP area; the FCSP area falls entirely within the FUSD.

5.13.3 - Regulatory Setting

State and local regulations related to public services are described below.

State Regulations

California Building Standards Code

The 2010 California Building Standards Code (CBC), contained in Part 2 of Title 24 of the California Code of Regulations (CCR), identifies building design standards, including those for fire safety. The CBC is based on the 1997 Uniform Building Code but has been modified for California conditions. It is generally adopted on a jurisdiction-by-jurisdiction basis, subject to further modification based on local conditions. Commercial and residential buildings are plan-checked by local city and county building officials for compliance with the CBC. Typical fire safety requirements of the CBC include the installation of sprinklers in multi-family buildings; the establishment of fire resistance standards for fire doors, building materials, and particular types of construction; and clearance of debris and vegetation within a prescribed distance from occupied structures in wildfire hazard areas.

California Fire Code

The California Fire Code, contained in Part 9 of CCR Title 24, incorporates by adoption the International Fire Code of the International Code Council, with California amendments. The California Fire Code regulates building standards set forth in the CBC, fire department access, fire protection systems and devices, fire and explosion hazards safety, hazardous materials storage and use, and standards for building inspection. The California Fire Code is updated and published every 3 years by the California Building Standards Commission.

Quimby Act

The Quimby Act sets a standard park space to population ratio of up to three acres of park space per 1,000 persons. Cities with a ratio of higher than three acres per 1,000 persons can set a standard of up to 5 acres per 1,000 persons for new development. The calculation of a City's park space to population ratio is based on a comparison of the population count of the last federal census to the amount of City-owned parkland. A 1982 amendment (Assembly Bill [AB] 1600) requires agencies to clearly show a reasonable relationship between the public need for a recreation facility or park land and the type of development project on which the fee is imposed.

Senate Bill 50

SB 50 (funded by Proposition 1A, approved in 1998) limits the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development and provides instead for a standardized developer fee. SB 50 generally provides for a 50/50 state and local school facilities funding match. SB 50 also provides for three levels of statutory impact fees. The application level depends on whether state funding is available, whether the school district is eligible for state funding, and whether the school district meets certain additional criteria involving bonding capacity, year round school, and the percentage of moveable classrooms in use.

California Government Code, Section 65995(b) and Education Code, Section 17620

SB 50 amended Section 65995 of the California Government Code, which contains limitations on Section 17620 of the Education Code, the statute that authorizes school districts to assess development fees within school district boundaries. Section 65995(b)(3) of the Government Code requires the maximum square footage assessment for development to be increased every 2 years, according to inflation adjustments. On January 22, 2014, the State Allocation Board (SAB) approved

increasing the allowable amount of statutory school facilities fees (Level I School Fees) from $3.20 to $3.36 per square foot of assessable space for residential development of 500 square feet or more, and from $0.51 to $0.54 per square foot of chargeable covered and enclosed space for commercial/industrial development. School districts may levy higher fees if they apply to the SAB and meet certain conditions.

Mitigation Fee Act

Enacted as AB 1600 on January 1, 1989, the Mitigation Fee Act (California Government Code 66000-66008) requires a local agency that is establishing, increasing, or imposing an impact fee as a condition of development to identify the purpose of the fee and the use to which the fee is to be put. The agency also must demonstrate a reasonable relationship between the fee and the purpose for which it is charged, and between the fee and the type of development project on which it is to be levied.

Local Regulations

Fresno Municipal Code

As detailed in the City of Fresno Municipal Code (FMC), various development fees (for police, fire, parks, and streets) have been established as follows:

Police Facilities Fee: Section 12-4.801 of the FMC states:

> In order to implement the goals and objectives of the City's General Plan, and to mitigate the impacts caused by future development in the City, certain police facilities must be constructed. The City Council has determined that a Police Facilities Fee is needed in order to finance these public facilities and to pay for each development's fair share of the construction and acquisition costs of these improvements. In establishing the fee described in the following sections, the City Council has found the fee to be consistent with its general plan, and pursuant to Government Code Section 65913.2, has considered the effects of the fee with respect to the city's housing needs as established in the housing element of the general plan.

Fire Facilities Fee: Section 12-4.901 of the FMC states:

> In order to implement the goals and objectives of the City's General Plan, and to mitigate the impacts caused by future development in the City, certain fire department facilities must be constructed. The City Council has determined that a Fire Facilities Fee is needed in order to finance these public facilities and to pay for each development's fair share of the construction and acquisition costs of these improvements. In establishing the fee described in the following sections, the City Council has found the fee to be consistent with its general plan, and pursuant to Government Code Section 65913.2, has considered the effects of the fee with respect to the city's housing needs as established in the housing element of the general plan.

Park Facilities Fee: Section 12-4.701 of the FMC states:

> In order to implement the goals and objectives of the City's General Plan, and to mitigate the impacts caused by future development in the City, certain park facilities must be constructed. The City Council has determined that a park facilities fee is needed in order to finance these public facilities and to pay for each development's fair share of the construction and acquisition costs of these improvements. In establishing the fee described in the following sections, the City Council has found the fee to be consistent with its general plan, and pursuant to Government Code Section 65913.2, has considered the effects of the fee with respect to the city's housing needs as established in the housing element of the general plan.

Street Facilities Fees: Section 12-4.1001 of the FMC states:

> In order to implement the goals and objectives of the City's General Plan, and to mitigate the impacts caused by future development in the City, certain street facilities must be constructed. The City Council has determined that street facilities fees are needed in order to finance these public facilities and to pay for each development's fair share of the construction and acquisition costs of these improvements. Based on this determination, Council adopted, by resolution amending the Master Fee Schedule, a Citywide Regional Street Impact Fee ("Citywide Street Fee") and a New Growth Area Major Street Fee ("Growth Area Street Fee"). Council adopts this Article to require the imposition of these street facilities fees on new development in the city.

Measure B

Measure B is a one-eighth of one percent sales tax intended to provide funds for the improvement of library services throughout Fresno County. Voters passed Measure B in November 1998 and again in 2004. As of June 2007, Measure B had provided more than $76 million in funds to provide more library hours, more library materials, and more library services for Fresno County residents. Measure B has also contributed to new building and renovation projects in Kerman, Caruthers, Laton, Fowler, Orange Cove, Tranquility, Mendota, and the Woodward Park area. The Fresno County Measure B library tax has been extended for 16 years until 2029.

Fresno General Plan

Below are summaries of the City's General Plan objectives and policies regarding public services (i.e., police, fire, parks/recreation, and schools).

Police

The City's General Plan contains the following goals, policies, and objectives relevant to the provision of police services:

- **Objective PU-1:** Provide the level of law enforcement and crime prevention services necessary to maintain a safe, secure, and stable urban living environment through a Police Department

that is dedicated to providing professional, ethical, efficient and innovative service with integrity, consistency and pride.

- **Policy PU-1-c:** Safety Considerations in Development Approval. Continue to identify and apply appropriate safety, design and operational measures as conditions of development approval, including, but not limited to, street access control measures, lighting and visibility of access points and common areas, functional and secure on-site recreational and open space improvements within residential developments, and use of State licensed, uniformed security.
- **Policy PU-1-d:** New Police Station Locations. Consideration will be given to co-locating new police station facilities with other public property including, but not limited to, schools, parks, playgrounds, and community centers to create a synergy of participation in the neighborhood with the potential result of less vandalism and promotion of a better sense of security for the citizens using these facilities.
- **Policy PU-1-h:** Retail Conversion. Assist community groups seeking information on conversion of establishments with off-site or on-site liquor sales licenses to other retail products that better meet community needs.
- **Policy PU-1-i:** Crime and Nuisances. Assist community and neighborhood groups seeking to reduce crime and nuisances they associate with high concentrations of establishments with off-sale or on-sale liquor licenses through Police Department consultations, other available services, and programs such as Neighborhood Watch.
- **Policy PU-1-j:** Lighting and Safety. Ensure adequate lighting at off-sale liquor stores to help deter crime and to promote a more inviting and safe atmosphere around them.

Fire

The City's General Plan contains the following policies and objectives relevant to the provision of fire protection services:

- **Objective PU-2:** Ensure that the Fire Department's staffing and equipment resources are sufficient to meet all fire and emergency service level objectives and are provided in an efficient and cost effective manner.
- **Policy PU-2-b:** Maintain Ability. Strive to continually maintain the Fire Department's ability to provide staffing and equipment resources to effectively prevent and mitigate emergencies in existing and new high-rise buildings and in other high-density residential and commercial development throughout the city.
- **Policy PU-2-c:** Station Siting. Use the General Plan, community plans, Specific Plans, neighborhood plans, and Concept Plans, the City's Geographic Information Systems (GIS) database, and a fire station location program to achieve optimum siting of future fire stations
- **Objective PU-3:** Enhance the level of fire protection to meet the increasing demand for services from an increasing population.
- **Policy PU-3-a:** Fire Prevention Strategies. Develop strategies to enable the performance of annual fire and life safety inspection of all industrial, commercial, institutional, and multi-family residential buildings, in accordance with nationally recognized standards for the level of service necessary for a large Metropolitan Area, including a self-certification program.

- **Policy PU-3-d:** Review Development Application. Continue Fire Department review of development applications, provide comments and recommend conditions of approval that will ensure adequate on-site and off-site fire protection systems and features are provided.
- **Policy PU-3-e:** Building Codes. Adopt and enforce amendments to construction and fire codes, as determined appropriate, to systematically reduce the level of risk to life and property from fire, commensurate with the City's fire suppression capabilities.
- **Policy PU-3-f:** Adequate Infrastructure. Continue to pursue the provision of adequate water supplies, hydrants, and appropriate property access to allow for adequate fire suppression throughout the City.
- **Policy PU-3-g:** Cost Recovery. Continue to evaluate appropriate codes, policies, and methods to generate fees or other sources of revenue to offset the ongoing personnel and maintenance costs of providing fire prevention and response services.
- **Policy PU-3-i:** New Fire Station Locations. Consideration will be given to co-locating new Fire Station facilities with other public property including, but not limited to, police substations, schools, parks, playgrounds, and community centers to create a synergy of participation in the neighborhood with the potential result of less vandalism and promotion of a better sense of security for the citizens using these facilities.

Parks and Recreation

The City's General Plan contains the following policies and objectives relevant to the provision of parks and recreation areas:

- **Objective POSS-2:** Ensure that adequate land, in appropriate locations, is designated and acquired for park and recreation uses in infill and growth areas.
- **Policy POSS-2-a:** Identify opportunities to site, develop and co-locate Fire and Police stations with needed parks and open space as joint-use facilities.
- **Policy POSS-2-c:** Review of Development Applications. Coordinate review of all development applications (i.e., site plans, conditional use permits, and subdivision maps) in order to implement the parks and open space standards of this Plan.
  - Assure the provision of adequate active and passive open spaces and facilities as appropriate within residential subdivisions through Citywide Development Code requirements for mandatory dedication and improvement of land and/or development fees.
  - Require the provision of appropriate outdoor living areas or private open space in multi-family residential developments not subject to the Subdivision Map Act.
  - Request open space easements where feasible and warranted to secure appropriate public use of sensitive areas with scenic or recreation values, and for buffering space for sensitive areas.
  - Require provision of appropriate open space areas in private projects, in the form of trails, enhanced landscaped setbacks, parks, and water features.
  - Evaluate the merits of establishing a development bonus entitlement program in which development incentives (i.e., bonus densities, bonus floor area square footage) are provided for contributions to public recreational facilities on-site or in the vicinity of the development project.

- **Policy POSS-2-e:** Open Space Dedication for Residential Development. Ensure new residential developments provide adequate land for parks, open space, landscaping, and trails through the dedication of land or otherwise providing for Pocket Parks, planned trails, and other recreational space, maintained by an HOA, CFD, or other such entity.
- **Objective POSS-3:** Ensure that park and recreational facilities make the most efficient use of land; that they are designed and managed to provide for the entire Fresno community; and that they represent positive examples of design and energy conservation.
- **Policy POSS-3-a:** Centralized Park Locations. Site parks central and accessible to the population served, while preserving the integrity of the surrounding neighborhood.
- **Policy POSS-3-c:** Park Location and Walking Distance. Site Pocket and Neighborhood Parks within a half-mile walking distance of new residential development.
- **Policy POSS-3-d:** Link Parks with Walkways. Link public open space to adjacent, schools, and residential uses and Activity Centers through a series of landscaped linear walkways and bikeways that enhance and encourage pedestrian use.

Schools

The City's General Plan contains the following objectives and policies relevant to the provision of school services within the City:

- **Objective POSS-8:** Work cooperatively with school districts to find appropriate locations for schools to meet the needs of students and neighborhoods.
- **Policy POSS-8-b:** Appropriate School Locations. Support school locations that facilitate safe and convenient access by pedestrian and bicycle routes, are compatible with surrounding land uses, and contribute to a positive neighborhood identity and Complete Neighborhoods.
- **Policy POSS-8-c:** Park and School Park and School Site Coordination. Pursue the cooperative development and use of school sites with adjacent neighborhood parks for both school activities and non-school related recreational activities.

General Plan—Parks

The City's General Plan defines various classes of park space and sets standards for the amount of park acreage that should be provided per thousand population. Park types in the General Plan are classified as follows:

- **Pocket Park**. A Pocket Park is a park up to 0.5 to 2.0 acres in size, and is intended to serve the needs of a smaller, specific neighborhood located within a half-mile radius of the pocket park. Pocket Parks should include amenities to draw neighbors to the park such as a tot lot, picnic bench, or shade structure. New Pocket Parks developed within new subdivisions are maintained as part of a Home Owners Association (HOA) or Community Facilities District (CFD).
- **Neighborhood Park.** A park of more than 2.0 acres and up to Neighborhood Park. Ten acres in size, which provides basic recreational activities for neighborhoods located generally within a one-mile radius. There are two types of Neighborhood Parks, active and passive. These parks contribute to neighborhood identity and accommodate a range of facilities, such as play fields and courts, children's play structures, picnic tables, restrooms, and may include a small

center with a multi-purpose room, but also passive recreational features such as walking trails, community gardens, or nature areas.

- **Community Park.** A park of more than 10 acres and up to 40 acres in size (typically at least 20 acres), which helps define a community or district and is intended to serve the more active recreational needs of persons who live or work up to a two to four-mile radius. These parks typically include facilities such as lighted sport fields and a community center building with a gym, meeting rooms, and restrooms. Other features may include swimming pools, tennis courts, concession stands, community defining public art, courtyard or plaza.
- **Regional Park.** A large park of more than 40 acres in size, which is meant to serve a large number of residents across a broad area of the city, or around 100,000 residents. Regional parks typically include community park features that allow for a variety of sports and active recreation. Some are large enough to enable Fresno to host local and regional tournaments or events that bring revenue to the City and local businesses in the form of additional patrons and tax revenue generated. Regional parks also provide unique public facilities, such as the Shinzen Japanese Garden, the Chaffee Zoological Gardens, or natural areas with hiking trails, fishing opportunities, and access to the San Joaquin River. Parks that provide unique opportunities, such as river access, have been categorized as a regional park, even though they are less than 40 acres in size.
- **Trail/Greenway/Parkway**. A network of linear open space Trail/Greenway/Parkway spaces of varying size, typically intended to accommodate walking and bicycling opportunities for leisure, exercise and commuting purposes. These parkways typically include paved surfaces for bicyclists and walkers, and in appropriate locations may include equestrian trails.

The current citywide standard for parks is a ratio of 3.0 acres per 1,000 residents; this was established under the City's previous Urban Growth Management Program and current general plan. The Parks Master Plan is currently being developed and will refine and adjust as necessary the objectives, policies, open space land use designations, and trail alignments adopted in the land use and transportation topics of the City's General Plan and in the various community and specific plans, ordinances, and resolutions of the City of Fresno.

Fresno Unified School District Facilities Master Plan

The FUSD Facilities Master Plan—Final Report was approved by the Board of Education on April 29, 2009. The Master Plan will assist the FUSD in achieving a common equitable base for district facilities and anticipating future needs. The plan addresses current facility conditions and suitability and identifies facility improvements to support student engagement and academic achievement. In order to relieve overcrowding/capacity issues, the Master Plan identifies the construction of a new high school and elementary school and boundary solutions to be implemented by 2025.

5.13.4 - Thresholds of Significance

In accordance with CEQA, the effects of a project are evaluated to determine if they will result in significant adverse impacts on the environment. The criteria used to determine the significance of an impact on public services and/or recreation are based on the Environmental Checklist in

Appendix G of the CEQA Guidelines, as identified below. Accordingly, public services and/or recreation impacts resulting from the proposed project are considered significant if the project would

> Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:
> a) Fire protection?
> b) Police protection?
> c) Schools?
> d) Parks?
> e) Other public facilities?
>
> Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?
>
> Include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?

5.13.5 - Impact Analysis, Mitigation Measures, and Level of Significance after Mitigation

Fire Protection

Impact PS-1:	**The project would not result in substantial adverse physical impacts associated with the provision of or need for new or physically altered governmental facilities in order to maintain acceptable service ratios, response times or other performance objectives for fire protection, the construction of which could cause significant environmental impacts.**

Project-specific Impact Analysis

Less than significant impact. The Department's target response time is 5 minutes and 20 seconds from the time the station receives notification of an emergency, but the FPD does not currently meet target response times because of the cuts in the number of units available to respond. Staffing reductions and other cuts since 2009 have resulted in the City's level of service to be below average compared with metropolitan cities of similar size. The expected level of service—based on nationally recognized best practice for fire prevention services in a city the size of Fresno—is the ability to provide annual fire and life safety inspections of all commercial, industrial, institutional, and multi-family buildings and to provide proactive fire safety public education programs. Due to current budget issues, many buildings that are susceptible to low and moderate fire and life safety hazards are not being inspected and public education outreach has ceased.

Implementation of the DNCP and the FCSP would result in an additional 10,850,000 square feet of non-residential building space and an increase of up to 27,225 residents, which is within the population growth contemplated by the General Plan. Increased population densities of the urban

core and planned creation of mid-rise and high-rise, mixed-use corridors and centers will require commensurate increases in firefighter staffing and facilities and equipment. Fire station location will become more dependent on density and availability than "running distances" between fire stations. Implementation of the proposed project would result in an increased demand for fire protection services, commensurate with the increase in resident population and daytime population. However, this increase in demand can be met with additional staffing requirements at the existing fire stations that serve the DNCP and FCSP, and would not result in the need to construct additional government facilities. Additionally, development projects within the DNCP and FCSP areas would be required to comply with Section 12-4.901 of the FMC, which requires each development to pay a Fire Facilities Fee in order to mitigate the impacts on fire protection facilities caused by future development in the City. Payment of the appropriate development impact fees would offset the construction and acquisition costs of required fire facility improvements. In addition, the Master EIR for the City's General Plan has already analyzed and accounted for the anticipated improvements to the City's fire protection facilities and services. Further, there are no policies in the DNCP, FCSP, or DDC that address fire protection. Therefore, project-specific impacts are considered less than significant.

Cumulative Impact Analysis

Less than significant impact. Future growth would result in an increased demand for fire services and facilities throughout the Plan areas, as well as areas that are outside the Plan areas. The Master EIR for the City's General Plan has already analyzed and accounted for this increased demand and the associated facility improvements. Because the DNCP and FCSP population increase is within the population increase contemplated by the General Plan, the project impacts are not deemed cumulatively considerable. Therefore, less than significant cumulative impacts are anticipated related to the provision of fire protection services.

Mitigation Measures

Project Specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Police Protection

Impact PS-2:	**The project would not result in substantial adverse physical impacts associated with the provision of or need for new or physically altered governmental facilities in order to maintain acceptable service ratios, response times or other performance objectives for police protection, the construction of which could cause significant environmental impacts.**

Project-specific Impact Analysis

Less than significant impact. Implementation of the DNCP and the FCSP would result in an additional 10,850,000 square feet of non-residential building space and an increase of up to 28,860 residents, which is within the population growth contemplated by the General Plan. Implementation of the proposed project would result in an increased demand for police protection services, commensurate with the increase in resident population and daytime population.

The City of Fresno uses a minimum level of service of two officers per 1,000 residents. Using the current City of Fresno staffing goal, at full buildout of the DNCP and FCSP, approximately 54 additional officers would be required for law enforcement services in order for the City to meet its goal of two officers per 1,000 residents.

The DNCP includes the following policies related to police protection services:

- **Goal 7.4:** Increase safety in the Downtown Neighborhoods.
- **Policy 7.4.1:** As resources become available, increase the police presence in the Downtown Fresno neighborhoods while improving the quality of police-neighborhood relations to make these areas safe for residents and visitors.
- **Policy 7.4.2**: Improve collaboration between the police department and code enforcement to address issues of health, wellness and public safety in the Downtown Neighborhoods.
- **Policy 7.4.3**: Implement Crime Prevention Through Environmental Design (CPTED) principles and strategies (including windows facing the sidewalk, good night lighting, and improved sight lines) in all new development projects in the Downtown Neighborhoods, pursuant to the Development Code.

As growth occurs within the Plan areas, the FPD may require additional personnel and additional facilities to provide adequate police protection services. Development projects within the DNCP and FCSP areas would be required to comply with Section 12-4.801 of the FMC, which requires each development to pay a Police Facilities Fee in order to mitigate the impacts on police protection facilities caused by future development in the City. Payment of the appropriate development impact fees would offset the construction and acquisition costs of required police facility improvements. However, the provision of new or physically altered police protection facilities could result in adverse environmental impacts. Because the DNCP and FCSP population increase is within the population growth contemplated by the General Plan, and the General Plan EIR has already addressed impacts related to the provision of new or altered police protection facilities, project impacts are considered Less than significant impact.

Cumulative Impact Analysis

Less than significant impact. Development facilitated by the DNCP and FCSP, together with other projected areawide growth in neighboring communities, would result in additional residential and non-residential development by 2035. This cumulative development would generate additional residents, contributing to an increase in demand for police services.

The Master EIR for the City's General Plan has already analyzed and accounted for this increased demand and the associated facility improvements. Because the DNCP and FCSP population increase is within the population growth contemplated by the General Plan, project impacts are not deemed cumulatively considerable. All cumulative development would be assessed police facilities fees in accordance with FMC Section 12-4.801. Therefore, less than significant cumulative impacts related to the provision of fire protection services are anticipated.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Schools

Impact PS-3:	**The project would not result in substantial adverse physical impacts associated with the provision of or need for new or physically altered governmental facilities in order to maintain acceptable service ratios, response times or other performance objectives for schools, the construction of which could cause significant environmental impacts.**

Project-specific Impact Analysis

Less than significant impact. Using student generation rates provided by the FUSD, as shown in Table 5.13-5, the proposed project is estimated to generate approximately 4,805 students in grades K-12. At full buildout, the proposed project would include an additional 9,990 residential units. While it is unknown how many single-family and multi-family residential units will be developed, it is assumed a maximum of 50 percent of the units will be single-family residential; therefore, a single blended student generation rate was used.

Table 5.13-5: Fresno Unified School District Student Generation Rates for K-12

Residential Type	Units	Student Generation Rates	Students Generated
Single-Family	9,990	0.481[1]	4,805
Multi-Family			

[1] The student generation rate was derived based on a review of the student generation rate provided by the Fresno Unified School District.
Source: FirstCarbon Solutions, 2014.

As previously stated, FUSD has an enrollment of 72,357 students and a maximum enrollment capacity of 78,648 students. FUSD (charter) has an enrollment of 2,981 and a maximum enrollment capacity of 2,247 students. Based on the existing capacities of FUSD, including the charter schools, students generated by the project would exceed FUSD's maximum enrollment capacity.

The DNCP includes the following policies related to school facilities:

- **Policy 2.1.2:** Prioritize the installation of new sidewalks on arterial roads and near schools.
- **Policy 2.1.10:** Support the development of new high-quality public charter schools, private schools, trade schools, and institutions of higher learning—including satellite campuses—within each of the Downtown Neighborhood's seven planning areas. Whenever possible, consider locating these educational facilities in mixed-use buildings.
- **Policy 2.5.6:** Attract institutions such as schools, charter schools, colleges, and college satellite campuses to locate Downtown.
- **Policy 2.14.2:** Work with school districts and public charter schools to anticipate potential increases in the residential population in the Downtown Neighborhoods and the subsequent impact on school enrollment and capacity.
- **Policy 2.14.9:** Include neighborhood places for interaction among residents, such as parks, community centers, schools, commercial areas, churches, and other gathering points.
- **Policy 2.14.11:** Work with the school district and/or public charter schools to develop schools that also provide gathering places for residents to gain greater access to—and involvement from—health and social service providers, community organizations, commerce, service clubs, and philanthropic institutions.
- **Policy 2.18.9:** Continue to work with Fresno Unified in an effort to expand the existing joiunt use agreement and work with new schools to allow after-hours access to school fields, playgrounds, gyms, auditoriums, and aquatic facilities through mechanisms such as joint-use agreements.

Cumulative Impact Analysis

Less than significant impact. Development facilitated by the DNCP and FCSP, together with other projected areawide growth in surrounding communities, would result in additional residential and non-residential development by 2035. This cumulative development would generate additional

[1] Average of FUSD generation rates

students who would attend schools within the FUSD. Cumulative development would be assessed state-mandated development impact fees in compliance with SB 50 requirements. In addition, future school facilities construction would require its own environmental review in accordance with CEQA. Therefore, impacts related to project development are not deemed cumulatively considerable, and cumulative impacts related to schools are considered less than significant.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Parks

Impact PS-4:	**The project would not result in substantial adverse physical impacts associated with the provision of or need for new or physically altered governmental facilities in order to maintain acceptable service ratios, response times or other performance objectives for parks, the construction of which could cause significant environmental impacts.**

Project-specific Impact Analysis

Less than significant impact. Implementation of the DNCP and the FCSP would result in a population increase of approximately 28,860 residents and thus requires the dedication of approximately 87 acres of useable parkland. Implementation of the DNCP and FCSP would result in the creation of approximately 91.7 acres of new parkland, which is 4.7 acres more than the required acreage based on the citywide standard of 3.0 acres per 1,000 residents. Combined with the existing 285 acres of parkland within the DNCP and FCSP area, implementation of the DNCP and FCSP will result in approximately 376.7 acres of parks being located within the Planning Area. The City of Fresno currently has 1,617 acres of parks. The General Plan proposed nearly 1,100 acres of new neighborhood, community, and regional and trail parklands by the buildout stage of development in the City. When combined with existing facilities, Fresno will have 5 acres of neighborhood, community and regional and trail parkland per 1,000 residents. This exceeds the City's stated target of 3 acres of parkland per 1,000 residents.

Development projects within the DNCP and FCSP areas would be required to comply with Section 12-4.701 of the FMC, which requires each development to pay a Park Facilities Fee in order to mitigate the impacts on park facilities caused by future development in the City. Payment of the appropriate development impact fees would offset the construction and acquisition costs of

required park facility improvements. However, the provision of new or physically altered park facilities could result in adverse environmental impacts. Because the DNCP and FCSP population increase is within the population growth contemplated by the General Plan, and the General Plan EIR has already addressed impacts related to the provision of new or altered park facilities, project impacts are considered less than significant.

It is important to note that the Fulton Mall has always been designated a pedestrian mall, which is classified as a street rather than an urban park. The Fulton Mall Reconstruction Project, which is currently underway in 2016, will retain the Mall's existing artwork such as mosaic installations on benches, and also includes reconstruction of many of the existing water features, as well as providing areas for sitting. Courthouse Park will continue to provide additional opportunities for passive recreation in the downtown area.

The DNCP includes the following policies related to parks:

- **Goal 4.4:** Increase access to parks and open spaces, aiming for all residents to be within walking distance of a park or open space facility.
- **Policy 4.4.1:** Increase access to existing and new parks, tot lots, and playing fields with the goal of having all residents within a ½ mile walk distance (a ten minute walk) of a park or publicly accessible open space. Prioritize the location of new parks and open spaces to areas lacking park space within ½ mile.
- **Policy 4.4.2:** Increase access to healthy food by working with property owners and community organizations to introduce urban agriculture on vacant and underutilized parcels within each of the Downtown Neighborhood's seven planning areas.
- **Policy 4.4.3:** Where feasible, surround existing parks with development that includes front doors and windows that face the park, so that building occupants can see the park and provide a feeling of safety and deter criminal activity.
- **Policy 4.4.4**: As resources become available, promote safety, accessibility and compatibility between parks and adjacent residential areas through creative design, adequate maintenance, and enforcement of regulations regarding littering and consumption of alcohol in public parks. (RCP 1-15.9)
- **Policy 4.4.5:** Require the installation of security lighting for parking, points of access, and building areas at all public recreation and park sites. (RCP 1-15.10)
- **Policy 4.4.6:** Ensure that tot lots, informal greens, playing fields, plazas, and recreation programs and services, meet the diverse needs of users including seniors, youth, non-English speaking groups, and special needs groups.
- **Policy 4.4.7:** Improve existing parks in the Downtown Neighborhoods to a level that meets the physical activity, leisure, and social needs of area residents and employees.
- **Policy 4.4.8:** Use parks to protect resources and wildlife, enhance water and air quality, and improve sustainability for new and existing parks. Develop smart irrigation systems using the latest Certus Management Information System (CMIS) data, plan to use reclaimed water systems for parks where and when available, limit turf grass to recreational areas, and offset water needs by using low water plant material in non-recreational areas.

The FCSP includes the following policies related to parks:

- **Goal 8-1:** Increase access to and improve the quality of Downtown's existing parks, plazas, and open spaces.
- **Policy 8-1-4:** Require new buildings to face parks and other open spaces—whether across the street or immediately adjacent to the park or open space–and to provide ground floor frontages, windows, and entries that face the park or open space.
- **Goal 8-2:** Introduce a variety of new public parks and open spaces throughout Downtown as valuable amenities for residents, workers, and visitors.
- **Policy 8-2-1:** Work with the City's Parks, Recreation, and Community Services (PARCS) Department to develop a program to increase the number of parks and open spaces for public use while maintaining existing facilities.
- **Policy 8-2-2:** Require new development that is built next to or across the street from parks, plazas, and other open spaces to provide front doors and windows that face the park.
- **Policy 8-2-3:** In conformance with the Development Code, activate parks and open spaces by allowing a variety of uses, including dog parks, recreational activities such as basketball and pétanque, and compatible commercial activities such as vendors, cafes, and bike/skate rentals.
- **Policy 8-2-4:** On an on-going basis, develop a variety of funding and financing sources to pay for the construction and maintenance of new parks, tot lots, and playing fields. Whenever possible, use a Landscaping Maintenance Benefit Assessment District or a Community Facilities District for acquisition and maintenance of park lands.
- **Policy 8-2-5:** Partner with private citizens and organizations to contribute funds, labor, or materials towards public parks and open space.

Cumulative Impact Analysis

Less than significant impact. As stated above, the proposed DNCP and FCSP are expected to generate 28,860 people and thus require the dedication of 87 acres of useable parkland. The City of Fresno currently has 1,617 acres of parks. The General Plan proposed nearly 1,100 acres of new neighborhood, community, and regional and trail parklands by the buildout stage of development in the Fresno Sphere of Influence. When combined with existing facilities, Fresno will have 5 acres of neighborhood, community and regional and trail parkland per 1,000 residents at buildout. This falls above the City's current standard of 3 acres of parkland per 1,000 residents. An additional 91.7 acres of new parkland will be created with the implementation of the DNCP and FCSP.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Other Public Facilities—Libraries

Impact PS-5:	**The project would not result in substantial adverse physical impacts associated with the provision of or need for new or physically altered governmental facilities in order to maintain acceptable service ratios, response times or other performance objectives for libraries, the construction of which could cause significant environmental impacts.**

Project-specific Impact Analysis

Less than significant impact. The Central Public Library located at 2420 Mariposa Street is within the DNCP and FCSP. The Central Public Library currently has 2.67 total materials available per capita. Implementation of the DNCP and FCSP would result in an increased demand for library services, due to an increase in residential population. Implementation of the project would directly add an estimated 28,860 people within the DNCP and FCSP areas, which could result in accelerated use of local libraries. Since 1998, the County of Fresno has expanded its library services, due in part to the success of Measure B. The measure is a one-eighth of one percent sales tax, providing funds for improvement of library services throughout the County. The County had funding for ongoing improvements through March 2013, when Measure B was set to expire; a ballot measure to extend Measure B for another 12-year period was approved by two-thirds of the voters in the 2012 elections.

The Fresno County Library has projected a deficiency in the system's capacity to serve population growth and has an adopted Facilities Development Plan. The population growth attributable to the project would not be sufficient to trigger the need for additional library facilities on its own; however, in conjunction with overall population growth, additional facilities or expansion of current facilities will be required.

Given the current economic conditions, additional public financing is unlikely. While the project's residents would contribute to the provision of library services through payment of sales taxes as part of Measure B, it does not appear that this will sufficiently pay for new facilities.

If new facilities were constructed, the Library would rely on the existing facilities development plan, "The Heart of a Community: Its Public Library—Meeting Library Needs for Fresno County Residents: 2002–2020," which requires that construction of new facilities occur within existing developed areas to serve established populations. Where new library facilities would be located and their design and scope is unknown at this time. However, there are a number of locations that would be available in and around the project site meeting the "Heart of a Community" siting guidelines. Therefore, it is not reasonably foreseeable at this time that construction of new library facilities in and around the

project site, which is an urban use consistent with many other uses in the City, would cause significant impacts to the environment.

Cumulative Impact Analysis

Less than significant impact. Development facilitated by the DNCP and FCSP, together with other projected areawide growth, would result in additional residential and non-residential development by the year 2035. Therefore, implementation of the DNCP and FCSP, together with anticipated development in the Plans' vicinity, would result in an increased demand for library services. The recent passage of a 16-year extension of Measure B will secure funding for library improvements to meet this increased demand for services. Cumulative impacts on libraries are therefore considered less than significant.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Increase Use of Recreational Facilities

Impact PS-6:	**The project would not increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated.**

Project-specific Impact Analysis

Less than significant impact. Implementation of the DNCP and FCSP would result in the development of residential, office, retail, industrial, and open conservation land uses, and would increase the City's residential population by 28,860 people, which is within the population growth contemplated by the General Plan.

In order to meet the increased demand for neighborhood and regional parks and other recreational facilities, the DNCP and FCSP would introduce a variety of new public parks and open spaces throughout the Downtown Neighborhoods. Potential locations include:

- A linear park between H Street and the Union Pacific railroad tracks on the blocks south of Kern Street and north of Stanislaus Street;
- A Chinatown Park located across G Street from the entrance to the High Speed Rail station;

- A Mural District park, just over three-quarters of in acre in size, located in the heart of the Mural District; and
- Various vacant parcels and/or City-owned parcels.

The DNCP and FCSP also contain policies requiring the City to collaborate with the FUSD and other public agencies to provide open space and recreation facilities through mechanisms such as joint use agreements with existing schools.[2] Implementation of the DNCP and FCSP would result in the creation of approximately 91.7 acres of new parkland that potentially can be shared through joint-use agreements. Recently, the City of Fresno and two local school districts entered into a joint use agreement allowing 16 school campuses to remain open to the public for use on weekends.

When combined with the existing 285 acres of parkland within the DNCP and FCSP area, implementation of the DNCP and FCSP will result in approximately 376.7 acres of parks being located within the Planning Area. Because the proposed project would provide additional recreational facilities and parkland to serve future residents, existing recreational facilities would not experience substantial physical deterioration or experience an acceleration of physical deterioration. Development within the DNCP and FCSP would also be required to comply with FMC Section 12-4.701, which requires payment of park facilities fees to finance park facility improvements. The proposed project would therefore result in a less than significant impact on existing parks and recreational facilities.

Cumulative Impact Analysis

Less than significant impact. Development facilitated by the DNCP and FCSP, together with other projected areawide growth, would result in additional residential and non-residential development by the year 2035. The DNCP and FCSP would provide additional public parks and recreational opportunities within the Plan areas, which could also be utilized by residents of neighboring jurisdictions. Parks facilities development fees required under FMC Section 12-4.701 would also be assessed in those communities. Based on these factors, cumulative impacts on parks and recreation are considered less than significant.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

[2] Fulton Corridor Specific Plan, Public Draft. October 14, 2011.

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5.14 - Transportation

5.14.1 - Introduction

This section addresses the potential transportation impacts related to the proposed Downtown Neighborhoods Community Plan and Fulton Corridor Specific Plan. Together, these two plans, also referred to collectively as the Fresno Downtown Plans, along with the proposed Downtown Development Code (DDC), aim to guide future development in the Downtown Fresno area. The Fresno Downtown Plans and the associated DDC would allow a mixture of commercial, office, and residential uses throughout the project area.

The methodologies used in this analysis comply with applicable California Environmental Quality Act (CEQA) guidelines and requirements, as well as the City of Fresno Traffic Impact Study Report Guidelines.

The technical analysis contained in this section includes traffic operations at intersections and freeway facilities, and ramp queuing within the study area. This section also evaluates the project's impact on railroad crossings, transit, bicycle, and pedestrian facilities. The analysis identifies mitigation measures to address project impacts where appropriate.

Sources

Information in this section is based on the following sources:

- Fresno General Plan. December 2014.
- Downtown Neighborhoods Community Plan. 2016. The complete report is contained in Appendix A.
- Fulton Corridor Specific Plan. 2016. The complete report is contained in Appendix B.
- Downtown Development Code. 2016. The complete report is contained in Appendix C.
- Traffic Impact Analysis. The complete report is contained in Appendix D.
- Comments received in response to the Notice of Preparation. These comments are summarized in Section 1, Introduction, of this Draft EIR. Copies of these comments are contained in Appendix D.
- Comments made during the public scoping meeting. These comments are summarized in Section 1, Introduction, of this Draft EIR. Copies of these comments are contained in Appendix D.

This report analyzes the following scenarios to determine the effects of the proposed project:

- **Baseline Conditions Analysis**—The baseline and baseline plus project analyses are used to identify impacts directly related to the development potential associated with the proposed project. Baseline roadway operations were analyzed using roadway geometrics as observed in

Spring 2015 and traffic volumes collected between November 2009 through January 2012, and verified by counts collected in May 2015.

- **Cumulative Conditions Analysis**—The Cumulative Conditions scenario analyzes the proposed project's incremental effects to traffic congestion when viewed in connection with the effects of reasonably foreseeable future projects. This analysis uses population and employment forecasts from the recently adopted Fresno General Plan as land use inputs for future development in the region. This is consistent with §15130(b)(1)(B) from the CEQA Guidelines. The analysis also includes reasonably foreseeable roadway network changes including funded roadway improvement projects identified in the Fresno Council of Governments (Fresno COG) 2014 Regional Transportation Plan/Sustainable Communities Strategy (RTP/SCS) and applicable local and regional impact fee programs as well as modifications to the roadway network associated with the construction of the High Speed Rail (HSR) trackway.

Project Description

The proposed project consists of the Downtown Neighborhoods Community Plan (DNCP), Fulton Corridor Specific Plan (FCSP), and the Downtown Development Code (DDC). Together, the DNCP and FCSP aim to guide future development in Downtown Fresno and its surrounding neighborhoods, with the DDC used to implement these plans. The DNCP, FCSP, and the DDC would allow a mixture of commercial, office, and residential uses throughout the project area.

Downtown Neighborhoods Community Plan

The Downtown Neighborhoods Community Plan (DNCP) is written to be the community's tool for guiding the regeneration of Downtown Fresno and its surrounding neighborhoods. The DNCP covers a 7,290-acre area generally bounded by State Route 180 to the north, Church Avenue to the south, Chestnut Avenue to the east, and Thorne, West, and Marks Avenues to the west. Within the boundaries of the DNCP is the Fulton Corridor Specific Plan (FCSP).

Along with the DNCP, the associated DDC would replace the existing Fresno Municipal Zoning Code within the plan area. The DDC is a form-based code created to implement the DNCP and FCSP.

Downtown Neighborhoods Community Plan Land Use

The DNCP anticipates that the plan with the associated DDC in place has a development potential of 3,697 new dwelling units in the DNCP area outside the FCSP, resulting in 15,268 additional residents in the DNCP area. The DNCP also anticipates the potential for 350,000 square feet of retail uses, 2,000,000 square feet of office uses, and 2,900,000 square feet of industrial space outside the FCSP.

Downtown Neighborhoods Community Plan Circulation

The proposed DNCP includes several changes to the roadway network in Downtown, including converting one-way streets to two-way traffic, constructing new streets to "reconnect" the City's original grid system of roadways, and implementing "road diets"—reducing the number of vehicle lanes to provide bike lanes or wider sidewalks. These circulation changes are summarized below:

One-Way to Two-Way Conversions

- M Street: Stanislaus Street to SR-41
- N Street: Mariposa Street to Tulare Street
- P Street: Ventura Avenue to Tuolumne Street
- Whitesbridge Avenue/B Street: Amador Street to Stanislaus Street
- Amador Street/A Street: Fruit Avenue to Tuolumne Street
- Stanislaus Street: B Street to Divisadero Street
- Tuolumne Street: A Street to P Street

New Roadways (Reconnect Street Grid)

- O Street: Stanislaus Street to Tuolumne Street
- Fulton Street: Tuolumne Street to Inyo Street
- Broadway: Tuolumne Street to Broadway Street
- Merced Street: H Street to Van Ness Avenue
- Mariposa Street: H Street to Van Ness Avenue
- Mariposa Street: M Street to N Street
- Mariposa Street: N Street to P Street
- Kern Street: Fulton Street to Van Ness Avenue
- Van Ness Avenue: Railroad Avenue to G Street
- Belgravia Avenue: Geneva Avenue to Elm Avenue

Roadway Removal

- Amador Street: Whitesbridge Avenue to Fruit Avenue
- Millbrook Avenue: Belmont Avenue to Seventh Street
- Tuolumne/Mall Loop Road: Fulton Street to Van Ness Avenue

Road Diets & Bike Lanes

- Abby Street: Divisadero Street to Blackstone Avenue (3 lanes to 2 lanes)
- Blackstone Avenue: Olive Avenue to Stanislaus Street (3 lanes to 2 lanes)
- Belmont Avenue: SR-41 to Chestnut Avenue (4-lane undivided to 2-lane divided)
- Fresno Street: Divisadero Street to Olive Avenue (4 lanes to 2-lane divided)
- First Street: Ventura Avenue to Olive Avenue (4 lanes to 2 lanes)
- Van Ness Avenue: Mono Street to Tulare Street (3-lanes to 2-lanes)
- Butler Avenue: Los Angeles Street to Mosqueda Community Center (4-lane undivided to 2-lane divided)
- Maple Avenue: California Avenue to Olive Avenue (4-lane undivided to 2-lane divided)
- Tulare Street: Union Pacific Railroad to R Street (4 lane devided to 3 lanes)

In addition to the roadway network changes identified above, the DNCP also includes an extensive planned bicycle network in the Study Area to support bicycling, as shown in Figure 3-1 of the DNCP, and re-created here in Exhibit 5.14-4. Some of these planned bikeways are different from the proposed bicycle network identified in the City of Fresno Bicycle, Pedestrian, & Trails Master Plan,

but will be consistent with the proposed bicycle network in the City's Active Transportation Plan currently under development.

Applicable Plan Policies

The DNCP includes several proposed policies related to transportation and circulation that are relevant to this analysis. These policies include:

- **Policy 3.1.9:** Continue to implement Bus Rapid Transit improvements along Blackstone Avenue and Abby Street, and Ventura Avenue/Kings Canyon Road.
- **Policy 3.1.10**: As resources become available, prioritize the minimization of transit delay along key transit corridors through the use of signal prioritization for transit, queue jumping, optimal stop spacing, pre-paid fares, and other transit priority tools. (FCSP 7-5-2)
- **Policy 3.3.1:** As resources become available, encourage the creation of "complete streets" in the Downtown Neighborhoods, so that all streets accommodate the needs of all potential users—vehicles, pedestrians, cyclists, transit vehicles and freight.
- **Policy 3.3.4:** Consider a tiered system of flexible, multi-modal Level of Service (LOS) criteria to evaluate the transportation performance of streets.
- **Policy 3.3.5:** Street segments and intersections identified as Bus Rapid Transit (BRT) or major transit corridors and located outside of the Core Area but within the DNCP area boundary or a distance of one mile outside of the DNCP boundary may be allowed to function at an "E" or "F" LOS as determined appropriate to preserve or promote development of desired property improvements and multi-modal complete street priorities.
- **Policy 3.3.6:** For new development projects in the Downtown area, ensure that the projects do not result in worsening facilities or service for transit, bicyclists, and pedestrians. For new development projects in the Community Plan Area, require mitigation for any resulting degradation of service for transit (by reducing the quality of a transit stop or precluding a planned stop, or by introducing significant transit delay or overloading individual routes or transit vehicles), bicyclists (by eliminating an existing or precluding a planned bicycle facility) or pedestrians (by reducing the width of a sidewalk, increasing a roadway crossing distance, reducing landscape or shade coverage, or replacing an active building frontage with an inactive frontage). (FCSP 9-3-2)
- **Policy 3.3.9:** In order to decrease conflicts between automobiles and pedestrians, when feasible, consolidate existing and minimize new driveways throughout the Community Plan Area.
- **Policy 3.4.1**: Allow the narrowing of roadways ("road diets") in order to transform appropriate corridors into multi-modal thoroughfares. Road diets could be applied to streets that have excess vehicular capacity in order to reduce vehicular speeds, introduce street parking, and accommodate additional transportation modes.
- **Policy 3.4.2:** As resources become available, reestablish an interconnected street grid comparable to Fresno's original grid pattern in order to increase walkability and improve connections to parks, open space, schools, and neighborhood centers.
- **Policy 3.4.3**: Allow for the conversion of one-way streets into two-way streets in order to meet the City's economic development and walkability goals.
- **Policy 3.5.5:** Strive for all new commercial parking to be shared, and work with private parking operators to share existing parking as part of a unified Park Once system.

- **Policy 3.6.2:** Maintain bicycle facilities so that they are safe and secure, and facilitate the linkages between cycling and other modes of transportation. (RCP 2-6)
- **Policy 3.6.5**: Add and improve Class II, III, or IV bike facilities whenever possible, expanding the bicycle network and linking with areas in and beyond Downtown.
- **Policy 7.6.1:** Encourage land use, urban form, and transportation decisions that promote physical activity, reduce vehicle miles traveled (VMT), and improve air quality.
- **Policy 7.6.3**: Create a well-connected, safe, and attractive pedestrian and cycling environment for all ages and abilities to enhance safety and encourage physical activity.

Fulton Corridor Specific Plan

The Fulton Corridor Specific Plan (FCSP) is both a visionary document laying out the community's long term goals for the plan area as well as an implementation plan for immediate and midterm actions needed to achieve the long-term goal. The FCSP covers a 655-acre area generally bounded by Divisadero Street to the north, State Route 41 to the south, M Street, N Street, O Street, and the alley between M and N Streets to the east, and State Route 99 to the west. This area is the historical center of the Fresno metropolitan area where the City's urban development originally began and from which it expanded. In 1964, the City converted six blocks of Fulton Street, the primary retail/commercial corridor in Downtown Fresno, to a pedestrian mall as part of a plan to slow the disinvestment that was occurring in the area. However, the area continued to decline as suburban growth further resulted in decentralization.

Fulton Corridor Specific Plan Land Use

The proposed FCSP aims to reverse the decline of the area by encouraging and supporting infill development within the specific plan area. Implementation of the FCSP has an identified development potential of 6,293 dwelling units including 860 units from existing vacant space resulting in an additional 13,593 residents in the plan area. The FCSP also anticipates an additional 1,500,000 square feet of retail uses, 3,900,000 square feet of office uses, and 145,000 square feet of industrial space.

The FCSP accommodates the construction of a high speed rail station within the plan area. However, the full construction of an operational California High Speed Rail system is not currently fully-funded and too speculative to include in this analysis. The California High Speed Rail system is discussed further under the Cumulative Conditions analysis section (see Section 5.14.6).

Fulton Corridor Specific Plan Circulation

In addition to the expected increase in development, the FCSP includes several changes to the roadway network similar to the DNCP. These circulation changes are summarized below:

One-Way to Two-Way Conversions

- M Street: Stanislaus Street to SR-41
- N Street: Mariposa Street to Tulare Street
- P Street: Ventura Street to Divisadero Street
- Stanislaus Street: B Street to Divisadero Street
- Tuolumne Street: A Street to P Street

New Roadways (Reconnect Street Grid)

- Fulton Street: Inyo Street to Tuolumne Street (see Fulton Mall discussion below)
- Mariposa Street: H Street to Van Ness Avenue
- Mariposa Street: M Street to N Street
- Mariposa Street: O Street to P Street
- Broadway: Tuolumne Street to Mariposa Street
- O Street: Stanislaus Street to Tuolumne Street

Roadway Removal

- Tuolumne/Mall Loop Road: Fulton Street to Van Ness Avenue
- Broadway Plaza: Broadway to H Street (adjacent to Hotel Fresno)

Road Diets

- Van Ness Avenue: Mono Street to Tulare Street (3 lanes to 2 lanes)
- Tulare Street: Union Pacific Railroad to R Street (4 lane divided to 3 lanes)
- G Street: Tuolumne to Inyo Street (4 lanes to 3 lanes)

Interchange Reconstruction

- SR-41 Southbound loop on-ramp from Broadway: Replace with a direct on-ramp from Van Ness Avenue
- Reconstruct Fresno Street/H Street interchange into an at-grade intersection

Additional Transportation Improvements

In addition to the roadway network changes identified above, the FCSP also includes an extensive planned bicycle network in the Study Area to support bicycling, as shown in Figure 9.6A of the FCSP. Some of these planned bikeways are different from the proposed bicycle network identified in the City of Fresno Bicycle, Pedestrian, & Trails Master Plan, but will be consistent with the proposed bicycle network in City's Active Transportation Plan currently under development.

As part of accommodating the construction of a high-speed rail station, the FCSP also includes local transportation-related improvements around the HSR station. This includes an Intermodal Transit Center along G Street that will facilitate better connectivity between HSR and other local and regional transportation providers, such as FAX (including BRT), Fresno County Rural Transit Agency, Greyhound, Amtrak, taxis, transportation network companies, rental cars, and a potential future bike share system.

Fulton Mall

As discussed in Chapter 4 of the FCSP, the revitalization of the Fulton Mall Corridor is a central piece of the FCSP. Through a series of public workshops and input from the City's project team, the City originally considered ten options for the existing pedestrian Fulton Mall. Of these ten options, the FCSP Community Advisory Committee voted to recommend the following three for further study:

- Option 1: Reconnect the Grid on Traditional Streets—completely remove the existing pedestrian mall and introduce a narrow, two-lane, two-way enhanced street with oversized sidewalks, stately trees, and on-street parking throughout the Fulton Mall and its cross streets.
- Option 2: Reconnect the Grid with Vignettes—introduce a two-way street throughout the Fulton Mall, keeping selected features in their original Mall contexts ("vignettes"), in a manner that provides improved retail visibility and some on-street parking. Transform Kern, Mariposa, and Merced Malls into enhanced streets with narrow traffic ways, ample sidewalks, stately trees, and on-street parking.
- Option 3: Restoration and Completion—Keep Fulton Street, Merced Street, Mariposa Street, and Kern Street Malls pedestrian-only. Renovate and repair the pedestrian malls in their entirety, including their landscape and hardscape, and restore the artwork.

The revitalization of the Fulton Mall Corridor was further analyzed in the Fulton Mall Reconstruction Project EIR and Environmental Assessment (EA). As discussed in Sections 4.4 and 4.5 of the FCSP, the Fulton Mall Reconstruction Project EIR and EA analysis ultimately resulted in a selected alternative that primarily reflects Option 1 as presented above. This selected alternative introduces a two-lane, two-way enhanced streets with on-street parking, street trees, and wide sidewalks along Fulton Street and its cross streets. Along Fulton Street, the sidewalk on one side of the street is extra wide to accommodate selected artwork features of the existing Fulton Mall, similar to Option 2.

With the selection of the preferred alternative described above for the Fulton Mall in the Fulton Mall Reconstruction Project EIR & EA, this report analyzes the transportation conditions with Fulton Mall open to vehicular traffic with a narrow two-lane, two-way local serving roadway.

With the implementation of the Fulton Mall Reconstruction project, the reintroduced roadways will primarily carry local trips to access adjacent businesses. Therefore, it would not greatly affect traffic patterns outside the vicinity of the Fulton Mall.

Applicable Plan Policies

The FCSP includes several proposed policies related to transportation and circulation that are relevant to this analysis. These policies include:

- **Policy 6-3-4:** Create a safe environment for pedestrians and cyclists by implementing the following measures when feasible:
  - Repairing cracked and broken sidewalks and introducing tree wells that are level with the sidewalk in order to minimize tripping hazards and provide a pedestrian environment that is accessible to all users.
  - Introducing planted medians along 3- and 4-lane roadways in order to beautify Downtown's streets, reduce the urban heat island effect, and enable two-stage pedestrian crossing.
  - Introducing bulbouts along high volume pedestrian routes and vibrant mixed-use areas in order to shorten pedestrian crossing distances.
  - Installing high visibility crosswalks at uncontrolled intersections and mid-block crossings in order to remind and alert motorists of crossing pedestrians.

  - Narrowing street widths by implementing road diets.
  - Introducing bike lanes and bike racks per the Bicycle, Pedestrian, and Trails Master Plan.
- **Policy 8-8-7:** Reduce conflicts between automobiles and pedestrians by consolidating existing driveways and minimizing new curb cuts and driveways that cross sidewalks. Where alleys are present, retain them and require all new parking access to be taken from them.
- **Policy 9-1-4**: Accommodate bus service without expanding roadways, narrowing sidewalks, eliminating streetscape, or compromising pedestrian safety.
- **Policy 9-1-6**: Prohibit the expansion or widening of City controlled existing intersections through the addition of left- or right-turn lanes, and consider removing left and right turn lanes when possible.
- **Policy 9-1-7:** Consider plan goals, policy, and objectives for improving safety and facilities or service for transit, bicyclists, and pedestrians when evaluating the conversion of existing permissive left-turn traffic signal phasing to protected left-turn phasing.
- **Policy 9-1-10:** Upgrade traffic signal control equipment, interconnect traffics signals, connect all signals to a traffic operations center, and install emergency vehicle traffic signal interruption systems at all existing and new traffic signal-controlled intersections.
- **Policy 9-1-11:** Reestablish an interconnected street grid comparable to Fresno's original grid pattern in order to increase walkability and improve connections to parks, open space, schools, and neighborhood centers.
- **Policy 9-1-12:** Support the conversion of one-way streets into two-way streets in order to meet the City's economic development and walkability goals.
- **Policy 9-1-13:** In order to free up valuable land for development and improve the southbound SR-41 on-ramp from Broadway Street, work with Caltrans to replace the on-ramp with a direct southbound on-ramp from Van Ness Avenue that runs parallel to SR-41.
- **Policy 9-3-1:** The City uses a tiered automobile level of service (LOS) approach for street segments and intersections throughout the City. Within the Plan Area, LOS F will be allowed in order to preserve or promote development of desired property improvements and multi-modal complete street priorities.
- **Policy 9-3-2:** Use multi-modal level of service analysis for proposed projects in the Downtown area that increase automobile capacity to ensure that proposed projects do not result in worsening levels of service for transit, bicyclists, and pedestrians.
- **Policy 9-3-3**: As funds are available, utilize technology to support an improved level of service for transit, bicyclists, and pedestrians within the needs and context of Downtown. Management strategies include traffic signal synchronization, traffic signal optimization, real time traffic signal operations, transit prioritization, transit queue jumping, bicycle lanes, bicycle detection at signal controlled intersections, driveway consolidation, motorist information systems, and incident response systems.
- **Policy 9-3-4:** Pursue reductions or waivers of impact for development projects within an area that at a minimum includes the Downtown Core (DTC) zoning district.
- **Goal 9-10:** Develop a public transit system that can effectively link Downtown to surrounding neighborhoods, employment, and education centers and other important destinations.
- **Policy 9-10-1:** Continue to implement the Bus Rapid Transit (BRT) on Blackstone Avenue and Kings Canyon Road.

- **Policy 9-11-1:** Focus resources and investment on transit corridors where ridership is already high, and make transit there fast, frequent, and reliable.
- **Policy 9-11-2:** Minimize transit delay along key transit corridors through the use of signal prioritization for transit, optimal stop spacing, pre-paid fares and other tools.
- **Policy 9-13-1:** As funds become available, prioritize bicycle facilities improvements identified in the upcoming Active Transportation Plan (ATP).
- **Policy 9-13-2:** Add and improve Class II, III, or IV bike facilities whenever possible, expanding the bicycle network and linking with areas in and beyond Downtown.
- **Policy 9-13-3:** As funds become available, introduce the "Downtown Rail Trail," a Class I bike facility within proposed Railroad Linear Park (see Section 8.3.B.2)
- **Policy 9-13-4:** Utilize technology to support an improved level of service for bicyclists within the needs and context of Downtown. Management strategies include traffic signal synchronization, traffic signal optimization, real time traffic signal operations, bicycle lanes, and bicycle detection at signal-controlled intersections.
- **Policy 9-14-1:** Add sidewalks and enhance existing pedestrian facilities and safety at all railroad crossings.
- **Policy 9-14-2:** Provide safe and well-designed bicycle crossings of the railroad right-of-way at all places identified in the BMP/ATP.

5.14.2 - Environmental Setting

The following information is provided in accordance with CEQA §15125. The environmental setting discussion provides a baseline discussion of the existing conditions within the DNCP and FCSP areas.

Study Area

Exhibit 5.14-1 shows the proposed project location and associated existing roadway network. The Downtown Neighborhoods Community Plan (DNCP) covers an area generally bounded by State Route (SR) 180 to the north, Church Avenue to the south, Chestnut Avenue to the east, and Thorne, West, and Marks Avenues to the west. Within the boundaries of the DNCP is the Fulton Corridor Specific Plan (FCSP), which is generally bounded by Divisadero Street to the north, SR-41 to the south, M, N, and O Streets, and the alley between M and N Streets to the east, and SR-99 to the west.

In accordance with CEQA statute §21092.4, the City's Consultant Team contacted public agencies with transportation facilities within ten miles of the project site. Based on this consultation with neighboring agencies, coordination with City of Fresno and Caltrans District 6 staff, and review of the City of Fresno Traffic Impact Study Report Guidelines (City of Fresno, 2009), 89 intersections and 63 freeway segments were selected for analysis. The study intersections are located within multiple jurisdictions and subject to different level of service (LOS) standards based on the policies of the presiding jurisdiction. Table 5.14-1 lists the study intersections and identifies the presiding jurisdiction and LOS standard.Table 5.14-2 presents the study freeway facilities. Specific LOS policies for transportation facilities are described in the Regulatory Setting section (see Section 5.14.3).

Table 5.14-1: Study Intersections

Intersection	Jurisdiction	LOS Standard[1]
1. Belmont Avenue/SR-99 southbound ramps	Caltrans	D
2. Belmont Avenue/SR-99 northbound ramps	Caltrans	D
3. Belmont Avenue/Golden State Boulevard–Wesley Avenue	City of Fresno	E
4. Belmont Avenue/H Street–Faris Avenue	City of Fresno	E
5. Belmont Avenue/Palm Avenue	City of Fresno	E
6. Belmont Avenue/Fulton Street	City of Fresno	F
7. Belmont Avenue/Van Ness Avenue	City of Fresno	F
8. SR-180 westbound ramps—Bremer Avenue/Blackstone Avenue	Caltrans	D
9. Bremer Avenue (SR-180 westbound ramps)/Abby Street	Caltrans	D
10. White Avenue (SR-180 eastbound ramps)/Blackstone Avenue	Caltrans	D
11. SR-180 eastbound ramps—White Avenue/Abby Street	Caltrans	D
12. Belmont Avenue/Blackstone Avenue	City of Fresno	F
13. Belmont Avenue/Abby Street	City of Fresno	F
14. Belmont Avenue/Fresno Street	City of Fresno	F
15. Belmont Avenue/First Street	City of Fresno	F
16. SR-180 westbound ramps/Fulton Street	Caltrans	D
17. SR-180 westbound ramps/Van Ness Avenue	Caltrans	D
18. SR-180 eastbound off-ramp/Fulton Street	Caltrans	D
19. SR-180 eastbound on-ramp/Van Ness Avenue	Caltrans	D
20. H Street/Palm Avenue	City of Fresno	E
21. Divisadero Street/H Street–Echo Avenue	City of Fresno	F
22. Divisadero Street/Fulton Street	City of Fresno	F
23. Divisadero Street/Van Ness Avenue	City of Fresno	F
24. Divisadero Street/Blackstone Avenue	City of Fresno	F
25. Divisadero Street/Abby Street	City of Fresno	F
26. Stanislaus Street/Blackstone Avenue–O Street	City of Fresno	F
27. Stanislaus Street/M Street	City of Fresno	F
28. Stanislaus Street/Van Ness Avenue	City of Fresno	F
29. Stanislaus Street/Broadway	City of Fresno	F
30. Stanislaus Street/E Street	City of Fresno	F
31. Stanislaus Street/SR-99 northbound on-ramp	Caltrans	D
32. Stanislaus Street/SR-99 southbound off-ramp	Caltrans	D

Table 5.14-1 (cont.): Study Intersections

Intersection	Jurisdiction	LOS Standard[1]
33. Stanislaus Street/B Street	City of Fresno	F
34. Tuolumne Street/A Street	City of Fresno	F
35. Tuolumne Street/SR-99 southbound frontage road	Caltrans	D
36. Tuolumne Street/SR-99 northbound frontage road	Caltrans	D
37. Tuolumne Street/E Street	City of Fresno	F
38. Tuolumne Street/Broadway	City of Fresno	F
39. Tuolumne Street/Van Ness Avenue	City of Fresno	F
40. Tuolumne Street/M Street	City of Fresno	F
41. Tuolumne Street/P Street	City of Fresno	F
42. Fresno Street/B Street	City of Fresno	F
43. Fresno Street/C Street	City of Fresno	F
44. Fresno Street/SR-99 southbound ramps	Caltrans	D
45. Fresno Street/SR-99 northbound ramps	Caltrans	D
46. Fresno Street/E Street	City of Fresno	F
47. Fresno Street/G Street	City of Fresno	F
48. Fresno Street/Van Ness Avenue	City of Fresno	F
49. Fresno Street/M Street	City of Fresno	F
50. Fresno Street/O Street	City of Fresno	F
51. Fresno Street/P Street	City of Fresno	F
52. Divisadero Street/Fresno Street	City of Fresno	F
53. Tulare Street/G Street	City of Fresno	F
54. Tulare Street/H Street	City of Fresno	F
55. Tulare Street/Van Ness Avenue	City of Fresno	F
56. Tulare Street/M Street	City of Fresno	F
57. Tulare Street/O Street	City of Fresno	F
58. Tulare Street/P Street	City of Fresno	F
59. Tulare Street/U Street–SR-41 southbound on-ramp	Caltrans	D
60. Divisadero Street/SR-41 southbound off-ramp	Caltrans	D
61. Tulare Street/SR-41 southbound off-ramp	Caltrans	D
62. Tulare Street/SR-41 northbound ramps	Caltrans	D
62A. Divisadero Street/SR-41 northbound on-ramp	Caltrans	D
62B. Tulare Street/Divisadero Street	Caltrans	D

Table 5.14-1 (cont.): Study Intersections

Intersection	Jurisdiction	LOS Standard[1]
63. Tulare Street/First Street	City of Fresno	F
64. Inyo Street/H Street	City of Fresno	F
65. Inyo Street/Van Ness Avenue	City of Fresno	F
66. Ventura Avenue/C Street	City of Fresno	F
67. Ventura Avenue/SR-99 southbound ramps	Caltrans	D
68. Ventura Avenue/SR-99 northbound ramps	Caltrans	D
69. Ventura Avenue/E Street	City of Fresno	F
70. Ventura Avenue/G Street	City of Fresno	F
71. Ventura Avenue/H Street	City of Fresno	F
72. Ventura Avenue/Broadway	City of Fresno	F
73. Ventura Avenue/Van Ness Avenue	City of Fresno	F
74. Ventura Avenue/M Street	City of Fresno	F
75. Ventura Avenue/O Street	City of Fresno	F
76. Ventura Avenue/P Street	City of Fresno	F
77. Ventura Avenue/First Street	City of Fresno	F
78. Santa Clara Street–SR-41 southbound off-ramp/O Street	Caltrans	D
79. San Benito Street–SR-41 northbound on-ramp/M Street	Caltrans	D
80. SR-41 southbound off-ramp/Van Ness Avenue	Caltrans	D
81. SR-41 northbound off-ramp–San Benito Street/Van Ness Avenue	Caltrans	D
82. Stanislaus Street/Fulton Street	City of Fresno	F
83. Tuolumne Street/Fulton Street	City of Fresno	F
84. Divisadero Street/San Pablo Avenue	City of Fresno	F
85. Inyo Street/Fulton Street	City of Fresno	F
86. Tulare Street/E Street	City of Fresno	F
87. Fresno Street/H Street (Future)	City of Fresno	F
88. Fresno Street/Fulton Street (Future)	City of Fresno	F
89. Tulare Street/Fulton Street (Future)	City of Fresno	F

Notes:
[1] Level of Service (LOS) standard based on presiding jurisdiction's LOS policy.
For intersections under Caltrans's jurisdiction, consultation with Caltrans staff identified LOS D as the appropriate target LOS.
For City of Fresno intersections, LOS F is the LOS standard for the Downtown Planning Area, coterminous with the DNCP Planning Area as identified in General Plan Policy MT-1-l, MT-2-i, and Figure MT-4.
LOS E is the LOS standard for City of Fresno intersections in activity centers and bus rapid transit corridors pursuant to General Plan Policy MT-1-n. Furthermore, pursuant to General Plan Policy MT-2-i and Figure MT-4, LOS E is the standard in the area immediately surrounding the Downtown Planning Area (Traffic Impact Zone II (TIZ-II). In the Study Area, this includes intersections along Belmont Avenue outside of the Downtown Planning Area.

Table 5.14-2: Study Freeway Segments

SR-41—Northbound	SR-41—Southbound
1. Jensen Avenue to SR-99—Weave & Basic	1. McKinley Avenue to SR-180—Weave & Basic
2. SR-99 northbound on-ramp–Merge	2. SR-180 to Divisadero St./Tulare St.–Weave & Basic
3. SR-99 to Van Ness–Basic	3. Tulare Street on-ramp–Merge
4. Van Ness Avenue off-ramp–Diverge	4. Tulare Street to O Street–Basic
5. Broadway on-ramp–Merge	5. O Street off-ramp–Diverge
6. M Street on-ramp–Merge	6. Van Ness Avenue off-ramp–Diverge
7. M Street to Tulare Street–Basic	7. M Street on-ramp–Merge
8. Tulare Street off-ramp–Diverge	8. Broadway on-ramp–Merge
9. Tulare Street on-ramp–Basic	9. Broadway to SR-99–Basic
10. Divisadero Street to SR-180–Weave & Basic	10. SR-99 southbound off-ramp–Diverge
11. SR-180 westbound off-ramp–Diverge	11. SR-99 to Jensen Avenue–Weave & Basic
12. SR-180 to McKinley Avenue–Weave & Basic	
SR-99—Northbound	**SR-99—Southbound**
1. Jensen Avenue to SR-41—Weave & Basic	1. Olive Avenue on-ramp–Merge
2. SR-41 northbound on-ramp–Merge	2. Olive Avenue to Belmont Avenue–Basic
3. SR-41 to Ventura Avenue off-ramp–Basic	3. Belmont Avenue off-ramp–Diverge
4. Ventura Avenue off-ramp–Diverge	4. Belmont Avenue to SR-180–Weave & Basic
5. Ventura Ave. off-ramp to Ventura Ave. on-ramp (lane drop)–Basic	5. SR-180 westbound on-ramp–Merge
6. Ventura Avenue on-ramp–Merge	6. SR-180 eastbound on-ramp–Merge
7. Ventura Avenue to Fresno Street–Basic	7. SR-180 to Stanislaus Street–Basic
8. Fresno Street off-ramp–Diverge	8. Stanislaus Street off-ramp–Diverge
9. Fresno Street on-ramp–Merge	9. Fresno Street off-ramp–Diverge
10. Stanislaus Street on-ramp–Merge	10. Fresno Street to Ventura Avenue–Weave & Basic
11. Stanislaus Street to SR-180–Basic	11. Ventura Avenue to SR-41–Weave & Basic
12. SR-180 off-ramp–Diverge	12. SR-41 to Jensen Avenue–Weave & Basic
13. SR-180 eastbound on-ramp–Merge	
14. SR-180 westbound on-ramp–Merge	
15. SR-180 to Belmont Avenue–Basic	
16. Belmont Avenue off-ramp–Diverge	
17. Belmont Avenue on-ramp–Merge	
18. Belmont Avenue to Olive Avenue–Basic	
19. Olive Avenue off-ramp–Diverge	

Table 5.14-2 (cont.): Study Freeway Segments

SR-41—Northbound	SR-41—Southbound
SR-180—Eastbound	**SR-180—Westbound**
1. SR-99 off-ramp–Diverge	1. SR-99 off-ramp–Diverge
2. SR-99 to Fulton St./Van Ness Ave.–Weave & Basic	2. SR-99 to Fulton St./Van Ness Ave.–Weave & Basic
3. Fulton St./Van Ness Ave. to Blackstone Ave./Abby St.–Weave & Basic	3. Fulton St./Van Ness Ave. to Blackstone Ave./Abby St.–Weave & Basic
4. Blackstone Ave./Abby St. to SR-41–Weave & Basic	4. Blackstone Ave./Abby St. to SR-41–Weave & Basic
	5. SR-99 off-ramp–Diverge

Existing Conditions

This section describes the existing conditions of the roadway, transit, bicycle, and pedestrian systems in the study area. This report uses the existing conditions as the baseline to measure the potential impacts of proposed project.

Roadway Network

The following describes key roadway facilities within the study area:

State Route 41 is a north-south freeway that connects Fresno to Yosemite National Park to the north and the Central Coast towns of Atascadero and Morro Bay to the south. In the project study area, it is generally a six-lane freeway north of SR-99 and a four-lane freeway transitioning to a four-lane expressway south of SR-99.

State Route 99 is a north-south freeway that originates south of Bakersfield, traverses through the San Joaquin Valley as it heads north towards Sacramento. In the project vicinity, the freeway generally has three lanes in each direction.

State Route 180 is an east-west state highway that originates on the west in Mendota and ends on the east in Kings Canyon National Park. In the study vicinity, it is generally a six-lane freeway with auxiliary lanes between interchanges.

Belmont Avenue is an east-west arterial roadway that roughly parallels SR-180. In the study area, it is generally a four-lane undivided facility west of Blackstone Avenue, and a four-lane divided facility east of Blackstone Avenue.



Source: Fehr & Peers, 2016

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Exhibit 5.14-1
Study Area

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DNCP, FCSP, AND DDC
ENVIRONMENTAL IMPACT REPORT

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Divisadero Street is an east-west collector street that originates at G Street in the west and terminates at Tulare Street in the east, with a break at Community Regional Medical Center between Clark Street/Maddy Drive and Fresno Street. West of Community Regional Medical Center, it is generally a two-lane roadway with a center two-way left-turn lane. East of Community Regional Medical Center, it is a four-lane divided roadway and has an interchange with SR-41. It has at-grade crossings of the UPRR east of G Street and the BNSF Railroad west of Clark Street/Maddy Drive.

Stanislaus Street is a two- to three-lane one-way westbound roadway that originates at Divisadero Street on the east to B Street on the west. West of B Street, Stanislaus Street transitions to a two-lane, two-way residential street. It has a two-lane, westbound grade separation over the UPRR tracks that will soon be removed by the California HSR Authority and a partial interchange with SR-99.

Tuolumne Street is a two- to three-lane one-way eastbound roadway beginning at A Street on the west and terminating at Divisadero Street on the east. West of A Street, Tuolumne Street is a two-lane, two-way residential street. The Tuolumne Street overcrossing of the UPRR tracks is currently being reconstructed by the California HSR Authority into a two-lane, two-way roadway.

Fresno Street is a four-lane roadway that originates at West California Avenue on the south and terminates at North Friant Road on the north. In the study area, it is generally a four-lane divided roadway that travels along a northeast-southwest orientation. It has a grade separated undercrossing of the UPRR tracks and a diamond interchange with SR-99.

Tulare Street is an east-west roadway. In the study area it is generally a four-lane, divided facility east of the UPRR tracks, and a two-lane facility west of the UPRR tracks. It begins at West California Avenue on the west and ends at North Clovis Avenue on the east. It has an at-grade crossing of the UPRR and an interchange with SR-41 (with Divisadero Street).

Ventura Avenue is a four-lane, east-west arterial originating at West California Avenue on the west and changing into Kings Canyon Road east of Cedar Avenue. It has an interchange with SR-99.

Fulton Street is a north-south roadway that originates on the north at Olive Avenue in the Tower District. From Olive Avenue to Divisadero Street, Fulton Street is a two-lane, one-way southbound roadway with a partial interchange with SR-180. South of Divisadero Street, Fulton Street becomes a two-lane, two-way street. The Fulton Mall Reconstruction Project is underway and is opening Fulton Street to two-way vehicular traffic between Tuolumne and Inyo Street south of Inyo Street; Fulton Street continues as a two-lane, two-way north-south roadway.

Van Ness Avenue is a north-south roadway that originates on the south at Railroad Avenue and travels north through the Tower District. South of Divisadero Street, it is generally a two- to four-lane, two-way street with a partial interchange with SR-41. North of Divisadero Street, it transitions to a one- to two-lane, one-way roadway northbound to Fresno City College north of McKinley Avenue, and has a partial interchange with SR-180.

M Street is a north-south roadway that originates on the north at San Pablo Avenue and terminates on the south at Butler Avenue. North of Stanislaus Street, it is a two-lane, two-way street. South of

Stanislaus Street, it transitions to a two-lane one-way southbound roadway to SR-41. South of SR-41, it transitions again back to a two-lane, two-way street.

P Street is a northbound one- to two-lane one-way roadway that originates on the south at O Street and terminates on the north at Divisadero Street. North of Divisadero Street it becomes Abby Street.

Blackstone Avenue is a north-south arterial roadway. In the study area, it is a three-lane, one-way southbound roadway that terminates on the south at Stanislaus Street. North of the study area, it transitions to a six-lane north-south arterial. It has a partial interchange with SR-180.

Abby Street is a three-lane, one-way northbound roadway that originates in the south at Divisadero Street and terminates on the north at Blackstone Avenue just north of Olive Avenue. It has a partial interchange with SR-180.

Traffic Volumes and Roadway Operations

Traffic counts were originally collected at the study intersections on weekdays between November 2009 and January 2012 (refer to Appendix J for traffic count data). These turning movement counts at study intersections were taken during both the morning (7:00–9:00 a.m.) and evening (4:00–6:00 p.m.) peak periods. While these counts were taken over the course of a little more than a two-year period, the traffic counts demonstrate that traffic volumes have roughly remained the same or slightly decreased during this time period. A review of traffic counts collected in 2009 and 2011 on the Fresno Street and Tulare Street corridors in Downtown Fresno show that traffic volumes have either stayed roughly the same or decreased by up to 20 percent, with an average decrease of about 10 percent. Therefore, using the slightly older counts from November 2009 represents similar or slightly more congested traffic conditions as those observed in 2011 and 2012.

Similarly, new traffic counts were collected in May 2015 at several freeway on-ramp and off-ramp locations at the major access points into the study area. These traffic counts showed that the overall change in traffic levels on the ramps and local roadways are generally within ten percent. Upon closer evaluation, the majority of the locations (11 of the 18 locations) showed a decrease in traffic volumes from 2009–2011 traffic counts during either the AM or PM peak hour. Most of the remaining intersections saw only slight increases in traffic volumes (less than 10 percent, which is typically considered acceptable for day to day fluctuations in traffic). Of these intersections that showed slight increases, two were projected to operate at LOS C or better and two were projected to operate at a low LOS D in the future. Therefore, this slight increase in traffic will not result in a significant traffic congestion issue. The remaining three intersections were already projected to operate at LOS F in the future; so this slight increase in traffic will not result in any different conclusion to the traffic analysis.

Therefore, this analysis uses the original traffic counts collected from November 2009 to January 2012 to represent existing conditions.

The existing conditions roadway operations analysis uses roadway geometrics and traffic control as observed in Spring 2015.

Exhibits 5.14–2A, 5.14–2B, and 5.14–2C provide the existing conditions peak-hour traffic volumes, lane configurations, and traffic control used in the existing conditions analysis.

Intersection Operations

Table 5.14-3 summarizes the AM and PM peak-hour level of service (LOS) at each study intersection under existing conditions (refer to Appendix J for calculations). Roadway LOS is a qualitative description of traffic flow from the perspective of motorists. The *Highway Capacity Manual* (HCM) defines six levels of service from LOS A representing the least congested traffic conditions to LOS F representing the most congested traffic conditions. This is further described in the Methodology section (see Section 5.14.4).

Exhibits 5.14-3A and 5.14-3B also show the peak-hour intersection LOS. Based on the results in Table 5.14-3, the following six intersections operate at LOS E or F during the AM and/or PM peak-hour under existing conditions:

- Divisadero Street/Van Ness Avenue
- Divisadero Street/P Street–Abby Street–Stanislaus Street
- Stanislaus Street/SR-99 NB On-Ramp
- Stanislaus Street/B Street
- Tuolumne Street/SR-99 NB Frontage Road
- Ventura Avenue/SR-99 NB Ramps
- Ventura Avenue/E Street
- San Benito Street–SR-41 NB On-Ramp/M Street

Although several City of Fresno intersections operate at LOS E or F under existing conditions, these traffic operations are considered acceptable pursuant to the City's General Plan Policy MT-1-m and MT-2-i, which accepts LOS E and F vehicle traffic operations for City of Fresno intersections within the Downtown Planning Area. This includes the following intersections: Divisadero Street/Van Ness Avenue, Divisadero Street/P Street–Abby Street–Stanislaus Street, Stanislaus Street/B Street, and Ventura Avenue/E Street. The remaining four intersections operate at an unacceptable LOS based on Caltrans's LOS D standard.

Table 5.14-3: Peak Hour Intersection Operations—Existing Conditions

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]
1. Belmont Avenue/SR-99 southbound ramps	Side Street Stop-Controlled	16	C	28	D
2. Belmont Avenue/SR-99 northbound ramps	Side Street Stop-Controlled	15	B	31	D
3. Belmont Avenue/Golden State Boulevard–Wesley Avenue	Roundabout	4	A	5	A
4. Belmont Avenue/H Street–Faris Avenue	Signal	9	A	14	B

Table 5.14-3 (cont.): Peak Hour Intersection Operations—Existing Conditions

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]
5. Belmont Avenue/Palm Avenue	Signal	11	B	11	B
6. Belmont Avenue/Fulton Street	Signal	15	B	21	C
7. Belmont Avenue/Van Ness Avenue	Signal	13	B	13	B
8. SR-180 westbound ramps–Bremer Avenue/Blackstone Avenue	Signal	10	B	11	B
9. Bremer Avenue (SR-180 westbound ramps)/ Abby Street	Signal	11	B	7	A
10. White Avenue (SR-180 eastbound ramps)/Blackstone Avenue	Signal	9	A	7	A
11. SR-180 eastbound ramps–White Avenue/ Abby Street	Signal	15	B	12	B
12. Belmont Avenue/Blackstone Avenue	Signal	19	B	18	B
13. Belmont Avenue/Abby Street	Signal	17	B	28	C
14. Belmont Avenue/Fresno Street	Signal	19	B	23	C
15. Belmont Avenue/First Street	Signal	23	C	30	C
16. SR-180 westbound ramps/Fulton Street	Signal	7	A	11	B
17. SR-180 westbound ramps/Van Ness Avenue	Signal	14	B	13	B
18. SR-180 eastbound off-ramp/Fulton Street	Signal	8	A	10	B
19. SR-180 eastbound on-ramp/Van Ness Avenue	Signal	22	C	18	B
20. H Street/Palm Avenue	Signal	12	B	9	A
21. Divisadero Street/H Street–Echo Avenue	Signal	23	C	24	C
22. Divisadero Street/Fulton Street	Signal	20	C	13	B
23. Divisadero Street/Van Ness Avenue	Signal	12	B	*>150*	*F*
24. Divisadero Street/Blackstone Avenue	Signal	16	B	13	B
25. Divisadero Street/P Street–Abby Street–Stanislaus Street	Signal	12	B	*128*	*F*
26. Stanislaus Street/Blackstone Avenue–O Street	Signal	13	B	10	B
27. Stanislaus Street/M Street	Signal	11	B	10	B
28. Stanislaus Street/Van Ness Avenue	Signal	11	B	13	B
29. Stanislaus Street/Broadway	Signal	10	A	28	C
30. Stanislaus Street/E Street	Signal	11	B	16	B

Table 5.14-3 (cont.): Peak Hour Intersection Operations—Existing Conditions

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]
31. Stanislaus Street/SR-99 northbound on-ramp	Side Street Stop-Controlled	16	C	**>150**	**F**
32. Stanislaus Street/SR-99 southbound off-ramp	Side Street Stop-Controlled	20	C	26	D
33. Stanislaus Street/B Street	Side Street Stop-Controlled	14	B	**>150**	**F**
34. Tuolumne Street/A Street	Side Street Stop-Controlled	23	C	22	C
35. Tuolumne Street/SR-99 southbound frontage road	Side Street Stop-Controlled	22	C	19	C
36. Tuolumne Street/SR-99 northbound frontage road	Side Street Stop-Controlled	**35**	**E**	28	D
37. Tuolumne Street/E Street	Signal	8	A	9	A
38. Tuolumne Street/Broadway	Signal	14	B	15	B
39. Tuolumne Street/Van Ness Avenue	Signal	12	B	13	B
40. Tuolumne Street/M Street	Signal	15	B	11	B
41. Tuolumne Street/P Street	Signal	10	B	13	B
42. Fresno Street/B Street	Signal	16	B	19	B
43. Fresno Street/C Street	Signal	16	B	23	C
44. Fresno Street/SR-99 southbound ramps	Signal	22	C	21	C
45. Fresno Street/SR-99 northbound ramps	Signal	19	B	22	C
46. Fresno Street/E Street	Signal	7	A	8	A
47. Fresno Street/G Street	Signal	19	B	17	B
48. Fresno Street/Van Ness Avenue	Signal	35	D	35	D
49. Fresno Street/M Street	Signal	9	A	8	A
50. Fresno Street/O Street	Signal	7	A	9	A
51. Fresno Street/P Street	Signal	8	A	9	A
52. Divisadero Street/Fresno Street	Signal	32	C	36	D
53. Tulare Street/G Street	Signal	10	B	12	B
54. Tulare Street/H Street	Signal	12	B	11	B
55. Tulare Street/Van Ness Avenue	Signal	23	C	22	C
56. Tulare Street/M Street	Signal	10	B	12	B
57. Tulare Street/O Street	Signal	12	B	13	B

Table 5.14-3 (cont.): Peak Hour Intersection Operations—Existing Conditions

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]
58. Tulare Street/P Street	Signal	9	A	8	A
59. Tulare Street/U Street–SR-41 southbound on-ramp	Signal	8	A	16	B
60. Divisadero Street/SR-41 southbound off-ramp	Signal	34	C	16	B
61. Tulare Street/SR-41 southbound off-ramp	Signal	20	B	4	A
62. Tulare Street/SR-41 northbound ramps	Signal	18	B	23	C
62A. Divisadero Street/SR-41 northbound on-ramp	Signal	9	A	21	C
62B. Tulare Street/Divisadero Street	Signal	14	B	21	C
63. Tulare Street/First Street	Signal	32	C	36	D
64. Inyo Street/H Street	Signal	13	B	12	B
65. Inyo Street/Van Ness Avenue	Signal	13	B	11	B
66. Ventura Avenue/C Street	Signal	10	B	10	A
67. Ventura Avenue/SR-99 southbound ramps	Signal	16	B	13	B
68. Ventura Avenue/SR-99 northbound ramps	Side Street Stop-Controlled	**>150**	**F**	33	D
69. Ventura Avenue/E Street	Side Street Stop-Controlled	33	D	*38*	*E*
70. Ventura Avenue/G Street	Signal	10	A	12	B
71. Ventura Avenue/H Street	Side Street Stop-Controlled	30	D	22	C
72. Ventura Avenue/Broadway	Signal	9	A	13	B
73. Ventura Avenue/Van Ness Avenue	Signal	22	C	20	C
74. Ventura Avenue/M Street	Signal	11	B	27	C
75. Ventura Avenue/O Street	Signal	32	C	15	B
76. Ventura Avenue/P Street	Signal	11	B	7	A
77. Ventura Avenue/First Street	Signal	23	C	24	C
78. Santa Clara Street–SR-41 southbound off-ramp/O Street	Signal	20	C	20	C
79. San Benito Street–SR-41 northbound on-ramp/M Street	Side Street Stop-Controlled	15	B	**>150**	**F**
80. SR-41 southbound off-ramp/Van Ness Avenue	Side Street Stop-Controlled	21	C	12	B

Table 5.14-3 (cont.): Peak Hour Intersection Operations—Existing Conditions

Intersection	Traffic Control	AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]
81. SR-41 northbound off-ramp–San Benito Street/Van Ness Avenue	All Way Stop-Controlled	12	B	11	A
82. Stanislaus Street/Fulton Street	Signal	14	B	20	B
83. Tuolumne Street/Fulton Street	Signal	9	A	8	A
84. Divisadero Street/San Pablo Avenue	Signal	12	B	11	B
85. Inyo Street/Fulton Street	Signal	10	A	10	B
86. Tulare Street/E Street	Signal	11	B	12	B
87. Fresno Street/H Street[3]	N/A	-	-	-	-
88. Fresno Street/Fulton Street[4]	Pedestrian Signal	-	-	-	-
89. Tulare Street/Fulton Street[4]	Pedestrian Signal	-	-	-	-

Notes:
[1] For signalized intersections, the overall average intersection control delay is reported in seconds per vehicle. For side-street stop controlled intersections, the average control delay for the movement with the greatest delay is reported in seconds per vehicle.
[2] Level of Service based on *Highway Capacity Manual* (Transportation Research Board, 2000).
[3] Intersection does not exist under Existing Conditions.
[4] Intersection currently exists as a pedestrian signal; not analyzed under Existing Conditions.
Delays greater than 2.5 minutes are not reported due to model insensitivity under extreme congestion.
BOLD text indicates the intersection operates at an unacceptable LOS based on the presiding jurisdiction's level of service policy.
Italic text indicates LOS E and/or F traffic operations, which are acceptable per Fresno General Plan Policy MT-1-l, MT-1-m, and MT-2-i.
Source: Fehr & Peers, 2015.

Freeway Operations

Table 5.14-4 and Table 5.14-5 summarize the AM and PM peak-hour level of service (LOS) at the freeway mainline segments and ramp junctions, respectively (refer to Appendix J for calculations). In general, the LOS results for the ramp junctions are worse than the freeway mainline, and are controlling the freeway operations. Based on the results in Table 5.14-4 and Table 5.14-5 and the policies identified in the regulatory setting section, the following freeway locations currently operate at an unacceptable LOS during the AM and/or PM peak hour:

SR-99 Northbound

- Fresno Street Off-Ramp
- Stanislaus Street On-Ramp
- SR-180 Off-Ramp
- SR-180 Westbound On-Ramp
- SR-180 to Belmont Avenue

- Belmont Avenue Off-Ramp
- Belmont Avenue On-Ramp
- Belmont Avenue to Olive Avenue
- Olive Avenue Off-Ramp

SR-99 Southbound

- Olive Avenue On-Ramp
- Olive Avenue to Belmont Avenue
- Belmont Avenue Off-Ramp
- Belmont Avenue to SR-180

SR-41 Northbound

- Tulare Street Off-Ramp
- SR-180 to McKinley Avenue

SR-41 Southbound

- McKinley Avenue to SR-180
- SR-180 to Divisadero Street

Table 5.14-4: Peak Hour Freeway Mainline Operations—Existing Conditions

Mainline Segment	AM Peak Hour		PM Peak Hour	
	Density[1]	LOS[2]	Density[1]	LOS[2]
SR-99 Northbound				
Jensen Avenue to SR-41	20	C	21	C
SR-41 to Ventura Avenue	9	A	12	B
Ventura Avenue to Fresno Street	16	B	22	C
Stanislaus Street to SR-180	16	B	29	D
SR-180 to Belmont Avenue	30	D	**1.01**	**F**
Belmont Avenue to Olive Avenue	28	D	**44**	**E**
SR-99 Southbound				
Olive Avenue to Belmont Avenue	**43**	**E**	29	D
Belmont Avenue to SR-180	28	D	22	C
SR-180 to Stanislaus Street	26	C	18	C
Fresno Street to Ventura Avenue	15	B	12	B
Ventura Avenue to SR-41	11	A	10	A
SR-41 to Jensen Avenue	14	B	16	B
SR-41 Northbound				
Jensen Avenue to SR-99	11	A	12	B
SR-99 to Van Ness Avenue	26	C	22	C
M Street to Tulare Street	27	D	29	D
Divisadero Street to SR-180	18	C	22	C

Table 5.14-4 (cont.): Peak Hour Freeway Mainline Operations—Existing Conditions

Mainline Segment	AM Peak Hour		PM Peak Hour	
	Density[1]	LOS[2]	Density[1]	LOS[2]
SR-180 to McKinley Avenue	30	D	28	D
SR-41 Southbound				
McKinley Avenue to SR-180	29	D	24	C
SR-180 to Divisadero Street	30	D	18	C
Tulare Street to O Street	21	C	15	B
Broadway to SR-99	20	C	19	C
SR-99 to Jensen Avenue	11	A	7	A
SR-180 Eastbound				
SR-99 to Fulton Street	22	C	18	C
Van Ness Avenue to Abby Street	23	C	20	C
Abby Street to SR-41	24	C	21	C
SR-180 Westbound				
SR-41 to Blackstone Avenue	23	C	17	B
Blackstone Avenue to Fulton Street	19	C	17	B
Fulton Street to SR-99	15	B	16	B

Notes:
[1] Density is reported in passenger cars per mile per lane (pcpmpl); volume-to-capacity (v/c) ratio is reported for LOS F conditions.
[2] Level of Service based on *Highway Capacity Manual* (Transportation Research Board, 2000).
BOLD text indicates the freeway mainline segment operates at an unacceptable LOS based on Caltrans's LOS criteria.
Source: Fehr & Peers, 2015.

Table 5.14-5: Peak Hour Freeway Ramp Junction Operations—Existing Conditions

Location	Maneuver	AM Peak Hour		PM Peak Hour	
		Density[1]	LOS[2]	Density[1]	LOS[2]
SR-99 Northbound					
Jensen Avenue eastbound on-ramp	Merge	20	B	21	C
Jensen Avenue to SR-41	Weave[3]	n/a	C	n/a	C
SR-41 on-ramp	Merge	13	B	18	B
Ventura Avenue off-ramp	Diverge	13	B	16	B
Ventura Avenue (lane drop)	Basic	11	B	16	B
Ventura Avenue on-ramp	Merge	26	C	33	D
Fresno Street off-ramp	Diverge	30	D	**40**	**E**
Fresno Street on-ramp	Merge	16	B	26	C

Table 5.14-5 (cont.): Peak Hour Freeway Ramp Junction Operations—Existing Conditions

Location	Maneuver	AM Peak Hour		PM Peak Hour	
		Density[1]	LOS[2]	Density[1]	LOS[2]
Stanislaus Street on-ramp	Merge	22	C	**1.06**	**F**
SR-180 off-ramp	Diverge	26	C	**1.22**	**F**
SR-180 eastbound on-ramp	Merge	22	C	28	D
SR-180 westbound on-ramp	Merge	**1.02**	**F**	**1.14**	**F**
Belmont Avenue off-ramp	Diverge	**1.3**	**F**	**1.62**	**F**
Belmont Avenue on-ramp	Merge	**36**	**E**	**1.13**	**F**
Olive Avenue off-ramp	Diverge	33	D	**40**	**E**
SR-99 Southbound					
Olive Avenue on-ramp	Merge	**1.15**	**F**	**37**	**E**
Belmont Avenue off-ramp	Diverge	**1.12**	**F**	**38**	**E**
Belmont Avenue to SR-180	Weave[3]	**0.92**	**E**	n/a	D
SR-180 westbound on-ramp	Merge	27	C	20	B
SR-180 eastbound on-ramp	Merge	29	D	20	B
Stanislaus Street off-ramp	Diverge	33	D	24	C
Fresno Street off-ramp	Diverge	28	D	22	C
Fresno Street to Ventura Avenue	Weave[3]	n/a	B	n/a	B
Ventura Avenue to SR-41	Weave[3]	n/a	A	13	B
SR-41 to Jensen Avenue	Weave[3]	n/a	B	3	A
SR-41 Northbound					
Jensen Avenue eastbound on-ramp	Merge	15	B	16	B
Jensen Avenue to SR-99	Weave[3]	32	D	n/a	A
SR-99 on-ramp	Merge	26	C	22	C
Van Ness Avenue off-ramp	Diverge	30	D	28	C
Broadway on-ramp	Merge	26	C	27	C
M Street on-ramp	Merge	28	D	32	D
Tulare St off-ramp	Diverge	32	D	**38**	**E**
Tulare St on-ramp	Merge	22	C	29	D
Divisadero Street to SR-180	Weave[3]	n/a	C	n/a	D
SR-180 westbound off-ramp	Diverge	14	B	15	B
SR-180 to McKinley Avenue	Weave[3]	**0.90**	**E**	**1.03**	**F**
SR-41 Southbound					
McKinley Avenue to SR-180	Weave[3]	0.98	E	0.90	E
SR-180 to Divisadero Street	Weave[3]	1.09	F	n/a	C

Table 5.14-5 (cont.): Peak Hour Freeway Ramp Junction Operations—Existing Conditions

Location	Maneuver	AM Peak Hour		PM Peak Hour	
		Density[1]	LOS[2]	Density[1]	LOS[2]
Tulare Street on-ramp	Merge	22	C	18	B
O Street off-ramp	Diverge	29	D	20	B
Van Ness Avenue off-ramp	Diverge	29	D	24	C
M Street on-ramp	Merge	21	C	21	C
Broadway on-ramp	Merge	20	C	19	B
SR-99 off-ramp	Diverge	14	B	13	B
SR-99 to Jensen Avenue	Weave[3]	n/a	A	13	B
SR-180 Eastbound					
SR-99 off-ramp	Diverge	12	B	7	A
SR-99 to Fulton Street	Weave[3]	n/a	C	n/a	C
Van Ness Avenue to Abby Street	Weave[3]	n/a	C	n/a	C
Abby Street to SR-41	Weave[3]	n/a	C	n/a	D
SR-180 Westbound					
SR-41 northbound on-ramp	Merge	24	C	20	B
SR-41 to Blackstone Avenue	Weave[3]	n/a	C	n/a	B
Blackstone Avenue to Fulton Street	Weave[3]	n/a	B	n/a	B
Fulton Street to SR-99	Weave[3]	n/a	B	n/a	B
SR-99 on-ramp	Merge	13	B	13	B

Notes:
[1] Density is reported in passenger cars per mile per lane (pcpmpl); volume-to-capacity (v/c) ratio is reported at freeway ramp merge and diverge sections operating at LOS F, and weave sections operating at LOS E or F.
[2] Freeway ramp merge and diverge level of service based on *Highway Capacity Manual* (Transportation Research Board, 2000).
[3] According to Caltrans's *Guide for the Preparation of Traffic Impact Studies* (Caltrans 2002), weave sections are analyzed using the Leisch Method as described in Chapter 500 of the *Highway Design Manual* (Caltrans 2010). Weave LOS results are based on service volume (density not calculated). If the volumes in a weave section result in non-weaving traffic conditions, this table reports the density and LOS of the adjacent freeway merge or diverge section with the more congested LOS.
BOLD text indicates the facility operates at an unacceptable LOS based on Caltrans's LOS criteria.
Source: Fehr & Peers, 2015.

Freeway Off-Ramp Queuing

Table 5.14-6 summarizes the 95th percentile queues during the AM and PM peak hour at each off-ramp study intersection under existing conditions (refer to Appendix J for calculations). Based on these results, the 95th percentile queues extend into the deceleration zone at the following locations:

- SR-99 NB Off-Ramp/Belmont Avenue
- SR-99 SB Off-Ramp/Fresno Street
- SR-41 SB Off-Ramp/Divisadero Street
- SR-99 NB Off-Ramp/Ventura Avenue

Table 5.14-6: Peak Hour Freeway Off-Ramp Queuing—Existing Conditions

Freeway Off-Ramp	Ramp Length[1]	Storage Length[2]	95th Percentile Queue[3]	
			AM Peak Hour	PM Peak Hour
1. SR-99 SB off-ramp/Belmont Avenue	910	60	25	**75**
2. SR-99 NB off-ramp/Belmont Avenue	790	10	**75**	**175**
8. SR-180 WB off-ramp/Blackstone Avenue	1,160	370	200	150
11. SR-180 EB off-ramp/Abby Street	1,150	370	100	75
16. SR-180 WB off-ramp/Fulton Street	1,370	550	175	200
18. SR-180 EB off-ramp/Fulton Street	1,050	250	50	125
32. SR-99 SB off-ramp/Stanislaus Street	1,130	310	100	75
44. SR-99 SB off-ramp/Fresno Street	1,030	230	**325**	150
45. SR-99 NB off-ramp/Fresno Street	1,070	280	225	100
60. SR-41 SB off-ramp/Divisadero Street	980	150	**400**	125
62. SR-41 NB off-ramp/Tulare Street	1,130	320	100	100
67. SR-99 SB off-ramp/Ventura Avenue	1,230	370	200	125
68. SR-99 NB off-ramp/Ventura Avenue	1,030	120	**325**	100
78. SR-41 SB off-ramp/O Street	1,210	270	125	175
80. SR-41 SB off-ramp/Van Ness Avenue	1,240	520	225	50
81. SR-41 NB off-ramp/Van Ness Avenue	1,000	210	25	25

Notes:
[1] The ramp length is determined by estimating the distance from the gore point where the off-ramp departs from the mainline to the limit line at the ramp terminal intersection with the local street. Distance reported in feet.
[2] In accordance with consultation with Caltrans staff, the acceptable storage length is the area between the limit line at the ramp terminal intersection and the deceleration zone, defined as the area within 525 feet from the exit nose (see Figure 504.2B in Chapter 500 of the Caltrans *Highway Design Manual* (Caltrans 2010)). Distance reported in feet.
[3] 95th Percentile Queue calculated using Synchro software. Queue reported in feet and rounded up to the nearest 25-foot interval.
BOLD text indicates the off-ramp queue extends into the deceleration zone.
Source: Fehr & Peers, 2015.

Railroad, Bicycle, Pedestrian, and Transit Systems

In addition to the roadway network and existing traffic conditions, this study evaluated the existing conditions of the rail, bicycle, pedestrian, and transit systems in the study area.

Railroad System

The study area is bisected by two major railroad lines, the Union Pacific Railroad (UPRR) and the Burlington Northern Santa Fe (BNSF) railroad. The UPRR tracks are crossed by three grade separated

crossings (Stanislaus Street, Tuolumne Street, and Fresno Street) and five at-grade crossings (Divisadero Street, Tulare Street, Kern Street, Mono Street, and Ventura Street). Of the five at-grade crossings with the UPRR, three will be closed (Divisadero Street, Kern Street, and Mono Street) and two will be grade-separated by the California HSR Authority. The BNSF tracks are crossed by five at-grade crossings (Fresno Street, Ventura Street, Divisadero Street, Tulare Street, and a pedestrian crossing at Mariposa Street). All of the at-grade crossings are controlled by crossing gates and lights.

Bicycle Facilities

Bicycle facilities are relatively limited within the project area. Bicycle facilities can be classified into one of the following four categories:

- Class I Bike Path—Off-street bike paths within exclusive right-of-way
- Class II Bike Lane—Striped on-road bike lanes adjacent to the outside travel lane on preferred corridors for biking
- Class III Bike Route—Shared on-road facility, usually delineated by signage
- Class IV Separated Bikeway—An exclusive, on-road bike facility that is physically separated from vehicle traffic and distinct from the sidewalk

According to the City of Fresno Bicycle, Pedestrian, and Trails Master Plan (2010) and field observations, the following Class II bike lanes are present within the study area:

North-South Facilities

- Thorne Avenue: California Ave. to SR-99
- Martin Luther King Jr. Boulevard: California Ave. to Florence Ave.
- B Street/Elm Avenue: Ventura Ave. to North Ave.
- C Street: Fresno St. to Ventura Ave.
- H Street: Divisadero St. to Broadway Plaza
- M Street: Divisadero St. to San Benito St.
- P Street: Fresno St. to Divisadero St.
- Fulton Street: Wishon Ave. to Divisadero St.
- Van Ness Avenue: Divisadero St. to McKinley Ave.
- East Avenue: North of California Ave.
- First Street: Tulare St. to Dakota Ave.
- Cedar Avenue: Butler Ave. to Kings Canyon Rd. and Tulare St. to Olive Ave.
- Chestnut Avenue: Jensen Ave. to Clinton Ave.

East-West Facilities

- Nielsen Avenue: West Ave. to Teilman Ave.
- Divisadero Street: H Street to Clark St.
- Huntington Boulevard: R Street to First St.
- Whitesbridge Avenue/B Street: Stanislaus St. to Teilman Ave.
- Amador Street/A Street: Teilman Ave. to Stanislaus St.
- Stanislaus Street: Divisadero St. to Broadway and F Street to E Street
- Tuolumne Street: E Street to F Street and Broadway to Divisadero St.
- Kearney Boulevard: West Ave. to Pickford Ave.
- California Avenue/Ventura Avenue: Plumas Ave. to C Street
- Church Avenue: Martin Luther King Jr. Blvd. to Clara Ave. and Elm Ave. to Golden State Blvd.

In addition to the existing bicycle facilities listed above, the *City of Fresno* Bicycle, Pedestrian, & Trails Master Plan (2010) identifies a recommended network of bike paths, bike lanes, and bike routes that may be implemented in the future. As noted in the regulatory setting section, the Bicycle,

Pedestrian, & Trails Master Plan was adopted by the Fresno City Council as an infrastructure plan whose contents are intended to be incorporated into the City's regulatory plans.

The City of Fresno Bicycle, Pedestrian, & Trails Master Plan is in the process of being updated into the City's Active Transportation Plan. As part of this process, the proposed bikeway network is being updated. Exhibit 5.14-4 shows the location of existing and planned bicycle facilities in the study area as identified in the DNCP, FCSP, and the initial draft networks developed for the Active Transportation Plan.

Pedestrian Facilities

Within the Downtown Triangle, pedestrian facilities are found on most streets northeast of the UPRR tracks and are intermittent to the southwest of the UPRR tracks. Sidewalks are located on one of the at-grade crossings of the UPRR tracks (Divisadero Street) and four of the BNSF railroad tracks (Fresno Street, Tulare Street, Mariposa Avenue and Divisadero Street).

Outside the Downtown Triangle, sidewalks are found on most streets in the Southeast and Edison Neighborhoods, and are intermittent in the Jane Addams Neighborhoods and South Van Ness Industrial District.

Transit Service

Fresno Area Express (FAX) operates most of the bus service within the City of Fresno and Fresno-Clovis Metropolitan Area. In addition, the Fresno County Rural Transit Agency (FCRTA) provides intercity bus service connecting Downtown Fresno with outlying cities, towns, and rural areas within Fresno County.

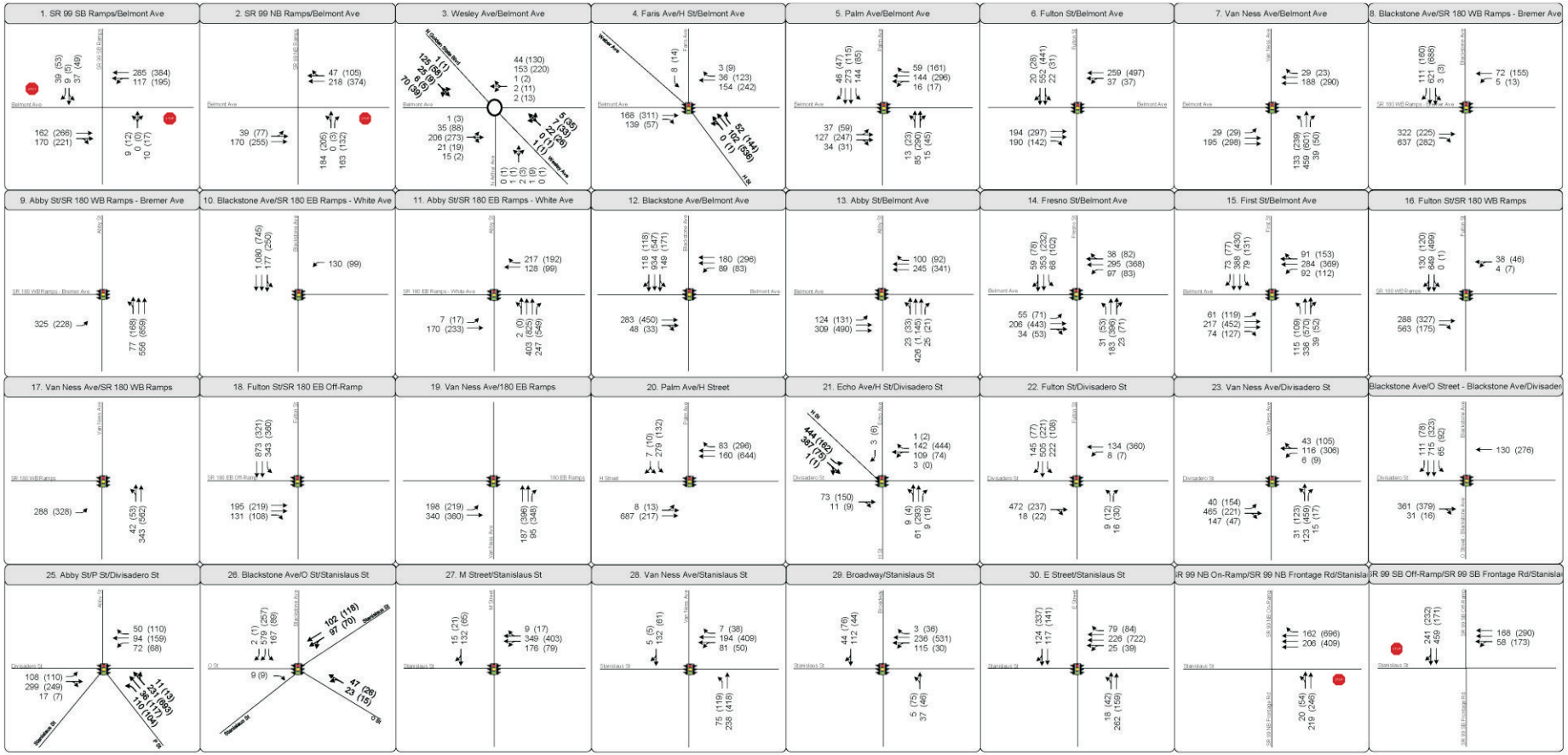
The following 14 fixed-route bus lines currently serve the project area:

FAX Routes

- Route 20–Hughes Ave/Marks Ave
- Route 22—West Ave/Tulare St
- Route 26—Palm Ave/Butler Ave/Peach Ave
- Route 28—CSUF/Manchester/W. Fresno
- Route 30—Pinedale/Blackstone/W. Fresno
- Route 32—Fresno St/Manchester/SW Fresno
- Route 33—Belmont Ave Crosstown
- Route 34—NE Fresno/First/SW Fresno
- Route 38—Chukchansi Park/River Park/SW Fresno
- Route 41—Marks Ave/Shields Ave/Chestnut

FCRTA Routes

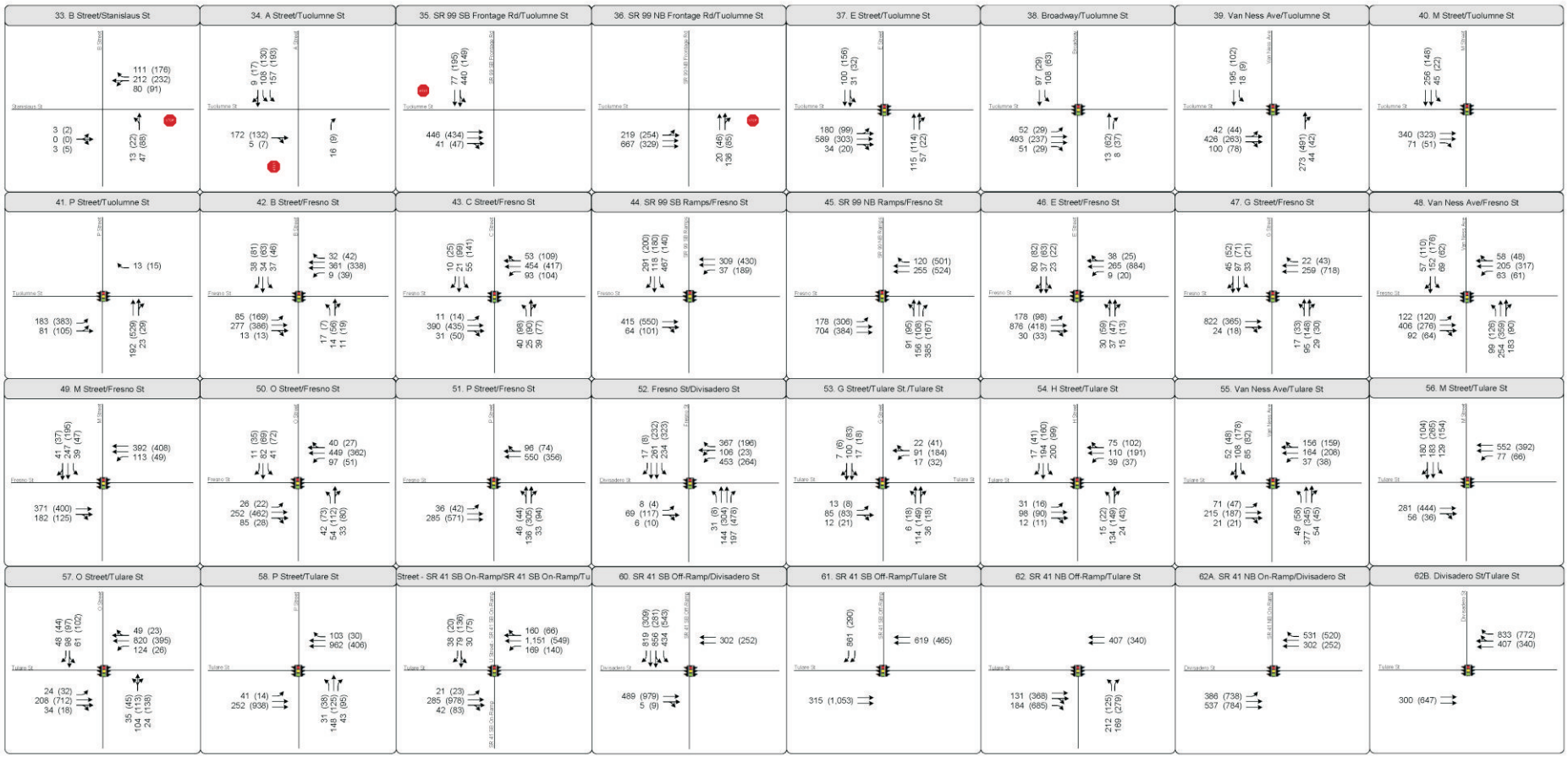
- Coalinga Transit—intercity fixed route service with stops in Coalinga, Huron, Five Points, Lanare, Riverdale, Caruthers, Raisin City, and Easton
- Westside Transit—intercity fixed route service with stops in Firebaugh, Mendota, and Kerman
- Southeast Transit—intercity fixed route service with stops in Fowler, Selma, and Kingsburg
- Orange Cove Transit—intercity fixed route service with stops in Sanger, Parlier, Reedley, and Orange Cove



Source: Fehr & Peers, 2015

Exhibit 5.14-2A
Peak Hour Traffic Volumes and Lane Configurations - Existing Conditions

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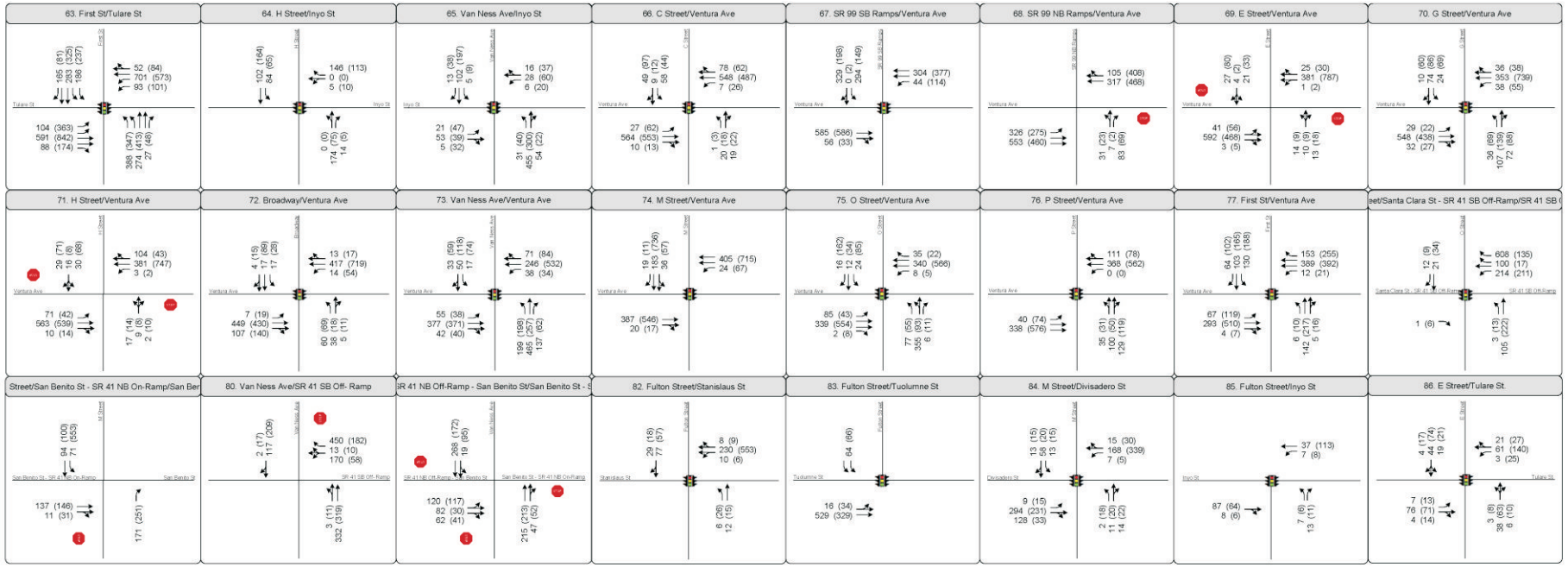
LEGEND

- Turn Lane
- AM (PM) Peak Hour Traffic Volume
- Stop Sign
- Signal
- Roundabout

Source: Fehr & Peers, 2015

Exhibit 5.14-2B
Peak Hour Traffic Volumes and Lane Configurations - Existing Conditions

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Source: Fehr & Peers, 2015

Exhibit 5.14-2C
Peak Hour Traffic Volumes and Lane Configurations - Existing Conditions

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Source: Fehr & Peers, 2016

FirstCarbon® SOLUTIONS

Exhibit 5.14-3A
AM Peak Hour Level of Service
Existing Conditions

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CITY OF FRESNO
DNCP, FCSP, AND DDC
ENVIRONMENTAL IMPACT REPORT

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Source: Fehr & Peers, 2016

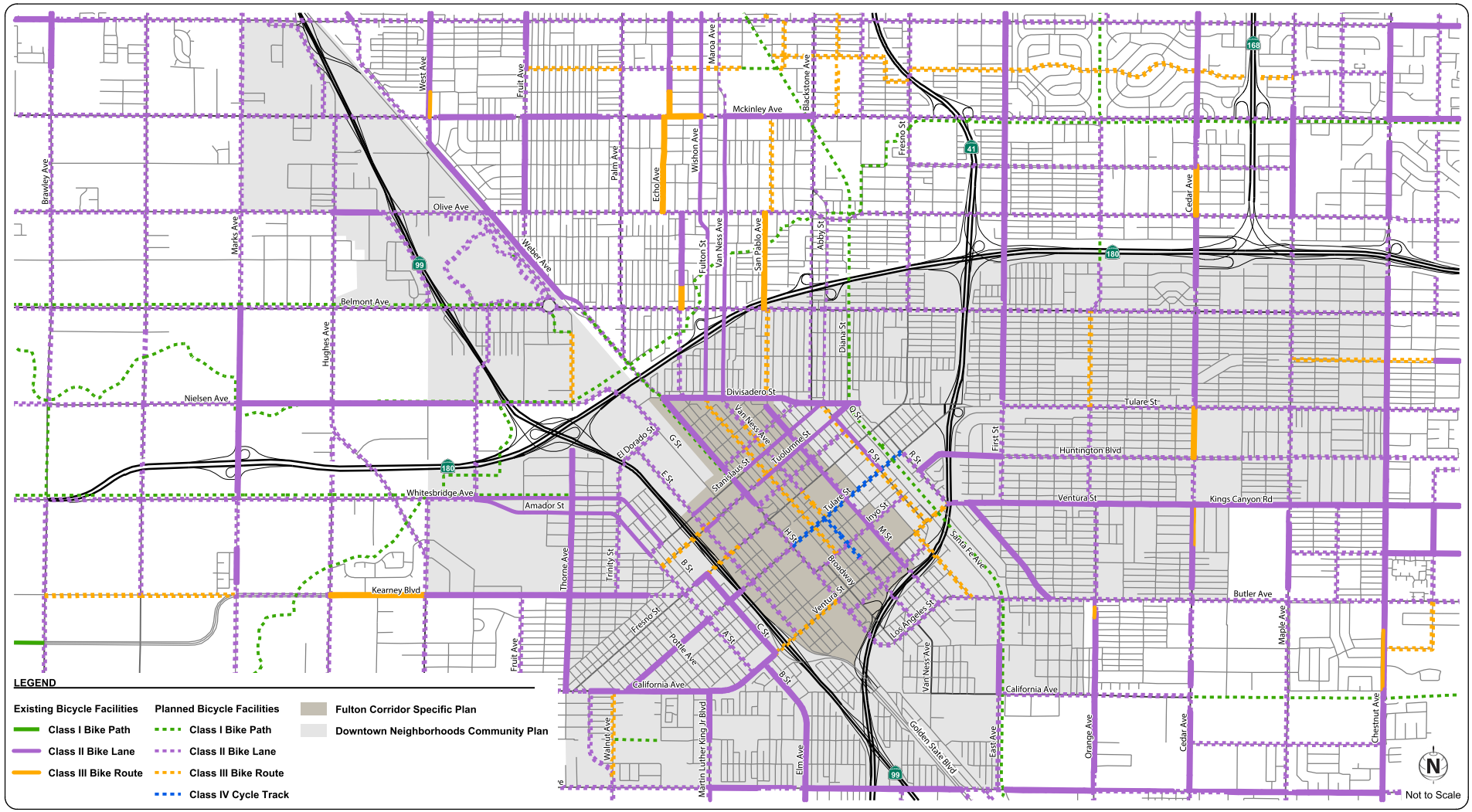
FirstCarbon® SOLUTIONS

Exhibit 5.14-3B
PM Peak Hour Level of Service
Existing Conditions

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CITY OF FRESNO
DNCP, FCSP, AND DDC
ENVIRONMENTAL IMPACT REPORT

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Source: Fehr & Peers, 2016

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Exhibit 5.14-4
Existing Bicycle Facilities

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The Downtown Transit Mall located at Courthouse Park is a major transfer location between FAX Routes 20, 22, 26, 28, 30, 32, 34, and 38 as well as the FCRTA intercity bus routes. The current configuration of the Downtown Transit Mall features three primary bus shelters: two that front Van Ness Avenue and one on Fresno Street. The bus shelters are spaced relatively far apart compared to typical transit centers that offer transfers between multiple routes.

Exhibit 5.14-5 presents the existing transit service in the study area.

5.14.3 - Regulatory Setting

This section summarizes the transportation policies, laws, and regulations that apply to the proposed project. This information provides context for the impact discussion related to the project's consistency with applicable regulatory conditions. Further, this report identifies impacts to traffic operations by comparing roadway LOS analysis results against LOS policies and standards set forth by the City of Fresno and Caltrans.

State Regulations

California Department of Transportation (Caltrans)

The California Department of Transportation (Caltrans) is responsible for operating and maintaining the State highway system. In the project vicinity, State Routes 41, 99, and 180, along with all the freeway on- and off-ramps and their intersections with local streets, fall under Caltrans jurisdiction. Caltrans provides administrative support for transportation programming decisions made by the California Transportation Commission (CTC) for state funding programs. The State Transportation Improvement Program (STIP) is a multi-year capital improvement program that sets priorities and funds transportation projects envisioned in long-range transportation plans.

Corridor System Management Plans (CSMP) & Transportation Concept Reports (TCR)

A Corridor System Management Plan (CSMP) is a long-range comprehensive planning document that identifies the current LOS on a facility and the projected future LOS when considering long-term projects. Similarly, a Transportation Concept Report (TCR) is a long-range system-planning document that establishes a planning concept for state facilities. Both documents identify a concept LOS, or "target" LOS, for the applicable highway facility. A deficiency or need for improvement is triggered when the actual LOS falls below the concept LOS.

In July 2013, Caltrans released the SR-41 TCR. Based on the SR-41 TCR, the segments of SR-41 through the project study area are anticipated to operate at LOS F in year 2035 with the 2035 concept facility (six-lane freeway with auxiliary lanes). However, the SR-41 TCR identifies LOS D as the concept LOS for the study area.

In April 2009, Caltrans released the Fresno/Madera Urban Route 99 CSMP. Based on this CSMP for SR-99, the segments of this facility located within the project study area are anticipated to operate at LOS F conditions in year 2030 with the 2030 concept facility (six-lane freeway with auxiliary lanes). However, the CSMP identifies LOS D as the concept LOS.

In February 2014, Caltrans released the SR-180 TCR. Based on the SR-180 TCR, the segment of SR-180 between SR-99 and SR-41 in the project study area is anticipated to operate at LOS E in year 2035. However, the SR-180 TCR identifies LOS D as the route concept LOS in the study area.

Guide for the Preparation of Traffic Impact Studies

Caltrans's *Guide for the Preparation of Traffic Impact Studies* (Caltrans 2002) provides general guidance regarding the preparation of traffic impacts studies for projects that may have an impact on the State Highway System. The guidance includes when a traffic study should be prepared and the methodology to use when evaluating operating conditions on the State highway system.

The Guide for the Preparation of Traffic Impact Studies states that "Caltrans endeavors to maintain a target LOS at the transition between LOS "C" and LOS "D" on state highway facilities, however, Caltrans acknowledges that this may not always be feasible and recommends that the lead agency consult with Caltrans to determine the appropriate target LOS." In accordance with this recommendation, consultation with Caltrans staff indicated that Caltrans would be willing to consider LOS D at the LOS D/E threshold when improvements become infeasible for State facilities. This is consistent with the SR-41 TCR, SR-99 CSMP, and SR-180 TCR, which identify LOS D as the target LOS for those facilities.

The *Guide for the Preparation of Traffic Impact Studies* also states that where "an existing State highway facility is operating at less than the appropriate target LOS, the existing measure of effectiveness (MOE) should be maintained."

California Public Utilities Commission (CPUC)

The California Public Utilities Commission (CPUC) sets guidelines for interactions between railroad facilities and ground transportation facilities. This includes location and type of crossing guards, design of railroad crossings, and other design criteria in and around railroad facilities. The guidelines come in the form of General Orders (GO).

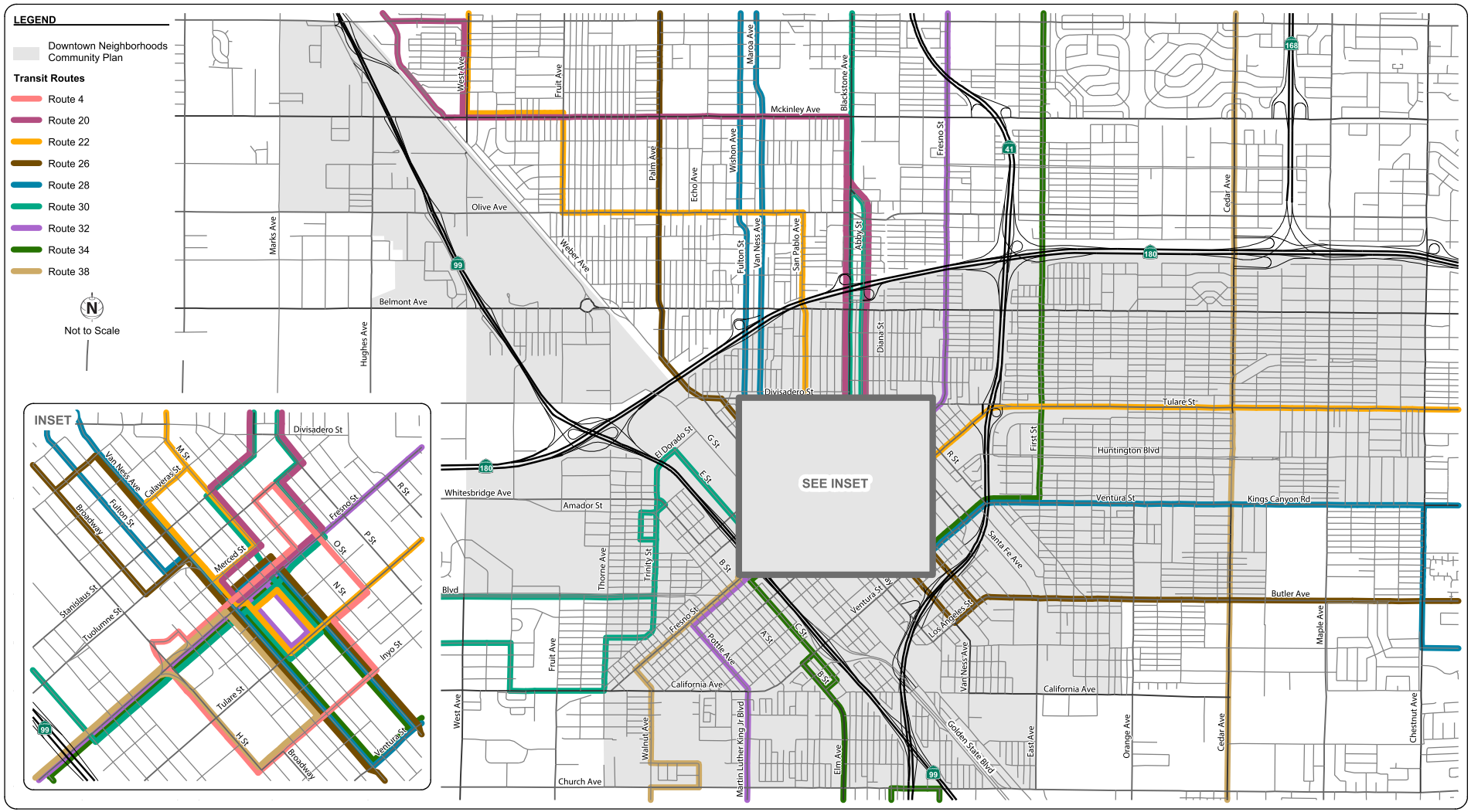
Local Policies

Fresno Council of Governments (Fresno COG)

The Fresno Council of Governments (Fresno COG) is an association of local governments in Fresno County. Fresno COG provides transportation planning and funding for the region, and serves as a forum for the study and resolution of regional issues. In addition to preparing the region's long-range transportation plan, Fresno COG assists in planning for transit, bicycle networks, clean air, and airport land uses.

2014 Fresno COG Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS)

The 2014 Fresno COG *Regional Transportation Plan* and Sustainable Communities Strategy (RTP/SCS) (Fresno COG, 2014) is a federally mandated long-range fiscally constrained transportation plan for Fresno County. It is a fiscally constrained plan that includes only those projects which can be delivered with funds expected to be available and that will help attain and maintain air quality standards. The RTP/SCS also includes an integrated land use and transportation plan to meet greenhouse gas emission reduction targets set forth by the California Air Resources Board (ARB).



Source: Fehr & Peers, 2016

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Exhibit 5.14-5
Existing Transit Network

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To receive federal funding, transportation projects nominated by cities, counties, and agencies must be consistent with the RTP/SCS. The 2014 RTP/SCS provides a comprehensive assessment of all forms of transportation available in Fresno County and of the needs for travel and goods movement through 2040.

The 2014 Fresno COG RTP/SCS includes the following relevant policies:

- Develop a regional streets and highways system that has a balanced mix of high speed and local corridors which are functional and flexible for intermodal use, providing connectivity to the region, state and nation.
- Pursue development of strategies and methods to enhance the efficient movement of freight through the multimodal network.
- Integrate transportation modes through a coordinated transportation systems management process.
- Develop bicycle and pedestrian facilities as viable alternatives to single-occupancy vehicle use.
- Manage the transportation system in a manner designed to increase operational efficiency, conserve energy and space, reduce air pollution and noise, and provide for effective goods movement, safety, personal mobility, and accessibility.
- Maintain stringent safety requirements for all transportation modes, and identify problem (hazardous) locations and implement counter measures for anticipated problems wherever possible.
- Seek to ensure fair distribution of the benefits and burdens of transportation projects, and seek to address the transportation needs of the disadvantaged communities through SCS Implementation Programs.
- Encourage infill development in areas that take advantage of remaining capacity in exiting transportation facilities.
- Coordinate with other public agencies to ensure that the overall social, health, economic, energy and environmental effects of transportation decisions are understood, and given opportunity for input, by the general public and groups that have been traditionally underrepresented in planning processes.
- Monitor levels of service on the streets and highways network within Fresno County to ensure safe and efficient movement of people and goods.
- Manage the highways, streets and roads network in a manner designed to increase operational efficiency, reduce air pollution and provide adequate mobility for both people and goods.

Regional Transportation Improvement Program (RTIP)

The Regional Transportation Improvement Program (RTIP) is a list of transportation projects and programs to be funded and implemented over the next 3 years. Fresno COG submits this document to Caltrans and amends the program on a quarterly cycle.

Fresno Bus Rapid Transit (BRT) Master Plan

The Fresno COG Bus Rapid Transit (BRT) Master Plan studies the possibility of BRT service in the Fresno-Clovis Metropolitan Area. The study recommends BRT service in the Ventura Avenue/Kings Canyon Road corridor and the Blackstone Avenue/Abby Street corridor with service routed through Downtown to connect the two corridors. In addition, the Master Plan cites previous transit studies, including the Transit Master Plan (1994), the Transit Long Range Master Plan (2001), and the Downtown Transportation and Infrastructure Study (2007).

City of Fresno Downtown Transportation and Infrastructure Study

The City of Fresno Downtown Transportation and Infrastructure Study builds upon prior planning efforts to integrate and coordinate these plans and outline a strategy to implement transportation improvements. The recommendations from this study include:

- Consolidating rail traffic onto the Union Pacific Railroad (UPRR) corridor
- Increasing the importance of public transit as an access mode to Downtown
- Transitioning away from pulse operations at the current Courthouse Transit Center to a more urban street corridor service with bus stops on both curb faces of Van Ness Avenue
- Implement a Downtown Circulator linking parking, outlying employment and destination sites, and the Downtown Core
- Supporting transit priority treatments, improved pedestrian facilities, and improved wayfinding in Downtown Fresno

Fresno Area Express (FAX)

The Fresno Area Express (FAX) provides public transit service within the project area. FAX operates 16 bus routes covering City of Fresno.

FAX's *Short-Range Transit Plan* (2011) is the short-term plan for transit service and transit capital improvements over the next five years. The *Short-Range Transit Plan* (SRTP) places significant emphasis on improved transit service throughout the region through a combination of infrastructure investments and service modifications. This includes the implementation of BRT service in the Blackstone Avenue/Abby Street and Ventura Avenue/Kings Canyon Road corridors, purchase of new articulated buses, transit signal prioritization, a Downtown Circulator (electric bus), and enhanced passenger amenities in Downtown.

The *Long-Range Transit Plan* (2002) identifies transit system improvements over a 20 year period. The *Long-Range Transit Plan* (LRTP) recommends increases in transit service (decreased headways) on highly utilized routes, BRT service on Blackstone Avenue, Ventura Avenue/Kings Canyon Road,

and Shaw Avenue, and relocating the existing Downtown Transfer Center at Courthouse Park, potentially to M Street adjacent to the County Courthouse, closing M Street to automobile traffic.

City of Fresno

The City of Fresno provides for the mobility of people and goods within the City. The majority of the study intersections for this analysis are within the City of Fresno's jurisdiction.

City of Fresno General Plan

The City of Fresno adopted its current General Plan in 2014. The Fresno General Plan serves as the community's guide for the continued development, enhancement, and revitalization of the City of Fresno.

The General Plan includes the following policies related to transportation and circulation that are relevant to this analysis:

- **Policy MT-1-k: Multi-Modal Level of Service Standards.** Develop and use a tiered system of flexible, multi-modal Level of Service standards for streets designated by the Circulation Diagram (Figure MT-1). Strive to accommodate a peak hour vehicle LOS of D or better on street segments and at intersections, except where Policies MT-1-m through MT-1-p provide greater specificity. Establish minimum acceptable service levels for other modes and use them in the development and environmental review process.
- **Policy MT-1-l: Level of Service in the Downtown Area**. Within the Downtown Planning Area accept vehicle LOS F conditions during peak hours for street segments and intersections specified in community and Specific Plans as may be adopted by the City. Where there is an overlap in policies regarding LOS in the Downtown Planning Area, this policy shall supersede.
- **Policy MT-1-m: Standards for Planned Bus Rapid Transit Corridors and Activity Centers**. Independent of the Traffic Impact zones identified in MT-2-i and Figure MT-4, strive to maintain the following vehicle LOS standards on major roadway segments and intersections along Bus Rapid Transit Corridors and in Activity Centers:
  - LOS E or better at all times, including peak travel times, unless the City Traffic Engineer determines that mitigation to maintain this LOS would be infeasible and/or conflict with the achievement of other General Plan policies
  - Accept LOS F conditions in Activity Centers and Bus Rapid Transit Corridors only if provisions are made to improve the overall system and/or promote non-vehicular transportation and transit as part of a development project or a City-initiated project. In accepting LOS F conditions, the City Traffic Engineer may request limited analyses of operation issues at locations near Activity Centers and along Bus Rapid Transit Corridors, such as queueing or left-turn movements.
  - Give priority to maintaining pedestrian service first, followed by transit service and then by vehicle LOS, where conflicts between objectives for service capacity between different transportation modes occur.
  - Identify pedestrian-priority and transit-priority streets where these modes would have priority in order to apply a multi-modal priority system, as part of the General Plan implementation.

- **Policy MT-1-n: Peak Hour Vehicle LOS**. Maintain a peak-hour vehicle LOS standard of D or better for all roadway areas outside of identified Activity Center and Bus Rapid Transit Corridor districts, unless the City Traffic Engineer determines that mitigation to maintain this LOS would be infeasible and/or conflict with the achievement of other General Plan policies.
- **Policy MT-1-o: LOS Deviations Outside of Activity Centers and Areas Designated for Mixed Use.** Accept vehicle LOS E or F conditions outside of identified multi-modal districts only if provisions commensurate with the level of impact and approved by the City Traffic Engineer are made to sufficiently improve the overall transportation system and/or promote non-vehicular transportation as part of a development project or City-initiated project.
- **Policy MT-2-b: Reduce Vehicle Miles Traveled and Trips**. Partner with major employers and other responsible agencies, such the San Joaquin Valley Air Pollution Control District and the Fresno Council of Governments, to implement trip reduction strategies, such as eTRIP, to reduce total vehicle miles traveled and the total number of daily and peak hour vehicle trips, thereby making better use of the existing transportation system.
- **Policy MT-2-c: Reduce VMT through Infill Development.** Provide incentives for infill development that would provide jobs and services closer to housing and multi-modal transportations corridors in order to reduce citywide vehicle miles travelled (VMT).
- **Policy MT-2-d: Street Redesign where Excess Capacity Exists.** Evaluate opportunities to reduce right of way and/or redesign streets to support non-automobile travel modes along streets with excess roadway capacity where adjacent land use is not expected to change over the planning period.
- **Policy MT-2-f**: **Optimization of Roadway Operations.** Optimize roadway operations by continuing to expand the use of techniques such as the City's intelligent transportation system (ITS) to manage traffic signal timing coordination in order to improve traffic operations and increase traffic-carrying capacity, while reducing unnecessary congestion and decreasing air pollution emissions. In order to facilitate roadway optimization and as a potential revenue source for the optimization, the following strategies need to be implemented:
  - **Dig Once Policy**. Install conduit for telecommunications use when trenching or construction occurs.
  - **Telecommunications Strategy**. Develop a costing mechanism for allowing the use of excess conduit within the City for use by communication carriers. The Policy shall follow regulations of the California Public Utilities Commission.
  - **Grant Funding**. Pursue grant funding to assist in construction and/or implementation of fiber-optic or other telecommunication infrastructure for additional public services such as education, economic development, reaching underserved populations, and public safety communications.
- **Policy MT-2-g: Transportation Demand Management and Transportation System Management.** Pursue implementation of Transportation Demand Management and Transportation System Management strategies to reduce peak hour vehicle traffic and supplement the capacity of the transportation system.
- **Policy MT-2-i: Transportation Impact Studies**. Require a Transportation Impact Study (currently named *Traffic Impact Study*) to assess the impacts of new development projects on existing and planned streets for projects meeting one or more of the following criteria, unless

it is determined by the City Traffic Engineer that the project site and surrounding area already has appropriate multi-modal infrastructure improvements

- When a project includes a General Plan amendment that changes the General Plan Land Use Designation.
- When the project will substantially change the off-site transportation system (auto, transit, bike or pedestrian) or connection to the system, as determined by the City Traffic Engineer.
- Transportation impact criteria are tiered based on a project's location within the City's Sphere of Influence. This is to assist with areas being incentivized for development. The four zones, as defined on Figure MT-4, are listed below. The following criteria apply:
  - Traffic Impact Zone I (TIZ-I): TIZ-I represents the Downtown Planning Area. Maintain a peak hour LOS standard of F or better for all intersections and roadway segments. A TIS will be required for all development projected to generate 200 or more vehicle trips.
  - Traffic Impact Zone II (TIZ-II): TIZ-II generally represents areas of the City currently built up and wanting to encourage infill development. Maintain a peak hour LOS standard of E or better for all intersections and roadway segments. A TIS will be required for all development projected to generate 200 or more peak hour new vehicle trips.
  - Traffic Impact Zone III (TIZ-III): TIZ-III general represents areas near or outside the City Limits but within the SOI as of December 31, 2012. Maintain a peak hour LOS standard of D or better for all intersections and roadway segments. A TIS will be required for all development projected to generate 100 or more peak hour new vehicle trips.
  - Traffic Impact Zone IV (TIZ-IV): TIZ-IV represents the southern employment areas within and planned by the City. Maintain a peak hour LOS standard of E or better for all intersections and roadway segments. A TIS will be required for all development projected to generate 200 or more peak hour vehicle trips.

- **Policy MT-2-j: Funding for Multi-Modal Transportation System**. Continue to seek and secure adequate financing to construct and maintain a complete multi-modal system through such measures as development impact fees, local sales tax measures, special tax measures, assessment/improvement districts, and regional, state, and federal transportation funds and grants.
- **Policy MT-2-l: Region-Wide Transportation Impact Fees.** Continue to support the implementation of metropolitan-wide and region-wide transportation impact fees sufficient to cover the proportional share of a development's impacts and needs for a comprehensive multi-modal transportation system that is not funded by other sources. Work with the Council of Fresno County Governments, transportation agencies (e.g. Caltrans, Federal Transportation Agency) and other jurisdictions in the region to develop a method for determining:
  - Regional transportation impacts of new development;
  - Regional highways, streets, rails, trails, public transportation, and goods movement system components, consistent with the General Plan, necessary to mitigate those impacts and serve projected demands;
  - Projected full lifetime costs of the regional transportation system components, including construction, operation, and maintenance; and
  - Costs covered by established funding sources.

- **Policy MT-4-a: Bicycle, Pedestrian, and Trails Master Plan**. To the extent consistent with this General Plan, continue to implement and periodically update the Bicycle, Pedestrian, and Trails Master Plan to meet State standards and requirements for recommended improvements and funding proposals as determined appropriate and feasible.
- **Policy MT-4-e: Minimum Bike Lane Widths.** Provide not less than 10 feet of street width (five feet for each travel direction) to implement bike lanes for designated Class II bikeways along major streets. Strive for 14 feet of street width (seven feet for each travel direction) for curbside bike lanes where right-of-way is available.
- **Policy MT-5-d: Pedestrian Safety.** Minimize vehicular and pedestrian conflicts on both major and non-major roadways through implementation of traffic access design and control standards addressing street intersections, median island openings and access driveways to facilitate accessibility while reducing congestion and increasing safety. Increase safety and accessibility for pedestrians with vision disabilities through the installation of Accessible Pedestrian Signals at signalized intersections.
- **Policy MT-5-f: Modifications to Street Standards.** Continue to evaluate and adopt modifications to City street standards to achieve overall objectives of providing good access and travel opportunities while calming traffic, promoting pedestrian and other transportation options, and reducing the amount of land devoted to streets.
- **Policy MT-8-a: Street Design Coordinated with Transit**. Coordinate the planning, design and construction of the major street network with transit operators to facilitate efficient direct transit routing throughout the Planning Area.
- **Policy MT-8-f: Multi-modal Downtown Transportation Facility.** Support the development of a multimodal transportation facility in Downtown.

City of Fresno Traffic Impact Study Report Guidelines

The City of Fresno's *Traffic Impact Study Report Guidelines* establish general procedures and requirements for the preparation of traffic impact studies associated with development within the City of Fresno. The guidelines are intended to be a checklist to ensure regular study items are not missed, but are not intended to be prescriptive to the point of eliminating professional judgment.

The guidelines include the preferred traffic analysis methodologies, significance criteria, and documentation requirements. This analysis is conducted using the preferred analysis methodologies and significance criteria as outlined in the City's guidelines.

City of Fresno Bicycle, Pedestrian, & Trails Master Plan

The *City of Fresno* Bicycle, Pedestrian, & Trails Master Plan (2010) guides and influences bikeway policies, programs, and development standards to encourage bicycling in the City of Fresno. As an infrastructure plan, the contents of the Bicycle, Pedestrian, & Trails Master Plan are intended to be incorporated into the City's regulatory plans, including the proposed Downtown Neighborhoods Community Plan and Fulton Corridor Specific Plan.

The Plan includes a variety of resources for bicycle transportation including:

- Identification of existing and planned bicycle facilities
- Goals, objectives, and policies that expand upon objectives and policies in the Fresno General Plan

- Encouragement, education, and enforcement programs designed to increase bicycling in Fresno
- Implementation steps for the planned bicycle network

The Bicycle, Pedestrian, & Trails Master Plan also includes a chapter focused on bicycle travel to and around Downtown Fresno. This chapter identifies the existing and proposed bicycle network in Downtown Fresno, potential incentives, support facilities, and multi-modal connections to encourage cycling, and phasing for implementing bicycle facilities in Downtown.

The City of Fresno is currently updating the Bicycle, Pedestrian, & Trails Master Plan as part of creating an Active Transportation Plan. The Active Transportation Plan will update the existing and planned bicycle facility maps, as well as identify priorities for improving bicycle and pedestrian infrastructure throughout the City. The Active Transportation Plan will also revisit the goals, objectives, and policies in the Bicycle, Pedestrian, & Trails Master Plan and update them as necessary.

5.14.4 - Methodology

Travel Demand Forecasting

This analysis uses the travel demand forecasting (TDF) model that was developed for the Fresno General Plan Master EIR (MEIR) to forecast plus project and cumulative traffic volumes. The base year version of the model was modified and calibrated within the study area to more accurately reflect baseline conditions. Static validation tests consistent with Caltrans's *Travel Forecasting Guidelines* (Caltrans 1992) and FHWA's *Model Validation and Reasonableness Checking Manual* (FHWA, 1997) were completed to validate the TDF model for the study area.

The outputs from the Fresno General Plan MEIR TDF model were compared to the recently adopted Fresno COG RTP/SCS TDF model to evaluate their potential differences (see Appendix J). The comparison of these two models showed that the Fresno General Plan MEIR TDF model generally generates higher traffic forecasts. Therefore, using this model is unlikely to underestimate the cumulative traffic levels when compared to the RTP/SCS TDF model.

Traffic Operations

This report analyzes traffic operations using level of service (LOS) as the primary measure of performance. Roadway LOS is a qualitative description of traffic flow from the perspective of motorists. The *Highway Capacity Manual* (HCM) (Transportation Research Board, 2000) defines six levels of service from LOS A representing the least congested traffic conditions to LOS F representing the most congested traffic conditions. The City of Fresno *Traffic Impact Study Report Guidelines* (2009) and Caltrans's *Guide for the Preparation of Traffic Impact Studies* (2002) recommend using the HCM methodology. When this analysis was conducted in early 2012, the 2010 HCM had been released just over a year earlier at the end of 2010. Given the limitations in the software and application of the 2010 HCM at that time, City of Fresno and Caltrans District 6 staff agreed on the use of the 2000 HCM methodology for this analysis.

Intersections

Intersection LOS is based on the control delay experienced by motorists traveling through the intersection. At signalized intersections, the LOS is determined by the average control delay per vehicle, as described in Chapter 16 of the 2000 HCM. Unsignalized intersections are evaluated using the methodology contained in Chapter 17 of the 2000 HCM. The 2000 HCM does not define an overall intersection LOS for side-street stop-controlled intersections; therefore, at side-street stop-controlled intersections, this report presents the control delay and LOS for the movement with the greatest control delay.

Table 5.14-7 and Table 5.14-8 present the control delay thresholds for each LOS level for signalized and unsignalized intersections, respectively. The analysis calculates control delay and LOS at each intersection using the Synchro 8 analysis software, which is based on the 2000 HCM procedures.

Table 5.14-7: Level of Service Criteria—Signalized Intersections

Level of Service	Average Vehicle Delay (seconds/vehicle)	Description
A	≤ 10.0	Uncongested operations; all queues clear in single cycle.
B	10.1–20.0	Very light congestion; an occasional phase is fully utilized.
C	20.1–35.0	Light congestion; occasional queues on approaches.
D	35.1–55.0	Significant congestion on critical approaches, but intersection is functional. Cars required to wait through more than one cycle during short peaks. No long-standing queues formed.
E	55.1–80.0	Severe congestion with some long-standing queues on critical approaches.
F	> 80	Total breakdown, stop-and-go conditions.
Source: Highway Capacity Manual, Transportation Research Board (2000).		

Table 5.14-8: Level of Service Criteria—Unsignalized Intersections

Level of Service	Average Vehicle Delay (seconds/vehicle)	Description
A	≤ 10.0	Minimal control delay.
B	10.1–15.0	Insignificant traffic delays.
C	15.1–25.0	Increased traffic delays; queues may build.
D	25.1–35.0	Longer traffic delays; increased queuing.
E	35.1–50.0	Very long traffic delays.
F	> 50	Stop-and-go conditions.
Source: Highway Capacity Manual, Transportation Research Board (2000).		

Freeway Facilities

This report analyzes freeway traffic operations using the methodology contained in Chapter 21 of the 2000 HCM. With the exception of weave segments, the average density in passenger cars per mile per lane was calculated using spreadsheets consistent with the 2000 HCM methodology. Table 5.14-9 presents the LOS definitions for both mainline segments and ramp junctions. Freeway ramp weave segments were analyzed using the Leisch methodology as defined in Chapter 500 of the *Highway Design Manual* (Caltrans 2010).

Table 5.14-9: Level of Service Criteria—Freeway Mainline, Off-Ramp Diverge, & On-Ramp Merge Segments

Level of Service	Density (passenger cars/mile/lane)		Description
	Mainline	Ramp Junction	
A	≤ 11	≤ 10	Free-flow operations. Drivers are almost completely unimpeded in their ability to maneuver within the traffic stream.
B	11–18	10–20	Free-flow speeds are maintained. The ability to maneuver within the traffic stream is only slightly restricted.
C	18–26	20–28	Traffic flow with speeds at or near free-flow speed. The freedom to maneuver within the traffic steam is noticeably restricted, and lane changes require more care and vigilance on the part of the driver.
D	26–35	28–35	Speeds begin to decline slightly with increasing flows. Freedom to maneuver within the traffic stream is noticeably limited.
E	35–45	> 35	Operations at or near capacity. There are virtually no useable gaps within the traffic stream, leaving little room to maneuver.
F	> 45	Demand exceeds capacity	Breakdown in vehicular flow. Vehicular demand exceeds capacity.
Source: Highway Capacity Manual, Transportation Research Board (2000).			

Off-Ramp Queuing Analysis

This report analyzes the 95th percentile queues at freeway off-ramps using the Synchro 8 analysis software. The Synchro 8 queue report provides the 95th percentile queue length in feet. This report assumes that each vehicle in the queue uses approximately 25 feet. Since the Synchro 8 output does not round to the nearest vehicle length, this analysis rounds the Synchro 8 output up to the next highest 25-foot interval.

Based on consultation with Caltrans, the acceptable queuing space is defined as the area between the deceleration zone and the limit line at the ramp terminal intersection. In accordance with Caltrans's *Highway Design Manual* and input from Caltrans staff, the deceleration zone is defined as

the area within 525 feet from the exit nose (see Figure 504.2B in Chapter 500 of the Caltrans *Highway Design Manual* (Caltrans 2010)).

Since the study area consists of some of the older freeway interchanges in the Fresno area, some of the shorter off-ramps have minimal or no acceptable queuing space based on this methodology. For example, the off-ramps at the SR-99/Belmont Avenue interchange have roughly 10 feet and 60 feet of acceptable storage space, which equates to less than one vehicle and up to two vehicles, respectively.

Analysis Assumptions and Methodology Limitations

Key assumptions made in the process of this analysis include:

- Existing traffic counts collected in the field between November 2009 and January 2012 are representative of baseline conditions.
- Belmont Circle is analyzed as a roundabout using the Sidra analysis software. Technically, due to the stop-controlled approaches on Arthur Avenue and Wesley Avenue, this location is not a roundabout. However, analyzing as a roundabout in Sidra provided the most accurate results based on the overall intersection control and geometrics.
- The Stanislaus Street/B Street, Tuolumne Street/A Street, and San Benito Street/M Street intersections feature unique circumstances where one-way streets transition to two-way streets at a side-street stop-controlled location. In these locations, the one-way movement is free while all other approaches are stop-controlled. The HCM methodology cannot calculate LOS with only one free-approach opposed by all stop-controlled approaches. Therefore, this analysis assumes that the approach opposing the free-moving one-way approach is also a free movement.

Travel Demand Forecasting Limitations

As noted earlier, this analysis uses the most recently adopted Fresno COG TDF model released in 2010, and calibrated and validated the model for the project study subarea. While this makes the TDF model the most valid and capable tool for forecasting future traffic volumes, the TDF model has some limitations in its application for this analysis. For example, the model was designed to model traffic for regional air quality conformity, and typically only includes the regional roadway network. Additional local roadways were added to the model within the project study area to be able to generate future travel forecasts.

While the model was calibrated and is able to closely replicate baseline roadway segment volumes, the model is more limited in its ability to forecast specific turning movement volumes, particularly in a more compact grid network, such as Downtown Fresno. Drivers may choose from multiple routes in a grid system based on signal progression, congestion, and individual preferences, and may use different routes for the same trip. While the model accounts for segment level congestion, it is more limited in its ability to directly account for changes in routes due to signal operations or driver preferences. To account for some of these limitations, this analysis uses a process known as the "difference method" to develop turning movement forecasts. This approach adjusts raw model

volume forecasts by adding the forecasted incremental growth from the TDF model to the baseline traffic counts.

Traffic Operations Limitations

This report uses analysis methodologies that are consistent with the City of Fresno's *Traffic Impact Study Report Guidelines* (2009) and Caltrans's *Guide for the Preparation of Traffic Impact Studies* (2002). However, these methodologies and the software tools consistent with these methodologies have certain limitations. For example, the 2000 HCM results from the Synchro 8 software package do not take into account additional delay or queuing that may occur due to a queue spilling out of or blocking a turn pocket at an intersection. Also, the 2000 HCM methodology does not account for any additional delay incurred by queues spilling back from adjacent intersections.

The freeway analysis methodology used for this report analyzes each freeway segment in isolation. In other words, the methodology does not account for the effect of congested upstream and downstream locations. Freeway segments upstream from a congested bottleneck may experience queue spillback not identified in the methodology, while locations downstream may operate better than reported due to upstream constraints. Similarly, congestion on the local street system may limit traffic demand volumes from reaching certain study freeway segments and congestion on the freeway system may limit traffic demand volumes from reaching the local streets.

Both the 2000 HCM freeway analysis methodology and the Leisch weaving methodology do not account for the effect of ramp metering. Ramp meters at the freeway on-ramps smooth traffic flow in freeway merge and weave sections by breaking up platoons of traffic entering the freeway. Therefore, operations in merge and weave sections would operate better than reported in the 2000 HCM methodology.

The 2000 HCM merge and diverge methodology focuses on the outside two lanes of the freeway. Therefore, this report also presents the mainline analysis between interchanges to verify the operations of the overall freeway segment. In some cases, a proposed mitigation to add an auxiliary or mainline lane resulted in a worse LOS at the merge or diverge section. According to the methodology, the lane addition is projected to concentrate a greater proportion of freeway traffic in the two outside lanes than may actually occur.

5.14.5 - Thresholds of Significance

Based on the local and state policies and regulations listed above and the Appendix G Environmental Checklist from the California Environmental Quality Act (CEQA) Guidelines listed below, this analysis uses the following criteria to determine if the project causes a significant impact.

According to the Appendix G Environmental Checklist, a project may have a significant impact related to transportation and traffic if one of the following occurs:

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of

the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

b) Conflict with an applicable congestion management program, including, but not limited to, level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

e) Result in inadequate emergency access?

f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

The passage of California Assembly Bill 2419 in 1996 allowed counties to "opt out" of the California Congestion Management Program, referenced in criteria b above, if a majority of local governments elected to exempt themselves from California's Congestion Management Plans. On September 25, 1997, the Fresno COG Policy Board rescinded the Fresno County Congestion Management Program at the request of the local member agencies. Therefore, criteria (b) is not applicable.

The proposed project would not result in a change in air traffic patterns, nor would the proposed project introduce hazardous design features or incompatible uses. All new and redesigned roadway facilities would meet either the current or the proposed roadway standards in the proposed Downtown Development Code. In some cases, the proposed project would correct existing roadway deficiencies (such as inadequate roadway shoulders or medians). Similarly, emergency access would meet or exceed all City and County standards. Therefore, criteria (c), (d), and (e) are not discussed further.

The significance criteria used to identify impacts caused by the proposed project related to items (a) and (f) in the Appendix G checklist are discussed below. These criteria are based on the policies and regulations of Caltrans and the City of Fresno identified in the regulatory setting section.

Caltrans

According to the *Guide for the Preparation of Traffic Impact Studies* (Caltrans 2002), if an existing State highway facility operates at less than the appropriate target LOS, then the existing measure of effectiveness should be maintained.

In coordination with *Guide for the Preparation of Traffic Impact Studies*, the proposed project would cause a significant impact if it results in one or more of the following:

- Causes a Caltrans facility operating at an acceptable LOS to operate at an unacceptable LOS (i.e., LOS E or F)

- Results in an increase of the applicable measure of effectiveness (i.e., delay, density, v/c ratio, or service volume) on a Caltrans facility that currently or will (under cumulative no project conditions) operate at an unacceptable LOS (LOS E or F)
- Increases the queue length on a freeway off-ramp such that the 95th percentile queue extends into the deceleration zone of the off-ramp (defined by Caltrans as the area within 525 feet from the exit nose (see Figure 504.2B in Chapter 500 of the Caltrans *Highway Design Manual* [Caltrans 2010]).

City of Fresno

Based on the policies in the City of Fresno General Plan, the City of Fresno *Traffic Impact Study Report Guidelines*, and consultation with City of Fresno Public Works staff, the proposed project would cause a significant impact to the roadway system if it would:

- Cause a City of Fresno intersection operating at an acceptable LOS to operate at an unacceptable LOS
- Increase the average delay for a City of Fresno study intersection that is already operating at an unacceptable LOS by more than five seconds

According to Policy MT-1-l and MT-2-i in the Fresno General Plan, LOS F motor vehicle operations are acceptable for City of Fresno roadways and intersections located within the Downtown Planning Area. Therefore, LOS F vehicle operations are considered acceptable for City of Fresno study intersections within the Downtown Planning Area for this analysis.

According to Policy MT-1-m in the Fresno General Plan, the City strives to maintain LOS E operations in Activity Centers and along Bus Rapid Transit Corridors, unless maintaining this LOS would be infeasible or conflict with other General Plan policies. LOS F is acceptable for Activity Centers and Bus Rapid Transit Corridors only if provisions are made to improve the overall system and/or promote non-vehicular transportation and transit. According to Policy MT-2-i in the Fresno General Plan, the City desires to maintain a peak-hour LOS standard of E or better in the area surrounding the Downtown Planning Area (see Traffic Impact Zone II (TIZ-II)). Therefore, this analysis uses LOS E as the LOS standard for City of Fresno intersections along Bus Rapid Transit Corridors and in the area immediately outside the Downtown Planning Area. In the study area, this includes City of Fresno intersections along Belmont Avenue and H Street north of SR-180 outside of the Downtown Planning Area.

Transit, Bicycle, and Pedestrian Facilities

The City of Fresno General Plan and *Traffic Impact Study Report Guidelines* do not establish specific thresholds for impacts on transit, bicycle, and pedestrian facilities.

Based on item (f) in the Appendix G Environmental Checklist shown above, the project would cause a significant impact to the transit system, bicycle network, and/or pedestrian facilities if it would:

- Disrupt or interfere with existing or planned public transit services or facilities
- Create an inconsistency with policies concerning transit systems set forth in the Fresno General Plan or other applicable adopted policy document

- Disrupt or interfere with existing or planned bicycle/pedestrian facilities
- Result in unsafe conditions for pedestrians, including unsafe pedestrian/bicycle or pedestrian/vehicle conflicts
- Result in unsafe conditions for bicycles, including unsafe bicycle/pedestrian or bicycle/vehicle conflicts
- Create an inconsistency with policies related to bicycle or pedestrian systems set forth in the Fresno General Plan or other applicable regulatory plans

5.14.6 - Impact Analysis, Mitigation Measures, and Level of Significance After Mitigation

Project Traffic Forecasts

The traffic generated by the proposed project will be caused by future development within the project area. The amount of future development, or development potential, anticipated to occur with the two plan areas used in this analysis is based on the land use totals quantified in the Notice of Preparation. This project related traffic was assigned to the transportation system using the following three-step process:

1. Trip Generation—estimates the amount of traffic generated by the proposed plans based on the planned land uses
2. Trip Distribution—distributes project trips based on origins and destinations in the region
3. Trip Assignment—assigns project trips to the roadway network based on the proposed project's trip generation and distribution

Trip Generation

This analysis uses the Fresno Council of Governments (Fresno COG) travel demand forecasting (TDF) model created by Fresno COG in 2010 and modified for the Fresno General Plan MEIR to generate traffic based on baseline conditions and the proposed project development potential land uses.

For the Existing Plus Project scenario, the quantified development potential land uses identified in the Notice of Preparation were added to the Fresno COG base year land uses to create the Baseline Plus Project land use totals. The proposed project land uses include residential units, retail, office, and industrial space.

To verify the model trip generation, this analysis compared the number of trips generated by the Fresno COG TDF model with the trip generation estimate from *Trip Generation, 8th Edition* (Institute of Transportation Engineers, 2008). Table 5.14-10 presents the total number of vehicle trips generated by the proposed project using trip generation rates from *Trip Generation, 8th Edition* (Institute of Transportation Engineers, 2008). The table presents the total trips generated by the proposed project for the AM peak hour, PM peak hour, and daily time periods. Based on the diversity of proposed and existing land uses and the size of the plan area, some of the total trips would be expected to remain within the plan area.

Table 5.14-10: Proposed Project Trip Generation

Land Use	Quantity	Trip Rate			Trips		
		AM	PM	Daily	AM	PM	Daily
Downtown Neighborhoods Community Plan							
High Density Residential	3,697 DUs	0.51	0.62	6.65	1,885	2,292	24,585
Industrial	2,900 ksf	0.92	0.97	6.97	2,668	2,813	20,213
Retail	350 ksf	1.00	3.73	42.94	350	1,306	15,022
General Office	2,000 ksf	1.55	1.49	11.01	3,100	2,980	22,020
Downtown Neighborhoods Community Plan Sub-Total					*8,003*	*9,391*	*81,840*
Fulton Corridor Specific Plan							
High Density Residential	6,293 DUs	0.51	0.62	6.65	3,209	3,902	41,848
Industrial	150 ksf	0.92	0.97	6.97	138	146	1,046
Retail	1,600 ksf	1.00	3.73	42.94	1,600	5,968	68,672
General Office	3,900 ksf	1.55	1.49	11.01	6,045	5,811	42,939
Fulton Corridor Specific Plan Sub-Total					*10,992*	*15,826*	*154,505*
DNCP & FCSP Total Project Trips					**18,995**	**25,217**	**236,345**

Notes:
[1] DUs = dwelling units; ksf = 1,000 square feet
Source: *Trip Generation, 8th Edition* (Institute of Transportation Engineers, 2008)

In September 2012, during the preparation of this analysis, the Institute of Transportation Engineers released *Trip Generation Manual, 9th Edition* (Institute of Transportation Engineers, 2012) as an update to *Trip Generation, 8th Edition*. In general, the trip rates for the land uses evaluated in Table 5.14-10 stayed roughly the same between the 8th and 9th editions. A comparison of the 8th and 9th editions showed that using the more recent 9th edition would produce a trip generation estimate approximately 0.1% less than the 8th edition values shown in Table 5.14-10.

When compared to the ITE *Trip Generation* estimate, the TDF model used in this study generates approximately 20 percent fewer AM and PM peak-hour vehicle trips. However, the trip rates in ITE's *Trip Generation* are based on data collected throughout the United States and Canada in generally suburban locations since the 1960s, and may not be representative of the Downtown Fresno area. The TDF model, by comparison, takes into account land use and socio-demographic variables, including access to automobiles, household size, and income, which influence vehicle trip making behavior.

Trip Distribution

This analysis uses the locally validated TDF model from the Fresno General Plan MEIR to estimate the distribution of project trips during the AM peak hour and PM peak hour for Baseline Plus Project Conditions. Given the size of the proposed project in terms of land uses and the extent of the plan

area, this TDF model was used to distribute project trips to the surrounding roadway network. The model takes into account how adding these new uses might influence overall traffic patterns in the region. For example, by adding a substantial number of dwelling units to the downtown core area, the project may change commute patterns for some who currently commute to Downtown from outside the area.

Trip Assignment

The Fresno General Plan MEIR TDF model was used to assign project traffic to the study intersections and freeway segments based on the routes that would be used to get to/from origins and destinations. To account for model error, this analysis adjusts project traffic forecasts using a process known as the "difference method," which adjusts raw model volume forecasts based on expected incremental growth from Baseline Conditions using the following formula:

Plus Project Forecasts = Existing Traffic Count +
(Plus Project Raw Model Volume–Base Year Raw Model Volume)

Existing Plus Project Conditions

Traffic Forecasts and Roadway Operations

Exhibits 5.14-6A through 5.14-6C show the peak hour Existing Plus Project traffic forecasts at the study intersections.

Intersection Operations

Table 5.14-11 summarizes the AM and PM peak-hour level of service (LOS) at the study intersections under existing plus project conditions (refer to Appendix J for calculations). Exhibits 5.14-7A and 5.14-7B also show the peak-hour intersection LOS.

Table 5.14-11: Peak Hour Intersection Operations—Existing Plus Project Conditions

Intersection	Traffic Control	Existing Conditions				Existing Plus Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]
1. Belmont Avenue/SR-99 southbound ramps	Side Street Stop-Controlled	16	C	28	D	***>150***	***F***	***>150***	***F***
2. Belmont Avenue/SR-99 northbound ramps	Side Street Stop-Controlled	15	B	31	D	***>150***	***F***	***>150***	***F***
3. Belmont Avenue/Golden State Boulevard–Wesley Avenue	Roundabout	4	A	5	A	—	—	—	—
4. Belmont Avenue/H Street–Faris Avenue	Signal	9	A	14	B	11	B	18	B

Table 5.14-11 (cont.): Peak Hour Intersection Operations—Existing Plus Project Conditions

Intersection	Traffic Control	Existing Conditions				Existing Plus Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]
5. Belmont Avenue/Palm Avenue	Signal	11	B	11	B	12	B	14	B
6. Belmont Avenue/Fulton Street	Signal	15	B	21	C	17	B	16	B
7. Belmont Avenue/Van Ness Avenue	Signal	13	B	13	B	19	B	15	B
8. SR-180 westbound ramps–Bremer Avenue/Blackstone Avenue	Signal	10	B	11	B	11	B	13	B
9. Bremer Avenue (SR-180 westbound ramps)/ Abby Street	Signal	11	B	7	A	12	B	9	A
10. White Avenue (SR-180 eastbound ramps)/Blackstone Avenue	Signal	9	A	7	A	10	A	6	A
11. SR-180 eastbound ramps–White Avenue/ Abby Street	Signal	15	B	12	B	20	C	17	B
12. Belmont Avenue/Blackstone Avenue	Signal	19	B	18	B	25	C	21	C
13. Belmont Avenue/Abby Street	Signal	17	B	28	C	16	B	47	C
14. Belmont Avenue/Fresno Street	Signal	19	B	23	C	21	C	27	C
15. Belmont Avenue/First Street	Signal	23	C	30	C	28	C	36	D
16. SR-180 westbound ramps/Fulton Street	Signal	7	A	11	B	7	A	10	A
17. SR-180 westbound ramps/Van Ness Avenue	Signal	14	B	13	B	15	B	15	B
18. SR-180 eastbound off-ramp/Fulton Street	Signal	8	A	10	B	16	B	8	A

Table 5.14-11 (cont.): Peak Hour Intersection Operations—Existing Plus Project Conditions

Intersection	Traffic Control	Existing Conditions				Existing Plus Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]
19. SR-180 eastbound on-ramp/Van Ness Avenue	Signal	22	C	18	B	19	B	***>150***	***F***
20. H Street/Palm Avenue	Signal	12	B	9	A	14	B	11	B
21. Divisadero Street/H Street–Echo Avenue	Signal	23	C	24	C	46	D	46	D
22. Divisadero Street/Fulton Street	Signal	20	C	13	B	*124*	*F*	34	C
23. Divisadero Street/Van Ness Avenue	Signal	12	B	*>150*	*F*	*146*	*F*	*>150*	*F*
24. Divisadero Street/Blackstone Avenue	Signal	16	B	13	B	22	C	15	B
25. Divisadero Street/P Street–Abby Street–Stanislaus Street	Signal	12	B	*128*	*F*	14	B	*>150*	*F*
26. Stanislaus Street/Blackstone Avenue–O Street	Signal	13	B	10	B	15	B	24	C
27. Stanislaus Street/M Street	Signal	11	B	10	B	20	B	18	B
28. Stanislaus Street/Van Ness Avenue	Signal	11	B	13	B	14	B	17	B
29. Stanislaus Street/Broadway	Signal	10	A	28	C	40	D	*>150*	*F*
30. Stanislaus Street/E Street	Signal	11	B	16	B	13	B	*109*	*F*
31. Stanislaus Street/SR-99 northbound on-ramp	Side Street Stop-Controlled	16	C	**>150**	**F**	***123***	***F***	***>150***	***F***
32. Stanislaus Street/SR-99 southbound off-ramp	Side Street Stop-Controlled	20	C	26	D	***>150***	***F***	***>150***	***F***
33. Stanislaus Street/B Street	Side Street Stop-Controlled	16	C	>150	F	***123***	***F***	***>150***	***F***

Table 5.14-11 (cont.): Peak Hour Intersection Operations—Existing Plus Project Conditions

Intersection	Traffic Control	Existing Conditions				Existing Plus Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]
34. Tuolumne Street/A Street	Side Street Stop-Controlled	20	C	26	D	***>150***	***F***	***>150***	***F***
35. Tuolumne Street/SR-99 southbound frontage road	Side Street Stop-Controlled	22	C	19	C	***>150***	***F***	***>150***	***F***
36. Tuolumne Street/SR-99 northbound frontage road	Side Street Stop-Controlled	**35**	**E**	28	D	***>150***	***F***	***97***	***F***
37. Tuolumne Street/E Street	Signal	8	A	9	A	18	B	11	B
38. Tuolumne Street/Broadway	Signal	14	B	15	B	*69*	*E*	*>150*	*F*
39. Tuolumne Street/Van Ness Avenue	Signal	12	B	13	B	13	B	26	C
40. Tuolumne Street/M Street	Signal	15	B	11	B	16	B	15	B
41. Tuolumne Street/P Street	Signal	10	B	13	B	14	B	17	B
42. Fresno Street/B Street	Signal	16	B	19	B	21	C	23	C
43. Fresno Street/C Street	Signal	16	B	23	C	26	C	26	C
44. Fresno Street/SR-99 southbound ramps	Signal	22	C	21	C	***82***	***F***	***71***	***E***
45. Fresno Street/SR-99 northbound ramps	Signal	19	B	22	C	24	C	***60***	***E***
46. Fresno Street/E Street	Signal	7	A	8	A	11	B	25	C
47. Fresno Street/G Street	Signal	19	B	17	B	26	C	27	C
48. Fresno Street/Van Ness Avenue	Signal	35	D	35	D	53	D	42	D
49. Fresno Street/M Street	Signal	9	A	8	A	12	B	15	B
50. Fresno Street/O Street	Signal	7	A	9	A	10	A	12	B
51. Fresno Street/P Street	Signal	8	A	9	A	15	B	15	B
52. Divisadero Street/Fresno Street	Signal	32	C	36	D	39	D	55	D

Table 5.14-11 (cont.): Peak Hour Intersection Operations—Existing Plus Project Conditions

Intersection	Traffic Control	Existing Conditions				Existing Plus Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]
53. Tulare Street/G Street	Signal	10	B	12	B	18	B	21	C
54. Tulare Street/H Street	Signal	12	B	11	B	13	B	13	B
55. Tulare Street/Van Ness Avenue	Signal	23	C	22	C	51	D	31	C
56. Tulare Street/M Street	Signal	10	B	12	B	15	B	21	C
57. Tulare Street/O Street	Signal	12	B	13	B	13	B	15	B
58. Tulare Street/P Street	Signal	9	A	8	A	10	A	10	A
59. Tulare Street/U Street–SR-41 southbound on-ramp	Signal	8	A	16	B	12	B	38	D
60. Divisadero Street/SR-41 southbound off-ramp	Signal	34	C	16	B	16	B	18	B
61. Tulare Street/SR-41 southbound off-ramp	Signal	20	B	4	A	40	D	10	A
62. Tulare Street/SR-41 northbound ramps	Signal	18	B	23	C	16	B	23	C
62A. Divisadero Street/SR-41 northbound on-ramp	Signal	9	A	21	C	6	A	34	C
62B. Tulare Street/Divisadero Street	Signal	14	B	21	C	14	B	21	C
63. Tulare Street/First Street	Signal	32	C	36	D	40	D	47	D
64. Inyo Street/H Street	Signal	13	B	12	B	14	B	14	B
65. Inyo Street/Van Ness Avenue	Signal	13	B	11	B	14	B	12	B
66. Ventura Avenue/C Street	Signal	10	B	10	A	19	B	15	B
67. Ventura Avenue/SR-99 southbound ramps	Signal	16	B	13	B	19	B	55	D
68. Ventura Avenue/SR-99 northbound ramps	Side Street Stop-Controlled	**>150**	**F**	33	D	***>150***	***F***	***>150***	***F***

Table 5.14-11 (cont.): Peak Hour Intersection Operations—Existing Plus Project Conditions

Intersection	Traffic Control	Existing Conditions				Existing Plus Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]
69. Ventura Avenue/E Street	Side Street Stop-Controlled	33	D	*38*	*E*	*>150*	*F*	*>150*	*F*
70. Ventura Avenue/G Street	Signal	10	A	12	B	16	B	*71*	*E*
71. Ventura Avenue/H Street	Side Street Stop-Controlled	30	D	22	C	*149*	*F*	*>150*	*F*
72. Ventura Avenue/Broadway	Signal	9	A	13	B	15	B	21	C
73. Ventura Avenue/Van Ness Avenue	Signal	22	C	20	C	35	C	35	D
74. Ventura Avenue/M Street	Signal	11	B	27	C	25	C	*56*	*E*
75. Ventura Avenue/O Street	Signal	32	C	15	B	52	D	20	C
76. Ventura Avenue/P Street	Signal	11	B	7	A	10	A	17	B
77. Ventura Avenue/First Street	Signal	23	C	24	C	23	C	26	C
78. Santa Clara Street–SR-41 southbound off-ramp/ O Street	Signal	20	C	20	C	18	B	19	B
79. San Benito Street–SR-41 northbound on-ramp/ M Street	Side Street Stop-Controlled	15	C	**>150**	**F**	***>150***	***F***	***>150***	**F**
80. SR-41 southbound off-ramp/Van Ness Avenue	Side Street Stop-Controlled	21	C	12	B	***>150***	***F***	18	C
81. SR-41 northbound off-ramp–San Benito Street/Van Ness Avenue	All Way Stop-Controlled	12	B	11	A	***40***	***E***	27	D
82. Stanislaus Street/Fulton Street	Signal	14	B	20	B	19	B	55	D
83. Tuolumne Street/Fulton Street	Signal	9	A	8	A	10	B	11	B

Table 5.14-11 (cont.): Peak Hour Intersection Operations—Existing Plus Project Conditions

Intersection	Traffic Control	Existing Conditions				Existing Plus Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]
84. Divisadero Street/San Pablo Avenue	Signal	12	B	11	B	32	C	16	B
85. Inyo Street/Fulton Street	Signal	10	A	10	B	11	B	11	B
86. Tulare Street/E Street	Signal	11	B	12	B	11	B	19	B
87. Fresno Street/H Street[3]	Signal	—	—	—	—	*64*	*E*	55	D
88. Fresno Street/Fulton Street[4]	Signal	—	—	—	—	4	A	6	A
89. Tulare Street/Fulton Street[4]	Signal	—	—	—	—	4	A	4	A

Notes:
[1] For signalized intersections, the overall average intersection control delay is reported in seconds per vehicle. For side-street stop controlled intersections, the average control delay for the movement with the greatest delay is reported in seconds per vehicle.
[2] Level of Service based on *Highway Capacity Manual* (Transportation Research Board, 2000).
[3] Baseline Conditions Traffic Control/Baseline Plus Project Traffic Control
Delays greater than 2.5 minutes are not reported due to model insensitivity under extreme congestion.
BOLD text indicates the intersection operates at an unacceptable LOS based on the presiding jurisdiction's level of service policy.
Bold Italic text indicates a significant impact based on the significance criteria identified in Section 5.14.3.
Italic text indicates LOS E and F traffic operations which are acceptable pursuant to Fresno General Plan Policy MT-1-m.
Source: Fehr & Peers, 2015.

Freeway Operations

Table 5.14-12 and Table 5.14-13 summarize the AM and PM peak-hour level of service (LOS) at the freeway mainline segments and ramp junctions, respectively (refer to Appendix J for calculations). In general, the LOS results for the ramp junctions are worse than the freeway mainline, and are controlling the freeway operations.

Table 5.14-12: Peak Hour Freeway Mainline Operations—Existing Plus Project Conditions

Mainline Segment	Existing Conditions				Existing Plus Project Conditions			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]
SR-99 Northbound								
Jensen Avenue to SR-41	20	C	21	C	25	C	22	C
SR-41 to Ventura Avenue	9	A	12	B	14	B	14	B

Table 5.14-12 (cont.): Peak Hour Freeway Mainline Operations—Existing Plus Project Conditions

Mainline Segment	Existing Conditions				Existing Plus Project Conditions			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]
Ventura Avenue to Fresno Street	16	B	22	C	22	C	25	C
Stanislaus Street to SR-180	16	B	29	D	24	C	***36***	***E***
SR-180 to Belmont Avenue	30	D	**1.01**	**F**	***42***	***E***	***1.05***	***F***
Belmont Avenue to Olive Avenue	28	D	**44**	**E**	32	D	***1.04***	***F***
SR-99 Southbound								
Olive Avenue to Belmont Avenue	**43**	**E**	29	D	***1.12***	***F***	34	D
Belmont Avenue to SR-180	28	D	22	C	34	D	27	D
SR-180 to Stanislaus Street	26	C	18	C	***36***	***E***	25	C
Fresno Street to Ventura Avenue	15	B	12	B	17	B	16	B
Ventura Avenue to SR-41	11	A	10	A	11	B	14	B
SR-41 to Jensen Avenue	14	B	16	B	15	B	20	C
SR-41 Northbound								
Jensen Avenue to SR-99	11	A	12	B	12	B	13	B
SR-99 to Van Ness Avenue	26	C	22	C	27	D	22	C
M Street to Tulare Street	27	D	29	D	28	D	34	D
Divisadero Street to SR-180	18	C	22	C	19	C	25	C
SR-180 to McKinley Avenue	30	D	28	D	35	D	32	D
SR-41 Southbound								
McKinley Avenue to SR-180	29	D	24	C	33	D	26	C
SR-180 to Divisadero Street	30	D	18	C	***36***	***E***	20	C
Tulare Street to O Street	21	C	15	B	24	C	17	B
Broadway to SR-99	20	C	19	C	20	C	22	C
SR-99 to Jensen Avenue	11	A	7	A	11	A	10	A
SR-180 Eastbound								
SR-99 to Fulton Street	22	C	18	C	26	D	21	C
Van Ness Avenue to Abby Street	23	C	20	C	28	D	25	C
Abby Street to SR-41	24	C	21	C	30	D	26	D
SR-180 Westbound								
SR-41 to Blackstone Avenue	23	C	17	B	28	D	20	C

Table 5.14-12 (cont.): Peak Hour Freeway Mainline Operations—Existing Plus Project Conditions

Mainline Segment	Existing Conditions				Existing Plus Project Conditions			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]
Blackstone Avenue to Fulton Street	19	C	17	B	23	C	20	C
Fulton Street to SR-99	15	B	16	B	18	C	18	B

Notes:
[1] Density is reported in passenger cars per mile per lane (pcpmpl); volume-to-capacity (v/c) ratio is reported for LOS F conditions.
[2] Level of Service based on Highway Capacity Manual (Transportation Research Board, 2000).
BOLD text indicates the freeway mainline segment operates at an unacceptable LOS based on Caltrans's LOS criteria.
Bold Italic text indicates a significant impact based on the significance criteria identified in Section 5.14.3.
Source: Fehr & Peers, 2015.

Table 5.14-13: Peak Hour Freeway Ramp Junction Operations—Existing Plus Project Conditions

Location	Maneuver	Existing Conditions				Existing Plus Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]
SR-99 Northbound									
Jensen Avenue eastbound on-ramp	Merge	20	B	21	C	25	C	22	C
Jensen Avenue to SR-41	Weave[3]	n/a	C	n/a	C	***n/a***	***E***	n/a	D
SR-41 on-ramp	Merge	13	B	18	B	21	C	20	C
Ventura Avenue off-ramp	Diverge	13	B	16	B	20	B	18	B
Ventura Avenue (lane drop)	Basic	11	B	16	B	16	B	17	B
Ventura Avenue on-ramp	Merge	26	C	33	D	***37***	***E***	***1.02***	***F***
Fresno Street off-ramp	Diverge	30	D	**40**	**E**	***40***	***E***	***1.12***	***F***
Fresno Street on-ramp	Merge	16	B	26	C	22	C	28	D
Stanislaus Street on-ramp	Merge	22	C	**1.06**	**F**	34	D	***1.35***	***F***

Table 5.14-13 (cont.): Peak Hour Freeway Ramp Junction Operations—Existing Plus Project Conditions

Location	Maneuver	Existing Conditions				Existing Plus Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]
SR-180 off-ramp	Diverge	26	C	**1.22**	**F**	***40***	***E***	***1.45***	***F***
SR-180 eastbound on-ramp	Merge	22	C	28	D	26	C	30	D
SR-180 westbound on-ramp	Merge	**1.02**	**F**	**1.14**	**F**	***1.22***	***F***	***1.21***	***F***
Belmont Avenue off-ramp	Diverge	**1.3**	**F**	**1.62**	**F**	***1.56***	***F***	***1.69***	***F***
Belmont Avenue on-ramp	Merge	**36**	**E**	**1.13**	**F**	***39***	***E***	***1.21***	***F***
Olive Avenue off-ramp	Diverge	33	D	**40**	**E**	***36***	***E***	***1.26***	***F***
SR-99 Southbound									
Olive Avenue on-ramp	Merge	**1.15**	**F**	**37**	**E**	***1.30***	***F***	***1.05***	***F***
Belmont Avenue off-ramp	Diverge	**1.12**	**F**	**38**	**E**	***1.35***	***F***	***1.15***	***F***
Belmont Avenue to SR-180	Weave[3]	**0.92**	**E**	n/a	D	***1.11***	***F***	***n/a***	***E***
SR-180 westbound on-ramp	Merge	27	C	20	B	34	D	27	C
SR-180 eastbound on-ramp	Merge	29	D	20	B	***1.01***	***F***	28	D
Stanislaus Street off-ramp	Diverge	33	D	24	C	***40***	***E***	31	D
Fresno Street off-ramp	Diverge	28	D	22	C	32	D	26	C
Fresno Street to Ventura Avenue	Weave[3]	n/a	B	n/a	B	n/a	C	n/a	C
Ventura Avenue to SR-41	Weave[3]	n/a	A	13	B	n/a	A	n/a	B
SR-41 to Jensen Avenue	Weave[3]	n/a	B	3	A	n/a	B	7	A
SR-41 Northbound									
Jensen Avenue eastbound on-ramp	Merge	15	B	16	B	16	B	16	B

Table 5.14-13 (cont.): Peak Hour Freeway Ramp Junction Operations—Existing Plus Project Conditions

Location	Maneuver	Existing Conditions				Existing Plus Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]
Jensen Avenue to SR-99	Weave[3]	32	D	n/a	A	34	D	n/a	A
SR-99 on-ramp	Merge	26	C	22	C	27	D	22	C
Van Ness Avenue off-ramp	Diverge	30	D	28	C	32	D	28	C
Broadway on-ramp	Merge	26	C	27	C	27	C	30	D
M Street on-ramp	Merge	28	D	32	D	30	D	***36***	***E***
Tulare St off-ramp	Diverge	32	D	**38**	**E**	34	D	***1.11***	***F***
Tulare St on-ramp	Merge	22	C	29	D	24	C	34	D
Divisadero Street to SR-180	Weave[3]	n/a	C	n/a	D	n/a	C	***n/a***	***E***
SR-180 westbound off-ramp	Diverge	14	B	15	B	15	B	18	B
SR-180 to McKinley Avenue	Weave[3]	**0.90**	**E**	**1.03**	**F**	***0.97***	***E***	***1.16***	***F***
SR-41 Southbound									
McKinley Avenue to SR-180	Weave[3]	0.98	E	0.90	E	***1.09***	***F***	***0.97***	***E***
SR-180 to Divisadero Street	Weave[3]	1.09	F	n/a	C	***1.25***	***F***	n/a	D
Tulare Street on-ramp	Merge	22	C	18	B	24	C	20	B
O Street off-ramp	Diverge	29	D	20	B	33	D	23	C
Van Ness Avenue off-ramp	Diverge	29	D	24	C	32	D	26	C
M Street on-ramp	Merge	21	C	21	C	21	C	22	C
Broadway on-ramp	Merge	20	C	19	B	21	C	24	C
SR-99 off-ramp	Diverge	14	B	13	B	14	B	16	B
SR-99 to Jensen Avenue	Weave[3]	n/a	A	13	B	n/a	A	n/a	A
SR-180 Eastbound									
SR-99 off-ramp	Diverge	12	B	7	A	13	B	7	A
SR-99 to Fulton	Weave[3]	n/a	C	n/a	C	***n/a***	***F***	***n/a***	***F***

Table 5.14-13 (cont.): Peak Hour Freeway Ramp Junction Operations—Existing Plus Project Conditions

Location	Maneuver	Existing Conditions				Existing Plus Project Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]
Street									
Van Ness Avenue to Abby Street	Weave[3]	n/a	C	n/a	C	n/a	D	***n/a***	***E***
Abby Street to SR-41	Weave[3]	n/a	C	n/a	D	n/a	D	***n/a***	***E***
SR-180 Westbound									
SR-41 northbound on-ramp	Merge	24	C	20	B	29	D	23	C
SR-41 to Blackstone Avenue	Weave[3]	n/a	C	n/a	B	***n/a***	***E***	n/a	C
Blackstone Avenue to Fulton Street	Weave[3]	n/a	B	n/a	B	n/a	D	n/a	C
Fulton Street to SR-99	Weave[3]	n/a	B	n/a	B	n/a	B	n/a	C
SR-99 on-ramp	Merge	13	B	13	B	13	B	16	B

Notes:
[1] Density is reported in passenger cars per mile per lane (pcpmpl); volume-to-capacity (v/c) ratio is reported at freeway ramp merge and diverge sections operating at LOS F, and weave sections operating at LOS E or F.
[2] Freeway ramp merge and diverge level of service based on *Highway Capacity Manual* (Transportation Research Board, 2000). According to Caltrans's *Guide for the Preparation of Traffic Impact Studies* (Caltrans 2002), weave sections are analyzed using the Leisch Method as described in Chapter 500 of the *Highway Design Manual* (Caltrans 2010).
[3] According to Caltrans's *Guide for the Preparation of Traffic Impact Studies* (Caltrans 2002), weave sections are analyzed using the Leisch Method as described in Chapter 500 of the *Highway Design Manual* (Caltrans 2010). Weave LOS results are based on service volume (density not calculated). If the volumes in a weave section result in non-weaving traffic conditions, this table reports the adjacent freeway merge or diverge operations with the more congested LOS.
BOLD text indicates the facility operates at an unacceptable LOS based on Caltrans's LOS criteria.
Bold Italic text indicates a significant impact based on the significance criteria identified in Section 5.14.3.
Source: Fehr & Peers, 2015.

Freeway Off-Ramp Queuing

Table 5.14-14 summarizes the results of the AM and PM peak-hour queuing analysis at each off-ramp study intersection (refer to Appendix J for calculations).

Table 5.14-14: Peak Hour Freeway Off-Ramp Queuing—Existing Plus Project Conditions

Freeway Off-Ramp	Ramp Length[1]	Storage Length[2]	95th Percentile Queue[3]			
			Existing Conditions		Existing Plus Project Conditions	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
3. SR-99 SB off-ramp/Belmont Avenue	910	60	25	75	***450***	*
4. SR-99 NB off-ramp/Belmont Avenue	790	10	**75**	**175**	***1,575***	***1,050***
9. SR-180 WB off-ramp/Blackstone Avenue	1,160	370	200	150	200	175
12. SR-180 EB off-ramp/Abby Street	1,150	370	100	75	150	175
17. SR-180 WB off-ramp/Fulton Street	1,370	550	175	200	175	200
19. SR-180 EB off-ramp/Fulton Street	1,050	250	50	125	175	75
33. SR-99 SB off-ramp/Stanislaus Street	1,130	310	100	75	***1,150***	*
46. SR-99 SB off-ramp/Fresno Street	1,030	230	**325**	150	***450***	***350***
47. SR-99 NB off-ramp/Fresno Street	1,070	280	225	100	***300***	200
61. SR-41 SB off-ramp/Divisadero Street	980	150	**400**	125	***450***	125
63. SR-41 NB off-ramp/Tulare Street	1,130	320	100	100	125	125
69. SR-99 SB off-ramp/Ventura Avenue	1,230	370	200	125	300	125
70. SR-99 NB off-ramp/Ventura Avenue	1,030	120	**325**	100	*	*
79. SR-41 SB off-ramp/O Street	1,210	270	125	175	150	175
82. SR-41 SB off-ramp/Van Ness Avenue	1,240	520	225	50	***1,575***	100
83. SR-41 NB off-ramp/Van Ness Avenue	1,000	210	25	25	25	25

Notes:
[1] The ramp length is determined by estimating the distance from the gore point where the off-ramp departs from the mainline to the limit line at the ramp terminal intersection with the local street. Distance reported in feet.
[2] According to consultation with Caltrans staff, the acceptable storage length is the area between the limit line at the ramp terminal intersection and the deceleration zone, defined as the area within 525 feet from the exit nose (see Figure 504.2B in Chapter 500 of the Caltrans *Highway Design Manual* (Caltrans 2010)). Distance reported in feet.
[3] 95th Percentile Queue calculated using Synchro software. Queue reported in feet and rounded up to the nearest 25-foot interval.
* = v/c ration > 3.00; 95th percentile queue length is undermined.
BOLD text indicates the off-ramp queue extends into the deceleration zone.
Bold Italic text indicates a significant impact based on the significance criteria identified in Section 5.14.3.
Source: Fehr & Peers, 2015.

Cumulative Conditions

The Cumulative Conditions analysis evaluates future conditions with the proposed Downtown Neighborhoods Community Plan and Fulton Corridor Specific Plan in conjunction with reasonably foreseeable projects. This includes the cumulative transportation and land use development

changes previously identified outside the project area, along with the proposed project's development potential and circulation changes within the project area as identified in the project description.

Cumulative Transportation Network Changes

Several changes to the transportation network are anticipated to occur by the 2035 horizon year of the proposed Downtown Neighborhoods Community Plan (DNCP) and Fulton Corridor Specific Plan (FCSP). These changes are identified as funded transportation projects from several sources, including the Fresno COG *Regional Transportation Plan/Sustainable Communities Strategy*, traffic impact fee program nexus studies, and documents associated with the proposed California High Speed Rail project.

Fresno COG 2014 Regional Transportation Plan/Sustainable Communities Strategy

The Fresno COG 2014 *Regional Transportation Plan and Sustainable Communities Strategy* (RTP/SCS) includes a financially constrained list of transportation projects for which funding has been identified or is reasonably expected to be available within the RTP planning horizon of 2035. The financially constrained list of projects includes the following transportation improvements to the local roadway network in the project vicinity:

- Ventura Ave.: improve to 4-lane divided arterial from SR-41 to SR-99
- California Ave.: widen to 4 lanes from Fruit Ave. to Ventura Ave.
- Belmont Ave.: improve to 4-lane divided arterial from Brawley Ave. to SR-99
- Marks Ave.: widen to 4 lanes from Belmont Ave. to Shields Ave.
- Hughes Ave.: widen to 4 lanes from Nielsen Ave. to McKinley Ave.

The Fresno COG 2014 RTP/SCS also includes the following improvements to the regional transportation system:

- SR-99/Veterans Blvd. interchange
- SR-180: widened to a 4-lane expressway from Locan Ave. to Frankwood Ave.
- SR-41: widened to a 4-lane expressway from Elkhorn Ave. to Kings Co. Line

In addition to these roadway projects, the Fresno COG 2014 RTP/SCS also identifies funding for increased transit service via reduced bus headways, a BRT starter line on Blackstone Avenue, Ventura Avenue/Kings Canyon Road, and through Downtown, as well as bicycle lanes and trails throughout the City of Fresno.

Traffic Impact Fee Programs

The City of Fresno assesses traffic impact fees to new development projects to mitigate traffic impacts through the funding of improvements that help the City maintain adequate levels of service on its roadway network. Each new development is expected to add to the incremental need for roadway capacity and each new development will benefit from the new roadway capacity. The City has two impact fee programs related to traffic: the Fresno Major Streets Impact (FSMI) fee and the Traffic Signal Mitigation Impact (TSMI) fee.

City of Fresno Major Streets Impact (FMSI) Fee

The FSMI fee funds improvements identified in the Major Street Capital Improvement Program (Major Street CIP). In the project area, the Major Street CIP includes the following roadways:

- McKinley Avenue–Grantland Avenue to SR-99
- Church Avenue–Marks Avenue to Martin Luther King, Jr. Boulevard

Traffic Signal Mitigation Impact (TSMI) Fee

The TSMI fee funds traffic signal improvements, including new traffic signals, adding protected left-turn phasing, and modifications to existing traffic signals. The TSMI Nexus Analysis identifies the following improvements at the following study intersections:

New Traffic Signals

- Belmont Avenue/SR-99 southbound ramps
- Belmont Avenue/SR-99 northbound ramps
- Stanislaus Street/SR-99 southbound off-ramp
- Ventura Avenue/SR-99 northbound ramps
- SR-41 southbound off-ramp/Van Ness Avenue
- SR-41 northbound off-ramp/Van Ness Avenue

Protected Left-Turn Phasing

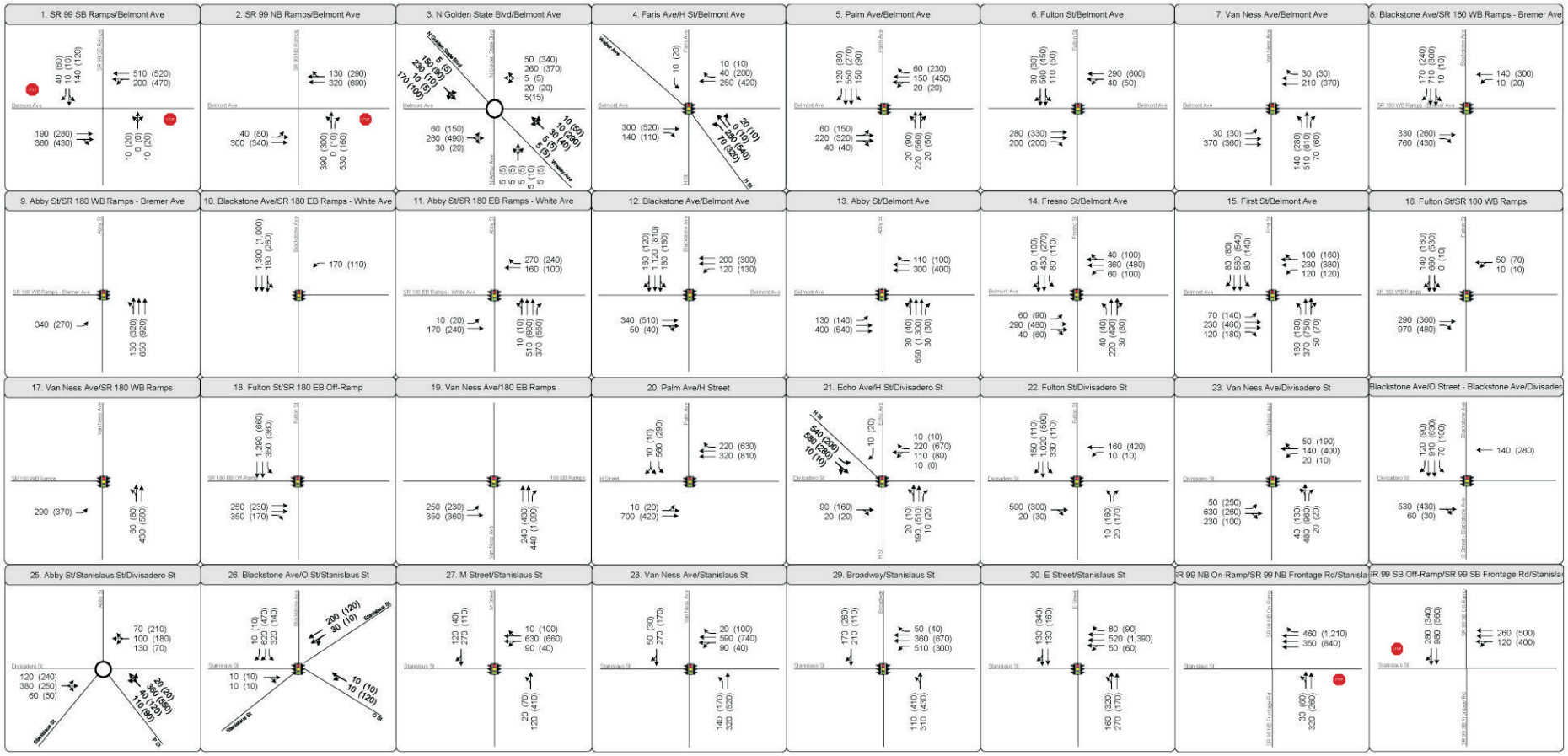
- Belmont Avenue/Palm Avenue
- Belmont Avenue/Fresno Street

Downtown Signal Improvements

- H Street/Palm Avenue
- Divisadero Street/Van Ness Avenue
- Stanislaus Street/E Street
- Stanislaus Street/M Street
- Tuolumne Street/M Street
- Ventura Avenue/C Street
- Ventura Avenue/Van Ness Avenue
- Ventura Avenue/O Street
- Ventura Avenue/P Street
- San Benito Street–SR-41 NB on-ramp/M Street
- Stanislaus Street/Fulton Street
- Fresno Street/Fulton Mall
- Tulare Street/Fulton Mall

Fresno COG Regional Transportation Mitigation Fee (RTMF)

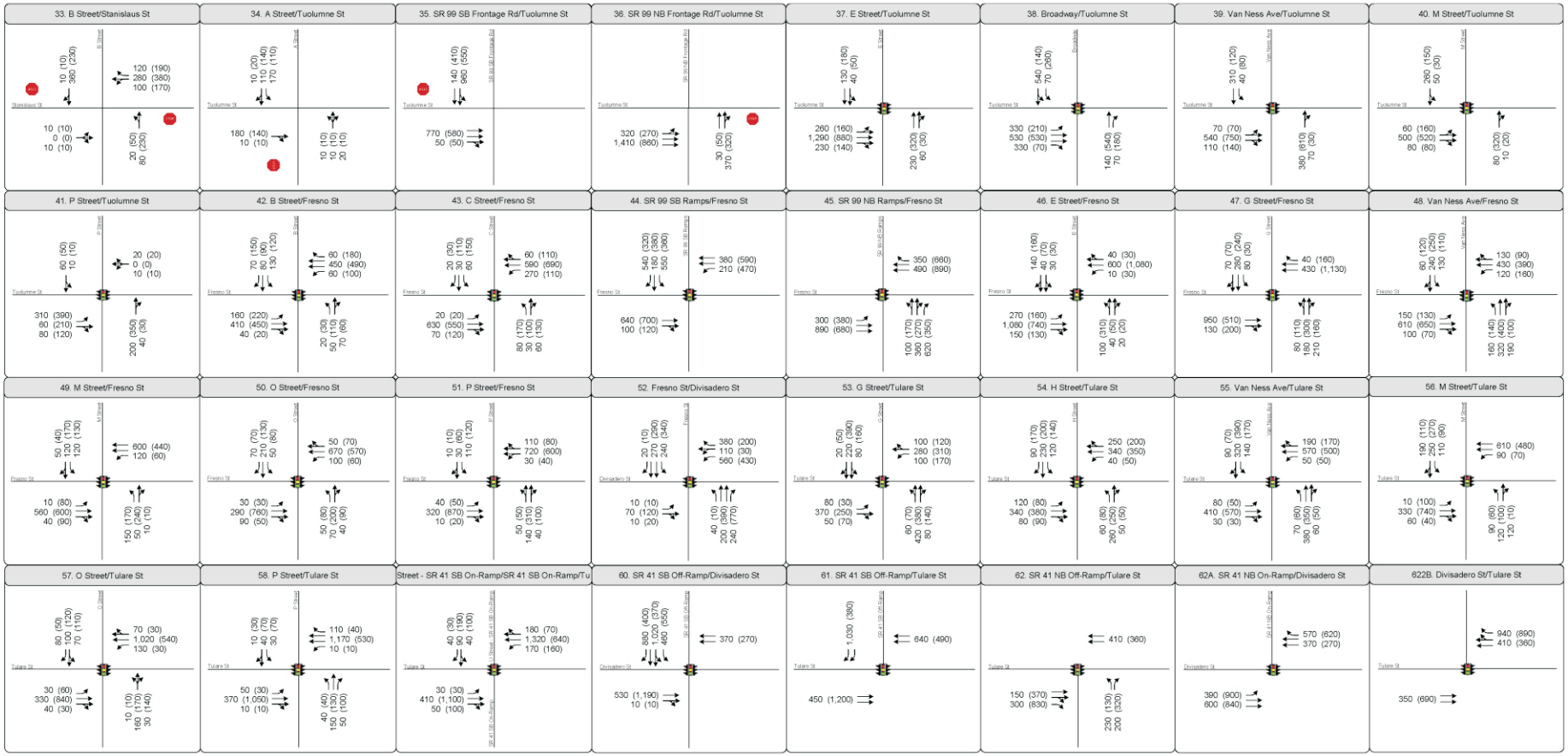
In addition to the City of Fresno's traffic impact fees, Fresno COG administers the Regional Transportation Mitigation Fee (RTMF), which was developed to mitigate new development's indirect regional impacts on State highway facilities in Fresno County. The fee helps fund improvements needed to maintain the target LOS in light of higher traffic volumes generated by new developments.



Source: Fehr & Peers, 2015

Exhibit 5.14-6A
Peak Hour Traffic Volumes and Lane Configurations - Existing Plus Project Conditions

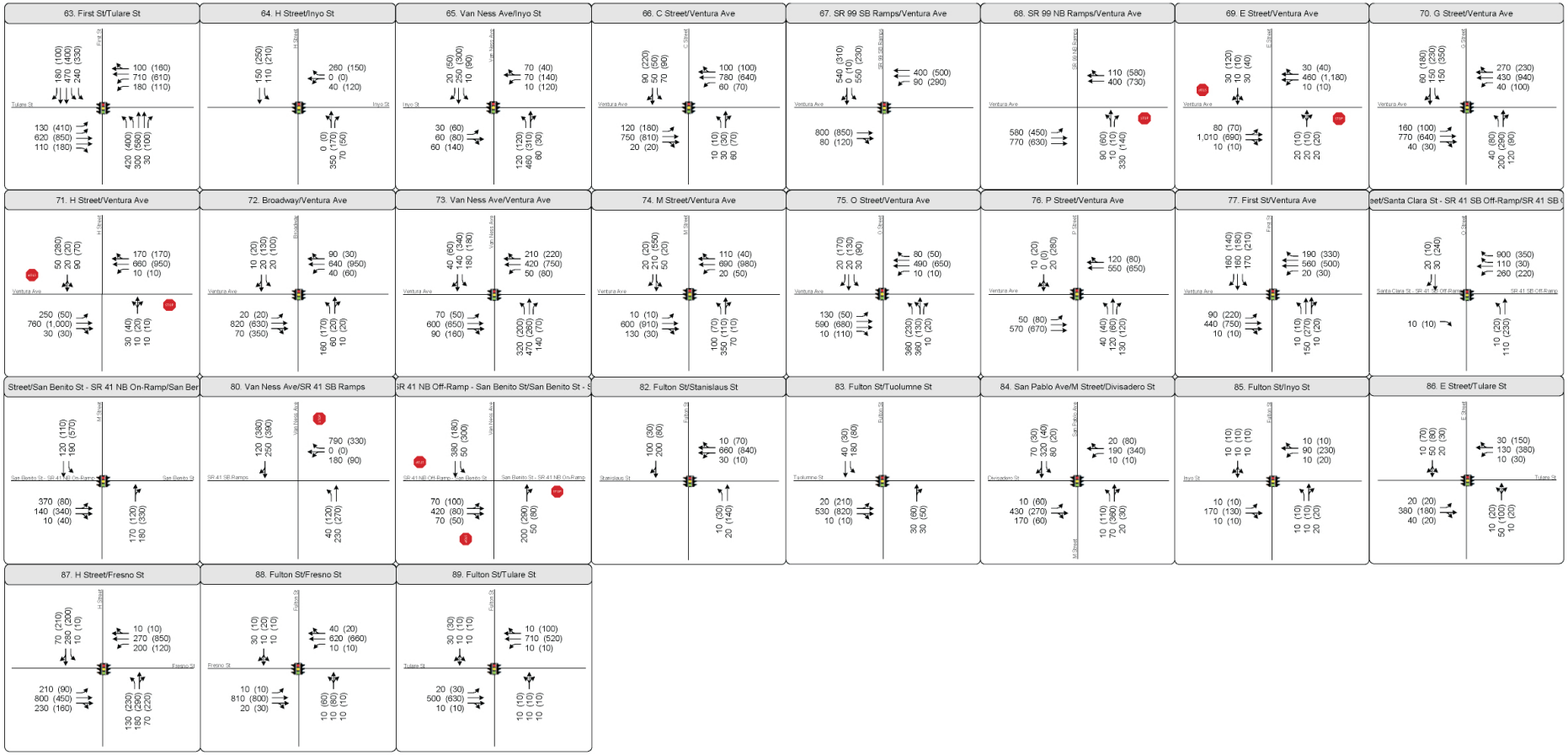
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Source: Fehr & Peers, 2015

Exhibit 5.14-6B
Peak Hour Traffic Volumes and Lane Configurations - Existing Plus Project Conditions

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Source: Fehr & Peers, 2015

Exhibit 5.14-6C
Peak Hour Traffic Volumes and Lane Configurations - Existing Plus Project Conditions

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Source: Fehr & Peers, 2016

FirstCarbon® SOLUTIONS

Exhibit 5.14-7A
AM Peak Hour Level of Service - Existing Plus Project Conditions

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Source: Fehr & Peers, 2016

FirstCarbon® SOLUTIONS

Exhibit 5.14-7B
PM Peak Hour Level of Service - Existing Plus Project Conditions

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According to the RTMF Nexus Study, the RTMF will provide 57 percent of the funding for improvements at the following interchanges in the study area:

- SR-99/Belmont Avenue
- SR-41/Tulare Street–Divisadero Street
- SR-180/Fulton Street–Van Ness Avenue

The improvements at these interchanges are detailed in the Fresno-Madera Freeway Interchange Deficiency Study (FIDS).

High Speed Rail

The California High Speed Rail Authority is proposing to construct, operate, and maintain an electric-powered high speed train system in California. In August 2011, the Authority released the Draft Environmental Impact Report (DEIR) for the Merced to Fresno and Fresno to Bakersfield project sections. The DEIR identified several roadway network changes in the City of Fresno, including road closures, new grade separations, and road realignments. In April 2012, the Authority released the Final EIR for the Merced to Fresno section, which revised some of the DEIR roadway changes. In Fall 2012, the Authority circulated a Revised DEIR for the Fresno to Bakersfield segment for public comment.

As of July 2016, the Authority had secured Federal and State funding for an initial construction section (ICS) in the Fresno area. Design and construction of the ICS had begun along the high speed rail (HSR) trackway through the City of Fresno, from Madera County through Downtown Fresno.

As identified in the Merced to Fresno Final EIR and Fresno to Bakersfield DEIR, this construction will result in several modifications to the local roadway network as identified in Table 5.14-15.

Table 5.14-15: High Speed Rail Local Roadway Circulation Changes

Roadway	Location	Circulation Changes
Road Closures		
Golden State Boulevard	Olive Avenue to Belmont Avenue	• Roadway closed
Divisadero Street	Rail crossing—G Street to H Street	• Connection between G Street and Divisadero Street/H Street eliminated
Stanislaus Street	UPRR overcrossing—F Street to Broadway	• Stanislaus Street overcrossing closed; westbound traffic moves to Tuolumne Street • New at-grade intersections at G Street and H Street
Kern Street	Rail crossing—G Street to H Street	• Roadway closed; traffic shifts to adjacent crossings
Mono Street	Rail crossing—G Street to H Street	• Roadway closed; traffic shifts to adjacent crossings

Table 5.14-15 (cont.): High Speed Rail Local Roadway Circulation Changes

Roadway	Location	Circulation Changes
Monterey Street	UPRR overcrossing—Broadway to Golden State Boulevard	• Roadway closed to traffic and demolished in 2012.
One-way to Two-Way Conversions		
Stanislaus Street	H Street to Van Ness Avenue	• Conversion and road diet
Tuolumne Street	E Street to Divisadero Street	• Conversion and road diet
Proposed Grade Separated Crossings		
McKinley Avenue	Rail crossing—Golden State Boulevard to Weber Avenue	• Proposed four-lane overcrossing of UPRR and HSR • Eliminates existing at-grade intersections with Golden State Boulevard and Weber Avenue • New connector provides access to Golden State Boulevard • Weber Avenue extended under new overcrossing to West Avenue
Olive Avenue	Rail crossing—Golden State Boulevard to Weber Avenue	• Proposed four-lane overcrossing of UPRR and HSR • Eliminates existing at-grade intersections with Golden State Blvd., Weber Ave., and Delno Ave. • Existing West Avenue provides access to Golden State Boulevard • Existing Fruit Avenue provides access to Weber Avenue and Delno Avenue
Tulare Street	Rail crossing—G Street to H Street	• Proposed two-lane undercrossing of UPRR and HSR • Eliminates existing at-grade intersection at G Street
Ventura Avenue	Rail crossing—G Street to H Street	• Proposed four-lane undercrossing of UPRR and HSR • Eliminates existing at-grade intersection at G Street
Modification of Existing Grade Separations		
Belmont Avenue	Rail crossing—Belmont Circle to H Street/Weber Avenue	• Proposed four-lane overcrossing of UPRR and HSR • Eliminates Belmont Circle, existing at-grade intersections with H Street, Farris Avenue, and Harrison Avenue, and existing southbound Weber Avenue overcrossing • Wesley Avenue realigned west of Belmont Circle

Table 5.14-15 (cont.): High Speed Rail Local Roadway Circulation Changes

Roadway	Location	Circulation Changes
Stanislaus Street	UPRR overcrossing—Broadway to F Street	• Overcrossing closed; westbound traffic is shifted to Tuolumne Street • See additional details under "Road Closures" section of this table above
Tuolumne Street	Rail overcrossing—Broadway to F Street	• Proposed two-lane, two-way overcrossing; converted to a two-lane two-way street from E Street to P Street
Fresno Street	Rail undercrossing—Broadway Plaza to G Street	• Proposed four-lane undercrossing • Eliminates existing at-grade intersection at G Street • Creates new at-grade intersection at H Street
Notes: UPRR = Union Pacific Railroad HSR-= High Speed Rail Source: California High Speed Rail Authority, 2015.		

In addition to the changes to the local roadway network in the project area as identified in Table 5.14-15, the construction of the HSR-trackway would realign the SR-99 freeway resulting in the following modifications:

- Close the southbound off-ramp to Dakota Avenue
- Close the southbound on- and off-ramp to Shields Avenue
- Close the southbound on- and off-ramp to Princeton Avenue
- Add a northbound auxiliary lane from Clinton Avenue to Golden State Boulevard (Ashlan Avenue)
- Add a southbound auxiliary lane from Golden State Boulevard (Ashlan Avenue) to Golden State Boulevard (Clinton Avenue)
- Reconstruct the Clinton Avenue interchange to a diamond configuration

The initial construction section of HSR-trackway in the Fresno area is funded and in the early stages of construction. These changes to the local circulation system are just beginning to take shape as part of the project. Therefore, they are included in the Cumulative Conditions analysis as a reasonably foreseeable probable future project.

While the initial construction section in the Fresno area is funded, it is our understanding that the Authority has only secured funding to construct the trackway from Bakersfield to Merced. The remainder of the HSR-project, including the segments that connect Bakersfield to the Los Angeles metropolitan area and from San Francisco Bay Area to Merced to create the operational system proposed by the Authority, are not funded. Furthermore, plans to operate the first phase of the proposed High Speed Rail between San Francisco and Los Angeles/Anaheim are not currently funded.

In addition to the funding limitations, changes to the High Speed Rail business plan, projected cost, and construction schedule generate uncertainty regarding the project description, timing for completing construction, and beginning operation of the proposed high speed rail system. For example, the original 2008 business plan envisioned high speed rail service connecting San Francisco and Anaheim by 2020. However, the November 2011 draft business plan anticipated completion by 2033, which was then revised in the April 2012 business plan to 2028. While the original plan included high speed trains operating on dedicated right-of-way between San Francisco and Anaheim, the April 2012 business plan focuses on a blended system utilizing existing commuter rail right-of-way to lower cost and reduce construction time. The expected cost to construct the system has also changed, from the estimated $42.5 billion in the original 2008 business plan to $98.5 billion in the November 2011 draft business plan to $68.4 billion in the April 2012 business plan.

In light of these changes and lack of specified funding for the full proposed High Speed Rail project, there is significant uncertainty regarding its ultimate implementation. Therefore, it is currently too speculative to include the operations of the full California High Speed Rail system as a reasonably foreseeable future project for a CEQA analysis. As a result, this Cumulative Conditions analysis does not include the potential increase in traffic associated with passenger demand at a proposed High Speed Rail station in Downtown Fresno as part of a fully functioning statewide High Speed Rail system. While the traffic associated with the High Speed Rail patronage is not included in this analysis, this study does include additional development surrounding the proposed station site as anticipated within the overall development potential identified in the FCSP. This study also includes local roadway circulation changes associated with the initial construction section outlined in Table 5.14-15.

While this study does not include traffic associated with High Speed Rail passengers because of its speculative nature, the effects of traffic associated with High Speed Rail passengers is fully analyzed in the California High Speed Rail Authority's Merced to Fresno and Fresno to Bakersfield EIR sections.

Cumulative Land Use Growth

The Fresno General Plan MEIR TDF model uses land use inputs for future development consistent with the Fresno General Plan, along with population and employment forecasts from Fresno COG for the region. These land use inputs, along with the development potential associated with the proposed project, are used in the Cumulative Conditions analysis.

Under the Cumulative No Project scenario, development within the project area is anticipated to occur as it would under the Fresno General Plan. Since the land use inputs for the proposed project are consistent with the Fresno General Plan, the cumulative land use growth both with and without the project are the same. Therefore, the Cumulative No Project scenario uses the same land use inputs.

Cumulative Conditions Forecasting

Land Use Inputs

As noted above, the proposed project is not expected to change the land use inputs associated with the Fresno General Plan. The proposed project will also not affect overall regional population and employment projections. Therefore, the Cumulative Conditions analysis maintains the overall total regional population and employment projections used in the Fresno General Plan MEIR.

Transportation Inputs

The Cumulative Conditions analysis includes the circulation changes associated with the proposed project within the project study area as described in the project description. Outside the project study area, the analysis includes funded transportation network improvements and changes as the result of the proposed high speed rail project identified in the Cumulative Transportation Network Changes section.

Turning Movement Forecasts

Using these inputs, the Fresno COG TDF model generates Cumulative Conditions travel demand forecasts for the AM and PM peak hours. Similar to the Baseline Plus Project travel demand modeling, the Cumulative Conditions turning movement forecasts were developed using the "difference method." This approach adjusts raw model volume forecasts based on expected incremental growth from Baseline Conditions using the following formula:

Cumulative Plus Project Forecasts = Baseline Traffic Count +
(Cumulative Plus Project Model Volume–Base Year Raw Model Volume)

Exhibits 5.14-8A through 5.14-8C show the peak-hour Cumulative Plus Project turning movement forecasts at the study intersections.

Intersection Operations

Table 5.14-16 summarizes the AM and PM peak-hour level of service (LOS) at the study intersections under cumulative plus project conditions (refer to Appendix J for calculations). Exhibits 5.14-9A and 5.14-9B also show the peak-hour intersection LOS.

Table 5.14-16: Peak Hour Intersection Operations—Cumulative Conditions

Intersection	Traffic Control	Existing Conditions				Cumulative Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]
1. Belmont Avenue/SR-99 southbound ramps	Side Street Stop-Controlled	16	C	28	D	***>150***	***F***	***>150***	***F***
2. Belmont Avenue/SR-99 northbound ramps	Side Street Stop-Controlled	15	B	31	D	***>150***	***F***	***>150***	***F***
3. Belmont Avenue/Golden State Boulevard–Wesley Avenue	Roundabout	4	A	5	A	***>150***	***F***	***>150***	***F***
4. Belmont Avenue/H Street–Faris Avenue	Signal/NA[4]	9	A	14	B	—	—	—	—
5. Belmont Avenue/Palm Avenue	Signal	11	B	11	B	19	B	***133***	***F***

Table 5.14-16 (cont.): Peak Hour Intersection Operations—Cumulative Conditions

Intersection	Traffic Control	Existing Conditions				Cumulative Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]
6. Belmont Avenue/Fulton Street	Signal	15	B	21	C	24	C	18	B
7. Belmont Avenue/Van Ness Avenue	Signal	13	B	13	B	20	C	33	C
8. SR-180 westbound ramps–Bremer Avenue/Blackstone Avenue	Signal	10	B	11	B	14	B	16	B
9. Bremer Avenue (SR-180 westbound ramps)/ Abby Street	Signal	11	B	7	A	11	B	16	B
10. White Avenue (SR-180 eastbound ramps)/Blackstone Avenue	Signal	9	A	7	A	9	A	8	A
11. SR-180 eastbound ramps–White Avenue/ Abby Street	Signal	15	B	12	B	19	B	15	B
12. Belmont Avenue/Blackstone Avenue	Signal	19	B	18	B	47	D	42	D
13. Belmont Avenue/Abby Street	Signal	17	B	28	C	21	C	40	D
14. Belmont Avenue/Fresno Street	Signal	19	B	23	C	10	A	43	D
15. Belmont Avenue/First Street	Signal	23	C	30	C	15	B	49	D
16. SR-180 westbound ramps/Fulton Street	Signal	7	A	11	B	13	B	16	B
17. SR-180 westbound ramps/Van Ness Avenue	Signal	14	B	13	B	18	B	14	B
18. SR-180 eastbound off-ramp/Fulton Street	Signal	8	A	10	B	18	B	19	B
19. SR-180 eastbound on-ramp/Van Ness Avenue	Signal	22	C	18	B	26	C	24	C
20. H Street/Palm Avenue	Signal	12	B	9	A	15	B	52	D
21. Divisadero Street/H Street–Echo Avenue	Signal	23	C	24	C	*74*	*E*	*61*	*E*

Table 5.14-16 (cont.): Peak Hour Intersection Operations—Cumulative Conditions

Intersection	Traffic Control	Existing Conditions				Cumulative Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]
22. Divisadero Street/Fulton Street	Signal	20	C	13	B	*59*	*E*	*55*	*E*
23. Divisadero Street/Van Ness Avenue	Signal	12	B	*>150*	*F*	52	D	*71*	*E*
24. Divisadero Street/Blackstone Avenue	Signal	16	B	13	B	32	C	16	B
25. Divisadero Street/P Street–Abby Street–Stanislaus Street	Signal/Roundabout	12	B	*128*	*F*	13	B	*85*	*F*
26. Stanislaus Street/Blackstone Avenue–O Street	Signal	13	B	10	B	28	C	36	D
27. Stanislaus Street/M Street	Signal	11	B	10	B	23	C	10	B
28. Stanislaus Street/Van Ness Avenue	Signal	11	B	13	B	36	D	52	D
29. Stanislaus Street/Broadway	Signal	10	A	28	C	*60*	*E*	*65*	*E*
30. Stanislaus Street/E Street	Signal	11	B	16	B	19	B	45	D
31. Stanislaus Street/SR-99 northbound on-ramp	Side Street Stop-Controlled	16	C	**>150**	**F**	***105***	***F***	***>150***	**F**
32. Stanislaus Street/SR-99 southbound off-ramp	Side Street Stop-Controlled	20	C	26	D	***>150***	***F***	***>150***	**F**
33. Stanislaus Street/B Street	Side Street Stop-Controlled	14	B	**>150**	**F**	***>150***	***F***	***>150***	**F**
34. Tuolumne Street/A Street	Side Street Stop-Controlled	23	C	22	C	***>150***	***F***	20	C
35. Tuolumne Street/SR-99 southbound frontage road	Side Street Stop-Controlled	22	C	19	C	***>150***	***F***	30	D
36. Tuolumne Street/SR-99 northbound frontage road	Side Street Stop-Controlled	**35**	**E**	28	D	***>150***	***F***	***135***	***F***

Table 5.14-16 (cont.): Peak Hour Intersection Operations—Cumulative Conditions

Intersection	Traffic Control	Existing Conditions				Cumulative Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]
37. Tuolumne Street/E Street	Signal	8	A	9	A	12	B	13	B
38. Tuolumne Street/Broadway	Signal	14	B	15	B	49	D	*66*	*E*
39. Tuolumne Street/Van Ness Avenue	Signal	12	B	13	B	22	C	28	C
40. Tuolumne Street/M Street	Signal	15	B	11	B	19	B	20	B
41. Tuolumne Street/P Street	Signal	10	B	13	B	16	B	21	C
42. Fresno Street/B Street	Signal	16	B	19	B	25	C	31	C
43. Fresno Street/C Street	Signal	16	B	23	C	21	C	24	C
44. Fresno Street/SR-99 southbound ramps	Signal	22	C	21	C	51	D	33	C
45. Fresno Street/SR-99 northbound ramps	Signal	19	B	22	C	53	D	***74***	***E***
46. Fresno Street/E Street	Signal	7	A	8	A	12	B	25	C
47. Fresno Street/G Street	Signal/NA[4]	19	B	17	B	—	—	—	—
48. Fresno Street/Van Ness Avenue	Signal	35	D	35	D	27	C	42	D
49. Fresno Street/M Street	Signal	9	A	8	A	14	B	8	A
50. Fresno Street/O Street	Signal	7	A	9	A	6	A	12	B
51. Fresno Street/P Street	Signal	8	A	9	A	12	B	13	B
52. Divisadero Street/Fresno Street	Signal	32	C	36	D	33	C	52	D
53. Tulare Street/G Street	Signal/NA[4]	10	B	12	B	—	—	—	—
54. Tulare Street/H Street	Signal	12	B	11	B	22	C	17	B
55. Tulare Street/Van Ness Avenue	Signal	23	C	22	C	29	C	36	D
56. Tulare Street/M Street	Signal	10	B	12	B	17	B	13	B
57. Tulare Street/O Street	Signal	12	B	13	B	14	B	19	B
58. Tulare Street/P Street	Signal	9	A	8	A	11	B	17	B
59. Tulare Street/U Street–SR-41 southbound on-ramp	Signal	8	A	16	B	10	B	40	D

Table 5.14-16 (cont.): Peak Hour Intersection Operations—Cumulative Conditions

Intersection	Traffic Control	Existing Conditions				Cumulative Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]
60. Divisadero Street/SR-41 southbound off-ramp	Signal	34	C	16	B	17	B	18	B
61. Tulare Street/SR-41 southbound off-ramp	Signal	20	B	4	A	11	B	2	A
62. Tulare Street/SR-41 northbound ramps	Signal	18	B	23	C	9	A	11	B
62A. Divisadero Street/SR-41 northbound on-ramp	Signal	9	A	21	C	8	A	***68***	***E***
62B. Tulare Street/Divisadero Street	Signal	14	B	21	C	14	B	17	B
63. Tulare Street/First Street	Signal	32	C	36	D	42	D	50	D
64. Inyo Street/H Street	Signal	13	B	12	B	18	B	28	C
65. Inyo Street/Van Ness Avenue	Signal	13	B	11	B	15	B	13	B
66. Ventura Avenue/C Street	Signal	10	B	10	A	15	B	***58***	***E***
67. Ventura Avenue/SR-99 southbound ramps	Signal	16	B	13	B	27	C	15	B
68. Ventura Avenue/SR-99 northbound ramps	Side Street Stop-Controlled	**>150**	**F**	33	D	***>150***	***F***	***>150***	***F***
69. Ventura Avenue/E Street	Side Street Stop-Controlled	33	D	*38*	*E*	*>150*	*F*	*>150*	*F*
70. Ventura Avenue/G Street	Signal/NA[4]	10	A	12	B	—	—	—	—
71. Ventura Avenue/H Street	Side Street Stop-Controlled	30	D	22	C	*>150*	*F*	*>150*	*F*
72. Ventura Avenue/Broadway	Signal	9	A	13	B	27	C	32	C
73. Ventura Avenue/Van Ness Avenue	Signal	22	C	20	C	26	C	*65*	*E*

Table 5.14-16 (cont.): Peak Hour Intersection Operations—Cumulative Conditions

Intersection	Traffic Control	Existing Conditions				Cumulative Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]
74. Ventura Avenue/M Street	Signal	11	B	27	C	26	C	25	C
75. Ventura Avenue/O Street	Signal	32	C	15	B	19	B	21	C
76. Ventura Avenue/P Street	Signal	11	B	7	A	11	B	15	B
77. Ventura Avenue/First Street	Signal	23	C	24	C	24	C	*57*	*E*
78. Santa Clara Street–SR-41 southbound off-ramp/O Street	Signal	20	C	20	C	22	C	17	B
79. San Benito Street–SR-41 northbound on-ramp/M Street	Side Street Stop-Controlled	15	B	**>150**	**F**	***>150***	***F***	***>150***	***F***
80. SR-41 southbound off-ramp/Van Ness Avenue	Side Street Stop-Controlled	21	C	12	B	***>150***	***F***	***123***	***F***
81. SR-41 northbound off-ramp–San Benito Street/Van Ness Avenue	All Way Stop-Controlled	12	B	11	A	***100***	***F***	***130***	***F***
82. Stanislaus Street/Fulton Street	Signal	14	B	20	B	23	C	18	B
83. Tuolumne Street/Fulton Street	Signal	9	A	8	A	33	C	35	C
84. Divisadero Street/San Pablo Avenue	Signal	12	B	11	B	27	C	22	C
85. Inyo Street/Fulton Street	Signal	10	A	10	B	24	C	21	C
86. Tulare Street/E Street	Signal	11	B	12	B	15	B	18	B
87. Fresno Street/H Street[3]	Signal	—	—	—	—	*76*	*E*	*88*	*F*
88. Fresno Street/Fulton Street[4]	Signal	—	—	—	—	23	C	21	C
89. Tulare Street/Fulton Street[4]	Signal	—	—	—	—	29	C	23	C

Notes:
[1] For signalized intersections, the overall average intersection control delay is reported in seconds per vehicle. For side-street stop controlled intersections, the average control delay for the movement with the greatest delay is reported in seconds per vehicle.

Table 5.14-16 (cont.): Peak Hour Intersection Operations—Cumulative Conditions

Intersection	Traffic Control	Existing Conditions				Cumulative Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]	Delay[1]	LOS[2]

[2] Level of Service based on Highway Capacity Manual (Transportation Research Board, 2000).
[3] Baseline Conditions Traffic Control/Baseline Plus Project Traffic Control
[4] Intersection is eliminated by High Speed Rail project.
Delays greater than 2.5 minutes are not reported due to model insensitivity under extreme congestion.
BOLD text indicates the intersection operates at an unacceptable LOS based on the presiding jurisdiction's level of service policy.
Bold Italic text indicates a significant impact based on the significance criteria identified in Section 5.14.3.
Italic text indicates LOS E and F traffic operations which are acceptable pursuant to Fresno General Plan Policy MT-1-l, MT-1-m, and MT-2-i.
Source: Fehr & Peers, 2015.

Freeway Operations

Table 5.14-17 and Table 5.14-18 summarize the AM and PM peak hour level of service (LOS) at the freeway mainline segments and ramp junctions, respectively (refer to Appendix J for calculations). In general, the LOS results for the ramp junctions are worse than the freeway mainline, and are controlling the freeway operations.

Table 5.14-17: Peak Hour Freeway Mainline Operations—Cumulative Conditions

Mainline Segment	Existing Conditions				Cumulative Conditions			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]
SR-99 Northbound								
Jensen Avenue to SR-41	20	C	21	C	33	D	35	D
SR-41 to Ventura Avenue	9	A	12	B	18	B	24	C
Ventura Avenue to Fresno Street	16	B	22	C	31	D	42	D
Stanislaus Street to SR-180	16	B	29	D	33	D	***1.06***	***F***
SR-180 to Belmont Avenue	30	D	**1.01**	**F**	***1.12***	***F***	***1.13***	***F***
Belmont Avenue to Olive Avenue	28	D	**44**	**E**	***1.10***	***F***	***1.16***	***F***
SR-99 Southbound								
Olive Avenue to Belmont Avenue	**43**	**E**	29	D	***1.20***	***F***	***1.15***	***F***
Belmont Avenue to SR-180	28	D	22	C	***41***	***E***	***39***	***E***
SR-180 to Stanislaus Street	26	C	18	C	***1.01***	***F***	***38***	***E***

Table 5.14-17 (cont.): Peak Hour Freeway Mainline Operations—Cumulative Conditions

Mainline Segment	Existing Conditions				Cumulative Conditions			
	AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]
Fresno Street to Ventura Avenue	15	B	12	B	24	C	24	C
Ventura Avenue to SR-41	11	A	10	A	21	C	20	C
SR-41 to Jensen Avenue	14	B	16	B	24	C	25	C
SR-41 Northbound								
Jensen Avenue to SR-99	11	A	12	B	20	C	24	C
SR-99 to Van Ness Avenue	26	C	22	C	***1.03***	***F***	***38***	***E***
M Street to Tulare Street	27	D	29	D	***44***	***E***	***1.04***	***F***
Divisadero Street to SR-180	18	C	22	C	24	C	30	D
SR-180 to McKinley Avenue	30	D	28	D	***38***	***E***	***37***	***E***
SR-41 Southbound								
McKinley Avenue to SR-180	29	D	24	C	***44***	***E***	31	D
SR-180 to Divisadero Street	30	D	18	C	***1.02***	***F***	28	D
Tulare Street to O Street	21	C	15	B	33	D	25	C
Broadway to SR-99	20	C	19	C	35	D	34	D
SR-99 to Jensen Avenue	11	A	7	A	20	C	18	B
SR-180 Eastbound								
SR-99 to Fulton Street	22	C	18	C	***1.14***	***F***	***44***	***E***
Van Ness Avenue to Abby Street	23	C	20	C	***1.06***	***F***	***42***	***E***
Abby Street to SR-41	24	C	21	C	***1.01***	***F***	***42***	***E***
SR-180 Westbound								
SR-41 to Blackstone Avenue	23	C	17	B	35	D	***38***	***E***
Blackstone Avenue to Fulton Street	19	C	17	B	30	D	***39***	***E***
Fulton Street to SR-99	15	B	16	B	27	D	***42***	***E***

Notes:
[1] Density is reported in passenger cars per mile per lane (pcpmpl); volume-to-capacity (v/c) ratio is reported for LOS F conditions.
[2] Level of Service based on *Highway Capacity Manual* (Transportation Research Board, 2000).
BOLD text indicates the freeway mainline segment operates at an unacceptable LOS based on Caltrans's LOS criteria.
Bold Italic text indicates a significant impact based on the significance criteria identified in Section 5.14.3.
Source: Fehr & Peers, 2015.

Table 5.14-18: Peak Hour Freeway Ramp Junction Operations—Cumulative Conditions

Location	Maneuver	Existing Conditions				Cumulative Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]
SR-99 Northbound									
Jensen Avenue eastbound on-ramp	Merge	20	B	21	C	30	D	35	D
Jensen Avenue to SR-41	Weave[3]	n/a	C	n/a	C	***1.24***	***F***	***1.27***	***F***
SR-41 on-ramp	Merge	13	B	18	B	25	C	35	D
Ventura Avenue off-ramp	Diverge	13	B	16	B	22	C	29	D
Ventura Avenue (lane drop)	Basic	11	B	16	B	23	C	30	D
Ventura Avenue on-ramp	Merge	26	C	33	D	***1.20***	***F***	***1.36***	***F***
Fresno Street off-ramp	Diverge	30	D	**40**	**E**	***1.32***	***F***	***1.56***	***F***
Fresno Street on-ramp	Merge	16	B	26	C	28	D	35	D
Stanislaus Street on-ramp	Merge	22	C	**1.06**	**F**	***1.20***	***F***	***1.65***	***F***
SR-180 off-ramp	Diverge	26	C	**1.22**	**F**	***1.18***	***F***	***1.55***	***F***
SR-180 eastbound on-ramp	Merge	22	C	28	D	30	D	31	D
SR-180 westbound on-ramp	Merge	**1.02**	**F**	**1.14**	**F**	***1.28***	***F***	***1.29***	***F***
Belmont Avenue off-ramp	Diverge	**1.30**	**F**	**1.62**	**F**	***1.79***	***F***	***1.81***	***F***
Belmont Avenue on-ramp	Merge	**36**	**E**	**1.13**	**F**	***1.24***	***F***	***1.32***	***F***
Olive Avenue off-ramp	Diverge	33	D	**40**	**E**	***1.26***	***F***	***1.59***	***F***
SR-99 Southbound									
Olive Avenue on-ramp	Merge	**1.15**	**F**	**37**	**E**	***1.37***	***F***	***1.30***	***F***
Belmont Avenue off-ramp	Diverge	**1.12**	**F**	**38**	**E**	***1.46***	***F***	***1.24***	***F***
Belmont Avenue to SR-180	Weave[3]	**0.92**	**E**	n/a	D	***n/a***	***F***	***1.34***	***F***

Table 5.14-18 (cont.): Peak Hour Freeway Ramp Junction Operations—Cumulative Conditions

Location	Maneuver	Existing Conditions				Cumulative Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]
SR-180 westbound on-ramp	Merge	27	C	20	B	31	D	32	D
SR-180 eastbound on-ramp	Merge	29	D	20	B	***1.12***	***F***	***36.3***	***E***
Stanislaus Street off-ramp	Diverge	33	D	24	C	***1.40***	***F***	***1.03***	***F***
Fresno Street off-ramp	Diverge	28	D	22	C	***36.4***	***E***	34.4	D
Fresno Street to Ventura Avenue	Weave[3]	n/a	B	n/a	B	***0.92***	***E***	***0.92***	***E***
Ventura Avenue to SR-41	Weave[3]	n/a	A	13	B	0.73	C	0.67	C
SR-41 to Jensen Avenue	Weave[3]	n/a	B	3	A	***0.93***	***E***	***0.88***	***E***
SR-41 Northbound									
Jensen Avenue eastbound on-ramp	Merge	15	B	16	B	28	D	32	D
Jensen Avenue to SR-99	Weave[3]	32	D	n/a	A	0.74	D	0.63	C
SR-99 on-ramp	Merge	26	C	22	C	***1.03***	***F***	***38***	***E***
Van Ness Avenue off-ramp	Diverge	30	D	28	C	***1.03***	***F***	***37.4***	***E***
Broadway on-ramp	Merge	26	C	27	C	34	D	34	D
M Street on-ramp	Merge	28	D	32	D	***38***	***E***	***1.05***	***F***
Tulare St off-ramp	Diverge	32	D	**38**	**E**	***40***	***E***	***1.13***	***F***
Tulare St on-ramp	Merge	22	C	29	D	30.8	D	***1.14***	***F***
Divisadero Street to SR-180	Weave[3]	n/a	C	n/a	D	***0.95***	***E***	***1.18***	***F***
SR-180 westbound off-ramp	Diverge	14	B	15	B	16.4	B	21.3	C
SR-180 to McKinley Avenue	Weave[3]	**0.90**	**E**	**1.03**	**F**	***n/a***	***F***	***n/a***	***F***

Table 5.14-18 (cont.): Peak Hour Freeway Ramp Junction Operations—Cumulative Conditions

Location	Maneuver	Existing Conditions				Cumulative Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]
SR-41 Southbound									
McKinley Avenue to SR-180	Weave[3]	**0.98**	**E**	**0.90**	**E**	***1.35***	***F***	***1.24***	***F***
SR-180 to Divisadero Street	Weave[3]	**1.09**	**F**	n/a	C	***1.33***	***F***	***1.08***	***F***
Tulare Street on-ramp	Merge	22	C	18	B	31	D	26	C
O Street off-ramp	Diverge	29	D	20	B	**38**	**E**	29	D
Van Ness Avenue off-ramp	Diverge	29	D	24	C	**39**	**E**	**35**	**E**
M Street on-ramp	Merge	21	C	21	C	31	D	31	D
Broadway on-ramp	Merge	20	C	19	B	31	D	31	D
SR-99 off-ramp	Diverge	14	B	13	B	29	C	22	C
SR-99 to Jensen Avenue	Weave[3]	n/a	A	13	B	0.64	C	0.81	D
SR-180 Eastbound									
SR-99 off-ramp	Diverge	12	B	7	A	***1.30***	***F***	24	C
SR-99 to Fulton Street	Weave[3]	n/a	C	n/a	C	***n/a***	***F***	***n/a***	***F***
Van Ness Avenue to Abby Street	Weave[3]	n/a	C	n/a	C	***1.39***	***F***	***1.29***	***F***
Abby Street to SR-41	Weave[3]	n/a	C	n/a	D	***1.39***	***F***	***1.35***	***F***
SR-180 Westbound									
SR-41 northbound on-ramp	Merge	24	C	20	B	***36***	***E***	***1.04***	***F***
SR-41 to Blackstone Avenue	Weave[3]	n/a	C	n/a	B	***1.18***	***F***	***1.30***	***F***
Blackstone Avenue to Fulton Street	Weave[3]	n/a	B	n/a	B	***1.07***	***F***	***1.26***	***F***
Fulton Street to SR-99	Weave[3]	n/a	B	n/a	B	***0.88***	***E***	***1.38***	***F***
SR-99 on-ramp	Merge	13	B	13	B	27	C	***1.09***	***F***

Table 5.14-18 (cont.): Peak Hour Freeway Ramp Junction Operations—Cumulative Conditions

Location	Maneuver	Existing Conditions				Cumulative Conditions			
		AM Peak Hour		PM Peak Hour		AM Peak Hour		PM Peak Hour	
		Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]	Density[1]	LOS[2]

Notes:
[1] Density is reported in passenger cars per mile per lane (pcpmpl); volume-to-capacity (v/c) ratio is reported at freeway ramp merge and diverge sections operating at LOS F, and weave sections operating at LOS E or F.
[2] Freeway ramp merge and diverge level of service based on *Highway Capacity Manual* (Transportation Research Board, 2000). According to Caltrans's *Guide for the Preparation of Traffic Impact Studies* (Caltrans 2002), weave sections are analyzed using the Leisch Method as described in Chapter 500 of the *Highway Design Manual* (Caltrans 2010).
[3] According to Caltrans's *Guide for the Preparation of Traffic Impact Studies* (Caltrans 2002), weave sections are analyzed using the Leisch Method as described in Chapter 500 of the *Highway Design Manual* (Caltrans 2010). Weave LOS results are based on service volume (density not calculated). If the volumes in a weave section result in non-weaving traffic conditions, this table reports the adjacent freeway merge or diverge operations with the more congested LOS.
BOLD text indicates the facility operates at an unacceptable LOS based on Caltrans's LOS criteria.
Bold Italic text indicates a significant impact based on the significance criteria identified in Section 5.14.3.
Source: Fehr & Peers, 2015.

Freeway Off-Ramp Queuing

Table 5.14-19 summarizes the results of the AM and PM peak-hour queuing analysis at each off-ramp study intersection (refer to Appendix G for calculations).

Table 5.14-19: Peak Hour Freeway Off-Ramp Queuing—Cumulative Plus Project Conditions

Freeway Off-Ramp	Ramp Length[1]	Storage Length[2]	95th Percentile Queue[3]			
			Existing Conditions		Cumulative Plus Project Conditions	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
1. SR-99 SB off-ramp/Belmont Avenue	910	60	25	75	*	*
2. SR-99 NB off-ramp/Belmont Avenue	790	10	**75**	**175**	*	*
8. SR-180 WB off-ramp/Blackstone Avenue	1,160	370	200	150	300	300
11. SR-180 EB off-ramp/Abby Street	1,150	370	100	75	225	375
16. SR-180 WB off-ramp/Fulton Street	1,370	550	175	200	325	275
18. SR-180 EB off-ramp/Fulton Street	1,050	250	50	125	***450***	225
32. SR-99 SB off-ramp/Stanislaus Street	1,130	310	100	75	***375***	***625***
44. SR-99 SB off-ramp/Fresno Street	1,030	230	**325**	150	***475***	***425***
45. SR-99 NB off-ramp/Fresno Street	1,070	280	225	100	***650***	225

Table 5.14-19 (cont.): Peak Hour Freeway Off-Ramp Queuing—Cumulative Plus Project Conditions

Freeway Off-Ramp	Ramp Length[1]	Storage Length[2]	95th Percentile Queue[3]			
			Existing Conditions		Cumulative Plus Project Conditions	
			AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
60. SR-41 SB off-ramp/Divisadero Street	980	150	**400**	125	***475***	150
62. SR-41 NB off-ramp/Tulare Street	1,130	320	100	100	175	100
67. SR-99 SB off-ramp/Ventura Avenue	1,230	370	200	125	275	350
68. SR-99 NB off-ramp/Ventura Avenue	1,030	120	**325**	100	*	*
78. SR-41 SB off-ramp/O Street	1,210	270	125	175	175	175
80. SR-41 SB off-ramp/Van Ness Avenue	1,240	520	225	50	***525***	75
81. SR-41 NB off-ramp/Van Ness Avenue	1,000	210	25	25	25	25

Notes:
[1] The ramp length is determined by estimating the distance from the gore point where the off-ramp departs from the mainline to the limit line at the ramp terminal intersection with the local street. Distance reported in feet.
[2] According to consultation with Caltrans staff, the acceptable storage length is the area between the limit line at the ramp terminal intersection and the deceleration zone, defined as the area within 525 feet from the exit nose (see Figure 504.2B in Chapter 500 of the Caltrans *Highway Design Manual* (Caltrans 2010)). Distance reported in feet.
[3] 95th Percentile Queue calculated using Synchro software. Queue reported in feet and rounded up to the nearest 25-foot interval.
* = v/c ration > 3.00; 95th percentile queue length is undermined.
BOLD text indicates the off-ramp queue extends into the deceleration zone.
Bold Italic text indicates a significant impact based on the significance criteria identified in Section 5.14.3.
Source: Fehr & Peers, 2015.

Impacts and Mitigation Measures

This section evaluates the significance of project impacts based on the thresholds of significance and analysis results presented in previous chapters.

Impact TRANS-1: The addition of project traffic to the roadway network results in LOS E and F intersection operations at City of Fresno intersections within the Downtown Planning Area.

Project-specific Impact Analysis

Less than significant impact. The proposed project will increase the traffic volumes at City of Fresno study intersections within the Downtown Planning Area. The addition of the traffic caused by the proposed project will result in LOS E or F operations.

Table 5.14-11 presents the Existing Plus Project traffic operations results at the study intersections. Based on these results, the following intersections within the Downtown Planning Area would operate at LOS E or F during the AM, PM, or both peak hours:

- Divisadero Street/Fulton Street
- Divisadero Street/Van Ness Avenue
- Divisadero Street/P Street–Abby Street–Stanislaus Street
- Stanislaus Street/Broadway
- Stanislaus Street/E Street
- Stanislaus Street/B Street
- Tuolumne Street/A Street
- Tuolumne Street/Broadway
- Fresno Street/H Street
- Ventura Avenue/C Street
- Ventura Avenue/E Street
- Ventura Avenue/G Street
- Ventura Avenue/H Street
- Ventura Avenue/M Street

The City of Fresno General Plan Policy MT-1-j accepts motor vehicle LOS "F" conditions during peak hours on street segments and intersections within the Downtown Planning Area. The ten intersections listed above are City intersections located within this Downtown Planning Area.

Furthermore, Fulton Corridor Specific Plan policy 9-3-1 specifies that a reduced automobile level of service of LOS F during peak hours is allowed in the Core Area bounded by State Routes 99, 41, and 180. Therefore, this impact is **less than significant**.

Cumulative Impact Analysis

Less than significant impact. The proposed project will contribute to increasing traffic volumes at City of Fresno study intersections within the Downtown Planning Area, defined as the DNCP area coterminous with TIZ-I in Fresno General Plan Policy MT-2-i. The addition of traffic caused by the proposed project would contribute to LOS E or F operations during the AM, PM, or both peak hours under Cumulative Conditions.

Table 5.14-16 presents the Cumulative Conditions traffic operations results at the study intersections. Based on these results, the following 11 intersections within the Downtown Planning Area would operate at LOS E or F during the AM, PM, or both peak hours:

- Divisadero Street/H Street–Echo Avenue
- Divisadero Street/Fulton Street
- Divisadero Street/Van Ness Avenue
- Divisadero Street/P Street–Abby Street–Stanislaus Street
- Stanislaus Street/Broadway
- Tuolumne Street/Broadway
- Stanislaus Street/B Street

- Ventura Avenue/E Street
- Ventura Avenue/H Street
- Ventura Avenue/Van Ness Avenue
- Ventura Avenue/First Street
- Fresno Street/H Street

The City of Fresno General Plan Policy MT-1-l and MT-2-i accepts motor vehicle LOS "F" conditions during peak hours on street segments and intersections within the Downtown Planning Area. The 11 intersections listed above are City intersections located within this Downtown Planning Area.

Furthermore, Fulton Corridor Specific Plan policy 9-3-1 specifies that a reduced automobile level of service of LOS F during peak hours is allowed in the Core Area bounded by State Routes 99, 41, and 180. Therefore, this impact is **less than significant**.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Impact TRANS-2: The addition of project traffic to the roadway network results in unacceptable intersection operations at City of Fresno intersections outside the Downtown Planning Area.

Project-specific Impact Analysis

Less than Significant. The addition of proposed project traffic at the study intersections will result in LOS E or better operations. Table 5.14-11 presents the Existing Plus Project traffic operations results at the study intersections. Based on these results, all intersections outside the Downtown Planning Area would operate at LOS E or better during the AM and PM peak hours. Therefore, this impact is **less than significant**.

Cumulative Impact Analysis

Potentially significant impact. The addition of proposed project traffic at the study intersections in conjunction with projected future traffic growth from reasonably foreseeable projects will result in LOS F operations. Table 5.14-16 presents the Cumulative Conditions traffic operations results at the study intersections. Based on these results, the following intersections outside the Downtown Planning Area would operate at LOS F during the AM, PM, or both peak hours:

- Belmont Avenue/Golden State Boulevard–Wesley Avenue
- Belmont Avenue/Palm Avenue

Mitigation Measures

Project-specific

No mitigation measures are required.

The following mitigation measures were not included in the MEIR but are applicable to this project:

Cumulative

MM TRANS-2a The City of Fresno shall monitor AM and PM peak-hour traffic operations at the impacted intersections at least every 3 years. Once the impacted intersections reach LOS E operations during either the AM or PM peak hour, a Transportation Management Association (TMA) shall be formed and funded to actively implement feasible transportation demand management (TDM) strategies that reduce peak-hour vehicle trips to and from the project area, as supported by DNCP Policy 3.3.3 and General Plan Policy MT-2-g. The TMA will implement TDM measures such as:

- Provide discounted transit passes.
- Coordinate with Fresno Area Express and TMA members to ensure transit schedules align with TMA member work schedules to the extent feasible.
- Organize ridesharing, bike-share, or car-share programs.
- Offer shuttle/vanpool services, in collaboration with employers, to serve major employment centers.
- Operate a commute trip reduction program that includes measures such as:
  - Preferential carpool parking.
  - Encouraging flexible work schedules/telecommuting.
  - Conducting marketing campaigns to encourage non-auto modes for commuting and other travel purposes.
  - Encouraging the use of a transportation coordinator for the project area
  - Provide end-of-trip facilities for bicyclists.

MM TRANS-2b The City of Fresno shall monitor AM and PM peak-hour traffic operations at the impacted intersections at least every 3 years. The monitoring program will identify improvements that are needed, if any, to mitigate the project's impacts to traffic operations at these impacted locations. If the monitoring program determines that the proposed project causes an intersection to operate at unacceptable levels (LOS E or F), or adds more than five seconds of delay to an intersection already operating at an unacceptable LOS, the City of Fresno shall implement mitigation measures that improve operations to mitigate the project's impact, if feasible. These measures may include, but are not limited to, feasible TDM strategies to reduce peak-hour vehicle trips or physical improvements, such as adding traffic signals, turn lanes, travel lanes, roundabouts, or the specific improvements listed for each impacted study intersection below.

- Belmont Avenue/Golden State Boulevard-Wesley Avenue
  - Signalize the intersection.
  - Widen the westbound approach to two through lanes and one protected left-turn lane.
- Belmont Avenue/Palm Avenue
  - Convert the northbound shared through/left-turn lane to separate through and left-turn lanes.
  - Convert the eastbound and westbound shared through/left-turn lane to a single left-turn lane.
  - Convert the left-turn movements to protected phasing.
  - Add a second eastbound left-turn lane.
  - Convert the eastbound shared through/right-turn lane to separate through and right-turn lanes.
  - Add a second northbound left-turn lane.
  - Optimize the signal timings.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Significant and unavoidable impact. The proposed project will contribute to increasing traffic volumes at City of Fresno study intersections outside the Core Area, Table 5.14-16 presents the Cumulative Plus Project traffic operations results at the study intersections. Based on these results and the significance criteria presented in Section 5.14.3, the proposed project's incremental effects on intersection operations would be cumulatively considerable at the following two City of Fresno study intersections during the AM, PM, or both peak hours:

- Belmont Circle/Golden State Boulevard–Wesley Avenue
- Belmont Avenue/Palm Avenue

The specific improvements listed below for the impacted City of Fresno study intersections would address the proposed project's cumulatively considerable incremental effects on intersection traffic operations.

Belmont Avenue/Golden State Boulevard-Wesley Avenue

The proposed project would contribute to increased traffic delay at the Belmont Avenue/Golden State Boulevard-Wesley Avenue intersection during the AM and PM peak hours contributing to LOS F conditions. This contribution to traffic delay is defined as cumulatively considerable, and therefore a significant impact. The following improvements would improve operations to LOS C during the AM and PM peak hour under Cumulative conditions:

- Signalize the intersection.
- Widen the westbound approach to two through lanes and one protected left-turn lane.

These improvements or improvements providing similar operational benefits as approved by the City Traffic Engineer will be needed when the intersection degrades to LOS F operations. These improvements are not included in the Fresno COG 2014 RTP/SCS, Fresno Major Streets Impact (FMSI) fee program, Traffic Signal Mitigation Impact (TSMI) fee program, or Regional Transportation Mitigation Fee (RTMF).

Although these improvements would mitigate the proposed project's cumulatively considerable incremental effect, full funding for these improvements is uncertain and this impact would remain **significant and unavoidable**.

Belmont Avenue/Palm Avenue

The proposed project would contribute to increased traffic delay at the Belmont Avenue/Palm Avenue intersection during the PM peak hour contributing to LOS F conditions. This contribution to traffic delay is defined as cumulatively considerable, and therefore a significant impact. The following improvements would improve operations by reducing delay:

- Convert the northbound shared through/left-turn lane to separate through and left-turn lanes.
- Convert the eastbound and westbound shared through/left-turn lane to a single left-turn lane.
- Convert the left-turn movements to protected phasing.
- Add a second eastbound left-turn lane.
- Convert the eastbound shared through/right-turn lane to separate through and right-turn lanes.
- Add a second northbound left-turn lane.
- Optimize the signal timings.

These improvements or improvements providing similar operational benefits as approved by the City Traffic Engineer will be needed upon project build out. While the LOS remains unacceptable during the AM and PM peak hours, these improvements reduce delay, mitigating the proposed project's cumulative contribution.

The roadway is constrained by existing development on all four corners at this intersection, making the addition of dual left-turn lanes on the northbound and eastbound approaches potentially infeasible. A portion of these improvements are included in the Traffic Signal Mitigation Impact (TSMI) fee program, but not all are identified and funded.

Although these improvements would mitigate the proposed project's cumulatively considerable incremental effect, due to right of-way and funding constraints, this impact would remain **significant and unavoidable**.

Impact TRANS-3: The addition of project traffic to the roadway network results in unacceptable intersection operations at Caltrans study intersections.

Project-specific Impact Analysis

Potentially significant impact. The addition of proposed project traffic at the study intersections will result in LOS E or F operations. Table 5.14-11 presents the Existing Plus Project traffic operations

results at the study intersections. Based on these results, the following intersections within Caltrans's jurisdiction would operate at LOS E or F during the AM, PM, or both peak hours:

- Belmont Avenue/SR-99 SB Ramps
- Belmont Avenue/SR-99 NB Ramps
- SR-180 EB On-Ramp/Van Ness Avenue
- Stanislaus Street/SR-99 NB On-Ramp
- Stanislaus Street/SR-99 SB Off-Ramp
- Tuolumne Street/SR-99 SB Frontage Road
- Tuolumne Street/SR-99 NB Frontage Road
- Fresno Street/SR-99 SB Ramps
- Fresno Street SR-99 NB Ramps
- Ventura Avenue/SR-99 NB Ramps
- San Benito St.–SR-41 NB On-Ramp/M Street
- SR-41 SB Off-Ramp/Van Ness Avenue
- SR-41 NB Off-Ramp–San Benito Street/Van Ness Avenue

The resulting LOS E or F operations are due to a combination of traffic generated by development associated with the proposed project in combination with existing traffic. The City of Fresno General Plan includes the following policy related to transportation funding and regional-level coordination to address regional traffic issues:

Policy MT-2-j: Funding for Multi-Modal Transportation Systems. Continue to seek and secure adequate financing to construct and maintain a complete multi-modal system through such measures as development of impact fees, local sales tax measures, special tax measures, assessment/improvement districts, and regional state, and federal transportation funds and grants.

Policy MT-2-l: Region-wide Transportation Impact Fees. Continue to support the implementation of a metropolitan-wide and region-wide transportation impact fees to cover the proportional share of a development's impacts to and need for a comprehensive multi-modal transportation system that is not funded by other sources. Work with the Council of Fresno County Governments, transportation agencies (e.g., Caltrans, Federal Transportation Agency) and other jurisdictions in the region to develop a method for determining:

- Regional transportation impacts of new development;
- Regional highways, streets, trails, public transportation, goods movement system components consistent with the General Plan necessary to mitigate those impacts and serve projected demand;
- Projected full lifetime costs of the regional transportation system components, including construction, operations, and maintenance;
- Cost covered by establishing funding sources.

Cumulative Impact Analysis

Potentially significant impact. The addition of proposed project traffic at the study intersections will result in LOS E or F operations. Table 5.14-16 presents the Cumulative Plus Project traffic operations results at the study intersections. Based on these results, the following intersections within Caltrans's jurisdiction would operate at LOS E or F during the AM, PM, or both peak hours:

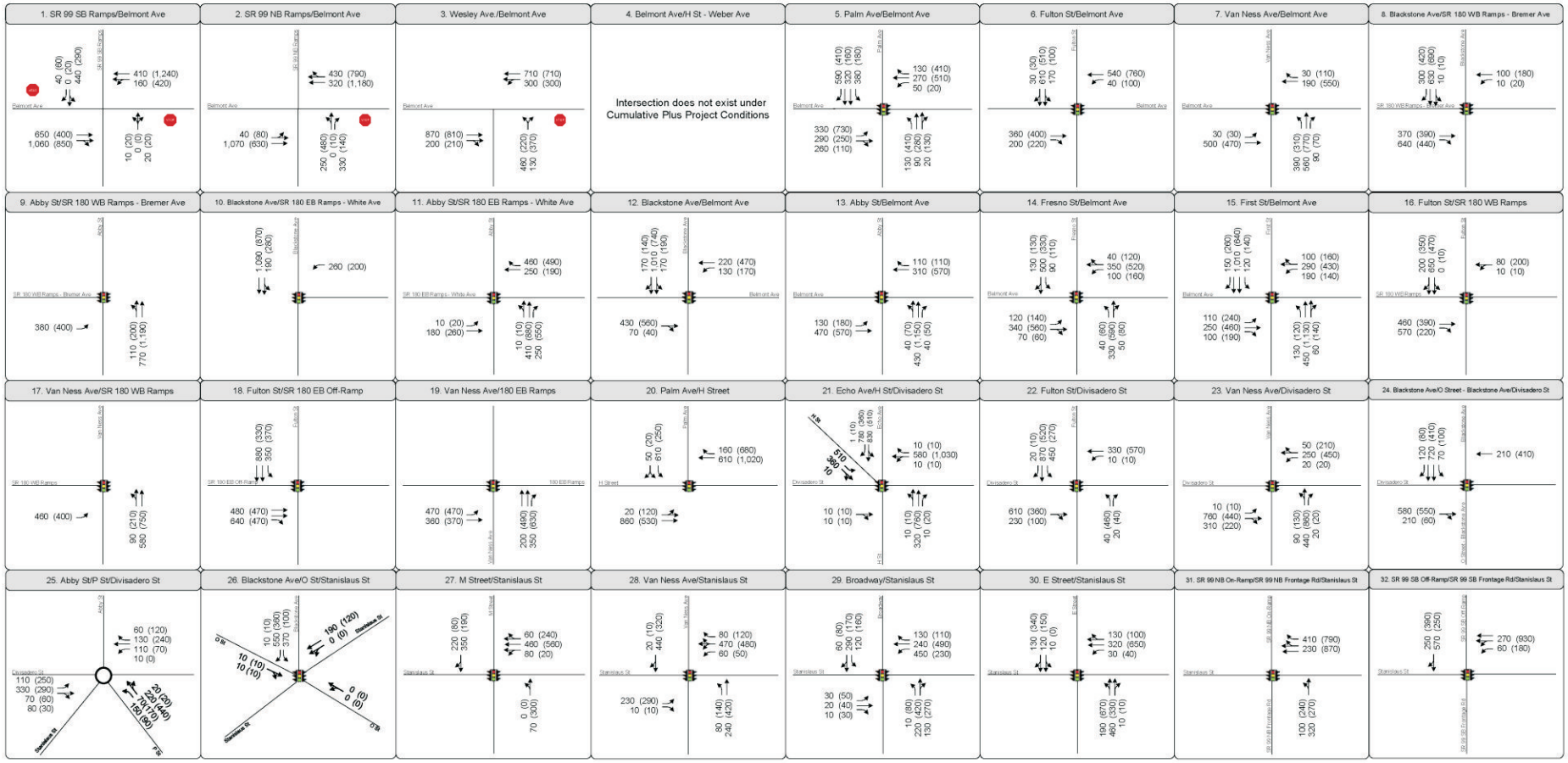
- Belmont Ave/SR-99 SB Ramps
- Belmont Ave/SR-99 NB Ramps
- Stanislaus Street/SR-99 NB On-Ramp
- Stanislaus Street/SR-99 SB Off-Ramp
- Tuolumne Street/SR-99 SB Frontage Road
- Tuolumne Street/SR-99 NB Frontage Road
- Fresno Street/SR-99 NB Ramps
- Divisadero Street/SR-41 NB On-Ramp
- Ventura Avenue/SR-99 NB Ramps
- San Benito Street–SR-41 NB On-Ramp/M Street
- SR-41 SB Off-Ramp/Van Ness Avenue
- SR-41 NB Off-Ramp/San Benito Street/Van Ness Avenue

The resulting LOS E or F operations are due to a combination of traffic generated by development associated with the proposed project in combination with existing traffic and future traffic growth from reasonably foreseeable projects. The City of Fresno General Plan includes the following policy related to transportation funding and regional-level coordination:

Policy MT-2-j: Funding for Multi-Modal Transportation Systems. Continue to seek and secure adequate financing to construct and maintain a complete multi-modal system through such measures as development of impact fees, local sales tax measures, special tax measures, assessment/improvement districts, and regional state, and federal transportation funds and grants.

Policy MT-2-l: Region-wide Transportation Impact Fees. Continue to support the implementation of a metropolitan-wide and region-wide transportation impact fees to cover the proportional share of a development's impacts to and need for a comprehensive multi-modal transportation system that is not funded by other sources. Work with the Council of Fresno County Governments, transportation agencies (e.g., Caltrans, Federal Transportation Agency) and other jurisdictions in the region to develop a method for determining:

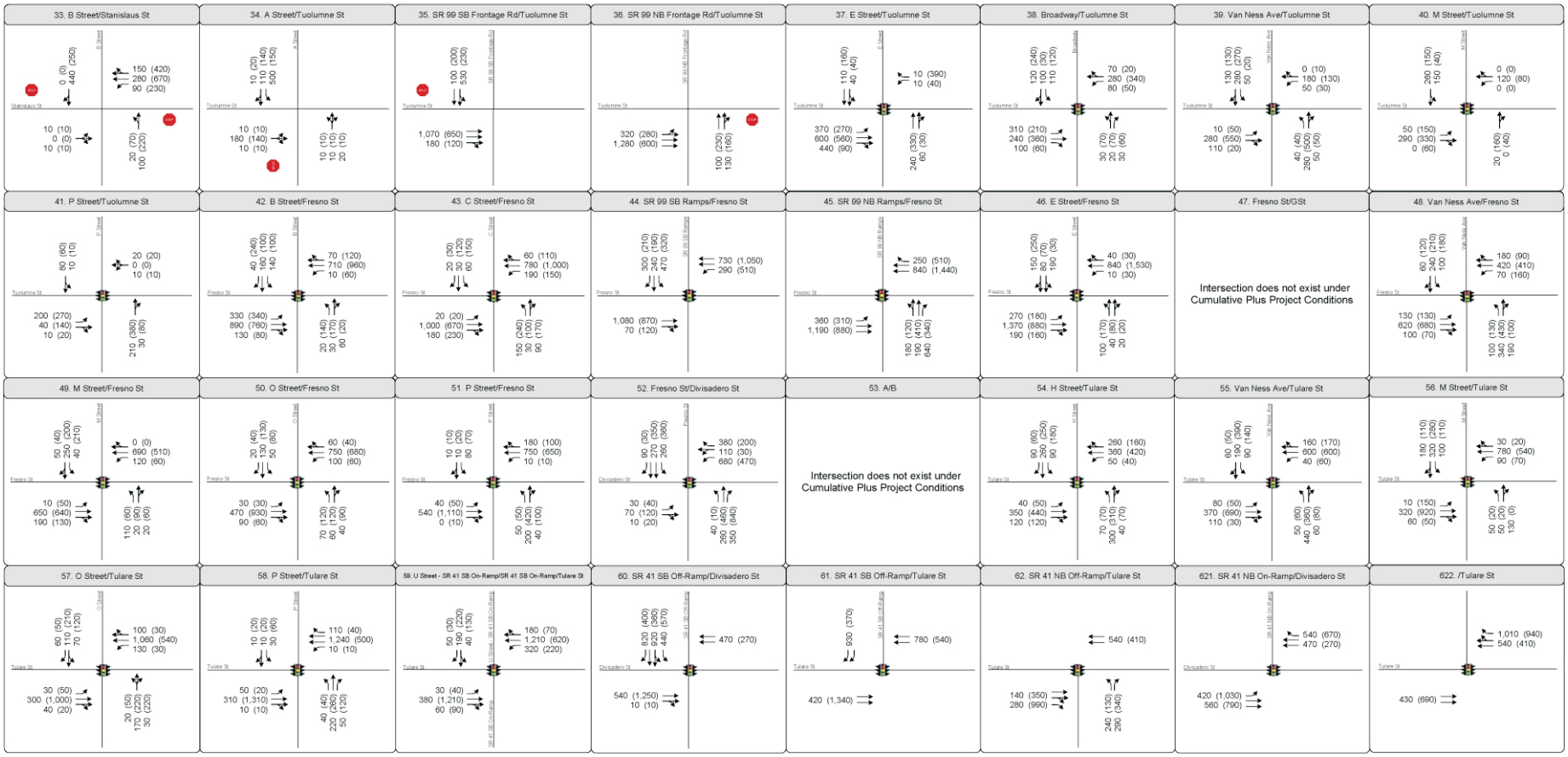
- Regional transportation impacts of new development;
- Regional highways, streets, trails, public transportation, goods movement system components consistent with the General Plan necessary to mitigate those impacts and serve projected demand;
- Projected full lifetime costs of the regional transportation system components, including construction, operations, and maintenance;
- Cost covered by establishing funding sources.



Source: Fehr & Peers, 2015

Exhibit 5.14-8A
Peak Hour Traffic Volumes and Lane Configurations - Cumulative Conditions

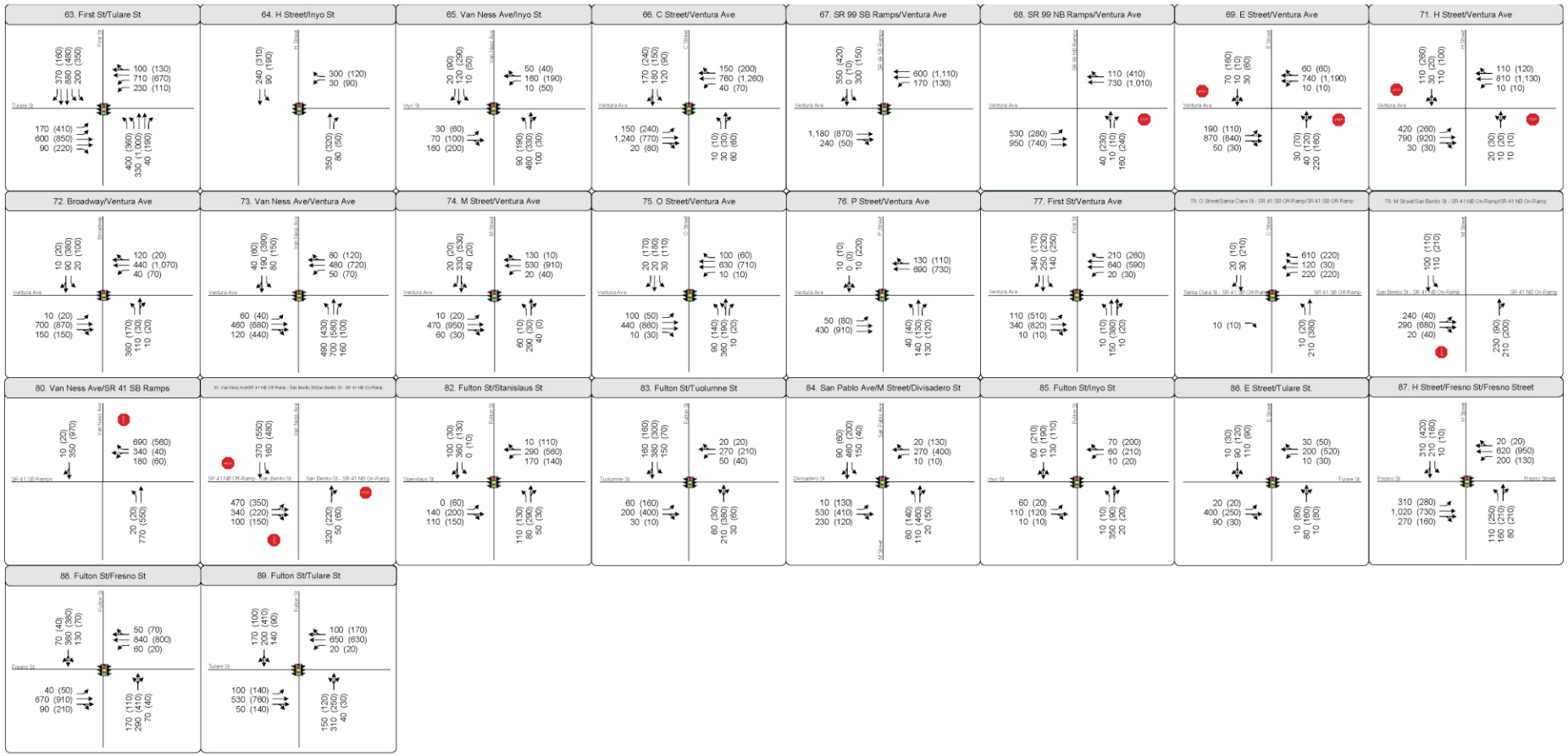
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Source: Fehr & Peers, 2015

Exhibit 5.14-8B
Peak Hour Traffic Volumes and Lane Configurations - Cumulative Conditions

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Source: Fehr & Peers, 2015

Exhibit 5.14-8C
Peak Hour Traffic Volumes and Lane Configurations - Cumulative Conditions

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Source: Fehr & Peers, 2016

FirstCarbon® SOLUTIONS

Exhibit 5.14-9A
AM Peak Hour Level of Service - Cumulative Plus Project Conditions

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Source: Fehr & Peers, 2016

Exhibit 5.14-9B
PM Peak Hour Level of Service - Cumulative Plus Project Conditions

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Mitigation Measures

The following mitigation measures were not included in the MEIR but are applicable to this project:

Project-specific

MM TRANS-3a The City of Fresno shall monitor AM and PM peak-hour traffic operations at the impacted intersections at least every 3 years. Once the impacted intersections reach LOS D operations during either the AM or PM peak hour, a Transportation Management Association (TMA) shall be formed and funded to actively implement feasible transportation demand management (TDM) strategies to reduce peak-hour vehicle trips to and from the project area, as supported by DNCP Policy 3.3.3 and General Plan Policy MT-2-g. The TMA will implement TDM measures such as:

- Provide discounted transit passes.
- Coordinate with Fresno Area Express and TMA members to ensure transit schedules align with TMA member work schedules to the extent feasible.
- Organize ridesharing, bike-share, or car-share programs.
- Offer shuttle/vanpool services, in collaboration with employers, to serve major employment centers.
- Operate a commute trip reduction program that includes measures such as:
  - Preferential carpool parking.
  - Encouraging flexible work schedules/telecommuting.
  - Conducting marketing campaigns to encourage non-auto modes for commuting and other travel purposes.
  - Encouraging the use of a transportation coordinator for the project area.
  - Provide end-of-trip facilities for bicyclists.

MMTRANS-3b Implement General Plan Policy MT-2-j and MT-2-l pursuant to Fresno General Plan MEIR impact TRANS-1 to seek funding for a multimodal transportation system and funding mechanism to address region-wide traffic impacts.

As noted in the Traffic Impact Fee Programs section of this report, the current RTMF administered by Fresno COG will provide 57 percent of the funding for improvements at the following interchanges in the study area:

- SR-99/Belmont Avenue
- SR-41/Tulare Street–Divisadero Street
- SR-180/Fulton Street–Van Ness Avenue

While the RTMF provides 57 percent of the funding for improvements at a few of the impacted locations, there is no identified funding source for the remaining cost at these locations. Furthermore, a funding source has not been identified for the improvements outside of these three interchanges receiving RTMF funding.

Ultimately, improvements to the freeway system would affect roadways under Caltrans's jurisdiction. Since full funding for improvements at these impacted locations has not been identified and the City

of Fresno does not have control over its timing or implementation, this impact would remain **significant and unavoidable**.

Cumulative

MM TRANS-3a The City of Fresno shall monitor AM and PM peak-hour traffic operations at the impacted intersections at least every 3 years. Once the impacted intersections reach LOS D operations during either the AM or PM peak hour, a Transportation Management Association (TMA) shall be formed and funded to actively implement feasible transportation demand management (TDM) strategies to reduce peak-hour vehicle trips to and from the project area, as supported by DNCP Policy 3.3.3 and General Plan Policy MT-2-g. The TMA will implement TDM measures such as:

- Provide discounted transit passes.
- Coordinate with Fresno Area Express and TMA members to ensure transit schedules align with TMA member work schedules to the extent feasible.
- Organize ridesharing, bike-share, or car-share programs.
- Offer shuttle/vanpool services, in collaboration with employers, to serve major employment centers.
- Operate a commute trip reduction program that includes measures such as:
  - Preferential carpool parking.
  - Encouraging flexible work schedules/telecommuting.
  - Conducting marketing campaigns to encourage non-auto modes for commuting and other travel purposes.
  - Encouraging the use of a transportation coordinator for the project area
  - Provide end-of-trip facilities for bicyclists.

MM TRANS-3b Implement General Plan Policy MT-2-j and MT-2-l pursuant to Fresno General Plan MEIR impact TRANS-1 to seek funding for a multimodal transportation system and funding mechanism to address region-wide traffic impacts.

As noted in the Traffic Impact Fee Programs section of this report, the current RTMF administered by Fresno COG will provide 57 percent of the funding for improvements at the following interchanges in the study area:

- SR-99/Belmont Avenue
- SR-41/Tulare Street–Divisadero Street
- SR-180/Fulton Street–Van Ness Avenue

While the RTMF provides 57 percent of the funding for improvements at a few of the impacted locations, there is no identified funding source for the remaining cost at these locations. Furthermore, a funding source has not been identified for the improvements outside of these three interchanges receiving RTMF funding.

Ultimately, improvements to the freeway system would affect roadways under Caltrans's jurisdiction. Since full funding for improvements at these impacted locations has not been identified and the City

of Fresno does not have control over its timing or implementation, this impact would remain **significant and unavoidable**.

Level of Significance After Mitigation

Project-specific

Since the City of Fresno does not have jurisdiction over implementing improvements to facilities controlled by Caltrans, this impact remains significant and unavoidable.

Cumulative

Since the City of Fresno does not have jurisdiction over implementing improvements to facilities controlled by Caltrans, this impact remains significant and unavoidable.

Impact TRANS-4: The addition of project traffic to the roadway network results in unacceptable freeway operations.

Project-specific Impact Analysis

Significant Impact. Table 5.14-12 and Table 5.14-13 summarize the AM and PM peak-hour level of service (LOS) at the freeway mainline segments and ramp junctions, respectively (refer to Appendix J for calculations). In general, the LOS results for the ramp junctions are worse than the freeway mainline, and are controlling the freeway operations. Based on the results in Table 5.14-12 and Table 5.14-13 and the significance criteria identified in Section 5.14.3, the project causes a significant impact at the following freeway locations during the AM and/or PM peak hour:

SR-99 Northbound
- Jensen Avenue to SR-41
- Ventura Avenue On-Ramp
- Fresno Street Off-Ramp
- Stanislaus Street On-Ramp
- Stanislaus Street to SR-180
- SR-180 Off-Ramp
- SR-180 Westbound On-Ramp
- SR-180 to Belmont Avenue
- Belmont Avenue Off-Ramp
- Belmont Avenue On-Ramp
- Belmont Avenue to Olive Avenue
- Olive Avenue Off-Ramp

SR-99 Southbound
- Olive Avenue On-Ramp
- Olive Avenue to Belmont Avenue
- Belmont Avenue Off-Ramp
- Belmont Avenue to SR-180
- SR-180 Eastbound On-Ramp
- SR-180 to Stanislaus Street
- Stanislaus Street Off-Ramp

SR-41 Northbound
- M Street On-Ramp
- Tulare Street Off-Ramp
- Divisadero Street to SR-180
- SR-180 to McKinley Avenue

SR-41 Southbound
- McKinley Avenue to SR-180
- SR-180 to Divisadero Street

SR-180 Eastbound
- SR-99 to Fulton Street
- Van Ness Avenue to Abby Street
- Abby Street to SR-41

SR-180 Westbound
- SR-41 to Blackstone Avenue

The resulting LOS E or F operations are due to a combination of traffic generated by development associated with the proposed project in combination with existing traffic. The City of Fresno General Plan includes the following policy related to transportation funding and regional-level coordination to address regional traffic issues:

Policy MT-2-j: Funding for Multi-Modal Transportation Systems. Continue to seek and secure adequate financing to construct and maintain a complete multi-modal system through such measures as development of impact fees, local sales tax measures, special tax measures, assessment/improvement districts, and regional state, and federal transportation funds and grants.

Policy MT-2-l: Region-wide Transportation Impact Fees. Continue to support the implementation of a metropolitan-wide and region-wide transportation impact fees to cover the proportional share of a development's impacts to and need for a comprehensive multi-modal transportation system that is not funded by other sources. Work with the Council of Fresno County Governments, transportation agencies (e.g., Caltrans, Federal Transportation Agency) and other jurisdictions in the region to develop a method for determining:

- Regional transportation impacts of new development;
- Regional highways, streets, trails, public transportation, goods movement system components consistent with the General Plan necessary to mitigate those impacts and serve projected demand;
- Projected full lifetime costs of the regional transportation system components, including construction, operations, and maintenance;
- Cost covered by establishing funding sources.

Cumulative Impact Analysis

Significant Impact. Table 5.14-17 and Table 5.14-18 summarize the AM and PM peak-hour level of service (LOS) at the freeway mainline segments and ramp junctions, respectively (refer to Appendix J for calculations). In general, the LOS results for ramp junctions are worse than the freeway mainline, and are controlling the freeway operations. Based on the results in Table 5.14-17 and Table 5.14-18 and the significance criteria identified in Section 5.14.3, the project causes a significant impact at the following freeway locations during the AM and/or PM peak hour:

SR-99 Northbound

- Jensen Avenue to SR-41
- Stanislaus Street to SR-180
- SR-180 to Belmont Avenue
- Belmont Avenue to Olive Avenue
- Ventura Avenue On-Ramp
- Fresno Street Off-Ramp
- Stanislaus Street On-Ramp
- SR-180 Off-Ramp
- SR-180 WB On-Ramp
- Belmont Avenue Off-Ramp

SR-41 Northbound

- SR-99 to Van Ness Avenue
- M Street to Tulare Street SR-99 On-Ramp
- Van Ness Avenue Off-Ramp
- M Street On-Ramp
- Tulare Street Off-Ramp
- Divisadero Street to SR-180
- SR-180 to McKinley Avenue

SR-41 Southbound

- McKinley Avenue to SR-180
- SR-180 to Divisadero Street

- Belmont Avenue On-Ramp
- Olive Avenue Off-Ramp

SR-99 Southbound

- Olive Avenue to Belmont Avenue
- SR-180 to Stanislaus Street
- Olive Avenue On-Ramp
- Belmont Avenue Off-Ramp
- Belmont Avenue to SR-180
- SR-180 EB On-Ramp
- Stanislaus St Off-Ramp
- Fresno Street Off-Ramp
- Fresno Street to Ventura Avenue
- SR-41 to Jensen Avenue
- O Street Off-Ramp
- Van Ness Avenue Off-Ramp

SR-180 Eastbound

- SR-99 Off-Ramp
- SR-99 to Fulton Street
- Van Ness Avenue to Abby Street
- Abby Street to SR-41

SR-180 Westbound

- SR-41 NB On-Ramp
- SR-41 to Blackstone Avenue
- Blackstone Avenue to Fulton Street
- Fulton Street to SR-99
- SR-99 On-Ramp

The resulting LOS E or F operations are due to a combination of traffic generated by development associated with the proposed project in combination with existing traffic and future traffic growth from reasonably foreseeable projects. The City of Fresno General Plan includes the following policy related to transportation funding and regional-level coordination:

Policy MT-2-j: Funding for Multi-Modal Transportation Systems. Continue to seek and secure adequate financing to construct and maintain a complete multi-modal system through such measures as development of impact fees, local sales tax measures, special tax measures, assessment/improvement districts, and regional state, and federal transportation funds and grants.

Policy MT-2-l: Region-wide Transportation Impact Fees. Continue to support the implementation of a metropolitan-wide and region-wide transportation impact fees to cover the proportional share of a development's impacts to and need for a comprehensive multi-modal transportation system that is not funded by other sources. Work with the Council of Fresno County Governments, transportation agencies (e.g., Caltrans, Federal Transportation Agency) and other jurisdictions in the region to develop a method for determining:

- Regional transportation impacts of new development;
- Regional highways, streets, trails, public transportation, goods movement system components consistent with the General Plan necessary to mitigate those impacts and serve projected demand;
- Projected full lifetime costs of the regional transportation system components, including construction, operations, and maintenance;
- Cost covered by establishing funding sources.

Mitigation Measures

The following mitigation measures were not included in the MEIR but are applicable to this project:

Project-specific

MM TRANS-4a The City of Fresno shall monitor AM and PM peak-hour traffic operations at the impacted locations at least every 3 years. Once the impacted locations reach LOS D

operations during either the AM or PM peak hour, a Transportation Management Association (TMA) shall be formed and funded to actively implement feasible transportation demand management (TDM) strategies to reduce peak-hour vehicle trips to and from the project area, as supported by DNCP Policy 3.3.3 and General Plan Policy MT-2-g. The TMA will implement TDM measures such as:

- Provide discounted transit passes.
- Coordinate with Fresno Area Express and TMA members to ensure transit schedules align with TMA member work schedules to the extent feasible.
- Organize ridesharing, bike-share, or car-share programs.
- Offer shuttle/vanpool services, in collaboration with employers, to serve major employment centers.
- Operate a commute trip reduction program that includes measures such as:
  - Preferential carpool parking.
  - Encouraging flexible work schedules/telecommuting.
  - Conducting marketing campaigns to encourage non-auto modes for commuting and other travel purposes.
  - Encouraging the use of a transportation coordinator for the project area.
  - Provide end-of-trip facilities for bicyclists.

MM TRANS-4b Implement General Plan Policy MT-2-j and MT-2-l pursuant to Fresno General Plan MEIR impact TRANS-1 to seek funding for a multimodal transportation system and funding mechanism to address region-wide traffic impacts.

There are no currently identified funding sources for improvements at the impacted locations.

Ultimately, improvements to the freeway system would affect roadways under Caltrans's jurisdiction. Since full funding for improvements at these impacted locations has not been identified and the City of Fresno does not have control over its timing or implementation, this impact would remain **significant and unavoidable**.

Cumulative

MM TRANS-4a The City of Fresno shall monitor AM and PM peak-hour traffic operations at the impacted locations at least every 3 years. Once the impacted locations reach LOS D operations during either the AM or PM peak hour, a Transportation Management Association (TMA) shall be formed and funded to actively implement feasible transportation demand management (TDM) strategies to reduce peak-hour vehicle trips to and from the project area, as supported by DNCP Policy 3.3.3 and General Plan Policy MT-2-g. The TMA will implement TDM measures such as:

- Provide discounted transit passes.
- Coordinate with Fresno Area Express and TMA members to ensure transit schedules align with TMA member work schedules to the extent feasible.
- Organize ridesharing, bike-share, or car-share programs.

- Offer shuttle/vanpool services, in collaboration with employers, to serve major employment centers.
- Operate a commute trip reduction program that includes measures such as:
- Preferential carpool parking.
  - Encouraging flexible work schedules/telecommuting.
  - Conducting marketing campaigns to encourage non-auto modes for commuting and other travel purposes.
  - Encouraging the use of a transportation coordinator for the project area.
  - Provide end-of-trip facilities for bicyclists.

MM TRANS-4b Implement General Plan Policy MT-2-j and MT-2-l pursuant to Fresno General Plan MEIR impact TRANS-1 to seek funding for a multimodal transportation system and funding mechanism to address region-wide traffic impacts.

There are no currently identified funding sources for improvements at the impacted locations.

Ultimately, improvements to the freeway system would affect roadways under Caltrans's jurisdiction. Since full funding for improvements at these impacted locations has not been identified and the City of Fresno does not have control over its timing or implementation, this impact would remain **significant and unavoidable**.

Level of Significance After Mitigation

Project-specific

Since the City of Fresno does not have jurisdiction over implementing improvements to facilities controlled by Caltrans, this impact remains significant and unavoidable.

Cumulative

Since the City of Fresno does not have jurisdiction over implementing improvements to facilities controlled by Caltrans, this impact remains significant and unavoidable.

Impact TRANS-5: The addition of project traffic to the roadway network results in unacceptable queuing at freeway off-ramps.

Project-specific Impact Analysis

Significant Impact. Table 5.14-14 summarizes the results of the AM and PM peak-hour queuing analysis at each off-ramp study intersection (refer to Appendix D for calculations). Based on these results, the proposed project would cause the 95th percentile queues to extend into the deceleration zone, or increase baseline 95th percentile queues to extend further into the deceleration zone, at the following locations:

- SR-99 SB Off-Ramp/Belmont Avenue
- SR-99 NB Off-Ramp/Belmont Avenue
- SR-99 SB Off-Ramp/Stanislaus Street
- SR-99 SB Off-Ramp/Fresno Street
- SR-99 NB Off-Ramp/Fresno Street

- SR-41 SB Off-Ramp/Divisadero Street
- SR-99 NB Off-Ramp/Ventura Avenue
- SR-41 SB Off-Ramp/Van Ness Avenue

The resulting queues are due to a combination of traffic generated by development associated with the proposed project in combination with existing traffic. The City of Fresno General Plan includes the following policy related to transportation funding and regional-level coordination to address regional traffic issues:

Policy MT-2-j: Funding for Multi-Modal Transportation Systems. Continue to seek and secure adequate financing to construct and maintain a complete multi-modal system through such measures as development of impact fees, local sales tax measures, special tax measures, assessment/improvement districts, and regional state, and federal transportation funds and grants.

Policy MT-2-l: Region-wide Transportation Impact Fees. Continue to support the implementation of a metropolitan-wide and region-wide transportation impact fees to cover the proportional share of a development's impacts to and need for a comprehensive multi-modal transportation system that is not funded by other sources. Work with the Council of Fresno County Governments, transportation agencies (e.g., Caltrans, Federal Transportation Agency) and other jurisdictions in the region to develop a method for determining:

- Regional transportation impacts of new development;
- Regional highways, streets, trails, public transportation, goods movement system components consistent with the General Plan necessary to mitigate those impacts and serve projected demand;
- Projected full lifetime costs of the regional transportation system components, including construction, operations, and maintenance;
- Cost covered by establishing funding sources.

Cumulative Impact Analysis

Significant Impact. Table 5.14-19 summarizes the results of the AM and PM peak-hour queueing analysis at each off-ramp study intersection (refer to Appendix J for calculations). Based on these results, the proposed project would cause the 95th percentile queues to extend into the deceleration zone, or increase baseline 95th percentile queues to extend further into the deceleration zone, at the following locations:

- SR-99 SB Off-Ramp/Belmont Avenue
- SR-99 NB Off-Ramp/Belmont Avenue
- SR-180 EB Off-Ramp/Fulton Street
- SR-99 SB Off-Ramp/Stanislaus Street
- SR-99 SB Off-Ramp/Fresno Street
- SR-99 NB Off-Ramp/Fresno Street
- SR-41 SB Off-Ramp/Divisadero Street

- SR-99 NB Off-Ramp/Ventura Avenue
- SR-41 SB Off-Ramp/Van Ness Avenue

The resulting queues are due to a combination of traffic generated by development associated with the proposed project in combination with existing traffic and future traffic growth from reasonably foreseeable projects. The City of Fresno General Plan includes the following policy related to transportation funding and regional-level coordination:

Policy MT-2-j: Funding for Multi-Modal Transportation Systems. Continue to seek and secure adequate financing to construct and maintain a complete multi-modal system through such measures as development of impact fees, local sales tax measures, special tax measures, assessment/improvement districts, and regional state, and federal transportation funds and grants.

Policy MT-2-l: Region-wide Transportation Impact Fees. Continue to support the implementation of a metropolitan-wide and region-wide transportation impact fees to cover the proportional share of a development's impacts to and need for a comprehensive multi-modal transportation system that is not funded by other sources. Work with the Council of Fresno County Governments, transportation agencies (e.g., Caltrans, Federal Transportation Agency) and other jurisdictions in the region to develop a method for determining:

- Regional transportation impacts of new development;
- Regional highways, streets, trails, public transportation, goods movement system components consistent with the General Plan necessary to mitigate those impacts and serve projected demand;
- Projected full lifetime costs of the regional transportation system components, including construction, operations, and maintenance;
- Cost covered by establishing funding sources.

Mitigation Measures

The following mitigation measures were not included in the MEIR but are applicable to this project:

Project-specific

MM TRANS-5a The City of Fresno shall monitor AM and PM peak-hour traffic queuing at the impacted ramps at least every 3 years. Once the queues at the impacted ramps extend into the deceleration zone as defined in Caltrans Highway Design Manual (HDM) during either the AM or PM peak hour, a Transportation Management Association (TMA) shall be formed and funded to actively implement feasible transportation demand management (TDM) strategies to reduce peak-hour vehicle trips to and from the project area, as supported by DNCP Policy 3.3.3 and General Plan Policy MT-2-g. The TMA will implement TDM measures such as:

- Provide discounted transit passes.
- Coordinate with Fresno Area Express and TMA members to ensure transit schedules align with TMA member work schedules to the extent feasible.
- Organize ridesharing, bike-share, or car-share programs.

- Offer shuttle/vanpool services, in collaboration with employers, to serve major employment centers.
- Operate a commute trip reduction program that includes measures such as:
  - Preferential carpool parking.
  - Encouraging flexible work schedules/telecommuting.
  - Conducting marketing campaigns to encourage non-auto modes for commuting and other travel purposes.
  - Encouraging the use of a transportation coordinator for the project area
  - Provide end-of-trip facilities for bicyclists.

MM TRANS-5b Implement General Plan Policy MT-2-j and MT-2-l pursuant to Fresno General Plan MEIR impact TRANS-1 to seek funding for a multimodal transportation system and funding mechanism to address region-wide traffic impacts.

As noted in the Traffic Impact Fee Programs section of this report, the current RTMF administered by Fresno COG will provide 57 percent of the funding for improvements at the following interchanges in the study area:

- SR-99/Belmont Avenue
- SR-41/Tulare Street–Divisadero Street
- SR-180/Fulton Street–Van Ness Avenue

While the RTMF provides 57 percent of the funding for improvements at a few of the impacted off-ramps, there is no identified funding source for the remaining cost at these locations. Furthermore, a funding source has not been identified for the improvements outside of these three interchanges receiving RTMF funding.

Ultimately, improvements to the freeway ramps would affect roadways under Caltrans's jurisdiction. Since full funding for improvements at these impacted locations has not been identified and the City of Fresno does not have control over its timing or implementation, this impact would remain **significant and unavoidable**.

Cumulative

MM TRANS-5a The City of Fresno shall monitor AM and PM peak-hour traffic queuing at the impacted ramps at least every 3 years. Once the queues at the impacted ramps extend into the deceleration zone as defined in Caltrans HDM during either the AM or PM peak hour, a Transportation Management Association (TMA) shall be formed and funded to actively implement feasible transportation demand management (TDM) strategies to reduce peak-hour vehicle trips to and from the project area, as supported by DNCP Policy 3.3.3 and General Plan Policy MT-2-g. The TMA will implement TDM measures such as:

- Provide discounted transit passes.
- Coordinate with Fresno Area Express and TMA members to ensure transit schedules align with TMA member work schedules to the extent feasible.

- Organize ridesharing, bike-share, or car-share programs.
- Offer shuttle/vanpool services, in collaboration with employers, to serve major employment centers.
- Operate a commute trip reduction program that includes measures such as:
  - Preferential carpool parking.
  - Encouraging flexible work schedules/telecommuting.
  - Conducting marketing campaigns to encourage non-auto modes for commuting and other travel purposes.
  - Encouraging the use of a transportation coordinator for the project area
  - Provide end-of-trip facilities for bicyclists.

MM TRANS-5b Implement General Plan Policy MT-2-j and MT-2-l pursuant to Fresno General Plan MEIR impact TRANS-1 to seek funding for a multimodal transportation system and funding mechanism to address region-wide traffic impacts.

As noted in the Traffic Impact Fee Programs section of this report, the current RTMF administered by Fresno COG will provide 57 percent of the funding for improvements at the following interchanges in the study area:

- SR-99/Belmont Avenue
- SR-41/Tulare Street–Divisadero Street
- SR-180/Fulton Street–Van Ness Avenue

While the RTMF provides 57 percent of the funding for improvements at a few of the impacted off-ramps, there is no identified funding source for the remaining cost at these locations. Furthermore, a funding source has not been identified for the improvements outside of these three interchanges receiving RTMF funding.

Ultimately, improvements to the freeway system would affect roadways under Caltrans's jurisdiction. Since full funding for improvements at these impacted locations has not been identified and the City of Fresno does not have control over its timing or implementation, this impact would remain **significant and unavoidable**.

Level of Significance After Mitigation

Project-specific

Since the City of Fresno does not have jurisdiction over implementing improvements to facilities controlled by Caltrans, this impact remains significant and unavoidable.

Cumulative

Since the City of Fresno does not have jurisdiction over implementing improvements to facilities controlled by Caltrans, this impact remains significant and unavoidable.

Impact TRANS-6: The addition of project traffic to the transportation network would increase ridership and demand for transit service.

Project-specific Impact Analysis

Less than significant impact. The addition of the project would result in the addition of residents, employees and visitors to the study area, some of which would utilize transit. However, it is not anticipated that transit ridership generated by the project would adversely affect transit operations already planned for the study area. Furthermore, the proposed project includes goals and policies that support improving transit operations within, into, and out of the study area.

The proposed plans will not adversely affect existing or planned transit facilities. The proposed project would not conflict with adopted plans, policies, or programs regarding transit facilities. Therefore, this impact is considered **less than significant.**

Cumulative Impact Analysis

Less than significant impact. As discussed above, it is not anticipated that transit ridership generated by the project would not adversely affect transit operations already planned for the study area. Furthermore, the proposed project includes goals and policies that support improving transit operations within, into, and out of the study area. Therefore, this impact is considered **less than significant.**

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Impact TRANS-7: The addition of project traffic to the transportation network would increase demand for bicycle and pedestrian facilities.

Project-specific Impact Analysis

Potentially significant impact. The development potential associated with the proposed plans would result in the addition of residents, employees, and visitors to the study area, some of which will increase cycling or walking activity in the area. Implementation of the proposed project would result in the construction of bicycle facilities as identified in the DNCP and FCSP. The DNCP and FCSP also include goals and policies supporting the improvement of the existing pedestrian environment,

including completion of sidewalks where they currently do not exist, sidewalk widening, enhanced street crossings, and bulb outs at intersections.

The proposed project will not adversely affect existing or planned bicycle or pedestrian networks. However, the proposed project does propose some changes to the planned bicycle network identified in the City of Fresno's Bicycle, Pedestrian, and Trails Master Plan. These changes include:

- Changing classification of planned bicycle facilities for the following streets:
  - Fulton Street: Inyo Street to Tuolumne Street (Pedestrian Mall to Class III Bike Route)
  - Fulton Street: Tuolumne Street to Divisadero Street (Class II Bike Lanes to Class III Bike Route)
  - Van Ness Avenue: Mono Street to Tulare Street (Class II Bike Lanes to Class IV Cycle Track)
  - Van Ness Avenue: Tuolumne Street to Divisadero Street (Class II Bike Lanes to Class III Bike Route)
  - Kern Street: California Avenue to G Street (Class II Bike Lanes to Class III Bike Route)
  - Mariposa Mall: Fulton Mall to O Street (Pedestrian Mall to Class III Bike Route)
- Removing planned bicycle facilities on the following streets:
  - H Street: Los Angeles Street to Divisadero Street (Class I Bike Path)
  - Broadway: Los Angeles Street to Inyo Street (Class II Bike Lanes)
  - Broadway: Tuolumne Street to Divisadero Street (Class II Bike Lanes)
  - Stanislaus Street: H Street to G Street (Class II Bike Lanes)
  - El Dorado Street: G Street to Broadway (Class II Bike Lanes)
- Adding planned bicycle facilities on the following streets:
  - H Street: Los Angeles Street to Tulare Street (Class II Bike Lanes)
  - L Street: Fresno Street to San Joaquin Street (Class II Bike Lanes)
  - N Street: Capitol Street to Divisadero Street (Class II Bike Lanes)
  - O Street: Tuolumne Street to Stanislaus Street (Class II Bike Route)
  - P Street: Fresno Street to Tuolumne Street (Class II Bike Lanes)
  - Santa Clara Street: H Street to Broadway (Class II Bike Lanes)
  - Ventura Street: G Street to O Street (Class II Bike Lanes)
  - Mono Street: E Street to G Street (Class II Bike Lanes)
  - Mono Street: Fulton Street to N Street (Class II Bike Lanes)
  - Tulare Street: H Street to R Street (Class II Bike Lanes)
  - Mariposa Street: H Street to Fulton Street (Class III Bike Route)
  - Mariposa Street: O Street to P Street (Class III Bike Route)
  - Fresno Street: O Street to Divisadero Street (Class III Bike Route)
  - Merced Street: Fulton Street to P Street (Class II Bike Lanes)

This impact is considered **potentially significant.**

Cumulative Impact Analysis

Less than significant impact. As discussed above, the proposed project would construct bicycle facilities and include goals and policies supporting the improvement of the pedestrian environment. Therefore, this impact is less than significant.

Mitigation Measures

The following mitigation measures were not included in the MEIR but are applicable to this project:

Project-specific

MM TRANS-7 The City shall update the Bicycle, Pedestrian, and Trails Master Plan to reflect the proposed changes in the DNCP and FCSP. The implementation of this mitigation measure would maintain consistency among the City's plans for bicycle facilities and lessen proposed project's impact to less than significant.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Impact TRANS-8: The addition of project traffic to the transportation network would increase vehicles and pedestrian crossings of the at-grade railroad crossings.

Project-specific Impact Analysis

Potentially significant impact. The development potential associated with the proposed project would result in the addition of residents, employees, and visitors to the study area. While the plan would not adversely crossing operations, the increase in vehicular, bicycle, and pedestrian traffic may result in increased conflicts with trains at at-grade crossings. This impact is considered **potentially significant.**

Mitigation Measures

The following mitigation measures were not included in the MEIR but are applicable to this project:

Project-specific

MM TRANS-8 Implementation of the DNCP and FCSP would include improvements to the existing at-grade railroad crossings to ensure that they have adequate vehicle, bicycle, and pedestrian facilities, and that the crossing gates meet PUC standards. The implementation of these improvements would improve conditions at at-grade railroad crossings and lessen potential project impacts to less than significant.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

5.15 - Utilities and Service Systems

5.15.1 - Introduction

This section describes the existing conditions with regard to utilities and service systems in the Downtown Neighborhoods Community Plan (DNCP) and Fulton Corridor Specific Plan (FCSP) areas. The topics of water, wastewater, drainage/flood control, and solid waste are discussed in this section.

Sources

Information in this section is based on the following sources:

- Fresno General Plan. December 2014.
- Downtown Neighborhoods Community Plan. 2016. The complete report is contained in Appendix A.
- Fulton Corridor Specific Plan. 2016. The complete report is contained in Appendix B.
- Downtown Development Code. 2016. The complete report is contained in Appendix C.
- Comments received in response to the Notice of Preparation. These comments are summarized in Section 1, Introduction, of this Draft EIR. Copies of these comments are contained in Appendix D.
- Comments made during the public scoping meeting. These comments are summarized in Section 1, Introduction, of this Draft EIR. Copies of these comments are contained in Appendix D.
- Water Memorandum. Buche 2013.
- Wastewater Memorandum. Hogg 2013.
- 2010 Urban Water Management Plan. 2012.
- 2015 Urban Water Management Plan. 2016.
- City of Fresno Metropolitan Water Resources Management Plan Update Addendum. 2014. West Yost Associates.[1]

5.15.2 - Environmental Setting

This section discusses the following utilities: water, wastewater, drainage/flood control, and solid waste. The following information is provided in accordance with CEQA Section 15125. The environmental setting discussion provides a baseline discussion of the existing conditions within the DNCP and FCSP areas.

[1] The Fresno Metropolitan Water Resources Management plan was prepared to provide a roadmap for water supply decisions for the five major water agencies serving the area. Thus, the aforementioned plan informed the preparation of the City's subsequent Urban Water Management Plans. Thus, only pertinent data from this plan has been included within the EIR.

Study Area for Project Impacts

The study area for project impacts on utilities and service systems includes the DNCP and FCSP areas.

Study Area for Cumulative Impacts

The study area for the analysis of cumulative impacts is the City of Fresno, as well as the service areas served by the various utility and service providers.

Potable Water Supply

The City Water Division manages and operates the City of Fresno's water system. The City delivers drinking water to approximately 509,265 urban residential, commercial, and industrial customers in over 114 square miles of the City, including many County Islands (unincorporated areas within the City), within the City's Sphere of Influence. Fresno meets its demand for domestic water from two sources: groundwater and treated surface water (City of Fresno 2012).

The City of Fresno operates approximately 260 municipal supply wells that access groundwater from the Kings River Sub-basin of the San Joaquin Valley Groundwater Basin, as well as the Northeast Surface Water Treatment Facility (NESWTF), a 30-million-gallon-per-day (mgd) surface water treatment facility. As growth within the City increases demands, this facility will be expanded by another 30 mgd for a total capacity of 60 mgd. The timing for this expansion is anticipated to occur by approximately 2035; however, the City will monitor system demands and adjust the schedule for this project as is required to meet projected water system demands and maintain the sustainable use of available water resources. Three active wells (PS3A, PS21A, and PS22A) are located near or within the FCSP area. These wells are prone to sanding, air entrainment, and general failure due to receding groundwater levels. Groundwater quality generally meets primary and secondary drinking water standards for municipal use, although chemical contaminant plumes and nitrates pose a threat to the drinking water supply (DNCP 2015).

The Surface Water Treatment Facility (SWTF) located in northeast Fresno receives supplies from the United States Bureau of Reclamation (USBR), Fresno Irrigation District (FID) contract for Kings River Water, and a wastewater recycle exchange agreement with the Fresno Irrigation District. The USBR would supply 60,000 acre-feet per year (afy) in year 2010 through year 2025, the FID would supply an estimated 108,200 afy in year 2010 (125,543 afy actual) (increasing to 132,400 afy by 2035) for the Kings River contracted water, and the FID wastewater exchange agreement would supply 13,800 afy in year 2010 through year 2025 (City of Fresno 2016).

In 2004, the NESWTF, located at Chestnut and Behymer Avenues, began operation. The NESWTF has reduced the dependence on groundwater pumping by the City needed to meet water demand. Prior to NESWTF operation, 100 percent of the City's water demand was met through groundwater pumping. According to the 2015 UWMP, the City had a high in groundwater pumping of 165,540 afy in 2002. Since the NESWTF went online in 2004, groundwater production has dropped to half this value in 2015. In addition, the City has started construction on a new 54-mgd SWTF in southeast Fresno (SESWTF), a 13-mile, 72-inch-diameter raw water gravity main from the Fresno Irrigation District's Fresno Canal to the proposed SESWTF, and approximately 13-miles of Regional

Transmission Mains (RTM) throughout the City. Production from this facility may ultimately reach 80 mgd, with the City demonstrating to DDW that the facility is capable of safely running at higher loading rates. All of these major water system improvements began or will begin construction in 2016 with planned completion in 2017 and 2018, which will help to alleviate groundwater demand.

The SWTF has an existing design capacity of 92.07 acre-feet per day (30 million gallons per day [mgd]). Based on this design capacity, and assuming the SWTF is inoperable for a total of 30 days throughout the year for maintenance activities, the SWTF can provide up to approximately 30,800 afy of treated surface water. Because of operational constraints, the SWTF has a current capacity of only 28,300 afy (27.5 mgd). Plans call for increasing total treatment capacity through correction of the operational constraints bringing the SWTF to its design capacity of 30,800 afy by year 2010. Additional proposed improvements at the facility would increase the capacity to 61,700 afy by year 2020. In addition to the SWTF improvements, the proposed Southeast Surface Water Treatment Plant with a design capacity of 61,700 afy, would bring the total supply to 123,400 afy (City of Fresno 2008).

Groundwater is obtained from the Kings Sub-basin within the San Joaquin Valley Groundwater basin, a natural underground basin (i.e., aquifer). Using approximately 260 City-operated municipal groundwater supply wells, the estimated groundwater pumped in year 2011 was 119, 8013 afy, with a steady decrease to 83,360 afy in 2015.

Because this groundwater replaces a similar volume of surface water that FID contractors would otherwise use for irrigation, the City receives a surface water credit from FID for 46 percent of the water it pumps into the canals under the terms of the Wastewater Recycle Exchange Agreement, up to a maximum of 13,800 acre-feet per year. Surface water obtained under this agreement is treated at the City's SWTF along with its other surface supplies, and pumped into the potable distribution system. To help reduce its use of limited potable water supplies and control groundwater contamination associated with percolation disposal, the City plans to begin using treated effluent from the City-operated Fresno/Clovis Regional Wastewater Reclamation Facility (RWRF) for landscape irrigation and other approved uses by 2030. Refer to the discussion below under the heading "Wastewater Collection" for a detailed discussion of the RWRF. This would require upgrading at least a portion of the RWRF treatment facilities to produce the tertiary quality effluent required for unrestricted use on publicly accessible landscape. It is now estimated the use of recycled water will total 25,000 afy by 2025.

Table 5.15-1 provides a summary of the potable water supplies.

Table 5.15-1: Current and Planned Potable Water Supplies

Water Supply	Additional Detail on Water Supply	Projected Water Supply (af)									
		2020		2025		2030		2035		2040 *(opt)*	
		Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*	Reasonably Available Volume	Total Right or Safe Yield *(optional)*
Groundwater[1]	Kings Subbasin	130,400	—	135,100	—	139,700	—	144,300	—	148,900	—
Surface Water[2]	FID—Agmt.	106,200	—	111,200	—	116,200	—	121,200	—	126,200	—
Surface Water[3]	USBR—CVP	52,600	—	52,600	—	52,600	—	52,600	—	52,600	—
Recycled[4]	Tertiary, disinfected	7,000	—	16,000	—	16,000	—	16,000	—	16,000	—
Recycled[5]	Secondary, undisinfected	10,000	—	10,000	—	10,000	—	10,000	—	10,000	—
Recycled[6]	Tertiary, disinfected	2,500	—	5,000	—	7,500	—	10,000	—	12,500	—
Total		308,700	0	329,900	0	342,000	0	354,100	0	366,200	0

Notes:
1 The value for "Reasonably Available Volume" includes the Safe Yield which increases as the City's SOI expands as discussed in Sections 6.1.5.1 & 6.1.5.2 and in Table 6-3 of the UWMP. Additionally, this value includes water from prior year(s) operation of intentional recharge as shown in Table 6-3 (of the UWMP) for the same year.
2 The City's surface water supply from FID grows as the City's annexed city limits expand as discussed in Section 6.2.1 of the UWMP.
3 The City's USBR CVP Friant Division contract is for 60,000 af of Class 1 water. The 52,600 af/yr value is the historic average allocated value for the City per Figure 7-2 of the UWMP (rounded to nearest 100).
4 The 2020 value of 7,000 af/yr is based on the RWRF's 5 mgd facility; the subsequent increase to 16,000 af/yr reflects the satellite WRF (8 mgd) being constructed and operational shortly after 2025.
5 The annual 10,000 af is the current amount presently directed to farm irrigation of non-food crops adjacent to the RWRF.
6 The City recently had extraction wells at the RWRF reclassified as providing "soil aquifer treated" recycled water. The projected values reflect the incorporation of this water into the flows returned to the metropolitan area and used for purposes as shown in Table 6-9 of the UWMP.
Source: City of Fresno, 2016. Prepared by Provost & Pritchard Consulting Group.

Potable Water Distribution System

In March of 2009, West Yost Associates completed a technical memorandum, Hydraulic Evaluation of the Downtown Central Area Water Supply Network, to determine whether the existing pipes and sources of supply had the capacity to meet increased demand associated with buildout of the General Plan. Although the City's water system is completely interconnected, it is divided into four zones usually operated as stand-alone nodes that primarily rely on local groundwater supplies. Demand within the Downtown area is met by six existing groundwater wells (two are currently inactive), which had a total capacity in 2008 of 8,327 gallons per minute (gpm), or approximately 12 mgd. The 2009 Hydraulic Evaluation determined this would be insufficient to meet future peak demands while also providing a minimum 3,500-gpm fire flow to the areas of highest density, and recommended replacing the two inactive wells with a single new well and rehabilitating a third well to increase its capacity. At the City's request, in May of 2011, West Yost updated the 2009 Hydraulic Evaluation to determine an alternative to the recommended well rehabilitation. The Update concluded that an enhanced connection to a seventh well, located outside the immediate Downtown area, would provide an equivalent water supply.

The City's potable water transmission and distribution system consists of a regional transmission main system, regional transmission grid system, distribution system, and storage tanks, each of which is described briefly below:

- Regional Transmission Main System. Pipes generally 24 inches in diameter or larger that convey water from the Northeast Surface Water Treatment Facility to neighborhoods throughout the City.
- Transmission Grid Main System. A series of 16-inch-diameter water mains that connect the Regional Transmission Main System to local distribution zones.
- Distribution System. A 1, 799-mile network of distribution pipes that range in size from 6 inches to 14 inches in diameter, providing connections to individual customers and supplying the City's fire suppression system.
- Storage Tanks. Reservoir storage that provides operational flexibility and additional peaking capacity to reduce demands on supply and transmission facilities.

In addition to the well improvements described above, the West Yost 2009 Hydraulic Evaluation determined that 3 million gallons of water storage would be needed in the Downtown area to reliably meet fire flow requirements plus peak hour demands. The evaluation also concluded that the Downtown area needed approximately 5,270 feet of new 16-inch pipeline and 9,050 feet of new 24-inch pipeline to ensure that water supplies could be properly distributed throughout the Downtown area, and to improve existing connections to outside wells and the SWTF. Installation of these major transmission mains would be in addition to replacement of an undetermined number of smaller pipes that may not be able to meet future 2025 General Plan demands, depending on the distribution and density of development. These projects have been environmentally cleared and are awaiting implementation.

The 2009 Hydraulic Evaluation mainly focused on the suitability of the Downtown distribution system to meet future demands, but the Fresno Department of Public Utilities (DPU) is also addressing issues related to the reliability and suitability of an aging pipe network. In the FCSP area alone, over 18,000 feet of pipe are known to have been installed prior to 1950, and another 20,000 feet of pipe are suspected to have been installed in the same time period. Thus, approximately 38,000 feet of existing water lines are either approaching or have already exceeded the end of their useful life-cycle.

Existing Water Demand—Citywide

The existing average water use for the City of Fresno is 300 gallons per capita per day. Total water demand for all sectors (industrial, public landscape irrigation, commercial/institutional, multi-family residential, single-family residential) in 2015 was 132,843 afy, and is projected by the 2015 Urban Water Management Plan (UWMP) to reach 262,500 afy by the year 2040. This projection includes conservation savings that will be achieved by the year 2040. Beginning late 2008 through January 2013, the City had initiated and completed the implementation of a residential water meter program through the installation of 113,000 water meters for single-family homes. From the period of 2008 through 2015, there has been a dramatic decline of water usage for all water use sectors.

Existing Water Demand—DNCP and FCSP

The 2015 Urban Water Management Plan projected future water use throughout the Fresno Water Service Area by applying land use-based demand rates to the estimated number of acres within each of the following five Customer Classes:

- Single-Family Residential
- Multi-Family Residential
- Commercial/Institutional
- Industrial
- Landscape Irrigation
- Other
- Fire Service

These rates, which are expressed as acre-feet of water demand per-acre per-year, were applied in this analysis to the estimated number of acres, measured on the basis of individual parcels, contained within each Customer Class in the FCSP and the DNCP. In both Plan Areas, only parcels with no buildings (such as parking lots and vacant land) were assumed to have no existing water demand.

Using this information, it was determined that existing (2010) water demand in the FCSP area was approximately 684,000 gallons per day (gpd), of which 513,000 gpd was attributed to developed parcels and 171,000 gpd to underutilized parcels. In the DNCP area, by contrast, total demand was estimated to be approximately 190 gcpd. The results of this analysis cannot be directly compared with demands calculated for the 2010 UWMP. This is because demand estimates presented in the UWMP were developed for the entire City, with no breakdown by individual neighborhood. However, the unit demand rates used for this analysis were taken from the 2010 UWMP, so it can be assumed the results are consistent with the conclusions reached in that document. Although the

UWMP plan was updated in 2016 (2015 UWMP), it is understood that demands per unit utilized in this analysis would remain the same or be reduced under the new 2015 UWMP given the increased requirements to reduce water usage (such as CA Emergency Conservation Regulation and others).

Plan Area Deficits

Aging infrastructure is one of the plan area's deficits. About 30 percent of the utility networks in the downtown area are over 50 years old and approximately 5 percent are over 100 years old. These networks are either nearing or past their intended design life and are subject to capacity, reliability, and potential failure issues (DNCP 2015).

The City of Fresno (particularly in areas developed more recently than the DNCP area) has some of the highest water use per capita in the State in conjunction with the lowest water rates of any major city, which overburdens the City's water supply. This water resource issue will only intensify if more stringent water conservation measures are not implemented and water rates are not raised to fund much-needed infrastructure improvements (DNCP 2015). In 2015, the City implemented new water rates, and, currently, several infrastructure improvements funded by the new rates are in various stages of development.

Wastewater Collection

Sewer service to most county areas is provided in accordance with a Joint Powers Agreement between the City and Fresno County. The City of Clovis is a capacity owner in trunk sewers and treatment capacity at the RWRF. Other operational sewer districts include the Pinedale Public Utility District and Pinedale County Water District, both of which maintain their collection sewer lines and discharge the effluent into the City of Fresno collection system. The Malaga County Water District maintains its own wastewater treatment facility in south Fresno. Since 1968, Fresno has administered a Mandatory Sewering Ordinance that requires discontinued use of on-site disposal and connection to the Regional Sewer System when it becomes available (City of Fresno 2002).

The City owns and maintains the sewer trunk system that serves the City of Clovis. In total, the City's wastewater collection system consists of:

- 24,217 manholes
- 15 lift stations
- 0.81 mile of force mains
- 54 junction structures, and
- Approximately 1,498 miles of gravity sewer pipes ranging from 6 inches to 84 inches in diameter.

Based on its 2006 Wastewater Collection System Master Plan, the City has established an ongoing program to address operational challenges found throughout its collection system. These include aging facilities, incomplete coverage of the service area, a lack of capacity and, most notably, corrosion of concrete sewers caused by high sulfide levels in the wastewater stream. The improvement projects designed to address these problems can be divided into the following categories:

- Infill to reach currently unserved areas
- Replacement of failed or undersized lines
- Rehabilitation of corroded or otherwise deteriorated lines
- Relief sewers to provide additional peak flow capacity
- Wastewater treatment

As a condition of a Clean Water Grant issued by the federal government, the City of Fresno was designated the Regional Sewer Agency for the Fresno-Clovis Metropolitan Area (FCMA) in 1966. The City operates the RWRF under a Joint Powers Agreement with Clovis and the County of Fresno. The 3,000-acre RWRF was originally constructed in 1947 and is located inside the city limits but within a non-contiguous area situated approximately 3.5 miles southwest of the Chandler Executive Airport. Over the past 40 years, the RWRF has been expanded and rehabilitated several times, most recently in 2010 when process units were added to the facility to address high organic concentrations within incoming wastewater. The treatment plant includes a number of redundant facilities that allow for regular maintenance and provide backup capacity in the event of equipment failure. The RWRF currently provides secondary treatment and has a rated capacity of 80 million gallons per day, with equipment redundancy to accommodate maintenance schedules or equipment failures. Effluent disposal occurs primarily through a combination of infiltration beds located at the RWRF and agricultural irrigation (Sherwood Design Engineers 2011).

Recycled Water

The total volume of wastewater treated at RWRF is either currently used to directly irrigate farmland or sent to incidental percolation basins. After water percolates into the groundwater basin, a portion of this water is then withdrawn and discharged into the FID canal system as part of the Wastewater Reclaimed Exchange Agreement with FID. The City has plans to further develop its newly constructed recycled water use (described in its Recycled Water Master Plan) to include landscape irrigation and non-potable applications, which would require the construction of additional tertiary treatment facilities. The expansion would enable the City to offset potable water use, enhance the sustainability of the water supply, and reduce current dependency on percolation ponds to handle effluent discharge (Sherwood Design Engineers 2011).

Except for incidental and evaporative losses, the total volume of treated wastewater effluent produced at the RWRF is currently used to either irrigate farmland or is discharged to large percolation basins. The percolated effluent helps recharge the local groundwater aquifer, some of which is withdrawn by reclamation wells for agricultural use by FID. Because this effluent effectively replaces an equivalent volume of naturally occurring groundwater that FID would otherwise use, the City receives credit for a portion of the percolated volume that allows it to increase withdrawals from its network of potable wells under the terms of its Wastewater Recycle Exchange Agreement with FID.

Recycled Water—Downtown Neighborhoods Community Plan and the Fulton Corridor Specific Plan

Except for incidental and evaporative losses, the total volume of treated wastewater effluent produced at the RWRF is currently used to irrigate farmland or is discharged to large percolation basins to help recharge the local groundwater aquifer. This allows the City to increase its

groundwater pumping by an amount equal to the volume percolated, but the "excess" groundwater obtained in this way (excess above the level permitted under goals set forth in the Fresno Area Regional Groundwater Management Plan) is discharged into FID canals for delivery to FID's agricultural customers. Because this groundwater replaces a similar volume of surface water that FID contractors would otherwise use for irrigation, the City receives a surface water credit from FID for 46 percent of the water it pumps into the canals under the terms of the agencies' Wastewater Recycle Exchange Agreement, up to a maximum of 13,800 acre-feet per year. Surface water obtained under this agreement is treated at the City's Surface Water Treatment Facility, along with its other surface supplies, and pumped into the potable distribution system.

To help reduce its use of limited potable water supplies and control groundwater contamination associated with percolation disposal, the City plans to begin using treated effluent from the RWRF for landscape irrigation and other approved uses by 2025. This would require upgrading at least a portion of the RWRF's treatment facilities to produce the tertiary quality effluent required for unrestricted use on publically accessible landscape. It is now anticipated this use of recycled water, estimated at 25,000 acre-feet, will be gradually implemented throughout the City as distribution infrastructure is installed in fully developed and newly developing areas. Other areas are also being considered, though, including additional undeveloped growth areas and portions of the existing City where large uses that include landscape irrigation, industrial processes, and dual plumbing systems in large buildings can be most efficiently served.

Preliminary plans set forth in the City's Recycled Water Master Plan (RWMP) and Ordinance: Notice of Preparation and Initial Study (ESA 2010) show the recycled water distribution system starting in the southwest quadrant and expanding in to the northwest then the northeast quadrant of the City. In the southwest quad, coverage would be extensive in the industrial portions of the DNCP located west of SR-99 and also along the western side of the FCSP. The RWMP included no information on potential uses, and therefore offered no information regarding the amount of existing or future potable water use that could be offset with recycled water within these areas.

Although the recycled distribution system described in the RWMP is predicated on the use of effluent from the RWRF, an alternative included in the Master Plan proposes the construction of as many as four satellite reclamation facilities throughout the City. These smaller plants would be similar to the ones discussed in the Wastewater Section, and would substantially reduce the need to move both untreated and treated wastewater long distances before reuse. The City is in the process of finalizing plans for developing its recycling treatment and distribution infrastructure, and the City Council has adopted an ordinance that requires various types of properties to use recycled water for approved uses (in accordance with State Division of Health Services requirements) when it becomes available. Establishing these mandates in advance of when the system is actually able to deliver recycled water allows property owners and developers to incorporate the necessary infrastructure into their building plans so they are ready to use the water once it becomes available.

The planned recycling at the RWRF and/or satellite plants would be in addition to an existing irrigation use of tertiary treated effluent from the City's satellite recycled water facility in North Fresno, which was constructed to serve the Copper River Ranch. The output from this plant, proposed to be approximately 1,250 afy at buildout of the development, could be used to irrigate

the project's golf course and other landscaped areas in the vicinity. Current output is used to irrigate the project's golf course and when demand declines during rainy periods the plant is either shut down or bypassed depending on the estimated length of the rainy period. Originally the operating plan during the rainy season was for the treated effluent to be sent to a percolation basin operated by the Fresno Metropolitan Flood Control District. The treatment plant is currently not permitted for this activity. The amount of effluent used for golf course irrigation would replace a supply that now mainly consists of surface water from FID, which would free up an equivalent volume for alternate potable uses throughout the Fresno area.

5.15.3 - Drainage/Flood Control

Drainage/Flood Control—City of Fresno

The Fresno Metropolitan Flood Control District (FMFCD) is responsible for managing urban water stormwater runoff in the Fresno metropolitan area. The District is authorized to control stormwaters within an approximately 400 square mile urban and rural foothill watershed (known as the Fresno County Stream Group). The District's flood control program is comprised of eight major flood control facilities and related streams and channel features that control the flows from the Fresno County Stream Group (which consists of several low-elevation streams). The Stream Group drains a part of the west slope of the Sierra Nevada between the San Joaquin and Kings rivers. The major structural elements of this flood control system include the following (Sherwood Design Engineers 2011):

- Dams and Reservoirs: Big Dry Creek, Fancier and Redbank Creek
- Detention Basins: Pup Creek, Alluvial Drain, Redbank, Fancher and Big Dry Creek

The FMFCD is responsible for flood control and stormwater planning and management. The District Services Plan provides comprehensive policies and implementation actions for flood control, rural streams management, local stormwater drainage, stormwater quality management, water conservation, recreation, and related wildlife management. Policy coordination among the FMFCD, cities, and the County of Fresno occurs via the inclusion of the Storm Drainage and Flood Control master plan, which is prepared by the district as a specific element within the general plan of each agency. The Storm Drainage and Flood Control Master Plan identifies urban and rural drainage area boundaries, computes runoff flows based on planned land use, identifies facility size and location, establishes street grades necessary to accomplish drainage of the runoff from the point of origin to the nearest collector facility, and identifies natural channels requiring preservation (City of Fresno 2002).

The District is responsible for reviewing all land use proposals for drainage and flood control needs/impacts, including evaluation of the proximity of development to floodplains, the need for the application of floodplain management requirements, and acceptability of proposed floodplain modifications' compliance with and implementation of the Storm Drainage and Flood Control Master Plan and identification of stormwater quality best management practices (City of Fresno 2002).

Stormwater collection in the project area begins in the street gutters that convey runoff to existing storm drain inlets and the underground storm drain conveyance infrastructure. The gutters, as well as all public streets and sidewalks, are maintained by the City of Fresno Street Maintenance Division,

which is responsible for keeping these surface storm drain facilities operating efficiently. The FMFCD stormwater system begins at the storm drain inlets and includes all downstream drainage facilities, including the underground pipes and pump stations that convey runoff to District-owned infiltration basins, which dispose of most annual runoff through percolation into the underlying groundwater table. When storms generate larger volumes of runoff than these basins can handle, it overflows into a network of relief channels that discharge to the San Joaquin River, its tributary streams, or local agricultural canals. The runoff from the FCSP Area is routed to infiltration basins to the west of the plan area where it infiltrates into the groundwater table.

Within the City of Fresno, FMFCD's Storm Drain Master Plan divides the District into local drainage areas of one to two square miles. All inlets, pipes and pumping stations within each drainage area are maintained by the District. It is assumed that this maintenance arrangement will remain in place for the foreseeable future and the City will continue to maintain that portion of the FCSP area's storm drain infrastructure throughout the life of the FCSP and DNCP.

There are two areas within the FCSP area that currently lack complete or adequate storm drain infrastructure. This makes them prone to localized flooding that inconveniences residents, potentially resulting in lower property values and higher insurance costs for both homeowners and businesses. These areas have not historically generated sufficient tax revenue to fund the construction of modern drainage facilities, so a number of storm drain improvements are now being constructed with funding provided by the American Recovery and Reinvestment Act (ARRA). One of these projects is located on Divisadero Street, adjacent to an approximately twelve-block area with no storm drain facilities that extends south from Divisadero into the Plan Area. Although these improvements would provide little immediate relief for this neighborhood, they would make it feasible to relieve existing flooding conditions by extending this system in the future.

The second area, totaling about 50 acres and located in the south corner of the Specific Plan Area, lacks an existing storm drain network. No facilities are currently planned for this area, but it is assumed that storm drains will eventually be needed to support the scale and character of redevelopment being considered. It is anticipated that these new facilities would be constructed at the time of future redevelopment and be connected to the major storm drain lines that now serve the central portion of the Specific Plan Area or to the lines that serve the neighborhood located immediately north of Divisadero Street. Although there are no indications of significant drainage problems within the areas now served by these facilities, shallow nuisance flooding has been reported after heavy rains, leaving standing water that has damaged pavement and inconvenienced both drivers and pedestrians.

5.15.4 - Solid Waste Disposal

Solid Waste—City of Fresno

Fresno diverts a majority of its solid waste away from landfills and into recycling and composting programs. Diversion conserves landfill space, keeps toxic chemicals and materials from contaminating landfills, and enhances the reuse of materials. In 2009, Fresno was ranked highest in the State among larger cities by the California Integrated Waste Management Board (now CalRecycle) for diverting 71 percent of its solid waste. A Council resolution commits the City to the

goal of a 75 percent Waste Diversion Rate by the year 2012 and a Zero Waste goal by the year 2025. The City is still on track for the 2025 Zero Waste goal while the Waste Diversion Rate by 2012 has been delayed. The City was on track to meet the 75 percent goal by 2012, but budget constraints in 2011 prevented the goal from being met in that year. Recycling of construction and demolition is required for any City-issued building, relocation, or demolition permitted project that generates at least 8 cubic yards of material by volume, and all waste must be transported to a City-approved facility (City of Fresno 2014).

The Solid Waste Division of the City of Fresno offers customers convenient and cost efficient, trash, recycling, and green waste collection services (City of Fresno 2014), which includes the DNCP and FCSP. Refuse disposed of in the City of Fresno is transported to Cedar Avenue Recycling and Transfer Station. Once refuse has been off-loaded at the transfer station, it is sorted and non-recyclable solid waste is loaded onto transfer trucks and taken to the American Avenue Landfill located approximately six miles southwest of the City of Kerman. American Avenue Landfill is owned and operated by Fresno County and began operations in 1992 for both public and commercial solid waste haulers. The American Avenue Landfill is a Class III sanitary landfill, meaning that it is a disposal site for non-hazardous solid waste spread in layers, compacted to the smallest practical volume, and an approved daily cover is applied at the end of each operating day (City of Fresno 2014).

The American Avenue Landfill (i.e., American Avenue Disposal Site 10-AA-0009) has a maximum permitted capacity of 32,700,000 cubic yards and a remaining capacity of 29,358,535 cubic yards, with an estimated closure date of August 31, 2031. The maximum permitted throughput is 2,200 tons per day (CalRecycle Facility/Site Summary Details 2015).

5.15.5 - Regulatory Setting

State Policies

Below are summaries of state policies related to public services and utilities (including water and solid waste policies).

California Urban Water Management Planning Act

The Urban Water Management Planning Act (California Water Code Sections 10610-10656) requires that all urban water suppliers with at least 3,000 customers prepare urban water management plans and update them every 5 years. The act requires that urban water management plans include a description of water management tools and options used by that entity that will maximize resources and minimize the need to import water from other regions. Specifically, urban water management plans must:

- Provide current and projected population, climate, and other demographic factors affecting the supplier's water management planning;
- Identify and quantify, to the extent practicable, the existing and planned sources of water available to the supplier;
- Describe the reliability of the water supply and vulnerability to seasonal or climatic shortage;

- Describe plans to supplement or replace that source with alternative sources or water demand management measures;
- Describe the opportunities for exchanges or transfers of water on a short-term or long-term basis (associated with systems that use surface water);
- Quantify past and current water use;
- Provide a description of the supplier's water demand management measures, including schedule of implementation, program to measure effectiveness of measures, and anticipated water demand reductions associated with the measures; and
- Assessment of the water supply reliability.

Model Water Efficient Landscape Ordinance

The Model Water Efficient Landscape Ordinance was adopted by the Office of Administrative Law in September 2009, and requires local agencies to implement water efficiency measures as part of its review of landscaping plans. Local agencies can either adopt the Model Water Efficient Landscape Ordinance or incorporate provisions of the ordinance into its own code requirements for landscaping. For new landscaping projects of 2,500 square feet or more that require a discretionary or ministerial approval, the applicant is required to submit a detailed "Landscape Documentation Package" that discusses water efficiency, soil management, and landscape design elements.

California Water Conservation Act

The California Water Conservation Act of 2009 (Senate Bill SBx7-7 2009), requires all waters suppliers to increase the efficiency of water use. This bill pertains to both urban water conservation and agricultural water conservation. With regards to Urban Water Conservation, there is an overall goal to reduce per capita urban water use by 20 percent by December 31, 2020. Additionally, the State shall reduce per capita water use by at least 10 percent by December 31, 2016. Those that supply water for agriculture were required to prepare and adopt agricultural water management plans by December 31, 2012. These suppliers are also required to update those plans every 5 years thereafter (California Department of Water Resources 2012).

California Emergency Conservation Regulation

Recognizing persistent yet less severe drought conditions throughout California, on May 18, 2016, the State Water Board adopted an emergency water conservation regulation that replaces the February 2, 2016 emergency regulation. The May 2016 regulation that will be in effect from June 2016 through January 2017 requires locally developed conservation standards based upon each agency's specific circumstances. It replaces the prior percentage reduction-based water conservation standard with a localized "stress test" approach. These standards require local water agencies to ensure a three-year supply assuming three more dry years like the ones the state experienced from 2012 to 2015. Water agencies that would face shortages under three additional dry years will be required to meet a conservation standard equal to the amount of shortage (CA Water Board 2016).

California Integrated Waste Management Act of 1989 (AB 939)

To minimize the amount of solid waste that must be disposed of by transformation and land disposal, the State Legislature passed Assembly Bill (AB) 939, the California Integrated Waste Management Act of 1989, effective January 1990. The legislation required each local jurisdiction in the State to set diversion requirements of 25 percent in 1995 and 50 percent in 2000; established a comprehensive statewide system of permitting, inspections, enforcement, and maintenance for solid waste facilities; and authorized local jurisdictions to impose fees based on the types or amounts of solid waste generated. In 2007, amendments to the California Integrated Waste Management Act introduced a new per capita disposal and goal measurement system that moves the emphasis from an estimated diversion measurement number to using an actual disposal measurement number as a per capita disposal rate factor. As such, the new disposal-based indicator (pounds per person per year) uses only two factors: a jurisdiction's population (or in some cases employment) and its disposal as reported by disposal facilities.

In response to AB 939, the City of Fresno introduced the three-cart residential program and a public outreach and education program in 2000, commercial recycling program in 2003, and a construction and demolition waste ordinance and mandatory recycling ordinance in 2005. In 2007, the City adopted a Zero Waste Goal aimed at reaching a 75 percent waste diversion goal by 2012 and a zero waste goal by 2025. In 2006, the City of Fresno had a waste diversion rate of 71 percent.

California Public Utilities Commission

The California Public Utilities Commission (CPUC) regulates privately owned telecommunication, electric, natural gas, water, railroad, rail transit, and passenger transportation companies. It is the responsibility of the CPUC to (1) assure California utility customers safe, reliable utility service at reasonable rates; (2) protect utility customers from fraud; and (3) promote a healthy California economy. The Public Utilities Code, adopted by the legislature, defines the jurisdiction of the CPUC.

Senate Bill 610

Senate Bill (SB) 610 requires that certain projects subject to CEQA that would be supplied with water from a public water system prepare a water supply assessment (WSA). These water supply assessments must be furnished to local governments for inclusion in any environmental documentation for certain projects (as defined in Water Code Section 10912[a]) subject to CEQA. This legislation also expands the requirements for certain types of information in a UWMP, including an identification of any existing water supply entitlements, water rights, or water service contracts held relevant to the water supply assessment for a proposed project, and a description of water deliveries received in prior years. Under Sections 10910–10915 of the California Water Code, a WSA is required by law for any development that meets the following thresholds:

1. A proposed residential development of more than 500 dwelling units.
2. A proposed shopping center or business establishment employing more than 1,000 persons or having more than 500,000 square feet of floor space.
3. A proposed commercial office building employing more than 1,000 persons or having more than 250,000 square feet of floor space.

4. A proposed hotel or motel, or both, having more than 500 rooms.
5. A proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area.
6. A mixed-use project that includes one or more of the projects specified in this subdivision.
7. A project that would demand an amount of water equivalent to, or greater than, the amount of water required by a 500-dwelling-unit project.

At this stage, the project does not meet the definition of "project" under Water Code Section 10912, and preparation of a WSA would be overly speculative at the programmatic level, since detailed development plans are not known. Individual water supply assessments would be required for any future proposed projects within the DNCP and FCSP that meet the criteria under Water Code Section 10912.

Title 24, California's Energy Efficiency Standards for Residential and Nonresidential Buildings

Title 24, Part 6, of the California Code of Regulations establishes California's Energy Efficiency Standards for Residential and Nonresidential Buildings. The most recent update, the 2013 Building Energy Efficiency Standards, went into effect on July 1, 2014. The Energy Commission is now in the process of developing the 2016 Standards, which will continue to improve upon the current 2013 Standards for new construction of, and additions and alterations to, residential and nonresidential buildings. The 2016 Standards will go into effect on January 1, 2017. For each year of construction, in both newly constructed buildings and alterations to existing buildings, the current 2013 Standards (for residential and nonresidential buildings) are expected to reduce the growth in electricity use by 555.5 gigawatt-hours per year and to reduce the growth in peak electrical demand by 148.4 megawatts. The 2013 Standards are also expected to reduce the growth in natural gas use by 7.04 million therms per year beyond the prior 2008 Standards. Overall, the 2013 Standards will use 25 percent less energy for lighting, heating, cooling, ventilation, and water heating than the 2008 Standards.

Over time, the energy savings will accumulate as the Standards affect each subsequent year of construction. The savings result from changes to both the residential and nonresidential standards. The Standards affect both newly constructed buildings and alterations to existing buildings. These savings result from retrofit insulation requirements for existing roofs and the energy requirement for renovated lighting systems to meet the new 2013 Standards.

5.15.6 - City of Fresno Policies

Fresno General Plan

Below are summaries of the City's General Plan objectives and policies regarding utilities and services systems (i.e., waste, wastewater, and solid waste).

Water

The City's General Plan contains the following goals, policies, and objectives relevant to the provision of water service and facilities:

- **Objective PU-8:** Manage and develop the City's water facilities on a strategic timeline basis that recognizes the long life cycle of the assets and the duration of the resources, to ensure a safe, economical, and reliable water supply for existing customers and planned urban development and economic diversification.
- **Policy PU-8-a:** Forecast Need. Use available and innovative tools, such as computerized flow modeling to determine system capacity, as necessary to forecast demand on water production and distribution systems by urban development, and to determine appropriate facility needs.
- **Policy PU-8-c:** Conditions of Approval. Set appropriate conditions of approval for each new development proposal to ensure that the necessary potable water production and supply facilities and water resources are in place prior to occupancy.
- **Policy PU-8-g:** Review Project Impact on Supply: Mitigate the effects of development and capital improvement projects on the long-range water budget to ensure an adequate water supply for current and future uses.

Wastewater

The City's General Plan contains the following goals, policies, and objectives relevant to the provision of wastewater service and facilities:

- **Objective PU-4:** Ensure provision of adequate trunk sewer and collector main capacities to serve existing and planned urban development, consistent with the Wastewater Master Plan.
- **Policy PU-4-c:** System Extension and Cost Recovery. Pursue enlargement or extension of the sewage collection system where necessary to serve planned urban development, with the capital costs and benefits allocated equitably and fairly between the existing users and new users.
- **Objective PU-5:** Preserve groundwater quality and ensure that the health and safety of the entire Fresno community is not impaired by use of private, on-site disposal systems.
- **Policy PU-5-b:** Non-Regional Treatment. Discourage, and when determined appropriate, oppose the use of private wastewater (septic) disposal systems, community wastewater disposal systems, or other non-regional sewage treatment and disposal systems within or adjacent to the Metropolitan Area if these types of wastewater treatment facilities would cause discharges that could result in groundwater degradation.
- **Objective PU-7:** Promote reduction in wastewater flows and develop facilities for beneficial reuse of reclaimed water and biosolids for management and distribution of treated wastewater.
- **Policy PU-7-a:** Reduce Wastewater. Identify and consider implementing water conservation standards and other programs and policies, as determined appropriate, to reduce wastewater flows.

Solid Waste

The City's General Plan contains the following goals, policies, and objectives relevant to the provision of solid waste disposal:

- **Objective PU-9:** Provide adequate solid waste facilities and services for the collection, transfer, recycling, and disposal of refuse.
- **Policy PU-9-a:** New Techniques. Continue to collaborate with affected stakeholders and partners to identify and support programs and new techniques of solid waste disposal, such as recycling, composting, waste to energy technology, and waste separation, to reduce the volume and toxicity of solid wastes that must be sent to landfill facilities.

City of Fresno Construction and Demolition Diversion Ordinance

In 2005, the City of Fresno adopted a Construction and Demolition Diversion ordinance to encourage and provide for the diversion of commercial materials and construction and demolition material from landfill disposal. Recycling of construction and demolition material is required for any City-issued permit for a building, relocation or demolition project that generates at least 8 cubic yards of material by volume. Additionally, all waste must be hauled to a City approved facility (City of Fresno. 2011: Working Paper 5).

5.15.7 - Thresholds of Significance

According to the CEQA Guidelines' Appendix G Environmental Checklist, to determine whether impacts to utilities and service systems are significant environmental effects, the following questions are analyzed and evaluated. Would the project:

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

g) Comply with federal, state, and local statutes and regulations related to solid waste?

5.15.8 - Impact Analysis, Mitigation Measures, and Level of Significance After Mitigation

Wastewater Treatment

Impact USS-1: The project would not exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board.

Project-specific Impact Analysis

No impact. The wastewater associated with implementing the DNCP and FCSP projects would be treated by the SWTF and the RWRF. The SWTF has an existing design capacity of 92.07 acre-feet per day (30 mgd). The RWRF currently provides secondary treatment and has a rated capacity of 80 million gallons per day. Development of the FCSP will result in an increase in peak wet weather flows of approximately 2.2 mgd, from an existing estimated rate of 5.2 mgd to 7.4 mgd at maximum buildout. The DNCP wastewater flow growth scenario proposed under the plan has been reviewed by the City, which concluded that the amount and distribution of densification, and its anticipated effect on total flows, is generally consistent with what would be allowed under the General Plan. The SWTF and RWRF are operated under the requirements of the City and the Regional Water Quality Control Board.

As discussed under Impact HWQ-1, the City of Fresno is a co-permittee with the FMFCD, the County of Fresno, the City of Clovis, and California State University-Fresno in the Phase 1 NPDES Permit for Stormwater Discharges from Municipal Separate Storm Sewer Systems (MS4s). This Phase 1 MS4 Permit requires that the City and its co-permittees implement water quality and watershed protection measures for all development projects. The waste discharge requirements contained in the NPDES Permit have been designed to be consistent with the water quality standards and goals established in the Central Valley Regional Water Quality Control Board's Basin Plan. The Phase 1 MS4 Permit prohibits discharges from violating applicable water quality standards or creating a nuisance or water quality impairment in receiving waters. Participation in the Phase 1 MS4 permit and implementation of the Storm Drainage Master Plan would reduce impacts to surface waters to acceptable levels and long-term project impacts to surface or groundwater quality would therefore not exceed acceptable levels.

Therefore, implementation of the proposed project would not exceed wastewater treatment requirements and no impacts would result.

Cumulative Impact Analysis

Implementation of the project is not considered cumulatively significant.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

No impact.

Cumulative

No impact.

Water or Wastewater Treatment Facilities

Impact USS-2:	**The project would not require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.**

Project-specific Impact Analysis

This section will evaluate potential impacts related to water, wastewater, and recycled water. Refer to Impact USS-5 for a discussion related to the impacts associated with wastewater treatment capacity.

Analysis in this section is based on Utility Technical Report prepared by Sherwood Design Engineers dated February 6, 2013, included in Appendix K.

Potable Water

Less than significant impact. In addition to the well improvements described above, the 2009 Hydraulic Evaluation determined that 3 million gallons of storage would be needed in the Downtown area to reliably meet fire flow requirements plus peak hour demands. The evaluation also concluded the area needed approximately 5,270 feet of new 16-inch pipeline and 9,050 feet of new 24-inch pipeline to ensure water supplies could be properly distributed throughout the Downtown, and to improve existing connections to outside wells and the City's surface water treatment plant. Installation of these major transmission mains would be in addition to replacement of an undetermined number of smaller pipes that may not be able to meet future General Plan demands, depending on the distribution and density of development. The evaluation anticipated that the City would assess the suitability of these existing facilities as it receives applications for development and better defines localized demand conditions throughout the Downtown neighborhood.

The Hydraulic Evaluation mainly focused on the suitability of the Downtown distribution system to meet future demands, but the Fresno Department of Public Utilities (DPU) is also addressing issues related to the reliability and suitability of an aging pipe network. In the FCSP area alone, over 18,000 feet of pipe are known to have been installed before 1950, and another 20,000 feet of pipe are suspected to have been installed in the same time period. Thus, approximately 38,000 feet of water mains are either approaching or have already exceeded the end of their useful life-cycle. As a result, the City should also inspect or otherwise evaluate the condition of existing distribution piping as part of the Hydraulic Evaluation's recommended distribution system capacity assessment, prior to constructing right of way surface improvements associated with Downtown redevelopment efforts. Replacing deficient pipes as part of a larger street improvement program would generally lower the

cost of replacement, while greatly reducing the need to excavate newly paved streets to find and repair future leaks after an area has been redeveloped.

Wastewater

Less than significant impact. The Fulton Corridor Specific Plan proposes a modest transfer of density from the DNCP to the FCSP compared with the General Plan, which would modify the distribution of wastewater generation by residents and businesses throughout the Downtown. Under either planning scenario (the proposed plans or the General Plan), wastewater generation will increase as growth occurs over the next 25 years. For the purposes of this wastewater analysis, it was assumed growth within the two Plan Areas will occur as described above, on currently vacant or underutilized parcels. As shown detail in Table 1.1 of Appendix K of this EIR, this will result in a maximum of 6,291 new or reoccupied dwelling units and 6.5 million square feet of new or repurposed commercial/industrial space within the FCSP. At an assumed density of 1.9 persons per dwelling unit, these will be almost 13,600 more residents at maximum buildout of the Plan Area than in 2010.

In the DNCP, by contrast, it was not assumed that there are any unused residences or commercial/industrial spaces that will be occupied in the future, so all growth will occur as new development of currently vacant properties. According to the DNCP development program, buildout will produce a maximum of 3,697 new dwelling units and 5.3 million square feet of new commercial/industrial space. At this area's higher assumed density of 4.13 persons per dwelling unit, the resident population is projected to grow by approximately 15,300 people by 2035.

FCSP

Existing Wastewater Generation

Existing Average Dry Weather Flows (ADWF) within the Specific Plan Area were estimated by assigning each parcel in the FCSP to one of the land use classifications set forth in the Fresno Wastewater Collection System Master Plan (WCSMP). The corresponding WCSMP wastewater generation rate for each classification was then multiplied times the measured parcel area to calculate an existing wastewater flow. These flows were summed by collection area to obtain the ADWF for each contributing sewershed, and the collection areas were summed to obtain a total for the entire FCSP. To estimate the peak flow rates that are used to determine the capacity needed for pipes and other collection facilities, the ADWF was multiplied by the WCSMP's peaking factor of 1.49 to account for fluctuations in wastewater flow over the course of a day, and then increased by 10,000 gpd per acre to account for the combined effects of infiltration and inflow (jointly referred to as "I&I").

Future Wastewater Generation

To account for significantly higher densities permitted by the proposed development plan than assumed in the WCSMP, modified wastewater generation rates based on actual building square footage were used to estimate future flows from currently vacant and underutilized parcels. This change makes the rates applicable to all proposed residential, commercial and industrial densities, since they are tied to the proposed FAR rather than to the size of a parcel. Vacant and underutilized dry weather flows were calculated by applying these rates to the development square footages shown in Table 1.1 in Appendix K, for both Maximum and Minimum FAR conditions. These were

then increased by the same factor used for existing developed properties to obtain peak dry weather flow, and I&I was added at the rate of 1,500 gallons per day per acre (gpd/ac [as specified by the WCSMP for new Downtown development]) to arrive at a peak wet weather flow rate generated by each parcel.

Based on this analysis, peak wet weather flows would increase by approximately 2.2 mgd, from an existing estimated rate of 5.2 mgd to 7.4 mgd at maximum buildout. Peak wastewater flows would increase by more than 2.2 mgd, but this would be offset by a 0.8 mgd decline in I&I, since it is assumed that illegal storm drain connections would be eliminated on redeveloped parcels. Average dry weather flows, which are significant in gauging required treatment capacity, would increase by nearly 2.0 mgd, resulting from the densification anticipated to occur as the Downtown is built out to the levels envisioned in the proposed Specific Plan. As noted in the Hydrology and Water Quality Section, the amount of development the plan would permit is not substantially different from what could occur under the General Plan, so little change is anticipated in overall wastewater flow. Therefore, the impact would be less than significant.

DNCP

Actual wastewater flow calculations were not prepared for the DNCP, but the growth scenario proposed under the plan has been reviewed by the City, which concluded that the amount and distribution of densification, and its anticipated effect on total flows, is generally consistent with what would be allowed under the General Plan. As a result, implementation of the DNCP would not result in a need for mainline upgrades or additional treatment capacity above what is already planned, although some localized segments of the existing collection system could require upgrades that had not been previously anticipated.

Recycled Water

Less than significant impact. The RWMP identified a number of different land uses where recycled water could be used for irrigation. A number of these—including schools, existing city-owned parcels, and parks proposed as part of the open space plan–are located within the FCSP boundary. In addition, the Specific Plan calls for the development of streetscapes with extensive plantings. Rough estimates of the potential irrigated areas associated with these land uses indicate there would be 32.9 acres around schools and parks, 34.5 acres of open space, and 8.4 acres of street right-of-way. This represents about 76 acres of area to be irrigated with recycled water within the built-out FCSP. These areas are shown graphically on Figures 2.7 and 2.8 (Appendix 2) in the Fulton Corridor Specific Plan and Community Plan EIR Technical Report contained in Appendix K of this EIR.

Note that for the purposes of this analysis, no estimate is made of other recycling opportunities, which can include industrial processes and toilet flushing in commercial buildings and high-density residential projects. If extended to these potential uses in the future, the use of recycled water within the FCSP could be substantially higher than estimated in this report.

Irrigation demand was estimated for the areas described above by subtracting average rainfall from the reference evapotranspiration rate for each month. It was assumed that all areas would be planted with ornamental grasses, which have a relatively high demand factor of 0.88, so the need for water would be only about 10 percent lower than the actual evapotranspiration rate minus rainfall.

Applying this factor to a total irrigated area of 76 acres results in an average annual demand of 3,188 acre-feet, most of which would be applied between the months of March and November. (Rainfall would typically eliminate the need for irrigation during the winter months.)

At this time, the 25,000 afy of recycled water the City plans to be distributing by the year 2025 has not been allocated to specific uses, so it is anticipated that the FCSP's estimated demand could be easily accommodated by the planned supply. It is noted, though, that unless a satellite treatment plant is located in the Downtown Area, the future use of recycled water within the FCSP will depend on whether the City decides to extend the RWRF recycled distribution system into the project vicinity. In addition, because the City has not committed to the construction of a satellite plant in the FCSP or anywhere else, it can only be assumed at this time that all recycled water would be produced at the RWRF.

Cumulative Impact Analysis

Less than significant impact. Future growth would result in an increased demand placed on water and wastewater facilities throughout the DNCP and FCSP plan areas as well as areas that are outside the plan areas. The Master EIR for the City's General Plan has already analyzed and accounted for this increased demand and the associated facility improvements. Because the DNCP and FCSP population increase is within the population potential permitted by the General Plan, the project impacts are not deemed cumulatively considerable. Therefore, less than significant cumulative impacts are anticipated related to the provision of new water or wastewater facilities.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Stormwater Drainage Facilities

Impact USS-3: **The project would not require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.**

Project-specific Impact Analysis

Stormwater Quantity and Quality Analysis and Results

Less than significant impact. The amount of impervious surface in a watershed is the principal determinant of both the peak rate and total volume of stormwater runoff. Peak rates of stormwater runoff are calculated in the City of Fresno using the Rational Method, which can be applied to both undeveloped and developed watersheds. The method is based on the use of runoff coefficients, which represent an estimate of the percentage of total rainfall expected to end up as runoff (i.e., a coefficient of 0.3 equals 30 percent runoff). For each subarea of a watershed, the runoff coefficient is multiplied by the number of acres within the contributing drainage area and by the expected peak rainfall intensity (expressed in inches per hour) to calculate the peak rate of stormwater runoff (expressed as cubic feet per second).

This relationship is expressed in the following equation:

Peak Runoff = Runoff Coefficient x Drainage Area x Rainfall Intensity or:
Q (cfs) = C x A (acres) x I (inches/hour)

In watersheds with mixed uses (such as the Downtown Area), the runoff coefficient represents a weighted average of the coefficients assigned to each land use.

Since Rainfall Intensity is a function of site location and local climate, it will remain constant for both the existing and proposed conditions. Consequently, a comparison of the product of the Area and Coefficient variables under existing and proposed conditions is sufficient to determine how the proposed development will affect peak rates of stormwater runoff, and whether some associated mitigation would be necessary. For this analysis, runoff coefficients were assumed to remain constant within a given land use type, though based on the landscape design intent of the Specific Plan, proposed development is likely to increase the permeability of the ground cover, resulting in lower runoff coefficients. The landscape design intent focuses on increased vegetated streetscape elements and the integration of landscape-based stormwater management features into new development projects.

The existing condition was provided by the Flood Control District and is included in the Results discussion below. Area calculations for proposed land uses by zone according to the FCSP were performed. A coefficient of runoff was assigned to each land use type within the zones. A weighted runoff coefficient was then calculated for each zone and correspondingly for the entire FCSP area. The existing and proposed runoff coefficients used for this analysis are:

- Residential = 0.75 (as estimated by Sherwood Design Engineers)
- Commercial = 0.80 (as provided by Flood Control)
- Industrial = 0.75 (as provided by Flood Control)
- Open Space = 0.40 (as estimated by Sherwood Design Engineers)

The percentage of each land use type for the proposed and existing conditions for the FCSP area is shown in Tables 3.1 and 3.2 of the Fulton Corridor Specific Plan and Community Plan EIR Technical Report contained in Appendix K of this EIR.

The methodology for determining potential changes in stormwater runoff rates within the DNCP area involves a comparison of the two primary land use types within the plan area. These are the conditions along the corridors and within the adjacent residential neighborhoods. By discussing the changes to lot coverage patterns within the corridors and then separately within the neighborhoods, a qualitative analysis will be performed.

A comparison of the proposed land uses under the two sets of conditions shows there would be little change in total coverage by impervious surfaces, and the total Area/Coefficient product would actually decline by a small amount (from 0.78 to 0.74). Since the amount of impervious surface in a watershed is the principal determinant of both the peak rate and total volume of stormwater runoff, this indicates there would be little difference between buildout under the proposed plan and buildout under the existing condition. As a result, it is anticipated that stormwater management strategies currently in place, which the Fresno Metropolitan Flood Control District considers to be satisfactory, would also be sufficient for development under the proposed FCSP.

This assessment is supported by letter correspondence with Ms. Denise Wade of the Fresno Metropolitan Flood District (Wade, pers. comm.) based on a preliminary review of the FCSP area development proposal. She determined that, upon initial inspection, existing land uses are comparable to the proposed changes within the proposed FCSP, and did not expect to see significant impacts to the existing system. In the event more intense land uses result in higher estimated rates of stormwater discharge, then mitigation such as construction of parallel pipelines to increase capacity and/or on-site water retention methods (surface ponds or underground storage pipelines) could be required. In addition, should the project change existing street drainage patterns and/or pipeline alignments, typically a review would be performed to determine how the system is impacted and whether additional pipelines and/or inlets would be required. In accordance with standard Flood Control District policy, it is generally the responsibility of developers to fund improvements to the District's system that are needed to address impacts associated with their projects.

The primary difference in land use between the existing Municipal Code and the proposed DNCP is a shift in residential density from the corridors into the surrounding neighborhoods. Whereas the Municipal Code included a higher density of residential uses along the corridors, the proposed DNCP maintains the corridors as primarily commercial centers.

Based on a comparison of required setbacks under the current Municipal Code and as set forth for each zoning district under the proposed Community Plan, it was determined that setbacks would decrease primarily along the corridors. Although a decrease in setback would indicate a potential for an overall increase in impervious area of these zones, examination of current conditions within the DCNP through aerial photographs shows that a large percentage of the existing setbacks within the proposed residential zones is currently covered by impervious surfaces such as access driveways and parking lots. Consequently, little change in the amount of impervious cover is anticipated in these

zones. Additionally, since there would be fewer multi-story residential buildings, there would be less need for large new areas of surface parking along the major street corridors under the DNCP. Within the DNCP's remaining zones, setbacks would either increase slightly or remain largely consistent with the existing Municipal Code and existing patterns of development.

In addition to setback conditions, within the DNCP there would be almost 600 fewer housing units at buildout than what would be permitted under the current Municipal Code (3,697 units versus 4,283 units). This reduction in density would mainly occur by shifting development away from the major street corridors and into multi-family units within the surrounding neighborhoods. As described above, this would lessen the need for new surface parking, because a surplus of on-street parking spaces already exists on neighborhood streets. As a result, it is assumed that there would be little difference in overall impervious area, and thus total runoff, between the Municipal Code and under the DNCP.

Because these conclusions regarding impervious cover and total runoff are preliminary, Denise Wade's previously cited comments regarding the need for additional review as development proceeds and the possibility that mitigation measures might be required would also apply throughout the DNCP. However, if development occurs in accordance with the assumptions set forth in the DNCP and in this report, it remains likely that few changes to the area's existing storm drain infrastructure would be required as the neighborhood continues to build out.

Although it was determined that neither the FCSP nor the DNCP would result in a net increase in stormwater runoff to the District's facilities, both the Specific and Community Plans include recommendations for the implementation of Low Impact Development (LID) stormwater management facilities. LID focuses on minimizing impervious surfaces, improving the quality of stormwater runoff, and reducing impacts to our natural waterways. The use of LID stormwater management will enhance the existing infrastructure network of the FMFCD and reduce localized flooding, improve water quality, provide community amenities, and enhance aquifer recharge throughout the City. The primary goal of the stormwater management approach outlined within these plans is to improve the quality and quantity of water infiltrated into the local groundwater supply and decrease flows to the District's system. Within the FCSP, implementation locations and conceptual designs are detailed to help ensure future integration of LID design into improvement projects.

Cumulative Impact Analysis

Less than significant impact. Future growth would result in an increased demand placed on stormwater facilities throughout the DNCP and FCSP plan areas as well as areas that are outside the plan areas. The Master EIR for the City's General Plan has already analyzed and accounted for this increased demand and the associated facility improvements. Because the DNCP and FCSP population increase is within the population potential permitted by the General Plan, the project impacts are not deemed cumulatively considerable. Therefore, less than significant cumulative impacts are anticipated related to stormwater facilities.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Water Supplies

Impact USS-4:	**The project would have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed.**

Project-specific Impact Analysis

Less than significant impact. As discussed above in Impact USS-2, overall use of potable water is projected to increase as growth occurs within the Downtown area in accordance with the proposed FCSP and the DNCP. To quantify these changes in demand, this section presents estimates of existing water use based on information presented in the City's 2015 Urban Water Management Plan (UWMP 2015), and calculates future use based on modified demand rates developed as part of this analysis.

Methodology

The land use-based demand rates used to calculate existing condition water use were developed to reflect citywide demand conditions and as a result, they were based on the suburban densities that are typical in Fresno and do not necessarily reflect the higher densities and levels of development anticipated throughout Downtown. To refine these demands and obtain a more accurate estimate of future water use in the FCSP and the DNCP, the demand rates were modified to reflect actual building square footages, rather than just parcel areas. These modified rates were based on studies of a similarly dense California urban area with metered service, to more accurately reflect future conditions within downtown Fresno. They were applied to all vacant and underutilized parcels in the FCSP and to all vacant parcels in the DNCP, while assuming water demand would remain mostly unchanged on parcels classified as already developed in the FCSP, and on parcels classified as either underutilized or already developed in the DNCP. Because the proposed plans only specify the anticipated mix of development within each development zone, it was not possible to assign a specific demand rate to each parcel. Instead, a weighted average of the anticipated water demand for each land use based on this mix (in accordance with the land uses set forth in Table 1.1 the Fulton Corridor Specific Plan and Community Plan EIR Technical Report contained in Appendix K of this EIR) was calculated for each zone, and the resulting rate was applied to the development potential of each parcel as calculated through applications of the zone's planned FAR.

The dwelling unit and building square footage totals listed in Section 2.1.2.2 of Appendix K for future development of vacant and underutilized parcels were multiplied by these new demand rates to calculate water use attributable to future development. This subtotal was added to the demand for already developed parcels to estimate the total future water demands listed below and presented in detail in Tables 2.5 and 2.6 of Appendix A in Appendix K of this EIR. As the tables show, these demands were broken down by Development Zone within each plan area to facilitate evaluation of the local distribution system, as described below.

The results of this analysis were provided to West Yost Associates for use in the water distribution network model, as described below in Section 2.1.4.1 of Appendix K.

FCSP

Using the methodology outlined above, demand on all currently vacant and under-utilized parcels in the FCSP at maximum buildout (some of which have existing water use) is expected to be approximately 2.81 mgd. This would be an increase on these parcels of 2.64 mgd over existing conditions, and it would raise total water use to 3.32 mgd when combined with an estimated demand of 0.51 mgd on already developed parcels.

DNCP

Projected water demand in the DNCP area would increase by 2.71 mgd if all currently vacant parcels are built out to the maximum level permitted under the proposed plan. However, this would be partially offset by an approximately 0.49 mgd decrease in demand resulting from increased conservation by existing water users, in accordance with the UWMP. As a result, total water use is expected to rise from 11.86 mgd to 14.07 mgd, or 2.21 mgd higher than the area's estimated existing demand.

Water Demand Summary

The General Plan projected the combined FCSP and DNCP areas would accommodate a total of 99,393 residents at buildout. The proposed development plans, by contrast, estimated these combined areas would accommodate 99,081 residents, a reduction of only 312 people, or less than 0.5 percent. Similarly, based on economic studies prepared as part of the FCSP and DNCP planning process, it is assumed that commercial and industrial development will be largely market-driven, so the amount and type of development that actually occurs should not differ substantially from the projections made for the General Plan. Consequently, it can be concluded that maximum buildout under the proposed development programs will be essentially the same as if development were to proceed in accordance with the current Municipal Code.

Development of the FCSP and DNCP in accordance with the proposed development plans would increase total water use in these portions of Downtown by approximately 4.84 mgd by the year 2035, compared with 2010 levels of demand. Of this total, water use in the FCSP would increase by approximately 2.64 mgd, and water use in the DNCP would increase by approximately 2.21 mgd. As previously noted, the 2015 UWMP did not estimate Fresno's future water demand by neighborhood, so it is not possible to directly determine if it accounted for these localized levels of growth. However, comparisons can be made by converting total water use into per capita water demand, which the UWMP also calculated.

As shown in Table 2.7, the Fulton Corridor Specific Plan and Community Plan EIR Technical Report contained in Appendix K of this EIR, estimated per capita water use within the FCSP and the DNCP was roughly equal in 2010 (the "existing" condition year), and both were more than 20 percent lower than in the City as a whole. Citywide per capita consumption under future conditions, is expected to increase by approximately 8.5 percent, while this analysis indicates per capita consumption will rise by nearly 17 percent in the FCSP and fall by 3.5 percent in the DNCP. This growing disparity between the Plan Areas is related to the higher levels of commercial/industrial development proposed within the FCSP, which increases the residents' per capita demand, and also to the higher resident densities per dwelling unit anticipated for nearly all of the new housing in the DNCP, which lowers per capita demand. Despite these differences, both Plan Areas would use significantly less water on a per capita basis than the City as a whole, which suggests the projected increased water use, at least within these two parts of the Downtown, was accounted for in the 2015 UWMP's future demand estimates. As a result, development of the FCSP and DNCP in accordance with the proposed plans should not require any modification of the City's existing long-range water supply plans. There is sufficient water supply from existing entitlements to serve growth resulting from the implementation of the DNCP and FCSP; therefore, the project would result in a less than significant impact related to water supply. Furthermore, the FCSP and Community Plan EIR Technical were prepared before the State of California implemented Emergency Conservation Regulations requiring an overall state reduction of 25 percent of water use. Thus, the actual per capita water usage is lower than the estimates contained within the Fulton Corridor Specific Plan and Community Plan EIR Technical Report. Therefore, this analysis is considered conservative and represents a "worst-case" scenario in terms of water use. Furthermore, the Emergency Conservation Regulation would require local water agencies to ensure a three-year supply assuming three more dry years like the ones the State experienced from 2012 to 2015. Water agencies that would face shortages under three additional dry years will be required to meet a conservation standard equal to the amount of shortage. Therefore, if the City anticipates water shortages in the coming years, it will be required to implement conservation measures to ensure that demands are met.

Cumulative Impact Analysis

Less than significant impact. Future growth would result in an increased demand for water supply throughout the DNCP and FCSP plan areas as well as areas that are outside the plan areas. The Master EIR for the City's General Plan has already analyzed and accounted for this increased demand and the associated facility improvements. Because the DNCP and FCSP population increase is within the population potential permitted by the General Plan, the project impacts are not deemed cumulatively considerable. Therefore, less than significant cumulative impacts are anticipated related to the provision of water.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Wastewater Treatment Capacity

Impact USS-5:	**The project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments.**

Project-specific Impact Analysis

Less than significant impact. The Fulton Corridor Specific Plan proposes a modest transfer of density from the DNCP to the FCSP, as compared with the General Plan, which would modify the distribution of wastewater generation by residents and businesses throughout the Downtown. Under either planning scenario (the proposed plans or the General Plan), wastewater generation will increase as growth occurs over the next 25 years.

For the purposes of this wastewater analysis, it was assumed that growth within the two Plan Areas will occur as described in Section 2.1.2 of the Fulton Corridor Specific Plan and Community Plan EIR Technical Report contained in Appendix K of this EIR, on currently vacant or underutilized parcels. As shown in detail in Table 1.1 of Appendix 1 of the Fulton Corridor Specific Plan and Community Plan EIR Technical Report contained in Appendix K of this EIR, this will result in a maximum of 6,291 new or reoccupied dwelling units and 6.5 million square feet of new or repurposed commercial/industrial space within the FCSP. At an assumed density of 1.9 persons per dwelling unit, these will be almost 13,600 more residents at maximum buildout of the Plan Area than in 2010.

In the DNCP, by contrast, it was not assumed there are any unused residences or commercial/industrial spaces that will be occupied in the future, so all growth will occur as new development of currently vacant properties. According to the DNCP development program, buildout will produce a maximum of 3,697 new dwelling units and 5.3 million square feet of new commercial/industrial space (see Table 1.2, Appendix 1 of the Fulton Corridor Specific Plan and Community Plan EIR Technical Report contained in Appendix K of this EIR). At this area's higher assumed density of 4.13 persons per dwelling unit, the resident population is projected to grow by approximately 15,300 people by 2035.

Future Wastewater Generation

To account for the significantly higher densities that would permitted by the proposed development plan than were assumed in the WCSMP, modified wastewater generation rates based on actual building square footage were used to estimate future flows from currently vacant and underutilized parcels. This change makes the rates applicable to all proposed residential, commercial, and industrial densities, since they are tied to the proposed FAR rather than to the size of a parcel.

Vacant and underutilized dry weather flows were calculated by applying these rates to the development square footages shown in Table 1.1 of the Fulton Corridor Specific Plan and Community Plan EIR Technical Report contained in Appendix K of this EIR, for both Maximum and Minimum FAR conditions. These were then increased by the same factor used for existing developed properties to obtain peak dry weather flow, and I&I was added at the rate of 1,500 gpd/ac (as specified by the WCSMP for each new parcel). These flows were then added to the previously calculated flows for already developed parcels to arrive at a total for each collection area and for the entire Plan Area, as shown in Table 2.8 of Appendix 2 of the Fulton Corridor Specific Plan and Community Plan EIR Technical Report contained in Appendix K of this EIR. Downtown development to arrive at a peak wet weather flow rate generated by each parcel.

Based on this analysis, peak wet weather flows would increase by approximately 2.2 mgd, from an existing estimated rate of 5.2 mgd to 7.4 mgd at maximum buildout. Peak wastewater flows would increase by more than 2.2 mgd, but this would be offset by a 0.8 mgd decline in I&I, since it is assumed that illegal storm drain connections would be eliminated on redeveloped parcels. Average dry weather flows, which are significant in gauging required treatment capacity, would increase by nearly 2.0 mgd, resulting from the densification anticipated to occur as the Downtown is built out to the levels envisioned in the proposed Specific Plan. The amount of development the plan would permit is not substantially different from what could occur under the General Plan, so little change is anticipated in overall wastewater flow. However, because the FCSP would change the distribution of this development, it would have different impacts on the existing collection system. To evaluate these differences, the results of this flow analysis were provided to the City of Fresno for use in their wastewater system model.

Actual wastewater flow calculations were not prepared for the DNCP, but the growth scenario proposed under the plan has been reviewed by the City, which concluded that the amount and distribution of densification, and its anticipated effect on total flows, is generally consistent with what would be allowed under the General Plan. As a result, implementation of the DNCP would not result in a need for mainline upgrades or additional treatment capacity above what is already planned, although some localized segments of the existing collection system could require upgrades that had not been previously anticipated. Therefore, the project would not result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments, and impacts would be less than significant.

Cumulative Impact Analysis

Less than significant impact. Future growth would result in an increased demand wastewater treatment throughout the DNCP and FCSP plan areas, as well as areas that are outside the plan areas. The Master EIR for the City's General Plan has already analyzed and accounted for this increased demand and the associated facility improvements. Because the DNCP and FCSP population increase is within the population potential permitted by the General Plan, the project impacts are not deemed cumulatively considerable. Therefore, less than significant cumulative impacts are anticipated related to the provision of wastewater treatment.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Landfill Capacity

Impact USS-6: The project would be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs.

Project-specific Impact Analysis

Less than significant impact. Refuse disposed of in the City of Fresno is taken to Cedar Avenue Recycling and Transfer Station. Once trash has been off-loaded at the transfer station, it is sorted and non-recyclable solid waste is loaded onto transfer trucks and taken to the American Avenue Landfill. Solid waste from the DNCP and FCSP plan areas would be disposed of in the American Avenue Landfill, which has a maximum permitted capacity of 32,700,000 cubic yards and a remaining capacity of 29,358,535 cubic yards, with an estimated closure date of August 31, 2031. The maximum permitted throughput is 2,200 tons per day (CalRecycle Facility/Site Summary Details 2015).

Solid waste generation rates from CalRecycle were utilized to estimate the amount of solid waste generated for the DNCP plan area and the FCSP plan area, using waste generation rates for commercial, industrial, and residential land uses as shown in Table 5.15-2.

Table 5.15-2: Downtown Neighborhoods Community Plan and Fulton Corridor Specific Plan Estimated Solid Waste Generation

Land Use	DNCP (excl. FCSP)	FCSP	DNCP + FCSP	Solid Waste Generation Rate	Estimated Solid Waste Generated (pounds and tons per day)
Residential (units)	3,697	6,293	9,990	12.23 pounds per household per day	122,178 pounds per day 61.1 tons per day
Office (sf)	2,000,000	3,900,000	5,900,000	6 pounds per 1,000 square feet per day	35,400 pounds per day 17.7 tons per day
Retail (sf)	350,000	1,600,000	1,950,000	2.5 pounds per 1,000 square feet per day	4,875 pounds per day 2.4 tons per day

Table 5.15-2 (cont.): Downtown Neighborhoods Community Plan and Fulton Corridor Specific Plan Estimated Solid Waste Generation

Land Use	DNCP (excl. FCSP)	FCSP	DNCP + FCSP	Solid Waste Generation Rate	Estimated Solid Waste Generated (pounds and tons per day)
Industrial (sf)	2,900,000	150,000	3,050,000	62.5 pounds per 1,000 square feet per day	190,625 pounds per day 95.3 tons per day
				Total	353,078 pounds per day 176.5 tons per day

Notes:
No solid waste generation rate estimates are provided because the NOP indicates that there is no development potential for public facilities, agriculture, and vacant land.
No solid waste generation estimate is provided for open conservation land given because there is no comparable CalRecycle solid waste generation rate for this land use type.
The highest generation rate for each land use type was used to provide a "worst-case" analysis of solid waste generation estimates.
Source: http://www.calrecycle.ca.gov/wastechar/WasteGenRates/default.htm; Notice of Preparation, Table 2.

The maximum permitted throughput is 2,200 tons per day at the American Avenue Landfill. The project's estimated generation of 176.5 tons of solid waste per day will comprise a fraction (approximately 8 percent) of the landfill's daily throughput. Additionally, because the American Avenue landfill has a remaining estimated capacity of 29,358,535 cubic yards, the proposed project will be served by a landfill with adequate capacity. Therefore, a less than significant impact is anticipated and no mitigation measures are required.

Cumulative-Level Analysis

Less than significant impact. As the buildout of the proposed DNCP, FCSP and other developments within the City of Fresno proceed, these developments will contribute to the reduced life span of the American Avenue Landfill. Additional landfill area will be necessary at an uncertain future time, due to the anticipated overall growth of the City of Fresno. As the American Avenue Landfill reaches its capacity, the City of Fresno and/or County of Fresno will be responsible for acquisition of additional landfill area or possibly privatization at additional landfill locations. The City of Fresno has a Construction and Demolition Diversion ordinance to encourage and provide for the diversion of commercial materials and construction and demolition material from landfill disposal. The proposed DNCP, FCSP and other future development within the City will be required to comply with the City's Construction and Demolition Diversion ordinance. As such, a less than significant impact is anticipated.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

Compliance with Solid Waste Regulations and Statutes

Impact USS-7:	**The project would comply with federal, state, and local statutes and regulations related to solid waste.**

Project-specific Impact Analysis

Less than significant impact. Pursuant to Senate Bill 1016 (SB 1016), jurisdictions have been assigned target disposal per capita rates for residents and employees. The target rates for the City of Fresno are 6.6 pounds/resident/day and 15.5 pounds/employee/day. According to the 2011 Jurisdiction Diversion/Disposal Rate Detail for the City of Fresno, the disposal rate for the City was 3.8 pounds/resident/day and 9.9 pounds/employee/day (California Integrated Waste Management Board 2011).

Development under the proposed DNCP and FCSP is not anticipated to conflict with federal, state, and local statutes and regulations related to solid waste because development is anticipated to comply with applicable City of Fresno General Plan goals and policies and comply with the City of Fresno Municipal Code requirements and diversion requirements regarding solid waste disposal. Therefore, a less than significant impact is anticipated and no mitigation measures are warranted.

Cumulative Impact Analysis

Less than significant impact. The City of Fresno has a Construction and Demolition Diversion ordinance to encourage and provide for the diversion of commercial materials and construction and demolition material from landfill disposal. Future development within the City will be required to comply with applicable city regulations and ordinances regarding solid waste disposal and recycling requirements. Therefore, on a cumulative basis, the compliance of development under the DNCP and FCSP as well as future development with applicable City of Fresno policies, regulations, and ordinances regarding solid waste disposal are anticipated to reduce potential impacts to less than significant. Therefore, no cumulative mitigation measures are warranted.

Mitigation Measures

Project-specific

No mitigation measures are required.

Cumulative

No mitigation measures are required.

Level of Significance After Mitigation

Project-specific

Less than significant impact.

Cumulative

Less than significant impact.

SECTION 6: OTHER CEQA CONSIDERATIONS

6.1 - Significant Unavoidable Adverse Impacts

CEQA Guidelines Section 15126.2(a)(b) requires an EIR to identify and focus on the significant environmental effects of the proposed project, including effects that cannot be avoided if the proposed project were implemented. With implementation of the proposed project, the following significant and unavoidable impacts would occur:

- Air Quality—criteria pollutant emissions and toxic air contaminants would exceed applicable thresholds.
- Cultural Resources—potential removal of historic resources.
- Greenhouse Gases—increase in greenhouse gas emissions beyond the year 2020.
- Noise—exceedance of noise standards and substantial permanent increases in noise levels.
- Transportation and Traffic—potential exceedance of level of service thresholds on roadways under jurisdiction of the County of Fresno, City of Fresno, and Caltrans.

6.2 - Growth Inducing Impacts

There are two types of growth-inducing impacts that a project may have: direct and indirect. To assess the potential for growth-inducing impacts, the project's characteristics that may encourage and facilitate activities that individually or cumulatively may affect the environment must be evaluated (CEQA Guidelines Section 15126.2(d)).

Direct growth-inducing impacts occur when the development of a project imposes new burdens on a community by directly inducing population growth, or by leading to the construction of additional developments in the same area. Similarly, projects that remove physical obstacles to population growth (such as a new road into an undeveloped area or a wastewater treatment plant with excess capacity that could allow additional development in the service area) are also considered growth-inducing. Analysis of these types of infrastructure projects must also consider the development they would facilitate and serve, since they may provide a catalyst for future unrelated development in an area such as a new residential community that requires additional commercial uses to support residents.

At buildout, the DNCP and FCSP boundaries would contain 10.9 million square feet of newly developed office, retail, industrial, and open conservation uses, along with 9,990 residential units. Together, the DNCP and FCSP anticipate that by the year 2035, the residential population of the plan areas could increase by as many as 27,225 people to a total population of 97,446 residents, which is within the limits established by the Fresno General Plan.

Implementation of the DNCP and FCSP would include the expansion or redevelopment of roads, potable water, recycled water, wastewater, and stormwater facilities, which would facilitate

development and land use activities. However, this would not be considered removal of a barrier to growth, because the DNCP and FCSP will not be overly sized to serve development that is not planned. As such, the extension of this urban infrastructure is growth accommodating because it is intended to facilitate planned growth.

The DNCP and FCSP are tools for the systematic implementation of the Fresno General Plan and will serve to establish a link between the policies of the General Plan and the individual development proposals in the plans. Thus, development and land use activities that occur within the DNCP and FCSP boundaries are inherently "planned growth." As such, the development of housing, infrastructure, and employment within the Plan Area would not be considered growth-inducing.

6.3 - Energy Conservation

Public Resources Code Section 21100(b)(3) and CEQA Guidelines Section 15126.4 require EIRs to describe, where relevant, the wasteful, inefficient, and unnecessary consumption of energy caused by a project.

In 1975, largely in response to the oil crisis of the 1970s, the State Legislature adopted AB 1575, which created the California Energy Commission (CEC). The statutory mission of the CEC is to forecast future energy needs, license thermal power plants of 50 megawatts or larger, develop energy technologies and renewable energy resources, plan for and direct State responses to energy emergencies, and—perhaps most importantly—promote energy efficiency through the adoption and enforcement of appliance and building energy efficiency standards. AB 1575 also amended Public Resources Code Section 21100(b)(3) to require EIRs to consider the wasteful, inefficient, and unnecessary consumption of energy caused by a project.

Thereafter, the State Resources Agency created Appendix F of the CEQA Guidelines. Appendix F is an advisory document that assists EIR preparers in determining whether a project will result in the inefficient, wasteful, and unnecessary consumption of energy. For the reasons set forth below, this EIR concludes that the DNCP and FCSP will not result in the wasteful, inefficient, and unnecessary consumption of energy, will not cause the need for additional natural gas or electrical energy-producing facilities, and therefore, will not create a significant impact on energy resources.

6.3.1 - Regulatory Setting

Federal and state agencies regulate energy use and consumption through various means and programs. At the federal level, the United States Department of Transportation, the United States Department of Energy, and the United States Environmental Protection Agency (EPA) are three federal agencies with substantial influence over energy policies and programs. Generally, federal agencies influence and regulate transportation energy consumption through establishment and enforcement of fuel economy standards for automobiles and light trucks, through funding of energy-related research and development projects, and through funding for transportation infrastructure improvements. At the State level, the California Public Utilities Commission (CPUC) and the CEC are two agencies with authority over different aspects of energy. The CPUC regulates privately owned utilities in the energy, rail, telecommunications, and water fields. The CEC collects and analyzes

energy-related data, prepares statewide energy policy recommendations and plans, promotes and funds energy efficiency programs, and adopts and enforces appliance and building energy efficiency standards. California is exempt under federal law from setting state fuel economy standards for new on-road motor vehicles. Some of the more relevant federal and state energy-related laws and plans are discussed below.

Federal Energy Policy and Conservation Act

The Energy Policy and Conservation Act of 1975 sought to ensure that all vehicles sold in the U.S. would meet certain fuel economy goals. This Act enabled Congress to establish the first fuel economy standards for on-road motor vehicles in the United States. In compliance with this Act, the National Highway Traffic and Safety Administration has the responsibility for establishing additional vehicle standards and revising existing standards. Since 1990, the fuel economy standard for new passenger cars has been 27.5 miles per gallon and since 1996, the fuel economy standard for new light trucks (gross vehicle weight of 8,500 pounds or less) has been 20.7 miles per gallon.

Currently, heavy-duty vehicles (vehicles and trucks over 8,500 pounds gross vehicle weight) are not subject to fuel economy standards. Compliance with federal fuel economy standards is determined based on the basis of each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the U.S. The Corporate Average Fuel Economy (CAFE) program, administered by EPA, was created to determine vehicle manufacturers' compliance with the fuel economy standards. The CAFE value is calculated by the EPA for each manufacturer based on city and highway fuel economy test results and vehicle sales. Using the information generated under the CAFE program, the United States Department of Transportation has the authority to assess penalties for noncompliance (South Coast Air Quality Management District 2012).

Energy Policy Act of 2005

This Act addresses energy efficiency; renewable energy requirements; oil, natural gas, and coal; alternative-fuel use; tribal energy, nuclear security; vehicles and vehicle fuels; hydropower and geothermal energy, and climate change technology. The Act provides revised annual energy reduction goals (two percent per year beginning in 2006), revised renewable energy purchase goals, federal procurement of Energy Star or Federal Energy Management Program-designated products, federal green building standards, and fuel cell vehicle and hydrogen energy system research/demonstration (South Coast Air Quality Management District 2012).

Corporate Average Fuel Economy (CAFE) Program

The Corporate Average Fuel Economy (CAFE) Program was enacted by Congress in 1975. The purpose of the program is to reduce the consumption of energy by increasing the fuel economy of cars and light trucks. The National Highway Traffic Safety Administration (NHTSA) has set standards to increase CAFE levels rapidly over the next several years, which will improve the nation's energy security and save consumers money on fuel (NHTSA 2012). The United States' CAFE Program is administered by the EPA. The program was created to determine vehicle manufacturers' compliance with the fuel economy standards. The CAFE value for each manufacturer is calculated based on city and highway fuel economy test results and vehicle sales. Compliance with federal fuel economy standards is determined on the basis of each manufacturer's average fuel economy for the portion

of their vehicles produced for sale in the U.S. The United States Department of Transportation has the authority to assess penalties for non-compliance, based on information that is generated under the CAFE program (South Coast Air Quality Management District 2012).

Energy Independence and Security Act of 2007 (EISA)

In December 2007, the Energy Independence and Security Act of 2007 was signed into law. The objectives of the Act are to stage the United States for greater energy independence and security, increase the production of clean renewable fuels, protect consumers, increase the efficiency of products, buildings and vehicles, promote greenhouse gas research, improve the energy efficiency of the Federal government, and improve vehicle fuel economy (South Coast Air Quality Management District 2012).

The Act contains a renewable fuel standard that requires 36 billion gallons of ethanol per year by 2022, and corn ethanol is limited to 15 billion gallons. Additionally, this Act establishes appliance energy efficiency standards for boilers, dehumidifiers, dishwashers, clothes washers, external power supplies, commercial walk-in coolers and freezers; federal buildings; lighting energy efficiency standards for general service incandescent lighting in 2012; and standards for industrial electric motor efficiency (South Coast Air Quality Management District 2012).

Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA)

The Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA) was enacted to promote the development of inter-modal transportation systems to maximize mobility as well as address national and local interests in air quality and energy. ISTEA contained factors that Metropolitan Planning Organizations (MPOs), such as Fresno COG, were to address in developing transportation plans and programs, including some energy-related factors. To meet the new ISTEA requirements, MPOs adopted explicit policies defining the social, economic, energy, and environmental values that were to guide transportation decisions in that metropolitan area. The planning process for specific projects would then address these policies. Another requirement was to consider the consistency of transportation planning with federal, state, and local energy goals. Through this requirement, energy consumption was expected to become a decision criterion, along with cost and other values that determine the best transportation solution.

The Transportation Equity Act for the 21st Century (TEA-21)

The Transportation Equity Act for the 21st Century (TEA-21) was signed into law in 1998 and builds upon the initiatives established in the ISTEA legislation, discussed above. The Transportation Equity Act for the 21st Century was enacted June 1998 and authorizes the Federal surface transportation programs for highways, highway safety, and transit for the 1998–2003 period.

The TEA 21 Restoration Act

The TEA 21 Restoration Act, enacted July 1998, provided technical corrections to the original law. TEA-21 builds on the initiatives established in the Intermodal Surface Transportation Efficiency Act of 1991 (ISTEA). TEA-21 provides initiatives to address the goals of improving safety, protecting and enhancing communities and the natural environment, and advancement of America's economic

growth and competitiveness through efficient and flexible transportation (United States Department of Transportation 2012).

Moving Ahead for Progress in the 21st Century Act (MAP-21)

On July 6, 2012, President Obama signed into law P.L. 112-141, the Moving Ahead for Progress in the 21st Century Act (MAP-21). Funding surface transportation programs at over $105 billion for fiscal years (FY) 2013 and 2014, MAP-21 is the first long-term highway authorization enacted since 2005. MAP-21 provides funds and a policy and programmatic framework to guide development of the country's transportation infrastructure. MAP-21 creates a program to address improving safety, maintaining infrastructure condition, reducing traffic congestion, improving efficiency of the system and freight movement, protecting the environment, and reducing delays in project delivery.

California Solar Initiative

In January 2006, the CPUC approved the California Solar Initiative (CSI), which provides $2.9 billion in incentives between 2007 and 2017. The CPUC oversees the California Solar Initiative, and includes a $2.5 billion program for commercial and existing residential customers, funded through revenues and collected from gas and electric utility distribution rates. Additionally, the CEC will manage $350 million targeted for new residential building construction, using funds, which were already allocated to the CEC to foster renewable projects between 2007 and 2011 (South Coast Air Quality Management District 2012).

State of California Energy Plan

The CEC is responsible for preparing the State Energy Plan, which identifies emerging trends related to energy supply, demand, conservation, public health and safety, and the maintenance of a healthy economy. The plan calls for the State to assist in the transformation of the transportation system to improve air quality, reduce congestion, and increase the efficient use of fuel supplies with the least environmental and energy costs. To further this policy, the plan identifies a number of strategies, including providing assistance to public agencies and fleet operators, encouraging urban designs that reduce vehicle miles traveled, and accommodating pedestrian and bicycle access.

Integrated Energy Policy Report

In 2002, Senate Bill 1389 was passed that requires the CEC to prepare the Integrated Energy Policy Report that assesses major energy trends and issues facing the state's electricity, natural gas, and transportation fuel sectors and provides policy recommendations to conserve resources, protect the environment, ensure reliable, secure, and diverse energy supplies. The Integrated Energy Policy Report is required to be prepared every 2 years. Information from the Energy Action Plan was incorporated into this policy report, and the Energy Action Plan is no longer updated.

Title 24, Energy Efficiency Standards

Title 24, which was promulgated by the CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption, provides energy efficiency standards for residential and nonresidential buildings.

In 2013, the CEC adopted new energy efficiency standards. Effective July 1, 2014, all projects that apply for a building permit must adhere to the new 2013 standards. Like the previous standards, the 2013 standards reflect the greenhouse gas reduction requirements of the California Global Warming Solutions Act of 2006 (AB 32).

Because the adoption of Title 24 post-dates the adoption of AB 1575, it has generally been the presumption throughout the State that compliance with Title 24 (as well as compliance with the federal and state regulations discussed above) ensures that projects will not result in the inefficient, wasteful, and unnecessary consumption of energy. As is the case with other uniform building codes, Title 24 is designed to provide certainty and uniformity throughout the State, while ensuring that the efficient and non-wasteful consumption of energy is carried out through design features. For the vast majority of residential and nonresidential projects, adherence to Title 24 is deemed necessary to ensure that no significant impacts occur from the inefficient, wasteful, and unnecessary consumption of energy. As a further example, the adoption of federal vehicle fuel standards in 1975 protect against the inefficient, wasteful, and unnecessary use of energy.

Pursuant to the California Building Standards Code and the Title 24 Energy Efficiency Standards, the City will review the design and construction components of the project's Title 24 compliance when specific building plans are submitted.

6.3.2 - Energy Requirements of the Proposed Project

Short-term construction and long-term operational energy consumption are discussed below.

Short-Term Construction

Development and land use activities contemplated by the DNCP and FCSP include short-term construction activities that would consume energy, primarily in the form of diesel fuel (e.g., mobile construction equipment) and electricity (e.g., power tools). It is not possible to reasonably estimate the amount of energy consumed by construction activities, as a number of hard-to-predict variables influence energy consumption (length of activities, size of buildings, equipment fleet, management practices, etc.).

Construction taking place within the planning areas would be required to monitor air quality emissions using applicable regulatory guidance such as the San Joaquin Valley Air Pollution Control District CEQA Guidelines. These guidelines indirectly relate to construction energy consumption because construction air pollutant emissions are reduced through functions of energy consumption. As such, evaluation of air quality emissions on a project-by-project basis would likely utilize energy-reducing activities such as anti-idling measures, limits on duration of activities, and the use of alternative fuels, thereby reducing energy consumption.

Finally, there are no aspects of the DNCP or FCSP that would foreseeably result in the inefficient, wasteful, or unnecessary consumption of energy during construction activities. For example, there are no policies that would directly or indirectly cause construction activities to be any less efficient than would otherwise occur elsewhere (restrictions on equipment, labor, types of activities, etc.).

In summary, the DNCP and FCSP would not result in the inefficient, wasteful, or unnecessary consumption of energy during construction activities.

Long-Term Operations

Transportation Energy Demand

Development and land use activities contemplated by the DNCP and FCSP would include long-term operational activities that would consume energy, both in the form of transportation fuel and building/equipment energy (e.g., electricity and natural gas). It is not possible to reasonably estimate the amount of energy consumed by operational activities, as a number of hard-to-predict variables influence energy consumption.

A key aspect of the DNCP and FCSP is to reduce vehicle miles traveled (which reduces transportation fuel consumption) through the development of pedestrian- and transit-oriented residential and employment-generating uses. Such uses would be well-positioned to allow residents, employees, and customers to use transit, ride bicycles, and walk rather than travel by single-occupant vehicle.

In summary, the DNCP and FCSP would not result in the inefficient, wasteful, or unnecessary consumption of transportation energy during operational activities.

Building Energy Demand

For each year of construction, in both newly constructed buildings and alterations to existing buildings within the DNCP and FCSP, the current 2013 Building Energy Efficiency Standards (for residential and nonresidential buildings) are expected to reduce the growth in electricity use by 555.5 gigawatt-hours per year and to reduce the growth in peak electrical demand by 148.4 megawatts. The 2013 Building Energy Efficiency Standards are also expected to reduce the growth in natural gas use by 7.04 million therms per year beyond the prior 2008 Standards. Overall, the 2013 Building Energy Efficiency Standards will use 25 percent less energy for lighting, heating, cooling, ventilation, and water heating than the 2008 Standards.

The proposed project's structures would be designed to achieve a 20 percent increase in energy efficiency above the 2008 Title 24, California's Energy Efficiency Standards for Residential and Nonresidential Buildings. These standards include minimum energy efficiency requirements related to building envelope, mechanical systems (e.g., HVAC and water heating systems), indoor and outdoor lighting, and illuminated signs. The incorporation increased energy efficiency above the 2008 Title 24 standards into the project would ensure that the project would not result in the inefficient, unnecessary, or wasteful consumption of energy.

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SECTION 7: ALTERNATIVES TO THE PROPOSED PLANS

7.1 - Introduction

In accordance with Section 15126.6 of the CEQA Guidelines, as amended, this Draft EIR contains a comparative evaluation of the proposed plans with the alternatives to the project, including a No Project Alternative. Per Section 15126.6 of the CEQA Guidelines, this section focuses on alternatives to the proposed Downtown Neighborhoods Community Plan (DNCP), the Fulton Corridor Specific Plan (FCSP), and Downtown Development Code (DDC) (project) that are capable of avoiding or substantially lessening any significant adverse impacts associated with the Proposed plans, despite the possibility that the alternatives could impede attainment of project objectives. Additionally, the alternatives could result in new impacts that would not have resulted from the proposed plans. CEQA requires that an alternatives analysis provide sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed plans.

Under case law and CEQA Section 15126.6(f), the discussion of alternatives need not be exhaustive and is subject to a rule of reason. CEQA Section 15126.6(d) states that "if an alternative would cause one or more significant effects in addition to those that would be caused by the project as proposed, the significant effects of the alternatives shall be discussed, but in less detail than the significant effects of the project as proposed." Determining factors that may be used to eliminate alternatives from detailed consideration in an EIR are (a) failure to meet most of the basic project objectives, (b) infeasibility, or (c) inability to avoid significant environmental impacts. CEQA Section 15364 defines "feasibility" as "Capable of being accomplished in a successful manner within a reasonable period of time, taking into account economic, environmental, legal, social, and technological factors."

An EIR need not consider an alternative whose effects cannot be reasonably ascertained, whose implementation is remote and speculative, or whose execution does not substantially lessen or avoid the significant effects of the project.

The implementation of the proposed plans would result in significant and unavoidable impacts and significant impacts prior to mitigation, but less than significant with mitigation incorporated. These potential significant and unavoidable impacts and less than significant impacts with mitigation incorporated are evaluated for each of the alternatives that are considered and evaluated as discussed below. The environmental issues that were found to be significant and unavoidable under the proposed plans are described in Table 7-1.

Table 7-1: Significant and Unavoidable Impacts of the Proposed DNCP, FCSP and DDC

Resource Area	Impact	Extent of Impact
Air Quality	The project's ROG, NO_x, PM_{10}, and $PM_{2.5}$ emissions would exceed applicable thresholds and therefore violate an air quality standard or contribute substantially to an existing or projected air quality violation.	Project-Specific: Significant and Unavoidable Impact Cumulative: Significant and Unavoidable Impact

Table 7-1 (cont.): Significant and Unavoidable Impacts of the Proposed DNCP, FCSP and DDC

Resource Area	Impact	Extent of Impact
Air Quality	The project would result in a considerable net increase of criteria pollutants PM_{10}, $PM_{2.5,}$ and ozone precursors (ROG and NO_x) for which the project region is non-attainment.	Project-Specific: Significant and Unavoidable Impact Cumulative: Significant and Unavoidable Impact
Greenhouse Gas	The project would generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.	Project-Specific: Significant and Unavoidable Impact Cumulative: Significant and Unavoidable Impact
Noise	The project would result in exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies.	Project-Specific: Significant and Unavoidable Impact Cumulative: Significant and Unavoidable Impact
Noise	The project would result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project.	Project-Specific: Significant and Unavoidable Impact Cumulative: Significant and Unavoidable Impact
Transportation	The addition of project traffic to the roadway network would result in unacceptable intersection operations at City of Fresno intersections outside the Downtown Planning Area.	Project-Specific: Significant and Unavoidable Impact Cumulative: Significant and Unavoidable Impact
Transportation	The addition of project traffic to the roadway network would result in unacceptable intersection operations at Caltrans study intersections.	Project-Specific: Significant and Unavoidable Impact Cumulative: Significant and Unavoidable Impact
Transportation	The addition of project traffic to the roadway network would result in unacceptable freeway operations.	Project-Specific: Significant and Unavoidable Impact Cumulative: Significant and Unavoidable Impact
Transportation	The addition of project traffic to the roadway network would result in unacceptable queuing at freeway off-ramps.	Project-Specific: Significant and Unavoidable Impact Cumulative: Significant and Unavoidable Impact

The following impacts were found to be potentially significant prior to mitigation, and less than significant with mitigation incorporated.

- Aesthetics
- Biological Resources
- Cultural Resources
- Hazards and Hazardous Materials

The impacts that were found to be less than significant or no impact without the need for mitigation include agriculture, geology, hydrology and water quality, land use and planning, population and housing, public services, and utilities and service systems.

Section 7.2 provides discussions of the alternatives. These discussions include brief descriptions of the alternatives and documentation to support why the alternative was rejected, or if the alternative was not rejected, providing a comparative evaluation to the proposed plans.

7.2 - Project Objectives

7.2.1 - Downtown Neighborhood Community Plan Objectives

The primary objectives of the DNCP are as follows:

- To make the Downtown Neighborhoods attractive, healthy, mixed-income places to live, thanks to their historic character and their proximity to a revitalized Downtown.
- To revive the underlying structure of the Downtown Neighborhoods to create identifiable neighborhoods, districts, and corridors.
- To integrate the public realm of streets with a multi-modal transportation network that renders them walkable and livable.
- To regenerate parks and public spaces and make them safe and accessible to residents.
- To reinforce the identity of each of the Plan areas by including all of the remaining ingredients for quality of life from childhood to old age within a walkable range.
- To reintroduce missing street trees, irrigation, and sidewalks, and slow down traffic on primary thoroughfares through various traffic-calming measures.
- To introduce a range of well-designed buildings that provide a variety of housing choices within easy access of parks, services, and jobs.
- To design residential buildings to promote safety and community on the sidewalk and street.
- To design commercial buildings with facades that are adjacent to sidewalks, are constructed of quality and durable materials, can accommodate a mix of uses at any one time, and can be reused over time under different programs.
- To introduce the High Speed Rail in a manner that has the most beneficial impact possible on the surrounding homes, businesses, and open spaces, while preserving Downtown's interconnected street network to the maximum extent possible.

7.2.2 - Fulton Corridor Specific Plan Objectives

The primary objectives of the FCSP are to define:

- A vision for the future of Downtown that recognizes the importance of history and tradition while embracing opportunities for continued reinvestment, growth, and beneficial change.
- Goals and policies that work in tandem with and refine those of the General Plan and the Downtown Neighborhoods Community Plan to achieve the revitalization of the Plan area.
- New land use policies for the Plan Area will guide upcoming zoning regulations. These new policies are calibrated to deliver new development that is consistent with Fresno's physical character, history, and culture, as well as the community's vision for its future growth.
- The implementation strategy for transforming the Plan Area's streets, infrastructure, parks, and other public spaces.
- Reconstruct Fulton Mall.
- Increase mobility and access in the Fulton Mall area.
- Provide convenient multi-modal access options on the Mall and its cross streets.
- Improve visibility of business, offices and other amenities in the Fulton Mall area by improving traffic circulation.
- Maximize sustainable development and economic productivity in conjunction with other downtown redevelopment projects while respecting, incorporating, and minimizing harm to the historic Fulton Mall landscape and its contributing features.

The above objectives provide private party owners with a clear understanding of the future context within which they are investing and reinvesting in their properties.

7.2.3 - Downtown Development Code Objectives

The objectives of the DDC are summarized as follows:

1. Property shall be occupied with land use activity to improve health; stabilize and improve property values; provide continuity of Fresno's heritage; maximize compatibility; offer a range of housing choices; increase reinvestment in the Downtown Neighborhoods; provide a wide range of services and shopping; revitalize mixed-use corridors; and support convenient transit.
2. Buildings and their additions shall be designed and maintained to support reinvestment; front the adjacent street(s); enhance the building's relationship to the public realm; use appropriate landscape materials; generate long-term value; and express creativity.
3. Frontages shall be designed and maintained to support the intended physical environment; support active and continuous pedestrian-oriented environments; provide appropriate physical transitions between the public right-of-way and the property; and express creativity.

4. Signage shall be designed and maintained to promote the aesthetic and environmental values of the community; provide an effective channel of communication; avoid traffic safety hazards; and safeguard and protect the public health, safety, and general welfare.
5. Open spaces, landscaping and streetscapes shall be designed and maintained to preserve and promote the aesthetic character and environmental quality of Fresno as a place to live, work, and shop; correspond to the adjacent streetscapes; incorporate urban agriculture at all scales, as practical; and contribute to mitigating environmental degradation.
6. Each new or modified block and street shall be designed and maintained to interconnect and form/maintain a network; support the intended physical context; generate pedestrian-oriented block lengths; transform large sites into pedestrian-oriented blocks; increase the number of blocks; and support a multi-modal transportation system.

7.2.4 - Alternatives to the Proposed Plans

An evaluation of four alternatives to the proposed plans is provided below. These alternatives represent a reasonable range of alternatives to the proposed plans. This analysis includes alternatives that could feasibly accomplish most of the basic objectives of the proposed plans and could avoid or substantially lessen one or more of the significant and unavoidable effects that would occur under the proposed plans.

The four alternatives to the proposed plans analyzed in this section are as follows:

- **No Project Alternative:** The DNCP, FCSP, and DDC would not be implemented.
- **High Density Residential Focus:** A 60 percent increase in residential land use density for the "high" capacity development potential (i.e., instead of 14 percent proposed for the DNCP), a 30 percent increase in residential land use density for the "medium" capacity development potential, and a 10 percent increase in the "low" capacity development potential for both Plan areas.
- **Retail Oriented Development Potential Scenario:** A 10 percent increase in total retail square footage in both Plan areas for the "high" capacity development potential, with a corresponding 5 percent decrease in the proposed office and industrial square feet in the Plan areas.
- **Office Oriented Development Potential Scenario:** A 10 percent increase of office square footage for the "high" capacity development potential with a corresponding 5 percent decrease in both the proposed residential and industrial land use square feet within the Plan areas.

Following is an evaluation of each of the alternatives to the proposed plans that were further considered for analysis. Table 7-2 provides a summary of impacts comparison between the proposed plans and the project alternatives. Table 7-2 includes the impacts of the alternatives and compares each impact to the impacts of the proposed plans. Table 7-2 also provides the level of impact significance for each issue.

For each impact issue listed, Table 7-2 first gives the level of significance under the project and each alternative, and then in parenthesis it compares the impact of the alternative to the project. For example, where the project's impact, Effects on Species, is shown as "LSM" (less than significant with mitigation), the table shows that the impact of No Project Alternative would be "LS" but the alternative would either have less impact than the proposed plans, "(L)," And equal impact than the proposed plans "(E)", or a greater impact "(G)". The analysis of each alternative assumes that all applicable mitigation measures as well as objectives and policies of the DNCP, FCSP, and DDC could be implemented with the appropriate alternative. However, applicable mitigation measures may be scaled to reduce or avoid a potential impact of the alternative under consideration, and may not precisely match those identified for proposed plans.

Table 7-2: Comparison Summary of Impacts between the Proposed Plans and Project Alternatives

Environmental Issue	Proposed DNCP, FCSP, and DDC	Alternative 1: No Project-Development in Accordance with Existing 2025 General Plan	Alternative 2: High Density Residential Focus	Alternative 3: Retail Oriented Development Potential Scenario	Alternative 4: Office Oriented Development Potential Scenario
Aesthetics					
AES-1: Scenic Vista	LS	LS (L)	LS (G)	LS (E)	LS (G)
AES-2: Scenic Resources within a State Scenic Highway	NI	NI (E)	NI (E)	NI (E)	NI (E)
AES-3: Visual Character	LS	LS (L)	SU (G)	SU (E)	SU (GL)
AES-4: Light and Glare (Illumination of night sky)	LSM	LS (L)	SU (G)	SU (E)	SU (G)
Agricultural Resources					
AG-1: Convert Farmland to Non-Agricultural Use	NI	NI (L)	NI (E)	NI (E)	NI (E)
AG-2: Conflict with Existing Zoning or Williamson Act Contract	LS	LS (L)	LS (E)	LS (E)	LS (E)
AG-3: Conflict with Existing Zoning for or Causing Rezoning of Forest Land	NI	NI (E)	NI (E)	NI (E)	NI (E)
AG-4: Result in the Loss of Forest Land or Conversion of Forest Land to Non-forest Use	NI	NI (E)	NI (E)	NI (E)	NI (E)
AG-5: Result in the Conversion of Farmland to Non-Agricultural Use or Conversion of Forest Land to Non-forest Use	LS	LS (E)	LS (E)	LS (E)	LS (E)

Table 7-2 (cont.): Comparison Summary of Impacts between the Proposed Plans and Project Alternatives

Environmental Issue	Proposed DNCP, FCSP, and DDC	Alternative 1: No Project-Development in Accordance with Existing 2025 General Plan	Alternative 2: High Density Residential Focus	Alternative 3: Retail Oriented Development Potential Scenario	Alternative 4: Office Oriented Development Potential Scenario
Air Quality					
AIR-1: Air Quality Plan	LS	LS (L)	LS (G)	LS (G)	LS (L)
AIR-2 Air Quality Standards/Violations (CO and SO_x)	SU	LS (L)	SU (G)	SU (E)	SU (G)
AIR-3: Criteria Pollutants (Exceedance of ROG, NO_x, PM_{10}, and $PM_{2.5}$ standards)	SU	LS (L)	SU (G)	SU (E)	SU (G)
AIR-4: Sensitive Receptors (Substantial Pollutant Concentrations)	LSM	NI (L)	LSM (G)	LSM (E)	LSM (G)
AIR-5: Odors	LSM	NI (L)	LSM (G)	LSM (E)	LSM (G)
Biological Resources					
BIO-1: Effect on Species	LSM	NI (L)	LSM (G)	LSM (E)	LSM (G)
BIO-2: Riparian Habitat	LS	NI (L)	LS (G)	LSM (E)	LSM (G)
BIO-3: Federally Protected Wetlands	LSM	NI (L)	LSM (G)	LSM (E)	LSM (G)
BIO-4: Wildlife Corridors and Nursery Sites	LS	NI (L)	LS (G)	LS (E)	LS (G)
BIO-5: Local Policies or Ordinances Protection Biological Resources	LS	NI (L)	LS (G)	LS (E)	LS (G)
BIO-6: Conservation Plans	NI	NI (E)	NI (G)	NI (E)	NI (E)
Cultural Resources					
CUL-1: Historical Resources	LSM	NI (L)	LSM (G)	LSM (E)	LSM (G)
CUL-2: Archaeological Resources	LSM	NI (L)	LSM (G)	LSM (E)	LSM (G)
CUL-3: Unique Paleontological Resources/Site or Unique Geologic Feature	LSM	NI (L)	LSM (G)	LSM (E)	LSM (G)
CUL-4: Human Remains	LSM	NI (L)	LSM (G)	LSM (E)	LSM (G)
Geology and Soils					
GEO-1: Earthquakes (Exposure to Fault Ruptures)	LS	NI (L)	LS (G)	LS (E)	LS (G)

Table 7-2 (cont.): Comparison Summary of Impacts between the Proposed Plans and Project Alternatives

Environmental Issue	Proposed DNCP, FCSP, and DDC	Alternative 1: No Project-Development in Accordance with Existing 2025 General Plan	Alternative 2: High Density Residential Focus	Alternative 3: Retail Oriented Development Potential Scenario	Alternative 4: Office Oriented Development Potential Scenario
GEO-2: Soil Erosion or Topsoil Loss	LS	NI (L)	LS (G)	LS (E)	LS (G)
GEO-3: Seismic Ground Failure	LS	NI (L)	LS (G)	LS (E)	LS (G)
GEO-4: Unstable Geologic Location (landslide, lateral spreading, subsidence, liquefaction or collapse)	LS	NI (L)	LS (G)	LS (E)	LS (G)
GEO-5: Wastewater Disposal Systems (Soils Incapable to Support Use of Septic Tanks)	LS	NI (L)	LS (G)	LS (E)	LS (G)
Greenhouse Gases					
GHG-1: Greenhouse Gas Emissions	SU	NI (L)	SU (G)	SU (E)	SU (G)
GHG-2: Conflict with Plan, Policy, or Regulation that Reduces Emissions	LS	NI (L)	LS (G)	LS (E)	LS (G)
Hazards and Hazardous Materials					
HAZ-1: Routine Use (Hazard Caused by Routine Transport, Use, or Disposal)	LSM	NI (L)	LSM (G)	LSM (E)	LSM (G)
HAZ-2: Accident Conditions (Accidental Release of Hazardous Materials)	LSM	NI (L)	LSM (G	LSM (E)	LSM (G)
HAZ-3: Schools (Hazardous Emissions or Materials Within One-Quarter Mile of School)	LSM	NI (L)	LSM (G)	LSM (E)	LSM (G)
HAZ-4: Hazardous Materials Site Listing (Create a Significant Hazard to Public or Environment)	LSM	NI (L)	LSM (G)	LSM (E)	LSM (G)
HAZ-5: Airports (Safety Hazard)	LS	NI (L)	LS (G)	LS (E)	LS (G)
HAZ-6: Private Air Street (Safety Hazard)	NI	NI (E)	NI (E)	NI (E)	NI (E)
HAZ-7: Emergency Plans (Physically Interfere with Plans)	LSM	NI (L)	LSM (E)	LSM (E)	LSM (E)

Table 7-2 (cont.): Comparison Summary of Impacts between the Proposed Plans and Project Alternatives

Environmental Issue	Proposed DNCP, FCSP, and DDC	Alternative 1: No Project-Development in Accordance with Existing 2025 General Plan	Alternative 2: High Density Residential Focus	Alternative 3: Retail Oriented Development Potential Scenario	Alternative 4: Office Oriented Development Potential Scenario
HAZ-8: Wildland Fires	NI	NI (E)	NI (E)	NI (E)	NI (E)
Hydrology and Water Quality					
HYD-1: Water Quality Standards and Requirements	LS	NI (L)	LS (G)	LS (E)	LS (G)
HYD-2: Groundwater Supplies and Recharge	LSM	NI (L)	LSM (G)	LSM (E)	LSM (G)
HYD-3: Drainage Pattern: Erosion or Siltation	LS	NI (L)	LS (G)	LS (E)	LS (G)
HYD-4: Drainage Pattern: Flooding	LS	NI (L)	LS (G)	LS (E)	LS (G)
HYD-5: Runoff Water and Drainage Systems	LS	NI (L)	LS (G)	LS (E)	LS (G)
HYD-6: Water Quality	LS	NI (L)	LS (G)	LS (E)	LS (G)
HYD-7: Housing Placement: Flood Hazard Area (Placing Housing Within 100-Year Flood Hazard Area	LS	NI (L)	LS (G)	LS (E)	LS (G)
HYD-8: Structures: Flood Hazard Area (Placing Structures within 100-Year Flood Hazard Area	LS	NI (L)	LS (G)	LS (E)	LS (G)
HYD-9: Flooding (Exposure of People of Structures)	LS	NI (L)	LS (G)	LS (E)	LS (G)
HYD-10: Seiche, Tsunami, or Mudflow (Inundation)	LS	NI (L)	LS (G)	LS (E)	LS (G)
Land Use and Planning					
LUP-1: Divide Establish Community	LS	NI (L)	LS (E)	LS (E)	LS (E)
LUP-2: Conflict with Applicable Plans, Policies, or Regulations	LS	NI (E)	LS (E)	LS (E)	LS (E)
LUP-3: Conflict with Conservation Plans	NI	NI (E)	NI (E)	NI (E)	NI (E)

Table 7-2 (cont.): Comparison Summary of Impacts between the Proposed Plans and Project Alternatives

Environmental Issue	Proposed DNCP, FCSP, and DDC	Alternative 1: No Project-Development in Accordance with Existing 2025 General Plan	Alternative 2: High Density Residential Focus	Alternative 3: Retail Oriented Development Potential Scenario	Alternative 4: Office Oriented Development Potential Scenario
Noise					
NOI-1: Noise Levels in Excess of Standards	SU	NI (L)	SU (G)	SU (E)	SU (G)
NOI-2: Excessive Groundborne Vibration	LSM	NI (L)	LSM (G)	LSM (E)	LSM (G)
NOI-3: Permanent Increase in Ambient Noise Levels	SU	NI (L)	SU (G)	SU (E)	SU (G)
NOI-4: Temporary or Periodic Increase in Ambient Noise Levels	LS	NI (L)	LS (G)	LS (E)	LS (G)
NOI-5: Airport Noise Levels	LS	NI (L)	LS (G)	LS (E)	LS (G)
NOI-6: Private Airstrip Noise	LS	NI (L)	LS (G)	LS (E)	LS (G)
Population and Housing					
POP-1: Induce Population Growth (Inducement of Substantial Growth)	LS	NI (L)	LS (G)	LS (E)	LS (E)
POP-2: Displacement of Housing	LS	NI (L)	LS (E)	LS (E)	LS (E)
POP-3: Displacement of People	LS	NI (L)	LS (E)	LS (E)	LS (E)
Public Services					
PS-1: Fire Protection	LS	NI (L)	LS (G)	LS (E)	LS (G)
PS-2: Police Protection	LS	NI (L)	LS (G)	LS (E)	LS (G)
PS-3: Schools	LS	NI (L)	LS (G)	LS (E)	LS (G)
PS-4: Parks	LS	NI (L)	LS (G)	LS (E)	LS (G)
PS-5: Libraries	LS	NI (L)	LS (G)	LS (E)	LS (G)
PS-6: Recreational Facilities	LS	NI (L)	LS (G)	LS (E)	LS (G)
Transportation and Traffic					
TRANS-1: Traffic Increase, Levels of Service	LS	NI (L)	LS (G)	LS (E)	LS (G)
TRANS-2: Traffic Increase, Unacceptable Intersection Operations	LSM	NI (L)	LSM (G)	LSM (E)	LSM (G)

Table 7-2 (cont.): Comparison Summary of Impacts between the Proposed Plans and Project Alternatives

Environmental Issue	Proposed DNCP, FCSP, and DDC	Alternative 1: No Project-Development in Accordance with Existing 2025 General Plan	Alternative 2: High Density Residential Focus	Alternative 3: Retail Oriented Development Potential Scenario	Alternative 4: Office Oriented Development Potential Scenario
TRANS-3: Traffic Increase, Operations at Caltrans study intersections	SU	NI (L)	SU (G)	SU (E)	SU (G)
TRANS-4: Traffic Increase, Freeway Operations	SU	NI (L)	SU (G)	SU (E)	SU (G)
TRANS-5: Traffic Increase, Unacceptable Queuing at Freeway Off-Ramps	SU	NI (L)	SU (G)	SU (E)	SU (G)
TRANS-6: Traffic Increase, Increase Ridership and Demand for Transit Service	LS	NI (L)	LS (G)	LS (E)	LS (G)
TRANS-7: Traffic Increase, Increase Demand for Bicycle and Pedestrian Facilities	LSM	NI (L)	LSM (G)	LS (E)	LSM (G)
TRANS-8: Traffic Increase, Increase Vehicles and Pedestrian Crossings of the At-grade Railroad Crossings	LS	NI (L)	LS (G)	LS (E)	LS (G)
Utilities and Service Systems					
USS-1: Wastewater Treatment (Exceeding Wastewater Treatment Requirements)	LSM	NI (L)	LSM (G)	LSM (G)	LSM (G)
USS-2: Water and Wastewater Treatment Facilities Construction of New Facilities Impact on Capacities of Facilities	LS	NI (L)	LS (G)	LS (E)	LS (G)
USS-3: Stormwater Drainage Facilities, Construction of New Facilities, Impact on Capacities of Facilities	LS	NI (L)	LS (G)	LS (E)	LS (G)
USS-4: Water Supplies (Sufficient Water Supplies for Project)	LS	NI (L)	LS (G)	LS (E)	LS (G)
USS-5: Wastewater Treatment Capacity	LS	NI (L)	LS (G)	LS (E)	LS (G)
USS-6: Landfill Capacity	LS	NI (L)	LS (G)	LS (E)	LS (G)

Table 7-2 (cont.): Comparison Summary of Impacts between the Proposed Plans and Project Alternatives

Environmental Issue	Proposed DNCP, FCSP, and DDC	Alternative 1: No Project-Development in Accordance with Existing 2025 General Plan	Alternative 2: High Density Residential Focus	Alternative 3: Retail Oriented Development Potential Scenario	Alternative 4: Office Oriented Development Potential Scenario
USS-7: Compliance with Solid Waste Regulations and Statutes	LS	NI (L)	LS (G)	LS (E)	LS (G)

7.3 - Alternative 1—No Project/Development in Accordance with Existing General Plan Land Use Designations

7.3.1 - Description

Under the No Project Alternative, the DNCP, FCSP, and DDC would not be implemented. The existing community and specific plans in the Planning Area would continue building out in accordance with the General Plan, as this represents the most likely "circumstance under which the project does not proceed." Approximately 30 to 50 percent of the planned development would occur.

7.3.2 - Analysis

Substantially less development would occur under this alternative compared with the proposed plans, and therefore environmental effects associated with this alternative would be less when compared with the proposed plans. Under the proposed plans, the maximum development potential for the DNCP and FCSP plan areas would increase by 9,990 residential dwelling units, 5,900,000 additional square feet of office space, 1,950,000 square feet of retail space, and 3,050,00 square feet of industrial space through the year 2035. This alternative would introduce less population growth and fewer residential units compared with the proposed plans in the same timeline. This alternative would also include a lower gross residential density for new residences compared with the proposed plans.

The significant and unavoidable effects associated with the proposed plans (air quality, greenhouse gas, noise and traffic) would be reduced with the implementation of this alternative. This alternative would represent planned growth in accordance with the current General Plan, and therefore any significant and unavoidable impacts that did occur under this alternative would have already been accounted for in the Master Environmental Impact Report (MEIR) prepared for the General Plan. In addition, the effects that were found to be less than significant or less than significant with mitigation under the proposed plans would also be reduced. This alternative is considered environmentally superior to the proposed plans; however, this alternative would not meet any of the objectives of the proposed plans.

Aesthetics, Light, and Glare

Under the No Project Alternative, the DNCP and FCSP areas would maintain existing development and land use activities for the foreseeable future (the duration of the General Plan planning period). The proposed plans were found to have no impact on State Scenic Highways, and visual character impacts were found to be less than significant (without mitigation). Therefore, the No Project Alternative would also have less than significant impacts on these areas. With 7,850,000 fewer square feet of commercial space and 9,900 fewer residential dwelling units, the No Project Alternative would result in fewer new sources of light and glare than the proposed plans. Mitigation similar to what would be required for the proposed plans would still likely be required to reduce this impact to a level of less than significant. Therefore, the No Project Alternative would have fewer impacts on aesthetics, light, and glare than the proposed plans.

Agricultural Resources

The proposed plans were found to have no impact or less than significant impacts on agricultural or forestry resources in the Plan areas, without the need for mitigation. Given the lack of agricultural and forestry resources in the Plan areas, the No Project alternative would have similar impacts as the proposed plan.

Air Quality/Greenhouse Gas Emissions

This alternative would result in a reduction of 7,850,000 fewer square feet of commercial space and 9,900 fewer residential dwelling units relative to the proposed plans. Under the proposed plans, some of the construction and long-term operational air quality and greenhouse gas impacts would be less than significant with mitigation, but several impacts would be significant and unavoidable. The MEIR prepared for the General Plan also found regional criteria pollutant impacts to be significant and unavoidable, which would reflect the development scenario under the No Project Alternative (as planned growth under the General Plan). From a construction standpoint, the No Project Alternative would include only 30 to 50 percent of the planned development and would therefore result in fewer emissions associated with both demolition and construction of commercial and residential buildings. From an operational standpoint, the project is also expected to have reduced air quality impacts compared with the proposed plans, even though several design features that are part of the proposed plans to reduce traffic would not be constructed under the No Project Alternative. Notably, the No Project Alternative would have reduced potential air quality impacts associated with exposure of sensitive receptors to air pollutants generated by commercial land uses and vehicle traffic. In summary, the No Project Alternative would have less impact on air quality and greenhouse gases than the proposed plans, although significant and unavoidable air quality impacts related to criteria pollutants would be expected to occur under both scenarios.

Biological Resources

Under the No Project Alternative, 7,850,000 fewer square feet of commercial space and 9,900 fewer residential dwelling units would be constructed within the DNCP and FCSP plan areas compared with the proposed plans. Nonetheless, this alternative would have the potential to impact nesting birds and would require mitigation similar to the proposed plans. Additionally, while the proposed plans would increase open space in the downtown area by 64 acres, this additional open space would not

be established under the No Project Alternative. To the extent that open space may promote habitat in the plan area, there would be less potential habitat under the No Project Alternative than the proposed plan. The implementation of mitigation would reduce impacts to a level of less than significant. Therefore, this alternative would have less impact on biological resources than the proposed plans.

Cultural Resources

Under the No Project Alternative, 7,850,000 fewer square feet of commercial space and 9,900 fewer residential dwelling units would be constructed as compared with the proposed plans. Even so, this alternative would have the potential to impact previously undiscovered buried cultural resources, albeit to a lesser degree than the proposed plans, and would require mitigation similar to the proposed plans. The implementation of mitigation would reduce impacts to a level of less than significant. However, the DNCP and FCSP have provisions for historic resources in the Plan areas that build on those contained within the General Plan, which would not be implemented under the No Project Alternative. Therefore, this alternative would have a greater impact on cultural resources than the proposed plans.

Geology, Soils, and Seismicity

Under the No Project Alternative, 7,850,000 fewer square feet of commercial space and 9,900 fewer residential dwelling units would be constructed within the DNCP and FCSP plan areas. Nonetheless, development would have the potential to expose people or structures to seismic hazards, unstable soils, or expansive soils and create erosion during construction, but to a lesser degree than the proposed plans. Therefore, this alternative would require mitigation similar to the proposed plans, the implementation of which would reduce impacts to a level of less than significant. This alternative would have fewer impacts related to geology, soils, and seismicity than the proposed plans.

Hazards and Hazardous Materials

Under the No Project Alternative, 7,850,000 fewer square feet of commercial space and 9,900 fewer residential dwelling units would be constructed within the DNCP and FCSP plan areas. Similar to the proposed plans, employees and patrons would have the potential to be exposed to existing contamination. However, since less residential development is included, potential exposure would be proportionately reduced. The implementation of mitigation would reduce impacts to a level of less than significant. Therefore, this alternative would have less impact on hazards and hazardous materials compared with the proposed plans.

Hydrology and Water Quality

Under the No Project Alternative, 7,850,000 fewer square feet of commercial space and 9,900 fewer residential dwelling units would be constructed within the DNCP and FCSP plan areas. Additionally, while the proposed plans would increase open space in the downtown area by 64 acres, this additional open space would not be established under the No Project Alternative. To the extent that open space may be impervious and increase water infiltration into the ground in the plan area, there would be less potential areas of water infiltration in the plan area under the No Project Alternative

than the proposed plan. New development would have the potential to create water quality problems in downstream waterways. As such, this alternative would require mitigation similar to the proposed plans, the implementation of which would reduce impacts to level of less than significant. Therefore, this alternative would have less overall impact on hydrology and water quality than the proposed plans.

Land Use

Similar to the proposed plans, the No Project Alternative would maintain the existing General Plan and Zoning Ordinance designations of the DNCP and FCSP plan areas. Buildout of the DNCP and FCSP plan areas under the General Plan would be required to comply with applicable General Plan and Zoning Ordinance policies. Therefore, this alternative would have impacts on land use similar to those of the proposed plans.

Noise

Construction activities in the plan area would be required to implement mitigation similar to the proposed plans to ensure that short-term noise impacts are less than significant. The MEIR prepared for the General Plan also identified significant and unavoidable noise impacts that would occur, similar to the proposed plans. However, unlike the proposed plans, the No Project Alternative would include fewer residential uses; therefore, it would not be necessary to implement the vibration and interior noise control mitigation measures identified for the proposed plans. In addition, because the No Project Alternative would generate fewer daily trips, it would have a smaller contribution to noise levels on local roadways. Therefore, the No Project Alternative would have less impact on noise than the proposed plans, although significant and unavoidable noise impacts would likely occur under both scenarios.

Population and Housing

This alternative would result in a net decrease of 7,850,000 fewer square feet of commercial space and 9,900 fewer residential dwelling units. The population and employment growth contemplated by the General Plan within the DNCP and FCSP plan areas have already been accounted for in local and regional forecasts, and would be consistent with the General Plan. Therefore, similar to the proposed plans, population and employment growth that would occur under this alternative would not exceed forecasted population growth assumptions. As such, this alternative would have impacts on population and housing similar to the proposed plans.

Public Services and Recreation

This alternative would represent a net decrease of 7,850,000 fewer square feet of commercial space and 9,900 fewer residential dwelling units relative to the proposed plans. Because this alternative would reduce the total number of dwelling units and create fewer employment opportunities, it would result in correspondingly lower impacts on public services and recreation through fewer calls for service, student generation, and public facility usage. Any development under the No Project Alternative would be required to implement fire protection mitigation similar to the proposed plans. Therefore, the No Project Alternative would have lesser impacts on public services and recreation than the proposed plans.

Transportation

The No Project Alternative would result in a net decrease of 7,850,000 fewer square feet of commercial space and 9,900 fewer residential dwelling units relative to the proposed plans. The No Project Alternative would generate fewer daily trips relative to the proposed plans, including fewer trips during the morning and afternoon peak hours. Although the proposed plans would create a more integrated traffic signal system, and promote several programs for traffic calming and pedestrian/cycling amenities, the implementation of the DNCP and FSCP would contribute to significant and unavoidable impacts on intersection operations outside of the Downtown Planning area, intersection operations at Caltrans study intersections, unacceptable freeway operations, and unacceptable queuing at freeway onramps. The MEIR prepared for the General Plan also identified a significant and unavoidable impact to Caltrans facilities (as well as to roadways and intersections located outside the City of Fresno). Therefore, the No Project Alternative would have a lesser impact on transportation than the proposed plans, but would not avoid the significant and unavoidable impact to Caltrans facilities.

Utility Systems

The reduced development intensity of this alternative would have correspondingly less demand for potable water relative to the proposed plans. The wastewater and storm drainage impacts from the proposed plans were determined to be less than significant; therefore, the No Project Alternative would also have less than significant impacts on these utility systems. The No Project alternative would result in less demolition and construction waste. The No Project Alternative would have a substantially lower demand for energy, but would not be guided by DNCP, FCSP and DDC policies to implement energy conservation and alternative energy strategies, and therefore, would require mitigation to reduce potential impacts to a level of less than significant. The No Project Alternative would have less impact on utility systems compared with the proposed plans.

Conclusion

The No Project Alternative would have an overall lesser impact than the proposed plans. It would have impacts similar to the proposed plans on aesthetic resources, agricultural resources and population and housing, and it would have greater impacts than the proposed plans on cultural resources. The No Project Alternative would reduce, but not avoid, the significant and unavoidable air quality, noise and traffic impacts that would occur under the proposed plans, as these impacts were also acknowledged by the MEIR prepared for the General Plan. As the General Plan was developed in tandem with the DNCP, FCSP, and DDC, the No Project Alternative would meet most of the project objectives, and would represent planned growth under the General Plan. However, the No Project Alternative would not have the specificity of the proposed plans for the Downtown Neighborhoods and would therefore not meet the following objectives of the DNCP:

- To revive the underlying structure of the Downtown Neighborhoods to create identifiable neighborhoods, districts, and corridors.
- To integrate the public realm of streets with a multi-modal transportation network that renders them walkable and livable.

- To reintroduce missing street trees, irrigation, and sidewalks, and slow down traffic on primary thoroughfares through various traffic-calming measures.
- To design commercial buildings with facades that are adjacent to sidewalks, are constructed of quality and durable materials, can accommodate a mix of uses at any one time, and can be reused over time under different programs.

Furthermore, the No Project Alternative would not meet the following primary goals of the FCSP, which are to define:

- New zoning standards for the Plan area that will replace current zoning regulations. These new standards are calibrated to deliver new development that is consistent with Fresno's physical character, history, and culture, as well as the community's vision for its future growth.
- The implementation strategy for transforming the Plan area's streets, infrastructure, parks, and other public spaces. The above purposes provide private property owners with a clear understanding of the future context within which they are investing and reinvesting in their properties.

7.4 - Alternative 2—High Density Residential Focus

7.4.1 - Description

The High Density Residential Focus consists of implementing a version of the DNCP and FCSP that emphasizes residential use intensification. This alternative would increase residential land use density for the "high" capacity development potential by 60 percent (i.e., instead of 14 percent proposed for the DNCP), a 30 percent increase in residential land use density for the "medium" capacity development potential, and a 10 percent increase in the "low" capacity development potential for both Plan areas. This would equate to an increase in 5,994 dwelling units for high capacity, 2,997 for medium, and 990 for low in addition to the 9,990 dwelling units proposed for the project. The intent of this alternative is to allow more people to live in the downtown neighborhoods where job opportunities, commercial, and recreational activities exist. This alternative would provide more dense urban housing opportunities, and seeks to create a fully integrated horizontal and vertical mixed-use downtown area with a vibrant commercial core and lifestyle residential neighborhoods. Under this alternative, the commercial square footage would remain the same as proposed under the DNCP and FCSP.

7.4.2 - Analysis

Because of increased residential development under this alternative compared with the proposed plans, environmental effects associated with this alternative would be greater than the proposed plans. Under this alternative, the maximum residential development potential for the DNCP and FCSP plan areas would increase by 990 to 5,994 residential dwelling units in addition to the 9,990 dwelling units proposed for the project, and commercial development would remain the same as the proposed plans through the year 2035. This alternative would enable more people to live in the downtown neighborhoods compared with the proposed plans in the same timeline.

The significant and unavoidable effects associated with the proposed plans (air quality, greenhouse gas, noise and traffic) would be slightly greater with the implementation of this alternative. In addition, the effects that were found to be significant prior to mitigation under the proposed plans would also be increased, as would impacts that were found to be less than significant under the proposed plans. This alternative would meet all of the project's objectives.

Aesthetics, Light, and Glare

The High Density Residential Focus alternative would result in 990 to 5,994 more residential dwelling units than the 9,990 proposed plans. The proposed plans was found to have no impacts on State Scenic Highways, and visual character impacts were found to be less than significant and did not require mitigation. This alternative would also have less than significant impacts on aesthetic resources, as the increase in residential dwellings would not be more visible from off-site than those in the proposed plans, due to height limitations that would apply to both scenarios. This alternative would result in more new sources of light and glare than the proposed plans, and mitigation similar to the proposed plans would be required to reduce this impact to a level of less than significant. Therefore, the High Density Residential Focus Alternative would have greater aesthetics, light, and glare impacts than the proposed plans.

Agricultural Resources

The proposed plans was found to have no impact or less than significant impacts on agricultural or forestry resources in the Plan areas. Given the lack of agricultural and forestry resources in the Plan areas, the High Density Residential Focus alternative would have similar impacts as the proposed plan.

Air Quality/Greenhouse Gas Emissions

The High Density Residential Focus Alternative would result in the addition of 990 to 5,994 more residential dwelling units than the proposed plans. Under the proposed plans, some of the construction and long-term operational air quality and greenhouse gas impacts would be less than significant with mitigation, but several impacts would be significant and unavoidable. From a construction emissions standpoint, the High Density Residential Focus Alternative would result in more emissions associated with increased residential construction. From an operational standpoint, the High Density Residential Focus Alternative is expected to have increased air quality impacts compared with the proposed plans. In particular, the significantly increased residential development component would potentially increase exposure of sensitive receptors to air quality impacts associated with air pollutants generated by commercial land uses and vehicle traffic. Although the High Density Residential Focus Alternative would result in overall greater generation of greenhouse gases, the increased density may result in a higher reduction from the business-as-usual emissions scenario than the proposed plans. In summary, the High Density Residential Focus Alternative would have greater air quality and greenhouse gas emissions impacts than the proposed plans.

Biological Resources

Under the High Density Residential Focus Alternative, 990 to 5,994 more residential dwelling units would be constructed than under the proposed plans. Similar to the proposed plans, this alternative would have the potential to impact nesting birds, but to a greater degree than the proposed plans.

Mitigation similar to that required for the proposed plans would be required. As with the proposed plans, the implementation of mitigation would reduce potential impacts to a level of less than significant. However, due to increased development, this alternative would have greater impacts on biological resources than the proposed plans.

Cultural Resources

Under this alternative, 990 to 5,994 more residential dwelling units would be constructed than under the proposed plans. Although residential development under this alternative would occur largely as urban infill, it would still have the potential to impact previously undiscovered buried cultural resources to a greater degree than the proposed plans, and it would require mitigation similar to the proposed plans. The implementation of mitigation would reduce impacts to a level of less than significant. Therefore, this alternative would have greater impacts on cultural resources than the proposed plans due to increased development.

Geology, Soils, and Seismicity

Under this alternative, 990 to 5,994 more residential dwelling units would be constructed than under the proposed plans. This alternative would have the potential to expose people or structures to seismic hazards, unstable soils, or expansive soils and create erosion during construction, but to a greater extent than the proposed plans because of the increased residential occupancy. This alternative would require mitigation similar to the proposed plans, the implementation of which would reduce impacts to a level of less than significant. Therefore, this alternative would have greater geology, soils, and seismicity impacts than the proposed plans.

Hazards and Hazardous Materials

Under the High Density Residential Focus Alternative, 990 to 5,994 more residential dwelling units would be constructed than under the proposed plans. Similar to the proposed plans, persons employed or living on the site would have the potential to be exposed to existing contamination, but to a greater extent because of increased occupancy. The implementation of mitigation would reduce impacts to a level of less than significant. Therefore, this alternative would have greater impacts related to hazards and hazardous materials than the proposed plans.

Hydrology and Water Quality

Under this alternative, more impervious surface area would be created in conjunction with an increased amount of residential dwellings compared with the proposed plan. Similar to the proposed plans, this alternative would have the potential to create water quality problems in downstream waterways. As such, this alternative would require mitigation similar to the proposed plans, the implementation of which would reduce impacts to a level of less than significant. Therefore, this alternative would have greater impacts on hydrology and water quality than the proposed plans.

Land Use

Similar to the proposed plans, this alternative would not divide an established community, conflict with land use plans, or conflict with existing conservation plans. The construction of the residential

space would be required to comply with applicable General Plan and Zoning Ordinance policies, as would be required for the proposed plans. Therefore, this alternative would have similar impacts on land use as those of the proposed plans.

Noise

Under the High Density Residential Focus Alternative, a total of 990 to 5,994 more residential dwelling units would be constructed than under the proposed plans. Similar to the proposed plans, noise impacts would occur during construction activities, but to a greater extent given the increased development included under this alternative. Construction activities would be required to implement mitigation similar to the proposed plans to ensure that short-term noise impacts are less than significant. This alternative includes significantly more residential dwellings than the proposed plans. As such, it will be necessary to implement vibration and interior noise control mitigation measures similar to those identified for the proposed plans. This alternative would generate an increased number of daily trips compared with the proposed plans. Accordingly, it would have a greater contribution to noise levels on local roadways. Therefore, this alternative would have noise impacts greater than the proposed plans.

Population and Housing

This alternative would increase the residential square footage of the proposed plans by 990 to 5,994 more residential dwelling units. As with the proposed plans, direct population growth would occur under this alternative. The direct population growth and employment growth created by this alternative have already been accounted for in local and regional forecasts, and this alternative would be consistent with the General Plan. Therefore, similar to the proposed plans, population and employment growth that would occur under this alternative would not exceed forecasted population growth assumptions. The population and housing impacts would be similar to those of the proposed plans.

Public Services and Recreation

The High Density Residential Focus Alternative would result in 990 to 5,994 more residential dwelling units than would be constructed under the proposed plans. Because this alternative would contain significantly more residential uses relative to the proposed plans, it would result in greater impacts on public services and recreation through increased calls for service, student generation, and public facility usage. This alternative would be required to implement fire protection mitigation similar to the proposed plans. In conclusion, this alternative would have greater impacts on public services and recreation than the proposed plans.

Transportation

The High Density Residential Focus Alternative would result in a net increase of 990 to 5,994 more residential dwelling units relative to the proposed plans. The High Density Residential Focus Alternative would generate more daily trips relative to the proposed plans, including more trips during the morning and afternoon peak hours. Although the proposed plans would create a more integrated traffic signal system, and promote several programs for traffic calming and pedestrian/cycling amenities as described in the DNCP and FCSP, the implementation of the

proposed plans would contribute to several significant and unavoidable impacts on the traffic system inside and outside of the plan areas. Therefore, while the addition of dwelling units that would attract more residents to the downtown area could result in more people working and recreating in the downtown area instead of driving elsewhere, this increase in residential dwellings would cause the High Density Residential Focus Alternative to have greater impacts on transportation than the proposed plans.

Utility Systems

The High Density Residential Focus Alternative would result in 990 to 5,994 more residential dwelling units than would be constructed under the proposed plans. The increased residential development under this alternative would have correspondingly greater demand for potable water and wastewater disposal and treatment relative to the proposed plans, and there would be increased demand for these utilities associated with commercial development. The proposed plan's wastewater and storm drainage impacts were determined to be less than significant. Therefore, this alternative would have less than significant impacts on these utility systems, although greater impacts than would occur under the proposed plans. This alternative would result in increased demolition and construction waste that would be considered significant enough to require demolition and construction debris recycling. In addition, this alternative would generate substantial amounts of operational solid waste and would require mitigation similar to the proposed plans to reduce potential impacts to a level of less than significant. This alternative would have an increased demand for energy, and would be guided by the DNCP, FCSP and DDC policies to implement energy conservation and alternative energy strategies that would reduce potential impacts to a level of less than significant. Therefore, this alternative would have impacts on utility systems greater than the proposed plans.

Conclusion

The High Density Residential Focus Alternative would have impacts similar to the proposed plans relative to aesthetic resources, agricultural resources, and population and housing. In all other impact categories, it would have greater environmental impacts. The High Density Residential Focus Alternative would meet all of the project objectives.

7.5 - Alternative 3—Retail Oriented Development Potential Scenario

7.5.1 - Description

The Retail Oriented Development Potential Scenario Alternative consists of implementing a version of the DNCP and FCSP that emphasizes retail use intensification. This alternative would increase the retail square footage under the plans by 10 percent for the "high" capacity development potential, and would decrease the office and industrial square footage proposed under the plans by 5 percent in the high capacity development potential category. This would equate to a 249,553-square-foot increase in retail space that would occur as new development, and an increase in 11,923 square feet of existing vacant space that would be used for retail over that of the proposed plan (a total increase of 261,476 square feet). Additionally, this alternative would have 30,734 fewer office square feet than what is proposed under the DNCP and FSCP (for a proposed total of 583,996 square feet of

office space in the plan areas), and 153,628 fewer industrial square feet (for a total of 2,918,948 square feet for industrial use in the plan areas). Under this alternative, residential and other land uses would remain the same as the proposed plans.

The intent of this alternative is to allow more retail use in the downtown neighborhoods where job opportunities, commercial, and recreational activities exist. This alternative would increase the tax base for the city, and would serve to attract more shopping retailers to the downtown neighborhoods for more intensified retail shopping opportunities where public transit and pedestrian amenities are available in the City.

7.5.2 - Analysis

Because of increased retail development under this alternative compared with the proposed plans, along with decreased office and industrial development, the environmental effects associated with this alternative would be roughly similar to the proposed plans. Under this alternative, the maximum retail development potential for the DNCP and FCSP plan areas would increase by 249,553 square feet, and there would be 30,734 fewer office square feet and 153,628 fewer industrial square feet relative to the proposed plans through the year 2035.

The significant and unavoidable effects associated with the proposed plans (air quality, greenhouse gas, noise and traffic) would be essentially the same with the implementation of this alternative. In addition, the effects that were found to be significant prior to mitigation under the proposed plans would be the same, as would impacts that were found to be less than significant under the proposed plans. This alternative would meet all of the project's objectives.

Aesthetics, Light, and Glare

The Retail Oriented Development Potential Scenario Alternative would result in a 249,553 square foot increase in retail development, and a 30,734 square foot and 153,628 square foot decrease in office and industrial space, respectively, than would be permitted under the proposed plans. The proposed plans would have no impact on State Scenic Highways, and impacts to visual character were found to be less than significant and did not require mitigation. The Retail Oriented Development Potential Scenario Alternative would also have less than significant impacts on these areas, since the additional retail space would not be more visible from off-site than those in the proposed plans. The Retail Oriented Development Potential Scenario Alternative would not result in more new sources of light and glare than the proposed plans, and mitigation similar to the proposed plans would be required to reduce this impact to a level of less than significant. Therefore, the Retail Oriented Development Potential Scenario Alternative would have the same aesthetics, light, and glare impacts as the proposed plans.

Agricultural Resources

The proposed plans was found to have no impact or less than significant impacts on agricultural or forestry resources in the Plan areas. Given the lack of agricultural and forestry resources in the Plan areas, the Retail Oriented Development Potential alternative would have similar impacts as the proposed plan.

Air Quality/Greenhouse Gas Emissions

The Retail Oriented Development Potential Scenario Alternative would result in a 249,553 square foot increase in retail development, and a 30,734 square foot and 153,628 square foot decrease in office and industrial space, respectively, than would be permitted under the proposed plans. Under the proposed plans, some of the construction and long-term operational air quality and greenhouse gas impacts would be less than significant with mitigation, but several impacts would be significant and unavoidable. From a construction emissions standpoint, the Retail Oriented Development Potential Scenario Alternative would result in similar emissions associated with increased construction for retail use because there would also be an approximately equal decrease in office and industrial square feet. From an operational standpoint, the Retail Oriented Development Potential Scenario Alternative is also expected to have the same air quality impacts as the proposed plans. In summary, this alternative would have the same impacts as the proposed plans.

Biological Resources

The Retail Oriented Development Potential Scenario Alternative would result in a 249,553 square foot increase in retail development, and a 30,734 square foot and 153,628 square foot decrease in office and industrial space, respectively, than would be permitted under the proposed plans. This alternative would have the potential to impact nesting birds to a degree similar to the proposed plans, and would require mitigation similar to the proposed plans. However, as with the proposed plans, the implementation of mitigation would reduce potential impacts to a level of less than significant. Therefore, this alternative would have the same impacts on biological resources as the proposed plans.

Cultural Resources

The Retail Oriented Development Potential Scenario Alternative would result in a 249,553 square foot increase in retail development, and a 30,734 square foot and 153,628 square foot decrease in office and industrial space, respectively, than would be permitted under the proposed plans. As such, this alternative would have the same potential to impact previously undiscovered buried cultural resources as the proposed plans, and would require mitigation similar to the proposed plans. However, the implementation of mitigation would reduce impacts to a level of less than significant. Therefore, this alternative would have the same impacts on cultural resources as the proposed plans.

Geology, Soils, and Seismicity

The Retail Oriented Development Potential Scenario Alternative would result in a 249,553 square foot increase in retail development, and a 30,734 square foot and 153,628 square foot decrease in office and industrial space, respectively, than would be permitted under the proposed plans. This alternative would have the potential to expose a number of people and structures to seismic hazards, unstable soils, or expansive soils and create erosion during construction similar to the proposed plans. This alternative would require mitigation similar to the proposed plans, the implementation of which would reduce impacts to a level of less than significant. Therefore, this alternative would have the same geology, soils, and seismicity impacts as the proposed plans.

Hazards and Hazardous Materials

The Retail Oriented Development Potential Scenario Alternative would result in a 249,553 square foot increase in retail development, and a 30,734 square foot and 153,628 square foot decrease in office and industrial space, respectively, than would be permitted under the proposed plans. Similar to the proposed plans, persons employed or living on the site would have the potential to be exposed to existing contamination. The implementation of mitigation would reduce impacts to a level of less than significant. Therefore, this alternative would have the same impact related to hazards and hazardous materials as the proposed plans.

Hydrology and Water Quality

Under the Retail Oriented Development Potential Scenario Alternative, the same impervious surface area would be constructed within the DNCP and FCSP plan areas as under the proposed plans, which, similar to the proposed plans, would have the potential to create water quality problems in downstream waterways. As such, this alternative would require mitigation similar to the proposed plans, the implementation of which would reduce impacts to level of less than significant. Therefore, this alternative would have the same impacts on hydrology and water quality as the proposed plans.

Land Use

Similar to the proposed plans, this alternative would not divide an established community, conflict with land use plans, or conflict with existing conservation plans. The construction of additional retail space would be required to comply with applicable General Plan and Zoning Ordinance policies, as would be required for the proposed plans. Therefore, this alternative would have similar impacts on land use as those of the proposed plans.

Noise

The Retail Oriented Development Potential Scenario Alternative would result in a 249,553 square foot increase in retail development, and a 30,734 square foot and 153,628 square foot decrease in office and industrial space, respectively, than would be permitted under the proposed plans. Like the proposed plans, noise impacts would occur during construction activities. Thus, construction activities would be required to implement mitigation similar to the proposed plans to ensure that short-term noise impacts are less than significant. It will be necessary to implement similar vibration and interior noise control mitigation measures to those identified for the proposed plans. The Retail Oriented Development Potential Scenario Alternative would have noise impacts similar to the proposed plans.

Population and Housing

The Retail Oriented Development Potential Scenario Alternative would result in a 249,553 square foot increase in retail development, and a 30,734 square foot and 153,628 square foot decrease in office and industrial space, respectively, than would be permitted under the proposed plans. As with the proposed plans, direct population growth would occur under the Retail Oriented Development Potential Scenario Alternative. The direct population growth and employment growth created by this alternative have already been accounted for in local and regional forecasts and would be

consistent with the General Plan. Therefore, similar to the proposed plans, population and employment growth that would occur under this alternative would not exceed forecasted population growth assumptions. Therefore, the impact is similar to that of the proposed plans.

Public Services and Recreation

The Retail Oriented Development Potential Scenario Alternative would result in a 249,553 square foot increase in retail development, and a 30,734 square foot and 153,628 square foot decrease in office and industrial space, respectively, than would be permitted under the proposed plans. This alternative would have impacts on public services and recreation similar to the proposed plans. This alternative would be required to implement fire protection mitigation similar to the proposed plans. In conclusion, the Retail Oriented Development Potential Scenario Alternative would have the same impacts on public services and recreation as the proposed plans.

Transportation

The Retail Oriented Development Potential Scenario Alternative would result in a 249,553 square foot increase in retail development, and a 30,734 square foot and 153,628 square foot decrease in office and industrial space, respectively, than would be permitted under the proposed plans. The Retail Oriented Development Potential Scenario Alternative would generate daily trips similar to the proposed plans, although it could include more trips during the off peak hours for evening and weekend shopping trips. Therefore, the Retail Oriented Development Potential Scenario Alternative would have impacts greater than the proposed plans on transportation and traffic.

Utility Systems

The Retail Oriented Development Potential Scenario Alternative would result in a 249,553 square foot increase in retail development, and a 30,734 square foot and 153,628 square foot decrease in office and industrial space, respectively, than would be permitted under the proposed plans. This alternative would have demand for potable water and wastewater disposal and treatment similar the proposed plans. Similar to the proposed plans, this alternative would be required to comply with all existing policies for water conservation and wastewater reduction. The proposed plan's wastewater and storm drainage impacts were determined to be less than significant. Therefore, the Retail Oriented Development Potential Scenario Alternative would have less than significant impacts on these utility systems. In addition, this alternative would generate substantial amounts of operational solid waste and require mitigation similar to the proposed plans to reduce potential impacts to a level of less than significant. The Retail Oriented Development Potential Scenario Alternative would have a similar demand for energy, and would be guided by policies to implement energy conservation and alternative energy strategies that would reduce potential impacts to a level of less than significant. Therefore, this alternative would have impacts on utility systems that are the same as the proposed plans.

Conclusion

The Retail Oriented Development Potential Scenario Alternative would have impacts similar to the proposed plans in all impact categories with the exception of transportation, under which it would

have greater environmental impacts related to peak hour trip generation. The High Density Residential Focus Alternative would meet all of the project objectives.

7.6 - Alternative 4—Office Oriented Development Potential Scenario

7.6.1 - Description

The Office Oriented Development Potential Scenario Alternative consists of implementing a version of the DNCP and FCSP that emphasizes office use intensification. This alternative would increase the office square footage under the plans by 10 percent for the "high" capacity development potential, and would decrease the retail and industrial square footage proposed under the plans by 5 percent in the high capacity development potential category. This would equate to a 503,848-square-foot increase in office space that would occur as new development, and an increase in 39,098 square feet of existing vacant space that would be used for office over that of the proposed plan (a total increase of 542,946 square feet of office space development). Additionally, this alternative would have 130,738 fewer retail square feet than what is proposed under the DNCP and FSCP (for a proposed total of 2,484,028 square feet of retail space in the plan areas), and 153,628 fewer industrial square feet (for a total of 2,918,948 square feet for industrial use in the plan areas). Under this alternative, residential and other land uses would remain the same as the proposed plans.

The intent of this alternative is to generate a better jobs-to-housing ratio in the Downtown neighborhoods and to allow for more local employment opportunities in the Downtown core where transit and other amenities are more readily available. This alternative would serve to increase the amount of jobs available in the downtown area that may also attract prospective homebuyers and consumers of commercial and recreational offerings to the downtown neighborhoods for more intensified use of the downtown area.

7.6.2 - Analysis

Under this alternative, the maximum office development potential for the DNCP and FCSP plan areas would increase by 503,848 square feet, and there would be 130,738 fewer retail square feet and 153,628 fewer industrial square feet relative to the proposed plans through the year 2035. Because of increased office development under this alternative compared with the proposed plans, there would be a total increase of 258,580 square feet of development in the plan area relative to the proposed plans. Although there would be decreased retail and industrial development, the overall environmental effects associated with this alternative would be greater than the proposed plans.

The significant and unavoidable effects associated with the proposed plans (air quality, greenhouse gas, noise and traffic) would be greater with the implementation of this alternative. In addition, the effects that were found to be significant prior to mitigation under the proposed plans would be greater, as would the impacts that were found to be less than significant under the proposed plans. This alternative would meet all of the project's objectives.

Aesthetics, Light, and Glare

The Office Oriented Development Potential Scenario Alternative would result in a total of 258,850 additional square feet of office development than would occur under the proposed plans. The

proposed plans would have no impact on State Scenic Highways, and impacts to visual character were found to be less than significant and did not require mitigation. The Office Oriented Development Potential Scenario Alternative would also have less than significant impacts on these areas, since the additional office space would not be more visible from off-site than under the proposed plans. The Office Oriented Development Potential Scenario Alternative would result in more new sources of light and glare than the proposed plans, and mitigation similar to the proposed plans would be required to reduce this impact to a level of less than significant. Therefore, the Office Oriented Development Potential Scenario Alternative would have greater aesthetics, light, and glare impacts than the proposed plans.

Agricultural Resources

The proposed plans was found to have no impact or less than significant impacts on agricultural or forestry resources in the Plan areas. Given the lack of agricultural and forestry resources in the Plan areas, the Office Oriented Development Potential alternative would have similar impacts as the proposed plan.

Air Quality/Greenhouse Gas Emissions

The Office Oriented Development Potential Scenario Alternative would result in a total of 258,850 additional square feet of office development than would occur under the proposed plans. Under the proposed plans, some of the construction and long-term operational air quality and greenhouse gas impacts would be less than significant with mitigation, but several impacts would be significant and unavoidable. From a construction standpoint, the Office Oriented Development Potential Scenario Alternative would result in greater emissions associated with increased construction for office use. From any operational standpoint, the Office Oriented Development Potential Scenario Alternative is also expected to have greater air quality impacts than the proposed plans due to increased square footage and the corresponding generation of vehicle trips. In summary, this alternative would have greater air quality impacts than the proposed plans.

Biological Resources

The Office Oriented Development Potential Scenario Alternative would result in a total of 258,850 additional square feet of office development than would occur under the proposed plans. This alternative would have the potential to impact nesting birds to a degree similar to the proposed plans, and would require mitigation similar to the proposed plans. However, as with the proposed plans, the implementation of mitigation would reduce potential impacts to a level of less than significant. However, this alternative proposes to develop more square footage of new construction than the proposed plans, and therefore this alternative would have greater potential impacts on biological resources than the proposed plans.

Cultural Resources

The Office Oriented Development Potential Scenario Alternative would result in a total of 258,850 additional square feet of office development than would occur under the proposed plans. As such, this alternative would have the same potential to impact previously undiscovered buried cultural resources as the proposed plans, and would require mitigation similar to the proposed plans.

However, the implementation of mitigation would reduce impacts to a level of less than significant. Because of the increase in square footage of development under this alternative, there would be a greater potential for impacts to previously undiscovered cultural resources than the proposed plans.

Geology, Soils, and Seismicity

The Office Oriented Development Potential Scenario Alternative would result in a total of 258,850 additional square feet of office development than would occur under the proposed plans. This alternative would have the potential to expose a greater number of people and structures to seismic hazards, unstable soils, or expansive soils and create erosion during construction than the proposed plans. This alternative would require mitigation similar to the proposed plans, the implementation of which would reduce impacts to a level of less than significant. Therefore, this alternative would have greater geology, soils, and seismicity impacts than the proposed plans.

Hazards and Hazardous Materials

The Office Oriented Development Potential Scenario Alternative would result in a total of 258,850 additional square feet of office development than would occur under the proposed plans. Similar to the proposed plans, persons employed on the site would have the potential to be exposed to existing contamination. The implementation of mitigation would reduce impacts to a level of less than significant. However, this alternative would have greater impacts related to hazards and hazardous materials than the proposed plans due to the increased amount of construction activities related to the additional square footage.

Hydrology and Water Quality

Under the Office Oriented Development Potential Scenario Alternative, a greater amount of impervious surface area (258,850 square feet) would be constructed within the DNCP and FCSP plan areas than under the proposed plans, which, similar to the proposed plans, would have the potential to create water quality problems in downstream waterways. As such, this alternative would require mitigation similar to the proposed plans, the implementation of which would reduce impacts to level of less than significant. Therefore, this alternative would have greater impacts on hydrology and water quality than the proposed plans due to the increase in impervious surface area.

Land Use

Similar to the proposed plans, this alternative would not divide an established community, conflict with land use plans, or conflict with existing conservation plans. The construction of additional office space would be required to comply with applicable General Plan and Zoning Ordinance policies, as would be required for the proposed plans. Therefore, this alternative would have similar impacts on land use as those of the proposed plans.

Noise

The Office Oriented Development Potential Scenario Alternative would result in a total of 258,850 additional square feet of office development than would occur under the proposed plans. Like the proposed plans, noise impacts would occur during construction activities. Thus, construction activities would be required to implement mitigation similar to the proposed plans to ensure that

short-term noise impacts are less than significant. It will be necessary to implement similar vibration and interior noise control mitigation measures to those identified for the proposed plans. The Office Oriented Development Potential Scenario Alternative would have greater noise impacts than the proposed plans.

Population and Housing

The Office Oriented Development Potential Scenario Alternative would result in a total of 258,850 additional square feet of office development than would occur under the proposed plans. As with the proposed plans, direct population growth would occur under the Office Oriented Development Potential Scenario Alternative. The direct population growth and employment growth created by this alternative have already been accounted for in local and regional forecasts and would be consistent with the General Plan. Therefore, similar to the proposed plans, population and employment growth that would occur under this alternative would not exceed forecasted population growth assumptions. Therefore, the impact is similar to that of the proposed plans.

Public Services and Recreation

The Office Oriented Development Potential Scenario Alternative would result in a total of 258,850 additional square feet of office development than would occur under the proposed plans. This alternative would have greater impacts on public services and recreation than the proposed plans. This alternative would be required to implement fire protection mitigation similar to the proposed plans. In conclusion, the Office Oriented Development Potential Scenario Alternative would have greater impacts on public services and recreation than the proposed plans due to the overall increase in square footage.

Transportation

The Office Oriented Development Potential Scenario Alternative would result in a total of 258,850 additional square feet of office development than would occur under the proposed plans. The Office Oriented Development Potential Scenario Alternative would generate greater daily trips than the proposed plans due to the increase in square footage. Therefore, the Office Oriented Development Potential Scenario Alternative would have greater impacts on transportation than the proposed plans.

Utility Systems

The Office Oriented Development Potential Scenario Alternative would result in a total of 258,850 additional square feet of office development than would occur under the proposed plans. This alternative would have a greater demand for potable water and wastewater disposal and treatment than the proposed plans. Similar to the proposed plans, this alternative would be required to comply with all existing policies for water conservation and wastewater reduction. The proposed plans' wastewater and storm drainage impacts were determined to be less than significant. Therefore, the Office Oriented Development Potential Scenario Alternative would have less than significant impacts on these utility systems. In addition, this alternative would generate substantial amounts of operational solid waste and require mitigation similar to the proposed plans to reduce potential impacts to a level of less than significant. The Office Oriented Development Potential

Scenario Alternative would have a greater demand for energy, but would be guided by policies to implement energy conservation and alternative energy strategies that would reduce potential impacts to a level of less than significant. Therefore, this alternative would have impacts on utility systems that are greater than the proposed plans due to the increase in overall square footage.

Conclusion

The Office Oriented Development Potential Scenario Alternative would have impacts greater than the proposed plans in all impact categories with the exception of Agriculture, Land Use and Population and Housing. The increase in the severity of the environmental effects is due to the overall net increase of square footage (258,850 square feet). The Office Oriented Development Potential Scenario would meet all of the project objectives.

7.7 - Environmentally Superior Alternative

The qualitative environmental effects of each alternative in relation to the proposed plans are summarized in Table 7-2.

CEQA requires that the City identify an Environmentally Superior Alternative. If the No Project Alternative is the Environmentally Superior Alternative as it is in this case, the City must identify an Environmentally Superior Alternative among the other alternatives considered in the EIR (CEQA Guidelines, Section 15126.6). It should be noted that the No Project Alternative would reduce, but not avoid the significant and unavoidable impacts that would occur under the proposed plans. This is because the MEIR prepared for the General Plan identified similar significant unavoidable impacts related to air quality, noise and traffic, and the No Project Alternative represents planned growth in accordance with the current General Plan.

The Retail Oriented Development Potential Scenario Alternative would have impacts similar to the proposed plans in all impact categories with the exception of transportation, under which it would have greater environmental impacts related to peak hour trip generation. However, it would not exacerbate the significant and unavoidable air quality and noise impacts that would occur under the proposed plans. The High-Density Residential Focus and Office Oriented Development Potential Scenario Alternatives would exacerbate these significant and unavoidable impacts. Therefore, based on the evaluation of the remaining alternatives, the Retail Oriented Development Potential alternative would have environmental impacts similar to the proposed plans and would be considered the Environmentally Superior Alternative.

SECTION 8: EFFECTS FOUND NOT TO BE SIGNIFICANT

8.1 - Introduction

This section is based on the Notice of Preparation (NOP), dated September 3, 2015, and contained in Appendix D-1 of this Environmental Impact Report (EIR). The NOP was prepared to identify the potentially significant effects of the proposed projects and was circulated for public review between September 4, 2015 and October 5, 2015. In the course of this evaluation, impacts to mineral resources were found to be less than significant because the proposed project's characteristics would not create such impacts. As such, mineral resources was scoped out of this EIR. All other environmental topics are addressed in Section 5, Environmental Impact Analysis, of this EIR.

8.1.1 - Mineral Resources

The area within the boundaries of the DNCP and FCSP does not contain any known mineral deposits or active mineral extraction operations. According to the City of Fresno General Plan, there are no historic or current mining operations other than minor excavations for fill material, which is not considered a significant resource within the General Plan study area (which includes the DNCP and FCSP). This condition precludes the possibility of the loss of important mineral resources as a result of the development of the DNCP and FCSP. No impacts would occur.

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