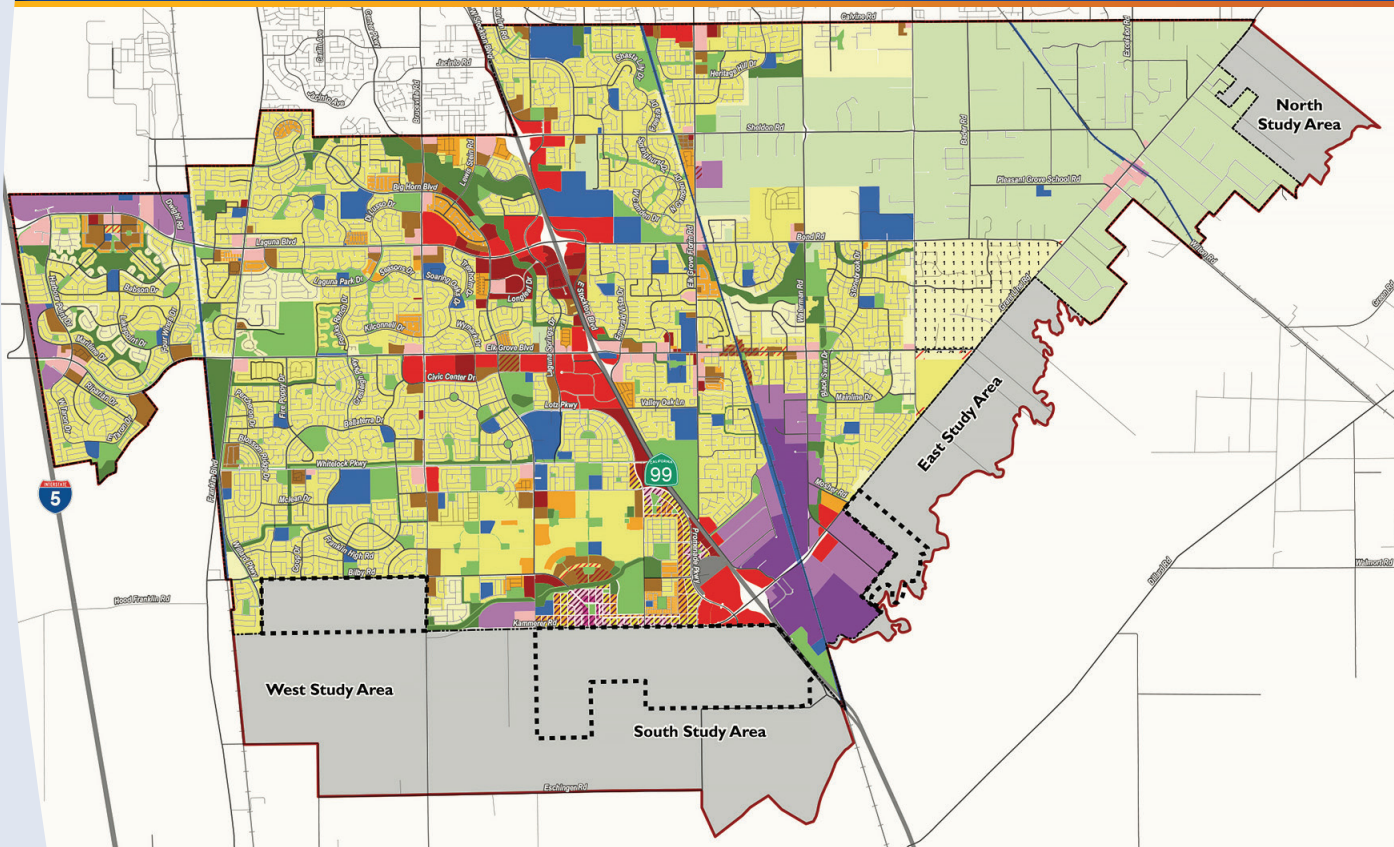


DRAFT SUBSEQUENT ENVIRONMENTAL IMPACT REPORT

City of Elk Grove General Plan Amendments and Update of Vehicle Miles Traveled Standards



SCH No. 2022020463

Prepared for:



June 2023

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LIST OF ABBREVIATIONS

AASHTO	American Association of State Highway and Transportation Officials
AB	Assembly Bill
ADA	Americans with Disability Act
ADT	average daily trips
af	acre-feet
AFY	acre-feet per year
B.P.	before present
BACT	best available control technology
BMP	best management practices
C	Celsius
CA SDWA	California Safe Drinking Water Act
CAA	Federal Clean Air Act
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate average fuel economy
CalEEMod	California Emissions Estimator Model
CalRecycle	California Department of Resources Recycling and Recovery
Caltrans	California Department of Transportation
CAP	Climate Action Plan
CARB	California Air Resources Board
CBC	California Building Code
CC	Community Commercial
CCAA	California Clean Air Act
CCR	California Code of Regulations
CCSD	Cosumnes Community Services District
CDFW	California Department of Fish and Wildlife
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CI	carbon intensity
City	City of Elk Grove
CMP	Congestion Management Process
CNEL	Community Noise Equivalent Level
CO	carbon monoxide
CO ₂	carbon dioxide
CSA	central service area
CVP	Central Valley Project
dB	decibel
dBA	A-weighted decibels

Diesel PM	particulate matter exhaust from diesel engines
DOT	US Department of Transportation
Draft SEIR	draft subsequent environmental impact report
EC	Employment Center
EGMC	Elk Grove Municipal Code
EGPD	Elk Grove Police Department
EGUSD	Elk Grove Unified School District
EGWD	Elk Grove Water District
EMD	Sacramento County Environmental Management Department
EPA	US Environmental Protection Agency
ER	Estate Residential
EVs	electric vehicles
F	Fahrenheit
FR	Federal Register
FTA	Federal Transit Administration
GBV	Ground-Borne Vibration
General Plan EIR	City of Elk Grove General Plan Update Final EIR
GHG	greenhouse gas
GWP	global warming potential
GWTP	groundwater treatment plants
HAP	hazardous air pollutant
HDR	High Density Residential
HI	Heavy Industrial
Hz	hertz
IEPR	Integrated Energy Policy Report
IPCC	Intergovernmental Panel on Climate Change
JPA	Joint Powers Authority
lb/day	pounds per day
LCFS	Low Carbon Fuel Standard
LDR	Low Density Residential
LEA	Livable Employment Area
LI	Light Industrial
LI/FX	Light Industrial/Flex
LOS	level of service
MCL	maximum contaminant level
MDR	Medium Density Residential
MGD	million gallons per day
MLD	most likely descendant
MOU	memorandum of understanding
MPOs	metropolitan planning organizations
MTCO _{2e}	metric tons of carbon dioxide equivalent
MTIP	Metropolitan Transportation Improvement Program

MTP/SCS	Metropolitan Transportation Plan/Sustainable Communities Strategy
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NHTSA	National Highway Traffic Safety Administration
NO ₂	nitrogen dioxide
NOP	Notice of Preparation
OHWD	Omochumne-Hartnell Water District
OPR	Governor's Office of Planning and Research
OTPA	Old Town Policy Area
PG&E	Pacific Gas and Electric Company
PM	particulate matter
PM ₁₀	Respirable particulate matter
PM _{2.5}	Fine particulate matter
POU	Place of Use
PPM	parts per million
PPV	peak particle velocity
PRC	Public Resources Code
Project	City of Elk Grove General Plan Amendments and Update of Vehicle Miles Traveled Standards
PS	Public Services
PV	photovoltaic
RC	Regional Commercial
Regional San	Sacramento Regional County Sanitation District
RMC	Resource Management and Conservation
RMS	root-mean-square
RMU	Residential Mixed Use
ROG	reactive organic gas
RPT	roadway performance targets
RR	Rural Residential
RTP	regional transportation plan
SACOG	Sacramento Area Council of Governments
SacSewer	Sacramento Area Sewer District
SAFE Rule	Safer Affordable Fuel-Efficient Vehicles Rule
SASb GSP	2021 South American Subbasin Groundwater Sustainability Plan
SB	Senate Bill
SCGA	Sacramento Central Groundwater Authority
SCWA	Sacramento County Water Agency
SGMA	Sustainable Groundwater Management Act
SIP	State Implementation Plan
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMUD	Sacramento Municipal Utility District
SO ₂	Sulfur dioxide

SPA	Special Planning Area
SPL	sound pressure level
SR	State Route
SRRE	source reduction and recycling element
SRWTP	Sacramento Regional Wastewater Treatment Plant
SSA	south service area
SVAB	Sacramento Valley Air Basin
SWRCB-DDW	State Water Resources Control Board Division of Drinking Water
SWTP	Surface Water Treatment Plant
TAC	Toxic air contaminants
TDM	transportation demand measure
TPY	tons per year
UPRR	Union Pacific Railroad
UWMP	urban water management plan
UWMPA	Urban Water Management Planning Act
VCMU	Mixed Use Village Center
VdB	vibration decibels
VMT	Vehicle Miles Traveled
VPH	vehicles per hour
WDR	waste discharge requirement
WSA	Water Supply Assessment
WSIP	Water Supply Infrastructure Plan
WSMP	Water Supply Master Plan
ZEV	zero-emission vehicle
ZNE	zero net energy

EXECUTIVE SUMMARY

ES.1 INTRODUCTION

This summary is provided in accordance with California Environmental Quality Act Guidelines (State CEQA Guidelines) Section 15123. As stated in Section 15123(a), “an EIR [environmental impact report] shall contain a brief summary of the proposed action and its consequences. The language of the summary should be as clear and simple as reasonably practical.” As required by the guidelines, this chapter includes (1) a summary description of the City of Elk Grove General Plan Amendments and Update of Vehicle Miles Traveled (VMT) Standards (Project), (2) a synopsis of environmental impacts and recommended mitigation measures (Table ES-1, presented at the end of this chapter), (3) identification of the alternatives evaluated and of the environmentally superior alternative, and (4) a discussion of the areas of controversy associated with the Project.

ES.2 SUMMARY DESCRIPTION OF THE PROJECT

The proposed Project would amend the City of Elk Grove General Plan (General Plan) to establish the Livable Employment Area Community Plan (LEA Community Plan); update of City VMT thresholds and guidelines (VMT Update); and various other General Plan land use adjustments including amendments to the South Study Area and West Study Area; and amendments to adopted General Plan Mitigation Measure MM 5.5.1a and MM 5.5.1b that requires preparation of a cultural resource study and protection of cultural resources for subsequent development projects.

ES.2.1 Project Background and History

State law requires each city and county to adopt a general plan. The City certified the City of Elk Grove General Plan Update Final EIR (General Plan EIR) and adopted the current General Plan in February 2019.

In 2019, the Elk Grove City Council directed City staff to study how to leverage the value of a planned new thoroughfare, Kammerer Road, beyond its ability to carry vehicle traffic, to lay the foundation for economic development in the form of a 21st century employment center. The charge was to connect transportation with land-use planning and design in recognition that the most economically, socially, and environmentally successful communities, which are walkable and contain a mix of uses. In January 2021, the City completed the Kammerer Road Urban Design Strategies that resulted in recommended increases in General Plan land use intensities and transportation improvements along a conceptual road corridor plan for the Promenade Parkway and Kammerer Road corridors. As a separate project, the City has also been exploring establishment of the future zoo site within this area.

The City has upgraded its current Travel Demand Model from SACSIM15 to SACSIM19. This modeling update has triggered the need to reevaluate the City’s VMT thresholds as set forth in General Plan Mobility Chapter (Policy MOB-1-1) and the 2019 City of Elk Grove Transportation Analysis Guidelines.

The City is a member of the Capital SouthEast Connector Joint Powers Authority (JPA), which was established to implement the 34-mile corridor known as the Capital SouthEast Connector (Connector). The Connector would connect Interstate 5 (I-5), State Route (SR) 99, SR 16, and US Highway 50. The Connector is intended to relieve traffic congestion, preserve open space, and improve roadway safety. Segment C of the Connector is a 2.7-mile section on Grant Line Road between Bond Road and Calvine Road in the City identified as the “Special Sheldon Segment.” Segment A2 is a section on Kammerer Road between Bruceville Road and SR 99. The City is considering General Plan policy changes for these two segments.

ES.2.2 Project Objectives

The primary objectives of the General Plan Amendments and Update of VMT Standards Project are to:

- ▶ create a physical environment that supports the growth of 21st century employment opportunities;
- ▶ develop walkable communities with amenities that attract and retain businesses and residents;
- ▶ update the City's VMT thresholds consistent with the most recent model while maintaining consistency with the policy provisions of the Mobility Chapter of the General Plan for efficient transportation systems in the City;
- ▶ refine the requirements for General Plan EIR Mitigation Measure MM 5.5.1a and Mitigation Measure 5.5.1b to improve its implementation; and
- ▶ establish design and implementation provisions for Segments A2 and C of the Capital SouthEast Connector.

ES.2.3 Project Location

The City is located in Sacramento County and consists of approximately 42 square miles within its boundary. Land uses are regulated under the City General Plan, which was comprehensively updated in 2019. The City General Plan established a Planning Area (approximately 31,238 acres) which includes all land within the current City limits as well as lands outside the City limits. Existing land uses in the City consist of residential at varying densities, commercial, office, industrial, park, and open space. Beyond the City limits, the Planning Area primarily consists of agricultural lands and rural residential uses. Nearby natural open space and habitat areas include the Stone Lakes National Wildlife Refuge and the Sacramento River to the west, the Cosumnes River Preserve to the south, and the Sacramento Regional County Sanitation District (Regional San) bufferlands to the northwest. Major roadway access to the City is provided by I-5 and SR 99.

ES.2.4 Project Characteristics

The proposed General Plan Amendments and Update of VMT Standards consists of the following components:

- ▶ General Plan amendments for creation of the LEA Community Plan Area,
- ▶ General Plan amendments to Update VMT thresholds and associated changes to the City Transportation Analysis Guidelines,
- ▶ Other land use plan revisions, principally in the Old Town Special Planning Area,
- ▶ Incorporation of the Grant Line Road Precise Plan into the Rural Area Community Plan,
- ▶ Amendments to adopted General Plan Mitigation Measure MM 5.5.1a and MM 5.5.1b, and
- ▶ Revisions to the South and West Study Areas in the General Plan.

ES.3 ENVIRONMENTAL IMPACTS AND RECOMMENDED MITIGATION MEASURES

This EIR has been prepared pursuant to CEQA (PRC Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, Section 15000 et seq.) to evaluate the physical environmental effects of the proposed Project. The City is the lead agency for the Project. The City Council has the principal responsibility for approving the Project and for ensuring that the requirements of CEQA have been met.

Table ES-1, presented at the end of this chapter, provides a summary of the environmental impacts of the Project. The table identifies the level of significance of the impact before mitigation, recommended mitigation measures, and the level of significance of the impact after implementation of the mitigation measures.

For detailed discussions of all Project impacts and mitigation measures, the reader is referred to the topical environmental analysis in Chapter 3, "Environmental Setting, Impacts, and Mitigation Measures." Cumulative impacts are discussed in Chapter 4, "Cumulative Impacts."

ES.4 SIGNIFICANT AND UNAVOIDABLE IMPACTS

Implementing the Project would result in the following significant and unavoidable impacts beyond what was identified in the General Plan EIR:

- ▶ Impact 3.2-2: Operational Air Quality
- ▶ Impact 3.5-1: Project Generated Greenhouse Gas Emissions
- ▶ Impact 3.6-2: Increased Traffic Noise
- ▶ Impact 3.8-3: Increased Demand for New Public School Facilities
- ▶ Impact 3.9-1: Result in an Exceedance of City of Elk Grove General Plan VMT Thresholds
- ▶ Impact 4-3: Cumulative Air Quality Impacts
- ▶ Impact 4-6: Cumulative Greenhouse Gas Impacts
- ▶ Impact 4-8: Cumulative Traffic Noise Impacts
- ▶ Impact 4-12: Cumulative Public School Impacts
- ▶ Impact 4-14: Cumulative Impacts on Vehicle Miles Traveled

ES.5 ALTERNATIVES TO THE PROPOSED PROJECT

The following alternatives are evaluated in this Draft SEIR. The reader is referred to Chapter 5, "Alternatives," for a further discussion of alternatives.

- ▶ **Alternative 1: No Project Alternative** assumes continued implementation of the City's 2019 General Plan. The LEA Planning Area, Old Town Policy Area, South Study Area, and West Study Area would retain their current General Plan and zoning designations. In addition, roadway improvements would not occur along Grant Line Road as detailed in the Precise Plan. And General Plan EIR Mitigation Measure MM 5.5.1a would remain as currently written in the General Plan EIR.
- ▶ **Alternative 2: Lent Ranch Alternative** includes retaining the existing zoning and land use designations in the Lent Ranch Policy Area.
- ▶ **Alternative 3: Reduced Project Alternative** includes removing the area south of Kammerer Road from the LEA Community Plan and retaining the existing zoning and land use designations.

ES.6 AREAS OF CONTROVERSY

State CEQA Guidelines Section 15123 requires the summary section of a Draft EIR to identify the areas of controversy known to the lead agency, including issues raised by agencies and the public. The areas of controversy associated with the Project are:

- ▶ potential increases in traffic noise; and
- ▶ transportation impacts related to vehicle miles traveled (VMT).

These issues are each addressed in this Draft SEIR. Any impacts related to these issues are identified either as less than significant or as less than significant after mitigation with the exception of the impacts identified under the

heading “Significant and Unavoidable Impacts,” above. Issues related to impacts identified as significant and unavoidable remain areas of controversy.

ES.7 ISSUES TO BE RESOLVED

State CEQA Guidelines Section 15123 requires the summary section of a Draft EIR to identify issues to be resolved related to the proposed project. Issues to be resolved by the City are identified below, including issues that will not necessarily be resolved through the SEIR:

- ▶ Should the General Plan amendments be approved as proposed?
- ▶ Should the existing land use designations in the LEA Planning Area and Old Town Policy Area modified?
- ▶ Should the City’s Transportation Guidelines be updated with the most recent model information?
- ▶ Should General Plan EIR Mitigation Measures MM 5.5.1a and MM 5.5.1b be revised?
- ▶ Should the design and implementation provisions for Segments A2 and C of the Capital SouthEast Connector be approved as proposed?

Table ES-1 Summary of Impacts and Mitigation Measures

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable			
Aesthetics			
<p>Impact 3.1-1: Potential to Substantially Degrade the Existing Visual Character or Quality of Public Views of the Project Area and Its Surroundings</p> <p>The General Plan EIR determined that buildout of the City’s Planning Area would cause conversion from a rural/natural character to a more urbanized character and this impact would be significant and unavoidable. Future development associated with the Project would result in the development of higher density residential and commercial uses that would be similar in development character that was evaluated in the General Plan EIR, which determined this impact significant and unavoidable. Therefore, the Project would not result in a new or substantially more severe impacts than were addressed in the General Plan EIR. Project impacts would remain significant and unavoidable.</p>	SU	<p>No additional mitigation is required beyond compliance with City Municipal Code Chapter 19.12 and Section 23.16.080.</p>	SU
<p>Impact 3.1-2: Potential to Create a New Source of Substantial Light or Glare Which Would Adversely Affect Day or Nighttime Views in the Area</p> <p>The General Plan EIR determined that buildout of the City’s Planning Area would create substantial new sources of light and glare and the impact would be significant and unavoidable. Future development associated with the Project would create nighttime lighting within the City similar to conditions anticipated for the planned urban land uses for the City under the General Plan. The Project would be subject to the City’s General Plan policies, Design Guidelines, and Municipal Code requirements that address lighting and glare. In addition, lighting, including adverse effects of glare and light trespass or spillover light are considerations addressed by the City through the site plan and design review process. All future development in the Project area would be subject to this review process, ensuring that the effects of glare and spillover light would be addressed. Therefore, the Project would not result in a new or substantially more severe impacts than were addressed in the General Plan EIR. Project impacts would remain significant and unavoidable.</p>	SU	<p>No additional mitigation is required beyond compliance with Municipal Code Chapter 23.56 and Section 23.16.080.</p>	SU

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable			
Air Quality			
<p>Impact 3.2-1: Construction Emissions of Criteria Air Pollutants and Precursors</p> <p>The General Plan EIR Impact 5.3.1 determined that development and growth under the General Plan could result in short-term construction emissions that could violate or substantially contribute to a violation of the NAAQS and CAAQS for ozone, PM10, and PM2.5. This impact was identified as significant and unavoidable. Implementation of the Project could generate construction emissions of ROG, NOX, PM10, and PM2.5 from demolition, material and equipment delivery trips, worker commute trips, and other miscellaneous activities. However, construction activities and emissions from implementation of the Project would be similar to what was anticipated under the General Plan EIR and the current General Plan land use designations. Subsequent projects would be required to comply with General Plan Policy NR-4-8, which would require that emissions in exceedance of SMAQMD’s thresholds of significance be mitigated. Therefore, construction-generated emissions would not result in a new or substantially more severe construction air quality impacts than was addressed in the General Plan EIR. However, pursuant to the previous findings it remains significant and unavoidable.</p>	<p>SU</p>	<p>Mitigation Measure 3.2-1: Implement the Sacramento Metropolitan Air Quality Management District’s Advanced On-site Exhaust Control Measures for the LEA Community Plan Area</p> <p>Subsequent development in the LEA Community Plan Area shall implement SMAQMD’s Enhanced Exhaust Control Practices for NO_x and exhaust PM emissions. Before the issuance of grading and/or building permits, subsequent project applicants shall submit to the City and SMAQMD an initial report of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used 8 hours or more during any portion of the construction project before any grading activities. The initial report shall include the horsepower rating, engine model year, and projected hours of use for each piece of equipment. The subsequent project applicants shall provide the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman. The information shall be submitted at least 4 business days before the use of subject heavy-duty off-road equipment. The report shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs.</p> <p>Before any grading activities, the subsequent project applicants shall provide a plan for approval by the City and SMAQMD demonstrating that the heavy-duty off-road vehicles (50 horsepower or more) to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a subsequent project-wide fleet-average of 10 percent NO_x reduction (depending on available technology and engine Tier) compared to the most recent CARB fleet average. This plan shall be submitted in conjunction with the equipment inventory. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. If achievement of the aforementioned reductions over the statewide average are deemed infeasible by the City, SMAQMD, or construction contractor, the subsequent project applicants shall ensure the construction fleet meets the lowest fleetwide emissions average possible, through the use of all available on-site emissions reduction measures (e.g., highest tier engines, emission control devices, cleaner burning fuel).</p>	<p>SU</p>

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation	
NI = No impact	LTS = Less than significant	PS = Potentially significant	S = Significant	SU = Significant and unavoidable
		<p>The subsequent project applicants shall submit a final report at the end of the job, phase, or calendar year, as pre-arranged with SMAQMD staff and documented in the approval letter, to demonstrate continued project compliance. If modeled construction-generated emissions of NO_x are not reduced to a level below SMAQMD's thresholds of significance by the application of the aforementioned mitigation measures, then the project developer must pay a mitigation fee into SMAQMD's off-site mitigation program. By paying the appropriate off-site mitigation fee, construction-generated emissions of NO_x would be reduced to a less-than-significant level. The fee calculation to offset daily NO_x emissions shall be based on the SMAQMD-determined cost to reduce one ton of NO_x applicable at the time (currently \$30,000 per ton in May 2023 but subject to change in future years).</p> <p>Once initial construction activities are finalized by the subsequent project applicants, and before the issuance of grading and/or building permits, quantification of construction-related emissions shall be verified at the project level. As each subsequent project-level construction phase is finalized throughout the duration of the project buildout, the mitigation fee shall be calculated based on current information, available construction equipment, and proposed construction activities. As construction activities occur over the buildout period, the developer shall work with SMAQMD to continually update mitigation fees based on actual on-the-ground emissions. The final mitigation fees shall be based on the contractor equipment report provided by the developer to SMAQMD and shall reconcile any fee discrepancies due to schedule adjustments and increased or decreased equipment inventories. Equipment inventories and NO_x emission estimates for subsequent construction phases shall be coordinated with SMAQMD, and the off-site mitigation fee measure shall be assessed to any construction phase that would result in an exceedance of SMAQMD's mass emission threshold for NO_x.</p>		
<p>Impact 3.2-2: Long-Term Operational Emissions of ROG, NO_x, PM₁₀, and PM_{2.5}</p> <p>General Plan EIR Impact 5.3.2 and 5.3.6 determined that long-term operational emissions of ROG, NO_x, PM₁₀, and PM_{2.5} would be substantial and could substantially contribute to a violation of the NAAQS and CAAQS for ozone and PM and conflict with air quality attainment efforts. This impact was identified as significant and unavoidable. Implementation of the Project could generate long-term operational emissions of ROG, NO_x, PM₁₀, and PM_{2.5}. The Project proposes greater development than what was presented in the General Plan EIR. This level of</p>	SU	<p>Mitigation Measure 3.2-2: Prepare an Air Quality Mitigation Plan for the LEA Community Plan Area</p> <p>The City shall prepare an Air Quality Management Plan that demonstrates a 15 percent reduction in operational air pollutant for the LEA Community Plan Area, compared to unmitigated baseline project consistent with General Plan Policy NR-4-1. The Air Quality Management Plan shall be submitted to the Sacramento Metropolitan Air Quality Management District for review and endorsement. Air Quality Management Plan emission reduction measures will be identified and</p>	SU	

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development would subsequently result in greater operational emissions as compared to the General Plan EIR for the Planning Area. Therefore, operational emissions would result in a substantially more severe air quality impacts that was addressed in the General Plan EIR. Project impacts would be significant and unavoidable.		quantified and may include commitments to reducing VMT, promoting alternative modes of transportation, and energy efficiency building measures. The Air Quality Management Plan shall be submitted to SMAQMD prior to the certification of the Final EIR to confirm that the project meets reduction requirements.	
<p>Impact 3.2-3: Exposure of Sensitive Receptors to Substantial Carbon Monoxide Pollutant Concentrations</p> <p>The General Plan EIR concluded that the Project would not contribute to localized concentrations of mobile-source CO impacts. Implementation of the Project would include land use amendments that would result in distribution of vehicle trips throughout the City; however, this redistribution would not result in a new CO impact. Based on modeling performed for this analysis, the maximum development proposed for the Project could generate a maximum of 24,200 daily trips; however, the trips would be distributed throughout the City and into the region and would not be focused within one intersection exclusively. Therefore, there is no new effect and the impact is not substantially more severe than the impact identified in the General Plan. This impact would remain less than significant as identified in the General Plan EIR.</p>	LTS	No mitigation is required.	LTS
<p>Impact 3.2-4: Exposure of Sensitive Receptors to TACs</p> <p>The General Plan EIR concluded that operational-related emissions of mobile source TACs would result in significant and unavoidable impacts to public health. Implementation of Project could generate mobile source TACs. However, these TAC emissions would be similar to what was anticipated under buildout conditions as described in the General Plan EIR and its current land use designations. Therefore, potential TAC mobile emissions would not result in a new or substantially more severe TAC impacts that was addressed in the General Plan EIR. Project impacts would remain significant and unavoidable.</p>	SU	No additional mitigation is required beyond compliance with General Plan Policies NR-2-4, NR-4-9, NR-4-10, MOB-3-1, MOB-3-2, MOB-3-5, MOB-3-6, MOB-3-7, MOB-3-13, and MOB-7-5.	SU
<p>Archaeological, Historical, and Tribal Cultural Resources</p>			
<p>Impact 3.3-1: Cause a Substantial Adverse Change in the Significance of a Historical Resource</p>	PS	<p>Mitigation Measure MM 5.5.1b</p> <p>As part of the development review process for projects involving modification to existing buildings and structures, require all affected buildings and structures over 50</p>	LTS

Impacts	Significance before Mitigation	Mitigation Measures				Significance after Mitigation				
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<p>General Plan EIR Impact 5.5.1 determined that implementation of the General Plan could result in impacts to historical resources and identified that implementation of Mitigation Measure MM 5.5.1a and MM 5.5.1b would reduce this impact to a less-than-significant level. Future development associated with the Project could be located on properties that contain previously unevaluated historic-age buildings or structures which could result in damage to or destruction to these features. If they are found to be eligible for listing in the NRHP, CRHR, or the Elk Grove Register of Historic Resources, the impact to historical resources would be potentially significant. All projects within the City would be subject to adopted General Plan Mitigation Measure MM 5.5.1a and MM 5.5.1b. As part of the Project adopted Mitigation Measures MM 5.5.1a and MM 5.5.1b would be modified to provide additional clarity and separate the requirements and procedures for historical resources from archaeological resources. Therefore, there is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR. The Project would remain a less-than-significant impact to historical resources.</p>		<p>years of age to be evaluated for historical significance, using the significance criteria set forth for historic resources under CEQA Guidelines Section 15064.5, which are also the criteria for listing in the Elk Grove Register of Historic Resources, contained in Section 7.00.050 of the Municipal Code. For buildings or structures that do not meet the CEQA criteria for historical resource, no further mitigation is required.</p> <p>If the building or structure can be preserved on site, but remodeling, renovation or other alterations are required, this work shall be conducted in compliance with the “Secretary of the Interior’s Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings” (Weeks and Grimmer 1995).</p> <p>If a significant historic building or structure is proposed for demolition, the City shall ensure that a qualified architectural historian thoroughly documents the building and associated landscaping, if applicable and setting. Documentation shall be to the applicable level (short form, Level I, Level II, or Level III) of Historic American Building Survey or Historic American Engineering Record documentation. This is consistent with Section 7.00.080(B)(5) of the Elk Grove Municipal Code. A copy of the record shall be deposited with the City, Elk Grove Historical Society, and the North Central Information Center, at minimum. The record shall be accompanied by a report containing site-specific history and appropriate contextual information.</p>								
<p>Impact 3.3-2: Cause a Substantial Adverse Change in the Significance of Unique Archaeological Resources</p> <p>General Plan EIR Impact 5.5.1 determined that implementation of the General Plan could result in significant impacts to archaeological resources and identified that implementation of Mitigation Measures 5.5.1a and 5.5.1b would reduce this impact to a less-than-significant level. Future development associated with the Project could be located on properties that contain known or unknown archaeological resources and ground-disturbing activities could result in discovery or damage of yet undiscovered archaeological resources as defined in CEQA Guidelines Section 15064.5. This would be a potentially significant impact. However, all projects within the City would be subject to adopted General Plan Mitigation Measure MM 5.5.1a. As part of the Project adopted Mitigation Measure MM 5.5.1a would be modified to provide additional clarity and separate the requirements and procedures for archaeological resources from historical resources. Therefore, there is no new</p>	PS	<p>Mitigation Measure MM 5.5.1a</p> <p>Prior to the approval of subsequent development projects in the Planning Area, the City shall determine the level of archaeological sensitivity based on the previously prepared confidential archaeological sensitivity map, in combination with the level of previous disturbance of the project area and anticipated level of ground disturbance, as shown below.</p> <table border="1" data-bbox="1249 1218 1831 1466"> <tr> <td data-bbox="1249 1218 1396 1466">Developed, proposed ground disturbance less than 24”</td> <td data-bbox="1396 1218 1543 1466">Not previously developed, proposed ground disturbance less than 24”</td> <td data-bbox="1543 1218 1690 1466">Developed, proposed ground disturbance more than 24”</td> <td data-bbox="1690 1218 1831 1466">Not previously developed, proposed ground disturbance below 24”</td> </tr> </table>				Developed, proposed ground disturbance less than 24”	Not previously developed, proposed ground disturbance less than 24”	Developed, proposed ground disturbance more than 24”	Not previously developed, proposed ground disturbance below 24”	LTS
Developed, proposed ground disturbance less than 24”	Not previously developed, proposed ground disturbance less than 24”	Developed, proposed ground disturbance more than 24”	Not previously developed, proposed ground disturbance below 24”							

Impacts	Significance before Mitigation	Mitigation Measures					Significance after Mitigation
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significant effect and the impact is not more severe than the impact identified in the General Plan EIR. The Project would remain a less-than-significant impact to archaeological resources.		low area of archaeological sensitivity	minimum investigation	minimum investigation	minimum investigation	moderate investigation	
		medium area of archaeological sensitivity	minimum investigation	moderate investigation	moderate investigation	intensive investigation	
		high area of archaeological sensitivity	moderate investigation	intensive investigation	intensive investigation	intensive investigation	
		<ul style="list-style-type: none"> ▶ Minimum Investigation: Implement Mitigation Measure 5.5-1a(1). ▶ Moderate Investigation: Implement Mitigation Measure 5.5-1a(1) and (2). ▶ Intensive Investigation: Implement Mitigation Measure 5.5-1a(1), (2), and (3). <p>1) Unless the project qualifies for part (2) below, no cultural resources study shall be required as part of the project consideration. If archaeological materials or tribal cultural resources are discovered during grading or construction activities within the project site, work shall halt immediately within 50 feet of the discovery, the Planning Division shall be notified, and a qualified professional shall be retained. As related to archaeological materials, a professional archaeologist meeting the Secretary of the Interior’s Professional Qualifications Standards in archaeology shall determine the significance of the discovery. As related to tribal cultural resources, a “qualified professional” consists of the geographically and culturally affiliated tribe.</p> <p>If resources are determined to be potentially significant, the City shall require the preparation of a treatment plan and report of findings for archaeological and tribal cultural resources by a qualified professional. The City and the applicant shall consult and agree to implement all measures the City deems feasible. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. The applicant shall be required to implement measures necessary for the protection and documentation of archaeological and tribal cultural resources.</p>					

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation	
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		<p>2) A detailed cultural resources study of the subject property shall be conducted by either the City or the applicant and then peer reviewed by the City. The report shall include a records search of the North Central Information Center, the Native American Heritage Commission, tribal outreach, and a pedestrian field survey. The cultural resources study shall identify, evaluate, and mitigate impacts to archaeological and tribal cultural resources as defined by CEQA and/or the NHPA. Mitigation methods to be employed include, but are not limited to, the following:</p> <ul style="list-style-type: none"> ▶ Redesign of the project to avoid the resource. The resource site shall be deeded to a nonprofit agency to be approved by the City for maintenance of the site. ▶ If avoidance is determined to be infeasible by the City, the resource shall be mapped, stabilized, and capped pursuant to appropriate standards. ▶ If capping is determined infeasible by the City, the resource shall be recovered to appropriate standards. <p>3) Prior to the start of any ground disturbing activities, a qualified archaeologist meeting the United States Secretary of Interior guidelines for professional archaeologists shall be retained to develop a construction worker awareness brochure. This brochure shall be distributed to all construction personnel and supervisors who will have the potential to encounter cultural resources. The topics to be addressed in the Worker Environmental Awareness Program will include, at a minimum:</p> <ul style="list-style-type: none"> ▶ types of cultural resources expected in the project area; ▶ what to do if a worker encounters a possible resource; ▶ what to do if a worker encounters bones or possible bones; and ▶ penalties for removing or intentionally disturbing cultural resources, such as those identified in the Archeological Resources Protection Act. 		
<p>Impact 3.3-3: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource</p>	LTS	No mitigation is required beyond compliance with California PRC 21081.3.	LTS	

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No California Native American tribes responded to AB 52 notification letters, however, one tribal cultural resource is known to exist in the Planning Area. It is possible that additional tribal cultural resources could be identified during analysis of subsequent projects associated with the Project. General Plan EIR Impact 5.5.1 determined that implementation of the General Plan could result in impacts to tribal cultural resources and identified that implementation of Mitigation Measures 5.5.1a and 5.5.1b would be required. However, compliance with PRC Section 21080.3.2 and Section 21084.3 (a) would reduce this impact to less than significant. Therefore, there is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR. The Project would continue to result in a less-than-significant impact to tribal cultural resources.			
<p>Impact 3.3-4: Disturb Human Remains</p> It is possible that ground-disturbing construction activities associated with the Project could uncover previously unknown human remains. General Plan EIR Impact 5.5.1 determined that implementation of the General Plan could result in impacts to the disturbance of human remains and identified that implementation of Mitigation Measure MM 5.5.1b would be required. However, compliance with California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097 would reduce this impact less than significant. Therefore, there is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR. The Project would continue to result in a less-than-significant impact to human remains.	LTS	No additional mitigation is required beyond compliance with California Health and Safety Code Section 7050.5 and California PRC Section 5097.	LTS
<p>Energy</p>			
<p>Impact 3.4-1: Wasteful, Inefficient, or Unnecessary Consumption of Energy during Project Construction or Operation</p> The General Plan EIR evaluated the energy consumption associated with the land uses proposed under the General Plan and concluded that energy consumption would not be wasteful, inefficient, or unnecessary because development would be required to comply with the most recent versions of the California Energy Code and actions under the Elk Grove CAP that include zero net energy requirements in 2020 and 2030 for residential and commercial development. Implementation of the Project could result in the consumption of additional energy supplies during construction in the form of gasoline and diesel fuel consumption; however, this	LTS	No new mitigation is required beyond compliance with City's CAP and the 2022 California Energy Code and any subsequent code updates.	LTS

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energy expenditure would not be considered wasteful when compared to other construction projects. Operation of development facilitated by the Project would also result in additional energy consumption but would be required to comply with the most recent version of the California Energy Code and the CAP. Implementation of the Project would be required to comply with these standards and would not result in a new or substantially more severe energy impacts that was addressed in the General Plan EIR. Project impacts would, therefore, remain less than significant.			
<p>Impact 3.4-2: Conflict with or Obstruction of a State or Local Plan for Renewable Energy or Energy Efficiency</p> <p>The General Plan EIR evaluated consistency with applicable state or local plans for renewable energy and energy efficiency and concluded that the land use under the General Plan would not conflict with an applicable plan. Implementation of the Project could increase energy demands compared to existing conditions; however, development would be required to comply with applicable California Energy Code. Additionally, the City's CAP contains several measures that would apply to subsequent development that would reduce overall energy demand. As a result, implementation of the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, the Project would not have a more severe impact than what was identified in the General Plan EIR. This impact would remain less than significant.</p>	LTS	No new mitigation is required beyond compliance with the City's CAP, including measures BE-1, BE-5, BE-6, BE-7, BE-8, and ACM-5, and Municipal Code Chapter 16.07 and Section 23.58.120.	LTS
<p>Greenhouse Gas Emissions and Climate Change</p>			
<p>Impact 3.5-1: Project-Generated GHG Emissions and Consistency with Plans and Regulations</p> <p>The General Plan EIR determined that GHG-related impacts would be less than significant through the incorporation of GHG reduction actions included in the General Plan and 2019 CAP (Impact 5.7.1) but would not likely meet long term reduction goals under Executive Order S-3-05 and result in a significant and unavoidable impact (Impact 5.7.2).</p> <p>Construction and operation of development under the Project would generate an estimated 29,701 MTCO₂e/year in 2040, the assumed first full year of Project operation. Consistent with the findings of the General Plan EIR, new development</p>	SU	No additional mitigation is available beyond compliance with Measures BE-1, BE-4, BE-5, BE-6, BE-7, BE-8, TACM-6, TACM-8, TACM-9, and ACM-5 from the 2019 CAP and EGMC Chapter 16.07 and Section 23.58.120.	SU

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<p>under the Project would be subject to the policies contained in the 2019 CAP and 2019 General Plan, which would demonstrate consistency with statewide GHG reduction goals set forth by SB 32. However, development under the Project would extend beyond 2030 into 2040 and beyond. While the current CAP has a long-term reduction target for 2050 of 1.4 MTCO₂e per capita, the measures of the CAP are designed to reduce the gap in emission between a business-as-usual scenario for 2020 and 2030 but do not currently fully address reduction targets for 2050. Also, since the time the current CAP was prepared GHG reduction goals have become more stringent (i.e., 80 percent reduction in 1990 GHG emissions by 2050 versus an 85 percent reduction in 1990 GHG emissions by 2045).</p> <p>Because the measures of the current CAP are limited to target years of 2020 and 2030, it does not account for the newest GHG reduction targets, and compliance with CAP measures would not be sufficient to meet the State’s long-term targets. Due to the more stringent GHG reduction targets and increase in emissions, this impact would result in a substantially more severe impact than what was addressed in the General Plan EIR. Project impacts would be significant and unavoidable.</p>			
<p>Noise and Vibration</p>			
<p>Impact 3.6-1: Construction Activities Could Result in a Substantial Temporary Increase in Noise Levels at Nearby Noise-Sensitive Land Uses</p> <p>The General Plan EIR determined that the potential noise generation from construction activities could result in a substantial temporary increase in noise levels, but impacts would be less than significant with adherence to the EGMC and General Plan policies. Potential construction noise impacts would be reduced by adherence to the EGMC and General Plan Policy N-1-7, which addresses potential impacts on current and future sensitive land uses associated with construction noise by setting allowable construction hours to limit impacts on sensitive land uses. Additionally, the City may require site-specific assessment and mitigation for future development under the Project to reduce construction noise. Finally, development facilitated by the Project would be subject to Policy N-1-8 that may require applicants to assess and minimize potential construction noise impacts on nearby sensitive receivers. Construction activities associated with implementation of the Project would be similar to construction activities anticipated under the</p>	<p>LTS</p>	<p>Mitigation Measure 3.6-1 Construction Noise Reduction Measures for the LEA Community Plan Area</p> <p>The following mitigation measures shall be implemented and specified on subsequent project building and improvement plans:</p> <ul style="list-style-type: none"> ▶ Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and shrouds, in accordance with manufacturers’ recommendations. ▶ Construction equipment staging areas shall be centrally located on the site or located at the farthest distance possible from nearby residential land uses. ▶ All motorized construction equipment and vehicles shall be turned off when not in use. ▶ To the extent feasible, alternative construction processes that generate lower noise levels shall be selected. Examples include the use of drilled piles as opposed to impact piles, use of electrified equipment as opposed to 	<p>LTS</p>

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<p>current General Plan and would be required to comply with these standards as well as General Plan Policy N-1-7 and N-1-8, and would not result in new or substantially more several impacts related to construction noise. This impact would remain less than significant.</p>		<p>combustion engines, and temporary noise barriers or noise curtains installation such that they block the line of sight between the noise source and the receiver.</p> <ul style="list-style-type: none"> ▶ Post visible signs along the perimeter of the construction site that disclose construction times and duration, as well as a contact number for a noise complaint and enforcement manager. The on-site noise complaint and enforcement manager's duties shall include documenting noise complaints, responding to and investigating noise-related complaints, implementing any feasible and appropriate measures to reduce noise at the receiving land uses, and reporting the complaints to City staff on a weekly basis. 	
<p>Impact 3.6-2: Traffic Noise</p> <p>General Plan EIR Impact 5.10.2 identified that implementation of the General Plan would result in a significant and unavoidable increase in transportation noise, including traffic noise levels along many existing roadways in the City. Further, Impact 5.10.2 notes that the General Plan includes a set of policies that are intended to ensure that new specific proposed development would comply with noise standards and would not adversely impact sensitive land uses from traffic noise. The policies include Policy N-1-1, Policy N-1-2, Policy N-1-4, Policy N-1-5, Policy N-1-6, and Policy N-2-2. Implementation of the Project would result in an exceedance of the City's traffic noise standard as identified in General Plan Policy N-2-2 and an increase in traffic noise as compared to roadways segments analyzed in the General Plan EIR. Therefore, the Project would result in substantially more severe traffic noise impacts than the General Plan EIR. Impacts would be significant and unavoidable.</p>	<p>SU</p>	<p>Mitigation Measure 3.6-2 Operational Noise Reduction Measures for the LEA Community Plan Area</p> <p>The City shall require acoustical assessments to be prepared as part of subsequent land use development projects in the LEA Community Plan Area. The acoustical assessments shall evaluate potential environmental noise impacts attributable to the subsequent project, anticipated traffic noise condition, stationary noise sources, and the compatibility of proposed land uses in comparison to applicable City noise standards. Where the acoustical analysis determines that noise levels would exceed applicable City noise standards, noise reduction measures shall be identified and included in the subsequent project. Such measures may include, but are not limited to, the incorporation of setbacks, sound barriers, berms, hourly limitations, or equipment enclosures. The emphasis of such measures shall be placed on site planning and Project design. The acoustical analysis shall be prepared in accordance with City requirements (Elk Grove Municipal Code and General Plan).</p>	<p>SU</p>
<p>Impact 3.6-3: Future Development Could Expose Existing Noise-Sensitive Land Uses to New Non-Transportation Noise Sources that Could Exceed the City's Applicable Noise Standards</p> <p>General Plan EIR Impact 5.10.3 determined that potential noise generation from future development could expose existing noise-sensitive land uses to new non-transportation noise sources that could exceed the City's applicable noise standards. Specific to residential land uses, the General Plan EIR identified lawn and garden equipment, voices, and amplified music as potential noise sources associated with residential land uses. Operational noise associated with</p>	<p>LTS</p>	<p>No additional mitigation is required beyond compliance with General Plan Policy N-2-1 and Municipal Code Section 6.32.110 and Mitigation Measure 3.6-2.</p>	<p>LTS</p>

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<p>commercial and industrial land uses typically consists of site-specific mechanical building equipment (e.g., heating equipment, HVAC systems) and other types of machinery. The General Plan EIR identified Section 6.32.110 of the EGMC as containing hourly noise standards that apply to non-transportation noise sources. Additionally, General Plan Policy N-2-1 indicates that noise created by new proposed non-transportation noise sources shall be mitigated so as not to exceed noise level standards. Development facilitated by the Project would be required to comply with these standards and would not result in new or substantially more severe noise impacts than addressed in the General Plan EIR. Project impacts would remain less than significant.</p>			
<p>Impact 3.6-4: Result in Development Projects Involving that Could Expose Receptors to Excessive Groundborne Vibration</p> <p>General Plan EIR Impact 5.10.4 determined that potential vibration generation from construction and operation could occur as a result of the Project. Long-term vibration was mainly associated with transit system routes and maintenance activities, and vibration from increased traffic would not be perceptible. Short-term vibration associated with construction could be substantial for activities such as pile driving and vibratory rolling. Adherence to Policy N-1.9 was identified as having a mitigating effect on construction vibration and the impact was determined to be less than significant. Implementation of the Project would be required to comply with these standards and would not result in new or substantially more severe vibration impacts. Project impacts would remain less than significant.</p>	LTS	No additional mitigation is required beyond compliance with General Plan Policy N-1-9 and Municipal Code Section 6.32.100.	LTS
<p>Population, Employment, and Housing</p>			
<p>Impact 3.7-1: Induce Substantial Population Growth</p> <p>General Plan EIR Section 3.3 determined that implementation of the General Plan would exceed SACOG’s population and housing projections for Elk Grove. The Project would accommodate up to 1,851 net new dwelling units, 123,923 jobs, and approximately 5,979 net new persons beyond the General Plan. This growth would exceed projections assumed under the City’s General Plan and regional planning efforts completed by SACOG. The Project would not indirectly induce unplanned population growth or residential development. Therefore, there is no new significant</p>	LTS	No new mitigation is required.	LTS

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effect and the impact is not more severe than the impact identified in the General Plan EIR. Growth inducement impacts would remain less than significant.			
Public Services and Recreation			
<p>Impact 3.8-1: Require Construction of New Fire Protection Facilities, Resulting in Adverse Environmental Impacts</p> <p>The General Plan EIR determined that where new growth areas within the City have been identified, new fire stations are planned to accommodate the anticipated growth and no significant impacts would occur. Compliance with applicable regulations and existing General Plan policies would ensure new fire station siting and resources are available. If new fire protection facilities are proposed, environmental review for the new facility would be conducted as appropriate. Project impacts associated with the construction of needed fire protection facilities would not result in a new or substantially more severe construction impacts than disclosed in the technical sections of the General Plan EIR. Buildout projected under the Project would be required to comply with applicable regulations and policies. Therefore, impacts related to the provision of fire services would remain less than significant.</p>	LTS	No additional mitigation is required beyond compliance with Municipal Code Chapter 16.85 and 17.04 and General Plan policies ER-4-1, ER-4-2, SAF-1-3, and SAF-1-4.	LTS
<p>Impact 3.8-2: Require Construction of New Law Enforcement Facilities, Resulting in Adverse Environmental Impacts</p> <p>General Plan EIR Impact 5.11.1.2 indicated that police services operates out of a centralized facility at the City Hall complex and additional police services to accommodate development can be accomplished through additional personnel and equipment and no significant impacts would occur. Relative to the General Plan EIR, the Project would not result in new or substantially more severe impacts related to law enforcement. In addition, Elk Grove General Plan Policy SAF-1-1 directs regular monitoring and review of the level of police staffing provided in Elk Grove and ensures that sufficient staffing and resources are available to serve local needs. The addition of new officers and/or administrative staff would not require a new or expanded police facility because EGPD operations would continue within the centralized facility at the City Hall complex and additional police services to accommodate development can be accomplished through additional personnel</p>	LTS	No additional mitigation is required beyond compliance with General Plan Policy SAF-1-1.	LTS

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and equipment. Therefore, impacts related to the provision of law enforcement would remain less than significant.			
<p>Impact 3.8-3: Increased Demand for New Public School Facilities</p> <p>Impact 5.11.3.1 of the General Plan EIR identifies that future development in the City would result in an increase of school-aged children and would require the construction of new public school facilities. As determined by the General Plan EIR, because school facilities would be constructed by the EGUSD the environmental impacts of school construction would be significant and unavoidable. Implementation of the Project would result in an increase in student generation that could require additional school facility needs beyond current General Plan analysis. This would be an increase in impact severity than what was previously identified in General Plan EIR Impact 5.11.3.1. No mitigation measures are available to reduce potentially significant impacts; thus this impact would remain significant and unavoidable.</p>	SU	<p>As stated in the General Plan EIR, no additional feasible mitigation is available beyond compliance with existing laws and General Plan policies, and payment of EGUSD fees. While the EGUSD could and should implement measures to reduce physical environmental effects of school development, the EGUSD is not subject to mitigation adopted by the City. No new enforceable measures are available to the City to mitigate this impact. Therefore, this impact would remain significant and unavoidable for the Project as determined in the General Plan EIR.</p>	SU
<p>Impact 3.8-4: Require Construction of New Park or Recreation Facilities, resulting in Adverse Environmental Impacts</p> <p>Impact 5.11.4.1 of the General Plan EIR identifies that increased development would increase the demand on existing recreational facilities and require the development of new recreational facilities and no significant impacts would occur. Construction of park facilities would be subject to policies, standards, and mitigation measures from the General Plan and the General Plan EIR, or the mitigation identified in project-specific mitigation monitoring and reporting programs. No new or substantially more severe impacts would be associated with implementation of the Project. The impacts of park construction would remain less than significant.</p>	LTS	<p>No additional mitigation is required beyond compliance with General Plan policies PT-1-3, PT-1-5, PT-1-6, and PT-1-9, City and CCSO MOU, and City Municipal Code Chapter 22.40.</p>	LTS
<p>Transportation</p>			
<p>Impact 3.9-1: Result in an Exceedance of City of Elk Grove General Plan VMT Threshold</p> <p>General Plan Impact 5.13.3 identified that implementation of the General Plan would result in increased VMT that would be significant and unavoidable. Project-generated VMT per service population associated with buildout of the Project</p>	SU	<p>No additional feasible mitigation is available beyond compliance with the General Plan Policies MOB-1-1, MOB-3-1 through MOB-3.9, MOB-3-10 through MOB-3-13, MOB-3-14 through MOB-3-17, MOB-4-1 through MOB-4-5, MOB-5-1 through MOB-5-10, and Mitigation Measure 3.13-1 from the Housing Element SEIR.</p>	SU

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
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<p>would result in an exceedance of the City’s VMT per service population threshold for several land use designations. The addition of Project-generated total daily VMT within the City could also result in an exceedance of the established Citywide limit of 6,367,833 VMT. The Project VMT modeling, limits, and results were calculated using a different base year (i.e., 2020), a revised calculation methodology, and new modeling tool (i.e., EGSIM20) than that of the General Plan EIR. Because of this, the changes in VMT associated with implementation of the Project, and more specifically the revisions to the model and VMT limits, are not comparable to the VMT estimates in the General Plan. Therefore, it cannot be assured that development under the Project would be able to achieve the VMT per service population limits for individual land use types or the required reduction in total daily VMT within the City with implementation of all feasible mitigation, the impact would remain significant and unavoidable.</p>			
<p>Impact 3.9-2: Impacts on Transit, Bicycle, and Pedestrian Facilities</p> <p>General Plan EIR Impact 5.13.7 identified that implementation of the General Plan would not result in conflicts with plans, policies, or programs for transit, bicycle, and pedestrian facilities. Implementation of the Project would be subject to and implement General Plan policies applicable to transit, bicycle, and pedestrian facilities and service. Additionally, subsequent development projects under the Project would be subject to all applicable City guidelines, standards, and specifications related to transit, bicycle, or pedestrian facilities. Therefore, there is no new significant effect, and the impact is not more severe than what was addressed in the General Plan EIR. Project impacts would remain less than significant.</p>	LTS	No additional mitigation is required beyond compliance with the Bicycle, Pedestrian, and Trails Master Plan and General Plan Policies MOB-1-2, MOB-3-1, MOB-3-7, MOB-3-8, MOB-5-4, MOB-5-6, MOB-5-7, and H-1-3.	LTS
<p>Impact 3.9-3: Substantially Increase Hazards Because of a Design Feature or Incompatible Uses</p> <p>No significant design hazard impacts were identified in the General Plan EIR. Implementation of the Project would be subject to, and constructed in accordance with, applicable roadway design and safety guidelines and General Plan policies. Therefore, the Project would not increase hazards because of a roadway design feature or incompatible uses. There is no new significant effect, and the impact is not more severe than what was addressed in the General Plan EIR. The Project</p>	LTS	No additional mitigation is required beyond General Plan Policy MOB-3-10 and compliance with City standards and specifications.	LTS

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
<p style="text-align: center;">NI = No impact LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable</p>			
<p>would continue to result in a less-than-significant impact to transportation hazards.</p>			
<p>Impact 3.9-4: Result in Inadequate Emergency Access</p> <p>The internal circulation network and any changes to the external circulation network associated with the development facilitated by the Project would be subject to review by the City of Elk Grove and responsible emergency service agencies; thus, ensuring that the Project would be designed to meet all applicable emergency access and design standards and adequate emergency access would be provided. There is no new significant effect, and the impact is not more severe than what was addressed in the General Plan EIR. The Project would continue to result in a less-than-significant impact.</p>	LTS	<p>No additional mitigation is required beyond compliance with City and Cosumnes Community Services District Fire Department standards.</p>	LTS
<p>Utilities and Service Systems</p>			
<p>Impact 3.10-1: Adverse Impacts on Sufficient Water Supply, Infrastructure, and Treatment</p> <p>General Plan Impact 5.12.1.1 identified significant and unavoidable water supply impacts because of the anticipated new water demand as a result of proposed development located outside of City limits but within the Study Areas. Implementation of the Project could generate additional demand for water supplies from increased development. Development facilitated by the Project would result in 3.12 mgd of water demand. However, the additional demand is minor compared with existing and projected water demand and water supplies. Therefore, the additional water demand resulting from the Project would not result in a new or substantially more severe water supply impacts than was addressed in the General Plan EIR. Project impacts would remain significant and unavoidable.</p>	SU	<p>No additional mitigation is required beyond compliance General Plan Policy INF-1-1 and Mitigation Measure 5.12.1.1.</p>	SU
<p>Impact 3.10-2: Adverse Impacts on Wastewater Treatment Capacity</p> <p>General Plan EIR Impact 5.12.2.1 evaluated whether implementation of the General Plan would increase demand for wastewater treatment. General Plan EIR Impact 5.12.2.2 evaluated whether implementation of the General Plan would require the construction of new or expanded wastewater infrastructure, which could result in impacts to the physical environmental effects. The analyses both concluded that while the General Plan would increase demand for wastewater treatment, facility</p>	LTS	<p>No mitigation is required for this impact.</p>	LTS

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<p>plans would have sufficient capacity to serve the additional wastewater; the impacts were found to be less than significant. Development facilitated by the Project could generate approximately 3.12 mgd of wastewater that would increase wastewater generation anticipated under the adopted General Plan. The SRWTP has adequate capacity to accommodate additional growth. Therefore, the additional wastewater services resulting from the provision of new development and an increase in residents as part of the Project would not result in a new or substantially more severe impacts than was addressed in the General Plan EIR. Project impacts would remain less than significant.</p>			
<p>Impact 3.10-3: Adverse Impacts on Landfill Capacity and Compliance with Applicable Solid Waste Regulations</p> <p>General Plan EIR Impact 5.12.3.1 concluded that increased demand for solid waste services associated with implementation of the General Plan would not result in significant environmental impacts. Implementation of the Project could result in increased solid waste generation associated with proposed residential, commercial, and industrial development that would require redesignation of General Plan land uses. There is substantial remaining capacity in the landfills serving local waste haulers, with an average remaining capacity of more than 70 percent. All future development projects associated with the Project would be required to comply with all applicable solid waste regulations, including the City’s Space Allocation and Enclosure Design Guidelines for Trash and Recycling. Therefore, the additional solid waste services resulting from the Project would not result in a new or substantially more severe impacts than was addressed in the General Plan EIR. Project impacts would remain less than significant.</p>	LTS	No additional mitigation is required beyond compliance with the City’s existing recycling programs and associated regulations, we well as EGMC Section 30.70.030(C).	LTS
<p>Environmental Impacts and Mitigation Addressed in Previous EIRs</p>			
<p>Impact 3.11.1 Agricultural Resources</p>	SU	<p>Mitigation Measure 3.11-1 Agricultural Resources Preservation for the LEA Community Plan Area</p> <p>The applicant of subsequent development projects in the LEA Community Plan Area shall protect one acre of existing farmland land of equal or higher quality for each acre of Prime Farmland, Unique Farmland or Farmland of Statewide Importance that would be developed as a result of the Project. The Project mitigation acreage must be located within Sacramento County. This protection may consist of the establishment of farmland conservation easement, farmland deed</p>	SU

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		<p>restriction or other appropriate farmland conservation mechanism that ensures the preservation of that land from conversion in perpetuity, but may also be utilized for compatible wildlife habitat conservation efforts (e.g., Swainson’s hawk foraging habitat mitigation). In deciding whether to approve the land proposed for preservation by the Project applicant, the City shall consider the benefits of preserving farmlands in proximity to other protected lands. The farmland/wildlife habitat must have adequate water supply to support agricultural use. The preservation of off-site farmland shall be done prior to the City’s approval of the project’s first grading permit. Grading plans shall include the acreage and type of farmland impacted. In addition, the City shall impose the following minimum conservation easement content standards:</p> <ul style="list-style-type: none"> a) All owners of the agricultural/wildlife habitat mitigation land shall execute the document encumbering the land. b) The document shall be recordable and contain an accurate legal description of the agricultural/wildlife habitat mitigation land. c) The document shall prohibit any activity which substantially impairs or diminishes the agricultural productivity of the land. If the conservation easement is also proposed for wildlife habitat mitigation purposes, the document shall also prohibit any activity which substantially impairs or diminishes the wildlife habitat suitability of the land. d) The document shall protect any existing water rights necessary to maintain agricultural uses on the land covered by the document, and retain such water rights for ongoing use on the agricultural/wildlife habitat mitigation land. e) Interests in agricultural/habitat mitigation land shall be held in trust by an entity acceptable to the City and/or the City in perpetuity. The entity shall not sell, lease, or convey any interest in agricultural/wildlife habitat mitigation land which it shall acquire without the prior written approval of the City. f) The applicant shall pay to the City an agricultural/wildlife habitat mitigation monitoring fee to cover the costs of administering, monitoring and enforcing the document in an amount determined by the receiving entity, not to exceed 10 percent of the easement price paid by the applicant, or a different amount approved by the City Council, not to exceed 15 percent of the easement price paid by the applicant. 		

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		g) The City shall be named a beneficiary under any document conveying the interest in the agricultural/wildlife habitat mitigation land to an entity acceptable to the City. h) If any qualifying entity owning an interest in agricultural/wildlife habitat mitigation land ceases to exist, the duty to hold, administer, monitor and enforce the interest shall be transferred to another entity acceptable to the City.		
Impact 3.11.2 Biological Resources	SU	<p>Mitigation Measure 3.11-2 Special Status Plant Preconstruction Surveys for the LEA Community Plan Area</p> <p>Applicants for any projects shall retain a qualified biologist(s) to conduct a preliminary evaluation of the specific project site to determine whether freshwater emergent wetland, or irrigation/drainage ditch habitats occur within the specific project site. If any of these habitats are identified within the specific project site, surveys in and adjacent to (within 100 feet, where appropriate) the proposed impact area, including new construction access routes, shall be conducted to determine the presence/absence of special-status plant species, including Sanford's arrowhead.</p> <p>Surveys shall be conducted in accordance with CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (2009). These guidelines require that rare plant surveys be conducted at the proper time of year when rare or endangered species are both evident and identifiable. Field surveys shall be scheduled to coincide with known flowering periods and/or during appropriate developmental periods that are necessary to identify the plant species of concern. Survey results shall be submitted to the City for review and approval.</p> <p>If no special status plant species are found in or adjacent to (within 100 feet) proposed impact areas, no further mitigation is required.</p> <p>If any special status plant species are found in or adjacent to (within 100 feet) proposed impact areas during the surveys, these plant species shall be avoided to the greatest extent feasible. Any special status plant species that are identified adjacent to the project area, but not proposed to be disturbed by the project, shall be protected by barrier fencing to ensure that construction activities and material stockpiles do not impact any special-status plant species. These avoidance areas shall be identified on site plans and/or, tentative subdivision maps.</p>	SU	

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		<p>If project-related impacts will result in the loss of occupied habitat for a special-status plant species, mitigation to ensure that the special-status plant species population is not reduced below to self-sustaining levels, avoid elimination of the plant community, or reduce the range of the plant species based on the technical analysis of the qualified biologist and applicable agency (e.g., U.S. Fish and Wildlife and California Department of Fish and Wildlife) input/guidance. Mitigation may include redesign of the subsequent project to avoid the plant species and permanent preservation of onsite plant species population, transplantation of the plant species to habitat suitable for the plant species, or offsite mitigation banks.</p> <p>Plans for avoidance, minimization, and mitigation (if appropriate) shall be prepared and submitted to the City of Elk Grove at the time of application for the City's review and approval. Surveys shall occur no more than two years prior to groundbreaking of the subsequent project.</p> <p>Mitigation Measure 3.11-3 Valley Elderberry Longhorn Beetle Avoidance and Minimization in the LEA Community Plan Area</p> <p>Applicants shall retain a qualified biologist to survey for the presence of elderberry shrubs with stems measuring greater than 1-inch diameter at ground level. Surveys shall be conducted in accordance with the USFWS 1999 Conservation Guidelines for the Valley Elderberry Longhorn Beetle. If no elderberry shrubs with one or more stems measuring 1 inch or greater in diameter at ground level are documented, no further mitigation is required. Survey results shall be submitted to the City for review and approval. If an elderberry shrub(s) with one or more stems measuring 1 inch or greater in diameter at ground level is documented, and a 100-foot avoidance buffer can be maintained around the shrub, the following protective measures shall be implemented:</p> <ol style="list-style-type: none"> 1) Fence and flag all areas to be avoided during construction activities. In areas where encroachment into the 100-foot buffer has been approved by the USFWS, provide a minimum setback of at least 20 feet from the dripline of each elderberry plant. 2) Brief contractors on the need to avoid damaging the elderberry plants and the possible penalties for not complying with these requirements. 3) Erect signs every 50 feet along the edge of the avoidance area with the following information: "This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is 			

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		<p>protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment." The signs should be clearly readable from a distance of 20 feet and must be maintained for the duration of construction.</p> <ol style="list-style-type: none"> 4) Instruct work crews about the status of the beetle and the need to protect its elderberry host plant. 5) Restore any damage done to the buffer area (area within 100 feet of elderberry plants) during construction. Provide erosion control and revegetate with appropriate native plants. 6) Continue to protect buffer areas after construction from adverse effects of the project. Measures such as fencing, signs, weeding, and trash removal are usually appropriate. 7) Do not use insecticides, herbicides, fertilizers, or other chemicals that might harm the beetle or its host plant in the buffer areas or within 100 feet of any elderberry plant with one or more stems measuring 1 inch or more in diameter at ground level. 8) Project applicants shall provide a written description of how the buffer areas are to be restored, protected, and maintained after construction is completed to the USFWS and the City. 9) Mowing of grasses/ground cover shall only occur from July through April to reduce fire hazard. No mowing shall occur within 5 feet of elderberry plant stems. Mowing shall be done in a manner that avoids damaging plants (e.g., stripping away bark through careless use of mowing/trimming equipment). <p>If elderberry plants cannot be avoided, they must be transplanted to a conservation area in accordance with the 2017 USFWS guidelines, with USFWS approval. A plant that is unlikely to survive transplantation because of poor condition or location, or a plant that would be extremely difficult to move because of access problems, may be exempted from transplantation through consultation with the USFWS. In addition to transplanting all elderberry shrubs, additional elderberry seedlings or cuttings shall be planted at a 3:1 ratio (new plantings to affected stems). Native plants shall also be planted at a 1:1 ratio (native tree/plant species to each elderberry seedling or cutting). Stock of saplings, cuttings, and seedlings shall be obtained from local sources. If the parent stock is obtained from a distance greater than 1 mile from the conservation area, the USFWS must approve the plant donor</p>			

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		<p>sites prior to initiation of revegetation work. Planting or seeding the conservation area with native herbaceous species is encouraged.</p> <p>Mitigation Measure 3.11-4 Giant Garter Snake Avoidance and Minimization in the LEA Community Plan Area</p> <p>For projects with potential to impact giant garter snake (GGS) habitat, applicants shall have a qualified biologist perform a preconstruction survey within 30 days prior to commencement of construction activities within 200 feet of all aquatic habitats potentially suitable for GGS. In order to protect snakes, de-watering of areas shall not occur prior to completion of the pre-construction surveys.</p> <p>If aquatic habitat potentially suitable for giant garter snake would be filled, the aquatic habitat shall be dewatered at least 15 days before fill. Dewatering of aquatic habitat for construction purposes shall not occur between October 1 and April 15, except for areas within a cofferdam, unless authorized by USFWS. Any dewatered habitat must remain dry for at least 15 consecutive days after April 15 and before excavation or filling of the dewatered habitat.</p> <p>All construction activities within 200 feet of aquatic habitat suitable for giant garter snakes shall be conducted during the snake’s active season of May 1 to October 1 so that snakes can move and avoid danger, and a monitoring biologist shall be retained by the City and funded by the project applicant to routinely monitor construction activities within 200 feet of aquatic habitat. For any construction outside of the snake’s active period, USFWS will be consulted to determine whether additional measures are necessary to avoid or minimize potential impacts during the inactive season and avoid take. The applicant shall implement the avoidance and minimization measures outlined in Appendix C Standard Avoidance and Minimization Measures During Construction Activities in Giant Garter Snake (<i>Thamnophis gigas</i>) Habitat (USFWS 1997) whenever working within 200 feet of aquatic habitats potentially suitable for GGS. If a snake is encountered during construction activities, the monitoring biologist shall contact the City and will have the authority to stop construction activities until appropriate corrective measures have been completed or it is determined that the snake will not be harmed.</p> <p>GGS encountered during construction activities should be allowed to move away from construction activities on their own. Capture and relocation of trapped or injured individuals can only be attempted by personnel or individuals with current USFWS recovery permits pursuant to Section 10(a) 1(A) of the ESA. The biologist</p>		

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		<p>shall be required to report any incidental take to the USFWS immediately. The project area shall be re-inspected whenever a lapse in construction activity of two weeks or greater has occurred. This mitigation measure does not apply to land areas where surveys within the active period of the snake have been conducted and no snakes were found.</p> <p>In areas where aquatic habitats potentially suitable for giant garter snake are being retained on the site:</p> <ul style="list-style-type: none"> ▶ A qualified biologist shall install temporary exclusion fencing around suitable upland habitat within 200 feet of aquatic habitat to prevent giant garter snakes from entering the work area during construction. The fencing shall be maintained for the duration of the construction activities; ▶ Ground disturbance, spoils, and equipment storage and other project activities shall not be allowed within the fenced area; and ▶ Water quality shall be maintained and construction runoff into wetland areas shall be limited using hay bales, filter fences, vegetative buffer strips, or other accepted equivalents. However, no plastic, monofilament, jute, or similar matting to control erosion that could entangle snakes shall be placed in the project area. <p>Mitigation Measure 3.11-5 Burrowing Owl Avoidance and Minimization in the LEA Community Plan Area</p> <ul style="list-style-type: none"> ▶ For projects with potential burrowing owl habitat, applicants shall retain a qualified biologist to determine whether suitable nesting habitat occurs within 500 feet of the specific project site within 30 days prior to any construction activities outside of the breeding season (September 1 through January 31). If suitable habitat exists, focused surveys must be performed by a qualified biologist in accordance with the CDFW's Staff Report on Burrowing Owl Mitigation, published March 7, 2012. Surveys shall be repeated if project activities are suspended or delayed more than 15 days during nesting season. ▶ If no burrowing owls are detected, no further mitigation is required. If active burrowing owl nest sites are detected, the project applicant shall implement the avoidance, minimization, and mitigation methodologies outlined in the CDFW's Staff Report on Burrowing Owl Mitigation prior to initiating project-related activities that may impact burrowing owls. Burrowing owl surveys are valid for one year from the date of the survey. 			

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		<p>Mitigation Measure 3.11-6 Migratory Bird Preconstruction Survey in the LEA Community Plan Area</p> <p>If clearing and/or construction activities would occur during the nesting bird season (February 1 through September 1), preconstruction surveys to identify active non-raptor native bird nests protected under the Migratory Bird Treaty Act or California Fish and Game Code Section 3503 shall be conducted by a qualified biologist within 14 days of construction initiation on specific project sites. Focused surveys must be performed by a qualified biologist for the purpose of determining the presence/absence of active nest sites within the proposed impact area and a 500-foot buffer (if accessible). Surveys shall be repeated if construction activities are delayed or postponed for more than 30 days.</p> <p>If active nest sites are identified within 500 feet of project activities, impacts on nesting birds shall be avoided by establishing appropriate buffers around active nest sites identified during focused surveys to prevent disturbance to the nest. Project activity shall not commence within the buffer areas until a qualified biologist has determined that the young have fledged, the nest is no longer active, or reducing the buffer would not likely result in nest abandonment. Buffer size for common, non-raptor bird species shall be determined by a qualified biologist. Factors to be considered for determining buffer size shall include presence of natural buffers provided by vegetation or topography, nest height above ground, baseline levels of noise and human activity, species sensitivity, and proposed project activities. Generally, buffer size for these species shall be at least 20 feet. The size of the buffer may be adjusted if a qualified biologist, determines that such an adjustment shall not be likely to adversely affect the nest. Any buffer reduction for a special-status species shall require consultation with CDFW and/or the City. Periodic monitoring of the nest by a qualified biologist during project activities shall be required if the activity has potential to adversely affect the nest, the buffer has been reduced, or if birds within active nests are showing behavioral signs of agitation (e.g., standing up from a brooding position, flying off the nest) during project activities, as determined by the qualified biologist.</p> <p>Mitigation Measure 3.11-7 Raptor Nesting Preconstruction Survey in the LEA Community Plan Area</p> <p>If clearing and/or construction activities would occur during the raptor nesting season (January 15–August 15), preconstruction surveys to identify active raptor nests shall be</p>		

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		<p>conducted by a qualified biologist within 14 days of construction initiation in specific project sites. Focused surveys must be performed by a qualified biologist for the purposes of determining presence/absence of active nest sites within the proposed impact area, including construction access routes and a 1,000-foot buffer. If no active nests are found, no further mitigation is required. Surveys shall be repeated if construction activities are delayed or postponed for more than 30 days.</p> <p>If active white-tailed kite or other raptor (excluding Swainson’s hawk) nest sites are identified within 1,000 feet of project activities, the applicant shall impose a 500-foot setback of all active nest sites prior to commencement of any project construction activities to avoid construction or access-related disturbances to nesting raptors. Project related activities (i.e., vegetation removal, earth moving, and construction) will not occur within the setback until the nest is deemed inactive. Activities permitted within setbacks and the size of setbacks may be adjusted through consultation with the CDFW and/or the City.</p> <p>Trees containing white-tailed kite or other raptor (excluding Swainson’s hawk) nests that must be removed as a result of project implementation shall be removed during the non-breeding season (September 1–January 1). Swainson’s hawks are State listed as a threatened species; therefore, impacts to Swainson’s hawk nest trees require regulatory authorization from the CDFW prior to removal.</p> <p>Mitigation Measure 3.11-8 Swainson’s Hawk Avoidance and Minimization in the LEA Community Plan Area</p> <p>The City shall require future project applicants to implement the measures to mitigate the potential loss of Swainson’s hawk foraging habitat. For any project 40 acres and greater the following measure shall be implemented to reduce impacts to Swainson’s hawk foraging habitat:</p> <ul style="list-style-type: none"> ▶ The project applicant shall acquire conservation easements or other instruments to preserve suitable foraging habitat for Swainson’s hawk. The location of mitigation parcels as well as conservation instruments protecting them shall be approved by the City. ▶ The amount of land preserved shall be at a ratio provided in Chapter 16.130 Swainson’s Hawk Mitigation Fees of the Elk Grove Municipal Code for each acre developed at the project site. In deciding whether to approve the land proposed for preservation by the Project applicant, the City shall consider the benefits of preserving lands in proximity to other protected lands. The preservation of land 		

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		<p>shall be done prior to any site disturbance, such as clearing or grubbing, or the issuance of any permits for grading, building, or other site improvements, whichever occurs first.</p> <ul style="list-style-type: none"> ▶ The applicant shall implement the following minimum conservation easement content standards, or such other requirements as may be updated by the City Council from time-to-time and as provide din Chapter 16.130: <ul style="list-style-type: none"> ➤ The land to be preserved must be found to be suitable Swainson’s hawk foraging habitat as determined by the City based on substantial evidence. ➤ The land shall be protected through either fee title or conservation easement (“legal agreement”) acceptable to the City of Elk Grove. ➤ The legal agreement shall be recordable and contain an accurate legal description of the mitigation land. ➤ The legal agreement shall prohibit any activity, which in the sole discretion of the City, substantially impairs or diminishes the land’s capacity as suitable Swainson’s hawk foraging habitat. ➤ If the land’s suitability as foraging habitat is related to existing agricultural uses on the land, the legal agreement shall protect any existing water rights necessary to maintain such agricultural uses on the land covered by the document and retain such water rights for ongoing use on the mitigation land. ➤ The applicant shall pay or cause to be paid to the City a mitigation monitoring fee to cover the costs of administering, monitoring, and enforcing the document in an amount determined by the City or a third-party receiving entity approved by the City, not to exceed 10% of the easement price paid by the applicant, or a different amount approved by the City Council. ➤ Interests in mitigation land shall be held in trust by an entity acceptable to the City and/or the City in perpetuity. The entity shall not sell, lease, or convey any interest in mitigation land without the prior written approval of the City. ➤ The City shall be named a beneficiary under any legal agreement conveying the interest in the mitigation land to an entity acceptable to 		

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NI = No impact	LTS = Less than significant	PS = Potentially significant	S = Significant	SU = Significant and unavoidable
		<p>the City and the City shall receive indemnification, defense and indemnity in any legal agreement.</p> <ul style="list-style-type: none"> If any qualifying entity owning an interest in mitigation land ceases to exist, the duty to hold, administer, monitor and enforce the interest shall be transferred to another entity acceptable to the City or to the City. Before committing to the preservation of any land, the project proponent shall obtain the City's approval of the land proposed for preservation. This mitigation measure may be fulfilled in combination with a mitigation measure imposed on the project requiring the preservation of agricultural land as long as the agricultural land is suitable Swainson's hawk habitat as determined by the City in its sole discretion. <p>For any project less than 40 acres (smaller projects shall still mitigate pursuant to Chapter 16.130) the following measure shall be implemented to reduce impacts to Swainson's hawk foraging habitat:</p> <ul style="list-style-type: none"> Prior to any site disturbance, such as clearing or grubbing, or the issuance of any permits for grading, building, or other site improvements, whichever occurs first, the project applicant shall preserve at the Chapter 16.130 prescribed ratio land of similar equally suitable habitat for each acre of habitat lost. This land shall be protected through a fee title or conservation easement acceptable to the City of Elk Grove, or Prior to any site disturbance, such as clearing or grubbing, or the issuance of any permits for grading, building, or other site improvements, whichever occurs first, the project applicant shall submit payment of Swainson's hawk impact mitigation fee per acre of habitat impacted (payment shall be at a 1:1 ratio) to the City of Elk Grove in the amount set forth in the Elk Grove Municipal Code. <p>Mitigation Measure 3.11-9 Western Pond Turtle Avoidance and Minimization in the LEA Community Plan Area</p> <p>The City shall require future project applicants to implement the following measures to avoid the potential loss of western pond turtles:</p> <ul style="list-style-type: none"> Projects shall be planned and designed to avoid aquatic habitats that could support western pond turtle to the extent that is technically feasible and appropriate. Avoidance shall be deemed technically feasible and appropriate if 		

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation	
NI = No impact	LTS = Less than significant	PS = Potentially significant	S = Significant	SU = Significant and unavoidable
		<p>the habitat may be preserved on-site while still obtaining the project purpose and objectives and if the preserved habitat features (i.e., aquatic habitats) could reasonably be expected to continue to function as suitable habitat for western pond turtle following project implementation.</p> <ul style="list-style-type: none"> ▶ A preconstruction survey for western pond turtle shall be conducted by a qualified biologist prior to work in suitable aquatic habitat. If no pond turtles are observed, no further mitigation is necessary. ▶ If pond turtles are observed, a qualified biologist, with approval from CDFW, shall relocate pond turtles from to the nearest area with suitable aquatic habitat that will not be disturbed by project related construction activities. ▶ Construction within 500 feet of aquatic habitat known to support western pond turtles shall be conducted outside of the nesting season (March-August) unless a nesting survey conducted by a qualified biologist determines there are no active nests or hatchlings present in the proposed construction area. <p>Mitigation Measure 3.11-10 Western Red Bats Avoidance and Minimization in the LEA Community Plan Area</p> <p>The City shall require future project applicants to implement the following measures to avoid the potential loss of western red bats:</p> <ul style="list-style-type: none"> ▶ A qualified biologist shall conduct surveys for roosting western red bats prior to any tree removal. If evidence of bat use is observed, the number of bats using the roost will be determined. Bat detectors may be used to supplement survey efforts. If no evidence of bat roosts is found, then no further study shall be required. ▶ If tree roosting bats are found, bats shall be excluded from the roosting site before the tree is removed. A mitigation program addressing compensation, exclusion methods, and roost removal procedures shall be developed by a qualified biologist in consultation with CDFW before implementation. Exclusion efforts may be restricted during periods of sensitive activity (e.g., during hibernation or while females in maternity colonies are nursing young). Once it is confirmed that bats are not present in the original roost site, the tree may be removed. 		

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
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		<p>Mitigation Measure 3.11-11 Wetland Avoidance and Minimization in the LEA Community Plan Area</p> <p>If there is potential for wetlands to occur on a project site, project applicants shall retain a qualified wetland consultant to determine if state or federally protected wetlands or other waters are present. If potential waters of the United States or state are identified, the project applicant shall submit a delineation report to the U. S. Army Corps of Engineers (USACE) and the Regional Water Quality Control Board (RWQCB) for verification or jurisdictional determination. The verified delineation will be submitted to the City for its records. If the project site supports a lake, river, or stream, the project applicant shall complete a notification of lake and streambed alteration and submit it to CDFW. Pursuant to California Code of Regulations, a stream is defined as a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This can include human-created waterways.</p> <p>Project applicants shall ensure that their specific projects would result in no net loss of state or federally protected waters through impact avoidance, impact minimization, and/or compensatory mitigation, as determined in CWA Section 404 and 401 permits and/or Waste Discharge Requirements and a California Fish and Game Code Section 1602 Lake and Streambed Alteration Agreement. Evidence of compliance with this mitigation measure shall be provided prior to construction and grading activities for each proposed project.</p>	
<p>Impact 3.11.3 Geology and Soils</p>	<p>LTS</p>	<p>No additional mitigation is required beyond compliance with General Plan policies and implementation of General Plan EIR Mitigation Measure MM 5.6.5 to protect paleontological resources.</p>	<p>LTS</p>
<p>Impact 3.11.4 Hazards and Hazardous Materials</p>	<p>LTS</p>	<p>Mitigation Measure MM 5.5.2 Hazardous Materials Evaluation</p> <p>Prior to approval of improvement plans, grading permits, and or demolition permits for properties in the Planning Area that have not already been evaluated for the potential for the presence of hazardous materials and hazardous conditions, Phase I ESAs shall be prepared by a qualified professional. Each Phase I ESA shall assess the potential for hazards and provide recommendations whether additional investigation (Phase II ESA) should be completed. If determined necessary, a Phase II ESA shall be conducted to determine the lateral and vertical extent of soil, groundwater, and/or soil vapor contamination, as recommended by the Phase I ESA. The City shall not issue a grading</p>	<p>LTS</p>

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation	
NI = No impact	LTS = Less than significant	PS = Potentially significant	S = Significant	SU = Significant and unavoidable
		<p>or building permit for a site where contamination has been identified until remediation or effective site management controls appropriate for the site use have been completed consistent with applicable regulations and to satisfy the Sacramento County Environmental Management Department, the California Department of Substances Control, and/or Central Valley Regional Water Quality Control Board, as appropriate. If the Phase I ESA determines there are no recognized environmental conditions, no further action is required. However, the City shall ensure any grading or improvement plan or building permit includes a statement that if hazardous materials contamination is discovered or suspected during construction activities, all work in the vicinity of the contamination shall stop immediately until a qualified professional has evaluated the site and determined an appropriate course of action.</p> <p>Mitigation Measure 3.11-12 Soil Contaminant Evaluation for the LEA Community Plan Area</p> <p>With each improvement plan and/or grading plan application, the Project applicant shall include a detailed assessment of soil contamination associated with previous herbicide/pesticide use on the site. Soil sampling shall be conducted within the areas of potential herbicide/pesticide contamination. If substances are detected at concentrations that could pose a health hazard and/or violate local, State, or federal health standards, remediation of the affected areas shall be undertaken in accordance with the requirements of the City of Elk Grove and the Sacramento County Environmental Management Department. Development of the site shall not commence until the site is deemed remediated and clear for development by the City in consultation with the Sacramento County Environmental Management Department.</p> <p>Mitigation Measure 3.11-13 Asbestos and Lead Prevention in the LEA Community Plan Area</p> <p>Prior to the issuance of demolition permits for existing onsite structures constructed prior to 1979, asbestos material sampling shall be conducted to determine if asbestos containing building materials are present. Any identified asbestos containing building materials present in each of the structures to be dismantled shall be removed under acceptable engineering methods and work practices by a licensed asbestos abatement contractor prior to removal. These practices include, but are not limited to: containment of the area by plastic, negative air filtration, wet removal techniques, and personal respiratory protection and decontamination. The process shall be designed and monitored by a California</p>		

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation	
NI = No impact	LTS = Less than significant	PS = Potentially significant	S = Significant	SU = Significant and unavoidable
		<p>Certified Asbestos Consultant. The abatement and monitoring plan shall be developed and submitted for review and approval by the Sacramento Metropolitan Air Quality Management District.</p> <p>Prior to the issuance of demolition permits for existing onsite structures that were constructed prior to 1970, all loose and peeling paint shall be removed and disposed of by a licensed and certified lead paint removal contractor, in accordance with local, State, and federal regulations. The demolition contractor shall be informed that all paint on the buildings shall be considered as containing lead. The contractor shall take precautions in accordance with local, state, and federal regulations to protect his/her workers, the surrounding community, and to dispose of construction waste containing lead paint.</p> <p>Mitigation Measure 3.11-14 Utility Hazard Avoidance in the LEA Community Plan Area</p> <p>Prior to approval of improvement plans and/or a grading permit for development of properties that contain transformers, the City Planning Department shall consult with SMUD, which owns and operates the transformers, to determine whether onsite transformers are to be abandoned, moved, upgraded, etc. Together, the City Planning Department and SMUD shall develop a plan for dealing with all of the transformers located within the Project area. Future actions associated with the transformers may be implemented as individual development Projects are proposed.</p>		
Impact 3.11.5 Hydrology and Water Quality	LTS	<p>Mitigation Measure 3.11-15 Stormwater Retention for the LEA Community Plan Area</p> <p>Grading plans for individual development projects in the LEA Community Plan Area shall be designed in such a way to direct all overland flow into proposed on-site detention basins. If this is not feasible, separate stormwater quality treatment facilities shall be constructed and a detailed drainage study shall be completed which demonstrates that the overall flood control and hydromodification goals for the watershed, contained in the City's Storm Drainage Master Plan, are still met.</p> <p>Mitigation Measure 3.11-16 Drainage Report for the LEA Community Plan Area</p> <p>New development in the LEA Community Plan Area shall be accompanied by site-specific drainage report. The project drainage report shall be reviewed and approved by the City prior to improvement plan approval for new development.</p>	LTS	

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
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		The project drainage report shall include, at a minimum, written text addressing existing conditions, the effects of project improvements, all appropriate calculations, a watershed map, potential increases in downstream flows and volumes, proposed on-site improvements, and drainage easements, if necessary, to accommodate flows from the site. The sites specific drainage plans shall ensure that peak flows from developed areas do not exceed pre-development conditions. Site-specific drainage reports shall demonstrate consistency with the Southeast Policy Area Drainage Study.	
Impact 3.11.6 Land Use and Planning	Not Significant	No additional mitigation is required beyond compliance with General Plan policies.	Not Significant
Cumulative Impacts			
Impact 4-1: Contribute to Cumulative Visual Resources Impacts	Cumulatively considerable and significant and unavoidable	No feasible mitigation measures are available to mitigate impacts to visual resources beyond compliance with Elk Grove Municipal Code Chapter 19.12 and Section 23.16.080. This impact would be cumulatively considerable and significant and unavoidable.	Cumulatively considerable and significant and unavoidable
Impact 4-2: Contribute to Cumulative Light and Glare Impacts	Cumulatively considerable and significant and unavoidable	No feasible mitigation measures are available to mitigate impacts to light and glare beyond compliance with Elk Grove Municipal Code Chapter 23.56. This impact would be cumulatively considerable and significant and unavoidable.	Cumulatively considerable and significant and unavoidable
Impact 4-3: Contribute to Cumulative Air Quality Impacts	Cumulatively considerable and significant and unavoidable	No additional mitigation is available to address this impact beyond implementation of Mitigation Measures 3.2-1 and 3.2-2 and compliance with General Plan policies NR-4-1, MOB-1-1, and Standard MOB-3-2a, Municipal Code Sections 16.07.200 through 16.07.500 and 23.58.120, and SMAQMD Basic Construction Emission Control Practices. This impact would be cumulatively considerable and significant and unavoidable.	Cumulatively considerable and significant and unavoidable
Impact 4-4: Contribute to Historic Resources, Archaeological Resources, Tribal Cultural Resources, and Human Remains Impacts	Not cumulatively considerable	No additional mitigation is required beyond compliance with General Plan policies HR-2-1, adopted Mitigation Measures 5.5-1a and 5.5-1b, compliance with California	Not cumulatively considerable

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
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		PRC Section 5097 et seq. and 21081.3, and California Health and Safety Code Section 7050.5. This impact would not be cumulatively considerable.	
Impact 4-5: Contribute to Cumulative Energy Impacts	Not cumulatively considerable	No additional mitigation is required beyond compliance with the City's CAP, including measures BE-1, BE-5, BE-6, BE-7, BE-8, and ACM-5, and Municipal Code Chapter 16.07 and Section 23.58.120. This impact would not be cumulatively considerable	Not cumulatively considerable
Impact 4-6: Contribute to Cumulative Greenhouse Gas and Emissions and Climate Change Impacts	Cumulatively considerable and significant and unavoidable	No additional mitigation is required beyond compliance with the City's CAP, No additional mitigation is available beyond compliance with Measures BE-1, BE-4, BE-5, BE-6, BE-7, BE-8, and ACM-5 from the 2019 CAP and Municipal Code Chapter 16.07 and Section 23.58.120. This impact would be cumulatively considerable and significant and unavoidable.	Cumulatively considerable and significant and unavoidable
Impact 4-7: Contribute to Cumulative Traffic Noise Impacts	Cumulatively considerable and significant and unavoidable	No mitigation is required beyond compliance with General Plan policies N-1-1, N-1-4, N-1-5, and N-2-3, and Mitigation Measure 3.6-2. This impact would be cumulatively considerable and significant and unavoidable.	Cumulatively considerable and significant and unavoidable
Impact 4-8: Contribute to Cumulative Construction and Development Noise and Vibration Impacts	Cumulatively considerable and significant and unavoidable	No additional mitigation is required beyond compliance with General Plan Policy N-1-8, Municipal Code Section 6.32.100, the Elk Grove Construction Specifications Manual, and Mitigation Measure 3.6-1. This impact would be cumulatively considerable and significant and unavoidable.	Cumulatively considerable and significant and unavoidable
Impact 4-9: Contribute to Cumulative Population Growth Impacts	Not cumulatively considerable	This impact would not be cumulatively considerable	Not cumulatively considerable
Impact 4-10: Contribute to Cumulative Fire Protection and Emergency Medical Services Impacts	Not cumulatively considerable	No additional mitigation is required beyond compliance with EGMC Chapter 16.85 and 17.04 and General Plan policies ER-4-1, ER-4-2, SAF-1-3, and SAF-1-4. This impact would not be cumulatively considerable	Not cumulatively considerable

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable			
Impact 4-11: Contribute to Cumulative Law Enforcement Impacts	Not cumulatively considerable	No additional mitigation is required beyond compliance with General Plan Policy SAF-1-1. This impact would not be cumulatively considerable	Not cumulatively considerable
Impact 4-12: Contribute to Cumulative Public School Impacts	Cumulatively considerable and significant and unavoidable	This impact would be cumulatively considerable and significant and unavoidable.	Cumulatively considerable and significant and unavoidable
Impact 4-13: Contribute to Cumulative Parks and Recreation Facilities Impacts	Not cumulatively considerable	No additional mitigation is required beyond compliance with General Plan policies PT-1-3, PT-1-5, PT-1-6, and PT-1-9, City and CCSO MOU, and EGMC Chapter 22.40. This impact would not be cumulatively considerable.	Not cumulatively considerable
Impact 4-14: Contribute to Cumulative Vehicles Miles Traveled Impacts	Cumulatively considerable and significant and unavoidable	No additional mitigation is required beyond compliance with Housing Element EIR Mitigation Measure 3.13-1. This impact would be cumulatively considerable and significant and unavoidable.	Cumulatively considerable and significant and unavoidable
Impact 4-15: Contribute to Cumulative Transit, Bicycle, and Pedestrian Facility Impacts	Not cumulatively considerable	No additional mitigation is required beyond compliance with the Bicycle, Pedestrian, and Trails Master Plan and General Plan Policies MOB-1-2, MOB-3-1, MOB-3-7, MOB-3-8, MOB-5-4, MOB-5-6, MOB-5-7, and H-1-3. This impact would not be cumulatively considerable.	Not cumulatively considerable
Impact 4-16: Contribute to Cumulative Hazards Due to a Design Feature or Incompatible Uses Impacts	Not cumulatively considerable	No additional mitigation is required beyond General Plan Policy MOB-3-10. This impact would not be cumulatively considerable.	Not cumulatively considerable
Impact 4-17: Contribute to Cumulative Water Service Impacts	Cumulatively considerable and significant and unavoidable	No additional mitigation is required beyond compliance General Plan Policy INF-1-1 and General Plan Mitigation Measure 5.12.1.1, which would address potential effects from water supply from SCWA outside the City limits. This impact would be cumulatively considerable and significant and unavoidable.	Cumulatively considerable and significant and unavoidable

Impacts	Significance before Mitigation	Mitigation Measures	Significance after Mitigation
NI = No impact LTS = Less than significant PS = Potentially significant S = Significant SU = Significant and unavoidable			
Impact 4-18: Contribute to Cumulative Wastewater Impacts	Cumulatively considerable and significant and unavoidable	This impact would be cumulatively considerable and significant and unavoidable.	Cumulatively considerable and significant and unavoidable
Impact 4-19: Contribute to Cumulative Solid Waste Impacts	Not cumulatively considerable	No additional mitigation is required beyond compliance with the City’s existing recycling programs and associated regulations, as well as Municipal Code Section 30.70.030(C). This impact would not be cumulatively considerable.	Not cumulatively considerable
Impact 4-20: Contribute to Cumulative Groundwater Use Impacts	Cumulatively considerable and significant and unavoidable	This impact would be cumulatively considerable and significant and unavoidable.	Cumulatively considerable and significant and unavoidable

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1 INTRODUCTION

This draft subsequent environmental impact report (Draft SEIR) evaluates the environmental impacts of the proposed City of Elk Grove General Plan Amendments and Update of Vehicle Miles Traveled (VMT) Standards (General Plan Amendments and Update of VMT Standards, or Project). It has been prepared under the direction of the City of Elk Grove (City) in accordance with the requirements of the California Environmental Quality Act (CEQA) (Public Resources Code [PRC] Section 21000 et seq.) and the State CEQA Guidelines (California Code of Regulations, Title 14, Chapter 3, Section 15000 et seq.). This chapter of the Draft SEIR provides information on:

- ▶ the Project requiring environmental analysis (synopsis);
- ▶ the type, purpose, and intended uses of this Draft SEIR;
- ▶ the Project's relationship to the current City General Plan;
- ▶ the scope of this Draft SEIR;
- ▶ agency roles and responsibilities;
- ▶ the public review process;
- ▶ the organization of this Draft SEIR; and
- ▶ standard terminology.

1.1 PROJECT BACKGROUND

The City, acting as the lead agency, has prepared this Draft SEIR to provide the public and responsible and trustee agencies with information about the potential environmental effects of the proposed Project. As described in State CEQA Guidelines Section 15121(a), an EIR is a public informational document that assesses potential environmental effects of the proposed project and identifies mitigation measures and alternatives to the proposed project that could reduce or avoid its adverse environmental impacts. Public agencies are charged with the duty to consider and minimize environmental impacts of proposed land use plans and development where feasible and are obligated to balance a variety of public objectives, including economic, environmental, and social factors.

1.2 PROJECT DESCRIPTION

The following provides a brief summary and overview of the General Plan Amendments and Update of VMT Standards. Chapter 2, "Project Description," of this SEIR includes a detailed description of the Project, including maps and graphics.

The Project would:

- ▶ Amend the City's General Plan to establish the Livable Employment Area (LEA) Community Plan,
- ▶ Amend the City's General Plan to update vehicle miles traveled thresholds currently provided in the General Plan,
- ▶ Amend the General Plan designated land uses in the Old Town Elk Grove Policy Area and incorporate the Grant Line Road Precise Plan,
- ▶ Amend the City's General Plan Mitigation Measure MM 5.5.1a and MM 5.5.1b, and
- ▶ Amend the City's General Plan to update the South and West Study Area land uses.

1.3 TYPE, PURPOSE, SCOPE, AND INTENDED USES OF THIS DRAFT SEIR

Pursuant to State CEQA Guidelines Section 15162, an SEIR should be prepared if an EIR has been certified for a project, but one or more of the following conditions are met.

- (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
- (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or Negative Declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
- (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the Negative Declaration was adopted, shows any of the following:
 - A. The project will have one or more significant effects not discussed in the previous EIR or negative declaration.
 - B. Significant effects previously examined will be substantially more severe than shown in the previous EIR;
 - C. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or
 - D. Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

The City certified the City of Elk Grove General Plan Update Final EIR (General Plan EIR) and adopted the General Plan in February 2019. This Project represents an update to the adopted General Plan. Because the Project proposes changes to the land uses evaluated in the General Plan EIR that could involve new significant environmental effects or a substantial increase in the severity of previously identified significant effects, the City has determined that the preparation of a SEIR is the appropriate environmental review document for the project, pursuant to the requirements of State CEQA Guidelines Section 15162.

The General Plan, Draft EIR, and Final EIR are available for review through the City and online at the following location: <http://www.elkgrovecity.org/generalplan>.

An EIR is a public informational document used in the planning and decision-making process. An EIR assesses the environmental effects related to the planning, construction, and operation of a project and indicates ways to reduce or avoid significant environmental impacts. An EIR also discloses significant environmental impacts that cannot be avoided; any growth-inducing impacts of a project; effects found not to be significant; and significant cumulative impacts of past, present, and reasonably foreseeable future projects in combination with the impacts of the project.

Mitigation has been recommended to the extent feasible to reduce or avoid the project's significant impacts. Mitigation measures from the General Plan EIR that are adopted and apply to the Project are identified. Section 3.11, "Environmental Impact and Mitigation Addressed in Previous EIRs," also identifies impacts and adopted mitigation measures from EIRs for plan areas adopted prior to the 2019 General Plan Update (Southeast Policy Area Strategic Plan, Laguna Ridge Specific Plan, and Lent Ranch Marketplace Special Planning Area) that cover portions of the proposed LEA Community Plan Area. As an informational document for decision makers, a Draft SEIR is not intended to recommend either approval or denial of a project. CEQA requires the decision makers to balance the benefits of a project against its unavoidable environmental impacts. If environmental impacts are identified as significant and unavoidable (i.e., no feasible mitigation is available to reduce the impact to a less-than-significant level), the City may still approve the project if it believes that social, economic, or other benefits outweigh the unavoidable impacts. The City would then be required to make findings and state, in writing, the specific reasons for approving the project, based on information in the Draft SEIR and other information in the administrative record. In accordance with Section

15093 of the State CEQA Guidelines, the document containing such reasons is called a “statement of overriding considerations.”

The program-level analysis in this SEIR considers the broad environmental effects of the Project. This SEIR will be used to evaluate subsequent projects and activities under the Project. This SEIR is intended to provide the information and environmental analysis necessary to assist public agency decision-makers in considering approval of the Project. Additional environmental review under CEQA may be required for subsequent projects and would be generally based on the subsequent project’s consistency with the Project and the analysis in this SEIR, as required under CEQA. It may be determined that some future projects or activities under the Project may be exempt from further environmental review. When subsequent projects or activities under the Project are proposed, the City will examine the projects or activities to determine whether their effects were adequately analyzed in the General Plan EIR and this SEIR (CEQA Guidelines Section 15168(c)). If the projects or activities would have no effects beyond those disclosed in this SEIR, no further CEQA compliance would be required.

1.4 RELATIONSHIP TO THE CITY OF ELK GROVE GENERAL PLAN

The City adopted its General Plan on February 27, 2019, pursuant to Government Code Section 65300. The General Plan acts as the official policy statement of the City and guides public and private development within the City in a manner that maximizes the social and economic benefits for all citizens. In addition, the General Plan also provides policy direction that guides land use development within the City, as well as provides protection for existing natural resources.

Previous environmental review for the General Plan was included in the *City of Elk Grove General Plan Update Draft and Final Environmental Impact Report* (General Plan EIR) (State Clearinghouse Number 2017062058). It should be noted that since adoption of the City’s General Plan in 2019 the General Plan has been amended six times, twice with SEIRs for the Housing and Safety Element Update and the Southeast Industrial Area Specific Plan. The General Plan EIR analyzed the General Plan based on the adopted General Plan land use designations. A Statement of Overriding Considerations was adopted for the impacts listed below that were identified as significant and unavoidable. The reader is referred to Section 3.11, “Environmental Impact and Mitigation Addressed in Previous EIRs,” for a discussion of significant and unavoidable impacts identified in EIRs for plan areas adopted prior to the 2019 General Plan Update that cover portions of the proposed LEA Community Plan Area.

1.4.1 Aesthetics, Lights, and Glare

- ▶ Implementation of the General Plan will encourage new development and redevelopment activities that could degrade the existing visual character or quality of the Planning Area.
- ▶ Implementation of the General Plan would create new sources of daytime glare and would change nighttime lighting and illumination levels associated with new and redevelopment activities in the Planning Area, which would contribute to skyglow.

1.4.2 Agricultural Resources

- ▶ Implementation of the General Plan would allow for new development in areas of the Planning Area that are designated Important Farmland and/or under Williamson Act contract.

1.4.3 Air Quality

- ▶ Buildout of the General Plan could result in short-term construction emissions that could violate or substantially contribute to a violation of federal and state standards for ozone, particulate matter (PM) PM₁₀, and PM_{2.5}.
- ▶ Buildout of the General Plan could result in long-term operational emissions that could violate or substantially contribute to a violation of federal and State standards for ozone and coarse and fine particulate matter.

- ▶ Buildout of the General Plan could result in increased exposure of existing or planned sensitive land uses to stationary or mobile-source toxic air contaminants that would exceed applicable health risk standards.
- ▶ Implementation of the General Plan would not result in increased exposure of sensitive receptors to odorous emissions as compared to baseline conditions.
- ▶ The General Plan would be substantially consistent with all applicable control measures in the Sacramento Regional National Ambient Air Quality Standards 8-Hour Ozone Attainment and Further Progress Plan (Attainment Plan), but because buildout of the General Plan would exceed the Sacramento Metropolitan Air Quality Management District's (SMAQMD) air quality thresholds of significance, the General Plan would not be considered to be fully consistent with the Plan's goals.

1.4.4 Biological Resources

- ▶ Implementation of the General Plan could result in adverse effects, either directly or indirectly, on species listed as endangered, threatened, rare, proposed, and candidate plants and wildlife.
- ▶ Implementation of the General Plan could result in adverse effects, either directly or indirectly, on non-listed special status species (Species of Special Concern, fully protected, and locally important).

1.4.5 Hydrology and Water Quality

- ▶ Buildout of the General Plan would increase the demand on water supplies, some of which would be groundwater.

1.4.6 Noise

- ▶ Implementation of the General Plan would result in a significant increase in transportation noise, including traffic noise levels along many existing roadways in the City. Even with implementation of proposed policies to limit traffic noise impacts, predicted traffic noise levels would still result in potential increases above applicable standards.

1.4.7 Public Services and Recreation

- ▶ Implementation of the General Plan would allow for future development in the Planning Area, which would result in an increase of school-aged children and require the construction of new public-school facilities, the construction of which could have impacts on the physical environment.

1.4.8 Public Utilities

- ▶ Implementation of the General Plan would increase demand for domestic water supply, which may result in the need for additional water supplies.
- ▶ Implementation of the General Plan would require the construction of new and expanded water supply infrastructure, which could result in impacts to the physical environment.

1.4.9 Cumulative Aesthetics, Light, and Glare

- ▶ Implementation of the General Plan, in addition to other reasonably foreseeable projects in the region, would introduce new development into undeveloped agricultural and rural areas that would have a cumulatively considerable contribution to impacts on visual character.

- ▶ Implementation of the General Plan, in addition to other reasonably foreseeable projects in the region, would introduce new development into undeveloped agricultural and rural areas, increasing nighttime lighting and daytime glare and contributing to regional skyglow.

1.4.10 Cumulative Agricultural Resources

- ▶ Implementation of the General Plan would ultimately result in the conversion of Important Farmland and the cancellation of Williamson Act contracts. This loss would contribute to the cumulative loss of farmland in the region.

1.4.11 Cumulative Air Quality

- ▶ The air basin will exacerbate existing regional problems with criteria air pollutants and ozone precursors.

1.4.12 Cumulative Biological Resources

- ▶ Future development in the Planning Area, when considered together with other past, existing, and planned future projects, could result in a significant cumulative impact on biological resources in the region.

1.4.13 Cumulative Greenhouse Gas Emissions and Energy

- ▶ Adoption of the proposed General Plan and CAP Update would result in emission reductions that are consistent with statewide reduction targets for 2020 and 2030. However, based on current emission estimates for the City projected for 2050, and considering the proposed policies and programs included in the General Plan and Climate Action Plan (CAP) Update, the proposed General Plan and CAP Update would likely not result in sufficient GHG reductions for the City to meet the longer-term goal for 2050 as stated in EO S-3-05.

1.4.14 Cumulative Hydrology and Water Quality

- ▶ Development of the Planning Area, in combination with other development in the Central Basin, would increase demand for groundwater and could potentially interfere with recharge of the aquifer.

1.4.15 Cumulative Noise

- ▶ Implementation of the General Plan would contribute to cumulative noise levels along many roadway segments in the Planning Area due to increased cumulative traffic volumes.

1.4.16 Cumulative Public Services and Recreation

- ▶ Implementation of the General Plan, in combination with other development in the EGUSD service area, would result in the increase of school-aged children, which would require the construction of new public school facilities, which could have impacts on the environment.

1.4.17 Cumulative Public Utilities

- ▶ Implementation of the General Plan, in combination with other development, would contribute to cumulative demand for domestic water supply.
- ▶ Implementation of the General Plan, in addition to other development in the Regional San service area, would generate new wastewater flows requiring conveyance and treatment.

1.4.18 Cumulative Transportation

- ▶ Implementation of the General Plan could cause unacceptable level of service (LOS) conditions at some intersections and on some roadway segments.
- ▶ Implementation of the General Plan would exacerbate unacceptable (LOS F) conditions on State Route 99 and Interstate 5.
- ▶ Implementation of the General Plan would result in increased vehicle miles traveled.

1.5 SCOPE OF THIS DRAFT SEIR

This Draft SEIR analyzes the potentially significant environmental impacts resulting from Project implementation, including amendment to the adopted General Plan land use designations and growth projections. See Chapter 2, "Project Description," for a complete discussion of adopted and proposed land use designations and growth projects for the Project.

This Draft SEIR includes an evaluation of the following 10 environmental issue areas as well as other CEQA-mandated issues (e.g., cumulative impacts, growth-inducing impacts, significant unavoidable impacts, alternatives):

- ▶ Aesthetics,
- ▶ Air Quality,
- ▶ Cultural and Tribal Cultural Resources,
- ▶ Energy,
- ▶ Greenhouse Gas Emissions and Climate Change,
- ▶ Noise and Vibration,
- ▶ Population and Housing,
- ▶ Public Services,
- ▶ Transportation, and
- ▶ Utilities and Service Systems.

This Draft SEIR also includes Section 3.11, "Environmental Impact and Mitigation Addressed in Previous EIRs," that evaluates additional environmental resource areas addressed in the General Plan EIR and in EIRs for plan areas adopted prior to the 2019 General Plan Update (Southeast Policy Area Strategic Plan, Laguna Ridge Specific Plan, and Lent Ranch Marketplace Special Planning Area) that cover the proposed LEA Community Plan Area. Project impacts for these environmental resource areas were determined not to be more severe than the impacts or new impacts identified in the General Plan Update EIR and the applicable EIRs identified above. In cases where there are multiple adopted mitigation measures from different EIRs that address the same impact topic, a new/consolidated mitigation measure is identified to be applied only to the LEA Community Plan Area to avoid conflicts from implementation of adopted mitigation monitoring programs.

Under the CEQA statutes and the State CEQA Guidelines, a lead agency may limit an EIR's discussion of environmental effects when such effects are not considered potentially significant (PRC Section 21002.1[e]; State CEQA Guidelines Sections 15128, 15143). Information used to determine which impacts would be potentially significant was derived from review of the Project; review of applicable planning documents and CEQA documentation; field work; feedback from public and agency consultation; and comments received on the Notice of Preparation (NOP) (see Appendix A of this Draft SEIR).

The NOP was distributed on February 18, 2022, to responsible agencies, interested parties, and organizations, as well as private organizations and individuals that may have an interest in the Project. The purpose of the NOP and the scoping meeting was to provide notification that an EIR for the Project was being prepared and to solicit input on the scope and

content of the environmental document. Traditionally, the City hosts one scoping meeting for the general public during the NOP comment period. Due to the COVID-19 pandemic and related State and local health orders limiting in-person public meetings, the City provided a video presentation during the NOP comment period (February 18 to March 21). The video presentation introduced the Project, outlined the CEQA process, and provided a method for directly submitting comments on the scope of the EIR. Comments were also received in writing via postal service.

As a result of the review of existing information and the scoping process, it was determined that each of the issue areas listed above should be evaluated fully in this Draft SEIR. Further information on the NOP and scoping process is provided below in Section 1.7, "Public Review Process."

1.6 AGENCY ROLES AND RESPONSIBILITIES

1.6.1 Lead Agency

The City is the lead agency responsible for approving the Project and for ensuring that the requirements of CEQA have been met. After the SEIR public review process is complete, the City Council will determine whether to certify the SEIR (see State CEQA Guidelines Sections 15090) and approve the Project.

1.6.2 Trustee and Responsible Agencies

A trustee agency is a State agency that has jurisdiction by law over natural resources that are held in trust for the people of the State of California. The only trustee agency that has jurisdiction over resources potentially affected by the Project is the California Department of Fish and Wildlife (CDFW).

Responsible agencies are public agencies, other than the lead agency, that have discretionary-approval responsibility for reviewing, carrying out, or approving elements of a project. Responsible agencies should participate in the lead agency's CEQA process, review the lead agency's CEQA document, and use the document when making a decision on project elements.

There are no agencies other than the City that have approval or permitting authority for the Project. However, implementation of the proposed Project could involve many responsible agencies, depending on the details of a future project. The following are some of the agencies that could be required to act as responsible agencies for subsequent projects under the General Plan Amendments and Update of VMT Standards:

- ▶ CDFW,
- ▶ Elk Grove Water District,
- ▶ Omochumne-Hartnell Water District,
- ▶ Sacramento Area Sewer District (SacSewer) and Sacramento Regional County Sanitation District (Regional San),
- ▶ Sacramento County Water Agency (SCWA),
- ▶ Sacramento Metropolitan Air Quality Management District (SMAQMD), and
- ▶ Sacramento Municipal Utility District (SMUD).

1.7 PUBLIC REVIEW PROCESS

As identified above in Section 1.5, "Scope of this Draft SEIR," in accordance with CEQA regulations, an NOP was distributed on February 18, 2022, to responsible agencies, interested parties and organizations, and private organizations and individuals that could have interest in the Project.

The purpose of the NOP was to provide notification that an EIR for the Project was being prepared and to solicit input on the scope and content of the document. The NOP and responses to the NOP are included in Appendix A of this Draft SEIR.

This Draft SEIR is being circulated for public review and comment for a period of 45 days. During this period, comments from the general public as well as organizations and agencies on environmental issues may be submitted to the lead agency.

Upon completion of the public review and comment period, a Final SEIR will be prepared that will include both written and oral comments on the Draft SEIR received during the public-review period, responses to those comments, and any revisions to the Draft SEIR made in response to public comments. The Draft SEIR and Final SEIR will comprise the SEIR for the Project.

Before adopting the Project, the lead agency is required to certify that the SEIR has been completed in compliance with CEQA, that the decision-making body reviewed and considered the information in the SEIR, and that the SEIR reflects the independent judgment of the lead agency.

1.8 DRAFT SEIR ORGANIZATION

This Draft SEIR is organized into chapters, as identified and briefly described below. Chapters are further divided into sections (e.g., Chapter 3, “Environmental Impacts and Mitigation Measures” and Section 3.5, “Energy”):

- ▶ The “Executive Summary”: This chapter introduces the Project; provides a summary of the environmental review process, effects found not to be significant, and key environmental issues; and lists significant impacts and mitigation measures to reduce significant impacts to less-than-significant levels.
- ▶ Chapter 1, “Introduction”: This chapter provides a description of the lead and responsible agencies, the legal authority and purpose for the document, and the public review process.
- ▶ Chapter 2, “Project Description”: This chapter describes the location, background, and goals and objectives for the Project, and describes the project elements in detail.
- ▶ Chapter 3, “Environmental Impacts and Mitigation Measures”: The sections within this chapter evaluate the expected environmental impacts generated by the Project, arranged by subject area (e.g., Aesthetics, Hydrology and Water Quality). Within each subsection of Chapter 3, the regulatory background, existing conditions, analysis methodology, and thresholds of significance are described. The anticipated changes to the existing conditions after development of the project are then evaluated for each subject area. For any significant or potentially significant impact that would result from project implementation, mitigation measures are presented and the level of impact significance after mitigation is identified. Environmental impacts are numbered sequentially within each section (e.g., Impact 3.2-1, Impact 3.2-2, Impact 3.2-3 and so forth and so on). Any required mitigation measures are numbered to correspond to the impact numbering; therefore, the mitigation measure for Impact 3.2-2 would be Mitigation Measure 3.2-2.
- ▶ Chapter 4, “Cumulative Impacts”: This chapter provides information required by CEQA regarding cumulative impacts that would result from implementation of the Project together with other past, present, and probable future projects.
- ▶ Chapter 5, “Alternatives”: This chapter evaluates alternatives to the Project, including alternatives considered but eliminated from further consideration, the No Project Alternative, and two alternative development options. The environmentally superior alternative is identified.
- ▶ Chapter 6, “Other CEQA Sections”: This chapter evaluates growth-inducing impacts and irreversible and irretrievable commitment of resources and discloses any significant and unavoidable adverse impacts.
- ▶ Chapter 7, “Report Preparers”: This chapter identifies the preparers of the document.
- ▶ Chapter 8, “References”: This chapter identifies the organizations and persons consulted during preparation of this Draft SEIR and the documents and individuals used as sources for the analysis.

1.9 STANDARD TERMINOLOGY

This Draft SEIR uses the following standard terminology:

- ▶ “No impact” means no change from existing conditions (no mitigation is needed).
- ▶ “Less-than-significant impact” means no substantial adverse change in the physical environment (no mitigation is needed).
- ▶ “Potentially significant impact” means an impact that might cause a substantial adverse change in the environment (mitigation is recommended because potentially significant impacts are treated as significant).
- ▶ “Significant impact” means an impact that would cause a substantial adverse change in the physical environment (mitigation is recommended).
- ▶ “Significant and unavoidable impact” means an impact that would cause a substantial adverse change in the physical environment and that cannot be avoided, even with the implementation of all feasible mitigation.

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2 PROJECT DESCRIPTION

The proposed City of Elk Grove General Plan Amendments and Update of Vehicle Miles Traveled (VMT) Standards (General Plan Amendments and Update of VMT Standards, or Project) would amend the City of Elk Grove General Plan (General Plan) to establish the Livable Employment Area Community Plan (LEA Community Plan); update of City VMT thresholds and guidelines (VMT Update); and various other General Plan land use adjustments including amendments to the South Study Area and West Study Area; and amendments to adopted General Plan Mitigation Measure MM 5.5.1a and MM 5.5.1b that requires preparation of a cultural resource study and protection of cultural resources for subsequent development projects.

2.1 PROJECT BACKGROUND AND HISTORY

State law requires each city and county to adopt a general plan. The City certified the City of Elk Grove General Plan Update Final EIR (General Plan EIR) and adopted the current General Plan in February 2019. The General Plan has been amended six times, twice with SEIRs for the Housing and Safety Element Update and the Southeast Industrial Area Specific Plan.

In 2019, the Elk Grove City Council directed City staff to study how to leverage the value of a planned new thoroughfare, Kammerer Road, beyond its ability to carry vehicle traffic, to lay the foundation for economic development in the form of a 21st century employment center. The charge was to connect transportation with land-use planning and design in recognition that the most economically, socially, and environmentally successful communities, which are walkable and contain a mix of uses. In January 2021, the City completed the Kammerer Road Urban Design Strategies that resulted in recommended increases in General Plan land use intensities and transportation improvements along a conceptual road corridor plan for the Promenade Parkway and Kammerer Road corridors. The City has also been exploring the establishment of the future zoo site within this area.

The City has upgraded its current Travel Demand Model from SACSIM15 to SACSIM19. This modeling update has triggered the need to reevaluate the City's VMT thresholds as set forth in General Plan Mobility Chapter (Policy MOB-1-1) and the 2019 City of Elk Grove Transportation Analysis Guidelines.

The City is a member of the Capital SouthEast Connector Joint Powers Authority (JPA), which was established to implement the 34-mile corridor known as the Capital SouthEast Connector (Connector). The Connector would connect Interstate 5 (I-5), State Route (SR) 99, SR 16, and US Highway 50. The Connector is intended to relieve traffic congestion, preserve open space, and improve roadway safety. Segment C of the Connector is a 2.7-mile section on Grant Line Road between Bond Road and Calvine Road in the City identified as the "Special Sheldon Segment." Segment A2 is a section on Kammerer Road between Bruceville Road and SR 99. The City is considering policy changes for these two segments.

2.2 PROJECT OBJECTIVES

The primary objectives of the General Plan Amendments and Update of VMT Standards Project are to:

- ▶ create a physical environment that supports the growth of 21st century employment opportunities;
- ▶ develop walkable communities with amenities that attract and retain businesses and residents;
- ▶ update the City's VMT thresholds consistent with the most recent model while maintaining consistency with the policy provisions of the Mobility Chapter of the General Plan for efficient transportation systems in the City;
- ▶ refine the requirements for General Plan EIR Mitigation Measure MM 5.5.1a and MM 5.5.1b to improve its implementation; and
- ▶ establish design and implementation provisions for Segments A2 and C of the Capital SouthEast Connector.

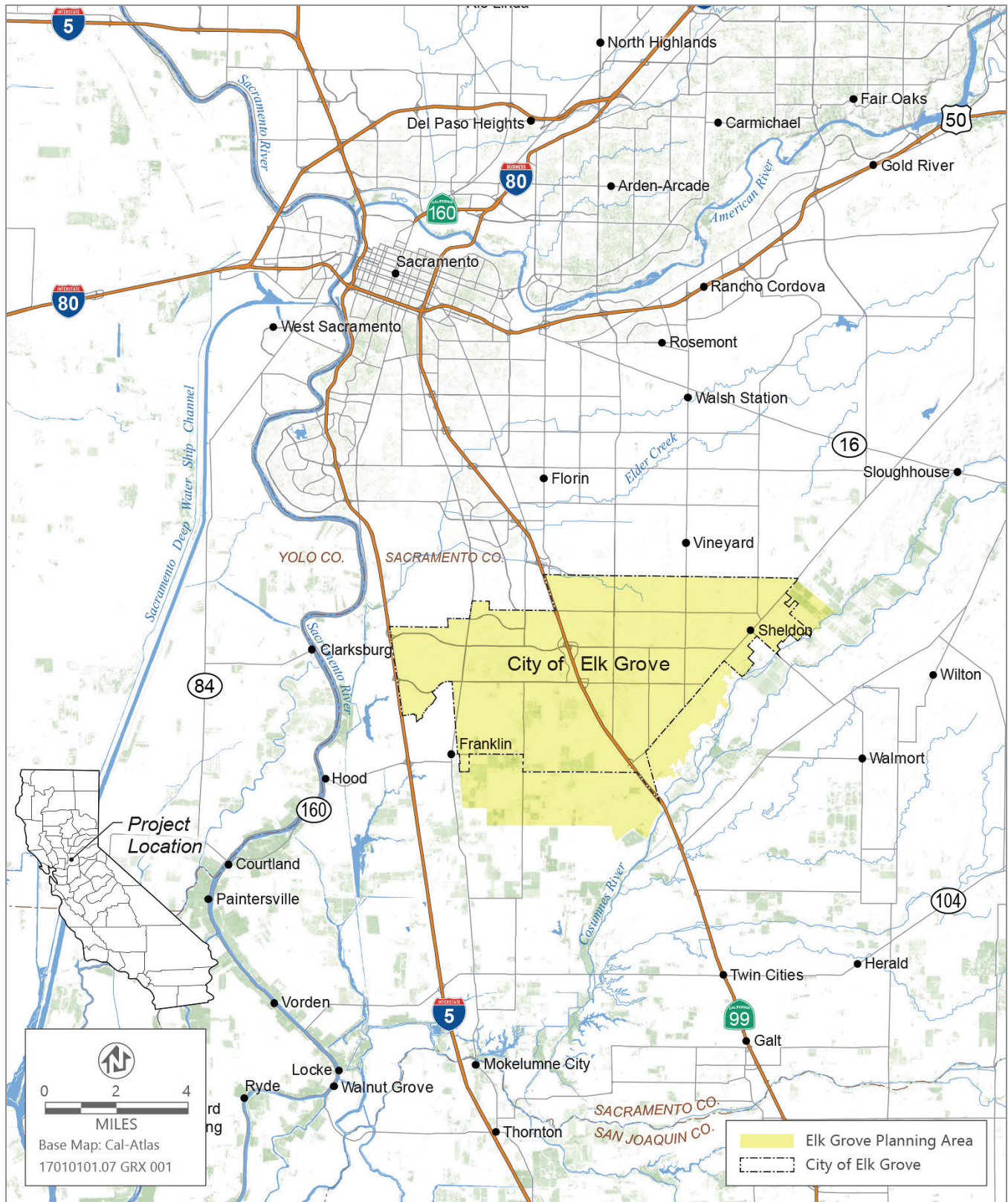
2.3 PROJECT LOCATION

The City is located in Sacramento County and consists of approximately 42 square miles within its boundary (Figure 2-1). Land uses are regulated under the City General Plan, which was comprehensively updated in 2019. The City General Plan established a Planning Area (approximately 31,238 acres) which includes all land within the current City limits as well as lands outside the City limits. Existing land uses in the City consist of residential at varying densities, commercial, office, industrial, park, and open space. Beyond the City limits, the Planning Area primarily consists of agricultural lands and rural residential uses. Nearby natural open space and habitat areas include the Stone Lakes National Wildlife Refuge and the Sacramento River to the west, the Cosumnes River Preserve to the south, and the Sacramento Regional County Sanitation District (Regional San) bufferlands to the northwest. Major roadway access to the City is provided by I-5 and SR 99.

2.4 PROJECT CHARACTERISTICS

The proposed General Plan Amendments and Update of VMT Standards consists of the following components that are described in further detail below:

- ▶ General Plan amendments for the creation of the LEA Community Plan Area,
- ▶ General Plan amendments to Update VMT thresholds and associated changes to the City Transportation Analysis Guidelines,
- ▶ Other land use plan revisions, principally in the Old Town Special Planning Area,
- ▶ Incorporation of the Grant Line Road Precise Plan into the Rural Area Community Plan,
- ▶ Amendments to adopted General Plan Mitigation Measure MM 5.5.1a and MM 5.5.1b, and
- ▶ Revisions to the South and West Study Areas in the General Plan.



Source: Ascent 2019.

Figure 2-1 Regional Location

2.4.1 Livable Employment Area Community Plan

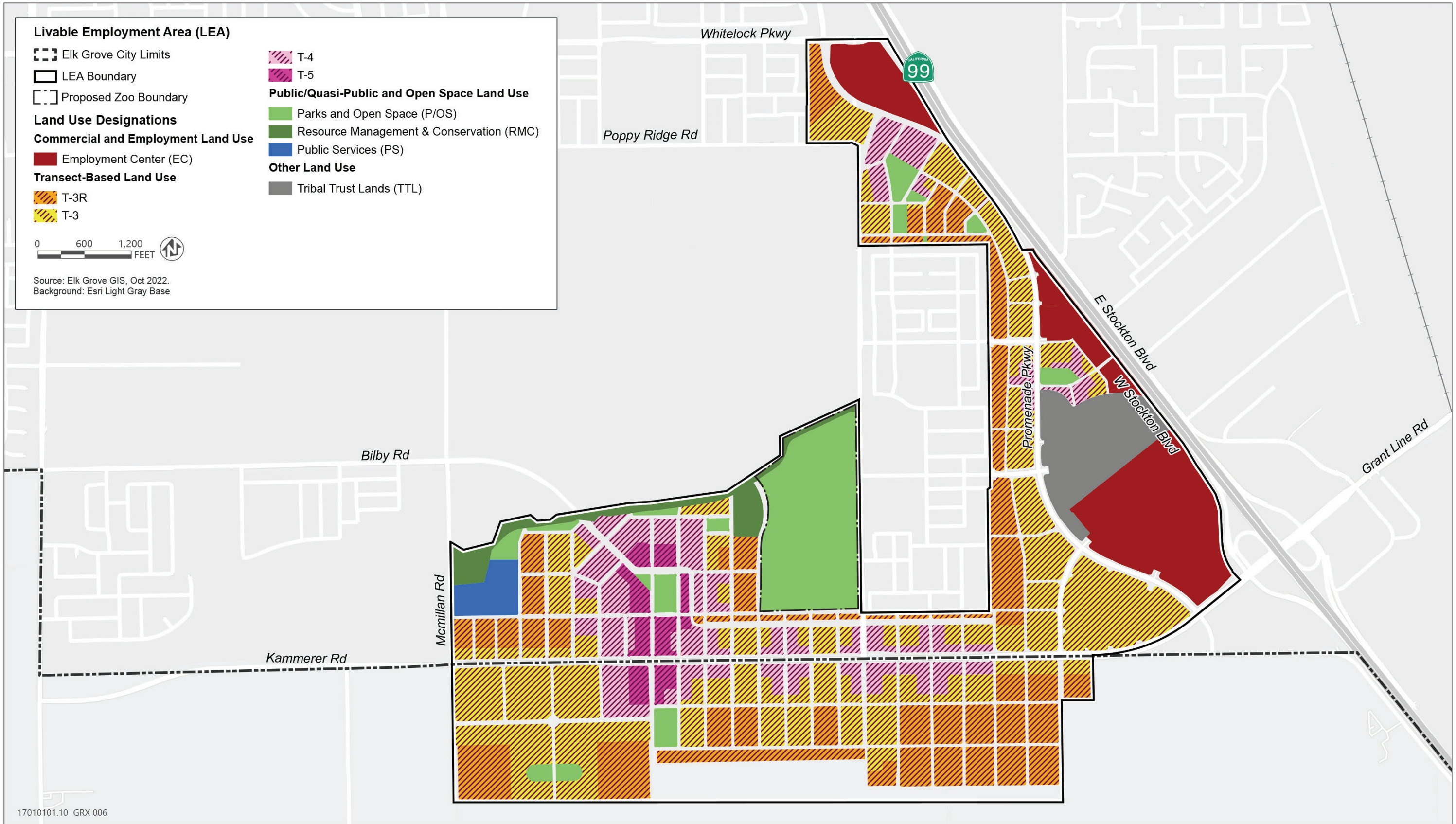
The City would develop a new community plan area, the LEA Community Plan. The LEA Community Plan covers a 1,150 acre area that would provide a walkable urban area in the City with a variety of mobility options and neighborhood streets. The LEA Community Plan area, herein referred to as the LEA Community Plan Area, is located west of SR 99, south of Whitelock Parkway along Promenade Parkway and along Kammerer Road to McMillan Road/Big Horn Boulevard to the west (Figure 2-2). The LEA Community Plan Area includes some areas that were previously part of the Southeast Policy Area (SEPA), South Pointe Land Use Policy Area, and the Lent Ranch Marketplace Policy Area. These plans areas were established prior to the 2019 General Plan Update. The Lent Ranch Land Use Policy Area would be incorporated into the LEA Community Plan as part of the Project. Additionally, the LEA Community Plan Area includes a portion of the South Study Area. Figure 2-3 shows the exiting land use designations in the LEA Community Plan Area.

The LEA Community Plan Area would be developed using the urban planning concept of the transect, which is defined as a series of zones that transition from sparse rural farmhouses to the dense urban core. The LEA Community Plan would be organized with three transects (sub-urban zone, general urban zone, and urban center zone) and around four centers (Figure 2-4). Each center would have higher densities with the areas between the centers having relatively lower intensities. The character of each center would be defined by the assemblage of diverse and dense land uses and public features such as plazas, parks, gathering spaces, and access to public transit. The centers would be developed according to proposed General Plan Policy LEA 2-4, as follows:

- ▶ Center 1 would be the most dense urban center of all the centers, a high concentration of retail centers and offices as well as higher density residential development. Buildings would range from two to seven stories, though additional height may be allowed (Figure 2-5).
- ▶ Center 2 would be considered the gateway to the LEA Community Plan Area and contain the terminus station of the light rail line. Development would include an urban style while providing a transition to the existing single family neighborhood to the north (Figure 2-6).
- ▶ Center 3 would integrate with the adjacent Sky River Casino and embrace surrounding development (Figure 2-7).
- ▶ Center 4 would have connections to important streets, including to SR 99. This center would have adjacent expansion opportunities (Figure 2-8).

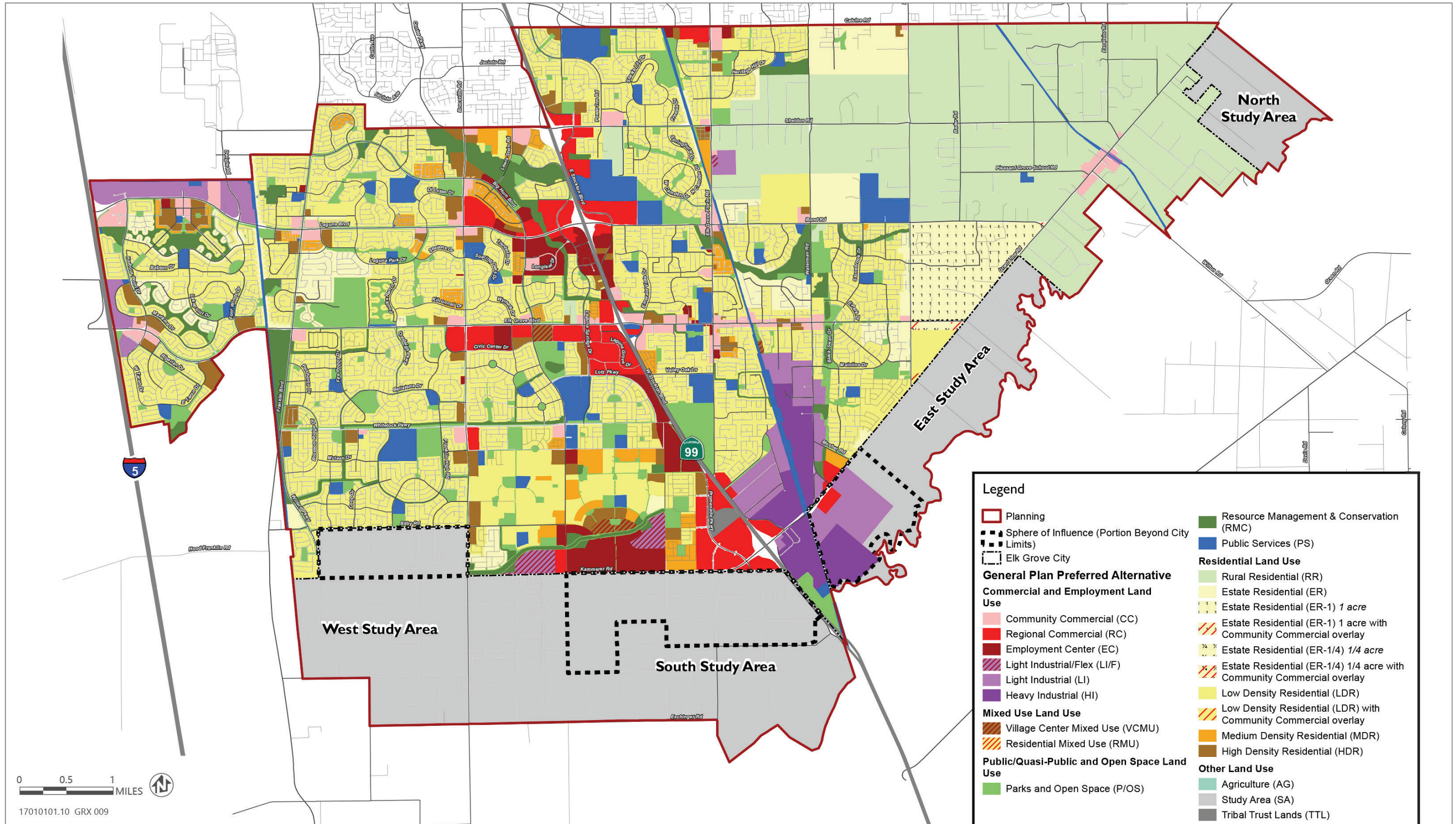
Within the LEA Community Plan Area Kammerer Road would be an urban avenue with two vehicular lanes in each direction and a 12-foot median (Figure 2-9). On each side of the roadway there would be a one-way slip lane to provide a pedestrian streetscape. New development would be designed with a street grid and all new thoroughfares would have a complete street design to allow pedestrian and bicycle infrastructure. Water and sewer infrastructure would be developed to support the LEA Community Plan Area as shown in Figures 2-10 and 2-11.

The area north of Kammerer Road and west of Lotz Parkway would be designated as Parks and Open Space (P/OS) (see Figure 2-2). This area has been identified as a potential site for the proposed development of a zoo in Elk Grove. The proposed Zoo would include zoo amenities such as exhibits, food vendors, retail, and offices. If the proposed relocation of the zoo to the City does not move forward, the site would be developed consistent to its P/OS land use designation. Environmental impacts of the proposed Zoo Project will be analyzed in a separate EIR as a distinct project.



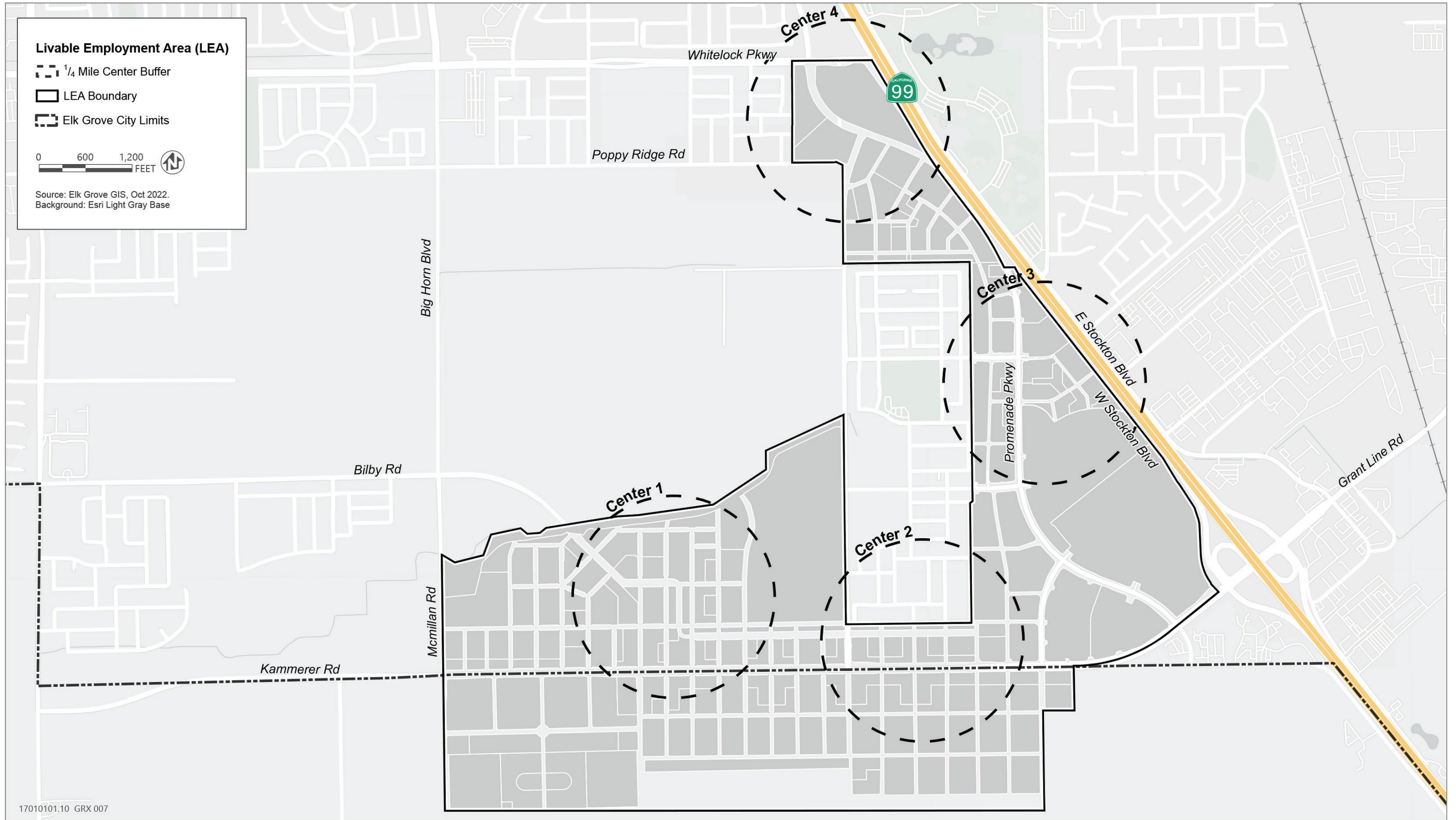
Source: City of Elk Grove 2022.

Figure 2-2 Livable Employment Land Use Area



Source: City of Elk Grove 2022.

Figure 2-3 Existing General Plan Land Use Designations



Source: City of Elk Grove 2022.

Figure 2-4 Livable Employment Area Centers



Source: Image produced and provided by Torti Gallas + Partners in 2021.

Figure 2-5 Kammerer Road Urban Design Strategies – Center 1



Source: Image produced and provided by Torti Gallas + Partners in 2021.

Figure 2-6 Kammerer Road Urban Design Strategies – Center 2



Source: Image produced and provided by Torti Gallas + Partners in 2021.

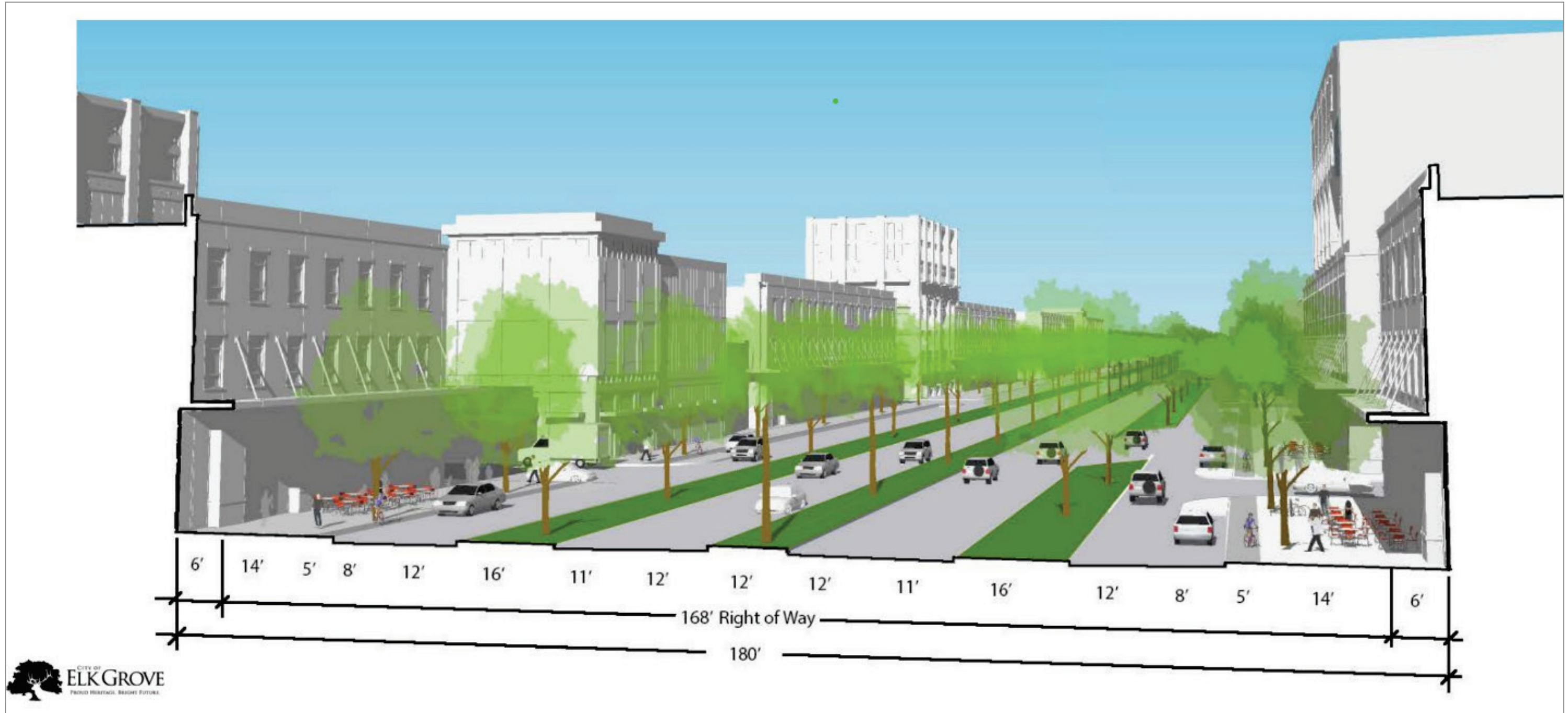
Figure 2-7 Kammerer Road Urban Design Strategies – Center 3



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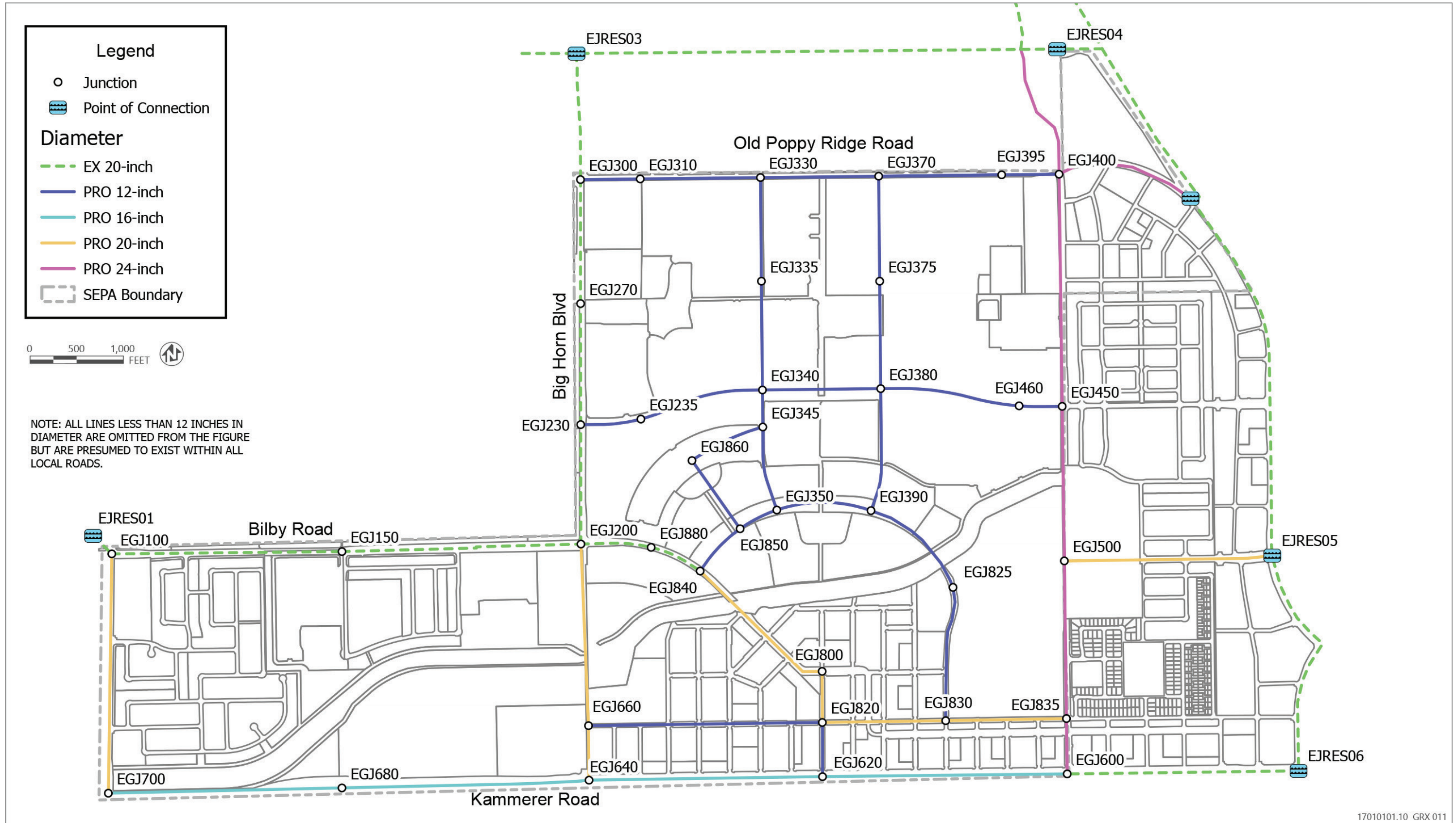
Source: Image produced and provided by Torti Gallas + Partners in 2021.

Figure 2-8 Kammerer Road Urban Design Strategies – Center 4



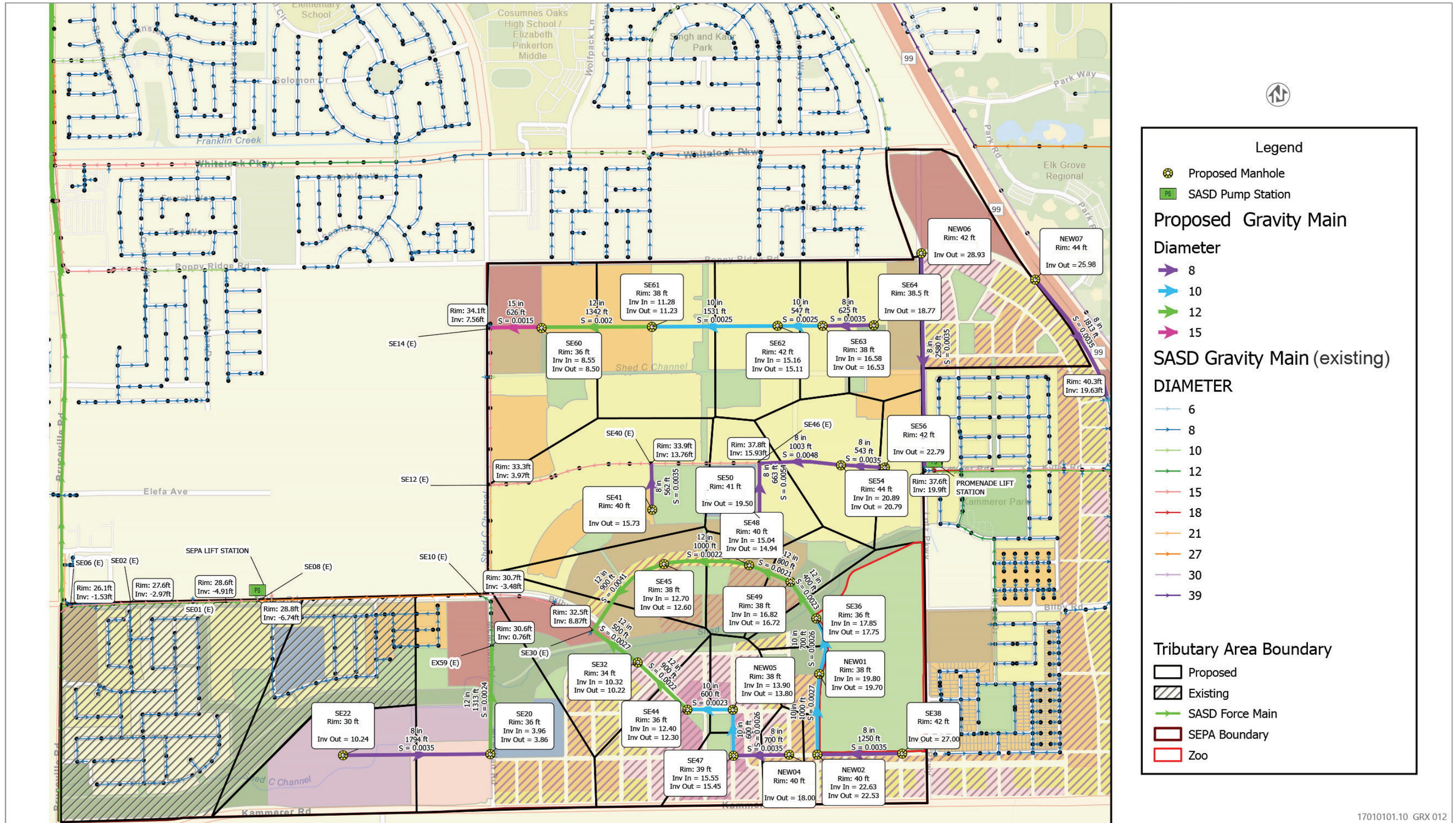
Source: Image produced and provided by Torti Gallas + Partners, City of Elk Grove 2022.

Figure 2-9 Kammerer Road Multi-way Boulevard



17010101.10 GRX 011

Figure 2-10 Proposed Water System



Legend

- Proposed Manhole
- SASSD Pump Station

Proposed Gravity Main

Diameter

- 8
- 10
- 12
- 15

SASSD Gravity Main (existing)

DIAMETER

- 6
- 8
- 10
- 12
- 15
- 18
- 21
- 27
- 30
- 39

Tributary Area Boundary

- Proposed
- Existing
- SASSD Force Main
- SEPA Boundary
- Zoo

17010101.10 GRX 012

Source: Image prepared and provided by Wood Rodgers in 2023, adapted by Ascent Environmental in 2023.

Figure 2-11 Proposed Sewer System

LEA COMMUNITY PLAN GUIDING PRINCIPLES AND GOALS

The overarching development framework for the LEA Community Plan would follow a set of guiding principles related to urban design, land use, circulation, environmental sensitivity, and contextual compatibility. The guiding principles would direct development in the LEA Community Plan Area to distinct neighborhoods with mixed-use development patterns and multimodal connectivity. The four new centers described above would be located around transit stations and would be developed with Transit Oriented development principles. Principles related to environmental sensitivity seek to achieve a carbon neutral development and principles related to contextual compatibility would provide for connectivity and consideration of surrounding development. A list of all guiding principles for the LEA Community Plan are included in Appendix B.

The LEA Community Plan includes goals and policies that would be added to the General Plan. New and revised goals are listed below with a summary of the policies. Full policies are included in Appendix B.

GOAL LEA-1: The development of four mixed-use pedestrian-friendly centers.

- ▶ Policies are related to circulation and are intended to promote a grid of streets, extend Kammerer Road and develop a multi-way boulevard, and develop complete streets.

GOAL LEA-2: Livable employment area development.

- ▶ Policies are related to structure and organization and are intended to promote development of neighborhood areas and mixed-use centers, establish new zoning regulations, and identify the four centers (see Policy LEA 2-4 above).

GOAL LEA-3: Parking is “right-sized” for future requirements.

- ▶ Policies are intended to reduce parking requirements and promote incentives for alternative transportation.

GOAL LEA-4: Healthy and safe community.

- ▶ Policies are related to pedestrian and bicycle-oriented design and are intended to guide development of safe and accessible pedestrian and bicycle infrastructure.

GOAL LEA-5: A network of parks and open spaces integrated into the development area.

- ▶ Policies are intended to provide park and open space requirements related to size, location, and design.

GOAL RC-1: A center within the region.

- ▶ Policy revisions under this existing goal are intended to provide additional standards for development in the LEA Community Plan Area and development around Kammerer Road.

LEA COMMUNITY PLAN LAND USE DESIGNATIONS

The LEA Community Plan would include an update to the General Plan Land Use Diagram, as shown in Figure 2-2. New land use designations include transect-based land use designations to establish the pattern and intensity of development in the LEA Community Plan Area. Specific land use designations for the LEA Community Plan are shown in Table 2-1.

Table 2-1 LEA Community Plan Land Use Designations

Transect-Based Land Use Designation	Residential Density	Building Intensity	Description	Maximum Height Allowance
General Neighborhood Residential (T3-R)	Minimum: 10.0 du/ac Maximum: 20.0 du/ac	Maximum FAR of 1.0	Uses are characterized by small-lot single-family residential development (attached or detached), duplexes, townhomes, and small apartment buildings, but may also include small live-work spaces, home-offices or workspaces, and bed and breakfast inns. Limited amounts of local serving retail and small office structures, particularly at intersections, are also permitted. Buildings are typically not taller than 3 stories and are surface parked (on the side or rear of the lot), though additional height may be allowed through zoning provisions.	3 stories
Neighborhood Center Low (T3)	Minimum: 14.0 du/ac Maximum: 30.0 du/ac	Maximum FAR of 2.0	Similar uses and densities as T3-R, however, a mix of uses is permitted throughout, with no preference provided for residential uses. Buildings are typically not taller than 3 stories and are surface parked (on the side or rear of the lot), though additional height may be allowed through zoning provisions.	3 stories
Neighborhood Center Medium (T4)	Minimum: 20.0 du/ac Maximum: 40.0 du/ac	Maximum FAR of 5.0	Uses are characterized by a diverse mix of uses residential and commercial uses at higher intensities than T3. Residential building types generally include townhomes and urban apartment buildings, as well as live-work spaces. Retail, hotel, and office uses are permitted. Buildings are typically not taller than 5 stories (though additional height may be allowed through zoning provisions) and may have a mix of garage and or surface parking in the rear of the lot or the middle of the block, screened from view.	5 stories

Transect-Based Land Use Designation	Residential Density	Building Intensity	Description	Maximum Height Allowance
Neighborhood Center High (T5)	Minimum: 40.0 du/ac Maximum: 100.0 du/ac	Maximum FAR of 7.0	Includes a diverse mix of uses at higher intensities than T4. Many individual buildings may have a mix of uses. Residential building types generally include apartment buildings as well as live-work spaces. Retail and Office uses as are hotels. Buildings are typically not taller than 7 stories (though additional height may be allowed through zoning provisions) and will have parking in garages that are screened from view or below ground.	7 stories

Notes: Du/ac = dwelling units per acre; FAR = Floor Area Ratio

LIVABLE EMPLOYMENT AREA FORM-BASED CODE

The form based code developed for the LEA Community Plan would carry out the policies of the General Plan by classifying and regulating the uses the land and structures with within the LEA Community Plan Area. A form based code is a type of development regulation that prioritizes that prioritizes the form of buildings, rather than the use within them. This contrasts with traditional zoning regulations, which tend to be more use-based. Form-based codes address the relationship between building facades and the public realm, the form and mass of buildings in relation to one another, and the scale and types of streets and blocks.

The mix of uses and building heights for each land use proposed in the LEA are included in Table 2-1. Parcels would be landscaped to conserve water with water efficient irrigation systems and hardscape would be semipermeable. Each area of landscaping in the LEA Community Plan Area would have a minimum interior width of 15 feet with protective curbing, except where stormwater discharge would be necessary. Lawns would be limited to 20 percent of the total landscaped area. Street trees would be planted in the public right-of-way. Multi-family or nonresidential development would be required to adhere to lighting standards in the form based code for the LEA Community Plan. Lighting would be limited to a maximum height of 16 feet, energy efficient, and directed downward.

GENERAL PLAN BUILDOUT PROJECTIONS

The General Plan designates land uses defining the type of development that can occur throughout the City through buildout of the geographic extents of the General Plan (the General Plan Planning Area). Development of the LEA Community Plan and an increase in the maximum residential density from 40 to 80 dwelling units per acre for the Village Center Mixed Use land use designation would increase buildout projections for dwelling units, population, and employment (Table 2-2). Based on the number of new dwelling units projected under buildout of the LEA Community Plan, full buildout of the General Plan would result in an additional estimated 1,851 new dwelling units, 5,979 more persons, and a reduction of 3,540 jobs in the City as compared to the existing General Plan. The number of dwelling units and population projections would decrease in the South Study Area under buildout of the General Plan with the implementation of the LEA Community Plan, while employment opportunities would increase. In the West Study Area the number of dwelling units and population would increase, while employment opportunities would decrease under buildout of the General Plan with the implementation of the LEA Community Plan. The Project would not result in any changes in buildout projections in the North Study Area or East Study Area.

Table 2-2 General Plan Development Capacity

	Existing General Plan			General Plan Amendment		
	Dwelling Units	Population ¹	Employment (Jobs)	Dwelling Units	Population ¹	Employment (Jobs)
General Plan Total	102,865	332,254	127,463	104,716	338,233	123,923
City Limits	72,262	233,406	81,784	76,906	248,406	72,788
Study Areas Subtotal	30,603	98,848	45,679	27,810	89,826	51,135
North Study Area	323	1,043	0	323	1,043	0
East Study Area	4,806	15,523	9,183	4,806	15,523	9,183
South Study Area	16,250	52,488	30,367	12,320	39,764	36,332
West Study Area	9,224	29,794	6,1295	10,361	33,466	5,620

Note: numbers may not sum due to rounding

¹ Based on 3.23 persons per household, average

Source: City of Elk Grove 2022, Appendix B.

2.4.2 General Plan Amendments for VMT

The General Plan would be updated to include revisions to Chapter 6, Mobility to incorporate results of the upgraded Travel Demand Model to SACSIM19. EGSIM20 is the City of Elk Grove Travel Demand Model, which is a modified version of the Sacramento Area of Governments SACIM19 Travel Demand Model. Relative to SACSIM19, EGSIM20 includes calibration refinements to the base year (2020) model to include more detailed traffic analysis zones, roadway network updated Internal-External and External-Internal (I-X and X-I) travel for the SR 99 and I-5 model gateways, and an update to the base year land use inputs in the City to 2020 conditions. The model was then validated to year 2020 pre-pandemic conditions. The future EGSIM20 model represents General Plan buildout for the City and land uses and transportation projects for the region as included in the 2020 Metropolitan Transportation Plan and was refined to include several planned developments, such as the LEA Community Plan. Additional details regarding the traffic model updates are available in Appendix C.

Specifically, the VMT limit in General Plan Table 6-1 and Table 6-2 under Policy MOB-1-1, would be revised to reflect the new model. General Plan Table 6-1 includes the daily VMT limits for projects to achieve a 15 percent below existing (2015) conditions. Updated VMT limits by land use designation are shown in Table 2-3. Cumulative total daily VMT would also be updated as part of the Project. New development projects would need to demonstrate that cumulative VMT within the City for a future project would be less than or equal to the revised cumulative limit of 8,035,140 total daily VMT, which is 1,667,307 above the current cumulative daily VMT in the General Plan of 6,367,833 as a result of proposed General Plan land use designation changes described in this Chapter. General Plan Table 6-2 would be updated to include cumulative development in Study Areas, as shown in Table 2-4. As discussed in the Transportation chapter later in this Draft SEIR, a direct comparison between the existing and proposed VMT thresholds is not possible because of the characteristics of either travel demand model.

Table 2-3 Vehicle Miles Traveled Limits by Land Use Designation

Land Use Designation	VMT Limit (daily per service population)		
	2019 General Plan	Proposed VMT Limit Update	Change in VMT (2019 General Plan – Project)
Commercial and Employment Land Use Designations			
Community Commercial (CC)	41.6	29.4	12.2
Regional Commercial (RC)	44.3	29.4	14.9
Employment Center (EC)	47.1	19.3	27.8
Light Industrial/Flex (LI/FX)	24.5	24.2	0.3
Light Industrial (LI)	24.5	24.2	0.3
Heavy Industrial (HI)	39.5	23.4	16.1
Mixed Use Land Use Designations			
Mixed Use Village Center (VCMU)	41.6	18.6	23.0
Residential Mixed Use (RMU)	21.2	19.7	1.5
Transect Based-Land Use Designations			
General Neighborhood Residential (T3-R)	NA	21.2	-
Neighborhood Center Low (T3)	NA	20.0	-
Neighborhood Center Medium (T4)	NA	21.1	-
Neighborhood Center High (T5)	NA	17.0	-
Public/Quasi Public and Open Space Land Use Designations			
Parks and Open Space (P/OS)	NA ¹	NA ¹	-
Resource Management and Conservation (RMC)	NA ¹	NA ¹	-
Public Services (PS)	NA	19.3	-
Residential Land Use Designations			
Rural Residential (RR)	34.7	25.0	9.7
Estate Residential (ER)	49.2	22.2	27.0
Low Density Residential (LDR)	21.2	20.2	1.0
Medium Density Residential (MDR)	20.9	19.6	1.3
High Density Residential (HDR)	20.6	18.6	2
Other Land Use Designations			
Agriculture (AG)	34.7	25.2	9.5
Study Areas	NA ²	NA ²	-
Tribal Trust Lands	NA ³	NA ³	-

Notes: VMT = vehicle miles traveled. VMT limit is 85% of average base year VMT per service population for parcels with land use designations. VMT limit is average buildout VMT per service population for parcels with land use designations.

¹ These land use designations are not anticipated to produce substantial VMT, as they have no residents and few to no employees. These land use designations therefore have no limit and are exempt from analysis.

² Lands within the Study Areas shall be analyzed based upon their ultimate land use designation, not the interim "Study Area" designation.

³ Tribal Trust Lands are exempt from VMT analysis as they are not subject to City policy

Source: Information provided by Fehr & Peers in 2023.

Table 2-4 Study Area Total Vehicle Miles Traveled Daily Limits

Study Area	VMT Limit (Total VMT at Buildout)	
	2019 General Plan	Proposed VMT Limit Update
City	6,367,833	8,039,802
North Study Area	37,622	27,132
East Study Area	420,612	574,028
South Study Area	1,311,107	1,769,671
West Study Area	705,243	751,049

Note: Total VMT refers to VMT based on all trips that have one end in a specific location. This is calculated using model origin – destination trip matrix. Fully accounts for entire trip length within SACOG region.

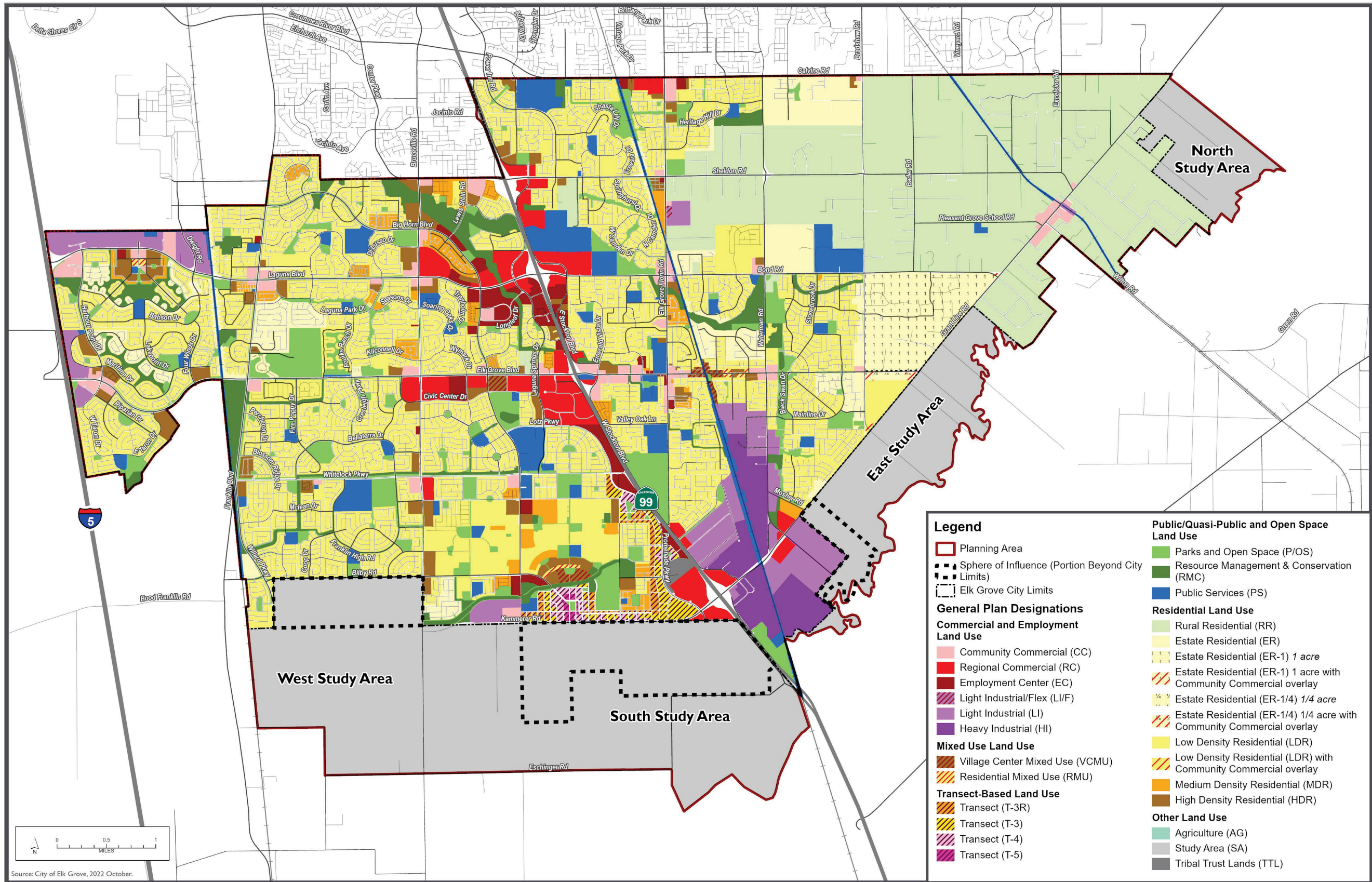
Source: Information provided by Fehr & Peers in 2023.

As shown in Table 2-3 VMT limit by land use designation under the Project would be reduced as compared to the 2019 General Plan, which used the SACSIM15 model to estimate VMT. However, the changes in VMT are not comparable to the VMT estimates in the General Plan because the revised VMT estimates are from a refined version of the model. The changes in VMT limits shown in Table 2-4 are also due to the changes in calculation methodology from the new model. In addition to VMT updates in the General Plan the Project would revise the 2019 City of Elk Grove Transportation Analysis Guidelines for consistency with the General Plan amendments. Revisions to the Transportation Analysis Guidelines would include VMT projections from the Travel Demand Model version SACSIM19 and a revised screening map.

2.4.3 Other General Plan Updates

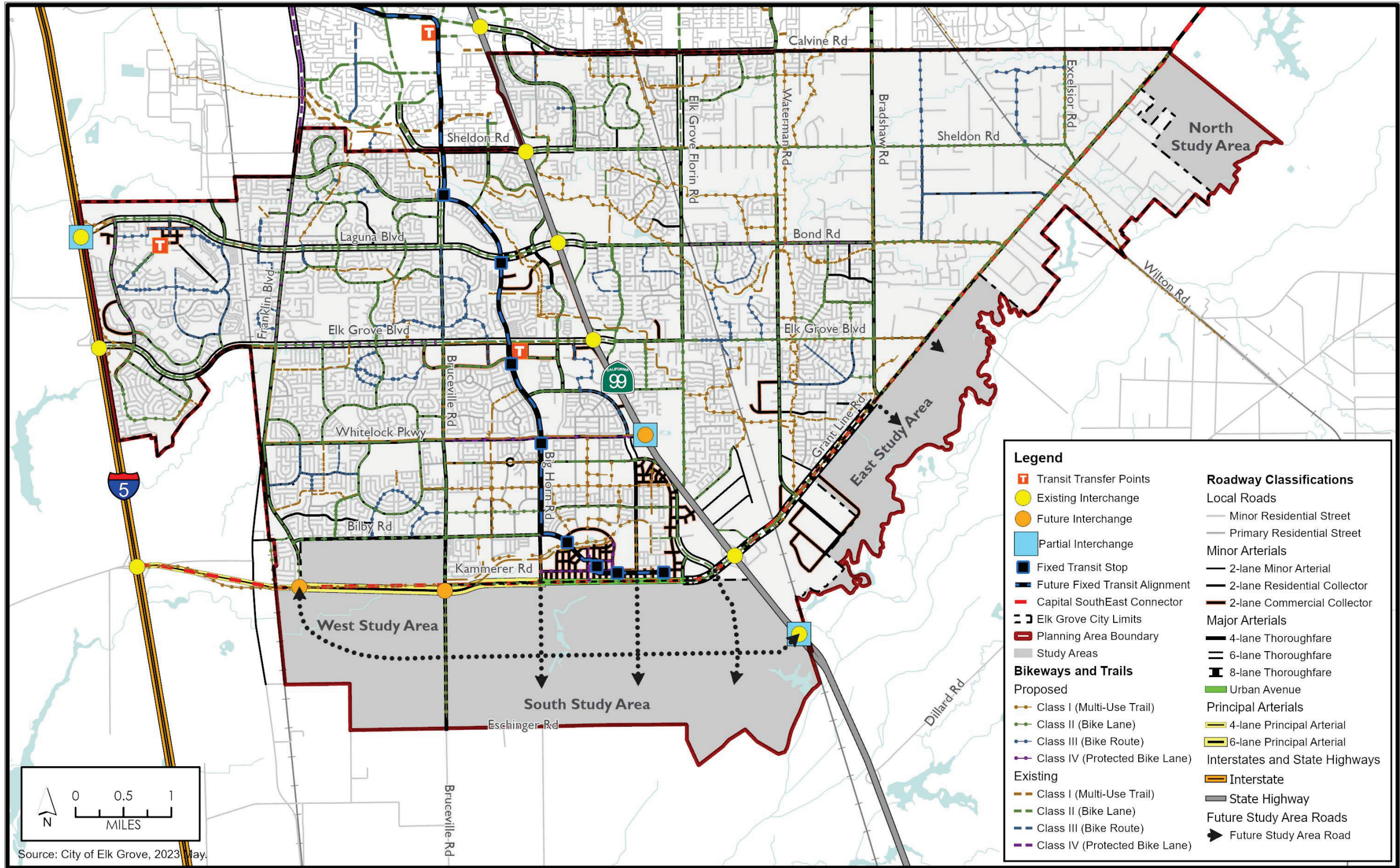
GENERAL PLAN LAND USE DESIGNATION AMENDMENTS

Amendments to the General Plan include land use changes, specifically in the Old Town Policy Area (OTPA), to promote more mixed-use development. The existing General Plan land uses in the Old Town included mainly commercial and high density residential. Land uses would be updated to encourage retail and commercial uses in proximity to similar enterprises in Old Town with surrounding housing consistent with General Plan policy provisions. Old Town Policy Area proposed land use designations (as well as proposed land use designation changes for the LEA) are shown on Figure 2-12. The Old Town Elk Grove Special Plan Area guidelines and land use provisions are planned to be updated by the City under a future separate process. The Transportation Plan of the General Plan, including the Roadway Sizing Diagram, would also be updated as illustrated in Figure 2-13.



Source: City of Elk Grove 2022.

Figure 2-12 Proposed Project Land Use Designations



Source: City of Elk Grove 2022.

Figure 2-13 Proposed Project Transportation Plan

SOUTHEAST CONNECTOR

Grant Line Road Precise Roadway Study

The Grant Line Road Precise Roadway Study (Precise Study) was prepared to determine the preparation of geometric layouts, identification of right-of-way impacts, cost estimates, consideration of public comments, and a comparison of alternatives for the Segment C of the Connector. The Project would incorporate the Grant Line Road Precise Roadway Study into the Rural Area Community Plan. Rural Area Community Plan Policy RA-3-4, under Goal RA-3, would be modified to include language that the City shall implement the Grant Line Road Precise Study. In addition, a new figure, Figure RA-2, that illustrates the preferred alignment for Segment C would be added to the Rural Area Community Plan (see Figure 2-13).

The preferred geometric layouts included in the Precise Study to be incorporated into the Rural Area Community Plan via Policy RA-3-4 are to be utilized by the City when considering a potential future project. Alternatives analyzed in the Precise Study include alternatives for signal and roundabout traffic control at intersections (see Figure 2-14). All alternatives include intersection controls at Bond Road, Wilton Road, Aleilani Lane, Sheldon Road, and Calvine Road. One additional intersection control was considered at either Graybill Road or Bradley Ranch Road. Signal and roundabout alternatives are included below.

Signal Alternatives:

- ▶ Alternative 1A: signals at each intersection, with an additional signal at Graybill Road
- ▶ Alternative 1C: signals at each study intersection, with an additional signal at Bradley Ranch Road

Signal alternatives would provide 12-foot lanes, 14-foot to 7-foot raised medians, 6-foot outside shoulders, and a separated 10-foot multi-use path on the west side of Grant Line Road. Signals would be provided at six intersections with required turn lanes to accommodate forecasted traffic to acceptable operations. Signal alternatives would require the acquisition of properties with commercial businesses located at the corner of Grant Line Road and Pleasant Grove School Road and at Grant Line Road north of Wilton Road.

Roundabout Alternatives:

- ▶ Alternative 2A: roundabouts at each intersection, with an additional roundabout at Graybill Road
- ▶ Alternative 2C: roundabouts at each intersection, with an additional roundabout at Graybill Road, and a realignment of Wilton Road and relocation of the Wilton Road intersection
- ▶ Alternative 2A/2D: roundabouts at each study intersection, with an additional roundabout at Bradley Ranch Road
- ▶ Alternative 2C/2D: roundabouts at each study intersection, with an additional roundabout at Bradley Ranch Road, and a realignment of Wilton Road and relocation of the Wilton Road intersection

Each roundabout would have the same lane configuration/cross-section between intersections as the signalized alternatives. Within the commercial zone, the median would be reduced to 4 feet and the multi-use path to 8 feet to reduce the right-of-way impacts. The Wilton Road intersection would be reconfigured. A roundabout would require right-of-way acquisition from the existing two fuel stations at the intersection of Grant Line Road. Additionally, the parking lots in front of the shopping center and restaurants on the west side near this intersection would likely need to be combined to maintain access to the businesses.

Kammerer Road Segment

Segment A2 of the SouthEast Connector includes Kammerer Road from Bruceville Road to SR 99 and is within the LEA Community Plan Area. The Project would revise the configuration of Segment A2 along Kammerer Road currently described in the General Plan.

Kammerer Road (Segment A2) from Big Horn to just east of Lotz Parkway would be an urban avenue with two vehicular lanes in each direction and a 12-foot median (Figure 2-9). On each side of the roadway there would be a

one-way slip lane to provide a pedestrian streetscape. The roadway design would be refined to increase compatibility with each of the subareas through which the roadway would pass.

2.4.4 Amendments to General Plan Mitigation Measure MM 5.5.1a and MM 5.5.1b

General Plan EIR Mitigation Measure MM 5.5.1a and MM 5.5.1b require subsequent development projects in the Planning Area to prepare a detailed cultural resources study of the subject property and protect cultural resources. Mitigation Measure MM 5.5.1a and MM 5.5.1b would be revised as follows with changes shown in ~~strikeout~~ and underline:

Mitigation Measure MM 5.5.1a

Prior to the approval of subsequent development projects in the Planning Area, the City shall determine the level of archaeological sensitivity based on the previously prepared confidential archaeological sensitivity map in combination with the level of previous disturbance of the project area and anticipated level of ground disturbance, as shown below.

	<u>Developed, proposed ground disturbance less than 24"</u>	<u>Not previously developed, proposed ground disturbance less than 24"</u>	<u>Developed, proposed ground disturbance more than 24"</u>	<u>Not previously developed, proposed ground disturbance below 24"</u>
<u>low area of archaeological sensitivity</u>	<u>minimum investigation</u>	<u>minimum investigation</u>	<u>minimum investigation</u>	<u>moderate investigation</u>
<u>medium area of archaeological sensitivity</u>	<u>minimum investigation</u>	<u>moderate investigation</u>	<u>moderate investigation</u>	<u>intensive investigation</u>
<u>high area of archaeological sensitivity</u>	<u>moderate investigation</u>	<u>intensive investigation</u>	<u>intensive investigation</u>	<u>intensive investigation</u>

- ▶ Minimum Investigation: Implement Mitigation Measure 5.5-1a(1).
- ▶ Moderate Investigation: Implement Mitigation Measure 5.5-1a(1) and (2).
- ▶ Intensive Investigation: Implement Mitigation Measure 5.5-1a(1), (2), and (3).

~~detailed cultural resources study of the subject property shall be conducted by the applicant and peer reviewed by the City. The cultural resources study shall identify, evaluate, and mitigate impacts to cultural resources as defined by CEQA and/or the NHPA. Mitigation methods to be employed include, but are not limited to, the following:~~

- ~~• Redesign of the project to avoid the resource. The resource site shall be deeded to a nonprofit agency to be approved by the City for maintenance of the site.~~
- ~~• If avoidance is determined to be infeasible by the City, the resource shall be mapped, stabilized, and capped pursuant to appropriate standards.~~
- ~~• If capping is determined infeasible by the City, the resource shall be recovered to appropriate standards~~

Mitigation Measure 5.5.1b

- 1) Unless the project qualifies for part (2) below, no cultural resources study shall be required as part of the project consideration. If cultural resources archaeological materials or tribal cultural resources are discovered during grading or construction activities within the project site Planning Area, work shall halt immediately within 50 feet of the discovery, the Planning Division Department shall be notified, and a qualified professional shall be retained. As related to archaeological materials, a professional archaeologist meeting the Secretary of the Interior’s Professional Qualifications Standards in archaeology shall be retained to determine the significance of the discovery. As related to tribal cultural resources, a “qualified professional” consists of the geographically and culturally affiliated tribe.

If resources are determined to be potentially significant, the City shall require the preparation of a treatment plan and report of findings for cultural archaeological and tribal cultural resources by a qualified professional. The City and the applicant shall consult and agree to implement all measures the City deems feasible. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. The applicant shall be required to implement measures necessary for the protection and documentation of cultural archeological and tribal cultural resources.

- 2) A detailed cultural resources study of the subject property shall be conducted by either the City or the applicant and then peer reviewed by the City. The report shall include a records search of the North Central Information Center, the Native American Heritage Commission, tribal outreach, and a pedestrian field survey. The cultural resources study shall identify, evaluate, and mitigate impacts to cultural archaeological and tribal cultural resources as defined by CEQA and/or the NHPA. Mitigation methods to be employed include, but are not limited to, the following:
 - ▶ Redesign of the project to avoid the resource. The resource site shall be deeded to a nonprofit agency to be approved by the City for maintenance of the site.
 - ▶ If avoidance is determined to be infeasible by the City, the resource shall be mapped, stabilized, and capped pursuant to appropriate standards.
 - ▶ If capping is determined infeasible by the City, the resource shall be recovered to appropriate standards.
- 3) Prior to the start of any ground disturbing activities, a qualified archaeologist meeting the United States Secretary of Interior guidelines for professional archaeologists shall be retained to develop a construction worker awareness brochure. This brochure shall be distributed to all construction personnel and supervisors who will have the potential to encounter cultural resources. The topics to be addressed in the Worker Environmental Awareness Program will include, at a minimum:
 - ▶ types of cultural resources expected in the project area;
 - ▶ what to do if a worker encounters a possible resource;
 - ▶ what to do if a worker encounters bones or possible bones; and
 - ▶ penalties for removing or intentionally disturbing cultural resources, such as those identified in the Archeological Resources Protection Act.

Mitigation Measure MM 5.5.1b

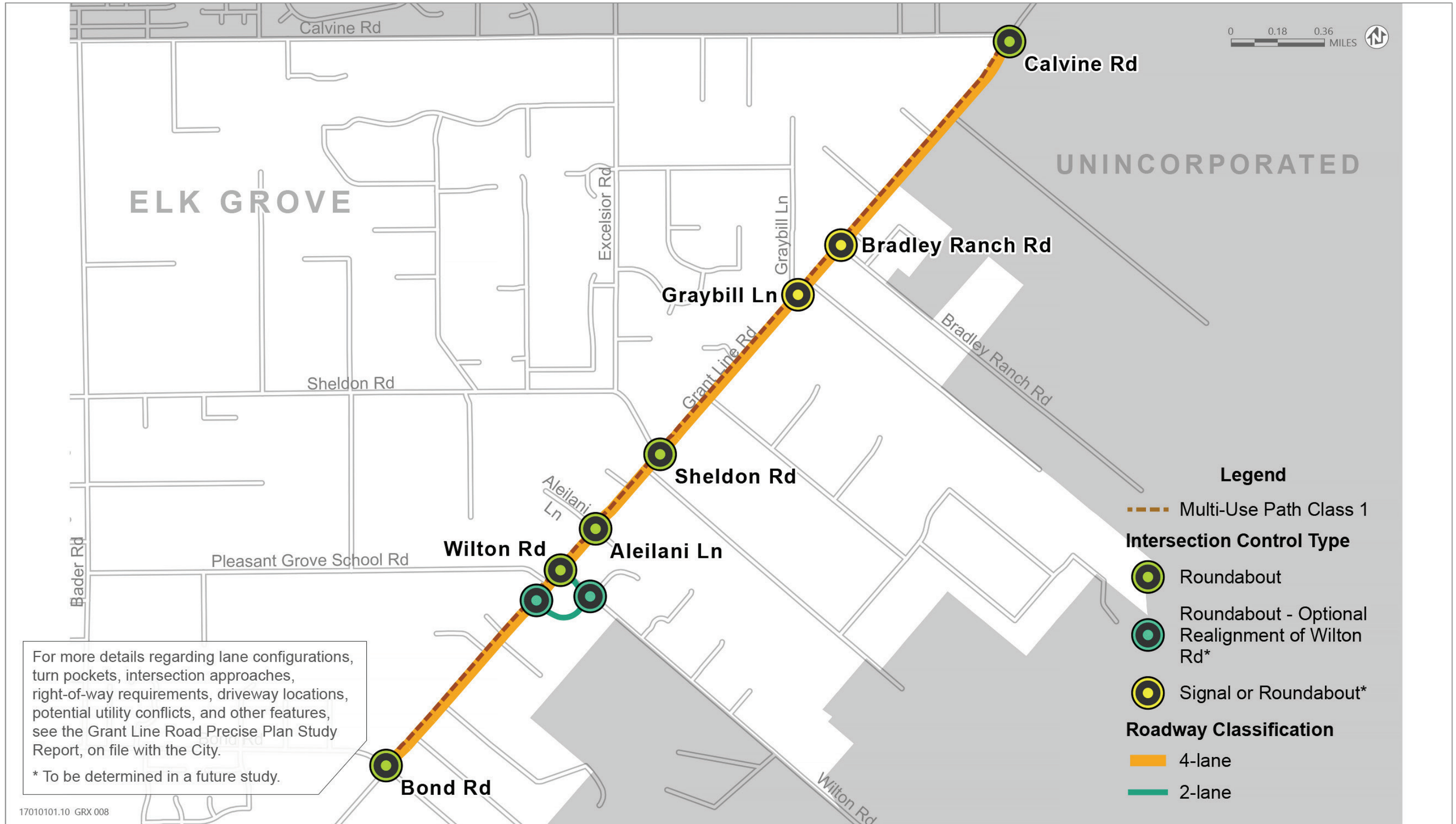
As part of the development review process for projects involving modification to existing buildings and structures, require all affected buildings and structures over 50 years of age to be evaluated for historical significance, using the significance criteria set forth for historic resources under CEQA Guidelines Section 15064.5, which are also criteria for listing in the Elk Grove Register of Historic Resources, contained in Section 7.00.050 of the Municipal Code. For buildings or structures that do not meet the CEQA criteria for historical resource, no further mitigation is required.

If the building or structure can be preserved on site, but remodeling, renovation or other alterations are required, this work shall be conducted in compliance with the "Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings" (Weeks and Grimmer 1995).

If a significant historic building or structure is proposed for demolition, the City shall ensure that a qualified architectural historian thoroughly documents the building and associated landscaping, if applicable, and setting. Documentation shall be to the applicable level (short form, Level 1, Level II, or Level III) of Historic American Building Survey or Historic American Engineering Record documentation. This is consistent with Section 700.080(B)(5) of the Elk Grove Municipal Code. A copy of the record shall be deposited with the City, Elk Grove Historical Society, and the North Central Information Center, at minimum. The record shall be accompanied by a report containing site-specific history and appropriate contextual information.

2.4.5 Revisions to South and West Study Areas

The Project includes revisions to the land use district program standards for both the South and West Study Areas. The South Study Area would serve as the second phase of the LEA that would build off development to the north. The land use district designations would be adjusted to increase industrial development with transitional neighborhoods and high density residential development. The West Study Area would include additional high density residential development, and rural and estate residential development. Medium density residential development, public services, and employment center development would be slightly reduced. The revised land use district program standards for the South and West Study Areas are shown in Tables 2-6 and 2-7, respectively. There are no changes proposed to the land use diagrams for the South and West Study Areas. Land use designations in Table 2-5 and Table 2-6 are intended to occur within the percentage ranges listed. If the land uses are required to be adjusted to support other land uses and meet the City's regional housing needs allocation the other percentages would be adjusted to achieve an appropriate development pattern.



Source: City of Elk Grove 2022.

Figure 2-14 Grant Line Rd Precise Roadway Study

Table 2-5 South Study Area Use District – Revised Program Standards

Land Use District	Designations Allowed in District	Desired Land Use Range (Percent)	Desired Land Use Range (Acres)
Activity District	Community Commercial (CC)	2-5	75-185
	Regional Commercial (RC)	2-5	75-185
	Employment Center (EC)	3-5	110-185
	Light Industrial/Flex (LI/FX)	20-25	735-920
	Light Industrial (LI)	20-25	735-920
	Heavy Industrial (HI)	20-25	735-920
	General Neighborhood Residential (T3-R)	3-4	110-185
	Neighborhood Center Low (T3)	3-4	110-185
	Neighborhood Center Medium (T4)	2-3	75-110
	Neighborhood Center High (T5)	2-3	75-110
	High Density Residential (HDR)	1-3 ^a	35-110
Public Services (PS)	1-3 ^b	35-110	
Residential Neighborhood District	Community Commercial (CC)	1-2	35-75
	Rural Residential (RR)	30-45	35-75
	Estate Residential (ER)	30-45	35-75
	Low Density Residential (LDR)	30-45	1,100-1,650
	Medium Density Residential (MDR)	3-5	110-185
	High Density Residential (HDR)	5-8 ^a	185-295
	Parks and Open Space (P/OS)	5-10 ^b	185-370
	Public Services (PS)	3-8 ^b	110-295
Open Space/Conservation District	Resources Management and Conservation (RMC)	5-10 ^c	180-370
	Public Services (PS)	0-1 ^b	0-35

^a percent of land use or as needed to meet regional housing needs allocation

^b percent of land use or as needed to support other land use

^c percent of land use or as needed to meet resource conservation standards and/or to provide floodplain buffer

Source: Elk Grove General Plan, Table 4-3.

Table 2-6 West Study Area Use District – Revised Program Standards

Land Use District	Designations Allowed in District	Desired Land Use Range (Percent)	Desired Land Use Range (Acres)
Activity District	Community Commercial (CC)	1-3	20-60
	Employment Center (EC)	3-5	60-100
	High Density Residential (HDR)	5-8 ^a	110-150
Residential Neighborhood District	Community Commercial (CC)	1-3	20-60
	Rural Residential (RR)	50-60	950-1,150
	Estate Residential (ER)	50-60	950-1,150
	Low Density Residential (LDR)	50-60	950-1,150
	Medium Density Residential (MDR)	8-10	150-190
	High Density Residential (HDR)	3-5 ^a	60-100
	Parks and Open Space (P/OS)	8-15 ^b	150-290
	Public Services (PS)	5-8 ^b	100-150
Open Space/Conservation District	Resources Management and Conservation (RMC)	2-8 ^b	40-150
	Public Services (PS)	2-8 ^b	40-150

^a percent of land use or as needed to meet regional housing needs allocation

^b percent of land use or as needed to support other land use

^c percent of land use or as needed to meet resource conservation standards and/or to provide floodplain buffer

Source: Elk Grove General Plan, Table 4-4.

2.5 PROJECT APPROVALS

The following actions would occur as part of this Project:

- ▶ Amend the City's General Plan to include the LEA Community Plan Area;
- ▶ Amend City's General Plan to include revisions to Mobility Policy MOB-1-1;
- ▶ Amend the City's Transportation Analysis Guidelines to include revisions to VMT thresholds and the screening map;
- ▶ Amend land use designations for the Old Town Policy Area;
- ▶ Amend the Rural Area Community Plan to include the Grant Line Road Precise Roadway Study; and
- ▶ Amend General Plan EIR Mitigation Measure MM 5.5.1a and MM 5.5.1b.

3 ENVIRONMENTAL SETTING, IMPACTS, AND MITIGATION MEASURES

This chapter is organized by environmental resource topic. Each resource topic is addressed in a separate section that presents an integrated discussion of the existing conditions (including environmental setting and regulatory setting) associated with the resource, potential environmental effects of the Project on the resource, and mitigation measures to reduce significant effects.

Cumulative and growth-inducing impacts are discussed in Chapter 4, "Cumulative Impacts," and Chapter 6, "Other CEQA-Mandated Sections," respectively.

APPROACH TO THE ENVIRONMENTAL ANALYSIS

Sections 3.1 through 3.11 of this Draft SEIR present a discussion of regulatory background, existing conditions, environmental impacts associated with construction and operation of the Project, mitigation measures to reduce the level of impact, and residual level of significance (i.e., after application of mitigation, including impacts that would remain significant and unavoidable after application of all feasible mitigation measures). Issues evaluated in these sections consist of the environmental topics identified for review in the notice of preparation (NOP) prepared for the project (see Appendix A of this Draft SEIR). Chapter 4 of this Draft SEIR, "Cumulative Impacts," presents an analysis of the Project's impacts considered together with other past, present, and probable future projects producing related impacts, as required by Section 15130 of the State CEQA Guidelines. Chapter 5, "Alternatives," presents a reasonable range of alternatives and evaluates the environmental effects of those alternatives relative to the Project, as required by Section 15126.6 of the State CEQA Guidelines. Chapter 6, "Other CEQA Sections," includes an analysis of the Project's growth inducing impacts, as required by Section 21100(b)(5) of CEQA.

The remainder of this chapter addresses the following resource topics:

- ▶ Section 3.1, "Aesthetics";
- ▶ Section 3.2, "Air Quality";
- ▶ Section 3.3, "Archaeological, Historical, and Tribal Cultural Resources";
- ▶ Section 3.4, "Energy";
- ▶ Section 3.5, "Greenhouse Gas Emissions and Climate Change";
- ▶ Section 3.6, "Noise and Vibration";
- ▶ Section 3.7, "Population and Housing";
- ▶ Section 3.8, "Public Services";
- ▶ Section 3.9, "Transportation";
- ▶ Section 3.10, "Utilities and Service System."; and
- ▶ Section 3.11, ""Environmental Impact and Mitigation Addressed in Previous EIRs."

Sections 3.1 through 3.11 of this Draft SEIR generally include the following components.

Regulatory Setting: This subsection presents information on the laws, regulations, plans, and policies relevant to each resource topic, including federal, State, regional, and City regulations that address potentially adverse environmental impacts.

Environmental Setting: This subsection describes existing environmental conditions at the Project site and in the surrounding area, in accordance with the State CEQA Guidelines (CCR Section 15125). This setting generally serves as

the baseline against which environmental impacts are evaluated. The NOP for the Project was issued on February 18, 2022. Typically, and in accordance with State CEQA Guidelines Section 15125, the date on which the NOP is issued is considered appropriate for establishing the baseline. This includes the planned development potential and policy provisions set forth in the adopted General Plan.

Environmental Impacts and Mitigation Measures: In accordance with the State CEQA Guidelines (CCR Sections 15126, 15126.2, and 15143), this section identifies the method of analysis to determine whether an impact may occur, and the thresholds of significance used to determine the level of significance of the environmental impacts for each resource topic. The thresholds of significance are based on the checklist presented in Appendix G of the most recently adopted State CEQA Guidelines (December 28, 2018), best available data, applicable regulatory standards, and local practice and standards. The level of each impact is determined by analyzing the effect of the Project on the defined baseline conditions and comparing it to the applicable significance threshold. Each impact discussion also includes a summary of the relevant impact analysis and conclusion provided in the General Plan EIR and other applicable EIRs and determines whether the Project would result in a new significant effect or more severe impact than what was identified in the General Plan EIR pursuant to State CEQA Guidelines 15162.

Project impacts and mitigation measures are numbered sequentially in each subsection (e.g., Impact 3.2-1, Impact 3.2-2, Impact 3.2-3, etc.). A summary impact statement precedes a more detailed discussion of each environmental impact. The discussion presents the analysis, rationale, and substantial evidence upon which conclusions are drawn regarding the level of significance of the impact.

An impact would be considered “less than significant” if it would not involve a substantial adverse change in the physical environment. An impact would be “potentially significant” or “significant” if it could or clearly would, respectively, result in a substantial adverse change in the physical environment; both are treated the same under CEQA in terms of procedural requirements and the need to identify feasible mitigation.

This SEIR identifies feasible mitigation measures that could avoid, minimize, rectify, reduce, or compensate for potentially significant or significant adverse impacts (PRC Section 21081.6[b]). Mitigation measures are not required for effects found to be less than significant. Where feasible mitigation for a significant or potentially significant impact is available, it is described in this SEIR following the impact, along with its effectiveness at addressing the impact. Each identified mitigation measure is labeled numerically to correspond with the impact it addresses. Where feasible mitigation is not sufficient to reduce an impact to a less-than-significant level, the impact is identified as significant and unavoidable. The final determination of the level of significance of each impact is presented in bold text in the impact summary and at the end of each impact discussion.

It is important to note that environmental impact analyses under CEQA are not required to analyze the impact of existing environmental conditions on a project’s future users or residents unless the proposed project might cause or risk exacerbating environmental hazards or conditions that already exist (CCR Section 15126.2[a]). 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 (*California Building Industry Association v. Bay Area Air Quality Management District* [2015] 62 Cal. 4th 369).

References: The full references associated with the parenthetical references found throughout Sections 3.1 through 3.10 can be found in Chapter 8, “References,” organized by section number.

EFFECTS FOUND NOT TO BE SIGNIFICANT

CEQA allows a lead agency to limit the detail of discussion of environmental effects that are not potentially significant (PRC Section 21100, CCR Section 15128). Following research and analysis of technical studies and data, it was determined that the Project would not result in significant environmental impacts on agriculture, biological resources, geology and soils, hazard and hazardous materials, hydrology and water quality and land use. An analysis of these environmental resource areas determined to be less than significant is included in Section 3.11, “Environmental Impact and Mitigation Addressed in Previous EIRs.” The environmental resources listed below were determined to have no impact. Accordingly, these resources are not addressed in later sections of this Draft SEIR.

Mineral Resources

No significant mineral resources have been identified in the City. There are no sites in the City used for mineral extraction, nor are any of the sites designated as an important mineral recovery site. Therefore, there would be no impact on mineral resources, and this impact is not discussed in this Draft SEIR.

Seiche, Tsunami, and Mudflow

The City's location (inland, away from any water bodies) and topography (relatively flat) ensure that there would be no impact related to seiche, tsunami, or mudflow. Therefore, this impact is not discussed in this Draft SEIR.

Wildfire

The City and its Planning Area is not located in or near a Very High Fire Hazard Severity Zone. Therefore, there would not be a significant impact related to wildfire, and this issue is not discussed in this Draft SEIR.

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3.1 AESTHETICS

This section provides a description of existing visual conditions, meaning the physical features that make up the visible landscape in the City and its Planning Area, and an assessment of changes to those conditions that would occur from implementation of the Project. The effects of the Project on the visual environment are generally defined in terms of the Project's physical characteristics and potential visibility, the extent to which the Project's presence would change the perceived visual character and quality of the environment, and the expected level of sensitivity that the viewing public may have where the Project would alter existing views. The primary source of information used for this analysis is the General Plan EIR (City of Elk Grove 2018).

No comments pertaining to aesthetics were received in response to the notice of preparation (NOP).

3.1.1 Regulatory Setting

FEDERAL

No federal plans, policies, regulations, or laws related to aesthetics, light, and glare are applicable to the Project.

STATE

California Scenic Highway Program

California's Scenic Highway Program (Streets and Highways Code, Section 260 et seq) was created by the Legislature in 1963 to preserve and protect scenic highway corridors from change that would diminish the aesthetic value of lands adjacent to highways. The State Scenic Highway System includes a list of highways that are either eligible for designation as scenic highways or have been so designated. There are no designated scenic highways in the City.

LOCAL

City of Elk Grove General Plan

The *City of Elk Grove General Plan* contains the following policies and actions related to aesthetics that apply to the Project. These policies are contained in Chapter 4, "Urban and Rural Development" (City of Elk Grove 2019).

- ▶ **Policy LU-1-5:** To support intensification of identified growth areas, restrict new development on properties in rural and transitional areas.
- ▶ **Policy LU-1-6:** Support development of neighborhood-serving commercial uses adjacent to residential areas that provide quality, convenient, and community-serving retail choices in a manner that does not impact neighborhood character.
- ▶ **Policy LU-2-4:** Require new infill development projects to be compatible with the character of surrounding areas and neighborhoods, support increased transit use, promote pedestrian and bicycle mobility, and increase housing diversity.
- ▶ **Policy LU-3-11:** Ensure that future development in the Study Areas is consistent with the City's Vision and Supporting Principles by implementing the Study Area Land Use Programs, as follows:
 - Study Area Land Use Programs
 - The Land Use Programs guide the appropriate balance between land development and conservation in each Study Area, using the organizing principles as a basis. The Land Use Programs will be used to guide the approval and development of individual projects in a manner that promotes long-term achievement of the Community Vision and Supporting Principles. The Land Use Program for each Study Area consists of the following:

- General development objectives, describing the vision for the individual Study Area.
 - Conceptual land use character graphics that illustrate the appropriate siting of the various Land Use Districts.
 - Land Use Program standards, which describe the future land use designations that will implement the Land Use Districts and the desired land use range (based on the gross acreage of the individual Study Area).
- ▶ **Policy LU-5-1:** Ensure that new development reflects the City's desire to create a high-quality, attractive, functional, and efficient built environment.
 - ▶ **Policy LU-5-3:** Reduce the unsightly appearance of overhead and aboveground utilities by requiring the undergrounding of appropriate services within the urban areas of the City.
 - **Standard LU-5-3a:** New utility facilities should be located underground to the extent possible. Facilities to be placed underground should include electrical transformers (where consistent with the guidelines of the electrical utility), water backflow preventers, and similar items.
 - ▶ **Policy LU-5-4:** Require high standards of architectural and site design, and apply strong design controls for all development projects, both public and private, for the enhancement and development of community character and for the proper transition between areas with different types of land uses. Design standards shall address new construction and the reuse and remodeling of existing buildings.
 - **Standard LU-5-4a:** Nonglare glass shall be used in all nonresidential buildings to minimize and reduce impacts from glare. Buildings that are allowed to use semi-reflective glass must be oriented so that the reflection of sunlight is minimized. This requirement shall be included in subsequent development applications.
 - ▶ **Policy LU-5-5:** Improve the visual appearance of business areas and districts by applying high standards for architectural design, landscaping, and signs for new development and the reuse or remodeling of existing buildings.
 - ▶ **Policy LU-5-8:** Require developers to provide pedestrian amenities, such as trees, lighting, recycling and refuse containers, seating, awnings, and/or art, in pedestrian areas along project frontages. Where appropriate, install pedestrian amenities in public rights-of-way.
 - ▶ **Policy LU-6-1:** Maintain and improve the aesthetic quality and architectural diversity of the Old Town historical district.
 - ▶ **Policy LU-6-9:** Support potential changes to the South Pointe Policy Area that incorporate retail, office, and light industrial/flex land uses along Kammerer Road.
 - ▶ **Policy NR-1-9:** Encourage development clustering where it would facilitate on-site protection of woodlands, grasslands, wetlands, stream corridors, scenic areas, or other appropriate features such as active agricultural uses and historic or cultural resources under the following conditions and requirements. Except as otherwise provided, clustering shall not be allowed in the Sheldon Rural Area.
 - Urban infrastructure capacity is available for urban use. If clustering is allowed in the Rural Area, those properties shall be exempt from providing urban water and sewer connections in accordance with the policies of the Sheldon/Rural Area Community Plan (see Chapter 9).
 - On-site resource protection is appropriate and consistent with other General Plan policies.
 - The architecture and scale of development are appropriate for and consistent with the intended character of the area.
 - Development rights for the open space area are permanently dedicated and appropriate long-term management is provided for by a public agency or another appropriate entity.

The *City of Elk Grove General Plan* does not contain any policies related to shadow effects.

City of Elk Grove Zoning Code

The Elk Grove Zoning Code (Municipal Code Title 23) provides development standards that address building mass, setbacks, landscaping, lighting, and signage to achieve an aesthetically pleasing appearance. Chapter 23.56, Lighting, addresses lighting specifically, which would reduce the potential for local light and glare, as well as contribution to skyglow. Section 23.56.030 contains requirements for shielding of fixtures and levels of illumination, as well as restrictions on fixture heights and hours of illumination for multi-family and non-residential uses. Elk Grove Municipal Code (EGMC) Section 23.56.040 prohibits certain types of lighting, such as neon tubing or band lighting along building structures, searchlights, illumination of entire buildings, roof-mounted lights (except for security purposes with motion detection), and any light that interferes with a traffic signal or other necessary safety or emergency light.

Old Town Elk Grove Special Planning Area Design Standards and Guidelines

The *Old Town Elk Grove Special Planning Area Design Standards and Guidelines* document, adopted in 2005 (and as subsequently amended), serves as a guide for future growth and planning efforts in the Old Town, and provides development regulations that are tailored preserve the historical character and ambiance of Old Town. This document is intended to identify issues that were deemed important to community members, including land use, site design, advertising and signage, and architecture. All future projects, including new development and redevelopment, within Old Town are required to undergo a Design Review and must be approved by the City Council prior to development.

City of Elk Grove Design Guidelines

The City Design Review process is established under Section 23.16.080 of the EGMC. This section and corresponding *Elk Grove Design Guidelines* (Design Guidelines) established a design review process and guidelines for site planning, architecture, lighting, and landscaping, as well as preservation of significant natural features and compatibility with surrounding property. The City strongly encourages incorporating natural features and using landscaping to reduce the potential impacts of lighting from parking areas on both project areas and adjacent vacant land, and that landscaping be designed to maximize screening and buffering between adjacent uses. Design Review is required for development types listed below.

- ▶ single-family residential subdivision maps;
- ▶ master home plans for single-family residential subdivisions;
- ▶ multi-family residential development; and
- ▶ non-residential development (e.g., commercial, office, industrial, and public/quasi-public development).

Any future development that falls under one of the above categories would undergo Design Review and comply with any conditions of approval imposed by the City. Design Guidelines chapters 3 and 4 address the design for residential uses. These chapters identify site design, architecture, lighting, and landscaping guidance to provide a desirable urban character as well as compatibility with surrounding neighborhoods and land uses. Chapter 5 addresses nonresidential uses.

The Southeast Policy Area has its own *Design Protocol and Architectural Style Guide* that is independent from the citywide Design Guidelines and provides design standards and guidelines for all forms of development (residential, commercial, office, mixed use, industrial).

The Laguna Ridge Policy Area also has its own design guidelines that are in addition to City Design Guidelines. This includes the Laguna Ridge Supplemental Design Guidelines (adopted 2005) and the Laguna Ridge Town Center Design Guidelines (adopted 2008).

3.1.2 Environmental Setting

VISUAL CHARACTER

Visual quality is defined as the overall visual impression or attractiveness of an area as determined by the landscape characteristics, including landforms, rock forms, water features, and vegetation patterns. The attributes of line, form, and color combine in various ways to create landscape characteristics whose variety, vividness, coherence, uniqueness, harmony, and pattern contribute to the overall visual quality of an area.

Sacramento County lies near the center of California's Central Valley, at the southern end of the Sacramento Valley. Views in the region are generally characterized by broad, sweeping panoramas of flat agricultural lands and open space dotted with trees, divided by numerous rivers and creeks, and populated with scattered towns and cities. To the east, the Sierra Nevada and their foothills form a background, and the Coast Range provides a backdrop on the western horizon.

Elk Grove is a suburban city set in the Sacramento Valley containing mostly flat land with no significant landforms, offering a wide view of the surrounding region. The visual character of the City generally consists of suburban development, including single- and multi-family homes set along wide meandering streets lined with sidewalks, commercial and office uses set in large retail and business centers, and smaller strip malls, parks, and public spaces, as well as roadways and other infrastructure. There are also scattered vacant parcels and open agricultural land. The western and central portions of the City are more urbanized. The eastern portions and the areas south and west of the City boundaries predominantly contain rural residential uses surrounded by agricultural land and natural grasslands, with riparian habitat areas to the southeast along the Cosumnes River. SR 99 bisects the City, extending north to south and providing access to the primary commercial areas along Bond Road/Laguna Boulevard and Elk Grove Boulevard. I-5 also traverses in a north-south direction along the City's western boundary. Elk Grove's riparian corridors bring natural areas into urbanized neighborhoods (City of Elk Grove 2018: 5.1-1).

VIEWS OF PROJECT COMPONENTS AND SURROUNDING AREA

LEA Community Planning Area

The proposed LEA Community Planning Area is located west of SR 99, south of Whitelock Parkway along Promenade Parkway and along Kammerer Road to McMillan Road/Big Horn Boulevard to the west. The LEA Community Planning Area consists predominantly of undeveloped agricultural land and commercial/office development along the eastern edge (Sky River Casino and Kaiser Permanente medical office building). The LEA Community Planning Area is surrounded by single-family rural residential and agriculture to the south, developing residential uses to the north, SR 99, industrial uses, and single-family residences to the east, and agriculture and single-family subdivisions to the west.

Old Town Policy Area

Old Town Policy Area is located east of SR 99, along Elk Grove Boulevard that encompasses the Elk Grove Historic District that is a listed resource on the National Register of Historic Places. The Old Town stretches one mile long on Elk Grove Boulevard and is defined by Elk Grove-Florin Road on the west; Waterman Road on the east; Locust Street on the north; Grove Street on the south; and several historic properties along the Union Pacific Railroad and School Street. The area consists primarily of commercial and office development, single-family residences, as well as trees and landscaping. Old Town consists of a cohesive historic visual character and requires specific design standards to improve the visual quality and maintain consistent historical character, and discourages the use of design, building material, and color inconsistencies. The *Old Town Special Planning Area Design Standards and Guidelines* regulate land uses and associated design to maintain the character for Old Town area.

Grant Line Road

Grant Line Road is a two-lane 2.7-mile subsection of the planned 34-mile long corridor located between Calvine Road and Bond Road along the City's eastern boundary. Grant Line Road corridor is bound by rural single-family residential neighborhoods and a variety of commercial/retail development.

South and West Study Areas

The South Study Area is bound by Bruceville Road to the west, Kammerer Road to the north, Eschinger Road to the south, and SR 99 to the east. The South Study Area consists of agricultural lands, solar fields, and single-family rural residential development along Rau Road. The South Study area is surrounded by multi-family residences to the north and agricultural lands to the south, east, and west.

The West Study Area is bound by the train tracks (directly east of Franklin Boulevard) to the west, Willard Parkway to the northwest, Bilbly Road to the north, Eschinger Road to the south, and Bruceville Road to the east. The West Study Area consists of agricultural lands and several sporadically located single-family residences. Similar to the South Study Area, the West Study area is surrounded by multi-family homes to the north and agricultural lands to the south, east, and west.

LIGHT AND GLARE CONDITIONS

Views of the night sky can be an important part of the natural environment, particularly in communities surrounded by extensive open space. Light pollution refers to all forms of unwanted light in the night sky, including glare, light trespass, skyglow, and over-lighting. The terms "glare" and "skyglow" are used in this analysis to describe the visual effects of lighting. Glare is direct exposure to bright lights. Light that is either emitted directly upward by luminaires or reflected from the ground is scattered by dust and gas molecules in the atmosphere, producing a luminous background known as skyglow.

Natural and artificial light reflect off various surfaces and can create localized occurrences of daytime and nighttime glare. Buildings and structures made with glass, metal, and polished exterior roofing materials exist throughout Elk Grove. In the Planning Area, light and glare are concentrated in the western and central portions where commercial and more densely developed residential areas are located.

SHADOWS

The evaluation of shading and shadows in this Draft SEIR is limited to daytime shadows cast by objects blocking sunlight. The angle of the sun, and hence the character of shadows, varies depending on the time of year and the time of day; however, in the Northern Hemisphere, the sun arcs across the southern portion of the sky. During the winter, the sun is lower in the southern sky, casting longer shadows compared to other times of year. During the summer months, the sun is higher in the southern sky, resulting in shorter shadows. During all seasons, as the sun rises in the east in the morning, shadows are cast to the west; at mid-day, the sun is at its highest point and shadows are their shortest and cast to the north; and as the sun sets in the west in the afternoon/evening, shadows are cast to the east. Because of the climate in the region, midday and afternoon shade in summer can be beneficial. In the winter, however, access to sunlight can be beneficial, which provides a reduced fluctuation in temperature and shadows between the summer and winter months.

3.1.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

This section analyzes aesthetic impacts (visual character and light and glare) that would occur from the proposed amendments to the General Plan. The visual resource analysis is based on field surveys, existing planning documents, the visual impact analysis provided in the General Plan EIR, and focused review of the extent of land use and density

change associated with the proposed buildout projections. The analysis focused on whether the Project would result in alteration of the visual characteristics of the area and/or view, the scale or degree of which appears as a substantial obvious and disharmonious modification of the overall visual character of the surrounding area that was not previously evaluated in the General Plan EIR.

The analysis is also based on a review of relevant planning documents, including the City's current General Plan, Design Guidelines, and Zoning regulations. This information, in combination with the thresholds below, was used to determine whether implementing the Project would create adverse visual effects.

THRESHOLDS OF SIGNIFICANCE

An impact on aesthetics, light, and glare is considered significant if implementation of the Project would do any of the following:

- ▶ have a substantial adverse effect on a scenic vista;
- ▶ substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway;
- ▶ substantially degrade the existing visual character or quality of public views of the site and its surroundings; or if the project is in an urbanized area, conflict with applicable zoning and other regulations governing scenic quality; and/or
- ▶ create a new source of substantial light or glare which would adversely affect day or nighttime views in the area.

ISSUES NOT DISCUSSED FURTHER

Scenic Vista

A scenic vista is considered a view of an area that has remarkable scenery or a natural or cultural resource that is indigenous to the area. The City and its Planning Area is located in a predominately developed urban setting and does not contain remarkable scenery or views of natural areas that would be considered a scenic vista. Beyond the City limits, the Planning Area consists of agricultural and rural residential uses, however these areas are included within the Planning Area depicted in the General Plan for development purposes. Areas may be designated as a scenic vista by jurisdictions in local and regional plans. As identified in the General Plan EIR, there are currently no officially designated scenic vistas in the City of Elk Grove's Planning Area (City of Elk Grove 2018: 5.1-4). There would be no impact to designated scenic vistas, and this impact is not discussed further.

State Scenic Highway

SR 160 is a State-designated scenic highway that traverses on top of levees along the Sacramento River from the Contra Costa County line to the southern city limit of the City of Sacramento. River Road meanders through the historic Delta agricultural areas and small towns along the Sacramento River. A portion of SR 160 is located 1 mile west of the current Elk Grove City limits, approximately 3.5 miles from the closest proposed development area (Caltrans 2022); therefore, the Project would have no impact on scenic resources in a designated scenic highway. This topic is not addressed further in this Draft SEIR.

VMT Thresholds

The proposed VMT thresholds are not evaluated further as they apply specifically to the transportation efficiency of land uses and do not involve physical alteration of land use conditions that could result in an aesthetic impact. Therefore, the proposed update to VMT thresholds would not impact aesthetics, and this topic is not addressed further in this section of the Draft SEIR.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.1-1: Potential to Substantially Degrade the Existing Visual Character or Quality of Public Views of the Project Area and Its Surroundings

The General Plan EIR determined that buildout of the City's Planning Area would cause conversion from a rural/natural character to a more urbanized character and this impact would be significant and unavoidable. Future development associated with the Project would result in the development of higher density residential and commercial uses that would be similar in development character that was evaluated in the General Plan EIR, which determined this impact significant and unavoidable. Therefore, the Project would not result in a new or substantially more severe impacts than were addressed in the General Plan EIR. Project impacts would remain **significant and unavoidable**.

LEA Community Plan Area

Impact 5.1.2 of the General Plan EIR evaluated whether buildout of the City's Planning Area would cause conversion from a rural/natural character to a more urbanized character. As a result of the urbanization of the Study Areas outside of City boundaries, which encourages new development and redevelopment activities in an area that contains important visual character, including undeveloped agricultural and rural areas, this impact was determined to be significant and unavoidable with no feasible mitigation available beyond compliance with the City's proposed General Plan policies.

Implementation of the Project would result in changes to the zoning of the LEA Community Plan Area that would accommodate increased development densities and intensities, as described in Chapter 2, "Project Description." As part of the Project the LEA Community Plan Area would support multi-family and mixed-use development within urban economic centers, and would allow an increase in the maximum residential density from 40 to 80 dwelling units per acre for the Village Center Mixed Use land use designation, as shown in Figure 2-10. Proposed LEA Community Plan land use designations include transect-based land use designations to establish the pattern and intensity of development, including a breakdown of residential and building intensity and maximum height allowance up to 7 stories, as shown in Table 2-1, "LEA Community Plan Land Use Designations." The majority of the LEA Community Plan Area currently includes land use designations for high-density residential, regional commercial, office, and light industrial uses. Existing land use designations in the LEA Community Plan Area permit up to 3 stories in building height and density of 40 dwelling units per acre. Project buildout in the LEA Community Plan Area could result in the development of high-density residential and commercial uses in an area of the City that is currently planned for urban land uses. Therefore, the Project would result in higher intensity uses and increased development in the LEA Community Plan Area as compared to the existing General Plan EIR.

The LEA Community Plan Area would be divided into transect zones that would allow for a continuum of development intensity, and would take into consideration the different transect elements, including building, frontage, thoroughfare, and open space types, as further described in the City's Livable Employment Area Form-Based Code. This type of development design would create a cohesive transition of the level of intensity of urban development ranging from natural to rural to urban, as illustrated in Figure 2-2 of the "Project Description".

Additionally, future development within the LEA Community Plan Area would be designed and built according to General Plan Policy LU 2-4, which requires new infill development be compatible with the existing character of surrounding areas and neighborhoods and promotes increased transit use and housing diversity. Development in the LEA Community Plan Area would adhere to other General Plan policies related to aesthetics specifically General Plan Policies LU-2-1, LU-3-1, LU-3-11, LU-5-1, LU-5-3, LU-5-4, LU-5-8, and NR-1-8. Views of sites within the LEA Community Plan Area may include tree breaks along property lines, scattered trees, and clusters of trees. These sites are subject to the tree preservation and protection requirements under EGMC Chapter 19.12.

Compliance with the City's design review process in the LEA Community Plan Area would require subsequent projects to submit site plans (including lighting and landscaping plans) and architectural details for approval depending on the required design review process under EGMC Section 23.16.080 and the LEA SPA. The adoption of the new Form

Based Code for the LEA Community Plan Area and compliance with the EGMC along with General Plan requirements would ensure consistent design compatibility with surrounding development. Additionally, potential planned development within the LEA Community Plan Area is within areas planned for urban development under the existing General Plan and are surrounded primarily by single-family rural residential, agriculture, and vacant commercial development. There is no new significant effect, and the impact is not more severe than the impact identified in the existing General Plan EIR. Thus, this impact would remain **significant and unavoidable**.

General Plan Land Use Designation Amendments

Development anticipated from proposed land use amendments within Old Town Policy Area would promote mixed use land uses. Future development would be subject to the provisions of the *Old Town Special Planning Area Design Standards and Guidelines* and potential future updates to this document by the City that would ensure compatibility with the historical and visual character of Old Town Elk Grove. Furthermore, the Old Town Policy Area is located within an urban setting surrounded by existing dense development and additional development as a result of the Project would not significantly affect the existing visual character or views of the area. There is no new significant effect, and the impact is not more severe than the impact identified in the General Plan EIR. Thus, this impact would remain **significant and unavoidable**.

Grant Line Road Precise Roadway Study

The change in the visual character of Grant Line Road corridor would be minimal and would not exceed planned roadway improvements identified in the existing General Plan or the SouthEast Connector project. Construction would mainly consist of excavating and roadway construction. Changes to Grant Line Road would not degrade existing visual character or public views because improvements would be close to ground level. The remaining areas immediately surrounding Grant Line Road would appear visually unchanged. The implementation of the SouthEast Connector, including the improvements associated with Grant Line Road, is intended to relieve traffic congestion and preserve open space, and would not impact the overall aesthetic quality of the area. There is no new significant effect, and the impact is not more severe than the impact identified in the General Plan EIR. Thus, this impact would remain **significant and unavoidable**.

South and West Study Areas

The South and West Study Areas currently consist of relatively flat rural landscape comprising of agricultural areas interspersed with native trees and drainage channels. Development within the South and West Study Areas would convert the rural visual character to an urban/suburban developed character, as envisioned in the General Plan EIR. The South Study Area would serve as the second phase of the LEA that would build off development to the north. The land use district designations would be adjusted to increase industrial development with transitional neighborhoods and high-density residential development. The combination of the procedures of the City's design review process through implementation of EGMC Section 23.16.080 and use of the City Design Guidelines and design provisions of the Southeast Policy Area, would address the design and location of new development within the South Study Area to ensure design compatibility with surrounding development.

The West Study Area would include additional high density residential development, and rural and estate residential development, similarly to what was envisioned in the existing General Plan EIR. Therefore, development proposed in the South and West Study Areas would result in varied development intensity and would alter the existing visual character that would be consistent with development and design envisioned in surrounding areas, including the LEA Community Plan Area described above. Proposed development within the South and West Study Areas would be similar in character as evaluated in the existing General Plan EIR. Additionally, the extent of the visual impact to existing agricultural, rural, and open spaces areas would be similar. Furthermore, once incorporated into the City limits, the South and West Study Areas would be subject to General Plan policies and mitigation measures identified in the existing General Plan EIR to reduce effects associated with degrading the existing visual character or quality from public views. Thus, this impact would remain **significant and unavoidable**. The impact is not more severe than the impact identified in the existing General Plan EIR.

Mitigation Measures

No mitigation is required for this impact beyond compliance with EGMC Chapter 19.12 and Section 23.16.080.

Impact 3.1-2: Potential to Create a New Source of Substantial Light or Glare Which Would Adversely Affect Day or Nighttime Views in the Area

The General Plan EIR determined that buildout of the City's Planning Area would create substantial new sources of light and glare and the impact would be significant and unavoidable. Future development associated with the Project would create nighttime lighting within the City similar to conditions anticipated for the planned urban land uses for the City under the General Plan. The Project would be subject to the City's General Plan policies, Design Guidelines, and Municipal Code requirements that address lighting and glare. In addition, lighting, including adverse effects of glare and light trespass or spillover light are considerations addressed by the City through the site plan and design review process. All future development in the Project area would be subject to this review process, ensuring that the effects of glare and spillover light would be addressed. Therefore, the Project would not result in a new or substantially more severe impacts than were addressed in the General Plan EIR. Project impacts would remain **significant and unavoidable**.

LEA Community Plan Area

Impact 5.1.3 of the General Plan EIR determined that implementation of the General Plan would introduce new sources of daytime glare and substantially change nighttime lighting and illumination levels in the City, including the LEA Community Plan Area. This impact was determined to be significant and unavoidable with no feasible mitigation available beyond compliance with the City's Design Guidelines, supplemental guidelines, and proposed General Plan policies.

Under buildout of the Project the LEA Community Plan Area would be developed with single- and multi-family residential and employment uses varying in density and intensity, although no specific development projects have yet been proposed beyond what is detailed in Section 2.4.1 of this SEIR. Future residential and employment development associated with the Project would be spread throughout the City in its General Plan designated urban land use areas and special planning areas. The largest concentration of development proposed is located within the LEA Community Plan Area; other large clusters of potential sites are located east along SR 99, directly south of Whitelock Parkway and north of Grant Line Road. Sites that are currently zoned for low-density residential and open space land use are located adjacent to areas of existing and planned urban areas (commercial and residential development).

Buildout of the Project would create nighttime lighting within the City similar to conditions anticipated for the planned urban land uses for the City under the existing General Plan due to the urban character of the land uses. Consistent with the General Plan EIR, compliance with the City Design Guidelines would minimize the Project's light and glare effects by requiring outdoor lighting fixtures to be shielded/directed downward and screened and by minimizing the use of reflective building materials. This is consistent with the lighting requirements of EGMC Chapter 23.56. This chapter addresses multi-family and nonresidential outdoor lighting standards. Full shielding is required for outdoor lighting to be constructed. Where the light source from an outdoor light fixture is visible beyond the property line, shielding is required to reduce glare so that the light source is not visible from within any residential dwelling unit. This would be demonstrated by subsequent projects through the submittal of site plans for design review approval under EGMC Section 23.16.080. Additionally, lighting proposed in the LEA Community Plan Area would adhere to lighting requirements in the LEA Form Based Code. The LEA Form Based Code would limit exterior lighting to a maximum height of 16 feet and require energy efficient, and downward directed lighting.

Portions of the LEA Community Plan Area have been previously analyzed in certified CEQA documents for the following projects: Southeast Policy Area Strategic Plan, Laguna Ridge Specific Plan, SouthPoint Policy Area/Sterling Meadows, and Lent Ranch Marketplace Special Planning Area. Mitigation measures from these CEQA documents include requirements related to reduction of light and glare. A comprehensive list of mitigation measures from other community plans prior environmental review are included in Appendix G. Mitigation measures from the Laguna Ridge Specific Plan EIR include requirements to reduce light spillage and glare. Southeast Policy Area Strategic Plan mitigation includes development of a lighting plan for consistency with the Elk Grove Municipal Code. Mitigation for the Lent Ranch Marketplace Specific Plan includes requirements for downcast and shielded lighting, hooded

streetlights, and non-glare glass. Lighting and glare requirements in Elk Grove General Plan policies, Elk Grove Municipal Code, and LEA Form Based Code, as described above, contain the same performance standards and are equivalent in effectiveness as mitigation contained in prior environmental documents. Therefore, no additional mitigation is required in the LEA Community Plan Area for light and glare impacts.

There is no new significant lighting or glare effect, and the impact is not more severe than the impact identified in the General Plan EIR. No mitigation measures are available beyond compliance with policies listed above, state regulations, the Elk Grove Municipal Code, and LEA Form Based Code. Thus, this impact would be similar to that analyzed in the General Plan EIR and would remain **significant and unavoidable**.

General Plan Land Use Designation Amendments

Development anticipated from proposed land use amendments within Old Town Policy Area would promote mixed use land uses. Future development would be subject to the provisions of the *Old Town Special Planning Area Design Standards and Guidelines* and lighting requirements of EGMC Chapter 23.56 would adequately regulate light and glare impacts such that light and glare associated with future development anticipated from proposed land use amendments in the Old Town Policy Area, would not be substantial and therefore would not adversely affect day or nighttime views. There is no new significant lighting or glare effect, and the impact is not more severe than the impact identified in the General Plan EIR. Thus, this impact would remain **significant and unavoidable**.

Grant Line Road Precise Roadway Study

Development of the Precise Roadway Study would not result in any additional vehicle traffic on Grant Line Road. However, reconfigurations to Grant Line Road may require street lighting along the roadway for safety, consistent with the Rural Roads Policy and Improvement Standards, the City Improvement Standards, and/or the Capital SouthEast Connector Design Guidelines, as applicable. These standards require the directing of light downward, which would reduce light and glare impacts. There is no new significant lighting or glare effect, and the impact is not more severe than the impact identified in the General Plan EIR. Thus, this impact would remain **significant and unavoidable**.

South and West Study Areas

Increased development anticipated under the South and West Study Areas is included in the overall development associated with the Project. Contrary to the LEA Community Plan Area and the Old Town, the South and West Study Areas are located outside of City limits. However, once annexed the South and West Study Areas would be subject to General Plan policies, City Design Guidelines, and EGMC Chapter 23.56 to reduce effects associated with new sources of daytime or nighttime light or glare. Although the South and West Study Areas are currently undeveloped, proposed development within these areas would be similar in intensity as evaluated in the General Plan EIR. Additionally, changes in the urban development would result in similar light and glare impacts as addressed in the General Plan EIR. There is no new significant lighting or glare effect, and the impact is not more severe than the impact identified in the General Plan EIR. Thus, this impact would remain **significant and unavoidable**.

Mitigation Measures

No mitigation is required for this impact.

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3.2 AIR QUALITY

This section includes a discussion of existing air quality conditions, a summary of applicable air quality regulations, and an analysis of potential short-term and long-term air quality impacts that could result from implementation of the Project. The primary source of information used for this analysis is the General Plan EIR (City of Elk Grove 2018, 2019).

The Sacramento Metropolitan Air Quality Management District (SMAQMD) submitted a comment in response to the notice of preparation (NOP). The letter included recommendations for what to evaluate in this air quality analysis. Specifically, the comment letter recommended that the Project be reviewed for consistency with applicable plans, potential cancer risk, and impacts to transit. Consistency with applicable plans is evaluated in the impact discussions in this section. Table 3.2-5 presents data regarding potential annual incremental health incidences. Effects on transit are discussed in Section 3.9, "Transportation," of this Draft SEIR.

3.2.1 Regulatory Setting

Ambient air quality in the City and Planning Area is regulated through the efforts of various federal, State, regional, and local government agencies. These agencies work jointly, as well as individually, to improve air quality through legislation, planning, policy making, education, and a variety of programs. The agencies responsible for improving the air quality in the air basin in which the Project area is located are discussed below.

FEDERAL

In *Massachusetts et al. v. Environmental Protection Agency et al.*, 549 U.S. 497 (2007), the Supreme Court of the United States ruled that CO₂ is an air pollutant as defined under the federal Clean Air Act (CAA) and that the U.S. Environmental Protection Agency (EPA) has the authority to regulate GHG emissions. In 2010, the EPA started to address GHG emissions from stationary sources through its New Source Review permitting program, including operating permits for "major sources" issued under Title V of the CAA.

The National Highway Traffic Safety Administration (NHTSA) also regulates vehicle emissions through the Corporate Average Fuel Economy (CAFE) Standards.

The CAFE Standards, which were first enacted by Congress in 1975, set fleet-wide averages that must be achieved by each automaker for its car and truck fleet. The purpose of the CAFE Standards is to reduce energy consumption by increasing the fuel economy of cars and light trucks. On April 1, 2022, Transportation Secretary Pete Buttigieg unveiled new CAFE standards for 2024–2026 model year passenger cars and light-duty trucks, requiring new vehicles sold in the US to average at least 40 miles per gallon.

Criteria Air Pollutants

The CAA required EPA to establish the national ambient air quality standards (NAAQS) (42 United States Code Section 7409). As shown in Table 3.2-1, EPA has established primary and secondary NAAQS for the following criteria air pollutants: ozone, carbon monoxide (CO), nitrogen dioxide (NO₂), sulfur dioxide, respirable particulate matter with an aerodynamic diameter of 10 micrometers or less (PM₁₀), fine particulate matter with an aerodynamic diameter of 2.5 micrometers or less (PM_{2.5}), and lead. The primary standards protect the public health, and the secondary standards protect public welfare. The CAA also requires each state to prepare a State Implementation Plan (SIP) for attaining and maintaining the NAAQS. The federal CAA amendments of 1990 added requirements for states with nonattainment areas to revise their SIPs to incorporate additional control measures to reduce air pollution. Individual SIPs are modified periodically to reflect the latest emissions inventories, planning documents, and rules and regulations of the air basins as reported by their jurisdictional agencies. EPA is responsible for reviewing all SIPs to determine whether they conform to the mandates of the CAA and its amendments, and whether implementation will achieve air quality goals. If EPA determines a SIP to be inadequate, a federal implementation plan that imposes additional control measures may be prepared for the nonattainment area. If an approvable SIP is not submitted or

implemented within the mandated time frame, sanctions may be applied to transportation funding and stationary air pollution sources in the air basin.

Toxic Air Contaminants/Hazardous Air Pollutants

Toxic air contaminants (TAC), or, in federal parlance, hazardous air pollutants (HAPs), are a defined set of airborne pollutants that may pose a present or potential hazard to human health. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or in serious illness, or that may pose a hazard to human health. A substance that is listed as a HAP pursuant to subsection (b) of Section 112 of the CAA (42 United States Code Section 7412[b]) is considered a TAC. 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.

A wide range of sources, from industrial plants to motor vehicles, emit TACs. The health effects associated with TACs are quite diverse and generally are assessed locally, rather than regionally. TACs can cause long-term health effects, such as cancer, birth defects, neurological damage, asthma, bronchitis, and genetic damage, or short-term acute effects, such as eye watering, respiratory irritation (a cough), running nose, throat pain, and headaches.

For evaluation purposes, TACs are separated into carcinogens and noncarcinogens based on the nature of the physiological effects associated with exposure to the pollutant. Carcinogens are assumed to have no safe threshold below which health impacts would not occur. This contrasts with criteria air pollutants, for which acceptable levels of exposure can be determined and for which ambient standards have been established (Table 3.2-1). Cancer risk from TACs is expressed as excess cancer cases per one million exposed individuals, typically over a lifetime of exposure.

EPA and, in California, the California Air Resources Board (CARB) regulate HAPs and TACs, respectively, through statutes (i.e., 42 United States Code Section 7412[b]) and regulations that generally require the use of the maximum achievable control technology or best available control technology (BACT) for toxics to limit emissions.

Table 3.2-1 National and California Ambient Air Quality Standards

Pollutant	Averaging Time	California (CAAQS) ^{ab}	National (NAAQS) ^c	
			Primary ^{bd}	Secondary ^{be}
Ozone	1-hour	0.09 ppm (180 µg/m ³)	— ^e	Same as primary standard
	8-hour	0.070 ppm (137 µg/m ³)	0.070 ppm (137 µg/m ³)	
Carbon monoxide (CO)	1-hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)	Same as primary standard
	8-hour	9 ppm ^f (10 mg/m ³)	9 ppm (10 mg/m ³)	
Nitrogen dioxide (NO ₂)	Annual arithmetic mean	0.030 ppm (57 µg/m ³)	53 ppb (100 µg/m ³)	Same as primary standard
	1-hour	0.18 ppm (339 µg/m ³)	100 ppb (188 µg/m ³)	—
Sulfur dioxide (SO ₂)	24-hour	0.04 ppm (105 µg/m ³)	—	—
	3-hour	—	—	0.5 ppm (1,300 µg/m ³)
	1-hour	0.25 ppm (655 µg/m ³)	75 ppb (196 µg/m ³)	—
Respirable particulate matter (PM ₁₀)	Annual arithmetic mean	20 µg/m ³	—	Same as primary standard
	24-hour	50 µg/m ³	150 µg/m ³	
Fine particulate matter (PM _{2.5})	Annual arithmetic mean	12 µg/m ³	12.0 µg/m ³	15.0 µg/m ³
	24-hour	—	35 µg/m ³	Same as primary standard
Lead ^f	Calendar quarter	—	1.5 µg/m ³	Same as primary standard
	30-day average	1.5 µg/m ³	—	—
	Rolling 3-month average	—	0.15 µg/m ³	Same as primary standard
Hydrogen sulfide	1-hour	0.03 ppm (42 µg/m ³)	No national standards	
Sulfates	24-hour	25 µg/m ³		
Vinyl chloride ^f	24-hour	0.01 ppm (26 µg/m ³)		
Visibility-reducing particulate matter	8-hour	Extinction of 0.23 per km		

Notes: µg/m³ = micrograms per cubic meter; CAAQS = California ambient air quality standards; km = kilometers; mg/m³ = milligrams per cubic meter; NAAQS = national ambient air quality standards; ppb = parts per billion; ppm = parts per million (by volume).

^a California standards for ozone, carbon monoxide, SO₂ (1- and 24-hour), NO₂, particulate matter, and visibility-reducing particles are values that are not to be exceeded. All others are not to be equaled or exceeded. California ambient air quality standards are listed in the Table of Standards in Section 70200 of Title 17 of the California Code of Regulations.

^b Concentration expressed first in units in which it was promulgated. Equivalent units given in parentheses are based on a reference temperature of 25 degrees Celsius (°C) and a reference pressure of 760 torr. Most measurements of air quality are to be corrected to a reference temperature of 25°C and a reference pressure of 760 torr; "ppm" in this table refers to ppm by volume, or micromoles of pollutant per mole of gas.

^c National standards (other than ozone, particulate matter, and those based on annual averages or annual arithmetic means) are not to be exceeded more than once a year. The ozone standard is attained when the fourth highest 8-hour concentration in a year, averaged over 3 years, is equal to or less than the standard. The PM₁₀ 24-hour standard is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 µg/m³ is equal to or less than one. The PM_{2.5} 24-hour standard is attained when 98 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard.

^d National primary standards: The levels of air quality necessary, with an adequate margin of safety, to protect the public health.

^e National secondary standards: The levels of air quality necessary to protect the public welfare from any known or anticipated adverse effects of a pollutant.

^f The California Air Resources Board has identified lead and vinyl chloride as toxic air contaminants with no threshold of exposure for adverse health effects determined. This allows for the implementation of control measures at levels below the ambient concentrations specified for these pollutants.

Sources: EPA 2016; CARB 2019a.

STATE

CARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California and for implementing the California Clean Air Act (CCAA) (California Health and Safety Code Section 40910). The CCAA, which was adopted in 1988, required CARB to establish California ambient air quality standards (CAAQS) (Table 3.2-1).

Criteria Air Pollutants

CARB has established CAAQS for sulfates, hydrogen sulfide, vinyl chloride, visibility-reducing particulate matter, and the above-mentioned criteria air pollutants. In most cases the CAAQS are more stringent than the NAAQS. Differences in the standards are generally explained by the health effects studies considered during the standard-setting process and the interpretation of the studies. In addition, the CAAQS incorporate a margin of safety to protect sensitive individuals.

The CCAA requires that all local air districts in the State endeavor to attain and maintain the CAAQS by the earliest date practical. It specifies that local air districts should focus particular attention on reducing the emissions from transportation and areawide emission sources, and it provides air districts with the authority to regulate indirect emission sources.

CARB regulates emission of criteria air pollutants through several programs, regulations, and plans. The 2022 State SIP Strategy (2022 SIP) serves as compilation document of all actions taken by CARB and local air districts to further the attainment of the NAAQS. Pertinent regulations to the project included in the 2022 SIP include, but are not limited to, the Advanced Clean Cars II Program, Advanced Clean Fleets, and Zero-Emissions Trucks Measure, which all serve to electrify the transportation sector through sales requirements for benchmark years (CARB 2022).

Toxic Air Contaminants

TACs in California are regulated primarily through the Tanner Air Toxics Act (Assembly Bill [AB] 1807, Chapter 1047, Statutes of 1983) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588, Chapter 1252, Statutes of 1987). AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. Research, public participation, and scientific peer review are required before CARB can designate a substance as a TAC. To date, CARB has identified more than 21 TACs and adopted EPA's list of HAPs as TACs. Most recently, particulate matter (PM) exhaust from diesel engines (diesel PM) was added to CARB's list of TACs.

After a TAC is identified, CARB then adopts an airborne toxics control measure for sources that emit that particular TAC. If a safe threshold exists for a substance at which there is no toxic effect, the control measure must reduce exposure below that threshold. If no safe threshold exists, the measure must incorporate best available control technology for toxics to minimize emissions.

The Hot Spots Act requires that existing facilities that emit toxic substances above a specified level prepare an inventory of toxic emissions, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures.

AB 617 of 2017 (California Health and Safety Code Section 39607.1) aims to help protect air quality and public health in communities around stationary sources of pollution including facilities subject to the State's cap-and-trade program for GHG emissions. AB 617 imposes a new State-mandated local program to address non-vehicular sources (e.g., refineries, manufacturing facilities) of criteria air pollutants and TACs. AB 617 requires CARB to identify high-pollutant areas and directs air districts to focus air quality improvement efforts through adoption of community emission reduction programs within these identified areas. Currently, air districts review individual sources and impose emissions limits on emitters based on best available control technology, pollutant type, and proximity to nearby existing land uses. AB 617 addresses the cumulative and additive nature of air pollutant health effects by requiring community-wide air quality assessment and emission reduction planning.

CARB has adopted diesel exhaust control measures and more stringent emissions standards for various transportation-related mobile sources of emissions, including transit buses, and off-road diesel equipment (e.g., tractors, generators). Over time, the replacement of older vehicles will result in a vehicle fleet that produces substantially lower levels of

TACs than under current conditions. Mobile-source emissions of TACs (e.g., benzene, 1-3-butadiene, diesel PM) have been reduced significantly over the last decade and will be reduced further in California through a progression of regulatory measures (e.g., Low Emission Vehicle/Clean Fuels and Phase II reformulated gasoline regulations) and control technologies. With implementation of CARB's Risk Reduction Plan and other regulatory programs, it is estimated that emissions of diesel PM will be less than half of those in 2010 by 2035 (CARB 2020). Adopted regulations are also expected to continue to reduce formaldehyde emissions emitted by cars and light-duty trucks. As emissions are reduced, it is expected that risks associated with exposure to the emissions will also be reduced.

LOCAL

Sacramento Metropolitan Air Quality Management District

Criteria Air Pollutants

SMAQMD is the primary agency responsible for planning to meet NAAQS and CAAQS in Sacramento County. SMAQMD works with other local air districts in the Sacramento region to maintain the region's portion of the SIP for ozone. The SIP is a compilation of plans and regulations that govern how the region and State will comply with the CAA requirements to attain and maintain the NAAQS for ozone. The Sacramento Region has been designated as a "moderate" 2015 8-hour ozone nonattainment area with an extended attainment deadline of June 15, 2019 (EPA 2020a). The 2018 Sacramento Regional 2008 8-Hour Ozone Attainment and Further Reasonable Progress Plan was approved by CARB on November 16, 2017. The previous 2013 Update to the 8-Hour Ozone Attainment and Reasonable Further Progress Plan was approved and promulgated by EPA for the 1997 8-Hour Ozone Standard. EPA has not released a notice of approval and promulgation of the 2017 SIP (CARB 2017).

SMAQMD has developed a set of guidelines for use by lead agencies when preparing environmental documents. The guidelines contain thresholds of significance for criteria pollutants and TACs, and also make recommendations for conducting air quality analyses. After SMAQMD guidelines have been consulted and the air quality impacts of a project have been assessed, the lead agency's analysis undergoes a review by SMAQMD. SMAQMD submits comments and suggestions to the lead agency for incorporation into the environmental document.

All projects are subject to adopted SMAQMD rules and regulations in effect at the time of construction. Specific rules relevant to the construction of future development under the Project may include the following:

- ▶ **Rule 201: General Permit Requirements.** Any project that includes the use of equipment capable of releasing emissions to the atmosphere may be required to obtain permit(s) from SMAQMD before equipment operation. The Applicant, developer, or operator of a project that includes an emergency generator, boiler, or heater should contact SMAQMD early to determine whether a permit is required, and to begin the permit application process. Portable construction equipment (e.g., generators, compressors, pile drivers, lighting equipment) with an internal combustion engine greater than 50 horsepower must have a SMAQMD permit or CARB portable equipment registration.
- ▶ **Rule 202: New Source Review.** The purpose of this rule is to provide for the issuance of authorities to construct and permits to operate at new and modified stationary air pollution sources and to provide mechanisms, including emission offsets, by which authorities to construct such sources may be granted without interfering with the attainment or maintenance of ambient air quality standards.
- ▶ **Rule 207: Federal Operating Permit.** The purpose this rule is to establish an operating permitting system consistent with the requirements of Title V of the United States Code and pursuant to 40 FR Part 70. Stationary sources subject to the requirements of this rule are also required to comply with any other applicable federal, state, or SMAQMD orders, rules and regulations, including requirements pertaining to prevention of significant deterioration pursuant to Rule 203, requirements to obtain an authority to construct pursuant to Rule 201, or applicable requirements under SMAQMD's new source review rule in the SIP.
- ▶ **Rule 402: Nuisance.** A person shall not discharge from any source whatsoever such quantities of air contaminants or other materials which cause injury, detriment, nuisance or annoyance to any considerable number of persons

or the public, or which endanger the comfort, repose, health or safety of any such persons or the public, or which cause or have natural tendency to cause injury or damage to business or property.

- ▶ **Rule 403: Fugitive Dust.** The developer or contractor is required to control dust emissions from earthmoving activities or any other construction activity to prevent airborne dust from leaving the project site. Fugitive dust controls include the following:
 - Water all exposed surfaces two times daily.
 - Cover or maintain at least two feet of free board on haul trucks transporting soil, sand, or other loose material on the site.
 - Use wet power vacuum street sweepers to remove any visible trackout mud or dirt onto adjacent public roads at least once a day.
 - Limit vehicle speeds on unpaved roads to 15 miles per hour.
 - All roadways, driveways, sidewalks, parking lots to be paved should be completed as soon as possible. In addition, building pads should be laid as soon as possible after grading unless seeding or soil binders are used.
 - Minimize idling time either by shutting equipment off when not in use or reducing the time of idling to 5 minutes.
 - Maintain all construction equipment in proper working condition according to manufacturer's specifications.
- ▶ **Rule 442: Architectural Coatings.** The purpose of this rule is to limit the emissions of volatile organic compounds from the use of architectural coatings supplied, sold, offered for sale, applied, solicited for application, or manufactured for use within Sacramento County.
- ▶ **Rule 902: Asbestos.** The developer or contractor is required to notify SMAQMD of any regulated renovation or demolition activity. Rule 902 contains specific requirements for surveying, notification, removal, and disposal of material containing asbestos.

In addition, if modeled construction-generated emissions for a project are not reduced to levels below SMAQMD's mass emission threshold (of 85 pounds per day [lb/day] for nitrogen oxide [NO_x], 80 lb/day or 13.2 tons per year (tpy) for PM₁₀, and 82 lb/day or 15 tpy for PM_{2.5}) after the standard construction mitigation is applied, then SMAQMD requires an offsite construction mitigation fee to purchase offsite emissions reductions. Such purchases are made through SMAQMD's Heavy Duty Incentive Program, through which select owners of heavy-duty equipment in Sacramento County can repower or retrofit their old engines with cleaner engines or technologies (SMAQMD 2019).

As discussed in greater detail under the headings, "Thresholds of Significance," and "Methodology," the Thresholds of Significance have been developed in consideration of long-term regional air quality planning. Projects that are found to emit emissions in exceedance of these bright-line thresholds would generate a cumulatively considerable contribution of regional air pollution which could obstruct the region's attainment of the NAAQS and/or CAAQS, or cause a localized exceedance of these concentration-based standards within the SVAB. Conversely, projects that emit levels of air pollution below these thresholds would not affect the SVAB's ability to attain the NAAQS and/or CAAQS.

Also discussed in greater detail under the heading, "Methodology," SMAQMD has released several versions of guidance in response to the California Supreme Court Case *Sierra Club v. County of Fresno* (2018) 6 Cal.App.5th 503 (herein referred to as the Friant Ranch Decision). The Final Guidance, released in October 2020, is discussed in greater detail under the heading, "Methodology."

Toxic Air Contaminants

At the local level, air districts may adopt and enforce CARB control measures for TACs. Under SMAQMD Rule 201 ("General Permit Requirements"), Rule 202 ("New Source Review"), and Rule 207 ("Federal Operating Permit"), all sources that possess the potential to emit TACs are required to obtain permits from SMAQMD. Permits may be granted to these operations if they are constructed and operated in accordance with applicable regulations, including New Source Review standards and air toxics control measures. SMAQMD limits emissions and public exposure to TACs through a number of programs. SMAQMD prioritizes TAC-emitting stationary sources based on the quantity

and toxicity of the TAC emissions and the proximity of the facilities to sensitive receptors. Sensitive receptors are people, or facilities that generally house people (e.g., schools, hospitals, residences), that may experience adverse effects from unhealthful concentrations of air pollutants.

Odors

Although offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable stress among the public and often generating citizen complaints to local governments and SMAQMD. SMAQMD's Rule 402 ("Nuisance") regulates odors.

City of Elk Grove General Plan

The following policies in the Elk Grove General Plan are relevant to the analysis of air quality effects (City of Elk Grove 2019).

- ▶ **Policy H-2-3:** Support energy-conserving programs in the production and rehabilitation of affordable housing to reduce household energy costs, improve air quality, and mitigate potential impacts of climate change in the region.
- ▶ **Policy NR-4-1:** Require all new development projects which have the potential to result in substantial air quality impacts to incorporate design, and/or operational features that result in a reduction in emissions equal to 15 percent compared to an "unmitigated baseline project." An unmitigated baseline project is a development project which is built and/or operated without the implementation of trip reduction, energy conservation, or similar features, including any such features which may be required by the Zoning Code or other applicable codes.
- ▶ **Policy NR-4-3:** Implement and support programs that reduce mobile source emissions.
- ▶ **Policy NR-4-4:** Promote pedestrian/bicycle access and circulation to encourage residents to use alternative modes of transportation in order to minimize direct and indirect emissions of air contaminants.
- ▶ **Policy NR-4-5:** Emphasize demand management strategies that seek to reduce single-occupant vehicle use in order to achieve State and federal air quality plan objectives.
- ▶ **Policy NR-4-8:** Require that development projects incorporate best management practices during construction activities to reduce emissions of criteria pollutants.
- ▶ **Policy NR-5-2:** Improve the health and sustainability of the community through improved regional air quality and reduction of greenhouse gas emissions that contribute to climate change.
- ▶ **Policy N-1-7:** The standards outlined in Table 8-4 shall not apply to transportation- and City infrastructure-related construction activities as long as construction occurs between the hours of 7 a.m. and 7 p.m., Monday through Friday, and 8 a.m. and 5 p.m. on weekends and federally recognized holidays. Work may occur beyond these time frames for construction safety or because of existing congestion that makes completing the work during these time frames infeasible.

City of Elk Grove Municipal Code

Elk Grove Municipal Code (EGMC) Chapter 16.07 provides permitting guidance for electric vehicle (EV) charging stations. Municipal Code Sections 16.07.200 through 16.07.500 summarize the streamlined permitting process for installation of EV charging stations, including provisions pertaining to the completion of a technical review checklist that ensures that installation of an EV charging station would not result in any adverse environmental or health effects. As stated in Municipal Code Section 16.07.400, "the intent of this chapter [is] to encourage the installation of electric vehicle charging stations by removing obstacles to permitting for charging stations so long as the action does not supersede the Building Official's authority to address higher priority, life-safety situations."

EGMC Section 23.58.120 requires one "EV ready" parking space for all new one-family and two-family dwelling units. This section also implements the requirements of Part 6 of the 2022 Title 24 California Building Code (CalGreen Code) for multi-family residential units and non-residential land uses.

EGMC 6.32 details the City's noise standards, including allowed hours for construction. Consistent with General Plan Policy Noise Policy NO-1-7, EGMC Section 6.32.100 limits construction activities within the proximity of sensitive receptors to 7 a.m. to 7 p.m., thus minimizing exposure of air pollution to nearby receptors. Monday through Friday and 8 a.m. and 5 p.m.

on weekends and federally recognized holidays. Section 6.32.100 states that construction activities not located near residential uses may be allowed to occur between 6 a.m. and 8 p.m. Also, when an unforeseen or unavoidable condition occurs during a construction project and the nature of the project necessitates that work in progress be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work after 7 p.m. and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner.

EGMC 23.60.050 directs development to comply with the relevant rules and regulations pertaining to odors and particulate matter overseen by SMAQMD. EGMC 23.60.050 also directs sources of odors to be modified to prevent the release of noxious odorous emissions, with the exception of agricultural operations.

3.2.2 Environmental Setting

Elk Grove is located in the Sacramento Valley Air Basin (SVAB). The SVAB includes all of Butte, Colusa, Glenn, Sacramento, Shasta, Sutter, Tehama, Yolo, and Yuba counties; the western portion of Placer County; and the eastern portion of Solano County. The ambient concentrations of air pollutants are determined by the amount of emissions released by the sources of air pollutants and the atmosphere's ability to transport and dilute such emissions. Natural factors that affect transport and dilution include terrain, wind, atmospheric stability, and sunlight. Therefore, existing air quality conditions in the area are determined by such natural factors as topography, meteorology, and climate, in addition to the amount of emissions released by existing air pollutant sources, as discussed separately below.

CLIMATE, METEOROLOGY, AND TOPOGRAPHY

The SVAB is a relatively flat area bordered by the north Coast Ranges to the west and the northern Sierra Nevada to the east. Air flows into the SVAB through the Carquinez Strait, the only breach in the western mountain barrier, and moves across the Sacramento River–San Joaquin River Delta (Delta) from the San Francisco Bay area.

The Mediterranean climate type of the SVAB is characterized by hot, dry summers and cool, rainy winters. During the summer, daily temperatures range from 50 degrees Fahrenheit (°F) to more than 100°F. The inland location and surrounding mountains shelter the area from much of the ocean breezes that keep the coastal regions moderate in temperature. Most precipitation in the area results from air masses that move in from the Pacific Ocean, usually from the west or northwest, during the winter months. More than half the total annual precipitation falls during the winter rainy season (November through February); the average winter temperature is a moderate 49°F. Also characteristic of SVAB winters are periods of dense and persistent low-level fog, which are most prevalent between storms. The prevailing winds are moderate in speed and vary from moisture-laden breezes from the south to dry land flows from the north.

The mountains surrounding the SVAB create a barrier to airflow, which leads to the entrapment of air pollutants when meteorological conditions are unfavorable for transport and dilution. The highest frequency of poor air movement occurs in the fall and winter when high-pressure cells are often present over the SVAB. The lack of surface wind during these periods, combined with the reduced vertical flow caused by a decline in surface heating, reduces the influx of air and leads to the concentration of air pollutants under stable meteorological conditions. Surface concentrations of air pollutant emissions are highest when these conditions occur in combination with agricultural burning activities or with temperature inversions, which hamper dispersion by creating a ceiling over the area and trapping air pollutants near the ground.

May through October is ozone season in the SVAB. This period is characterized by poor air movement in the mornings with the arrival of the Delta sea breeze from the southwest in the afternoons. In addition, longer daylight hours provide a plentiful amount of sunlight to fuel photochemical reactions between reactive organic gas (ROG) and NO_x, which result in ozone formation. Typically, the Delta breeze transports air pollutants northward out of the SVAB; however, a phenomenon known as the Schultz Eddy prevents this from occurring during approximately half of the time from July to September. The Schultz Eddy phenomenon causes the wind to shift southward and blow air

pollutants back into the SVAB. This phenomenon exacerbates the concentration of air pollutant emissions in the area and contributes to the area violating the ambient air quality standards.

The local meteorology of the City and surrounding area is represented by measurements recorded at the Western Regional Climate Center Sacramento Executive Airport Station. The normal annual precipitation is approximately 17.24 inches. January temperatures range from a normal minimum of 37.8°F to a normal maximum of 53.5°F. July temperatures range from a normal minimum of 58.2°F to a normal maximum of 92.7°F (WRCC 2016). The prevailing wind direction is from the south (WRCC 2002).

CRITERIA AIR POLLUTANTS

Concentrations of criteria air pollutants are used to indicate the quality of the ambient air. Ozone, PM₁₀, and PM_{2.5} are the criteria air pollutants of primary concern in this analysis due to their nonattainment status with respect to the applicable NAAQS and/or CAAQS in the SVAB. Brief descriptions of these key criteria air pollutants in the SVAB and their health effects are provided below. The attainment statuses of all criteria air pollutants with respect to the NAAQS and the CAAQS in Sacramento County are shown in Table 3.2-2.

Table 3.2-2 Attainment Status Designations for Sacramento County

Pollutant	National Ambient Air Quality Standard	California Ambient Air Quality Standard
Ozone	Attainment (1-hour) ¹	Nonattainment (1-hour) Classification-Serious ²
	Nonattainment (8-hour) ³ Classification=Moderate	Nonattainment (8-hour) Nonattainment (8-hour)
Respirable particulate matter (PM ₁₀)	Attainment (24-hour)	Nonattainment (24-hour)
	Attainment (24-hour)	Nonattainment (Annual)
Fine particulate matter (PM _{2.5})	Nonattainment (24-hour)	(No State Standard for 24-Hour)
	Attainment (Annual)	Attainment (Annual)
Carbon monoxide (CO)	Attainment (1-hour)	Attainment (1-hour)
	Attainment (8-hour)	Attainment (8-hour)
Nitrogen dioxide (NO ₂)	Unclassified/Attainment (1-hour)	Attainment (1-hour)
	Unclassified/Attainment (Annual)	Attainment (Annual)
Sulfur dioxide (SO ₂) ⁴	(Attainment Pending) (1-Hour)	Attainment (1-hour)
	(Attainment Pending) (1-Hour)	Attainment (24-hour)
Lead (Particulate)	Attainment (3-month rolling avg.)	Attainment (30 day average)
Hydrogen Sulfide	No Federal Standard	Unclassified (1-hour)
Sulfates		Attainment (24-hour)
Visibly Reducing Particles		Unclassified (8-hour)
Vinyl Chloride		Unclassified (24-hour)

Notes: NAAQS = national ambient air quality standards; CAAQS = California ambient air quality standards

¹ Air Quality meets federal 1-hour Ozone standard (77 FR 64036). EPA revoked this standard, but some associated requirements still apply. SMAQMD attained the standard in 2009. SMAQMD has requested EPA recognize attainment to fulfill the requirements.

² Per Health and Safety Code Section 40921.5(c), the classification is based on 1989–1991 data, and therefore does not change.

³ 2015 Standard.

⁴ 2010 Standard.

Source: CARB 2019b.

Ozone

Ground-level ozone is not emitted directly into the air but is created by chemical reactions between ROG and NO_x. This happens when pollutants emitted by cars, power plants, industrial boilers, refineries, chemical plants, and other sources chemically react in the presence of sunlight. Ozone at ground level is a harmful air pollutant because of its effects on people and the environment and is the main ingredient in smog (EPA 2020b).

Acute health effects of ozone exposure include increased respiratory and pulmonary resistance, cough, pain, shortness of breath, and lung inflammation. Chronic health effects include permeability of respiratory epithelia and possibility of permanent lung impairment (EPA 2020b). Emissions of the ozone precursors ROG and NO_x have decreased over the past two decades because of more stringent motor vehicle standards and cleaner burning fuels (CARB 2013).

Nitrogen Dioxide

NO₂ is a brownish, highly reactive gas that is present in all urban environments. The major human-made sources of NO₂ are combustion devices, such as boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines. Combustion devices emit primarily nitric oxide (NO), which reacts through oxidation in the atmosphere to form NO₂. The combined emissions of NO and NO₂ are referred to as NO_x and are reported as equivalent NO₂. Because NO₂ is formed and depleted by reactions associated with photochemical smog (ozone), the NO₂ concentration in a particular geographical area may not be representative of the local sources of NO_x emissions (EPA 2020b).

Acute health effects of exposure to NO_x includes coughing, difficulty breathing, vomiting, headache, eye irritation, chemical pneumonitis, or pulmonary edema, breathing abnormalities, cough, cyanosis, chest pain, rapid heartbeat, and death. Chronic health effects include chronic bronchitis and decreased lung function (EPA 2020b).

Particulate Matter

PM₁₀ is emitted directly into the air, and includes fugitive dust, soot, and smoke from mobile and stationary sources, construction operations, fires and natural windblown dust, and particulate matter formed in the atmosphere by reaction of gaseous precursors (CARB 2013). PM_{2.5} includes a subgroup of smaller particles that have an aerodynamic diameter of 2.5 micrometers or less. PM₁₀ emissions in the SVAB are dominated by emissions from area sources, primarily fugitive dust from vehicle travel on unpaved and paved roads, farming operations, construction and demolition, and particles from residential fuel combustion. Direct emissions of PM₁₀ are projected to remain relatively constant through 2035. Direct emissions of PM_{2.5} have steadily declined in the SVAB between 2000 and 2010 and are projected to increase slightly through 2035. Emissions of PM_{2.5} in the SVAB are dominated by the same sources as emissions of PM₁₀ (CARB 2013).

Acute health effects of exposure to PM₁₀ include breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular diseases including asthma and chronic obstructive pulmonary disease, and premature death. Chronic health effects include alternations to the immune system and carcinogenesis (EPA 2020b). For PM_{2.5}, short-term exposures (up to 24-hours duration) have been associated with premature mortality, increased hospital admissions for heart or lung causes, acute and chronic bronchitis, asthma attacks, emergency room visits, respiratory symptoms, and restricted activity days. These adverse health effects have been reported primarily in infants, children, and older adults with preexisting heart or lung diseases. Long-term (months to years) exposure to PM_{2.5} has been linked to premature death, particularly in people who have chronic heart or lung diseases, and reduced lung function growth in children.

TOXIC AIR CONTAMINANTS

According to the 2013 Edition of the California Almanac of Emissions and Air Quality, health risks from TACs can largely be attributed to relatively few compounds, the most important being diesel PM (CARB 2013:5-2 to 5-4). Diesel PM differs from other TACs in that it is not a single substance, but rather a complex mixture of hundreds of substances. Although diesel PM 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 emissions control system is being used. Unlike the other TACs, no ambient monitoring data are available for diesel PM because no routine measurement method currently exists. The TACs for which data are available that pose the greatest existing ambient risk in California are benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent

chromium, para-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene. Diesel PM poses the greatest health risk among the 10 TACs mentioned. Overall, Statewide emissions of diesel PM are forecasted to decline by 71 percent between 2000 and 2035 (CARB 2013:3-8).

ODORS

Odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache).

With respect to odors, the human nose is the sole sensing device. The ability to detect odors varies considerably among the population and overall is quite subjective. Some individuals can smell very minute quantities of specific substances; others may not have the same sensitivity but may have sensitivities to odors of other substances. In addition, people may have different reactions to the same odor; an odor that is offensive to one person may be perfectly acceptable to another (e.g., fast food restaurant). It is important to also note that an unfamiliar odor is more easily detected and is more likely to cause complaints than a familiar one. This is because of the phenomenon known as odor fatigue, in which a person can become desensitized to almost any odor and recognition only occurs with an alteration in the intensity.

Odor sources of concern include wastewater treatment plants, sanitary landfills, composting facilities, recycling facilities, petroleum refineries, chemical manufacturing plants, painting operations, rendering plants, food packaging plants, and cannabis (SMAQMD 2016). The Sacramento Regional Wastewater Treatment Plant is located directly north of the Elk Grove Planning Area.

SENSITIVE RECEPTORS

Sensitive receptors are generally considered to include those land uses where exposure to pollutants could result in health-related risks to sensitive individuals, such as children or the elderly. Residential dwellings, schools, hospitals, playgrounds, and similar facilities are of primary concern because of the presence of individuals particularly sensitive to pollutants and/or the potential for increased and prolonged exposure of individuals to pollutants. The Elk Grove Planning Area encompasses numerous sensitive receptors including, but not limited to, the schools within the Elk Grove Unified School District, area medical facilities, and the City's residences.

3.2.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

The analysis in this section is consistent with the recommendations of SMAQMD's Guide to Air Quality Assessment in Sacramento County, Chapter 9, "Program-Level Analysis of General Plans and Area Plans" (SMAQMD 2020). The analysis primarily focuses on the extent to which the Project would conflict with air quality planning efforts. The net increase in criteria air pollutant (PM₁₀ and PM_{2.5}) and ozone precursor (ROG and NO_x) emissions (i.e., pollutants for which the region is in nonattainment of ambient air quality standards) generated by the Project were estimated based on predicted vehicle miles traveled (VMT) and maximum development under the Project that are identified in Table 2-1 of Chapter 2, "Project Description," in order to address the largest extent of potential air quality impacts.

Construction and operational emissions were estimated based on the net change in land uses facilitated by the Project between the General Plan EIR and buildout of the Project. Construction emissions account for estimated changes in acreage of on-site and off-site improvements and were estimated consistent with SMAQMD's Program-Level Analysis guidance, which directs lead agencies to estimate construction emissions using guidance contained in Chapter 3, "Construction-Generated Criteria Air Pollutant and Ozone Precursor Emissions." For this analysis, a steady rate of construction was assumed.

As indicated in Chapter 2, "Project Description," the Project would include new land use designations that include transect-based land use designations to establish the pattern and intensity of development in the LEA Planning Area and land use amendments in the Old Town Policy Area. Development projected in the Old Town Policy Area from land use amendments, buildout of the LEA Community Plan, and an increase in the maximum residential density from 40 to 80 dwelling units per acre for the proposed Village Center Mixed Use land use designation would increase buildout projections for dwelling units and population. Based on the number of new dwelling units projected as part of the Project, full buildout of the General Plan would result in an additional estimated 1,851 new dwelling units and 5,979 more persons in the City as compared to the existing General Plan.

There is uncertainty surrounding the schedule and exact location of where Project development would occur, therefore, construction emissions were modeled using the assumptions that development would occur gradually over the horizon of the General Plan, which for purposes of this air quality analysis is assumed to be 2040 (note, it is most likely that buildout of the General Plan, both existing and proposed, would occur after 2050; the more conservative 2040 was used to model a worst-case scenario). The acreages and dwelling units provided by the City were utilized. Due to the programmatic nature of this analysis, California Emissions Estimator Model (CalEEMod) default values for trip generation, heavy-duty equipment type, and construction phasing were used.

Both short-term construction emissions and long-term operational emissions were calculated using the CalEEMod, version 2020.4.0, computer program. This model was developed in coordination with the South Coast Air Quality Management District and is the most current emissions model approved for use in California by various air districts, including SMAQMD. Appendix D includes outputs from the model runs for both construction and operational activity associated with future Project buildout conditions. With respect to operational emissions, mobile source emissions were estimated using Project-estimated annual VMT derived from the traffic study prepared for the Project (see Section 3.9, "Transportation"). Energy- and area-sourced emissions were estimated using CalEEMod default values. Project emissions were compared to anticipated air pollutant emissions associated with buildout under the General Plan as disclosed in the General Plan EIR.

Since the preparation of the General Plan EIR, the California Supreme Court issued a ruling in Friant Ranch Decision regarding an air quality analysis prepared for the Friant Ranch Development Project EIR in December 2018. The Court asserted that the air quality analysis performed for the project did not adequately explain the nature and magnitude of long-term air quality impacts from emissions of criteria pollutants and ozone precursors. The Court held that the EIR lacked "sufficient detail to enable those who did not participate in its preparation to understand and consider meaningfully the issues the proposed project raises."

The Court expressed the need to determine whether there was a connection between the significant project emissions and the human health impacts associated with such emissions. According to the Court, one pathway would be to estimate the level of ozone that would be produced from the project, measure to what extent human health would be affected, and describe where daily exceedances of the NAAQS and CAAQS would occur in an air basin. This detailed approach to modeling is founded on the assumption that such an exercise would produce estimates of meaningful accuracy.

In response to this court case, a discussion of the development of air quality thresholds of significance for criteria pollutants and ozone precursors and their connection to attainment of the NAAQS and CAAQS, as well as a discussion of the applicability of regional air pollution modeling is provided below.

Typically, air districts develop thresholds of significance for CEQA evaluation (summarized below) in consideration of maintaining or achieving attainment under the NAAQS and CAAQS for the geographical area they oversee (long-term regional air quality planning). These thresholds are tied to an air district in nonattainment's SIP for criteria air pollutants within a cumulative context. These SIPs are submitted to CARB and contain an inventory of existing ambient air pollutant concentrations and, if applicable, a suite of measures to reduce air pollution and a projected date of achieving attainment under the NAAQS and CAAQS. Air quality plans identify a budget that accounts for new, future sources of pollution from land use development and stationary sources. These budgets inform the development of CEQA thresholds of significance and represent an allowable level of pollution that, when emitted in volumes below such thresholds, would not conflict with an air district's long-term regional air quality planning or attainment date.

As discussed previously, the NAAQS and CAAQS represent concentrations of criteria air pollutants protective of human health and are substantiated by extensive scientific evidence. EPA and CARB recognize that ambient air quality below these concentrations would not cause adverse health impacts to exposed receptors. In connecting an air district's (e.g., SMAQMD, San Joaquin Valley Air Pollution Control District [SJVAPCD]) thresholds of significance to its anticipated date of attainment, projects that demonstrate levels of construction and/or operational emissions below the applicable thresholds would be consistent with long-term regional planning efforts. These projects would not result in emissions that would conflict with an area achieving future attainment status under the NAAQS and CAAQS as outlined by an applicable air quality plan.

Similarly, projects that demonstrate emissions levels in exceedance of an applicable threshold could contribute to the continued nonattainment designation of a region or potentially degrade a region from attainment to nonattainment resulting in acute or chronic respiratory and cardiovascular illness associated with exposure to concentrations of criteria air pollutants above what EPA and CARB consider safe. Symptoms can include coughing, difficulty breathing, chest pain, eye and throat irritation and, in extreme cases, death caused by exacerbation of existing respiratory and cardiovascular disease, cancer, and impaired immune and lung function.

However, the exact location and magnitude of specific health impacts that could occur as a result of project-level construction- or operation-related emissions is infeasible to model with a high degree of accuracy. While dispersion modeling of project-generated PM may be conducted to evaluate resulting ground-level concentrations, the secondary formation of PM is similar to the complexity of ozone formation, and localized impacts of directly emitted PM do not always equate to local PM concentrations due to the transport of emissions. Ozone is a secondary pollutant formed from the oxidation of ROG and NO_x in the presence of sunlight. Rates of ozone formation are a function of a variety of complex physical factors, including topography, building influences on air flow (e.g., downwash), ROG and NO_x concentration ratios, multiple meteorological conditions, and sunlight exposure (Seinfeld and Pandis 1996:298). For example, rates of ozone formation are highest in elevated temperatures and when the ratio of ROG to NO_x is 5.5:1. When temperatures are lower and this ratio shifts, rates of ozone formation are stunted (Seinfeld and Pandis 1996:299–300). In addition, ROG emissions are composed of many compounds that have different levels of reactivity leading to ozone formation. Methane, for instance, is the most common ROG compound, yet it has one of the lowest reactivity potentials (Seinfeld and Pandis 1996:309, 312). Moreover, some groups may develop more severe health impacts than others. For instance, infants, children, the elderly, and individuals with preexisting medical conditions are more susceptible to developing illnesses from exposure to air pollutants.

Notably, during the litigation process in the Friant Ranch case, SJVACPD submitted an amicus curiae brief that provided scientific context and expert opinion regarding the feasibility of performing regional dispersion modeling for ozone. While SJVAPCD does not regulate air pollution in the SVAB, SJVAPCD has the technical and scientific expertise to comment on the feasibility of performing photochemical regional dispersion modeling for project-level CEQA analyses. In the brief, SJVAPCD states that "CEQA does not require an EIR to correlate a project's air quality emissions to specific health impacts, because such an analysis is not reasonably feasible." SJVAPCD reiterates that (SJVAPCD 2015):

the Air District has based its thresholds of significance for CEQA purposes on the levels that scientific and factual data demonstrate that the [SVAB] can accommodate without affecting the attainment date for the NAAQS. The Air District has tied its CEQA significance thresholds to the level at which stationary pollution sources must 'offset' their emissions...Thus the CEQA air quality analysis for criteria air pollutants is not really localized, project-level impact analysis but one of regional 'cumulative impacts.

The brief asserts that these CEQA thresholds of significance are not intended to be applied such that any localized human health impact associated with a project's emissions could be identified. Rather, CEQA thresholds of significance are used to determine whether a project's emissions would obstruct a region's capability of attaining the NAAQS and CAAQS according to the emissions inventory prepared in a SIP, which is then submitted and reviewed by CARB and EPA. This sentiment is corroborated in an additional brief submitted by the South Coast Air Quality Management District (SCAQMD 2015).

SMAQMD has developed Final Guidance based on extensive air quality impact and health effects modeling that yields estimates of incremental health effects as a result of a proposed Project's emissions of criteria air pollutants

and ozone precursors. Based on the magnitude of the Project, the Strategic Area Project Health Effects Tool contained in the guidance was used to evaluate the Project's incremental health effects. The Strategy Area Project IV, "South Sacramento," the closest Strategic Area to the City of Elk Grove, was used for the model. Based on the impact determinations summarized below, the Project's associated adverse health outcomes were only estimated for operational emissions.

Carbon monoxide (CO) impacts were assessed qualitatively, using the results from the Project-specific traffic study. The level of health risk from exposure to construction- and operation-related TAC emissions was assessed qualitatively. This assessment was based on the proximity of TAC-generating construction activity to off-site sensitive receptors, the number and types of diesel-powered construction equipment being used, and the duration of potential TAC exposure. An operational-related TAC exposure assessment was based on the project siting any new sources of TAC-generated activities to off-site receptors.

THRESHOLDS OF SIGNIFICANCE

The impact analysis provided below is based on the following CEQA Guidelines Appendix G thresholds of significance. The Project is considered to have a significant effect on the environment if it would:

- ▶ conflict with or obstruct implementation of the applicable air quality plan,
- ▶ violate any air quality standard or contribute substantially to an existing or projected air quality violation,
- ▶ 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),
- ▶ expose sensitive receptors to substantial pollutant concentrations, and/or
- ▶ create objectionable odors affecting a substantial number of people

For individual and subsequent projects developed under the Project, the significance criteria used to evaluate project impacts on air quality under CEQA are based on Appendix G of the State CEQA Guidelines and thresholds of significance adopted by SMAQMD. SMAQMD's air quality thresholds of significance are tied to achieving or maintaining attainment designations with the NAAQS and CAAQS, which are scientifically substantiated, numerical concentrations of criteria air pollutants considered to be protective of human health. Implementing the Project would have a significant impact related to air quality such that human health would be adversely affected if it would (SMAQMD 2020):

- ▶ cause construction-generated criteria air pollutant or precursor emissions to exceed the SMAQMD-recommended thresholds of 85 lb/day for NO_x, 80 lb/day or 13.2 tpy for PM₁₀, and 82 lb/day or 15 tpy for PM_{2.5} once SMAQMD's Basic Construction Emission Control Practices have been implemented;
- ▶ result in a net increase in long-term operational criteria air pollutant or precursor emissions that exceed the SMAQMD-recommended thresholds of 65 lb/day for ROG and NO_x, 80 lb/day and 13.2 tpy for PM₁₀, and 82 lb/day or 15 tpy for PM_{2.5};
- ▶ result in long-term operational local mobile-source CO emissions that would violate or contribute substantially to concentrations that exceed the 1-hour CAAQS of 20 parts per million (ppm) or the 8-hour CAAQS of 9 ppm;
- ▶ result in an incremental increase in cancer risk (i.e., the risk of contracting cancer) greater than 10 in one million at any off-site receptor and/or a noncarcinogenic hazard index of 1.0 or greater; and/or
- ▶ result in other emissions (such as those leading to odors) adversely affecting a substantial number of people.

ISSUES NOT DISCUSSED FURTHER

Odors

The Project would not result in new sources of construction or operational stationary odors as none of the land uses proposed under the Project would be odorous as defined by SMAQMD. Therefore, issues related to stationary odor sources from the Project are dismissed from further consideration. Should a future project within the General Plan Planning Area be a source of odors it would be analyzed as part of that subsequent project's environmental review. To include such analysis here, given the scope of the Project and level of available detail, analysis at this time would be speculative, which is not required under CEQA (State CEQA Guidelines Section 15064[d][3]).

VMT Thresholds

The proposed VMT thresholds are not evaluated further as they apply specifically to the transportation efficiency of land uses and do not involve physical alteration of land use conditions that could result in additional emissions. Therefore, the proposed update to VMT thresholds would not impact air quality as provided in this section, and this topic is not addressed further in this section of the Draft SEIR. Impacts related to GHG emissions from the VMT thresholds are discussed in Section 3.5, "Greenhouse Gas Emissions and Climate Change."

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.2-1: Construction Emissions of Criteria Air Pollutants and Precursors

The General Plan EIR Impact 5.3.1 determined that development and growth under the General Plan could result in short-term construction emissions that could violate or substantially contribute to a violation of the NAAQS and CAAQS for ozone, PM₁₀, and PM_{2.5}. This impact was identified as significant and unavoidable. Implementation of the Project could generate construction emissions of ROG, NO_x, PM₁₀, and PM_{2.5} from demolition, material and equipment delivery trips, worker commute trips, and other miscellaneous activities. However, construction activities and emissions from implementation of the Project would be similar to what was anticipated under the General Plan EIR and the current General Plan land use designations. Subsequent projects would be required to comply with General Plan Policy NR-4-8, which would require that emissions in exceedance of SMAQMD's thresholds of significance be mitigated. Therefore, construction-generated emissions would not result in a new or substantially more severe construction air quality impacts than was addressed in the General Plan EIR. However, pursuant to the previous findings it remains **significant and unavoidable**.

LEA Community Plan

Impact 5.3.1 of the General Plan EIR estimated that under a worst-case construction year, construction of the development and growth under the General Plan could generate approximately 161.3 lb/day of ROG, 378.5 lb/day of NO_x, 235.0 lb/day of PM₁₀, and 64.0 lb/day of PM_{2.5}. The General Plan EIR concluded that this impact was significant and unavoidable.

Construction-related activities would generate emissions of ROG, NO_x, PM₁₀, and PM_{2.5} associated with demolition, off-road equipment, material delivery, worker commute trips, and other miscellaneous activities (e.g., application of architectural coatings). Fugitive dust emissions of PM₁₀ and PM_{2.5} would be associated primarily with demolition and vary as a function of soil silt content, soil moisture, wind speed, and acreage of disturbance. PM₁₀ and PM_{2.5} are also contained in exhaust from off-road equipment and on-road vehicles. Emissions of ozone precursors, ROG and NO_x, would be associated primarily with construction equipment and on-road mobile exhaust. The application of architectural coatings results in off-gas emissions of ROG.

Construction activities were assumed to begin in early 2024 and extend until the end of the growth forecast period (2040). For specific construction assumptions and modeling inputs, refer to Appendix D. Table 3.2-3 summarizes the modeled maximum daily (ROG, NO_x, PM) and annual (PM) emissions from construction activities over an assumed to extend until 2040 from buildout of the Project. The emissions summarized in Table 3.2-3 are reflective all of construction activity that would occur from the Project, including development of the LEA Community Plan Area.

As shown in Table 3.2-3, daily emissions of NO_x could exceed SMAQMD's annual mass emissions thresholds. Emissions of PM₁₀, and PM_{2.5} would also exceed their respective thresholds. SMAQMD's thresholds (in addition to the 2018 Sacramento Regional 2008 8-Hour Ozone Attainment and Further Reasonable Progress Plan) are intended to maintain or achieve attainment designations in the SVAB with respect to the CAAQS and NAAQS. If a project does not exceed SMAQMD's thresholds, it would be determined that a project's contribution of air pollutants would not affect an air basin's maintenance or attainment of the NAAQS and CAAQS, thus would not exacerbate or interfere with the region's ability to attain the health-based standards (SMAQMD 2020). Because the Project's construction emissions of NO_x, PM₁₀, and PM_{2.5} could be above SMAQMD's recommended thresholds, these pollutants could contribute substantially to an existing or projected air quality violation of the NAAQS and CAAQS could occur. This is consistent with the findings of the General Plan EIR as the subsequent development facilitated by the Project would be similar to development assumed in the General Plan EIR and its current land use designations. There is no new significant effect and the air quality impact is not more severe than the impact identified in the General Plan EIR.

Table 3.2-3 Summary of Maximum Emissions of Criteria Air Pollutants and Precursors Associated with Project Construction per Year (2024–2040)

Construction Year	ROG (lb/day) ¹	NO _x (lb/day)	PM ₁₀ (lb/day)	PM ₁₀ (tpy)	PM _{2.5} (lb/day)	PM _{2.5} (tpy)
2024	6	57	252	31	40	4
2025	20	116	157	27	21	4
2026	19	114	53	7	15	2
2027	18	111	53	7	15	2
2028	17	109	53	7	15	2
2029	16	107	53	7	15	2
2030	15	101	53	7	15	2
2031	15	100	53	77	15	2
2032	14	99	53	7	15	2
2033	13	98	53	7	15	2
2034	13	97	53	7	15	2
2035	12	95	53	7	15	2
2036	12	95	53	7	15	2
2037	12	95	53	7	15	2
2038	12	95	53	7	15	2
2039	1	5	<1	<1	<1	<1
2040	37	1	8	1	2	<1
SMAQMD Threshold of Significance	None	85	0	0	0	0

Notes: ROG = reactive organic gases; lb/day = pounds per day; NO_x = oxides of nitrogen; PM₁₀ = respirable particulate matter with aerodynamic diameter of 10 micrometers or less; PM_{2.5} = fine particulate matter with aerodynamic diameter of 2.5 micrometers or less; SMAQMD = Sacramento Metropolitan Air Quality Management District.

¹ Emissions of ROG were adjusted off-model to correct the CalEEMod assumption that all architectural coatings would occur within the final year of construction.

Source: Modeling performed by Ascent in 2022

As identified in the General Plan EIR, construction-generated sources of criteria air pollutants from new development under the Project would be minimized through implementation of General Plan Policy NR-4-8, which includes Standards NR-4.8.a through NR-4.8.d that require implementation of the SMAQMD recommended standard construction mitigation. All projects that would involve construction activities, regardless of the significance determination, are required to implement the SMAQMD Basic Construction Emission Control Practices (Best Management Practices) for controlling fugitive dust at construction sites. SMAQMD Best Management Practices

would be identified in subsequent project site plans and/or improvement plans and implemented during construction (e.g., site watering, equipment idling restrictions, and covering of transported fill). These practices collectively reduce fugitive PM by approximately 54 percent. For projects that would generate maximum daily NO_x emissions exceeding the SMAQMD threshold of significance, SMAQMD recommends implementation of the Enhanced Exhaust Control Practices for off-road construction equipment. The SMAQMD considers implementation of the Enhanced Exhaust Control Practices to achieve a 10 percent reduction for NO_x from off-road construction equipment exhaust when compared to the state fleet average. For projects where emissions still exceed the SMAQMD daily emissions threshold for NO_x and PM after application of the above measures, SMAQMD requires the project applicant to pay into the SMAQMD's construction mitigation fund to offset construction-generated emissions of NO_x and/or PM. Payment into this program allows the air district to offset the contribution of emissions associated with individual construction projects by removing other NO_x or PM generating sources elsewhere in the air basin.

Portions of the LEA Community Plan Area have been previously analyzed in certified CEQA documents for the following projects: Southeast Policy Area Strategic Plan, Laguna Ridge Specific Plan, SouthPoint Policy Area/Sterling Meadows, and Lent Ranch Marketplace Special Planning Area. Mitigation measures from these CEQA documents include requirements related to reducing construction emissions, including fugitive dust. A comprehensive list of mitigation measures from other community plans prior environmental review are included in Appendix G. The Lent Ranch Marketplace SPA EIR does not include any mitigation measures related to construction emissions. Mitigation measures from the Laguna Ridge Specific Plan EIR and Southeast Policy Area Strategic Plan include requirements to water exposed surfaces, limit construction vehicle speeds to 15 miles per hours, wash dirt off construction vehicles and public roads, and cover dirt being transported. These measures are consistent with SMAQMD Rule 403. Elk Grove General Plan Policy NR-4-8 and SMAQMD Rule 403, as described above, contain the same performance standards and are equivalent in effectiveness as mitigation contained in prior environmental documents. Therefore, no additional mitigation or application of previously adopted mitigation measures for the projects identified above is required in the LEA Community Plan Area to address fugitive dust impacts.

To address impacts from NO_x emissions mitigation from the Laguna Ridge Specific Plan requires projects greater than 20 acres in size or that would generate more than 400 pounds per day of NO_x to prepare a plan to reduce NO_x emissions and ensure emissions from all off-road diesel powered equipment used on the Specific Plan area do not exceed 40 percent opacity for more than three minutes in any one hour. The Southeast Policy Area Strategic Plan EIR requires submittal of a comprehensive inventory of all off-road construction equipment and plan to SMAQMD to reduce NO_x emissions. SMAQMD has since revised their construction NO_x emissions thresholds to 85 pounds per day with a screening threshold of projects 35 acres or less. Additionally, in 2019, SMAQMD updated the criteria of its Enhanced On-Site Exhaust Control Measures, which supersede SMAQMD's previous recommendations to reduce exhaust emissions. Development in the LEA Community Plan Area would be subject to General Plan policies and SMAQMD rules contains the same performance standards and is equivalent in effectiveness as mitigation contained in the prior environmental documents. Nevertheless, because SMAQMD has updated the standards established in its CEQA mitigation for minimizing construction exhaust emissions, a new mitigation measure (Mitigation Measure 3.2-1) for the LEA Community Plan construction emissions is identified below.

The General Plan EIR concluded that no additional feasible plan-level mitigation was available beyond compliance with General Plan Policy NR-4-8 and that this impact was significant and unavoidable. Construction-generated emissions from implementation of the Project would not result in a new or substantially more severe construction air quality impacts that was addressed in the General Plan EIR. A new mitigation measure (Mitigation Measure 3.2-1) would be applied to further address LEA Community Plan construction emissions and would reduce NO_x through achieving 10 percent reduction in NO_x emissions through incorporating construction equipment that uses high Tier engines. Additionally, any significant NO_x emissions remaining after this reduction, NO_x emissions could be reduced through SMAQMD's off-site mitigation fund. consistent with current SMAQMD standards, but would not eliminate this impact. This impact would remain **significant and unavoidable**.

General Plan Land Use Designation Amendments

Construction emissions anticipated to occur from the proposed General Plan land use amendments in the Old Town Policy Area are included in the overall construction modeling associated with the Project as presented in Table 3.2-3.

As discussed above, the Project would generate levels of construction emissions that would be like those discussed in the General Plan EIR and could be mitigated through compliance with General Plan Policy NR-4-8. Construction-generated emissions from implementation of the proposed General Plan land use amendments would not result in a new or substantially more severe construction air quality impacts that was addressed in the General Plan EIR. Impacts would remain **significant and unavoidable**.

Grant Line Road Precise Roadway Study

The Precise Study was prepared to analyze potential geometric layouts along Grant Line Road. Buildout of roadway configurations, including all alternatives of the Precise Study are included in the overall construction modeling associated with the Project as presented in Table 3.2-3. As discussed above, Project would generate levels of construction emissions that would be similar to those discussed in the General Plan EIR and could be mitigated through compliance with General Plan Policy NR-4-8. Construction-generated emissions from implementation of the Grant Line Road Precise Roadway Plan would not result in a new or substantially more severe construction air quality impacts that was addressed in the General Plan EIR. Impacts would remain **significant and unavoidable**.

South and West Study Areas

Construction emissions anticipated to occur from the South and West Study Areas are included in the overall construction modeling associated with the Project as presented in Table 3.2-3. As discussed above, the Project would generate levels of construction emissions that would be like those discussed in the General Plan EIR and could be mitigated through compliance with General Plan Policy NR-4-8. Construction-generated emissions from implementation of development in the South and West Study Areas would not result in a new or substantially more severe construction air quality impacts that was addressed in the General Plan EIR. Project impacts would remain **significant and unavoidable**.

Mitigation Measures

Mitigation Measure 3.2-1: Implement the Sacramento Metropolitan Air Quality Management District's Advanced On-site Exhaust Control Measures for the LEA Community Plan Area

Subsequent development in the LEA Community Plan Area shall implement SMAQMD's Enhanced Exhaust Control Practices for NO_x and exhaust PM emissions. Before the issuance of grading and/or building permits, subsequent project applicants shall submit to the City and SMAQMD an initial report of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used 8 hours or more during any portion of the construction project before any grading activities. The initial report shall include the horsepower rating, engine model year, and projected hours of use for each piece of equipment. The subsequent project applicants shall provide the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman. The information shall be submitted at least 4 business days before the use of subject heavy-duty off-road equipment. The report shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs.

Before any grading activities, the subsequent project applicants shall provide a plan for approval by the City and SMAQMD demonstrating that the heavy-duty off-road vehicles (50 horsepower or more) to be used in the construction project, including owned, leased, and subcontractor vehicles, will achieve a subsequent project-wide fleet-average of 10 percent NO_x reduction (depending on available technology and engine Tier) compared to the most recent CARB fleet average. This plan shall be submitted in conjunction with the equipment inventory. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available. If achievement of the aforementioned reductions over the statewide average are deemed infeasible by the City, SMAQMD, or construction contractor, the subsequent project applicants shall ensure the construction fleet meets the lowest fleetwide emissions average possible, through the use of all available on-site emissions reduction measures (e.g., highest tier engines, emission control devices, cleaner burning fuel).

The subsequent project applicants shall submit a final report at the end of the job, phase, or calendar year, as pre-arranged with SMAQMD staff and documented in the approval letter, to demonstrate continued project compliance. If modeled construction-generated emissions of NO_x are not reduced to a level below SMAQMD's thresholds of

significance by the application of the aforementioned mitigation measures, then the project developer must pay a mitigation fee into SMAQMD's off-site mitigation program. By paying the appropriate off-site mitigation fee, construction-generated emissions of NO_x would be reduced to a less-than-significant level. The fee calculation to offset daily NO_x emissions shall be based on the SMAQMD-determined cost to reduce one ton of NO_x applicable at the time (currently \$30,000 per ton in May 2023 but subject to change in future years).

Once initial construction activities are finalized by the subsequent project applicants, and before the issuance of grading and/or building permits, quantification of construction-related emissions shall be verified at the project level. As each subsequent project-level construction phase is finalized throughout the duration of the project buildout, the mitigation fee shall be calculated based on current information, available construction equipment, and proposed construction activities. As construction activities occur over the buildout period, the developer shall work with SMAQMD to continually update mitigation fees based on actual on-the-ground emissions. The final mitigation fees shall be based on the contractor equipment report provided by the developer to SMAQMD and shall reconcile any fee discrepancies due to schedule adjustments and increased or decreased equipment inventories. Equipment inventories and NO_x emission estimates for subsequent construction phases shall be coordinated with SMAQMD, and the off-site mitigation fee measure shall be assessed to any construction phase that would result in an exceedance of SMAQMD's mass emission threshold for NO_x.

Significance After Mitigation

Impact would remain significant and unavoidable.

Impact 3.2-2: Long-Term Operational Emissions of ROG, NO_x, PM₁₀, and PM_{2.5}

General Plan EIR Impact 5.3.2 and 5.3.6 determined that long-term operational emissions of ROG, NO_x, PM₁₀, and PM_{2.5} would be substantial and could substantially contribute to a violation of the NAAQS and CAAQS for ozone and PM and conflict with air quality attainment efforts. This impact was identified as significant and unavoidable. Implementation of the Project could generate long-term operational emissions of ROG, NO_x, PM₁₀, and PM_{2.5}. The Project proposes greater development than what was presented in the General Plan EIR. This level of development would subsequently result in greater operational emissions as compared to the General Plan EIR for the Planning Area. Therefore, operational emissions would result in a substantially more severe air quality impacts that was addressed in the General Plan EIR. Project impacts would be **significant and unavoidable**.

LEA Community Plan

General Plan EIR Impact 5.3.2 and 5.3.6 determined that long-term operational emissions of ROG, NO_x, PM₁₀, and PM_{2.5} would be substantial and could substantially contribute to a violation of the NAAQS and CAAQS for ozone and PM and conflict with air quality attainment efforts. Based on modeling performed for that analysis, the land uses proposed under the General Plan for the City and its Planning Area resulted in 8,280 lb/day of ROG, 2,673 lb/day of NO_x, 177 lb/day of PM₁₀, and 168 lb/day of PM_{2.5}. These levels of emissions would exceed SMAQMD's thresholds of significance and this impact was concluded to be significant and unavoidable.

Operation emissions associated with development of the Project could result in the generation of long-term operational emissions of ROG, NO_x, and particulate matter (PM₁₀ and PM_{2.5}) from mobile, stationary, and area-wide sources. Mobile-source emissions of criteria pollutants and precursors would result from vehicle trips generated by Project related trips. Stationary and area-wide sources would include the combustion of natural gas for space and water heating (i.e., energy use), the use of landscaping equipment and other small equipment, the periodic application of architectural coatings, and ROG from the use of consumer products.

Table 3.2-4 summarizes the maximum annual and daily operational-related emissions of criteria air pollutants during the first year of assumed buildout (i.e., 2040) for buildout of the Project. The emissions summarized in Table 3.2-4 are reflective all of land use changes that would occur from the Project, including development of the LEA Community Plan Area. Emissions were calculated based on proposed land uses and adjusted trip lengths to match Project-specific VMT, as reported in the traffic study (Section 3.9, "Transportation and Circulation") for the Project. As shown in Table 3.2-4, operational-related activities could result in annual and daily emissions of ROG, NO_x, and PM₁₀, that exceed the

SMAQMD-recommended thresholds of significance and inhibit efforts for attainment with NAAQS and CAAQS (e.g., 2018 Sacramento Regional 2008 8-Hour Ozone Attainment and Further Reasonable Progress Plan).

Table 3.2-4 Summary of Maximum Operational Emissions of Criteria Air Pollutants and Precursors from the Project (2040)

Emissions Source	ROG (lb/day)	NO _x (lb/day)	PM ₁₀ (lb/day)	PM ₁₀ (tpy)	PM _{2.5} (lb/day)	PM _{2.5} (tpy)
Area	219	1	<1	<1	<1	<1
Energy	4	37	3	<1	3	<1
Mobile	152	127	362	47	97	13
Total Emissions	375	165	360	47	101	13
SMAQMD Threshold of Significance	65	65	0	0	0	0

Notes: ROG = reactive organic gases; lb/day = pounds per day; NO_x = oxides of nitrogen; PM₁₀ = respirable particulate matter; PM_{2.5} = fine particulate matter; SMAQMD = Sacramento Metropolitan Air Quality Management District.

Total values may not sum exactly due to rounding. See Appendix D for detailed input parameters and modeling results.

Source: Modeling performed by Ascent in 2022.

SMAQMD's project thresholds are intended to maintain or achieve attainment designations in the SVAB with respect to the CAAQS and NAAQS. Projects that exceed SMAQMD's thresholds contribute to nonattainment designations, it would exacerbate or interfere with the region's ability to attain the health-based standards (SMAQMD 2020). Because implementation of the Project could result in operational emissions above SMAQMD's recommended thresholds, they could contribute to a violation of any air quality standard or contribute substantially to an existing or projected air quality violation. Because the ambient air quality standards are established to be protective of public health, adverse health impacts to receptors could occur due to the Project's emissions being above SMAQMD's thresholds. This is consistent with the findings of the General Plan EIR as the proposed development would generate emissions similar to development and buildout conditions assumed in the General Plan EIR and its current land use designations. Nevertheless, when compared emissions of the LEA Community Plan as proposed for this Project to the land use designations proposed in the General Plan EIR, the increased development would generate greater emissions for the Planning Area. This is due to the increased density and intensity of development for the LEA Community Plan. The emissions disclosed in the General Plan EIR represent the anticipated emissions from all development under the General Plan for the City and its Planning Area. The emissions summarized above in Table 3.2-4 are attributed to operation of the proposed land uses under the Project. Because emissions would be greater under the Project, operational air quality impacts would be more severe than the impact identified in the General Plan EIR.

Consistent with SMAQMD's most recent Friant Ranch Guidance, the possible operational emissions of criteria air pollutants from implementation of the Project were used to estimate foreseeable adverse health outcomes using SMAQMD's Strategic Area Project Health Effects Tool. Strategic Area Project IV, "South Sacramento," was used as this Strategic Area is the closest to the City of Elk Grove. Table 3.2-5 below summarizes the potential health effects in the region from the Project.

Table 3.2-5 Potential Annual Incremental Health Incidences for the Project

PM _{2.5} Health Endpoint	Age Range	Incidences (Mean)	Percent of Background Incidences	Total Number of Health Incidences (per Year)
Respiratory				
Emergency Room Visits	0-99	3.3	0.018%	18,419
Hospital Admissions, Asthma	0-64	0.22	0.012%	1,846
Hospital Admissions, All Respiratory	65-99	0.99	0.0050%	19,644
Cardiovascular				
Hospital Admissions, All Cardiovascular (less Myocardial Infarctions)	65-99	0.58	0.0024%	24,037

PM _{2.5} Health Endpoint	Age Range	Incidences (Mean)	Percent of Background Incidences	Total Number of Health Incidences (per Year)
Acute Myocardial Infarction, Nonfatal	18-24	0.00030	0.0079%	4
Acute Myocardial Infarction, Nonfatal	25-44	0.024	0.0078%	308
Acute Myocardial Infarction, Nonfatal	45-54	0.060	0.0081%	741
Acute Myocardial Infarction, Nonfatal	55-64	0.10	0.0081%	1,239
Acute Myocardial Infarction, Nonfatal	65-99	0.37	0.0074%	5,052
Mortality				
Mortality, All Causes	30-99	6.6	0.015%	44,766
Ozone Health Endpoint	Age Range	Incidences (Mean)	Percent of Background Incidences	Total Number of Health Incidences (per Year)
Respiratory				
Hospital Admissions, All Respiratory	65-99	0.14	0.00070%	19,644
Emergency Room Visits, Asthma	0-17	0.80	0.014%	5,859
Emergency Room Visits, Asthma	18-99	1.2	0.0097%	12,560
Mortality				
Mortality, Non-Accidental	0-99	0.090	0.00029%	30,386
Total Incidences	0-99	14.47	0.0012	184,505

Notes: PM_{2.5} = fine particulate matter; NA = not applicable.

Source: Modeling conducted by Ascent 2022.

Based on this modeling, operational emissions from implementation of the Project may result in an additional 7 deaths from ozone and PM_{2.5} exposure compared to a background number of incidences of about 75,000 mortality incidences per year. There is no established threshold of significance that addresses anticipated deaths; however, consistent with guidance from the Friant Ranch Decision, this information has been included to provide a meaningful level of detail to readers of this Draft SEIR. Notably, as discussed under the heading, "Methodology," there is inherent difficulty in evaluating the exact location and degree of adverse health outcomes from project-level emissions. Moreover, the Strategic Area Project Health Effects Tool cannot account for personal information such as age, preexisting conditions, genetic propensities, and lifestyle choices that may contribute to a receptor's sensitivity to air pollution.

As noted in the General Plan EIR, General Plan Policy NR-4-1 requires that all new development projects in the City with the potential to result in substantial air quality impacts incorporate features to reduce emissions equal to 15 percent compared to an "unmitigated baseline" project. An unmitigated baseline project is a development project that is built and/or operated without the implementation of trip reduction, energy conservation, or similar features. Standard NR-4-1a requires appropriate mitigation measures to the extent feasible and appropriate, potentially including—in the case of projects which may conflict with applicable air quality plans—emission reductions in addition to those required by Policy NR-4-1.

Additionally, General Plan Policy MOB-1-1 requires that new land use plans, amendments to such plans, and other discretionary development proposals demonstrate 15 percent reduction in VMT from existing conditions. While the primary intent of this policy would be to reduce emissions of greenhouse gases (see Section 3.5, "Greenhouse Gas Emissions"), this policy would have beneficial effects on ambient air quality in the Planning Area. However, a 15 percent reduction in VMT may be achieved through several pathways which are unknown at the time of writing this Draft SEIR. For instance, a project may implement a transportation demand management (TDM) plan, which may be composed of multiple strategies to reduce VMT such as congestion pricing, parking management, ridesharing matching, and carpool and vanpool programs. A TDM may include all or some methods of VMT-reducing strategies; however, a TDM plan is project-specific and would be developed in consideration of the land use types associated with a future project. As such, the composition of reductions for air pollutants would differ depending on the type of

project. General Plan Standard MOB-3-2.a requires new residential development to pre-wire for plug-in EV, which would further reduce emissions. As summarized in Section 3.2.1, "Regulatory Setting," the City Municipal Code Sections 16.07.200 through 16.07.500 includes a streamlined permitting process for the installation of EV charging stations, which would additionally reduce emissions from the mobile sector associated with the combustion of fossil fuels. Municipal Code Section 23.58.120 requires one "EV ready" parking space for all new one family and two family dwelling units. This section also requires that 2.5 percent of parking for multifamily projects provide EV charging and an additional 2.5 percent of parking be ready for future EV charging expansion.

Implementation of General Plan Policy NR-4-1 would help reduce operational emissions of ROG, NO_x, PM₁₀, and PM_{2.5}; however, the reductions anticipated to be achieved by General Plan Policy NR-4-1 cannot be uniformly applied to all future development under the Project. There is inherent uncertainty as to the size, intensity, and timing of future development that would occur under the Project. Notably, some development projects may generate emissions below SMAQMD's operational thresholds of significance. Therefore, because the details of future development (e.g., the size, intensity, duration of construction, overlap of construction with other projects) cannot be determined at this time, the assumed levels of emissions may not fully encompass total net changes in future emissions.

Portions of the LEA Community Plan Area have been previously analyzed in certified CEQA documents for the following projects: Southeast Policy Area Strategic Plan, Laguna Ridge Specific Plan, SouthPoint Policy Area/Sterling Meadows, and Lent Ranch Marketplace Special Planning Area. Mitigation measures from these CEQA documents include requirements related to reduction of operational emissions. A comprehensive list of mitigation measures from other community plans prior environmental review are included in Appendix G. Mitigation measures from the Laguna Ridge Specific Plan EIR, Southeast Policy Area Strategic Plan, and Lent Ranch Marketplace Special Planning Area EIR include requirements for compliance with the air quality management plans prepared for each community plan. The air quality management plans require measures to reduce emissions from mobile and stationary sources. Therefore, portions of the LEA Community Planning Area within the Laguna Ridge Specific Plan, Southeast Policy Area Strategic Plan, and Lent Ranch Marketplace Special Planning Area would be required to show consistency with the applicable air quality management plans, pursuant to mitigation measures contained in Appendix G. Development throughout the LEA Community Plan Area would be required to adhere to General Plan policies, as described above. The measures of these the air quality management plans would continue to apply to the portions of the LEA Community Plan geographically located within the boundaries of these plans; however, given the proposed land uses changes of the LEA Community Plan (e.g., increased density, pedestrian and bicycle infrastructure) as well as the passage of time between the time this analysis has been prepared and the certification of the most recent the air quality management plan (i.e., 2015), emissions from the LEA Community Plan would be subject to a new air quality management plan that demonstrates that the LEA Community Plan would include sufficient mitigation to meet SMAQMD's CEQA requirements for land use development projects. Mitigation Measure 3.2-2 below would require the preparation of an air quality management plan to demonstrate a 15 reduction in operational emission from unmitigated conditions. Implementation of Mitigation Measure 3.2-2 would require the project applicant to demonstrate that project design features proposed as a part of the project description would be sufficient to reduce operational emissions of criteria air pollutants and ozone precursors to meet SMAQMD's recommended reductions for projects within the regional growth projections of the most recent MTP/SCS.

The General Plan EIR concluded that no additional feasible plan-level mitigation was available beyond compliance with General Plan policies and concluded that Impact 5.3.2 and 5.3.6 are significant and unavoidable. Because operational emission for the Project would be greater for the Planning Area than what was anticipated in the General Plan due to increased development that would exceed SMAQMD's operational thresholds of significance, operational emissions from implementation of the LEA Community Plan would result in substantially more severe air quality impacts that was addressed in the General Plan EIR. Project impacts would be **significant and unavoidable** even with implementation of Mitigation Measure 3.2-2.

General Plan Land Use Designation Amendments

Operational emissions anticipated to occur from the proposed General Plan land use amendments are included in the overall operational modeling associated with the Project as presented in Table 3.2-4. As discussed above, the Project would generate levels of operational emissions that would be greater than those discussed in the General Plan EIR for the

Planning Area. Operation-generated emissions from implementation of the proposed General Plan land use amendments would result in substantially more severe operational air quality impacts that was addressed in the General Plan EIR. Project impacts would be **significant and unavoidable** due to the lack mitigation available to full address the impact.

Grant Line Road Precise Roadway Study

Operation of the Grant Line Road Precise Roadway Study would generate operational emissions from mobile sources using Grant Line Road. The Precise Study would not independently generate new vehicle trips and no new mobile source emissions would occur. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR. This impact would remain **significant and unavoidable**.

South and West Study Areas

Operational emissions anticipated to occur from the South and West Study Areas are included in the overall operational modeling associated with the Project as presented in Table 3.2-4. As discussed above, the Project would generate levels of operational emissions that would be greater than those discussed in the General Plan EIR. Operation-generated emissions from implementation of the proposed General Plan land use amendments would result in substantially more severe operational air quality impacts that was addressed in the General Plan EIR. Project impacts would be **significant and unavoidable** due to the lack mitigation available to full address the impact.

Mitigation Measures

Mitigation Measure 3.2-2: Prepare an Air Quality Mitigation Plan for the LEA Community Plan Area

The City shall prepare an Air Quality Management Plan that demonstrates a 15 percent reduction in operational air pollutant for the LEA Community Plan Area, compared to unmitigated baseline project consistent with General Plan Policy NR-4-1. The Air Quality Management Plan shall be submitted to the Sacramento Metropolitan Air Quality Management District for review and endorsement. Air Quality Management Plan emission reduction measures will be identified and quantified and may include commitments to reducing VMT, promoting alternative modes of transportation, and energy efficiency building measures. The Air Quality Management Plan shall be submitted to SMAQMD prior to the certification of the Final EIR to confirm that the project meets reduction requirements.

Significance After Mitigation

Project impacts would remain significant and unavoidable.

Impact 3.2-3: Exposure of Sensitive Receptors to Substantial Carbon Monoxide Pollutant Concentrations

The General Plan EIR concluded that the Project would not contribute to localized concentrations of mobile-source CO impacts. Implementation of the Project would include land use amendments that would result in distribution of vehicle trips throughout the City; however, this redistribution would not result in a new CO impact. Based on modeling performed for this analysis, the maximum development proposed for the Project could generate a maximum of 24,200 daily trips; however, the trips would be distributed throughout the City and into the region and would not be focused within one intersection exclusively. Therefore, there is no new effect and the impact is not substantially more severe than the impact identified in the General Plan. This impact would remain **less than significant** as identified in the General Plan EIR.

LEA Community Plan

Impact 5.3.3 of the General Plan EIR used a tiered approach established by SMAQMD to evaluate potential CO exposure. Based on this tiered approach, traffic generated would not exceed 9,010 and 9,240 trips in the a.m. and p.m. peak periods, respectively. This level of trips would be less than the 31,600 vehicles per hour (VPH) at an intersection, which comprises the screening criterion established by SMAQMD to evaluated CO impacts. Because this level would be less, the General Plan would not result in a CO "hotspot."

Based on modeling conducted for this analysis, the Project could generate a maximum of 24,200 daily vehicle trips throughout the City. While localized concentrations of criteria air pollutants can expose sensitive receptors to substantial pollutant concentrations, criteria air pollutants generally produce regional impacts. Criteria air pollutants are predominantly generated in the form of mobile-source exhaust from vehicle trips associated with land use development projects. These vehicle trips occur throughout a paved network of roads, and, therefore, associated exhaust emissions of criteria air pollutants are not generated in a single location where high concentrations could be formed. However, there may be unique situations or infrastructure designs (e.g., tunnels, enclosed underpasses) where a project with high levels of emissions may require concentration modeling to determine if the emissions will expose sensitive receptors to substantial pollutant concentrations.

Using the screening criteria utilized in the General Plan EIR established by SMAQMD, a CO hotspot could occur at intersections that support 31,600 VPH. The 24,200 daily trips generated by implementation of the Project would be less than this 31,600 VPH screening criterion. Because these trips would be regional in nature rather than localized and would be less than the screen criterion, a CO hotspot would not occur.

Additionally, mobile-source CO emissions have historically decreased since the advent of catalytic converters, which decrease mobile-source exhaust emissions, and there have been improvements in fuel economy since 2006 through regulatory compliance implemented by EPA and CARB (e.g., the café standards and Advanced Clean Cars program). As such, CO emissions from the Project would not have a substantially new or more severe impact as compared to what was evaluated in the General Plan EIR. Therefore, there is no new significant impact and the impact is not substantially more severe than the impact identified in the General Plan EIR. This impact would remain **less than significant**.

General Plan Land Use Designation Amendments

Anticipated new vehicle trips from the proposed General Plan land use amendments in the Old Town Policy Area are included in the overall number cited above for buildout of the Project. As discussed above, the Project would generate levels of new vehicle trips that would be below SMAQMD's screening criteria for CO hotspots. Implementation of the proposed General Plan land use amendments would not result in a new or substantially more severe air quality impacts that was addressed in the General Plan EIR. This impact would remain **less than significant**.

Grant Line Road Precise Roadway Study

The proposed Grant Line Road Precise Roadway Study would not independently generate new vehicle trips or create a traffic operational issue that could result in traffic congestion. Therefore, implementation of the Precise Study would not result in a new or substantially more severe air quality impacts that was addressed in the General Plan EIR. This impact would remain **less than significant**.

South and West Study Areas

Anticipated new vehicle trips from the South and West Study Areas are included in the overall number cited above for implementation of the Project. As discussed above, the Project would generate levels of new vehicle trips that would be below SMAQMD's screening criteria for CO hotspots. Implementation of development under the South and West Study Areas would not result in a new or substantially more severe air quality impacts that was addressed in the General Plan EIR. This impact would remain **less than significant**.

Mitigation Measures

No mitigation is required.

Impact 3.2-4: Exposure of Sensitive Receptors to TACs

The General Plan EIR concluded that operational-related emissions of mobile source TACs would result in significant and unavoidable impacts to public health. Implementation of Project could generate mobile source TACs. However, these TAC emissions would be similar to what was anticipated under buildout conditions as described in the General Plan EIR and its current land use designations. Therefore, potential TAC mobile emissions would not result in a new or substantially more severe TAC impacts that was addressed in the General Plan EIR. Project impacts would remain **significant and unavoidable**.

LEA Community Plan

Impact 5.3.4 of the General Plan EIR evaluated the potential health risk to sensitive receptors (i.e., people, or facilities that generally house people such as schools, hospitals, residences) associated with construction-generated TACs and concluded impacts would be less than significant.

Construction

Particulate exhaust emissions from diesel-fueled engines (i.e., diesel PM) were identified as a TAC by CARB in 1998. The potential cancer risk from the inhalation of diesel PM, as discussed above in Section 3.6.2, "Environmental Setting," outweighs the potential for all other health impacts (i.e., non-cancer chronic risk, short-term acute risk) and health impacts from other TACs (CARB 2003:K-1). With regard to exposure of diesel PM, the dose to which receptors are exposed is the primary factor used to determine health risk. Dose is a function of the concentration of a substance or substances in the environment and the duration of exposure to the substance. Dose is positively correlated with time, meaning that a longer exposure period would result in a higher level of health risk for any exposed receptor. Thus, the risks estimated for an exposed individual are higher if a fixed exposure occurs over a longer period. According to the Office of Environmental Health Hazard Assessment, when a Health Risk Assessment is prepared to project the results of exposure of sensitive receptors to selected compounds, exposure of sensitive receptors to TAC emissions should be based on a 70- or 30-year exposure period; however, such assessments should be limited to the duration of activities associated with the proposed project if emissions occur for shorter periods (OEHHA 2015:5-23, 5-24).

The TAC that is the focus of this construction analysis is diesel PM because it is known that diesel PM would be emitted during project construction.

Construction-related activities associated with buildout of the Project would result in temporary, intermittent emissions of diesel PM from the exhaust of off-road equipment used during demolition and building modernization and on-road heavy-duty trucks. On-road diesel-powered haul trucks traveling to and from a construction area to deliver materials and equipment are less of a concern because they do not operate at any one location for extended periods of time such that they would expose a single receptor to excessive diesel PM emissions.

Based on the construction-related emissions modeling conducted (see Appendix D), maximum daily emissions of exhaust PM₁₀ would be less than 2 lb/ during peak construction associated with the Project. A portion of these emissions would be due to haul trucks traveling to and from individual construction sites. This is below the SMAQMD-recommended threshold of 80 lb/day. In addition, construction activities located in close proximity to residential units (considered sensitive receptors) would occur during daytime hours consistent with General Plan Noise Policy NO-1-7 and Municipal Code Section 6.32.100, which restricts construction activities to between 7 a.m. and 7 p.m., Monday through Friday, which is when many residents are not home, thus limiting exposure from construction-related emissions to these receptors. As stated in Section 3.2.1, "Regulatory Setting," construction activities may be allowed between the hours of 6 a.m. and 8 p.m. if construction would not be located within the vicinity of a residential land uses, which are considered sensitive receptors. Finally, compliance with CAP measure TACM-8 would require 25 percent of off-road construction equipment to meet Tier 4 standards.

The Project would allow for more development than what was proposed in the General Plan EIR for the Planning Area, although development would occur within the same footprint as analyzed in the General Plan EIR. This increase could result in increased intensity and duration of construction activities within the Planning Area. At this time, however, the timing, location, duration, and magnitude of construction activities, as well as the potential for overlapping construction from multiple projects to occur is unknown. Nevertheless, provided that the peak PM₁₀ exhaust would be 2 lb/day during peak construction, the likelihood at the Project would result in a greater impact than those disclosed in the General Plan EIR is not expected.

Therefore, there is no new significant impact and the impact is not more severe than the impact identified in the General Plan EIR with respect to construction-related TACs. This impact would remain **significant and unavoidable**.

Stationary Sources

Impact 5.3.4 of the General Plan EIR assessed the potential for receptors to be exposed to substantial pollutant concentrations from stationary sources and concluded that this impact would be potentially significant. Development

facilitated by the Project would include industrial sources of TACs that could include, but are not limited to, benzene, 1,3-butadiene, hexavalent chromium, formaldehyde, methylene chloride. The types of industrial facilities that could be allowable under the Project would be similar to those discussed in Impact 5.3.4 of the General Plan EIR. These industrial sources would also be subject to SMAQMD's Rule 201 ("General Permit Requirements"), Rule 202 ("New Source Review"), and Rule 207 ("Federal Operating Permit") which would reduce TAC exposure through the use of BACT. Therefore, stationary source impacts would be similar to those discussed under Impact 5.3.4 of the General Plan EIR. There is no new significant impact and the impact is not more severe than the impact identified in the General Plan EIR with respect to stationary-sourced TACs. This impact would remain **significant and unavoidable**.

Mobile Sources

Impact 5.3.4 of the General Plan EIR evaluated long-term operational sources of TACs and concluded that due to the anticipated level of traffic along certain roadways within the General Plan area, sensitive receptors could be exposed to substantial TAC concentrations. The General Plan EIR used the CARB- and SMAQMD-recommended 100,000 daily vehicle trips on a roadway segment to determine that new vehicle trips generated by the land uses under the General Plan would introduce substantial mobile-source TACs within the Planning Area.

Implementation of the Project would generate additional vehicle trips associated with development than what was evaluated in the General Plan EIR due to the increased density of new land uses that were not previously evaluated in the General Plan EIR. However, the extent of this increase would not create substantially higher levels of mobile TACs or generate new sources of mobile TACs than what was considered in the General Plan EIR. Implementation of General Plan Policies NR-2-4, NR-4-9, NR-4-10, MOB-3-1, MOB-3-2, MOB-3-5, MOB-3-6, MOB-3-7, MOB-3-13, and MOB-7-5 would serve to lower exposure of sensitive receptors to sources of TACs throughout the Planning Area. As discussed previously, the CARB Diesel Risk Reduction Plan and Air Toxic Control Measures would help reduce future emissions of diesel PM (the primary TAC of concern in mobile emissions).

CARB recommends that sensitive receptors not be sited within 500 feet of urban roadways that support 100,000 vehicle trips per day. Based on the transportation modeling performed for the Project (Appendix C), the roadway that would support the highest number of vehicles would be Kammerer Road from Promenade Parkway to State Route 99 with approximately 88,100 average daily trips (ADT) per day. This level of vehicle trips would be below CARB's recommended 100,000 ADT, thus reducing the potential for mobile source TAC impacts to occur within the Planning Area.

The General Plan EIR concluded that no additional feasible plan-level mitigation was available beyond compliance with General Plan policies and that this impact was significant and unavoidable. Operational emissions from implementation of the LEA Community Plan would not result in a new or substantially more severe TAC impacts that was addressed in the General Plan EIR. This impact would remain **significant and unavoidable**.

General Plan Land Use Designation Amendments

Anticipated new TAC emissions from the proposed General Plan land use amendments in the Old Town Policy Area would be similar to those disclosed above for the Project. As discussed above, the Project would generate construction and operational TAC emission like those disclosed in the General Plan EIR. Construction of the General Plan land use amendments in the Old Town Policy Area would occur within the footprint of the General Plan; however, increased development may require construction of greater intensity. Operation of the development in the Old Town Policy Area would include similar stationary source and mobile source emissions as analyzed in the General Plan EIR. As discussed above, the roadways segment with the highest ADT under the Project would occur along Kammerer Road from Promenade Parkway to State Route 99 and would not exceed CARB's 100,000 ADT threshold for siting sensitive receptors. Implementation of the proposed General Plan land use amendments would not result in a new or substantially more severe air quality impacts that was addressed in the General Plan EIR. Project impacts would remain **significant and unavoidable**.

Grant Line Road Precise Roadway Study

Anticipated new TAC emissions from the Precise Study would be similar to those disclosed above during construction activities. The Precise Study would not produce operational TACs. As discussed above, the Project would generate construction TAC emission similar to those disclosed in the General Plan EIR. Implementation of the Grant Line Road

Precise Roadway Study would not result in a new or substantially more severe air quality impacts that was addressed in the General Plan EIR. Project impacts would remain **significant and unavoidable**.

South and West Study Areas

Anticipated new TAC emissions from development under the South and West Study Areas would be similar to those disclosed above. As discussed above, the Project would generate construction and operational TAC emission similar to those disclosed in the General Plan EIR. Construction of the South and West Coast Study Areas would occur within the footprint of the General Plan; however, increased development may require construction of greater intensity.

Operation of the development in the South and West Coast Study Areas would include similar stationary source and mobile source emissions as analyzed in the General Plan EIR. As discussed above, the roadways segment with the highest ADT would occur along Kammerer Road from Promenade Parkway to State Route 99 and would not exceed CARB's 100,000 ADT threshold for siting sensitive receptors. Implementation of development under the South and West Study Areas would not result in a new or substantially more severe air quality impacts that was addressed in the General Plan EIR. Project impacts would remain **significant and unavoidable**.

Mitigation Measures

No additional mitigation is required beyond compliance with General Plan Policies NR-2-4, NR-4-9, NR-4-10, MOB-3-1, MOB-3-2, MOB-3-5, MOB-3-6, MOB-3-7, MOB-3-13, and MOB-7-5.

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3.3 ARCHAEOLOGICAL, HISTORICAL, AND TRIBAL CULTURAL RESOURCES

This section analyzes and evaluates the potential impacts of the City of Elk Grove General Plan Amendments and Update of VMT Standards (Project) on known and unknown cultural resources. The primary source of information used for this analysis is the General Plan EIR.

Cultural resources include districts, sites, buildings, structures, or objects generally older than 50 years and considered to be important to a culture, subculture, or community for scientific, traditional, religious, or other reasons. They include pre-historic resources, historic-period resources, and “tribal cultural resources” (the latter as defined by Assembly Bill (AB) 52, Statutes of 2014, in Public Resources Code [PRC] Section 21074).

Archaeological resources are locations where human activity has measurably altered the earth or left deposits of prehistoric or historic-period physical remains (e.g., stone tools, bottles, former roads, house foundations). Historical (or built-environment) resources include standing buildings (e.g., houses, barns, outbuildings, cabins) and intact structures (e.g., dams, bridges, roads, districts), or landscapes. A cultural landscape is defined as a geographic area (including both cultural and natural resources and the wildlife therein), associated with a historic event, activity, or person or exhibiting other cultural or aesthetic values. Tribal cultural resources are sites, features, places, cultural landscapes, sacred places and objects, with cultural value to a tribe.

One comment letter regarding cultural resources was received in response to the notice of preparation (NOP) (see Appendix A). The Native American Heritage Commission (NAHC) requested AB 52 and SB 18 compliance information; while SB 18 does apply to the Project because there is a General Plan amendment associated with the Project (which is the trigger for SB 18 compliance), SB 18 is not a CEQA requirement and therefore is not discussed in this section. AB 52 compliance is described below. As described later in this section, AB 52 letters were sent to area tribes on March 18, 2022, and no requests for consultation were received by the City.

3.3.1 Regulatory Setting

FEDERAL

National Register of Historic Places

The National Register of Historic Places (NRHP) is the nation’s master inventory of known historic properties. It is administered by the National Park Service and includes listings of buildings, structures, sites, objects, and districts that possess historic, architectural, engineering, archaeological, or cultural significance at the national, state, or local level.

The formal criteria (36 CFR 60.4) for determining NRHP eligibility are as follows:

1. The property is at least 50 years old (however, properties under 50 years of age that are of exceptional importance or are contributors to a district can also be included in the NRHP);
2. It retains integrity of location, design, setting, materials, workmanship, feeling, and associations; and
3. It possesses at least one of the following characteristics:
 - Criterion A Is associated with events that have made a significant contribution to the broad patterns of history (events).
 - Criterion B Is associated with the lives of persons significant in the past (persons).
 - Criterion C 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 represents a significant, distinguishable entity whose components may lack individual distinction (architecture).
 - Criterion D Has yielded, or may be likely to yield, information important in prehistory or history (information potential).

For a property to retain and convey historic integrity it must possess most of the seven aspects of integrity: location, design, setting, materials, workmanship, feeling, and association. Location is the place where the historic property was constructed or the place where a historic event occurred. Integrity of location refers to whether the property has been moved since its construction. Design is the combination of elements that create the form, plan, space, structure, and style of a property. Setting is the physical environment of a historic property that illustrates the character of the place. Materials are the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property. Workmanship is the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory. Feeling is a property's expression of the aesthetic or historic sense of a particular period of time. This is an intangible quality evoked by physical features that reflect a sense of a past time and place. Association is the direct link between the important historic event or person and a historic property. Continuation of historic use and occupation help maintain integrity of association.

Listing in the NRHP does not entail specific protection or assistance for a property but it does guarantee consideration in planning for federal or federally-assisted projects, eligibility for federal tax benefits, and qualification for federal historic preservation assistance. Additionally, project effects on properties listed in the NRHP must be evaluated under CEQA.

The National Register Bulletin series was developed to assist evaluators in the application of NRHP criteria. For example, National Register Bulletin #36 provides guidance in the evaluation of archaeological site significance. If a property cannot be placed within a particular theme or time period, and thereby lacks "focus," it will be unlikely to possess characteristics which would make it eligible for listing in the NRHP. Evaluation standards for linear features (such as roads, trails, fence lines, railroads, ditches, and flumes) are considered in terms of four related criteria that account for specific elements that define engineering and construction methods of linear features: (1) size and length, (2) presence of distinctive engineering features and associated properties, (3) structural integrity, and (4) setting. The highest probability for NRHP eligibility exists in the intact, longer segments, where multiple criteria coincide.

Secretary of the Interior's Standards

The *Secretary of the Interior's Standards for the Treatment of Historic Properties* (Secretary's Standards) provide guidance for working with historic properties. The Secretary's Standards are used by lead agencies to evaluate proposed rehabilitative work on historic properties. The Secretary's Standards are a useful analytic tool for understanding and describing the potential impacts of proposed changes to historic resources. Projects that comply with the Secretary's Standards benefit from a regulatory presumption that they would not result in a significant impact to a historic resource.

In 1992 the Secretary's Standards were revised so they could be applied to all types of historic resources, including landscapes. They were reduced to four sets of treatments to guide work on historic properties: Preservation, Rehabilitation, Restoration, and Reconstruction. The four distinct treatments are defined as follows:

- ▶ **Preservation** focuses on the maintenance and repair of existing historic materials and retention of a property's form as it has evolved over time.
- ▶ **Rehabilitation** acknowledges the need to alter or add to a historic property to meet continuing or changing uses while retaining the property's historic character.
- ▶ **Restoration** depicts a property at a particular period of time in its history, while removing evidence of other periods.
- ▶ **Reconstruction** re-creates vanished or non-surviving portions of a property for interpretive purposes.

STATE

California Register of Historical Resources

All properties in California that are listed in or formally determined eligible for listing in the NRHP are also listed in the California Register of Historical Resources (CRHR). The CRHR is a listing of State of California resources that are significant in the context of California's history. It is a Statewide program with a scope and with criteria for inclusion

similar to those used for the NRHP. In addition, properties designated under municipal or county ordinances are also eligible for listing in the CRHR.

A historical resource must be significant at the local, state, or national level under one or more of the criteria defined in the California Code of Regulations Title 15, Chapter 11.5, Section 4850 to be included in the CRHR. The CRHR criteria are tied to CEQA because any resource that meets the criteria below is considered a significant historical resource under CEQA. As noted above, all resources listed in or formally determined eligible for listing in the NRHP are automatically listed in the CRHR.

The CRHR uses four evaluation criteria:

- Criterion 1. Is 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. Is associated with the lives of persons important to local, California, or national history.
- Criterion 3. Embodies the distinctive characteristics of a type, period, region, or method of construction; represents the work of a master; or possesses high artistic values.
- Criterion 4. Has yielded, or has the potential to yield, information important to the prehistory or history of the local area, California or the nation.

Similar to the NRHP, a historical resource must meet one of the above criteria and retain integrity to be listed in the CRHR. The CRHR uses the same seven aspects of integrity used by the NRHP.

California Environmental Quality Act

CEQA requires public agencies to consider the effects of their actions on "historical resources," "unique archaeological resources," and "tribal cultural resources." Pursuant to PRC Section 21084.1, a "project that may cause a substantial adverse change in the significance of an historical resource is a project that may have a significant effect on the environment." Section 21083.2 requires agencies to determine whether projects would have effects on unique archaeological resources. PRC Section 21084.2 establishes that "[a] project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment."

Historical Resources

"Historical resource" is a term with a defined statutory meaning (PRC Section 21084.1; State CEQA Guidelines Sections 15064.5[a] and [b]). Under State CEQA Guidelines Section 15064.5(a), historical resources include the following:

- 1) A resource listed in, or determined to be eligible by the State Historical Resources Commission for listing in, the CRHR (PRC Section 5024.1).
- 2) A resource included in a local register of historical resources, as defined in PRC Section 5020.1(k) or identified as significant in a historical resource survey meeting the requirements of PRC Section 5024.1(g), will be presumed to be historically or culturally significant. Public agencies must treat any such resource as significant unless the preponderance of evidence demonstrates that it is not historically or culturally significant.
- 3) Any object, building, structure, site, area, place, record, or manuscript that a lead agency determines to be historically significant or significant in the architectural, engineering, scientific, economic, agricultural, educational, social, political, military, or cultural annals of California may be considered to be a historical resource, provided the lead agency's determination is supported by substantial evidence in light of the whole record. Generally, a resource will be considered by the lead agency to be historically significant if the resource meets the criteria for listing in the CRHR (PRC Section 5024.1).
- 4) The fact that a resource is not listed in or determined to be eligible for listing in the CRHR, not included in a local register of historical resources (pursuant to PRC Section 5020.1[k]), or identified in a historical resources survey (meeting the criteria in PRC Section 5024.1[g]) does not preclude a lead agency from determining that the resource may be a historical resource as defined in PRC Sections 5020.1(j) or 5024.1.

Unique Archaeological Resources

CEQA also requires lead agencies to consider whether projects will affect unique archaeological resources. PRC Section 21083.2(g) states that “unique archaeological resource” means an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets one or more of the following criteria:

1. Contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information.
2. Has a special and particular quality such as being the oldest of its type or the best available example of its type.
3. Is directly associated with a scientifically recognized important prehistoric or historic event or person.

Tribal Cultural Resources

CEQA also requires lead agencies to consider whether projects will affect tribal cultural resources. PRC Section 21074 states:

- a) “Tribal cultural resources” are either of the following:
 - 1) Sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe that are either of the following:
 - A) Included or determined to be eligible for inclusion in the California Register of Historical Resources.
 - B) Included in a local register of historical resources as defined in subdivision (k) of Section 5020.1.
 - 2) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Section 5024.1. In applying the criteria set forth in subdivision (c) of Section 5024.1 for the purposes of this paragraph, the lead agency shall consider the significance of the resource to a California Native American tribe.
- b) A cultural landscape that meets the criteria of subdivision (a) is a tribal cultural resource to the extent that the landscape is geographically defined in terms of the size and scope of the landscape.
- c) A historical resource described in Section 21084.1, a unique archaeological resource as defined in subdivision (g) of Section 21083.2, or a “nonunique archaeological resource” as defined in subdivision (h) of Section 21083.2 may also be a tribal cultural resource if it conforms with the criteria of subdivision (a).

Public Resources Code Section 21083.2

Treatment options under PRC Section 21083.2(b) to mitigate impacts to archaeological resources include activities that preserve such resources in place in an undisturbed state. PRC Section 21083.2 states:

- (a) As part of the determination made pursuant to Section 21080.1, the lead agency shall determine whether the project may have a significant effect on archaeological resources. If the lead agency determines that the project may have a significant effect on unique archaeological resources, the environmental impact report shall address the issue of those resources. An environmental impact report, if otherwise necessary, shall not address the issue of nonunique archaeological resources. A negative declaration shall be issued with respect to a project if, but for the issue of nonunique archaeological resources, the negative declaration would be otherwise issued.
- (b) If it can be demonstrated that a project will cause damage to a unique archaeological resource, the lead agency may require reasonable efforts to be made to permit any or all of these resources to be preserved in place or left in an undisturbed state. Examples of that treatment, in no order of preference, may include, but are not limited to, any of the following:
 - (1) Planning construction to avoid archaeological sites.
 - (2) Deeding archaeological sites into permanent conservation easements.
 - (3) Capping or covering archaeological sites with a layer of soil before building on the sites.

- (4) Planning parks, greenspace, or other open space to incorporate archaeological sites.
- (c) To the extent that unique archaeological resources are not preserved in place or not left in an undisturbed state, mitigation measures shall be required as provided in this subdivision.
- (d) Excavation as mitigation shall be restricted to those parts of the unique archaeological resource that would be damaged or destroyed by the project.
- (e) In no event shall the amount paid by a project applicant for mitigation measures required pursuant to subdivision (c) exceed the following amounts:
- (1) An amount equal to one-half of 1 percent of the projected cost of the project for mitigation measures undertaken within the site boundaries of a commercial or industrial project.
 - (2) An amount equal to three-fourths of 1 percent of the projected cost of the project for mitigation measures undertaken within the site boundaries of a housing project consisting of a single unit.
 - (3) If a housing project consists of more than a single unit, an amount equal to three-fourths of 1 percent of the projected cost of the project for mitigation measures undertaken within the site boundaries of the project for the first unit plus the sum of the following:
 - (A) Two hundred dollars (\$200) per unit for any of the next 99 units.
 - (B) One hundred fifty dollars (\$150) per unit for any of the next 400 units.
 - (C) One hundred dollars (\$100) per unit in excess of 500 units.
- (f) Unless special or unusual circumstances warrant an exception, the field excavation phase of an approved mitigation plan shall be completed within 90 days after final approval necessary to implement the physical development of the project or, if a phased project, in connection with the phased portion to which the specific mitigation measures are applicable. However, the project applicant may extend that period if he or she so elects. Nothing in this section shall nullify protections for Indian cemeteries under any other provision of law.

Public Resources Code Section 21080.3

AB 52, signed by the California Governor in September of 2014, established a new class of resources under CEQA: "tribal cultural resources," defined in PRC Section 21074. Pursuant to PRC Sections 21080.3.1, 21080.3.2, and 21082.3, lead agencies undertaking CEQA review must, upon written request of a California Native American Tribe, begin consultation before the release of an EIR, negative declaration, or mitigated negative declaration. PRC Section 21080.3.2 states:

Within 14 days of determining that a project application is complete, or to undertake a project, the lead agency must provide formal notification, in writing, to the tribes that have requested notification of proposed projects in the lead agency's jurisdiction. If it wishes to engage in consultation on the project, the tribe must respond to the lead agency within 30 days of receipt of the formal notification. The lead agency must begin the consultation process with the tribes that have requested consultation within 30 days of receiving the request for consultation. Consultation concludes when either: 1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource, or 2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached.

If the lead agency determines that a project may cause a substantial adverse change to a tribal cultural resource, and measures are not otherwise identified in the consultation process, provisions under PRC Section 21084.3 (b) describe mitigation measures that may avoid or minimize the significant adverse impacts. Examples include:

- (1) Avoidance and preservation of the resources in place, including, but not limited to, planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
- (2) Treating the resource with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:

- (A) Protecting the cultural character and integrity of the resource
- (B) Protecting the traditional use of the resource
- (C) Protecting the confidentiality of the resource.
- (3) Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
- (4) Protecting the resource.

California Native American Historical, Cultural, and Sacred Sites Act

The California Native American Historical, Cultural, and Sacred Sites Act (PRC Section 5097.9) applies to both State and private lands. The act requires, upon discovery of human remains, that construction or excavation activity cease and that the county coroner be notified. If the remains are those of a Native American, the coroner must notify the NAHC, which notifies and has the authority to designate the most likely descendant (MLD) of the deceased. The act stipulates the procedures the descendants may follow for treating or disposing of the remains and associated grave goods.

Health and Safety Code, Sections 7050.5

Section 7050.5 of the Health and Safety Code requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If they are determined to be those of a Native American, the coroner must contact NAHC.

Public Resources Code, Section 5097

PRC Section 5097 specifies the procedures to be followed if human remains are unexpectedly discovered on nonfederal land. The disposition of Native American burial falls within the jurisdiction of NAHC. Section 5097.5 of the code states:

No person shall knowingly and willfully excavate upon, or remove, destroy, injure, or deface any historic or prehistoric ruins, burial grounds, archaeological or vertebrate paleontological site, including fossilized footprints, inscriptions made by human agency, or any other archaeological, paleontological or historical feature, situated on public lands, except with the express permission of the public agency having jurisdiction over such lands. Violation of this section is a misdemeanor.

LOCAL

City of Elk Grove General Plan

Chapter 7, "Community and Resource Protection," of the *City of Elk Grove General Plan* (City of Elk Grove 2019a) contains the following policies relevant to cultural and tribal cultural resources:

- ▶ **Policy HR-1-1:** Encourage the appropriate adaptive reuse of historic resources and buildings.
- ▶ **Policy HR-1-2:** Strive to preserve historic buildings and resources through adaptive re-use.
- ▶ **Policy HR-1-3:** Encourage efforts that prevent the misuse, disrepair, and demolition of historic resources and buildings.
- ▶ **Policy HR-2-1:** Protect and preserve prehistoric and historic archaeological resources throughout the City.
- ▶ **Policy HR 2-2:** Consult when appropriate with local Native American tribes, the California Native American Heritage Commission, and any other appropriate organizations and individuals to minimize potential impacts to cultural and tribal resources.
- ▶ **Policy HR 2-3:** Identify and evaluate local archaeological resources for inclusion in the National Register of Historic Places.
- ▶ **Policy HR 2-4:** Ensure that City ordinances, programs, and policies create an environment that fosters the preservation, rehabilitation, and maintenance of historic, archaeological, and tribal resources.

- ▶ **Policy HR 3-2:** Encourage new development to be compatible with adjacent existing historic structures in terms of scale, massing, building material, and general architectural treatment.

Old Town Special Planning Area Design Standards and Guidelines

The purpose of the *Old Town Elk Grove Special Planning Area Design Standards and Guidelines* (SPA) is to provide development regulations that are tailored to preserve the historical character and small town charm. Thus, the Old Town SPA establishes:

1. A design review process which:
 - a. Preserves the historical and cultural integrity of Old Town by guiding the architectural style of new development and the redevelopment of existing structures;
 - b. Encourages high quality land planning and architecture;
 - c. Encourages development in keeping with the desired character of the City; and
 - d. Ensures that proper attention is provided to site and architectural design, thereby fostering an environment that encourages stable growth in land values.
2. A map and table of permitted and conditionally permitted land uses which:
 - a. Enhances Old Town Elk Grove's sense of community;
 - b. Unifies Old Town's main street, Elk Grove Boulevard, by focusing on pedestrian oriented uses such as retail, restaurant, office, and services; and
 - c. Ensures physical, visual, and functional compatibility between uses.

The intent of the Old Town Elk Grove SPA's design review process is to establish discretionary review of development projects within the SPA boundaries to ensure conformance not only with the minimum standards set forth in the Title 23 of the City's Municipal Code, but also with the goals, standards, guidelines, and examples provided in the Old Town SPA. The Old Town SPA was originally created by Sacramento County in 1985. A significant update was completed by the City in August 2005, with updates in 2010, 2014, 2017, 2018, 2019, and 2021.

City of Elk Grove Municipal Code

Municipal Code Chapter 7, Historic Preservation, contains regulatory requirements to provide for "the identification, designation, protection, enhancement, perpetuation and use of historical resources including buildings, structures, objects, sites, districts, cultural landscapes, tribal cultural resources, and the historical personal histories and family stories of individuals, businesses, and associations in the City that reflect special elements of the City's heritage and cultural diversity."

The criteria for listing in the Elk Grove Register of Historic Resources are contained in Section 7.00.050 of the Municipal Code (or EGMC). A historical resource may be listed in the Elk Grove Register of Historic Resources if it meets any of the following four levels of significance within a given historic context:

1. Associated with events that have made a significant contribution to the broad patterns of Elk Grove's history;
2. Associated with the lives of persons significant in Elk Grove's past;
3. Embodies the distinctive characteristics of a type, period, or method of construction; or that represents the work of a master; or that possesses high artistic values; or that represents a significant and distinguishable entity whose components may lack individual distinction; and/or
4. Has yielded, or may be likely to yield, information noteworthy in prehistory or history.

To be listed in the Elk Grove Register of Historic Resources, resources must also retain four or more aspects of integrity outlined below:

1. Location: the place where a resource was constructed or the place where the historic event occurred.
2. Design: the combination of elements that create the form, plan, space, structure, and style of a resource.

3. Setting: the physical environment of a resource.
4. Materials: the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a resource.
5. Workmanship: the physical evidence of the crafts of a particular culture or people during any given period in history or prehistory.
6. Feeling: is a property's expression of the aesthetic or historic sense of a particular period of time.
7. Association: the direct link between an important historic event or person and a historic property.

EGMC Section 7.00.080 addresses the demolition and relocation of resources potentially eligible for historic designation and states that it shall not occur without review to determine the resource's eligibility for listing in the Elk Grove Register of Historic Resources. Additionally, no demolition or relocation of a historical resource shall be made by any person without a demolition/relocation certificate. Specifically, Section 7.00.080(B) states:

1. Demolition or relocation of historical resources shall be tied to a replacement project under concurrent review by the City of Elk Grove unless projects meet the provisions of EGMC Section 7.00.100 or 7.00.110.
2. Public Hearing. The Historic Preservation Committee shall hold a public hearing to review and consider the demolition/relocation certificate application.
3. Notice of Public Hearing. Notice of date, place, time, and purpose of the hearing shall be given by first (1st) class mail to the applicants, owners, and occupants of the property, and to property owners within five hundred (500' 0") feet of the property, at least ten (10) days prior to the date of the public hearing, using the name and address of such owners as shown on the latest equalized assessment rolls or in other ownership records, and shall be advertised once (1) in a daily newspaper of general circulation at least ten (10) days in advance of the public hearing. Failure to receive notice of such hearing shall in no way affect the validity of any action taken.
4. Approving Authority. The Historic Preservation Committee shall recommend approval or denial, with or without conditions, of all applications for certificates of demolition/relocation. If an entitlement other than or in addition to a certificate of demolition/relocation is necessary or sought for a proposed project, the approving authority shall be that body with jurisdiction over the other entitlement as set forth in the Elk Grove Municipal Code, including, but not limited to, the Zoning Code, as it now exists or is hereafter amended. When a proposed project requires more than one (1) land use or development entitlement from more than one (1) approving authority, all project entitlements shall be processed concurrently and final action shall be taken on any application for a certificate of demolition/relocation by the highest level designated approving authority for all such requested entitlements. The Director shall be the approving authority of all applications for certificates of demolition/relocation for which there is no other approving authority with jurisdiction over the project. Any decision of the Director on a certificate of demolition/relocation may be appealed to the Planning Commission. Any decision of the Planning Commission on a certificate of demolition/relocation may be appealed to the City Council, including matters heard on appeal from a decision by the Director. Any other decision by an approving authority not otherwise addressed herein may be appealed to the City Council. Any action or decision of the City Council shall be final and there shall be no further administrative appeal from the City Council decision. All appeals shall be in writing, shall state the basis of the appeal, shall be accompanied by any applicable filing fee, and shall be filed with the City Clerk within ten (10) days of the determination or action for which an appeal is made. Failure to file an appeal within the time frame and in the manner provided herein shall constitute a failure of a party to exhaust administrative remedies, and shall render the decision of the approving authority final and immune from further challenge.
5. Action by Approving Authority. The approving authority shall approve an application, disapprove it, or approve it subject to conditions. Wherever applicable, the approving authority can require the documentation of the historical resource proposed for demolition or relocation with such measures as archival-quality photographs and/or measured drawings prior to these actions. Notice of the decision shall be sent to the applicant, owners of the property, Code Enforcement, and the Building Department.

6. Findings. Demolition/relocation certificate applications for historical resources shall be approved if the project meets any of the following:
 - a. The provisions of EGMC Section 7.00.100 or 7.00.110 apply; or
 - b. The replacement project is consistent with and supportive of identified goals and policies of the General Plan or applicable specific area plans including the adopted historic district plan (if the historical resource is located within a historic district); or
 - c. The proposed action will not have a significant effect on the goals and purposes of this chapter or the potential effect is outweighed by significant benefits of the replacement project; or
 - d. In the case of relocating a contributing resource to a historic district, the integrity and significance of both the contributing resource and the entire historic district will not be significantly impaired.

3.3.2 Environmental Setting

REGIONAL PREHISTORY

Although human occupation of the Central Valley may extend back 10,000 before present (B.P.), reliable evidence of such an early human presence is lacking and may be deeply buried. The prehistoric setting can be categorized into the following periods.

The Paleo-Indian Period: The Paleo-Indian Period (12,000 to 10,500 B.P.) saw the first demonstrated entry and spread of humans into California. Characteristic artifacts recovered from archaeological sites of this time period include fluted projectile points (constructed from chipped stones that have a long groove down the center called a “flute”) and large, roughly fashioned cobble and bifacially-flaked stone tools that were used in hunting the mastodon, bison, and mammoth that roamed the land during this time.

The Lower Archaic Period: The beginning of the Lower Archaic Period (10,500 to 7500 B.P.) coincides with that of the Middle Holocene climatic change which resulted in widespread floodplain deposition. This episode resulted in most of the early archaeological deposits being buried. Most tools were manufactured of local materials, and distinctive artifact types include large dart points and the milling slab and handstone.

The Middle Archaic Period: The Middle Archaic Period (7500 to 2500 B.P.) is characterized by warm, dry conditions which brought about the drying up of pluvial lakes. Economies were more diversified and may have included the introduction of acorn processing technology, although hunting remained an important source of food. Artifacts characteristic of this period include milling stones and pestles and a continued use of a variety of implements interpreted as large dart points.

The Upper Archaic Period: The Upper Archaic Period (2500 to 850 B.P.) corresponds with a sudden turn to a cooler, wetter and more stable climate. The development of status distinctions based upon wealth is well documented in the archaeological record. The development of specialized tools, such as bone implements and stone plummets, as well as manufactured shell goods, were prolific during this time. The regional variance of economies was largely because of the seasonality of resources which were harvested and processed in large quantities.

The Emergent Period: Several technological and social changes distinguish the Emergent Period (850 B.P. to Historic) from earlier cultural manifestations. The bow and arrow were introduced, ultimately replacing the dart, and throwing spear, and territorial boundaries between groups became well established. In the latter portion of this Period (450 to 1800 B.P.), exchange relations became highly regularized and sophisticated. The clam disk bead developed as a monetary unit of exchange, and increasing quantities of goods moved greater distances. It was at the end of this Period that contact with Euroamericans became commonplace, eventually leading to intense pressures on Native American populations (Sacramento LAFCo 2017:3.5-2).

ETHNOGRAPHY

The Planning Area is located in the Plains Miwok territory. The Plains Miwok are one of four Eastern Miwok groups. Linguistically, the Plains Miwok were part of the eastern group of the two subdivisions of Miwokan speakers. Plains Miwok territory included the lower Mokelumne River, the Cosumnes River, and the Sacramento River from Rio Vista to Sacramento. The Sierra Nevada foothills formed the eastern boundary; the western boundary was between Fairfield and the Sacramento River.

The Plains Miwok were seasonal hunter-gatherers with semipermanent settlements. Their territory included a main village and smaller satellite villages. Villages were divided into tribelets, which averaged 300–500 individuals and controlled specific lands and the natural resources in the territory. The main village included a large semisubterranean or simple circular brush structure that served as the dance or assembly house. Villages also contained dwellings, acorn granaries, conical sweathouses, and winter grinding houses. Dwellings were either aboveground conical houses made with tule-matting or semisubterranean. Winter villages were located on high ridges near watercourses. Cremation, rather than interment, was practiced by the Plains Miwok.

As it was for many other Native American groups in California, the acorn was the primary food staple of the Plains Miwok, supplemented by fish, shellfish, waterfowl, and large and small mammals. Acorns were collected in the late fall/early winter and stored in the conical-shaped granaries before they were processed. Large and small animals regularly hunted by the Plains Miwok included deer, elk, pronghorn, rabbits, squirrels, beaver, and woodrats. Salmon were an important fish resource, along with sturgeon and lamprey.

The Plains Miwok used a variety of tools for hunting and collecting resources, including the bow and arrow, snares, traps, enclosures or blinds, nets, seines, hook and line, harpoons, and basketry. On navigable rivers, the principal watercraft was the tule balsa canoe. The Plains Miwok made both twined and coiled basketry and used woven burden baskets to transport seeds, roots, or nuts for processing or storage. Tools used to process food included bedrock mortars, cobblestone pestles, anvils, and portable stone mortars and pestles to grind or mill acorns and seeds. Food preparation involved use of a variety of knives, leaching and boiling baskets, woven strainers and winnowers, and woven drying trays. Earth ovens were used to bake acorn bread.

Trade goods included marine shell (*olivella* and abalone) and steatite with coastal groups; basketry from various areas; and salt and obsidian from the Sierra Nevada and Great Basin.

The Native American population in the Sacramento Valley first came into contact with Spanish explorers in the late 1700s as the Franciscan missions sought converts. Plains Miwok converts were sent to Mission San José in the early 1800s. Many labored in large ranchos awarded during the Mexican period.

During two epidemics, in 1830 and 1837, foreign diseases decimated the populations of indigenous people in the Sacramento Valley. The discovery of gold in 1848 and the ensuing Gold Rush also contributed to substantial population declines. Between 1805 and 1856, the Miwok population declined from nearly 20,000 to approximately 3,000. Surviving Miwok labored for the growing mining, ranching, farming, and lumber industries (City of Elk Grove 2018:5.5-2, 5.5-3).

HISTORIC SETTING

Regional History

Spanish exploration of the Central Valley dates to the late 1700s, but exploration of the northern section of the Central Valley and contact with its Native American population did not begin until the early 1800s, as described above. The second quarter of the nineteenth century encompasses the Mexican Period (ca. 1821-1848) in California. This period is an outgrowth of the Mexican Revolution, and its accompanying social and political views affected the mission system across California. In 1833 the missions were secularized and their lands divided among the *Californios* as land grants called *ranchos*. These ranchos facilitated the growth of a semi-aristocratic group that controlled the larger ranchos. The work on these large tracts of land was accomplished by the forced labor of local Native

Americans. The closest ranchos to the Project area are in Sacramento County near the southern boundary of Placer County. These ranchos include the Rancho de Paso, the San Juan, and the Río de los Americanos.

Simultaneously with the exploration of the Central Valley, the flanks of the Sierra Nevada trails were being blazed across the plains and mountains facilitating the westward migration of Euroamericans. These early immigrants to California are typified by groups such as the 1841 Bartleson-Bidwell party and the 1844 Stevens-Murphy party. The commencement of the Mexican-American War in 1846 also affected the exploration and development of California, including the identification of new trails across the Sierra Nevada. The exploits of the Mormon Battalion and the establishment of the Mormon Emigrant Trail across the Sierra Nevada highlight these activities.

The discovery of gold at Sutter's Mill in Coloma in 1848 was the catalyst that caused a dramatic alteration of both Native American and Euroamerican cultural patterns in California. Once news of the discovery of gold spread, a flood of Euroamericans entered the region, and gravitated to the area of the "Mother Lode." Initially, the Euroamerican population grew slowly but soon exploded as the presence of large deposits of gold was confirmed in the Sacramento area. The population of California quickly swelled from an estimated 4,000 Euroamericans in 1848 to 500,000 in 1850. Sacramento, established in 1848 by John A. Sutter, also grew in population and was incorporated as a city in 1850 (Sacramento LAFCO 2017:3.5-4).

Elk Grove History

Elk Grove first developed as a town between 1868-1892 (Early Elk Grove Historical Period) due to the construction of the Sacramento-Stockton line of the Western Pacific Railroad (later known as the Central Pacific Railroad). The railroad provided area ranchers and farmers improved access for shipping agricultural products. It also provided a central area in which to develop a downtown business district (City of Elk Grove 2016:4-7).

Beginning in 1893, Elk Grove developed its identity and character as agricultural community with solid infrastructure to support residential, commercial, industrial, and agricultural development. Municipal facilities formed, including a water company, fire department, and free library. Three waves of construction occurred after a fire in 1892: rebuilding after the fire, beginning in 1893; municipal improvements in 1910; and redevelopment in the 1920s to replace 19th century schools and churches, and build infrastructure to accommodate automobiles. The most impressive developments during this period are associated with the growth of Elk Grove's wine industry, and the increase of fruit packing and shipping. Throughout the three-decade period of 1893 to 1926 (Middle Elk Grove Historical Period), Elk Grove remained a quiet farming community, only growing from approximately 400 to 800 persons (City of Elk Grove 2016:4-11).

Restrained growth in Elk Grove between 1927 and 1945 (Late Elk Grove Historical Period) was due to the Great Depression and World War II. The two principal areas of growth during this period included industrial wine production following the repeal of Prohibition, and the development of new auto-related facilities. Modest municipal and educational facilities were also constructed. The primary historic themes and events characterizing this period include municipal and educational improvements, growth of automobile facilities, industrial wine production and wine industry consolidation, Works Progress Administration efforts, and Japanese internment and its effect on agricultural production (City of Elk Grove 2016:4-18).

Post-World War II growth (Elk Grove's Suburbanization Historical Period ([1946–1967]) in Elk Grove included construction of single-family residential subdivisions and commercial buildings. These developments catered to the dependence on automobiles in the form of sprawling subdivisions and commercial facilities ringed by parking lots. Growth was aided by the 1957 widening of Highway 99 from two to four lanes. SR 99 provided rapid access to and from Sacramento and led to sustained residential and commercial development during the 1960s and explosive growth toward the end of the 20th century. The three primary historic themes and events characterizing this period are residential suburbs and commercial growth, school development in response to the baby boom, and the decline of Elk Grove's wine production (City of Elk Grove 2016:4-23).

The Old Town Policy area encompasses the Elk Grove Historic District, which is a listed resource on the NRHP. There are 85 properties within the Elk Grove Historic District identified eligible for listing in the Elk Grove Registry as local landmark or heritage resource. Of these properties:

- ▶ 36 properties are considered individually eligible,

- ▶ 39 properties are identified as potential contributors to the Elk Grove Historic District, and
- ▶ 10 properties appear to meet criteria for local listing individually and as contributors to the Elk Grove Historic District (City of Elk Grove 2019b).

RECORDS SEARCHES AND CONSULTATION

A records search for previously recorded archaeological and historic resources was conducted at the North Central Information Center, at California State University, Sacramento, for the Existing Conditions Report for the 2016 General Plan Update. The following information was reviewed as part of the records search:

- ▶ NRHP and CRHR,
- ▶ California Office of Historic Preservation Historic Property Directory,
- ▶ California Inventory of Historic Resources,
- ▶ California State Historic Landmarks,
- ▶ California Points of Historical Interest, and
- ▶ Historic properties reference map.

Archaeological Sites

As stated in the Existing Conditions Report, 37 archeological sites were identified within the General Plan Planning Area but have not been evaluated; one archaeological site has been evaluated and determined not eligible for inclusion in the CRHR (see Table 1 in Appendix E). Because of the sensitive nature of archaeological materials, the location of these sites is not for public disclosure.

Historic-period Features

As stated in the Existing Conditions Report, 65 historic-period features within the General Plan Planning Area have been previously recorded but not evaluated for listing in the NRHP, CRHR, and/or the Elk Grove Register of Historic Resources (see Table 2 in Appendix E). An additional 188 historic-period features have been previously evaluated (see Table 3 in Appendix E); 133 of these are listed in, or recommended eligible for listing in these registers. Historic-period features that have been recommended eligible for, or listed in, any of these registers are considered "historical resources" for the purposes of CEQA.

Tribal Cultural Resources

Native American Consultation

On March 18, 2022, in compliance with AB 52 requirements, the City sent notification letters to the following 11 tribal representatives:

- ▶ Lone Band of Miwok Indians; Sara Dutschke Setshwaelo, Chairperson
- ▶ Wilton Rancheria; Jesus Tarango, Chairperson
- ▶ Wilton Rancheria; Dahlton Brown, Director of Administration
- ▶ Wilton Rancheria; Steven Hutchason, THPO
- ▶ United Auburn Indian Community of the Auburn Rancheria; Gene Whitehouse, Chairperson
- ▶ Shingle Springs Band of Miwok Indians; Regina Cuellar, Chairperson
- ▶ Buena Vista Rancheria; Rhonda Morningstar Pope, Chairperson
- ▶ Nashville Enterprise Miwok-Maidu-Nishinam Tribe; Cosme Valdez, Chairperson
- ▶ Tsi Akim Maidu; Don Ryberg, Chairperson

- ▶ Tsi Akim Maidu; Grayson Coney, Cultural Director
- ▶ Chicken Ranch Rancheria of Me-Wuk Indians; Lloyd Mathiesen, Chairperson

No responses were received during the 30-day response period for AB 52 as defined in PRC Section 21080.3.2. However, through work on other development projects, the City is aware of one previously recorded resource, P-24-005225, that has been identified as a tribal cultural resource. P-24-5225 is a tribal cultural landscape identified by contemporary Nisenan as Hoyo Sayo/Tah Sayo and contemporary Plains Miwok as Wake-ce/Waka-Ly. The resource is defined by an approximately 55-mile-long corridor of the Lower Sacramento River. According to the documentation for the resource, the tribal cultural landscape is a culturally significant natural landscape for its association with the cultural practices and beliefs of the Nisenan and Plains Miwok, maintaining the continuing cultural identity of the living descendants and contributing to the broader patterns of prehistory. The feature is described as a landscape encompassing waterways, tule habitat, fisheries, and other wildlife from approximately Knights Landing in the north to approximately Sherman Island in the south. It has been recommended that this feature be eligible for listing in the NRHP under Criterion A (InContext 2020).

3.3.3 Impacts and Mitigation Measures

METHODOLOGY

This analysis identifies the potential impacts of implementation of the Project on archaeological, historical, and tribal cultural resources within the City and its Planning Area. This analysis is based on a review of the General Plan EIR and is also informed by the provisions and requirements of federal, state, and local laws and regulations that apply to cultural resources. The impact analysis considers the known archaeological, historical, and tribal cultural resource environmental setting in the area, as well as the potential for previously undocumented resources, including human remains, and physical effects (i.e., disturbance, material alteration, demolition) to known and previously undocumented cultural resources that could result from implementation of the Project.

PRC Section 21083.2(g) defines a “unique archaeological resource” as an archaeological artifact, object, or site about which it can be clearly demonstrated that, without merely adding to the current body of knowledge, there is a high probability that it meets one or more of the following CRHR-related criteria: (1) that it contains information needed to answer important scientific research questions and that there is a demonstrable public interest in that information; (2) that it has a special and particular quality, such as being the oldest of its type or the best available example of its type; or (3) that it is directly associated with a scientifically recognized important prehistoric or historic event or person. An impact on a resource that is not unique is not a significant environmental impact under CEQA (State CEQA Guidelines Section 15064.5[c][4]). If an archaeological resource qualifies as a resource under CRHR criteria, then the resource is treated as a unique archaeological resource for the purposes of CEQA.

PRC Section 21074 defines “tribal cultural resources” as “sites, features, places, cultural landscapes, sacred places, and objects with cultural value to a California Native American tribe” that are listed or determined eligible for listing in the CRHR, listed in a local register of historical resources, or otherwise determined by the lead agency to be a tribal cultural resource.

For the purposes of the impact discussion, “historical resource” is used to describe built-environment historic-period resources. Archaeological resources (both prehistoric and historic-period), which may qualify as “historical resources” pursuant to CEQA, are analyzed separately from built-environment historical resources.

THRESHOLDS OF SIGNIFICANCE

Based on Appendix G of the State CEQA Guidelines, the Project would result in a significant impact on cultural resources if it would:

- ▶ cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5 of the State CEQA Guidelines;
- ▶ cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5 of the State CEQA Guidelines;
- ▶ cause a substantial adverse change in the significance of a tribal cultural resource, defined in PRC Section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe; or
- ▶ disturb any human remains, including those interred outside of dedicated cemeteries.

ISSUES NOT DISCUSSED FURTHER

All potential archaeological, historical, and tribal cultural resources issues identified in the significance criteria are evaluated below.

The purpose of the Project is to amend the City's General Plan land use designations to support residential and commercial growth in Elk Grove, specifically in the LEA Community Plan Area, Old Town Policy Area, and West and South Study Areas. The Project would develop the framework for walkable communities with amenities, such as commercial businesses. The update to the City's VMT thresholds would not result in physical development and therefore does not have the potential to trigger cultural resource impacts and this issue is not discussed further in this SEIR.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.3-1: Cause a Substantial Adverse Change in the Significance of a Historical Resource

General Plan EIR Impact 5.5.1 determined that implementation of the General Plan could result in impacts to historical resources and identified that implementation of Mitigation Measure MM 5.5.1a and MM 5.5.1b would reduce this impact to a less-than-significant level. Future development associated with the Project could be located on properties that contain previously unevaluated historic-age buildings or structures which could result in damage to or destruction to these features. If they are found to be eligible for listing in the NRHP, CRHR, or the Elk Grove Register of Historic Resources, the impact to historical resources would be potentially significant. All projects within the City would be subject to adopted General Plan Mitigation Measure MM 5.5.1a and MM 5.5.1b. As part of the Project adopted Mitigation Measures MM 5.5.1a and MM 5.5.1b would be modified to provide additional clarity and separate the requirements and procedures for historical resources from archaeological resources. Therefore, there is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR. The Project would remain a **less-than-significant** impact to historical resources.

Proposed Changes to Adopted General Plan Mitigation Measure MM 5.5.1b

The Project includes revisions to adopted Mitigation Measure MM 5.5.1a and MM 5.5.1b to clearly separate the requirements and procedures for historical resources from archaeological resources. Proposed revisions to Mitigation Measure MM 5.5.1b addresses historical resources, and are consistent with Chapter 7 of the Elk Grove Municipal Code. All development projects within the City would be subject to adopted Mitigation Measure MM 5.5.1b, as revised, which requires that future projects complete historical resource studies to identify resources, evaluate potential effects, and develop appropriate mitigation. Proposed revisions to Mitigation Measure MM 5.5.b are shown below with added language underlined.

Mitigation Measure MM 5.5.1b

As part of the development review process for projects involving modification to existing buildings and structures, require all affected buildings and structures over 50 years of age to be evaluated for historical significance, using the significance criteria set forth for historic resources under CEQA Guidelines Section 15064.5, which are also the criteria for listing in the Elk Grove Register of Historic Resources, contained in Section 7.00.050 of the Municipal Code. For buildings or structures that do not meet the CEQA criteria for historical resource, no further mitigation is required.

If the building or structure can be preserved on site, but remodeling, renovation or other alterations are required, this work shall be conducted in compliance with the "Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings" (Weeks and Grimmer 1995).

If a significant historic building or structure is proposed for demolition, the City shall ensure that a qualified architectural historian thoroughly documents the building and associated landscaping, if applicable, and setting. Documentation shall be to the applicable level (short form, Level I, Level II, or Level III) of Historic American Building Survey or Historic American Engineering Record documentation. This is consistent with Section 7.00.080(B)(5) of the Elk Grove Municipal Code. A copy of the record shall be deposited with the City, Elk Grove Historical Society, and the North Central Information Center, at minimum. The record shall be accompanied by a report containing site-specific history and appropriate contextual information.

Subsequent projects under the General Plan would be subject to adopted Mitigation Measure MM 5.5.1b, as revised, which would avoid potential impacts to historical resources. This mitigation measure would be implemented through subsequent development application submittals to the City for design review that include buildings and structures over 50 years of age and identification of measures to mitigate significant historic resource impacts. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR. With implementation of General Plan revised Mitigation Measure MM 5.5.1b, the Project would result in a **less-than-significant** impact to historical resources.

LEA Community Plan Area

The majority of the LEA Community Plan Area is currently designated by the General Plan for low and high-density residential, light industrial, or park and recreation uses. Implementation of the Project would result in changes to the land use designations of the LEA Community Plan Area that would accommodate increased development densities and intensities, as described in Chapter 2, "Project Description," to support multi-family and mixed-use development along urban economic centers. Future development could be located on properties that contain previously unevaluated historic-age buildings or structures that could be eligible for listing in the NRHP, CRHR, or the Elk Grove Register of Historic Resources. However, implementation of the LEA Community Plan and the associated policies would not expand the development/disturbance footprint beyond what was addressed in the impact analysis of the General Plan EIR.

Historical resources include standing buildings (e.g., houses, barns, cabins) and intact structures (e.g., dams, bridges, water conveyance systems). Historical resources dating to Elk Grove's historic periods are important to identify and protect. Resource types from the early Elk Grove historical period (1868-1892), middle Elk Grove historical period (1893-1926), late Elk Grove historical period (1927-1945), and Elk Grove's suburbanization historical period (1946-1967) include early ranches, transportation features, cemeteries, and agricultural, residential, educational, commercial, industrial, social, and municipal properties.

Development under the Project could result in damage to or destruction of a building or structure that has not yet been evaluated for historical significance. Future development associated with the Project could be located on properties that contain previously unevaluated historic-age buildings or structures, as described above, which could result in damage to or destruction to historic features if they are found to be eligible for listing in the NRHP, CRHR, or the Elk Grove Register of Historic Resources.

Impact 5.5.1 of the General Plan EIR evaluated the potential for implementation of the General Plan to result in impacts to historical resources. This impact was determined to be potentially significant, however implementation of

Mitigation Measure 5.5.1a and General Plan Policy HR-2-1 that requires the protection and preservation of historic resources would reduce the impact to a less-than-significant level.

Portions of the LEA Community Plan Area have been previously analyzed in certified CEQA documents for the following projects: Southeast Policy Area Strategic Plan, Laguna Ridge Specific Plan, and Lent Ranch Marketplace Specific Plan. Mitigation measures from these CEQA documents, as shown in Appendix G, include requirements to preserve and protect historic resources. This included further evaluation of potential historic structures at 8533 and 8551 Poppy Ridge Road (Laguna Ridge Specific Plan adopted Mitigation Measure MM 4.10.2) as well as potential historic structures at 7809 and 8011 Kammerer Road (Southeast Policy Area Strategic Plan adopted Mitigation Measure MM 5.5.1d). These sites are located outside of the LEA Community Plan Area. As identified above, revised Mitigation Measure MM 5.5.1b contains the same performance standards and is equivalent in effectiveness as mitigation contained in the prior environmental documents. This mitigation measure is consistent with and helps to implement the requirements of Elk Grove Municipal Code Chapter 7.00, Historic Preservation. Revised Mitigation Measure MM 5.5.1b would be applied to the LEA Community Plan Area and no application of previously adopted mitigation measures for the projects identified above is required. Any existing structures within the LEA Community Plan would be subject to this Mitigation Measure prior to approval of any subsequent approvals. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR. With implementation of General Plan revised Mitigation Measure MM 5.5.1b, impacts to historical resources would remain **less-than-significant**.

General Plan Land Use Designation Amendments

The magnitude of development and potential for damage to or destruction of historical resources anticipated from the proposed General Plan land use amendments in the Old Town Policy Area is included in the overall development associated with the Project. As discussed above under LEA Community Plan, impacts related to the damage to, or destruction of historical resources would remain **less than significant** with implementation of Mitigation Measure 5.5.1b. Additionally, the Old Town Elk Grove SPA Design Standards and Guidelines establishes a process for review of development projects within the Old Town Policy Area to preserve the historical integrity of the area. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

Grant Line Road Precise Roadway Study

The Precise Study was prepared to analyze potential geometric layouts along Grant Line Road. Buildout of roadway configurations, including all alternatives of the Precise Study, would result in the same potential to damage to or destroy historical resources as those anticipated from the build out of the LEA Community Plan as discussed above. Therefore, there would remain a **less-than-significant** impact with implementation of revised Mitigation Measure MM 5.5.1b from development of the Precise Study. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

South and West Study Areas

The magnitude of development and potential for damage to or destruction of historical resources anticipated within the South and West Study Areas is included in the overall development associated with the Project. As discussed above under LEA Community Plan, impacts related to the damage to, or destruction of historical resources would remain **less than significant** with implementation of revised Mitigation Measure MM 5.5.1b. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

Mitigation Measures

No new mitigation is required beyond compliance with General Plan Policy HR-2-1 and implementation of adopted General Plan Mitigation Measure MM 5.5.1b, as revised.

Impact 3.3-2: Cause a Substantial Adverse Change in the Significance of Unique Archaeological Resources

General Plan EIR Impact 5.5.1 determined that implementation of the General Plan could result in significant impacts to archaeological resources and identified that implementation of Mitigation Measures 5.5.1a and 5.5.1b would reduce this impact to a less-than-significant level. Future development associated with the Project could be located on properties that contain known or unknown archaeological resources and ground-disturbing activities could result in discovery or damage of yet undiscovered archaeological resources as defined in CEQA Guidelines Section 15064.5. This would be a potentially significant impact. However, all projects within the City would be subject to adopted General Plan Mitigation Measure MM 5.5.1a. As part of the Project adopted Mitigation Measure MM 5.5.1a would be modified to provide additional clarity and separate the requirements and procedures for archaeological resources from historical resources. Therefore, there is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR. The Project would remain a **less-than-significant** impact to archaeological resources.

Proposed Changes to Adopted General Plan Mitigation Measure MM 5.5.1b

The Project includes revisions to adopted Mitigation Measure MM 5.5.1a (and merging of MM 5.5.1a and 5.5.1b) to clearly separate the steps for archaeological resources from historical resources. Revised Mitigation Measure MM 5.5.1a addresses archaeological resources and outlines investigation levels and steps based on archaeological sensitivity and level of ground disturbance. All development projects within the City would be subject to adopted Mitigation Measure MM 5.5.1a, as revised.

Mitigation Measure MM 5.5.1a(1) addresses the potential for encountering undiscovered cultural resources. Mitigation Measure MM 5.5.1a(2) requires that future projects complete archaeological studies to identify cultural resources, evaluate potential effects, and develop appropriate mitigation. Mitigation Measure MM 5.5.1a(3) requires the preparation of a Worker Environmental Awareness Program. Revised Mitigation Measure MM 5.5.1a is show below with changes shown in ~~strikeout~~ and underline.

Mitigation Measure MM 5.5.1a

Prior to the approval of subsequent development projects in the Planning Area, the City shall determine the level of archaeological sensitivity based on the previously prepared confidential archaeological sensitivity map, in combination with the level of previous disturbance of the project area and anticipated level of ground disturbance, as shown below.

	<u>Developed, proposed ground disturbance less than 24"</u>	<u>Not previously developed, proposed ground disturbance less than 24"</u>	<u>Developed, proposed ground disturbance more than 24"</u>	<u>Not previously developed, proposed ground disturbance below 24"</u>
<u>low area of archaeological sensitivity</u>	<u>minimum investigation</u>	<u>minimum investigation</u>	<u>minimum investigation</u>	<u>moderate investigation</u>
<u>medium area of archaeological sensitivity</u>	<u>minimum investigation</u>	<u>moderate investigation</u>	<u>moderate investigation</u>	<u>intensive investigation</u>
<u>high area of archaeological sensitivity</u>	<u>moderate investigation</u>	<u>intensive investigation</u>	<u>intensive investigation</u>	<u>intensive investigation</u>

- ▶ Minimum Investigation: Implement Mitigation Measure 5.5-1a(1).
- ▶ Moderate Investigation: Implement Mitigation Measure 5.5-1a(1) and (2).
- ▶ Intensive Investigation: Implement Mitigation Measure 5.5-1a(1), (2), and (3).

Mitigation Measure 5.5.1b

- 1) Unless the project qualifies for part (2) below, no cultural resources study shall be required as part of the project consideration. If ~~cultural resources~~ archaeological materials or tribal cultural resources are

discovered during grading or construction activities within the project site Planning Area, work shall halt immediately within 50 feet of the discovery, the Planning Division Department shall be notified, and a qualified professional shall be retained. As related to archaeological materials, a professional archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards in archaeology shall be retained to determine the significance of the discovery. As related to tribal cultural resources, a "qualified professional" consists of the geographically and culturally affiliated tribe.

If resources are determined to be potentially significant, the City shall require the preparation of a treatment plan and report of findings for cultural archaeological and tribal cultural resources by a qualified professional. The City and the applicant shall consult and agree to implement all measures the City deems feasible. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. The applicant shall be required to implement measures necessary for the protection and documentation of cultural archaeological and tribal cultural resources.

- 2) A detailed cultural resources study of the subject property shall be conducted by either the City or the applicant and then peer reviewed by the City. The report shall include a records search of the North Central Information Center, the Native American Heritage Commission, tribal outreach, and a pedestrian field survey. The cultural resources study shall identify, evaluate, and mitigate impacts to archaeological and tribal cultural resources as defined by CEQA and/or the NHPA. Mitigation methods to be employed include, but are not limited to, the following:
 - ▶ Redesign of the project to avoid the resource. The resource site shall be deeded to a nonprofit agency to be approved by the City for maintenance of the site.
 - ▶ If avoidance is determined to be infeasible by the City, the resource shall be mapped, stabilized, and capped pursuant to appropriate standards.
 - ▶ If capping is determined infeasible by the City, the resource shall be recovered to appropriate standards.
- 3) Prior to the start of any ground disturbing activities, a qualified archaeologist meeting the United States Secretary of Interior guidelines for professional archaeologists shall be retained to develop a construction worker awareness brochure. This brochure shall be distributed to all construction personnel and supervisors who will have the potential to encounter cultural resources. The topics to be addressed in the Worker Environmental Awareness Program will include, at a minimum:
 - ▶ types of cultural resources expected in the project area;
 - ▶ what to do if a worker encounters a possible resource;
 - ▶ what to do if a worker encounters bones or possible bones; and
 - ▶ penalties for removing or intentionally disturbing cultural resources, such as those identified in the Archeological Resources Protection Act.

Subsequent projects under the General Plan would be subject to adopted General Plan Mitigation Measure MM 5.5.1a, as revised, which would avoid potential impacts to archaeological resources. This mitigation measure would be implemented through subsequent development application submittals to the City for design review that include archaeological evaluations and identification of measures to address archaeological resource impacts. As identified above, these changes to the mitigation measure would retain and expand the performance standards of the previous mitigation measure to protect archaeological resources. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR. With implementation of General Plan revised Mitigation Measure MM 5.5.1a, the Project would result in a **less-than-significant** impact to archaeological resources.

LEA Community Plan Area

The majority of the LEA Community Plan Area is currently designated under the General Plan for low and high-density residential, office, light industrial, and retail uses. Implementation of the Project would result in changes to the

land use designations of the LEA Community Plan Area that would accommodate increased development densities and intensities, as described in Chapter 2, "Project Description," to support multi-family and mixed-use development along urban economic centers. Construction of these uses would include ground-disturbing construction activities that could damage archaeological resources. However, implementation of the LEA Community Plan and the associated policies would not expand the development/disturbance footprint beyond what was addressed in the impact analysis of the General Plan EIR.

The Project is located in a region where prehistoric and historic-period archaeological resources have been recorded and there remains a potential that undocumented resources could be unearthed or otherwise discovered during ground-disturbing and construction activities. Prehistoric or ethnohistoric materials might include flaked stone tools, tool-making debris, stone milling tools, shell or bone items, and fire-affected rock or soil darkened by cultural activities (midden); examples of significant discoveries would include villages and cemeteries. Historic-period materials might include metal, glass, or ceramic artifacts; examples of significant discoveries might include former privies or refuse pits. Development under the Project would result in soil disturbance and because of the possible presence of undocumented archaeological resources within the Project site, which could destroy or damage resources.

Impact 5.5.1 of the General Plan EIR evaluated the potential for implementation of the General Plan to result in impacts to archaeological resources. This impact was determined to be potentially significant, however implementation of Mitigation Measures MM 5.5.1a and MM 5.5.1b would reduce the impact to a less-than-significant level.

Portions of the LEA Community Plan Area have been previously analyzed in certified CEQA documents for the following projects: Southeast Policy Area Strategic Plan, Laguna Ridge Specific Plan, and Lent Ranch Marketplace Specific Plan. Mitigation measures from these CEQA documents, as shown in Appendix G, include requirements to preserve and protect archaeological resources. Mitigation Measure MM 5.5.1a contains the same performance standards and is equivalent in effectiveness as mitigation contained in the prior environmental documents. Mitigation Measure MM 5.5.1a would be applied to the LEA Community Plan Area and no application of previously adopted mitigation measures for the projects identified above is required. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR. With implementation of adopted General Plan Mitigation Measure MM 5.5.1a, as revised, the Project would remain a **less-than-significant** impact to archaeological resources.

General Plan Land Use Designation Amendments

The magnitude of ground disturbance and potential to disturb archaeological resources anticipated from the proposed General Plan land use amendments in the Old Town Policy Area is included in the overall development associated with the Project. As discussed above under LEA Community Plan, impacts related to the disturbance of archaeological resources would remain **less than significant** with implementation of revised Mitigation Measure MM 5.5.1a. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

Grant Line Road Precise Study

The Precise Plan was prepared to analyze potential geometric layouts along Grant Line Road. Buildout of roadway configurations, including all alternatives of the Precise Plan, would result in the same potential to disturb archaeological resources as those anticipated from the build out of the LEA Community Plan as discussed above. Therefore, there would remain a **less-than-significant** impact from development of the Precise Plan with implementation of revised Mitigation Measure MM 5.5.1a. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

South and West Study Areas

The magnitude of ground disturbance and potential to disturb archaeological resources anticipated within the South and West Study Areas is included in the overall development associated with the Project. As discussed above under LEA Community Plan, impacts to the disturbance of archaeological resources would remain **less than significant** with implementation of revised Mitigation Measure MM 5.5.1a. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

Mitigation Measures

No new mitigation is required beyond implementation of adopted General Plan EIR Mitigation Measure MM 5.5.1a, as revised.

Impact 3.3-3: Cause a Substantial Adverse Change in the Significance of a Tribal Cultural Resource

No California Native American tribes responded to AB 52 notification letters, however, one tribal cultural resource is known to exist in the Planning Area. It is possible that additional tribal cultural resources could be identified during analysis of subsequent projects associated with the Project. General Plan EIR Impact 5.5.1 determined that implementation of the General Plan could result in impacts to tribal cultural resources and identified that implementation of Mitigation Measures 5.5.1a and 5.5.1b would be required. However, compliance with PRC Section 21080.3.2 and Section 21084.3 (a) would reduce this impact to less than significant. Therefore, there is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR. The Project would continue to result in a **less-than-significant** impact to tribal cultural resources.

LEA Community Plan Area

The majority of the LEA Community Plan Area is currently designated by the General Plan for low and high-density residential, light industrial, office, and retail uses. Implementation of the Project would result in changes to the land use designations of the LEA Community Plan Area that would accommodate increased development densities and intensities, as described in Chapter 2, "Project Description," to support multi-family and mixed-use development along urban economic centers. Construction of these uses would include ground-disturbing construction activities that could damage tribal cultural resources. However, implementation of the LEA Community Plan and the associated policies would not expand the development/disturbance footprint beyond what was addressed in the impact analysis of the General Plan EIR.

Impact 5.5.1 of the General Plan EIR evaluated the potential for implementation of the General Plan to result in impacts to tribal cultural resources. During the General Plan EIR process, the City also developed a sensitivity map in coordination with consulting tribes. This confidential map identifies areas of low, medium, and high areas of archaeological sensitivity throughout the Planning Area. The impact was determined to be potentially significant and required the implementation of Mitigation Measures 5.5.1a and 5.5.1b. However, this mitigation is not required because compliance with PRC Section 21080.3.2 and Section 21084.3 (a) would provide the same level of protection for tribal cultural resources as proposed mitigation.

As detailed above, the City of Elk Grove sent letters to 11 tribal representatives in compliance with AB 52. No response was received during the 30-day response period for AB 52 as defined in PRC Section 21080.3.2. This attempt at consultation resulted in the identification of no resources in the General Plan Planning Area considered to be tribal cultural resources as described under AB 52 and defined in PRC Section 21074. However, as described above, P-24-005225 was identified during previous development projects. The setting (landscape) has been heavily altered over the past century, but it still retains enough of the character-defining elements (waterways, tule, fisheries, and other wildlife) to convey the significance of this resource (InContext 2020). It should be noted that within the developed areas of the General Plan Planning Area, the primary attributes of this tribal cultural resources landscape (i.e., waterways, tule habitat, fisheries, and other wildlife) do not occur. The LEA Community Plan Area is also located outside of the boundaries of the P-24-005225.

Nevertheless, it is possible that subsequent discretionary projects upon annexation to the City of Elk Grove may be required to prepare site-specific project-level analysis to fulfill CEQA requirements, which may include additional AB 52 consultation that could lead to the identification of tribal cultural resources.

California law recognizes the need to identify and protect tribal cultural resources; the procedures for the treatment of Native American resources are contained in California PRC 21081.3.1.

- ▶ Within 14 days of determining that a project application is complete, or to undertake a project, the lead agency must provide formal notification, in writing, to the tribes that have requested notification of proposed projects in the lead agency's jurisdiction. If it wishes to engage in consultation on the project, the tribe must respond to the lead agency within 30 days of receipt of the formal notification. The lead agency must begin the consultation

process with the tribes that have requested consultation within 30 days of receiving the request for consultation. Consultation concludes when either: 1) the parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource, or 2) a party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached.

- ▶ Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource (PRC Section 21084.3 (a)). If the lead agency determines that a project may cause a substantial adverse change to a tribal cultural resource, and measures are not otherwise identified in the consultation process, new provisions in the PRC describe mitigation measures that, if determined by the lead agency to be feasible, may avoid or minimize the significant adverse impacts (PRC Section 21084.3 (b)). Examples include:
 1. Avoidance and preservation of the resources in place, including, but not limited to, planning and construction to avoid the resources and protect the cultural and natural context, or planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
 2. Treating the resource with culturally appropriate dignity taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
 - (A) Protecting the cultural character and integrity of the resource
 - (B) Protecting the traditional use of the resource
 - (C) Protecting the confidentiality of the resource.
 3. Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
 4. Protecting the resource.

Compliance with California PRC 21080.3.1 would provide an opportunity to avoid or minimize the disturbance of previously unknown tribal cultural resources, and to appropriately treat any that are discovered. Therefore, there is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR. This impact would remain **less than significant**.

General Plan Land Use Designation Amendments

The magnitude of ground disturbance and potential to disturb tribal cultural resources anticipated from the proposed General Plan land use amendments in the Old Town Policy Area is included in the overall development associated with the Project. As discussed above under LEA Community Plan, impacts related to the disturbance of tribal cultural resources would remain **less than significant**. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

Grant Line Road Precise Roadway Study

The Precise Study was prepared to analyze potential geometric layouts along Grant Line Road. Buildout of roadway configurations, including all alternatives of the Precise Plan, would result in the same potential to disturb tribal cultural resources as those anticipated from the build out of the LEA Community Plan as discussed above. Therefore, the impact from development of the Precise Study would remain **less-than-significant**. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

South and West Study Areas

The magnitude of ground disturbance and potential to disturb tribal cultural resources anticipated within the South and West Study Areas is included in the overall development associated with the Project. As discussed above under LEA Community Plan, impacts to the disturbance of tribal cultural resources would remain **less than significant**. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

Mitigation Measures

No additional mitigation is required beyond compliance with California PRC 21081.3.

Impact 3.3-4: Disturb Human Remains

It is possible that ground-disturbing construction activities associated with the Project could uncover previously unknown human remains. General Plan EIR Impact 5.5.1 determined that implementation of the General Plan could result in impacts to the disturbance of human remains and identified that implementation of Mitigation Measure MM 5.5.1b would be required. However, compliance with California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097 would reduce this impact less than significant. Therefore, there is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR. The Project would continue to result in a **less-than-significant** impact to human remains.

LEA Community Plan Area

The majority of the LEA Community Plan Area is currently designated by the General Plan for low and high-density residential, light industrial, office, and retail uses. Implementation of the Project would result in changes to the land use designations of the LEA Community Plan Area that would accommodate increased development densities and intensities, as described in Chapter 2, "Project Description," to support multi-family and mixed-use development along urban economic centers. Construction of development proposed in the LEA Community Plan Area would include ground-disturbing construction activities that could uncover previously unknown human remains. However, implementation of the LEA Community Plan and the associated policies would not expand the development/disturbance footprint beyond what was addressed in the impact analysis of the General Plan EIR.

The Plains Miwok have historically occupied the lands of the General Plan Planning Area. Because the location of grave sites and Native American remains can occur outside of identified cemeteries or burial sites, there is a possibility that unmarked, previously unknown Native American or other graves could be present within the LEA Community Plan Area and could be uncovered by Project-related construction activities.

Impact 5.5.1 of the General Plan EIR evaluated the potential for implementation of the General Plan to result in impacts to human remains. This impact was determined to be potentially significant and required the implementation of Mitigation Measure MM 5.5.1b. However, this mitigation is no longer required because compliance with California Health and Safety Code Section 7050.5 and California PRC Section 5097 would provide the same level of protection for human remains. Implementation of proposed revisions to General Plan Mitigation Measure 5.5.1a would also address discovery of human remains that would trigger actions under Health and Safety Code Section 7050.5 and California PRC Section 5097.

California law recognizes the need to protect Native American human burials, skeletal remains, and items associated with Native American burials from vandalism and inadvertent destruction. The procedures for the treatment of Native American human remains are contained in California Health and Safety Code Section 7050.5 and California PRC Section 5097.

These statutes require that, if human remains are discovered, potentially damaging ground-disturbing activities in the area of the remains shall be halted immediately, and the appropriate County coroner shall be notified immediately. If the remains are determined by the coroner to be Native American, NAHC shall be notified within 24 hours and the guidelines of the NAHC shall be adhered to in the treatment and disposition of the remains. Following the coroner's findings and recommendations of the NAHC-designated Most Likely Descendant, the landowner shall determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments, if present, are not disturbed. The responsibilities for acting upon notification of a discovery of Native American human remains are identified in PRC Section 5097.94.

Portions of the LEA Community Plan Area have been previously analyzed in certified CEQA documents for the following projects: Southeast Policy Area Strategic Plan, Laguna Ridge Specific Plan, and Lent Ranch Marketplace Specific Plan. Mitigation measures from these CEQA documents, as shown in Appendix G, include requirements to address and protect discovered human remains. These mitigation measures use and refer to the standards set forth

in Health and Safety Code Section 7050.5 and California PRC Section 5097. Compliance with California Health and Safety Code Section 7050.5 and California Public Resources Code Section 5097 as well as implementation of revised General Plan Mitigation Measure 3.5.1a would avoid or minimize the disturbance of human remains, and to appropriately treat any remains that are discovered. No application of previously adopted mitigation measures for the projects identified above is required. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR. Impacts would remain **less than significant**.

General Plan Land Use Designation Amendments

The magnitude of ground disturbance and potential to disturb human remains anticipated from the proposed General Plan land use amendments in the Old Town Policy Area is included in the overall development associated with the Project. As discussed above under LEA Community Plan, impacts related to the disturbance of human remains would remain **less than significant**. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

Grant Line Road Precise Roadway Study

The Precise Study was prepared to analyze potential geometric layouts along Grant Line Road. Buildout of roadway configurations, including all alternatives of the Precise Study, would result in the same potential to disturb human remains as those anticipated from the build out of the LEA Community Plan as discussed above. Therefore, there would be remain **less-than-significant** impact from development of the Precise Plan. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

South and West Study Areas

The magnitude of ground disturbance and potential to disturb human remains anticipated within the South and West Study Areas is included in the overall development associated with the Project. As discussed above under LEA Community Plan, impacts related to the disturbance of human remains would remain **less than significant**. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

Mitigation Measures

No additional mitigation is required beyond compliance with California Health and Safety Code Section 7050.5 and California PRC Section 5097.

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3.4 ENERGY

This section evaluates whether implementing the Project would result in an environmental impact related to the inefficient, wasteful, or unnecessary consumption of energy and evaluates the Project's consistency with applicable plans related to energy conservation or renewable energy. The capacity of existing and proposed infrastructure to serve the Project is evaluated in Section 3.14, "Utilities and Service Systems." The primary source of information used for this analysis is the General Plan EIR (City of Elk Grove 2018, 2019).

No comments pertaining to energy were received in response to the notice of preparation (NOP).

3.4.1 Regulatory Setting

Energy conservation is embodied in many federal, State, and local statutes and policies. At the federal level, energy standards apply to numerous products (e.g., the US Environmental Protection Agency's [EPA's] EnergyStar™ program) and transportation (e.g., fuel efficiency standards). At the State level, Title 24 of the California Code of Regulations (CCR) sets forth energy standards for buildings. Further, the state provides rebates and tax credits for installing renewable energy systems, and its Flex Your Power program promotes conservation in multiple areas. At the local level, individual cities and counties establish policies in their general plans and climate action plans related to the energy efficiency of new development and land use planning and related to the use of renewable energy sources.

FEDERAL

Energy Policy and Conservation Act and CAFE Standards

The Energy Policy and Conservation Act of 1975 established nationwide fuel economy standards to conserve oil. Pursuant to this act, the National Highway Traffic and Safety Administration, part of the US Department of Transportation (DOT), is responsible for revising existing fuel economy standards and establishing new vehicle economy standards.

The corporate average fuel economy (CAFE) program was established to determine vehicle manufacturer compliance with the government's fuel economy standards. Compliance with the CAFE standards is determined based on each manufacturer's average fuel economy for the portion of their vehicles produced for sale in the U.S. EPA calculates a CAFE value for each manufacturer based on the city and highway fuel economy test results and vehicle sales. The CAFE values are a weighted harmonic average of the EPA city and highway fuel economy test results. Based on information generated under the CAFE program, DOT is authorized to assess penalties for noncompliance. Under the Energy Independence and Security Act of 2007 (described below), the CAFE standards were revised for the first time in 30 years.

On August 2, 2018, the National Highway Traffic Safety Administration (NHTSA) and EPA proposed the Safer Affordable Fuel-Efficient Vehicles Rule (SAFE Rule) (49 Code of Federal Regulations [CFR] 523, 531, 533, 536, 537 and 40 CFR 85 and 86). The final SAFE Rule was signed on March 30, 2020. On April 2, 2018, however, the EPA administrator announced a final determination that the current standards should be revised. On that date, DOT and EPA proposed the Safer Affordable Fuel-Efficient Vehicles Rule (SAFE Rule), which would amend existing CAFE standards for passenger cars and light-duty trucks by increasing the stringency of the standards by 1.5 percent per year from models 2021 through 2026. With a change in federal administrations in early 2021, the SAFE Rule is now being reconsidered. On April 26, 2021, as directed in Executive Order 13990, "Protecting Public Health and the Environment and Restoring Science to Tackle the Climate Crisis," EPA announced plans to reconsider Part One of the SAFE Rule. EPA sought public input on its reconsideration of the action. Public comments to the Notice of Reconsideration closed on June 6, 2021, and a public hearing was held on June 2, 2021 (EPA 2022). On December 21, 2021, the NHTSA published its CAFE Preemption Rule, which finalizes the repeal of the SAFE Rule Part 1.

Energy Policy Act of 1992 and 2005

The Energy Policy Act of 1992 (EPAct) was passed to reduce the country's dependence on foreign petroleum and improve air quality. The EPAct includes several parts intended to build an inventory of alternative fuel vehicles (AFVs) in large, centrally fueled fleets in metropolitan areas. The EPAct requires certain federal, state, and local government and private fleets to purchase a percentage of light-duty AFVs capable of running on alternative fuels each year. In addition, financial incentives are also included in the EPAct. Federal tax deductions are allowed for businesses and individuals to cover the incremental cost of AFVs. States are also required by the act to consider a variety of incentive programs to help promote AFVs. The Energy Policy Act of 2005 provides renewed and expanded tax credits for electricity generated by qualified energy sources, such as landfill gas; provides bond financing, tax incentives, grants, and loan guarantees for clean renewable energy and rural community electrification; and establishes a federal purchase requirement for renewable energy.

Energy Independence and Security Act of 2007

The Energy Independence and Security Act of 2007 is designed to improve vehicle fuel economy and help reduce U.S. dependence on oil. It represents a major step forward in expanding the production of renewable fuels, reducing dependence on oil, and confronting global climate change. The Energy Independence and Security Act of 2007 increases the supply of alternative fuel sources by setting a mandatory Renewable Fuel Standard requiring fuel producers to use at least 36 billion gallons of biofuel in 2022, which represents a nearly fivefold increase over current levels. It also reduces U.S. demand for oil by setting a national fuel economy standard of 35 miles per gallon by 2020—an increase in fuel economy standards of 40 percent.

By addressing renewable fuels and the CAFE standards, the Energy Independence and Security Act of 2007 builds upon progress made by the Energy Policy Act of 2005 in setting out a comprehensive national energy strategy for the 21st century; however, in August of 2018, the NHTSA and EPA proposed the SAFE Vehicles Rule for Model Years 2021–2026 Passenger Cars and Light Trucks, which, if adopted, would decrease the stringency of CAFE standards. The Proposed Rule would maintain the existing standards until 2020 with a zero percent increase in fuel efficiency until 2026. Part One of the SAFE Rule, which became effective on November 26, 2019, revokes the federal Clean Air Act waiver that California obtains from EPA to set more stringent fuel economy standard. At the time of preparing this environmental document, the exact implications of the SAFE Rule on the energy efficiency of California's vehicle fleet is unknown.

STATE

Warren-Alquist Act

The 1974 Warren-Alquist Act established the California Energy Resources Conservation and Development Commission, now known as the California Energy Commission (CEC). The creation of the act occurred as a response to the State legislature's review of studies projecting an increase in statewide energy demand, which would potentially encourage the development of power plants in environmentally sensitive areas. The act introduced State policy for siting power plants to reduce potential environmental impacts and sought to reduce demand for these facilities by directing CEC to develop statewide energy conservation measures to reduce wasteful, inefficient, and unnecessary uses of energy. Conservation measures recommended establishing design standards for energy conservation in buildings, which ultimately resulted in the creation of the Title 24 Building Energy Efficiency Standards (California Energy Code). These standards are updated regularly and remain in effect today. The act additionally directed CEC to coordinate with the Governor's Office of Planning and Research, the California Natural Resources Agency, and other interested parties in ensuring that a discussion of wasteful, inefficient, and unnecessary consumption of energy is included in all CEQA-related environmental documents for projects undergoing environmental review.

State of California Energy Action Plan

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 current plan is the 2003 *Energy Action Plan* (2008 update), which 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 assisting public agencies and fleet operators in implementing incentive programs for zero-emission vehicles and addressing their infrastructure needs, as well as encouraging urban design that reduces vehicle miles traveled (VMT) and accommodates pedestrian and bicycle access.

The 2008 update has been supplemented by the 2019 California Energy Efficiency Action Plan, which includes three goals to drive energy efficiency: doubling energy efficiency savings by 2030, removing and reducing barriers to energy efficiency in low-income and disadvantaged communities, and reducing greenhouse gas (GHG) emissions from the buildings sector (CEC 2019).

Assembly Bill 2076: Reducing Dependence on Petroleum

Pursuant to AB 2076 (Chapter 936, Statutes of 2000), CEC and the California Air Resources Board (CARB) prepared and adopted a joint agency report in 2003, *Reducing California's Petroleum Dependence*. Included in this report are recommendations to increase the use of alternative fuels to 20 percent of on-road transportation fuel use by 2020 and 30 percent by 2030, significantly increase the efficiency of motor vehicles, and reduce per capita VMT (CEC and CARB 2003). Further, in response to CEC's 2003 and 2005 Integrated Energy Policy Reports (IEPRs), the governor directed CEC to take the lead in developing a long-term plan to increase alternative fuel use.

A performance-based goal of AB 2076 was to reduce petroleum demand to 15 percent below 2003 demand by 2030.

Integrated Energy Policy Report

Senate Bill (SB) 1389 (Chapter 568, Statutes of 2002) required CEC to "conduct assessments and forecasts of all aspects of energy industry supply, production, transportation, delivery and distribution, demand, and prices. The Energy Commission shall use these assessments and forecasts to develop energy policies that conserve resources, protect the environment, ensure energy reliability, enhance the state's economy, and protect public health and safety" (PRC Section 25301[a]). This work culminated in preparation of the first IEPR.

CEC adopts an IEPR every 2 years and an update every other year. The 2022 IEPR Update Report, which is the most recent IEPR, was adopted on November 9, 2022. The 2022 IEPR Update Report provides a summary of priority energy issues currently facing the state, outlining strategies and recommendations to further the State's goal of ensuring reliable, affordable, and environmentally responsible energy sources. Energy topics covered in the report include progress toward statewide renewable energy targets and issues facing future renewable development; efforts to increase energy efficiency in existing and new buildings; progress by utilities in achieving energy efficiency targets and potential; improving coordination among the state's energy agencies; streamlining power plant licensing processes; results of preliminary forecasts of electricity, natural gas, and transportation fuel supply and demand; future energy infrastructure needs; the need for research and development efforts to statewide energy policies; and issues facing California's nuclear power plants (CEC 2022).

Legislation Associated with Electricity Generation

The State has passed multiple pieces of legislation requiring the increasing use of renewable energy to produce electricity for consumers. California's Renewable Portfolio Standard (RPS) Program was established in 2002 (SB 1078) with the initial requirement to generate 20 percent of their electricity from renewable by 2017, 33 percent of their electricity from renewables by 2020 (SB X1-2 of 2011), 52 percent by 2027 (SB 100 of 2018), 60 percent by 2030 (also SB 100 of 2018), and 100 percent by 2045 (also SB 100 of 2018). More detail about these regulations is provided in Section 3.5, "Greenhouse Gas Emissions and Climate Change."

Senate Bill 350: Clean Energy and Pollution Reduction Act of 2015

The Clean Energy and Pollution Reduction Act of 2015 (SB 350) requires doubling of the energy efficiency savings in electricity and natural gas for retail customers through energy efficiency and conservation by December 31, 2030.

Assembly Bill 1007: State Alternative Fuels Plan

AB 1007 (Chapter 371, Statutes of 2005) required CEC to prepare a state plan to increase the use of alternative fuels in California. CEC prepared the State Alternative Fuels Plan in partnership with CARB and in consultation with other

state, federal, and local agencies. The plan presents strategies and actions California must take to increase the use of nonpetroleum fuels in a manner that minimizes the costs to California and maximizes the economic benefits of in-state production. The plan assessed various alternative fuels and developed fuel portfolios to meet California's goals to reduce petroleum consumption, increase alternative fuel use, reduce GHG emissions, and increase in-state production of biofuels without causing a significant degradation to public health and environmental quality.

California Building Energy Efficiency Standards (Title 24, Part 6)

The energy consumption of new residential and nonresidential buildings in California is regulated by the California Energy Code. The code was established by CEC in 1978 in response to a legislative mandate to create uniform building codes to reduce California's energy consumption and provide energy-efficiency standards for residential and nonresidential buildings. CEC updates the California Energy Code every 3 years, typically including more stringent design requirements for reduced energy consumption, which results in the generation of fewer GHG emissions.

The 2022 California Energy Code went into effect on January 1, 2023. The 2022 California Energy Code advances the onsite energy generation progress started in the 2019 California Energy Code by encouraging electric heat pump technology and use, establishing electric-ready requirements when natural gas is installed, expanding solar photovoltaic (PV) system and battery storage standards, and strengthening ventilation standards to improve indoor air quality. CEC estimates that the 2022 California Energy Code will save consumers \$1.5 billion and reduce GHGs by 10 million metric tons of carbon dioxide-equivalent over the next 30 years (CEC 2021).

California Green Building Standards (Title 24, Part 11)

The California Green Building Standards, also known as CALGreen, is a reach code (i.e., optional standards that exceed the requirements of mandatory codes) developed by CEC that provides green building standards for statewide residential and nonresidential construction. The current version is the 2022 CALGreen Code, which took effect on January 1, 2023. As compared to the 2019 CALGreen Code, the 2022 CALGreen Code strengthened sections pertaining to EV and bicycle parking, water efficiency and conservation, and material conservation and resource efficiency, among other sections of the CALGreen Code. The CALGreen Code sets design requirements equivalent to or more stringent than those of the California Energy Code for energy efficiency, water efficiency, waste diversion, and indoor air quality. These codes are adopted by local agencies that enforce building codes and used as guidelines by state agencies for meeting the requirements of Executive Order B-18-12.

Legislation Associated with Greenhouse Gas Reduction

The State has passed legislation that aims to reduce GHG emissions. The legislation often has an added benefit of reducing energy consumption. SB 32 requires a statewide GHG emission reduction of at least 40 percent below 1990 levels by no later than December 31, 2030. Executive Order S-3-05 sets a long-term target of reducing statewide GHG emissions by 80 percent below 1990 levels by 2050.

SB 375 aligns regional transportation planning efforts, regional GHG emission reduction targets, and land use and housing allocation. The Advanced Clean Cars program, approved by CARB, combines the control of GHG emissions and criteria air pollutants and the increase in the number of zero-emission vehicles into a single package of standards. The program's zero-emission vehicle regulation requires battery, fuel cell, and/or plug-in hybrid electric vehicles to account for up to 15 percent of California's new vehicle sales by 2025. In August 2022, CARB adopted the ACC II program, which sets sales requirements to reach the goal of 100 percent ZEV sales in the state by 2035. Additionally, in April 2023, CARB adopted the Advanced Clean Fleets regulation, which sets a goal of achieving a fully zero-emission truck and bus fleet within the State by 2045. Implementation of the state's legislation associated with GHG reduction will have the co-benefit of reducing California's dependency on fossil fuel and making land use development and transportation systems more energy efficient.

More details about legislation associated with GHG reduction are provided in the regulatory setting of Section 3.5, "Greenhouse Gas Emissions and Climate Change."

LOCAL

City of Elk Grove General Plan

The City of Elk Grove General Plan includes policies that promote energy conservation and reduction strategies. The following policies are applicable to the Project (City of Elk Grove 2019):

- ▶ **Policy H-2-3:** Support energy-conserving programs in the production and rehabilitation of affordable housing to reduce household energy costs, improve air quality, and mitigate potential impacts of climate change in the region.
- ▶ **Policy NR-2-4:** Preserve and plant trees in appropriate densities and locations to maximize energy conservation and air quality benefits.
- ▶ **Policy NR-4-1:** Require all new development projects which have the potential to result in substantial air quality impacts to incorporate design, and/or operational features that result in a reduction in emissions equal to 15 percent compared to an “unmitigated baseline project.” An unmitigated baseline project is a development project which is built and/or operated without the implementation of trip reduction, energy conservation, or similar features, including any such features which may be required by the Zoning Code or other applicable codes.
- ▶ **Policy NR-6-1:** Promote energy efficiency and conservation strategies to help residents and businesses save money and conserve valuable resources.
- ▶ **Policy NR-6-3:** Promote innovation in energy efficiency.
- ▶ **Policy NR-6-5:** Promote energy conservation measures in new development to reduce on-site emissions and seek to reduce the energy impacts from new residential and commercial projects through investigation and implementation of energy efficiency measures during all phases of design and development.
- ▶ **Policy NR-6-6:** Encourage renewable energy options that are affordable and benefit all community members.
- ▶ **Policy NR-6-7:** Encourage the use of solar energy systems in homes, commercial businesses, and City facilities as a form of renewable energy.

City of Elk Grove Climate Action Plan

The *City of Elk Grove Climate Action Plan: 2019 Update (CAP)*, adopted in February 2019 (and amended in December 2019 and December 2022) by the Elk Grove City Council, was incorporated into the most recent update to the General Plan (discussed above). The CAP includes GHG emission reduction targets, strategies, and implementation measures developed to help the City reach these targets. Reduction strategies address GHG emissions associated with transportation and land use, energy, water, waste management and recycling, agriculture, and open space. The following CAP goals are related to transportation and energy use (City of Elk Grove 2019):

- ▶ Encourage or Require Green Building Practices in New Construction,
- ▶ Phase in Zero Net Energy Standards in New Construction,
- ▶ Solar Photovoltaics in New and Existing Residential and Commercial Development,
- ▶ Limit Vehicle Miles Traveled,
- ▶ Require Tier 4 Final Construction Equipment by 2030, and
- ▶ Require EV [electric vehicle] Charging Stations for All New Development.

The next major update to the CAP is scheduled for 2024.

City of Elk Grove Municipal Code

Municipal Code Chapter 16.07 provides permitting guidance for EV charging stations. Municipal Code Sections 16.07.200 through 16.07.500 summarize the streamlined permitting process for installation of EV charging stations including provisions pertaining to the completion of a technical review checklist that ensures that installation of an EV charging station would not result in any adverse environmental or health effects. As stated in Municipal Code Section

16.07.400, “the intent of this chapter [is] to encourage the installation of electric vehicle charging stations by removing obstacles to permitting for charging stations so long as the action does not supersede the Building Official’s authority to address higher priority, life-safety situations.”

Municipal Code Section 23.58.120 requires one “EV ready” parking space for all new one family and two family dwelling units. This section also requires that 2.5 percent of parking for multifamily projects provide EV charging and an additional 2.5 percent of parking be ready for future EV charging expansion. This section also implements the requirements of Part 6 of the 2022 Title 24 California Building Code (CALGreen Code) for multi-family residential units and non-residential land uses.

3.4.2 Environmental Setting

ELECTRICITY AND NATURAL GAS USE

Electric services are provided to the City from Sacramento Municipal Utility District (SMUD). Natural gas is supplied to the City from Pacific Gas and Electric (PG&E). See Section 3.10, “Utilities and Service Systems,” for more detailed information on electrical and natural gas infrastructure specifically serving the Planning Area.

California relies on a regional power system composed of a diverse mix of natural gas, renewable, hydroelectric, and nuclear generation resources. One-third of energy commodities consumed in California is natural gas. In 2021, approximately 38 percent of natural gas consumed in the state was used to generate electricity. Large hydroelectric powered approximately 9 percent of electricity and renewable energy from solar, wind, small hydroelectric, geothermal, and biomass combustion totaled 34 percent (SMUD 2023). In 2021 SMUD provided its customers with 30 percent eligible renewable energy (i.e., biomass combustion, geothermal, small scale hydroelectric, solar, and wind) and 52 percent and 18 percent from large scale hydroelectric and natural gas, respectively (SMUD 2023). The contribution of in- and out-of-state power plants depends on the precipitation that occurred in the previous year, the corresponding amount of hydroelectric power that is available, and other factors. SMUD is the primary electricity provider in Sacramento County.

The proportion of SMUD-delivered electricity generated from eligible renewable energy sources is anticipated to increase over the next three decades to comply with the SB 100 goals described in Section 3.4.1.

ENERGY USE FOR TRANSPORTATION

In 2018, the transportation sector comprised the largest end-use sector of energy in the state totaling 39.1 percent, followed by the industrial sector totaling 23.5 percent, the commercial sectors at 19.2 percent, and the residential sector of 18.3 percent (EIA 2020). On-road vehicles use about 90 percent of the petroleum consumed in California. CEC reported retail sales of 448 million and 45 million gallons of gasoline and diesel, respectively, in Sacramento County in 2021 (the most recent data available) (CEC 2023). The California Department of Transportation (Caltrans) projects that 996 million gallons of gasoline and diesel will be consumed in Sacramento County in 2030 (Caltrans 2008).

ENERGY USE AND CLIMATE CHANGE

Scientists and climatologists have produced substantial evidence that the burning of fossil fuels by vehicles, power plants, industrial facilities, residences, and commercial facilities has led to an increase of the earth’s temperature (IPCC 2014 and OPR, CEC, and CNRA 2018). For an analysis of GHG production and the Project’s contribution to climate change, see Section 3.5, “Greenhouse Gas Emissions and Climate Change.”

3.4.3 Impacts and Mitigation Measures

METHODOLOGY

The following impact analysis is based primarily on review of the information and analysis presented in the General Plan EIR then compared to Project-related modeling performed for this analysis.

Energy consumed by the Project during construction would include gasoline and diesel fuel, measured in gallons. Gasoline, and some diesel fuel, would be consumed from worker commute trips to and from the Planning Area. Diesel would primarily be consumed to operate heavy-duty equipment such as dozers, tractors, and pavers and to support haul truck trips. Emissions factors from CARB's EmissionFactor 2021 program were used to calculate the average fuel economy for vehicles operating within Sacramento County by year (2024-2040).

Energy consumed during operation would include electricity and direct natural gas consumption, measured in megawatt-hours per year. Natural gas would also be indirectly combusted from electricity demand.

Building-related energy consumption estimates for maximum growth that are identified in Table 2-1 of Chapter 2, "Project Description," were calculated using the California Emissions Estimator Model (CalEEMod) version 2020.4.0 computer software (CAPCOA 2017). Where Project-specific information was unknown, CalEEMod default values based on the Planning Area were used.

Operational fuel use estimates were calculated using EMFAC 2017 using the estimated level of VMT associated with the Project as described in Section 3.9, "Transportation."

Refer to Appendix D for detailed assumptions and modeling results.

THRESHOLDS OF SIGNIFICANCE

Thresholds of significance are based on Appendix G of the State CEQA Guidelines. The Project would cause a significant impact related to energy if it would:

- ▶ result in a potentially significant environmental impact related to wasteful, inefficient, or unnecessary consumption of energy during project construction or operation; or
- ▶ conflict with or obstruct a state or local plan for renewable energy or energy efficiency.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.4-1: Wasteful, Inefficient, or Unnecessary Consumption of Energy during Project Construction or Operation

The General Plan EIR evaluated the energy consumption associated with the land uses proposed under the General Plan and concluded that energy consumption would not be wasteful, inefficient, or unnecessary because development would be required to comply with the most recent versions of the California Energy Code and actions under the Elk Grove CAP that include zero net energy requirements in 2020 and 2030 for residential and commercial development. Implementation of the Project could result in the consumption of additional energy supplies during construction in the form of gasoline and diesel fuel consumption; however, this energy expenditure would not be considered wasteful when compared to other construction projects. Operation of development facilitated by the Project would also result in additional energy consumption but would be required to comply with the most recent version of the California Energy Code and the CAP. Implementation of the Project would be required to comply with these standards and would not result in a new or substantially more severe energy impacts that was addressed in the General Plan EIR. Project impacts would, therefore, remain **less than significant**.

LEA Community Plan

Impact 5.7.3 of the General Plan EIR evaluated whether implementation of the proposed land uses under the General Plan would result in the wasteful, inefficient, or unnecessary consumption of energy. The General Plan EIR concluded that construction-related energy expenditures would be less than significant due to the inherent short-term nature of construction. The General Plan EIR also determined that operational energy usage would be less than significant because future development would comply with applicable future versions of the California Energy Code. The General Plan and CAP included policies and actions that would further reduce energy consumption. In addition to the General Plan EIR, none of the EIRs and certified CEQA documents that cover portions of the LEA Community Plan Area (i.e., Southeast Policy Area Strategic Plan EIR, Laguna Ridge Specific Plan EIR, and Lent Ranch Marketplace Special Planning Area) identified significant impacts or mitigation for energy use for approved area plans.

Most of the construction-related energy consumption for the development within the LEA Community Plan Area would be associated with off-road equipment and the transport of equipment and materials using on-road haul trucks.

An estimated 1,110,200 gallons of gasoline and 2,910,000 gallons of diesel fuel may be used during construction associated with buildout of the Project (see Appendix D for a summary of construction calculations). The energy needs for construction were assumed to occur between 2024 and 2040 and would be spread throughout the Planning Area, including the LEA Community Plan Area. Because construction projects would occur independently of each other and would occur within a generally urbanized environment, construction activities would not be anticipated to require additional capacity or substantially increase peak or base period demands for electricity and other forms of energy. Gasoline and diesel would also be consumed during worker commute trips associated with Project construction. Energy would be required to transport demolition waste and excavated materials. The one-time energy expenditure required to construct development would be nonrecoverable. There is no atypical construction-related energy demand associated with the development. Nonrenewable energy would not be consumed in a wasteful, inefficient, or unnecessary manner when compared to other construction activity in the region. Additionally, on-road gasoline and diesel fuel consumption associated with construction activity would go down every year as the vehicle fleet becomes more fuel-efficient over time.

Table 3.4-1 summarizes the anticipated operational electricity use, natural gas combustion, and gasoline and diesel fuel consumption associated with operation of development facilitated by the Project. This would be typical of residential, commercial, and educational land uses requiring electricity and natural gas for lighting, space and water heating, climate control, home appliances, and landscape maintenance activities.

The LEA Community Plan would result in more development in the LEA Community Plan Area than what is provided currently under the General Plan designated land uses. Thus, there would be an increase electricity and natural gas consumption as compared what was analyzed in the General Plan EIR. However, construction and operation would not require additional or new electrical or natural gas infrastructure outside of the Planning Area (see Section 3.11, "Utilities and Service Systems").

Residential and nonresidential development would be required to adhere to the 2022 California Energy Code and any subsequent code updates, historically every three years, throughout the Project lifetime. It is foreseeable that the Title 24 California Building Code, and the relevant parts that improve the energy efficiency of residential and nonresidential development (i.e., Part 6, California Energy Code, and Part 11, California Green Building Standards Code), is updated on its triennial basis. At this time, it is unknown how energy efficiency will be upgraded in code updates. Therefore, this analysis provides a more conservative estimate of future energy consumption as it is expected that the Title 24 California Building Code in effect in 2030 would result in more energy efficient development to assist the state in meeting its long-term energy and climate change goals such as SB 100 (See Section 3.5, "Greenhouse Gas Emissions and Climate Change," for additional discussion of applicable statewide regulations, policies, and plans that address reducing GHG emissions associated with the energy sector).

Additionally, as compared to the existing zoning under the General Plan, development of the Project would increase maximum residential density and increase buildout projections for dwelling units and population (see Table 2-2 in Chapter 2, "Project Description"). More densely operated land uses would improve the energy and VMT efficiency of

the City's residences on a per capita basis as compared to the less dense land uses currently included in the existing General Plan. Table 3.4-1 summarizes the operational energy consumption from the Project.

Table 3.4-1 Project Operational Energy Consumption (2040)

Energy Type	Energy Consumption	Units
Electricity	32,100	MWh/year
Natural Gas	249,200	therms/year
Gasoline	1,720,900	gal/year
Diesel	372,100	gal/year

Notes: MWh/year = megawatt-hours per year; therm/year = thermal units per year, gal/year = gallons per year.

Source: Calculations by Ascent Environmental in 2022.

Although energy use was modeled to reflect 2022 California Energy Code, new iterations of the Code are likely, based upon prior State actions, to become increasingly more stringent with updates to the efficiency standards until the Project's final buildout year. The California Energy Code is one mechanism that will assist the state in reaching its long-term energy goals of achieving carbon neutrality by 2045 as mandated by SB 100 and AB 1279 (discussed in Section 3.4.1, "Regulatory Setting"). This would result in increased building energy efficiency over time as buildings continue to be developed within the City. Moreover, future development under the LEA Community Plan would be supplied with energy resources that would become increasingly more renewable as utilities (i.e., SMUD) comply with the benchmark goals contained in the RPS (also see Section 3.4.1, "Regulatory Setting"). Additionally, as stated above, the Project would result in greater residential density as compared to the existing General Plan resulting in greater energy efficiency per capita.

Implementation of the LEA Community Plan would also be subject to the energy efficiency actions of the CAP (see Impact 3.4-2). This would be demonstrated through site design submittals and applications for subsequent development projects for City review and approval under the City's design review process. Therefore, the Project would not have a more severe impact than what was identified in the General Plan EIR. This impact would remain **less than significant**.

General Plan Land Use Designation Amendments

Construction and operational energy usage anticipated to occur from the proposed General Plan land use amendments in the Old Town Policy Area was included in the overall construction and operational modeling associated with the Project. As discussed above, the Project would consume gasoline and diesel fuel during construction, and natural gas, electricity, gasoline, and diesel fuel during operation. Total consumption of energy for the Project would be more than what was evaluated in the General Plan EIR due to increased development potential; however, the development would be of greater density and would therefore be more efficiently distributed on a per capita basis. Construction- and operation-related energy consumption from implementation of the proposed General Plan land use amendments would not result in a new or substantially more severe energy impacts that was addressed in the General Plan EIR. Impacts would remain **less than significant**.

Grant Line Road Precise Roadway Study

Construction energy usage anticipated to occur from Grant Line Road Precise Roadway Study was included in the overall construction modeling associated with the Project. As discussed above, the Project would consume gasoline and diesel fuel during construction. The Precise Roadway Study would not independently generate new vehicle trips or VMT; therefore, an increase in operational diesel and gasoline consumption would not occur. Some operational electricity would be consumed to power the lighting infrastructure associated with the Precise Roadway Study. Consumption of energy for this portion of the Project would be similar or less than those associated with the corridor design that was evaluated programmatically in the General Plan EIR. Construction- and operation-related energy consumption from implementation of the Precise Roadway Study would not result in a new or substantially more severe energy impacts that was addressed in the General Plan EIR. Impacts would remain **less than significant**.

South and West Study Areas

Construction and operational energy usage anticipated to occur from the South and West Study Areas was included in the overall construction and operational modeling associated with the Project. As discussed above, the Project would consume gasoline and diesel fuel during construction, and natural gas, electricity, gasoline, and diesel fuel during operation. Total consumption of energy for the Project would be more than what was evaluated in the General Plan EIR due to increased development; however, the development would be of greater density and would therefore be more efficiently distributed on a per capita basis. Construction- and operation-related energy consumption from implementation of development in the South and West Study Areas would not result in a new or substantially more severe energy impacts that was addressed in the General Plan EIR. Impacts would remain **less than significant**.

Mitigation Measures

No additional mitigation is required beyond compliance with the City's CAP and the 2022 California Energy Code and any subsequent code updates.

Impact 3.4-2: Conflict with or Obstruction of a State or Local Plan for Renewable Energy or Energy Efficiency

The General Plan EIR evaluated consistency with applicable state or local plans for renewable energy and energy efficiency and concluded that the land use under the General Plan would not conflict with an applicable plan. Implementation of the Project could increase energy demands compared to existing conditions; however, development would be required to comply with applicable California Energy Code. Additionally, the City's CAP contains several measures that would apply to subsequent development that would reduce overall energy demand. As a result, implementation of the Project would not conflict with or obstruct a state or local plan for renewable energy or energy efficiency. Therefore, the Project would not have a more severe impact than what was identified in the General Plan EIR. This impact would remain **less than significant**.

LEA Community Plan

Impact 5.7-3 of the General Plan EIR evaluated the consistency of land uses under the General Plan against applicable renewable energy and energy efficiency plans, including the City's CAP. The General Plan EIR concluded that because several CAP measures would result in reduced energy demand in addition to reducing GHG emissions, that the General Plan would be consistent with the CAP. The CAP, though designed to reduce GHG emissions specifically, concurrently plays a role in improving energy efficiency and enhancing renewable energy resources, and therefore may be considered to be a plan for renewable energy or energy efficiency. In addition to the General Plan EIR, none of the EIR and certified CEQA documents that cover portions of the LEA Community Plan Area (i.e., Southeast Policy Area Strategic Plan EIR, Laguna Ridge Specific Plan EIR, and Lent Ranch Marketplace Special Planning Area) identified significant impacts or mitigation for energy use or consistency with plans for approved area plans.

As noted above, development under the LEA Community Plan would be required to comply with the California Energy Code, which are intended to increase the energy efficiency of new development projects in the state. The 2022 California Energy Code (and subsequent updates), which the Project is subject to, is designed to move the state closer to its zero-net energy goals. For these same reasons, the Project would be consistent with the energy conservation Goals and Policies expressed in the City's General Plan identified above in Section 3.4.1, "Regulatory Setting." As also stated in Section 3.4.1, SMUD, as an electricity utility, is required to comply with the future benchmarks of the state's RPS (i.e., 52 percent renewable by 2027, 60 percent by 2030, and 100 percent by 2045). Because electricity utilities in the state are required to increase the percentage of renewable energy sources in the electricity they provide, over time electricity consumed as part of the Project would increasingly be provided by renewable sources.

Additionally, as discussed in the General Plan EIR, the City's CAP contains several measures that would reduce energy demand and increase the City's capacity to generate renewable resources that would apply to the LEA Community Plan:

- ▶ **BE-1. Building Stock: Promote Energy Conservation.** Promote energy conservation by residents and businesses in existing structures in close coordination with other agencies and local energy providers, including the Sacramento Municipal Utility District (SMUD) and Pacific Gas and Electric (PG&E).
- ▶ **BE-5. Building Stock: Phase in Zero Net Energy Standards in New Construction.** Phase in zero net energy (ZNE) standards for new construction, beginning in 2020 for residential projects and 2030 for commercial projects. Specific phase-in requirements and ZNE compliance standards will be supported by updates in the triennial building code updates, beginning with the 2019 update.
- ▶ **BE-6. Building Stock: Electrification in New and Existing Residential Development.** Encourage and incentivize new residential developments to include all-electrical appliances and HVAC systems in the design of new projects. Support local utilities in implementing residential retrofit programs to help homeowners convert to all electrical appliances and HVAC systems. Explore the feasibility of phasing in minimum standards for all-electric developments. For certain projects that the City determines are not exempt from CEQA (i.e., an environmental document is required) and that qualify for project-level GHG analysis streamlining under CEQA Guidelines Section 15183.5, compliance with this measure may be required as a mitigation measure, unless other measures are determined by the City to achieve equivalent GHG reductions such that the CAP remains on track to achieving the overall GHG reduction target.
- ▶ **BE-7. Building Stock: Solar Photovoltaics in New and Existing Residential and Commercial Development.** Encourage and require installation of on-site solar photovoltaic (PV) in new single-family and low-rise multi-family developments. Promote installation of on-site PV systems in existing residential and commercial development.
- ▶ **BE-8. SMUD Greenergy and SolarShares Programs.** Encourage participation in SMUD's offsite renewable energy programs (i.e., Greenergy, SolarShares), which allow building renters and owners to opt into cleaner electricity sources.
- ▶ **ACM-5. Affordable Housing.** Continue to promote and require the development of affordable housing in the City.

Additionally, Elk Grove Municipal Code Chapter 16.07 provides streamlined permitting for EV charging stations. Future development constructed and operated under the LEA Community Plan that seeks to install EV charging stations would be entitled to use the streamlining mechanisms outlined in Municipal Code Chapter 16.07. Municipal Code Section 23.58.120 requires one "EV ready" parking space for all new one family and two family dwelling units. This section also requires that 2.5 percent of parking for multifamily projects provide EV charging and an additional 2.5 percent of parking be ready for future EV charging expansion. This section additionally implements the requirements of Part 6 of the 2022 Title 24 California Building Code (CALGreen Code) for multi-family residential units and non-residential land uses. Compliance with these measures, and any subsequent measures included in a future CAP update, would be demonstrated in subsequent project building and site plan submittals for building permit approval and/or design review.

Therefore, the LEA Community Plan would not have a more severe impact than what was identified in the General Plan EIR. Impacts would remain **less than significant**.

General Plan Land Use Designation Amendments

As discussed above, development constructed to adhere to the proposed General Plan land use amendments in the Old Town Policy Area would be similarly subject to relevant CAP measures, General Plan policies, the City's municipal code, and would be provided electricity from SMUD meeting the standards of the RPS. Development from the proposed General Plan land use amendments would not result in a new or substantially more severe energy impacts that was addressed in the General Plan EIR. Impacts would remain **less than significant**.

Grant Line Road Precise Roadway Study

Implementation of the Grant Line Road Precise Roadway Study would not be subject to any energy-related CAP measures as the plan would not introduce new operational land uses or generate new vehicle trips. The Precise Study would entail construction activities to implement roadway improvements; however, these improvements would be singular activities. CAPs are written and developed to reduce operational sources of GHG emissions associated with energy consumption,

among other sectors. Implementation of the Precise Study would not result in a new or substantially more severe energy impacts that was addressed in the General Plan EIR. Impacts would remain **less than significant**.

South and West Study Areas

As discussed above, development constructed under the South and West Study Areas would be similarly subject to relevant CAP measures, General Plan policies, the City's municipal code, and would be provided electricity from SMUD meeting the standards of the RPS. Development under the South and West Study Areas would not result in a new or substantially more severe energy impacts that was addressed in the General Plan EIR. Impacts would remain less than significant.

Mitigation Measures

No additional mitigation is required beyond compliance with the City's CAP, including measures BE-1, BE-5, BE-6, BE-7, BE-8, and ACM-5, and Municipal Code Chapter 16.07 and Section 23.58.120.

3.5 GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

This section presents a summary of the current state of climate change science and greenhouse gas (GHG) emissions sources in California; a summary of applicable regulations; quantification of GHG emissions generated by the Project; and discussion of the Project's potential contribution to global climate change. Where impacts are found to be potentially significant, mitigation is presented. The primary source of information used for this analysis is the General Plan EIR (City of Elk Grove 2018, 2019). Energy impacts are evaluated in Section 3.5, "Energy," of this Draft SEIR.

For the purposes of this analysis, GHG emissions are measured as metric tons of carbon dioxide equivalent (MTCO_{2e}). The atmospheric impact of a GHG is based on the global warming potential (GWP) of that gas. GWP is a measure of the heat trapping ability of one unit of a gas over a certain timeframe relative to one unit of carbon dioxide (CO₂). The GWP of CO₂ is one (IPCC 2007). Consistent with the methodology used by the California Air Resources Board (CARB) in estimating statewide GHG emissions, this analysis uses GWP values from the Fourth Assessment Report Values by the Intergovernmental Panel on Climate Change (IPCC) (Greenhouse Gas Protocol n.d.).

No comments pertaining to GHGs and climate change were received in response to the notice of preparation (NOP).

3.5.1 Regulatory Setting

FEDERAL

In *Massachusetts et al. v. Environmental Protection Agency et al.*, 549 U.S. 497 (2007), the Supreme Court of the United States ruled that CO₂ is an air pollutant as defined under the federal Clean Air Act (CAA) and that the U.S. Environmental Protection Agency (EPA) has the authority to regulate GHG emissions. In 2010, EPA started to address GHG emissions from stationary sources through its New Source Review permitting program, including operating permits for "major sources" issued under Title V of the CAA.

The National Highway Traffic Safety Administration (NHTSA) regulate vehicle emissions through the Corporate Average Fuel Economy (CAFE) Standards. On April 2, 2018, the EPA administrator announced a final determination that the current standards should be revised. On August 2, 2018, the U.S. Department of Transportation and EPA proposed the Safer Affordable Fuel-Efficient Vehicles Rule (SAFE Rule), which would amend existing CAFE standards for passenger cars and light-duty trucks by increasing the stringency of the standards by 1.5 percent per year from models 2021 through 2026 (NHTSA 2020).

The CAA grants California the ability to enact and enforce more strict fuel economy standards through the acquisition of an EPA-issued waiver. Each time California adopts a new vehicle emission standard, the state applies to EPA for a preemption waiver for those standards. However, Part One of the SAFE Rule, which became effective on November 26, 2019, revoked California's existing waiver to implement its own vehicle emission standard and also established a standard to be adopted and enforced nationwide (84 Federal Register [FR] 51310). Pending several legal challenges to Part One of the SAFE Rule and administrative turnover, on December 21, 2021, the NHSTA published its CAFE Preemption Rule, which finalizes the repeal of the SAFE Rule Part 1 allowing California to continue procuring its waiver from EPA through the CAA to enforce more stringent emissions standards. Also, on April 1, 2022, the Secretary of Transportation unveiled new CAFE standards for 2024–2026 model year passenger cars and light-duty trucks. These new standards require new vehicles sold in the US to average at least 40 miles per gallon and apply to all states except those that enforce stricter standards.

STATE

Statewide GHG Emission Targets and Climate Change Scoping Plan

Reducing GHG emissions in California has been the focus of the State government for approximately two decades. GHG emission targets established by the State legislature include reducing statewide GHG emissions to 1990 levels by

2020 (Assembly Bill [AB] 32 of 2006) and reducing them to 40 percent below 1990 levels by 2030 (Senate Bill [SB] 32 of 2016). Executive Order S-3-05 calls for statewide GHG emissions to be reduced to 80 percent below 1990 levels by 2050. This target was superseded by AB 1279 which codifies a goal for carbon neutrality and reduce emissions by 85 percent below 1990 levels by 2045. These targets are in line with the scientifically established levels needed in the U.S. to limit the rise in global temperature to no more than 2 degrees Celsius, the warming threshold at which major climate disruptions, such as super droughts and rising sea levels, are projected; these targets also pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius.

California's 2017 Climate Change Scoping Plan (2017 Scoping Plan), prepared by CARB, outlines the main strategies California will implement to achieve the legislated GHG emission target for 2030 and "substantially advance toward our 2050 climate goals" (CARB 2017). It identifies the reductions needed by each GHG emission sector (e.g., transportation, industry, electricity generation, agriculture, commercial and residential, pollutants with high global warming potential, and recycling and waste).

On September 16, 2022, the state legislature passed AB 1279 which codified stringent emissions targets for the state of achieving carbon neutrality and an 85 percent reduction in 1990 emissions level by 2045. CARB released the *Final 2022 Scoping Plan for Achieving Carbon Neutrality* (2022 Scoping Plan) on November 16, 2022, as also directed by AB 1279 (CARB 2022). The 2022 Scoping Plan traces the pathway for the state to achieve its carbon neutrality and an 85 percent reduction in 1990 emissions goal by 2045 using a combined top down, bottoms up approach using various scenarios. CARB adopted the 2022 Scoping Plan on December 16, 2022.

CARB and other state agencies also released the *January 2019 Draft California 2030 Natural and Working Lands Climate Change Implementation Plan* consistent with the carbon neutrality goal of Executive Order B-55-18 (California Environmental Protection Agency et al. 2019).

The State has also passed more detailed legislation addressing GHG emissions associated with transportation, electricity generation, and energy consumption, as summarized below.

Transportation-Related Standards and Regulations

As part of its Advanced Clean Cars program, CARB established more stringent GHG emission standards and fuel efficiency standards for fossil fuel-powered on-road vehicles than EPA. In addition, the program's zero-emission vehicle (ZEV) regulation requires battery, fuel cell, and plug-in hybrid electric vehicles (EVs) to account for up to 15 percent of California's new vehicle sales by 2025 (CARB 2018a). In August 2022, CARB adopted the ACC II program, which sets sales requirements for ZEVs to ultimately reach the goal of 100 percent ZEV sales in the state by 2035.

Executive Order B-48-18, signed into law in January 2018, requires all State entities to work with the private sector to have at least 5 million ZEVs on the road by 2030, as well as 200 hydrogen-fueling stations and 250,000 EV-charging stations installed by 2025. It specifies that 10,000 of these charging stations must be direct-current fast chargers.

CARB adopted the Low Carbon Fuel Standard (LCFS) in 2007 to reduce the carbon intensity (CI) of California's transportation fuels. Low-CI fuels emit less CO₂ than other fossil fuel-based fuels such as gasoline and fossil diesel. The LCFS applies to fuels used by on-road motor vehicles and off-road vehicles, including construction equipment (Wade, pers. comm., 2017).

In addition to regulations that address tailpipe emissions and transportation fuels, the State legislature has passed regulations to address the amount of driving by on-road vehicles. Since passage of SB 375 in 2008, CARB requires metropolitan planning organizations (MPOs) to develop and adopt sustainable communities strategies (SCSs) as a component of the federally-prepared regional transportation plans (RTPs) to show reductions in GHG emissions from passenger cars and light-duty trucks in their respective regions for 2020 and 2035. These plans link land use and housing allocation to transportation planning and related mobile-source emissions. The Sacramento Area Council of Governments (SACOG) serves as the MPO for Sacramento, Placer, El Dorado, Yuba, Sutter, and Yolo counties, excluding those lands located in the Tahoe Basin. The Project site is in Sacramento County. Under SB 375, SACOG adopted the Metropolitan Transportation Plan/Sustainable Communities Strategy 2035 (MTP/SCS) in 2016. SACOG was tasked by CARB to achieve a 7-percent per capita reduction compared to 2012 emissions by 2020 and a 16-percent per capita reduction by 2035, both of which CARB confirmed the region would achieve by implementing the

MTP/SCS (CARB 2016). In March 2018, CARB promulgated revised targets tasking SACOG to achieve a 7-percent and a 19-percent per capita reduction by 2020 and 2035, respectively (CARB 2018b). SACOG completed and adopted its most recent 2020 MTP/SCS in November 2019 (SACOG 2019).

Legislation Associated with Electricity Generation

The State has passed legislation requiring the increasing use of renewables to produce electricity for consumers. California utilities are required to generate 33 percent of their electricity from renewables by 2020 (SB X1-2 of 2011); 52 percent by 2027 (SB 100 of 2018); 60 percent by 2030 (also SB 100 of 2018); and 100 percent by 2045 (also SB 100 of 2018).

Building Energy Efficiency Standards (Title 24, Part 6)

The energy consumption of new residential and nonresidential buildings in California is regulated by the California Code of Regulations Title 24, Part 6, Building Energy Efficiency Standards (California Energy Code). The California Energy Commission (CEC) updates the California Energy Code every three years with more stringent design requirements for reduced energy consumption, which results in the generation of fewer GHG emissions. The 2022 California Energy Code went into effect on January 1, 2023. The 2022 California Energy Code advances the onsite energy generation progress started in the 2019 California Energy Code by encouraging electric heat pump technology and use, establishing electric-ready requirements when natural gas is installed, expanding solar photovoltaic (PV) system and battery storage standards, and strengthening ventilation standards to improve indoor air quality. CEC estimates that the 2022 California Energy Code will save consumers \$1.5 billion and reduce GHGs by 10 million metric tons of carbon dioxide-equivalent over the next 30 years (CEC 2021).

LOCAL

Sacramento Metropolitan Air Quality Management District

The Sacramento Metropolitan Air Quality Management District (SMAQMD) is the primary agency responsible for addressing air quality concerns in all of Sacramento County—its role is discussed further in Section 3.2, “Air Quality,” of this Draft SEIR. SMAQMD also recommends methods for analyzing project-generated GHGs in CEQA analyses and offers multiple potential GHG reduction measures for land use development projects. SMAQMD developed thresholds of significance to provide a uniform scale to measure the significance of GHG emissions from land use and stationary source projects in compliance with CEQA to align with the statewide GHG target of 40 percent below 1990 levels by 2030 with passage of SB 32 for land use development projects (SMAQMD 2021).

SMAQMD’s new published new guidance to address GHGs was released in February 2021. SMAQMD recommends that an 1,100 metric tons of carbon dioxide equivalent (MTCO_{2e}) be applied as a bright-line threshold of significance for evaluating construction emissions of GHGs. SMAQMD also recommends a tiered approach to evaluating the significance of operational emissions. All projects are required to implement the following tier 1 best management practices (BMP):

- ▶ BMP 1 – Projects shall be designed and constructed without natural gas infrastructure.
- ▶ BMP 2 – Projects shall meet the current CalGreen Tier 2 standards, except all electric vehicle capable spaces shall instead be electric vehicle ready.

Projects can screen out by comparing to the SMAQMD’s operational screening levels table (equivalent to 1,100 MTCO_{2e}/year), including implementation of tier 1 BMPs. If the project emissions exceed the screening level, or the project fails to implement tier 1 BMPs, the project may have a cumulatively considerable contribution to a significant cumulative environmental impact, and all feasible mitigation is required. Projects exceeding the screening level, must implement tier 1 and tier 2 BMPs, or provide equivalent onsite or off-site mitigation measures.

SMAQMD also provides guidance for program-level analysis of general plans and area plans. The Project would meet the criteria of a General Plan Element Update as the Project would result in amendments to the existing General Plan, and therefore, SMAQMD’s guidance for general plans will be used in this analysis (SMAQMD 2020). SMAQMD recommends that program-level analyses “incorporate development policies, standards, and mitigation measures

achieving GHG reductions that result in a less-than-significant impact with respect to GHG emissions, this could alleviate the need to evaluate and mitigate GHGs at the project level for projects that are found to be consistent with the general or area plan” (SMAQMD 2020: 9-9). This recommendation for program level analysis can be satisfied through the development of a qualified CAP that accompanies a general plan.

City of Elk Grove General Plan

The *City of Elk Grove General Plan* contains the following policies and standards related to climate change that apply to the Project (City of Elk Grove 2019a):

- ▶ **Policy NR-5-2:** Improve the health and sustainability of the community through improved regional air quality and reduction of greenhouse gas emissions that contribute to climate change.
- ▶ **Policy NR-6-1:** Promote energy efficiency and conservation strategies to help residents and businesses save money and conserve valuable resources.
- ▶ **Policy NR-6-3:** Promote innovation in energy efficiency.
- ▶ **Policy NR-6-5:** Promote energy conservation measures in new development to reduce on-site emissions and seek to reduce the energy impacts from new residential and commercial projects through investigation and implementation of energy efficiency measures during all phases of design and development.
- ▶ **Policy NR-6-6:** Encourage renewable energy options that are affordable and benefit all community members.
- ▶ **Policy NR-6-7:** Encourage the use of solar energy systems in homes, commercial businesses, and City facilities as a form of renewable energy.
- ▶ **Policy H-2-3:** Support energy-conserving programs in the production and rehabilitation of affordable housing to reduce household energy costs, improve air quality, and mitigate potential impacts of climate change in the region.
- ▶ **Policy ER-6-11:** Seek to provide the community with information relating to sustainability, climate change, and innovative development strategies.

City of Elk Grove Climate Action Plan

The *City of Elk Grove Climate Action Plan 2019 Update (CAP)*, adopted in February 2019 and amended in December 2019 and December 2022 by the City, was incorporated into the current General Plan (discussed above). The CAP includes GHG emission reduction targets, strategies, and implementation measures developed to help the City reach these targets. Reduction strategies address GHG emissions associated with transportation and land use, energy, water, waste management and recycling, agriculture, and open space. Through the deployment of measures included in the CAP, as well as reductions achieved by Statewide regulatory schemes, consistent with direction from SB 32, the City would achieve a per capita emissions target of 4.1 MTCO_{2e} per year by 2030; however, based on projection within the CAP, the City would be expected to reduce per capita emissions to 3.0 MTCO_{2e} per year by 2050, which exceeds the State’s 2050 reduction target of 1.4 MTCO_{2e} per year (City of Elk Grove 2019b: 4-3). As discussed in the CAP, “additional technological advances across multiple sectors would be required to reduce emission further, combined with additional regulatory actions at the State or federal levels.” Further, the City “would identify new or modified GHG reduction measures that would achieve longer-term, post-2030 targets that may be set by the State or others in the future” (City of Elk Grove 2018: 5.7-37). The following GHG reduction actions would apply to development under the Project:

- ▶ **BE-1. Building Stock: Promote Energy Conservation.** Promote energy conservation by residents and businesses in existing structures in close coordination with other agencies and local energy providers, including the Sacramento Municipal Utility District (SMUD) and Pacific Gas and Electric (PG&E).
- ▶ **BE-4. Building Stock: Encourage or Require Green Building Practices in New Construction.** Encourage new construction projects to comply with CALGreen Tier 1 standards, including a 15 percent improvement over minimum Title 24 Part 6 Building Energy Efficiency Standards. For projects that the City determines are not exempt from CEQA (i.e., an environmental document is required) and that qualify for project-level GHG analysis streamlining under CEQA Guidelines Section 15183.5, compliance with CALGreen Tier 1 may be required as a

mitigation measure, unless other measures are determined by the City to achieve equivalent GHG reductions such that the CAP remains on track to achieving the overall GHG reduction target.

- ▶ **BE-5. Building Stock: Phase in Zero Net Energy Standards in New Construction.** Phase in zero net energy (ZNE) standards for new construction, beginning in 2020 for residential projects and 2030 for commercial projects. Specific phase-in requirements and ZNE compliance standards will be supported by updates in the triennial building code updates, beginning with the 2019 update.
- ▶ **BE-6. Building Stock: Electrification in New and Existing Residential Development.** Encourage and incentivize new residential developments to include all-electrical appliances and HVAC systems in the design of new projects. Support local utilities in implementing residential retrofit programs to help homeowners convert to all electrical appliances and HVAC systems. Explore the feasibility of phasing in minimum standards for all-electric developments. For certain projects that the City determines are not exempt from CEQA (i.e., an environmental document is required) and that qualify for project-level GHG analysis streamlining under CEQA Guidelines Section 15183.5, compliance with this measure may be required as a mitigation measure, unless other measures are determined by the City to achieve equivalent GHG reductions such that the CAP remains on track to achieving the overall GHG reduction target.
- ▶ **BE-7. Building Stock: Solar Photovoltaics in New and Existing Residential and Commercial Development.** Encourage and require installation of on-site solar photovoltaic (PV) in new single-family and low-rise multi-family developments. Promote installation of on-site PV systems in existing residential and commercial development.
- ▶ **BE-8. SMUD Greenergy and SolarShares Programs.** Encourage participation in SMUD's offsite renewable energy programs (i.e., Greenergy, SolarShares), which allow building renters and owners to opt into cleaner electricity sources.
- ▶ **TACM-5. Affordable Housing.** Continue to promote and require the development of affordable housing in the City.
- ▶ **TACM-6. Limit Vehicle Miles Traveled.** Achieve a 15 percent reduction in daily VMT compared to existing conditions (2015) for all new development in the City, consistent with state-mandated VMT reduction targets for land use and transportation projects.
- ▶ **TACM-9: EV Charging Requirements.** Adopt an electric vehicle (EV) charging station ordinance that establishes minimum EV charging standards for all new residential and commercial development. Increase the number of EV charging stations at municipal facilities throughout the City. In 2022, the City amended its municipal code to implement the requirements of Part 6 of the 2022 Title 24 California Building Code (CalGreen Code) for multi-family residential units and non-residential land uses.

The City is currently in the process of updating the existing CAP to align with long-term GHG reduction goals set forth by AB 1279. The aforementioned CAP aligns with the regulatory setting in place at the time of its adoption and includes policies capable of assisting the City in meeting the targets codified by SB 32 (40 percent reduction from 1990 emissions by 2030). The new CAP intends to include policies that will extend beyond 2030.

3.5.2 Environmental Setting

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

Certain gases in the earth's atmosphere, classified as GHGs, play a critical role in determining the earth's surface temperature. Solar radiation enters the atmosphere from space. A portion of the radiation is absorbed by the earth's surface, and a smaller portion of this radiation is reflected toward space. The absorbed radiation is then emitted from the earth as low-frequency infrared radiation. Most solar radiation passes through GHGs; however, infrared radiation is absorbed by these gases. As a result, radiation that otherwise would have escaped back into space is instead "trapped," resulting in a warming of the atmosphere. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate on earth.

Prominent GHGs contributing to the greenhouse effect are CO₂, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Human-caused emissions of these GHGs in excess of natural ambient concentrations are found to be responsible for intensifying the greenhouse effect and leading to a trend of unnatural warming of the earth's climate, known as global climate change or global warming. It is "extremely likely" that more than half of the observed increase in global average surface temperature from 1951 to 2010 was caused by the anthropogenic increase in GHG concentrations and other anthropogenic forcing (IPCC 2014).

Climate change is a global problem. GHGs are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas most pollutants with localized air quality effects have relatively short atmospheric lifetimes (approximately 1 day), GHGs have long atmospheric lifetimes (1 year to several thousand years). GHGs persist in the atmosphere long enough to be dispersed around the globe. Although the lifetime of any GHG molecule depends on multiple variables and cannot be determined with any certainty, it is understood that more CO₂ is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration. Of the total annual human-caused CO₂ emissions, approximately 55 percent are estimated to be sequestered through ocean and land uptake every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO₂ emissions remain stored in the atmosphere (IPCC 2013).

The quantity of GHGs in the atmosphere responsible for climate change is not precisely known, but it is considered to be enormous. No single project alone would measurably contribute to an incremental change in the global average temperature or to global or local climates or microclimates. From the standpoint of CEQA, GHG impacts relative to global climate change are inherently cumulative.

GREENHOUSE GAS EMISSION SOURCES

As discussed previously, GHG emissions are attributable in large part to human activities. The total GHG inventory for California in 2019 was 418 MMTCO_{2e} (CARB 2021). This is less than the 2020 target of 431 MMTCO_{2e} (CARB 2021).

A GHG inventory for the City is provided in the City's CAP and summarized in Table 3.5-1. As shown below, on-road vehicles and residential, commercial, and industrial energy consumption constitute the greatest sources of emissions.

Table 3.5-1 City of Elk Grove's Greenhouse Gas Emissions Inventory for 2013 and Business-as-Usual Forecast Years (MTCO_{2e})

Emissions Sector	2013	2020	2030	2050
On-Road Vehicles	730,340	645,542	844,317	1,241,867
Residential Energy	231,400	257,171	310,017	413,560
Commercial/Industrial Energy	129,860	147,685	196,037	293,532
Off-Road Vehicles	93,340	102,776	123,896	165,275
Solid Waste	26,260	36,181	39,817	47,781
Wastewater	3,854	4,283	5,163	6,888
Water-Related	2,708	3,010	3,628	4,840
Agriculture	1,030	2,585	1,061	299
Total	918,790	1,199,232	1,523,936	2,174,042

Notes: Totals may not equal the sum of the numbers because of independent rounding.

MTCO_{2e} = metric tons of carbon dioxide equivalent.

Source: City of Elk Grove 2019b: Appendix A.

As shown in Table 3.5-1, the transportation and building sectors are the largest GHG emission sectors in the City.

Emissions of CO₂ are byproducts of fossil fuel combustion. Methane, a highly potent GHG, primarily results from off-gassing (the release of chemicals from nonmetallic substances under ambient or greater pressure conditions) and is largely associated with agricultural practices, landfills, and forest fires. Nitrous oxide is also largely attributable to

agricultural practices and soil management. CO₂ sinks, or reservoirs, include vegetation and the ocean, which absorb CO₂ through sequestration and dissolution (CO₂ dissolving into the water) and are two of the most common processes for removing CO₂ from the atmosphere.

EFFECTS OF CLIMATE CHANGE ON THE ENVIRONMENT

According to IPCC, which was established in 1988 by the World Meteorological Organization and the United Nations Environment Programme, global average temperature will increase by 3.7 to 4.8 degrees Celsius (°C) (6.7 to 8.6 degrees Fahrenheit [°F]) by the end of the century unless additional efforts to reduce GHG emissions are made (IPCC 2014:10). According to *California's Fourth Climate Change Assessment*, with global GHGs reduced at a moderate rate California will experience average daily high temperatures that are warmer than the historic average by 2.5 °F from 2006 to 2039, by 4.4 °F from 2040 to 2069, and by 5.6 °F from 2070 to 2100; and if GHG emissions continue at current rates then California will experience average daily high temperatures that are warmer than the historic average by 2.7 °F from 2006 to 2039, by 5.8 °F from 2040 to 2069, and by 8.8 °F from 2070 to 2100 (OPR et al. 2018).

Since its previous climate change assessment in 2012, California has experienced several of the most extreme natural events in its recorded history: a severe drought from 2012–2016, an almost non-existent Sierra Nevada winter snowpack in 2014–2015, increasingly large and severe wildfires, and back-to-back years of the warmest average temperatures (OPR et al. 2018). According to California Natural Resource Agency's *Safeguarding California Plan: 2018 Update*, California experienced the driest 4-year statewide precipitation on record from 2012 through 2015; the warmest years on average in 2014, 2015, and 2016; and the smallest and second smallest Sierra snowpack on record in 2015 and 2014 (CNRA 2018). According to the National Oceanic and Atmospheric Administration and the National Aeronautics and Space Administration, 2016, 2017, and 2018 were the hottest recorded years in history (NOAA 2019). In contrast, the northern Sierra Nevada experienced one of its wettest years on record during the 2016–2017 water year (CNRA 2018). The changes in precipitation exacerbate wildfires throughout California through a cycle of high vegetative growth coupled with dry, hot periods which lowers the moisture content of fuel loads. As a result, the frequency, size, and devastation of forest fires has increased. In November 2018, the Camp Fire completely destroyed the town of Paradise in Butte County and caused 85 fatalities, becoming the state's deadliest fire in recorded history, and the largest fires in the state's history have occurred in the 2018–2020 period. Moreover, changes in the intensity of precipitation events following wildfires can also result in devastating landslides. In January 2018, following the Thomas Fire, 0.5 inch of rain fell in 5 minutes in Santa Barbara causing destructive mudslides formed from the debris and loose soil left behind by the fire. These mudslides resulted in 21 deaths.

As temperatures increase, the amount of precipitation falling as rain rather than snow also increases, which could lead to increased flooding because water that would normally be held in the snowpack of the Sierra Nevada and Cascade Range until spring would flow into the Central Valley during winter rainstorm events. This scenario would place more pressure on California's levee/flood control system (CNRA 2018). Portions of the City are within the 100-year and 200-year floodplain and may see increases in flood hazards in the future. Furthermore, in the extreme scenario involving the rapid loss of the Antarctic ice sheet and the glaciers atop Greenland, the sea level along California's coastline is expected to rise 54 inches by 2100 if GHG emissions continue at current rates (OPR et al. 2018).

Temperature increases and changes to historical precipitation patterns will likely affect ecological productivity and stability. Existing habitats may migrate from climatic changes where possible, and those habitats and species that lack the ability to retreat will be severely threatened. Altered climate conditions will also facilitate the movement of invasive species to new habitats thus outcompeting native species. Altered climatic conditions dramatically endanger the survival of arthropods (e.g., insects, spiders) which could have cascading effects throughout ecosystems (Lister and Garcia 2018). Conversely, a warming climate may support the populations of other insects such as ticks and mosquitos, which transmit diseases harmful to human health such as the Zika virus, West Nile virus, and Lyme disease (European Commission Joint Research Centre 2018).

Changes in temperature, precipitation patterns, extreme weather events, wildfires, and sea-level rise have the potential to threaten transportation and energy infrastructure, crop production, forests and rangelands, and public health (CNRA 2018; OPR et al. 2018). The effects of climate change will also have an indirect adverse impact on the economy as more severe natural disasters cause expensive, physical damage to communities and the state.

Additionally, adjusting to the physical changes associated with climate change can produce mental health impacts such as depression and anxiety.

3.5.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

The following impact analysis is based primarily on review of the information and analysis presented in the General Plan EIR then compared to Project-related modeling performed for this analysis.

The analysis in this section is consistent with the recommendations of the SMAQMD's Guide to Air Quality Assessment in Sacramento County, Chapter 9, Program-Level Analysis of General Plans and Area Plans (SMAQMD 2020b). The analysis primarily focuses on the extent to which the Project would conflict with a plan for reduction of GHG emissions as defined by CEQA Guidelines Section 15183.5. Both short-term construction emissions and long-term operational emissions were calculated using the California Emissions Estimator Model (CalEEMod), version 2020.4.0, computer program.

SMAQMD recommends that construction emissions be estimated for program levels of analysis consistent with guidance provided for project-level analyses. As indicated in Chapter 2, "Project Description," the Project entails various density adjustments to the current General Plan. There is uncertainty surrounding the schedule and exact location of where development would occur, therefore, construction emissions were modeled using the assumptions that development would occur gradually over the course of the General Plan's horizon year (2040). The acreages of the land uses proposed under the Project were used. Due to the programmatic nature of this analysis, CalEEMod default values for trip generation, heavy-duty equipment type, and construction phasing were used.

With respect to operational emissions, mobile source emissions were estimated using Project-estimated annual VMT derived from the traffic study prepared for the Project (see Section 3.9, "Transportation"). Energy-, area-, solid waste-, and water-sourced emissions were estimated using CalEEMod default values. These emissions are disclosed for informational purposes.

The City updated its CAP concurrently with the General Plan in 2019 (the 2019 CAP). The 2019 CAP is intended to carry out the 2019 General Plan goals and policies to reduce GHG emissions and address the impacts of climate change. The City's GHG emissions inventory and forecasts were updated to reflect new activity data and both current and projected population, housing, and employment demographic information consistent with the General Plan. The 2019 CAP includes GHG emissions reduction targets of 7.6 MTCO₂e per capita by 2020, and 4.1 MTCO₂e per capita by 2030. These targets are consistent with guidance provided to local governments in the 2017 Scoping Plan on setting plan-level GHG reduction goals that are consistent with the state's efforts to achieve the 2030 target established by SB 32. Consistency with the 2019 CAP is evaluated in this analysis. As noted in Section 3.5.1, "Regulatory Setting," the CAP is currently being updated to comply with the 2022 Scoping Plan Update, recently adopted by CARB in December 2022. However, at the time of preparing this analysis, this new CAP has not been adopted.

Detailed model assumptions and inputs for these calculations are presented in Appendix D.

THRESHOLDS OF SIGNIFICANCE

The issue of global climate change is inherently a cumulative issue because the GHG emissions of individual projects cannot be shown to have any material effect on global climate. Thus, the Project's impact on climate change is addressed only as a cumulative impact.

The significance criteria used to evaluate project impacts on climate change under CEQA are based on Section 15064 of the CEQA statute and relevant portions of Appendix G of the State CEQA Guidelines, which recommend that a lead agency consider a project's consistency with relevant, adopted plans and discuss any inconsistencies with

applicable regional plans, including plans to reduce GHG emissions. Implementation of a project would result in a cumulatively considerable contribution to climate change if it would:

- ▶ generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment; or
- ▶ conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs.

With respect to GHG emissions, the CEQA Guidelines Section 15064.4(a) states that lead agencies “shall make a good-faith effort, based to the extent possible on scientific and factual data, to describe, calculate or estimate” GHG emissions resulting from a project. The CEQA Guidelines note that an agency has the discretion to either quantify a project’s GHG emissions or rely on a “qualitative analysis or performance-based standards” (Section 15064.4[a]). A lead agency may use a “model or methodology” to estimate GHG emissions and has the discretion to select the model or methodology it considers “most appropriate to enable decision makers to intelligently take into account the project’s incremental contribution to climate change” (Section 15064.4[c]). The CEQA Guidelines provide that the lead agency should consider the following when determining the significance of impacts from GHG emissions on the environment (Section 15064.4[b]):

- ▶ The extent a project may increase or reduce GHG 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.
- ▶ 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 GHG emissions.

CEQA Guidelines Appendix G is a sample Initial Study checklist that includes a number of factual inquiries related to the subject of climate change, as it does on a whole series of additional environmental topics. Notably, lead agencies are under no obligation to use these inquiries in fashioning thresholds of significance on these subjects, or indeed on any subject addressed in the checklist. (*Save Cuyama Valley v. County of Santa Barbara* (2013) 213 Cal.App.4th 1059, 1068.) Rather, with few exceptions, “CEQA grants agencies discretion to develop their own thresholds of significance.” (*Ibid.*) Even so, it is a common practice for lead agencies to take the language from the inquiries set forth in Appendix G and to use that language in fashioning thresholds. The City has done so here.

Since California’s legislative mandate to reduce total projected GHG emissions to 1990 levels by the year 2020 has been achieved, the focus is now on reducing emissions 40 percent below 1990 levels by the year 2030 (SB 32), 85 percent below 1990 levels by 2045 (AB 1279), and carbon neutrality by 2045 (AB 1279). To achieve these targets, future development must be planned and implemented in the most GHG-efficient manner possible. GHG-efficient development reduces VMT by supporting compact, dense, mixed-use, pedestrian and bicycle-friendly, transit-oriented development. Development that reduces VMT by shifting car trips to walking, biking and transit use also imparts numerous public health co-benefits, such as increases in rates of routine physical activity and corresponding reductions in rates of obesity, diabetes, hypertension, and other chronic conditions; fewer injuries and deaths from traffic collisions; and more direct visual surveillance of the urban environment, which leads to reduced rates of crime and violence. Local agencies are strongly encouraged to address GHG emissions when updating and/or adopting general and area plans. The general plan is perhaps the best venue for addressing GHG emissions in making meaningful progress toward attaining GHG reduction goals while addressing CEQA requirements.

As stated previously, the 2019 Elk Grove General Plan was prepared in conjunction with the City’s 2019 CAP. The CAP is a qualified plan that has service metric targets for 2030 pursuant to the statewide reduction goals set forth by SB 32. However, development under the Project would extend beyond 2030 (i.e., 2040). As stated in the CAP, the CAP “demonstrates initial progress towards meeting the State’s long-term 2050 goal of reducing emissions to 80 percent below 1990 levels as stated in Executive Order S-03-05” (City of Elk Grove 2019b). The CAP sets a target to reduce emissions in the City to 1.4 MTCO₂e per capita by 2050. While 2020 and 2030 comprise the primary focus years of the CAP, the CAP, and future updates to it, establishes and quantifies measures that will evolve and expand into the future to ensure that the City meets its target by 2050. 2040 is the projected first full year of operation of the development under the Project; therefore, to determine the potential significance of the Project, the Project will be

evaluated for its consistency with the 2019 CAP. For the purposes of determining the significance of the Project, the Project would result in a cumulatively considerable contribution to climate change if it would:

- ▶ Not meet the 1.4 MTCO₂ per capita target for 2050 contained in the 2019 CAP.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.5-1: Project-Generated GHG Emissions and Consistency with Plans and Regulations

The General Plan EIR determined that GHG-related impacts would be less than significant through the incorporation of GHG reduction actions included in the General Plan and 2019 CAP (Impact 5.7.1) but would not likely meet long term reduction goals under Executive Order S-3-05 and result in a significant and unavoidable impact (Impact 5.7.2).

Construction and operation of development under the Project would generate an estimated 29,701 MTCO₂e/year in 2040, the assumed first full year of Project operation. Consistent with the findings of the General Plan EIR, new development under the Project would be subject to the policies contained in the 2019 CAP and 2019 General Plan, which would demonstrate consistency with statewide GHG reduction goals set forth by SB 32. However, development under the Project would extend beyond 2030 into 2040 and beyond. While the current CAP has a long-term reduction target for 2050 of 1.4 MTCO₂e per capita, the measures of the CAP are designed to reduce the gap in emission between a business-as-usual scenario for 2020 and 2030 but do not currently fully address reduction targets for 2050. Also, since the time the current CAP was prepared GHG reduction goals have become more stringent (i.e., 80 percent reduction in 1990 GHG emissions by 2050 versus an 85 percent reduction in 1990 GHG emissions by 2045).

Because the measures of the current CAP are limited to target years of 2020 and 2030, it does not account for the newest GHG reduction targets, and compliance with CAP measures would not be sufficient to meet the State's long-term targets. Due to the more stringent GHG reduction targets and increase in emissions, this impact would result in a substantially more severe impact than what was addressed in the General Plan EIR. Project impacts would be **significant and unavoidable**.

LEA Community Plan

Impact 5.7.2 of the General Plan EIR evaluated the General Plan's potential to conflict with long-term statewide GHG reduction goals for 2050. The General Plan EIR determined that development under the General Plan had the potential to conflict with statewide GHG reduction goals for 2050 because the measures of the CAP would only be sufficient to reduce GHG emissions to 3.0 MTCO₂ per capita, Impact 5.7.2 found the General Plan to have significant and unavoidable climate change impacts.

Construction-related activities associated with the Project would generate GHG emissions from the use of heavy-duty off-road equipment, materials transport, and worker commute. Based on modeling conducted for the Project, the Project would generate an estimated total 24,400 MTCO₂e from construction activity. SMAQMD recommends that project-level construction emissions be measured against a 1,100 MTCO₂e per year significance threshold which would be applied to projects undergoing project-level review. Refer to Appendix D for detailed construction modeling inputs and parameters.

Operation of the Project, which includes the LEA Community Plan Area, would directly generate GHG emissions from vehicle movement throughout the Planning Area, on-site natural gas consumption (e.g., stoves, fireplaces, water heaters), and use of landscaping equipment. GHGs would be indirectly emitted from electricity consumption, solid waste disposal at landfills, and water and wastewater treatment.

Table 3.5-2 summarizes the anticipated level of emissions for the Project by emissions sector. Refer to Appendix D for detailed input parameters and assumptions.

Table 3.5-2 Greenhouse Gas Emissions of the Project in 2040

Emissions Sector	MTCO ₂ e
Mobile Source	12,164
Energy Consumption ¹	4,069
Solid Waste Generation	667
Water Consumption and Wastewater Treatment	478
Area Sources	50
Total Operational GHG Emissions	17,426
GHG Emissions per Capita	2.9

Notes: Totals may not add due to rounding.

MTCO₂e = metric tons of carbon dioxide equivalent, MTCO₂e/year/SP = metric tons of carbon dioxide equivalent per year per service population.

¹ Energy was estimated in accordance with the 2019 California Energy Code (Part 6 of the Title 24 California Building Code). The California Energy Code is updated triennially and expected to enhance the energy efficiency and decarbonization of future development.

See Appendix D for detailed input parameters and modeling results.

Source: Modeled by Ascent Environmental in 2022.

As shown in Table 3.5-2, operation of the Project would generate approximately 17,426 MTCO₂e/year or 2.9 MTCO₂e per capita in 2040, the assumed first full year of Project operation. This is close to the per capita estimates in the CAP for 2050. While this estimate does not satisfy the target of 1.4 MTCO₂e per capita by 2050, it is relatively consistent with the projections in the 2019 CAP. Notably, the CAP does not establish a GHG reduction target for the year 2040. The General Plan EIR's GHG emissions inventory included operational emissions from the land uses sites identified in the previous General Plan land use maps. Implementation of the Project would introduce new operational emissions from increased density; however, as explained in the City's CAP, the projected GHG inventories for 2030 and 2050 contained assumptions pertaining to regional population growth, new households, and driving behavior.

Consistent with the analysis performed in the General Plan EIR, the Project would be subject to GHG reduction actions outlined in the 2019 CAP, which would reduce construction and operational emissions. Measures BE-1, BE-4, BE-5, BE-6, BE-7, BE-8, TACM-6, TACM-8, TACM-9, and ACM-5 from the 2019 CAP would apply to residential and nonresidential development constructed as part of implementation of the LEA Community Plan. The LEA Community Plan is designed to provide a walkable urban area in the City with a variety of mobility options and neighborhood streets. The centers of each of the three transections in the LEA Community Plan Area would be defined by the assemblage of diverse and dense land uses and public features such as plazas, parks, gathering spaces, and access to public transit. Therefore, the LEA Community Plan Area would be designed to promote alternative transportation and reduce mobile GHG emissions.

Additionally, the Elk Grove Municipal Code (EGMC) Chapter 16.07 provides streamlined permitting for EV charging stations. Future development constructed and operated under the LEA Community Plan that seeks to install EV charging stations would be entitled to use the streamlining mechanisms outlined in EGMC Chapter 16.07. EGMC Section 23.58.120 requires one "EV ready" parking space for all new one family and two-family dwelling units. This section also requires that 2.5 percent of parking for multifamily projects provide EV charging and an additional 2.5 percent of parking be ready for future EV charging expansion. This section additionally implements the requirements of Part 6 of the 2022 Title 24 California Building Code (CalGreen Code) for multi-family residential units and non-residential land uses. Compliance with these measures would be demonstrated in subsequent project building and site plan submittals for building permit approval and/or design review.

Although implementation of the Project would result in both direct and indirect GHG emissions, the 2019 CAP and associated General Plan policies would reduce emissions consistent with local GHG emissions reduction targets that were developed in consideration of the statewide 2030 reduction target established by SB 32 and the 2017 Scoping Plan. Unmitigated GHG emissions would increase under the Project due to the construction and operation of new development; however, as stated previously, the CAP's future GHG forecast included new emissions from regional population growth, additional household, and changing in driving behaviors. The CAP measures were developed in

consideration of this growth and adjusted accordingly to achieve the GHG reduction targets set forth by SB 32 and Executive Order S-3-05. As stated in the CAP, “[t]he City is also committed to updating the inventory, forecast, and reduction measures a minimum of once every five years. The City will use an implementation and monitoring tool to assist in tracking progress on CAP implementation and developing annual report for City Council presentations.”

Nevertheless, development under the LEA Community Plan, and the Project in a greater context, extends beyond 2030 to 2040 and beyond. The CAP establishes a long-term reduction target for 2050 of 1.4 MTCO₂e per capita however, the current CAP does not contain measures sufficient to meet this target. This is in large part because the gap between an unmitigated BAU scenario and adjusted BAU could not be accurately depicted at the time of preparing the current CAP due to the uncertainty of the nature and breadth of regulatory mechanisms that would be enacted by the state to achieve long-term targets extending to 2050, as well as available technology and systems. For instances, the regulatory landscape during the preparation of the CAP did not encompass the targets set forth by AB 1279 (i.e., carbon neutrality and a reduction of 85 percent less than 1990 emissions by 2045) and the future 2022 Scoping Plan. Therefore, the CAP, as it is currently written, does not address the state’s more recent long-term GHG reduction targets.

The City has made a commitment to ensure the efficacy of the CAP will improve over time through identifying the GHG reduction actions that achieve the greatest reductions, removing or amending the existing GHG reduction actions that are not reducing emissions, and adding new GHG reduction actions in response to new technologies, practices, and feasibility. As stated in the CAP, the CAP will “be reviewed every five years to understand the successes and barrier of implementation and ensure the most appropriate information and emissions reduction measures are included” (City of Elk Grove 2019: 1-3). Additionally, future GHG inventories would account for new data pertaining to regional growth and housing needs, which is being met as an objective of the LEA Community Plan.

Despite this commitment, the existing CAP measures would not be sufficient to reduce the City’s per capita emissions to the 2050 target, or until 2040 had a target been available at the time the CAP was prepared. While the CAP is currently being updated and is planned to be adopted in 2024, the targets of the existing CAP do not address the state’s most recent regulatory targets of carbon neutrality and a reduction of 85 percent below 1990 emissions levels by 2045. It is currently not known how the CAP update would address these new standards and what additional reduction measures may be applied to future development.

Portions of the LEA Community Plan Area have been previously analyzed in certified CEQA documents for the following projects: Southeast Policy Area Strategic Plan, Laguna Ridge Specific Plan, and Lent Ranch Marketplace Special Planning Area (SPA). Mitigation measures from the Southeast Policy Area Strategic Plan EIR include requirements related to reduction of GHG emissions. A comprehensive list of mitigation measures from these community plans prior environmental review are included in Appendix G. Mitigation from the Southeast Policy Area Strategic Plan includes measures to reduce GHG emissions based on measures from the City’s CAP and Elk Grove Municipal Code. Although as equivalent in effectiveness as requirements contained in the General Plan, Elk Grove Municipal Code, and exiting CAP mitigation measures would not be sufficient to reduce the City’s per capita emissions to the 2050 target.

With new long-term targets that are more aggressive than and supersede the state’s previous long-term targets of reducing emissions by 80 percent below 1990 levels by 2050, the Project would exceed emissions targets at a higher rate than anticipated as part of the General Plan. Because the Project would introduce development not captured in the inventory prepared for the CAP (i.e., the Project introduces land uses inconsistent with the assumptions of the previous General Plan) the efficacy of the CAP measures becomes more speculative. For this reason, impacts would be more severe than identified in the General Plan EIR. Because the CAP does not include the most recent regulations and there is no other mitigation available to reduce GHG impacts, this impact would be **significant and unavoidable**.

General Plan Land Use Designation Amendments

Construction and operational GHG emissions anticipated to occur from the proposed General Plan land use amendments in the Old Town Policy Area was included in the overall construction and operational modeling associated with the Project (see Table 3.5-2). As discussed above, the Project would generate emissions similar to those discussed in the General Plan EIR. Development in the Old Town Policy Area would similarly be subject to requirements of the City’s CAP and EGMC to reduce GHG emissions. However, it is currently not known how the CAP update would address the state’s newest GHG reduction goals and what additional reduction measures may be

applied to future development to do its “fair share” in meeting those goals. With these new long-term targets that are more aggressive than and supersede the state’s previous long-term targets of reducing emissions by 80 percent below 1990 levels, the Project would exceed emissions targets at a higher rate than anticipated as part of the General Plan. Construction- and operation-related emissions from implementation of the proposed General Plan land use amendments would result in a new or substantially more severe climate change impacts that was addressed in the General Plan EIR. Impacts would be **significant and unavoidable**.

Grant Line Road Precise Roadway Study

Construction emissions usage anticipated to occur from Grant Line Road Precise Roadway Study was included in the overall construction modeling associated with the Project. Construction of the Precise Study would generate short-term construction emissions; however, the Precise Study would not individually generate more vehicle trips and associated GHG mobile emissions as compared to the General Plan. Therefore, no operational emissions would occur from buildout of the Precise Plan. Construction emissions from implementation of the Precise Study would not result in a new or substantially more severe energy impacts that was addressed in the General Plan EIR. Impacts would be remain **significant and unavoidable**.

South and West Study Areas

Construction and operational GHG emissions anticipated to occur from the South and West Study Areas was included in the overall construction and operational modeling associated with the Project (see Table 3.5-2). As discussed above, the Project would generate emissions similar to those discussed in the General Plan EIR. Development in the South and West Study Areas would similarly be subject to requirements of the City’s CAP and EGMC to reduce GHG emissions. However, it is currently not known how the CAP update would address the state’s newest GHG reduction goals and what additional reduction measures may be applied to future development to do its “fair share” in meeting those goals. With these new long-term targets that are more aggressive than and supersede the state’s previous long-term targets of reducing emissions by 80 percent below 1990 levels, the Project would exceed emissions targets at a higher rate than anticipated as part of the General Plan. Construction- and operation-related emissions from implementation of the South and West Study Areas would result in a new or substantially more severe climate change impacts that was addressed in the General Plan EIR. Impacts would be **significant and unavoidable**.

Mitigation Measures

No additional mitigation is available beyond compliance with Measures BE-1, BE-4, BE-5, BE-6, BE-7, BE-8, TACM-6, TACM-8, TACM-9, and ACM-5 from the 2019 CAP and EGMC Chapter 16.07 and Section 23.58.120. The City is in the process of updating the 2019 CAP to meet the most recent regulatory requirements, however the CAP would not be completed before adoption of the Project.

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3.6 NOISE AND VIBRATION

This section includes a summary of applicable regulations related to noise and vibration, a description of ambient-noise conditions, and an analysis of potential short-term construction and long-term operational-source noise impacts associated with the Elk Grove General Plan Amendments and Update of VMT Standards (Project). The primary source of information used for this analysis is the General Plan EIR (City of Elk Grove 2018, 2019).

There were no comments regarding noise that were received in response to circulation of the notice of preparation (NOP).

3.6.1 Regulatory Setting

FEDERAL

U.S. Environmental Protection Agency Office of Noise Abatement and Control

The U.S. Environmental Protection Agency (EPA) Office of Noise Abatement and Control was originally established to coordinate Federal noise control activities. In 1981, EPA administrators determined that subjective issues such as noise would be better addressed at more local levels of government. Consequently, in 1982 responsibilities for regulating noise control policies were transferred to state and local governments. However, documents and research completed by the EPA Office of Noise Abatement and Control continue to provide value in the analysis of noise effects.

Federal Transit Administration

To address the human response to ground vibration, the Federal Transit Administration (FTA) has set forth guidelines for maximum-acceptable vibration criteria for different types of land uses. These guidelines are presented in Table 3.6-1.

Table 3.6-1 Ground-Borne Vibration (GBV) Impact Criteria for General Assessment

Land Use Category	GBV Impact Levels (VdB re 1 micro-inch/second)		
	Frequent Events ¹	Occasional Events ²	Infrequent Events ³
<i>Category 1:</i> Buildings where vibration would interfere with interior operations.	65 ⁴	65 ⁴	65 ⁴
<i>Category 2:</i> Residences and buildings where people normally sleep.	72	75	80
<i>Category 3:</i> Institutional land uses with primarily daytime uses.	75	78	83

Notes: VdB = vibration decibels referenced to 1 μ inch/second and based on the root mean square (RMS) velocity amplitude.

¹ "Frequent Events" is defined as more than 70 vibration events of the same source per day.

² "Occasional Events" is defined as between 30 and 70 vibration events of the same source per day.

³ "Infrequent Events" is defined as fewer than 30 vibration events of the same source per day.

⁴ This criterion is based on levels that are acceptable for most moderately sensitive equipment such as optical microscopes. Vibration-sensitive manufacturing or research would require detailed evaluation to define acceptable vibration levels.

Source: FTA 2018.

STATE

California Building Code Sound Transmission Standards

Noise within habitable units that is attributable to external sources is regulated by the California Building Standards codified in the California Code of Regulations, Title 24, Part 2, Section 1207. These standards are enforceable at the time of construction or during occupancy and apply to habitable units with common interior walls, partitions, and ceilings or those adjacent to public areas, such as halls, corridors, stairways, and service areas. Under these standards, the interior noise levels attributable to exterior sources shall not exceed 45 decibels (dB) in any habitable room. The noise metrics used to measure these levels can be day-night average sound level (L_{dn}) or Community Noise

Equivalent Level (CNEL), consistent with the local general plan. An acoustical analysis documenting compliance with the interior sound level standards shall be prepared for structures containing habitable rooms. Under Public Resources Code Section 25402.1(g), all cities and counties in the State are required to enforce the adopted California Building Code, including these standards for noise in interior environments.

California Department of Transportation

In 2013, Caltrans published the Transportation and Construction Vibration Manual (Caltrans 2020). The manual provides general guidance on vibration issues associated with construction and operation of projects in relation to human perception and structural damage. Table 3.6-2 presents recommendations for levels of vibration that could result in damage to structures exposed to continuous vibration.

Table 3.6-2 Caltrans Recommendations Regarding Levels of Vibration Exposure

PPV (in/sec)	Effect on Buildings
0.4-0.6	Architectural damage and possible minor structural damage
0.2	Risk of architectural damage to normal dwelling houses
0.1	Virtually no risk of architectural damage to normal buildings
0.08	Recommended upper limit of vibration to which ruins and ancient monuments should be subjected
0.006-0.019	Vibration unlikely to cause damage of any type

Notes: PPV= Peak Particle Velocity; in/sec = inches per second

Source: Caltrans 2020.

LOCAL

City of Elk Grove General Plan

Chapter 8 of the *City of Elk Grove General Plan* (City of Elk Grove 2019) includes noise policies that are applicable to the Project:

- **Policy N-1-1:** New development of the uses listed in Table 8-3 [presented as Table 3.6-3 of this SEIR] shall conform with the noise levels contained in the table. All indoor and outdoor areas shall be located, constructed, and/or shielded from noise sources to achieve compliance with the City's noise standards.

Table 3.6-3 Maximum Allowable Noise Exposure, Transportation Noise Sources

Land Use	Outdoor Activity Areas ^{1,2} L _{dn}	Interior Spaces	
		L _{dn}	L _{eq} ^{3,4}
Residential	60 ⁵	45	-
Residential subject to noise from railroad tracks, aircraft overflights, or similar noise sources which produce clearly identifiable, discrete noise events (the passing of a single train, as opposed to relatively steady noise sources as roadways)	60 ⁷	40 ⁶	-
Transient Lodging	60 ^{5,7}	45	-
Hospitals, Nursing Homes	60 ^{4,7}	45	-
Theaters, Auditoriums, Music Halls	-	-	35
Churches, Meeting Halls	60 ^{4,7}	-	40
Office Buildings	-	-	45
Schools, Libraries, Museums	-	-	45

Notes: L_{dn} = Day-Night Level, L_{eq} = Equivalent Continuous Sound Level

¹ Where the location of outdoor activity areas is unknown, the exterior noise level standards shall be applied to the property line of the receiving land use. Where it is not practical to mitigate exterior noise levels at patios or balconies of apartment complexes, a common area such as a pool or recreation area may be designated as the outdoor activity area.

- ² Transportation projects subject to California Department of Transportation review or approval shall comply with the Federal Highway Administration noise standards for evaluation and abatement of noise impacts.
- ³ As determined for a typical worst-case hour during periods of use.
- ⁴ L_{eq} represents an average of the sound energy occurring over a specified period. In effect, L_{eq} is the steady-state sound level containing the same acoustical energy as the time-varying sound level that occurs during the same period (Caltrans 2013: 2-48).
- ⁵ Where it is not possible to reduce noise in outdoor activity areas to 60 dB L_{dn} or less using a practical application of the best available noise reduction measures, an exterior noise level of up to 65 dB L_{dn} may be allowed provided that available exterior noise level reduction measures have been implemented and interior noise levels are in compliance with this table.
- ⁶ In the case of hotel/motel facilities or other transient lodging, outdoor activity areas such as pool areas may not be included in the project design. In these cases, only the interior noise level criterion will apply.
- ⁷ The intent of this noise standard is to provide increased protection against sleep disturbance for residences located near railroad tracks.
- ⁸ In cases where the existing ambient noise level exceeds 60 dB, the maximum allowable project-related permanent increase in ambient noise levels shall be 3 dB L_{dn} .

Source: City of Elk Grove 2019: 8-57

- ▶ **Policy N-1-2:** Where noise mitigation measures are required to achieve the standards of Tables 8-3 and 8-4 [presented as Tables 3.6-3 and 3.6-4, respectively, in this SEIR], the emphasis of such measures shall be placed upon site planning and project design. The use of noise barriers shall be considered a means of achieving the noise standards only after all other practical design-related noise mitigation measures, including the use of distance from noise sources, have been integrated into the project.

Table 3.6-4 Noise Level Performance Standards for New Projects Affected by or Including Non-Transportation Noise Sources*

Performance Standards for Stationary Sources	Noise Level Descriptor	Daytime (7 a.m. to 10 p.m.)	Nighttime (10 p.m. to 7 a.m.)
Performance Standards for Typical Stationary Noise Sources ¹	Hourly L_{eq} , dB	55 ^{3,4}	45 ^{3,4}
Performance Standards for Stationary Noise Sources Which Are Tonal, Impulsive, Repetitive, or Consist Primarily of Speech or Music ²	Hourly L_{eq} , dB	50 ^{3,4}	40 ^{3,4}

* Applies to noise-sensitive land uses only.

- ¹ These standards will apply generally to noise sources that are not tonal, impulsive, or repetitive in nature. Typical noise sources in this category would include HVAC systems, cooling towers, fans, and blowers.
- ² These standards apply to noises which are tonal in nature, impulsive, repetitive, or which consist primarily of speech or music (e.g., humming sounds, outdoor speaker systems). Typical noise sources in this category include pile drivers, drive-through speaker boxes, punch presses, steam valves, and transformer stations. HVAC/pool equipment are exempt from these standards.
- ³ These noise levels do not apply to residential units established in conjunction with industrial or commercial uses (e.g., caretaker dwelling). HVAC/pool equipment are exempt from these standards.
- ⁴ The City may impose noise level standards which are more or less restrictive based upon determination of existing low or high ambient noise levels.

Source: City of Elk Grove 2019: 8-58

- ▶ **Policy N-1-3:** Use the noise contour mapping identified in Figure 8-6 to inform land use decisions.
- ▶ **Policy N-1-4:** Protect noise-sensitive land uses, identified in Table 8-3 [presented as Table 3.6-3 in this SEIR], from noise impacts.
- ▶ **Policy N-1-5:** Where noise-sensitive land uses are proposed in areas exposed to existing or projected exterior noise levels exceeding the levels specified in Table 8-3 [presented as Table 3.6-3] or the performance standards of Table 8-4 [presented as Table 3.6-4], an acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.
- ▶ **Policy N-1-6:** Where proposed nonresidential land uses are likely to produce noise levels exceeding the performance standards of Table 8-4 [presented as Table 3.6-4] at existing or planned noise sensitive uses, an

acoustical analysis shall be required as part of the environmental review process so that noise mitigation may be included in the project design.

- ▶ **Policy N-1-7:** The standards outlined in Table 8-4 [presented as Table 3.6-4] shall not apply to transportation- and City infrastructure-related construction activities as long as construction occurs between the hours of 7:00 a.m. and 7:00 p.m., Monday through Friday, and 8:00 a.m. and 5:00 p.m. on weekends and federally recognized holidays. Work may occur beyond these time frames for construction safety or because of existing congestion that makes completing the work during these time frames infeasible.
- ▶ **Policy N-1-8:** For development projects that are subject to discretionary review, the City may require applicants to assess potential construction noise impacts on nearby sensitive uses and to minimize impacts on those uses.
- ▶ **Policy N-1-9:** For projects involving the use of major vibration-generating equipment (e.g., pile drivers, vibratory rollers) that could generate groundborne vibration levels in excess of 0.2 in/sec ppv, the City may require a project-specific vibration impact assessment to analyze potential groundborne vibrational impacts and may require measures to reduce ground vibration levels.
- ▶ **Policy N-1-10:** For new development involving noise-sensitive receptors that could be exposed to high levels of ground vibration levels generated by freight or transit rail, the City may require a project-specific vibration impact assessment to analyze potential groundborne vibrational impacts and may require measures to reduce ground vibrational levels.
- ▶ **Policy N-2-1:** Noise created by new proposed non-transportation noise sources shall be mitigated so as not to exceed the noise level standards of Table 8-4 [presented as Table 3.6-4 in this SEIR], as measured immediately within the property line of lands designated for noise-sensitive uses.
- ▶ **Policy N-2-2:** The following criteria shall be used as CEQA significance thresholds for transportation and stationary noise sources:
 - Where existing ambient noise levels are less than 60 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a +5 dB L_{dn} increase in noise levels shall be considered significant; and
 - Where existing ambient noise levels range between 60 and 65 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a +3 dB L_{dn} increase in noise levels shall be considered significant; and
 - Where existing ambient noise levels are greater than 65 dB L_{dn} at the outdoor activity areas of noise-sensitive uses, a +1.5 dB L_{dn} increase in noise levels shall be considered significant. Public roadway improvements to alleviate traffic congestion and safety hazards shall utilize FHWA [Federal Highway Administration] noise standards to allow a reasonable dollar threshold per dwelling to be used in the evaluation and abatement of impacts.
 - The standards outlined in Table 8-4 [presented as Table 3.6-4 in this EIR] shall not apply to public projects to alleviate traffic congestion and safety hazards.
- ▶ **Policy N-2-3:** Emphasize methods other than installation of sound walls in front yard areas to reduce noise to acceptable levels in residential areas that were originally constructed without sound walls.
- ▶ **Policy N-2-4:** Where sound walls or noise barriers are constructed, strongly encourage and consider requiring a combination of berms and walls to reduce the apparent height of the wall and produce a more aesthetically appealing streetscape.

City of Elk Grove Municipal Code

Chapter 6.32 of the Elk Grove Municipal Code (EGMC) addresses noise generation in the City. Section 6.32.080 of the EGMC contains exterior noise standards for sensitive receptors, outlined in Table 6.32-1 [presented as Table 3.6-5 in this SEIR]. The metric of these standards is L_{eq} because they are identical to the noise level performance standards included in the General Plan presented in Table 3.6-4.

Table 3.6-5 Exterior Noise Standards for Sensitive Receptors¹

	7:00 am to 10:00 pm	10:00 pm to 7:00 am
Stationary noise sources, generally	55 dB	45 dB
Stationary noise sources which are tonal, impulsive, repetitive, or consist primarily of speech or music	50 dB	40 dB

Source: Section 6.32.080 of the Elk Grove Municipal Code

¹ Sensitive receptors are defined as receiving premises used for residential purposes and for nonresidential purposes that are sensitive to noise, including, but not limited to, residential dwellings, schools, hospitals, hotels, and community care facilities.

In the case that the measured ambient noise level exceeds the noise levels identified in Table 6.32-1 of the EGMC (presented as Table 3.6-5 in this SEIR), a maximum increase of 5-dBA is allowed where the ambient noise level is above that shown in the table but less than 60 dB. Where the ambient noise level is between sixty (60) dB and sixty-five (65) dB, inclusive, a maximum increase of three (3) dB above the ambient noise level is allowed. Finally, where the ambient noise level is greater than sixty-five (65) dB, a maximum increase of one and one-half (1.5) dB above the ambient noise level is allowed.

Section 6.32.100 of the EGMC provides the several exemptions to all noise regulations specified within Chapter 6.32.100 of the Code. Relevant to the Project, the exemption includes:

- ▶ activities conducted on parks, public playgrounds and school grounds, provided such parks, playgrounds and school grounds are owned and operated by a public entity or private school;
- ▶ any mechanical device, apparatus or equipment related to or connected with emergency activities or emergency work; the exemption does not include permanently installed emergency generators;
- ▶ noise sources associated with construction, repair, remodeling, demolition, paving, or grading of any real property, provided said activities only occur between the hours of 7:00 a.m. and 7:00 p.m. when located in close proximity to residential uses. Noise associated with these activities not located in close proximity to residential uses may occur between the hours of 6:00 a.m. and 8:00 p.m. However, when an unforeseen or unavoidable condition occurs during a construction project and the nature of the project necessitates that work in process be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work after 7:00 p.m. and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner;
- ▶ all transportation, flood control, and utility company maintenance and construction operation at any time on public rights-of-way, and those situations that may occur on private property deemed necessary to serve the best interest of the public and to protect the public's health and well-being, including debris and limb removal, removal of damaged poles and vehicles, removal of downed wires, repairing traffic signals, repair of water hydrants and mains, gas lines, oil lines, and sewers, restoring electrical service, street sweeping, unplugging sewers, vacuuming catch basins, etc. The regular testing of motorized equipment and pumps shall not be exempt;
- ▶ noise sources associated with the authorized collection of solid waste (e.g., refuse and garbage); and
- ▶ noise sources associated with the minor maintenance and operation of residential real property, including but not limited to pool equipment and heating and air conditioning units. Additionally, yard maintenance equipment and other power tools may be allowed provided the activities take place between the hours of 7:00 a.m. and 10:00 p.m.

Section 6.32.110 of the EGMC pertains to the operation of machinery, equipment, fans, and air conditioning.

- ▶ Except as otherwise provided, it is unlawful for any person to operate any mechanical equipment, pump, fan, air conditioning apparatus, stationary pumps, stationary cooling towers, stationary compressors, similar mechanical devices, or any combination thereof in any manner so as to create any noise which would cause the maximum noise level to exceed a maximum limit of fifty-five (55) dBA.

Section 6.32.140 of the EGMC prohibits the following activities which are relevant to the Project:

- ▶ operating or causing the operation of tools or equipment on private property used in alteration, construction, demolition, drilling or repair work daily between the hours of 7:00 p.m. and 7:00 a.m. when located in close proximity to residential uses, or between the hours of 8:00 p.m. and 6:00 a.m. when not located in close proximity to residential uses, so that the sound creates a noise disturbance across a residential property line, except for emergency work of public service utilities. However, when an unforeseen or unavoidable condition occurs during a construction project and the nature of the project necessitates that work in process be continued until a specific phase is completed, the contractor or owner shall be allowed to continue work after 8:00 p.m. and to operate machinery and equipment necessary until completion of the specific work in progress can be brought to conclusion under conditions which will not jeopardize inspection acceptance or create undue financial hardships for the contractor or owner.
- ▶ loading, unloading, opening, closing or other handling of boxes, crates, containers, building materials, garbage cans, or similar objects on private property between the hours of 10:00 p.m. and 7:00 a.m. in a manner to cause a noise disturbance.

City of Elk Grove Standard Construction Specifications Manual

The Elk Grove Standard Construction Specifications Manual (City of Elk Grove 2022) includes the following standards that are applicable to the Project and noise:

- ▶ **Section 7-8.01: Allowable Times and Hours of Work.** Unless otherwise noted in the Special Provisions or approved by the City, no work shall be done between the hours of 6:00 p.m. and 7:00 a.m., or on Saturdays, Sundays, or legal holidays. Unless otherwise noted in the Special Provisions or approved by the City, no lane of traffic shall be closed to the public during the peak hours of 7:00 a.m. to 8:30 a.m. and 3:00 p.m. to 6:00 p.m., except as necessary for the proper care and protection of work already performed or in case of an emergency repair as defined below. Exceptions are allowed only with the City's written permission.
- ▶ **Section 7-8.02: Off-Period Work.** A written request to work between 6:00 p.m. and 7:00 a.m. or on Saturdays, Sundays, or legal holidays, or to close a lane of traffic during peak hours must be submitted at least two (2) Working Days in advance of the intended work. The City will evaluate the Contractor's request to determine if there is a benefit to the City, a nuisance or a hazard to the public, the project, or the area surrounding the site, and if the Contractor should pay any City overtime costs related to the off-period work. The City may place conditions on any approval of off-period work based on this analysis.
- ▶ **Section 10-6: Noise Control.** The Contractor shall comply with all local noise control and noise level rules, regulations, and ordinances that apply to the Work. The Special Provisions may contain specific or additional requirements. Internal combustion engines used for any purpose on the Work must be equipped with a muffler recommended by the manufacturer.

3.6.2 Environmental Setting

ACOUSTIC FUNDAMENTALS

Prior to discussing the noise setting for the Project, background information about sound, noise, vibration, and common noise descriptors is needed to provide context and a better understanding of the technical terms referenced throughout this section.

Sound, Noise, and Acoustics

Sound can be described as the mechanical energy of a vibrating object transmitted by pressure waves through a liquid or gaseous medium (e.g., air) to a human ear. Noise is defined as loud, unexpected, annoying, or unwanted sound.

In the science of acoustics, the fundamental model consists of a sound (or noise) source, a receiver, and the propagation path between the two. The loudness of the noise source and obstructions or atmospheric factors

affecting the propagation path to the receiver determines the sound level and characteristics of the noise perceived by the receiver. The field of acoustics deals primarily with the propagation and control of sound.

Frequency

Continuous sound can be described by frequency (pitch) and amplitude (loudness). A low-frequency sound is perceived as low in pitch. Frequency is expressed in terms of cycles per second, or hertz (Hz) (e.g., a frequency of 250 cycles per second is referred to as 250 Hz). High frequencies are sometimes more conveniently expressed in kilohertz, or thousands of hertz. The audible frequency range for humans is generally between 20 Hz and 20,000 Hz.

Sound Pressure Levels and Decibels

The amplitude of pressure waves generated by a sound source determines the loudness of that source. A logarithmic scale is used to describe sound pressure level (SPL) in terms of decibels (dB). Because decibels are logarithmic units, SPLs cannot be added or subtracted through ordinary arithmetic. Under the decibel scale, a doubling of sound energy corresponds to a 3-dB increase. In other words, when two identical sources are each producing sound of the same loudness at the same time, the resulting sound level at a given distance would be 3 dB higher than if only one of the sound sources was producing sound under the same conditions. For example, if one idling truck generates an SPL of 70 dB, two trucks idling simultaneously would not produce 140 dB; rather, they would combine to produce 73 dB. Under the decibel scale, three sources of equal loudness together produce a sound level approximately 5 dB louder than one source.

A-Weighted Decibels

The decibel scale alone does not adequately characterize how humans perceive noise. The dominant frequencies of a sound have a substantial effect on the human response to that sound. Although the intensity (energy per unit area) of the sound is a purely physical quantity, the loudness or human response is determined by the characteristics of the human ear.

Human hearing is limited in the range of audible frequencies as well as in the way it perceives the SPL in that range. In general, people are most sensitive to the frequency range of 1,000–8,000 Hz and perceive sounds within this range better than sounds of the same amplitude with frequencies outside of this range. To approximate the response of the human ear, sound levels of individual frequency bands are weighted, depending on the human sensitivity to those frequencies. Then, an “A-weighted” sound level (expressed in units of A-weighted decibels) can be computed based on this information.

The A-weighting network approximates the frequency response of the average young ear when listening to most ordinary sounds. When people make judgments of the relative loudness or annoyance of a sound, their judgment correlates well with the A-scale sound levels of those sounds. Thus, noise levels are typically reported in terms of A-weighted decibels. All sound levels discussed in this section are expressed in A-weighted decibels. Table 3.6-6 describes typical A-weighted noise levels for various noise sources.

Table 3.6-6 Typical A-Weighted Noise Levels

Common Outdoor Activities	Noise Level (dBA)	Common Indoor Activities
	— 110 —	Rock band
Jet fly-over at 1,000 feet	— 100 —	
Gas lawn mower at 3 feet	— 90 —	
Diesel truck at 50 feet at 50 miles per hour	— 80 —	Food blender at 3 feet, Garbage disposal at 3 feet
Noisy urban area, daytime, Gas lawn mower at 100 feet	— 70 —	Vacuum cleaner at 10 feet, Normal speech at 3 feet
Commercial area, Heavy traffic at 300 feet	— 60 —	
Quiet urban daytime	— 50 —	Large business office, Dishwasher next room
Quiet urban nighttime	— 40 —	Theater, large conference room (background)
Quiet suburban nighttime	— 30 —	Library, Bedroom at night
Quiet rural nighttime	— 20 —	
	— 10 —	Broadcast/recording studio
Lowest threshold of human hearing	— 0 —	Lowest threshold of human hearing

Source: Caltrans 2013: Table 2-5.

Human Response to Changes in Noise Levels

The doubling of sound energy results in a 3-dB increase in the sound level. However, given a sound level change measured with precise instrumentation, the subjective human perception of a doubling of loudness will usually be different from what is measured.

Under controlled conditions in an acoustical laboratory, the trained, healthy human ear can discern 1-dB changes in sound levels when exposed to steady, single-frequency (“pure-tone”) signals in the mid-frequency (1,000–8,000 Hz) range. In general, the healthy human ear is most sensitive to sounds between 1,000 and 5,000 Hz and perceives both higher and lower frequency sounds of the same magnitude with less intensity (Caltrans 2013: 2-18). In typical noisy environments, changes in noise of 1–2 dB are generally not perceptible. However, it is widely accepted that people can begin to detect sound level increases of 3 dB in typical noisy environments. Further, a 5-dB increase is generally perceived as a distinctly noticeable increase, and a 10-dB increase is generally perceived as a doubling of loudness (Caltrans 2013: 2-10). Therefore, a doubling of sound energy (e.g., doubling the volume of traffic on a highway) that would result in a 3-dB increase in sound would generally be perceived as barely detectable.

Vibration

Vibration is the periodic oscillation of a medium or object with respect to a given reference point. Sources of vibration include natural phenomena (e.g., earthquakes, volcanic eruptions, sea waves, landslides) and those introduced by human activity (e.g., explosions, machinery, traffic, trains, construction equipment). Vibration sources may be continuous (e.g., operating factory machinery) or transient in nature (e.g., explosions). Vibration levels can be depicted in terms of amplitude and frequency, relative to displacement, velocity, or acceleration.

Vibration amplitudes are commonly expressed in peak particle velocity (PPV) or root-mean-square (RMS) vibration velocity. PPV and RMS vibration velocity are normally described in inches per second (in/sec) or in millimeters per second. PPV is defined as the maximum instantaneous positive or negative peak of a vibration signal. PPV is typically used in the monitoring of transient and impact vibration and has been found to correlate well to the stresses experienced by buildings (FTA 2018: 110, Caltrans 2013: 6].

Although PPV is appropriate for evaluating the potential for building damage, it is not always suitable for evaluating human response. It takes some time for the human body to respond to vibration signals. In a sense, the human body responds to average vibration amplitude. The RMS of a signal is the average of the squared amplitude of the signal, typically calculated over a 1-second period. As with airborne sound, the RMS velocity is often expressed in decibel notation as vibration decibels (VdB), which serves to compress the range of numbers required to describe vibration (FTA 2018: 7-4; Caltrans 2020: 7). This is based on a reference value of 1 micro inch per second.

The typical background vibration-velocity level in residential areas is approximately 50 VdB. Ground vibration is normally perceptible to humans at approximately 65 VdB. For most people, a vibration-velocity level of 75 VdB is the approximate dividing line between barely perceptible and distinctly perceptible levels (FTA 2018: 7-8; Caltrans 2020: 27).

Typical outdoor sources of perceptible ground vibration are construction equipment, steel-wheeled trains, and traffic on rough roads. If a roadway is smooth, the ground vibration is rarely perceptible. The range of interest is from approximately 50 VdB, which is the typical background vibration-velocity level, to 100 VdB, which is the general threshold where minor damage can occur to fragile buildings. Construction activities can generate sufficient ground vibrations to pose a risk to nearby structures. Constant or transient vibrations can weaken structures, crack facades, and disturb occupants (FTA 2018: 7-5).

Vibrations generated by construction activity can be transient, random, or continuous. Transient construction vibrations are generated by blasting, impact pile driving, and wrecking balls. Continuous vibrations are generated by vibratory pile drivers, large pumps, and compressors. Random vibration can result from jackhammers, pavement breakers, and heavy construction equipment.

Table 3.6-7 summarizes the general human response to different ground vibration-velocity levels.

Table 3.6-7 Human Response to Different Levels of Ground Noise and Vibration

Vibration-Velocity Level	Human Reaction
65 VdB	Approximate threshold of perception.
75 VdB	Approximate dividing line between barely perceptible and distinctly perceptible. Many people find that transportation-related vibration at this level is unacceptable.
85 VdB	Vibration acceptable only if there are an infrequent number of events per day.

Notes: VdB = vibration decibels referenced to 1 μ inch/second and based on the root mean square (RMS) velocity amplitude.

Source: FTA 2018: 7-8

Common Noise Descriptors

Noise in our daily environment fluctuates over time. Various noise descriptors have been developed to describe time-varying noise levels. The following are the noise descriptors used throughout this section.

Equivalent Continuous Sound Level (L_{eq}): L_{eq} represents an average of the sound energy occurring over a specified period. In effect, L_{eq} is the steady-state sound level containing the same acoustical energy as the time-varying sound level that occurs during the same period (Caltrans 2013: 2-48). For instance, the 1-hour equivalent sound level, also referred to as the hourly L_{eq} , is the energy average of sound levels occurring during a 1-hour period and is the basis for noise abatement criteria used by California Department of Transportation (Caltrans) and Federal Transit Administration (FTA) (Caltrans 2013: 2-47; FTA 2018: 210).

Maximum Sound Level (L_{max}): L_{max} is the highest instantaneous sound level measured during a specified period (Caltrans 2013: 2-48; FTA 2018: 207–208).

Day-Night Level (L_{dn}): L_{dn} is the energy average of A-weighted sound levels occurring over a 24-hour period, with a 10-dB “penalty” applied to sound levels occurring during nighttime hours between 10:00 p.m. and 7:00 a.m. (Caltrans 2013: 2-48; FTA 2018: 214).

Community Noise Equivalent Level (CNEL): CNEL is the energy average of the A-weighted sound levels occurring over a 24-hour period, with a 10-dB penalty applied to sound levels occurring during the nighttime hours between 10:00 p.m. and 7:00 a.m. and a 5-dB penalty applied to the sound levels occurring during evening hours between 7:00 p.m. and 10:00 p.m. (Caltrans 2020).

Sound Propagation

When sound propagates over a distance, it changes in level and frequency content. The manner in which a noise level decreases with distance depends on four factors.

Geometric Spreading

Sound from a localized source (i.e., a point source) propagates uniformly outward in a spherical pattern. The sound level attenuates (or decreases) at a rate of 6 dB for each doubling of distance from a point source. Roads and highways consist of several localized noise sources on a defined path and hence can be treated as a line source, which approximates the effect of several point sources, thus propagating at a slower rate in comparison to a point source. Noise from a line source propagates outward in a cylindrical pattern, often referred to as cylindrical spreading. Sound levels attenuate at a rate of 3 dB for each doubling of distance from a line source.

Ground Absorption

The propagation path of noise from a source to a receiver is usually very close to the ground. Noise attenuation from ground absorption and reflective-wave canceling provides additional attenuation associated with geometric spreading. Traditionally, this additional attenuation has also been expressed in terms of attenuation per doubling of distance. This approximation is usually sufficiently accurate for distances of less than 200 feet. For acoustically hard sites (i.e., sites with a reflective surface between the source and the receiver, such as a parking lot or body of water), no excess ground attenuation is assumed. For acoustically absorptive or soft sites (i.e., those sites with an absorptive ground surface between the source and the receiver, such as soft dirt, grass, or scattered bushes and trees), additional ground-attenuation value of 1.5 dB per doubling of distance is normally assumed. When added to the attenuate rate associated with cylindrical spreading, the additional ground attenuation results in an overall drop-off rate of 4.5 dB per doubling of distance. This would hold true for point sources, resulting in an overall drop-off rate of up to 7.5 dB per doubling of distance.

Atmospheric Effects

Receivers located downwind from a source can be exposed to increased noise levels relative to calm conditions, whereas locations upwind can have lowered noise levels, as wind can carry sound. Sound levels can be increased over large distances (e.g., more than 500 feet) from the source because of atmospheric temperature inversion (i.e., increasing temperature with elevation). Other factors such as air temperature, humidity, and turbulence can also affect sound attenuation.

Shielding by Natural or Human-Made Features

A large object or barrier in the path between a noise source and a receiver attenuate noise levels at the receiver. The amount of attenuation provided by shielding depends on the size of the object and the frequency content of the noise source. Natural terrain features (e.g., hills and dense woods) and human-made features (e.g., buildings and walls) can substantially reduce noise levels. A barrier that breaks the line of sight between a source and a receiver will typically result in at least 5 dB of noise reduction (Caltrans 2013: 2-41; FTA 2018: 42). Barriers higher than the line of sight provide increased noise reduction (FTA 2018: 2-12). Vegetation between the source and receiver is rarely effective in reducing noise because it does not create a solid barrier unless there are multiple rows of vegetation (FTA 2018: 15, 104, 106).

EXISTING NOISE ENVIRONMENT

Existing Noise- and Vibration-Sensitive Land Uses

Noise-sensitive land uses are generally considered to include those uses where noise exposure could result in health-related risks to individuals, as well as places where quiet is an essential element of their intended purpose. Residential uses are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels, and because these land uses are places of rest and sleep for City residents. Additionally, the City of Elk Grove defines sensitive receptors as "receiving premises used for residential purposes and for nonresidential purposes that are sensitive to noise, including, but not limited to, residential dwellings, schools, hospitals, hotels, and community care facilities as those uses are defined in [EGMC] Title 23 (Zoning)." Additional land uses such as parks, historic sites, cemeteries, and recreation areas are also considered sensitive to increases in exterior noise levels. Schools, churches, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses. The City includes many of these types of noise-sensitive land uses including residential, hotel/motel, parks and recreational facilities, religious institutions, and schools. These land uses are given

priority in assessing and addressing noise exposure given the noise-sensitive nature of the land uses and activities occurring in these locations.

Existing Noise Sources

The noise environment in the City and its Planning Area is defined primarily by vehicular traffic on State Route (SR) 99, Interstate 5 (I-5), and local roadways. To a lesser extent, railroad traffic, occasional aircraft overflights, nearby agricultural activities, and landscape maintenance activities at residential and commercial uses also contribute on an intermittent basis to ambient noise levels. Industrial uses in the City are located primarily in the south-central and northwest portions of the City and are collocated adjacent to the two existing rail lines which traverse north-south through the City.

Roadway Noise Sources

Noise levels along roadways are affected by several traffic characteristics, including average daily traffic (ADT) volumes, the vehicle mix, roadway conditions, vehicle speed, and the gradient of the roadway. The major east-west roadways in the City are Laguna Boulevard/Bond Road, Elk Grove Boulevard, and Calvine Road. The major north-south roadways are Grant Line Road, Bond Road, Elk Grove-Florin Road, Bruceville Road, Bradshaw Road, and Franklin Boulevard. SR 99 traverses north-south through the City, adjacent to predominantly mixed-use, commercial, and office land uses. In general, these roadways abut commercial or residential land uses with some sound-reducing measures (e.g., sound walls, setbacks from roadways) incorporated into site design. I-5 traverses north-south along the western border of the City's boundaries. Currently, residential, commercial, and residential land uses are located adjacent to I-5, although a significant buffer distance (approximately 160 feet) exists between City boundaries and the nearest travel lane on I-5. Land uses adjacent to I-5 also include some sound-reducing measures to address traffic noise exposure for nearby noise-sensitive land uses.

Table 3.6-8 depicts estimated 2019 average-daily traffic noise levels (dB L_{dn}) at 50 feet from the near travel-lane centerline for major roadway segments adjacent to the development identified as part of the Project. The extent to which nearby land uses are affected by traffic noise depends on multiple factors, including their respective proximity to the roadways, shielding provided by intervening terrain and structures, and their individual sensitivity to noise.

Table 3.6-8 2019 Traffic Noise Levels

Roadway	From	To	L_{dn} at 50 Feet from Near-Travel-Lane Centerline ¹ (dB L_{dn})	Noise Contour Distance in Feet		
			Existing Conditions (2019)	60 dB	65 dB	70 dB
Laguna Boulevard	Harbour Point Dr	Franklin Blvd	72.0	783	248	78
	Franklin Blvd	Bruceville Rd	72.2	827	262	83
	Bruceville Rd	Big Horn Blvd	72.8	946	299	95
	Big Horn Blvd	Laguna Springs Dr	74.1	1294	409	129
Bond Rd	E. Stockton Blvd	Emerald Crest Dr	72.4	871	275	87
	Elk Grove Florin Rd	Waterman Rd	70.9	620	196	62
	Waterman Rd	Bradshaw Rd	67.9	307	97	31
	Bradshaw Rd	Grant Line Rd	64.0	127	40	13
Elk Grove Blvd	Harbour Point Dr	Franklin Blvd	73.5	1110	351	111
	Franklin Blvd	Bruceville Rd	73.7	1167	369	117
	Bruceville Rd	Big Horn Blvd	74.2	1312	415	131
	Laguna Springs Dr	SR 99	75.0	1571	497	157
	E. Stockton Blvd	Elk Grove Florin Rd	68.8	381	120	38
	Elk Grove Florin Rd	Waterman Rd	63.0	100	32	10
	Bradshaw Rd	Grant Line Rd	60.7	59	19	6

Roadway	From	To	L _{dn} at 50 Feet from Near-Travel-Lane Centerline ¹ (dB L _{dn})	Noise Contour Distance in Feet		
			Existing Conditions (2019)	60 dB	65 dB	70 dB
Bilby Rd	Franklin Blvd	Willard Pkwy	60.8	60	19	6
	Willard Pkwy	Bruceville Rd	67.8	304	96	30
Kammerer Rd	Bruceville Rd	Promenade Pkwy	68.8	383	121	38
	Promenade Pkwy	SR 99	72.2	832	263	83
Grant Line Rd	E. Stockton Blvd	Waterman Rd	74.0	1264	400	126
Sheldon Rd	Lewis Stein Rd	SR 99	72.7	937	296	94
	Elk Grove Florin Rd	Waterman Rd	68.6	360	114	36
Franklin Blvd	Big Horn Blvd	Laguna Blvd	70.8	606	192	61
	Laguna Blvd	Elk Grove Blvd	70.1	508	161	51
	Elk Grove Blvd	Whitelock Pkwy	70.3	538	170	54
Bruceville Rd	Big Horn Blvd	Laguna Blvd	70.4	544	172	54
	Laguna Blvd	Elk Grove Blvd	69.7	471	149	47
	Elk Grove Blvd	Whitelock Pkwy	69.7	462	146	46
	Whitelock Pkwy	Bilby Road	66.2	209	66	21
Big Horn Boulevard	Lewis Stein Rd	Laguna Blvd	67.4	276	87	28
	Laguna Blvd	Longleaf Dr	69.0	395	125	39
	Elk Grove Blvd	Civic Center Dr	69.0	397	125	40
	Lotz Pkwy	Whitelock Pkwy	67.4	275	87	27
Power Inn Rd	Aubury Dr	Sheldon Rd	63.5	112	36	11
Elk Grove Florin Rd	Calvine Rd	Sheldon Rd	71.6	725	229	73
	Sheldon Rd	Bond Rd	70.8	599	189	60
	Bond Rd	Elk Grove Blvd	66.5	222	70	22
	Valley Oak Lane	E. Stockton Blvd	61.8	75	24	7
Waterman Rd	Sheldon Rd	Bond Rd	70.6	572	181	57
	Bond Rd	Elk Grove Blvd	70.5	564	178	56
	Mosher Rd	Grant Line Rd	65.7	187	59	19
Bradshaw Rd	Sheldon Rd	Bond Rd	71.6	727	230	73
	Elk Grove Blvd	Grant Line Rd	68.7	370	117	37
Harbour Point Dr	Laguna Blvd	Babson Dr	66.6	231	73	23
Willard Pkwy	Whitelock Pkwy	Blossom Ridge Dr	67.3	268	85	27
	Blossom Ridge Dr	Bilby Rd	66.8	239	75	24
Civic Center Drive	Bruceville Rd	Wymark Dr	61.2	65	21	7
	Wymark Dr	Big Horn Blvd	61.8	75	24	7
	Big Horn Blvd	Laguna Springs Dr	58.6	36	11	4
Lotz Pkwy	Big Horn Blvd	Laguna Springs Dr	61.4	69	22	7
	Laguna Springs Dr	Whitelock Pkwy	60.4	54	17	5

Roadway	From	To	L _{dn} at 50 Feet from Near-Travel-Lane Centerline ¹ (dB L _{dn})	Noise Contour Distance in Feet		
			Existing Conditions (2019)	60 dB	65 dB	70 dB
Whitelock Pkwy	Franklin Blvd	Bruceville Rd	67.2	261	82	26
	Bruceville Rd	Big Horn Blvd	66.7	236	75	24
	Big Horn Blvd	Lotz Pkwy	63.3	106	34	11
W. Stockton Blvd	Lewis Stein Rd	Michener Way	61.3	68	21	7
	Dunisch Rd	Laguna Blvd	61.3	68	21	7
	Whitelock Pkwy	Kyler Rd	63.1	102	32	10
Poppy Ridge Road	Bruceville Rd	Cosby Wy	56.1	21	6	2
Promenade Pkwy	Kyler Rd	Krammerer Rd	66.6	226	72	23
Laguna Springs Blvd	Laguna Blvd	Longleaf Dr	66.7	236	75	24
	Longleaf Dr	Elk Grove Blvd	63.3	108	34	11
	Elk Grove Blvd	Civic Center Dr	62.9	97	31	10
Auto Center Dr	Elk Grove Blvd	W. Stockton Blvd	65.3	168	53	17
Lewis Stein Rd	Sheldon Rd	W. Stockton Blvd	65.6	181	57	18
E. Stockton Blvd	Marketplace 99 South	Bond Rd	64.7	147	47	15
	Bond Rd	Banff Vista Dr	63.3	108	34	11
	Elk Grove Blvd	SR 99 NB Ramps	68.1	323	102	32
	Elk Grove Florin Rd	Grant Line Rd	64.3	134	42	13
Emerald Vist Dr	E. Stockton Blvd	Elk Grove Blvd	64.0	126	40	13
Mosher Road	Waterman Rd	Grant Line Rd	60.5	56	18	6
Krammerer Rd Extension	Willard Pkwy	Bruceville Rd	--	--	--	--

Notes: SR = State Route; dB = a-weighted decibels; L_{dn} = Day-Night Level

Gray shaded cells reflect roadway segments that were analyzed in the City of Elk Grove General Plan

All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow, and does not account for shielding of any type or finite roadway adjustments. All noise levels are reported as A-weighted noise levels.

Source: Modeled by Ascent, Inc. (2022); based on traffic data provided by Fehr & Peers (2023).

Rail Noise

Two active rail lines are present in the City – one in the central portion and one in the western portion. The central line traverses north–south and enters the City at SR 99. This rail line is adjacent to residential and industrial land uses in the City and currently has an average of 32 daily pass-through train trips. The line is operated by Union Pacific Railroad (UPRR) and bisects some of the City’s major arterials, including Grant Line Road, Elk Grove Boulevard, Bond Road, Elk Grove-Florin Road, Sheldon Road, and Calvine Road. This rail line also serves Amtrak passenger trains with an average of four daily passenger train trips; this service has since been converted to thruway bus service due to reduced demand caused by the COVID-19 pandemic. Except for Grant Line Road, these crossings occur at grade.

The UPRR line in the western portion of the Planning Area traverses north–south and bisects Franklin Boulevard, Elk Grove Boulevard, and Laguna Boulevard. This line is located adjacent to residential and industrial land uses in the City. The crossings at Elk Grove Boulevard and Laguna Boulevard are grade-separated.

The City has established a series of quiet zones for many of the at-grade crossings to limit noise exposure to residents from train warning horns. These quiet zones include the at-grade crossings which intersect with Calvine Road, Sheldon Road, Elk Grove-Florin Road, Bond Road, Elk Grove Boulevard, Franklin Boulevard, and Bilby Road. While railroads are directed to not sound warning horns at these crossings, warning horns would still be used in

emergency situations per Federal Railroad Administration regulations and UPRR operating rules. Where the rail lines are adjacent to residential uses, sound walls have been erected to reduce noise exposure levels.

Aircraft Noise

There is one public airport and two private airports within 3 miles of the Planning Area. They are Franklin Field, which is public, and Sky Way Estates Airport and Borges-Clarksburg Airport, which are private. Sacramento Executive Airport, a public use airport, is approximately 6 miles north-northwest of the City, and Sacramento International Airport, a high-traffic airport, is approximately 20 miles north-northwest. Franklin Field, Sacramento Executive, and Sacramento International airport noise contours do not extend into the City of Elk Grove (Sacramento Area Council of Governments [SACOG] 1992, SACOG 1999). The Borges-Clarksburg Airport had about 3,000 general aviation operations in 2001, with 18 aircraft based in the field (SkyVector 2022). Operation data was not located for Sky Way Estates Airport, but only 8 aircraft are based in the field (Ainrav 2022). The low number of operations and number of aircraft based at these two fields, and their distance from the City of Elk Grove, indicates that noise generation within the City from these airports is minimal.

Construction Noise Sources

Construction activities are a regular and ongoing source of noise in the developing areas of the City. The noise levels generated by construction activities are generally isolated to the vicinity of a construction site and occur during daytime hours in accordance with City regulations. Construction activities also occur for relatively short-term periods of a few weeks to several months and upon completion of construction activity, noise exposure ceases. Table 3.6-9 illustrates noise levels for common construction equipment and activities at 50 feet. According to the EPA, construction noise levels are highest for pile-driving activities and can reach as high as 107 dB (EPA 1971).

Table 3.6-9 Noise Ranges of Typical Construction Equipment

Construction Equipment	Noise Levels at dBA Leq at 50 feet
Front Loader	72–86
Truck	82–95
Crane (movable)	75–88
Crane (derrick)	86–89
Vibrator	68–82
Saw	72–82
Pneumatic Impact Equipment	83–88
Pile Driving (peaks)	95–107
Jackhammer	81–98
Pump	68–72
Generator	71–83
Compressor	75–87
Concrete Mixer	75–88
Concrete Pump	81–85
Backhoe	73–95
Tractor	77–98
Scraper/Grader	80–93
Paver	85–88

Source: EPA 1971.

Industrial Noise Sources

The largest concentrations of industrial land in the City are in the north-central, northwest, and south-central sections. Current industrial uses in the City include heavy industrial and light industrial/warehouse. Generally, heavy

industrial uses are located away from noise-sensitive uses and near other noise-generating land uses such as major roadways and/or railroad lines. Primary noise sources associated with industrial uses include motors, agitators, forklifts, air compressors, and heavy- and medium-duty trucks with specific equipment use largely based on the type of industrial operation or use occurring at specific locations.

Agricultural Activities

Noise levels associated with agricultural activities can vary substantially depending on the type of activities being conducted and equipment used. Due to the seasonal nature of agricultural activities, there are often extended periods of time when no noise is generated on properties that are actively being farmed, followed by short-term periods of more intensive equipment use and associated noise levels. However, such noise levels are typically distributed over a large area and prolonged noise levels at individual nearby receptors would not be anticipated for most activities. In addition, given that agricultural activities typically occur during the daytime hours, noise generated by nearby agricultural activities are often largely masked by vehicle traffic noise along nearby roadways (i.e., Kammerer Road, Bruceville Road, Promenade Parkway, and SR 99).

Ambient Noise Levels

As part of the evaluation of Elk Grove's General Plan Update, long- and short-term noise measurements were taken in 2015 to characterize noise conditions across the Planning Area. The General Plan Draft EIR, released in July 2018, explained that the 2015 measurements were adequate at the time because noise sources that would substantially alter ambient noise levels in the Planning Area would be associated primarily with traffic volumes on roadways throughout the City, but that these generally do not drastically change from year to year. Furthermore, these measurements are used to provide a representative idea of the variation in noise levels across the Planning Area for the purposes of this analysis. As a result, those noise measurements are still relevant for this analysis. A summary of measurement data is provided in Table 3.6-10. The long-term noise measurement locations were identified as unique noise generators in the Planning Area due to a high volume of traffic, large number of truck trips, or commercial activities occurring in the vicinity. The eight long-term monitoring locations included residential, commercial, and industrial portions of the Planning Area. Short-term noise measurements were taken at 20 locations that generally represent residential areas in the Planning Area where ambient noise levels were anticipated to be lower than those along major transportation corridors and commercial areas (City of Elk Grove 2018).

Table 3.6-10 Summary of Ambient Noise Measurement Data

Noise Measurement	Range of Noise Levels (dBA)
Long-term Ambient Noise, 24-hour L_{dq}	61–78
Short-term Ambient Noise (L_{eq})	50–71

Note: L_{eq} represents an average of the sound energy occurring over a specified period. In effect, L_{eq} is the steady-state sound level containing the same acoustical energy as the time-varying sound level that occurs during the same period (Caltrans 2013: 2-48). For instance, the 1-hour equivalent sound level, also referred to as the hourly L_{eq} , is the energy average of sound levels occurring during a 1-hour period and is the basis for noise abatement criteria used by California Department of Transportation (Caltrans) and Federal Transit Administration (FTA) (Caltrans 2013: 2-47; FTA 2018: 2-19).

Source: City of Elk Grove 2018.

3.6.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

This impact analysis is based primarily on review of the analysis presented in the General Plan EIR as well as EIRs prepared the Southeast Policy Area Strategic Plan, Laguna Ridge Specific Plan, and Lent Ranch Special Planning Area.

Construction Noise and Vibration

To assess potential short-term construction-related noise and vibration impacts, typical Project-generated construction source noise and vibration levels were determined based on methodologies, reference emission levels, and usage factors

from FTA's *Guide on Transit Noise and Vibration Impact Assessment* methodology (FTA 2018) and FHWA's *Roadway Construction Noise Model User's Guide* (FHWA 2006). Reference levels for noise and vibration emissions for specific equipment or activity types are well documented and the usage thereof common practice in the field of acoustics.

Operational Noise and Vibration

Non-Transportation Noise

With respect to non-transportation noise sources (e.g., stationary) associated with project implementation, the assessment of long-term (operational-related) impacts was based on reconnaissance data, reference noise emission levels, and measured noise levels for activities and equipment associated with project operation (e.g., building mechanical equipment), and standard attenuation rates and modeling techniques.

Transportation Noise

To assess potential long-term (operational) noise impacts from Project-generated increases in traffic, noise levels were calculated using the FHWA roadway noise prediction model based on California vehicle reference noise emission factors. The analysis is based on the reference noise emission levels for automobiles, medium trucks, and heavy trucks, with consideration given to vehicle volume, speed, roadway configuration, distance to the receiver, and ground attenuation factors. Truck usage and vehicle speeds on area roadways were estimated from field observations and the Project-specific traffic report (Appendix C). Modeling does not account for any natural or human-made shielding (e.g., the presence of walls or buildings) or reflection off building surfaces and thus represents a conservative estimation of traffic noise.

Increases in traffic noise levels attributable to the Project were analyzed using roadway traffic data included in the City's General Plan EIR (i.e., baseline) as well as Plus Project roadway traffic data provided in the Project traffic study. New vehicle trips generated by the Project were added to traffic volumes modeled as part of General Plan EIR to analyze the roadway traffic noise level increases on affected roadways that would be associated with the Project. Projected traffic noise level increases were then compared to the City's transportation noise standards (see Section 3.6.1) to identify whether any standards were exceeded and any new or substantially more severe impacts would result from the Project.

THRESHOLDS OF SIGNIFICANCE

For projects undertaken by the City of Elk Grove, City noise standards are reasonable and appropriate thresholds for determination of significance. Therefore, a noise impact is considered significant if implementation of the Project would result in any of the following:

- ▶ construction-generated noise levels at residential receivers exceeding 50 dB L_{eq} or 65 dB L_{max} (the City's nighttime standards for fixed noise sources as shown in Table 3.6-5) during non-exempt nighttime hours from 7:00 p.m. to 7:00 a.m., Monday through Saturday, as defined in the City's Code of Ordinances;
- ▶ long-term, traffic-generated noise levels exceeding the outdoor and interior noise standards for transportation noise sources as specified in Table 3.6-3 or an increase in ambient-noise levels of more than the allowable noise increment at nearby existing noise-sensitive land uses as specified in Policy N-2-2 in the City's General Plan;
- ▶ long-term noise levels generated by stationary or area sources that exceed City standards for fixed noise sources, shown in Table 3.6-5, at existing noise-sensitive land uses;
- ▶ construction-generated or operational vibration levels exceeding Caltrans's recommended standards with respect to the prevention of structural building damage (shown in Table 3.6-2) or human response (shown in Table 3.6-3) at nearby vibration-sensitive land uses;
- ▶ 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, expose people residing or working in the project area to excessive noise levels; or
- ▶ 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.

ISSUES NOT DISCUSSED FURTHER

Airport Noise

As described above, Franklin Field, Sacramento Executive, and Sacramento International airport noise contours do not extend into the City of Elk Grove, and noise generation from Sky Way Estates Airport and Borges-Clarksburg Airport within the City of Elk Grove is minimal. As a result, noise impacts due to proximity to public and private airports and airstrips is not discussed further.

General Plan Amendments for VMT

The Project would include revisions to General Plan Chapter 6, "Mobility," to incorporate results of the upgraded Travel Demand Model to SACSIM19. EGSIM20 is the City of Elk Grove Travel Demand Model, which is a modified version of the Sacramento Area of Governments SACIM19 Travel Demand Model. Thus, changes to VMT thresholds resulting from the Project apply only to the transportation efficiency of land uses and do not involve alteration of land use conditions that could result in a noise impact. As a result, there would be no impacts from updating the VMT thresholds. This issue is not discussed further.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.6-1: Construction Activities Could Result in a Substantial Temporary Increase in Noise Levels at Nearby Noise-Sensitive Land Uses

The General Plan EIR determined that the potential noise generation from construction activities could result in a substantial temporary increase in noise levels, but impacts would be less than significant with adherence to the EGMC and General Plan policies. Potential construction noise impacts would be reduced by adherence to the EGMC and General Plan Policy N-1-7, which addresses potential impacts on current and future sensitive land uses associated with construction noise by setting allowable construction hours to limit impacts on sensitive land uses. Additionally, the City may require site-specific assessment and mitigation for future development under the Project to reduce construction noise. Finally, development facilitated by the Project would be subject to Policy N-1-8 that may require applicants to assess and minimize potential construction noise impacts on nearby sensitive receivers. Construction activities associated with implementation of the Project would be similar to construction activities anticipated under the current General Plan and would be required to comply with these standards as well as General Plan Policy N-1-7 and N-1-8. and would not result in new or substantially more several impacts related to construction noise. This impact would remain **less than significant**.

LEA Community Plan Area

The Project involves the development of a new community plan area which would provide a walkable urban area in the City with a variety of mobility options and neighborhood streets using the urban planning concept of the transect. The LEA Community Plan includes new land use designations and new growth areas that would have construction activity as future development projects are approved. Development in the LEA Community Plan Area would include planned construction of new roadways and expansion of existing roadways. However, implementation of the LEA Community Plan and the associated policies would not expand the development footprint or construction activities beyond what was addressed in the impact analysis of the General Plan EIR. These noise impacts from construction activities were identified in Impact 5.10.1 of the General Plan EIR.

Construction noise associated with development facilitated by the Project would be temporary in nature and vary depending on the characteristics of the construction activities being performed. Noise generated during construction of buildings and related structures is typically associated with the operation of off-road equipment, with the loudest phases being grading, excavation, and demolition. Construction noise can be disruptive to sensitive receivers during all hours of the day. Additionally, because exterior ambient noise levels typically decrease during the nighttime hours (i.e., 7:00 p.m. to 7:00 a.m.) as community activities (e.g., commercial activities, vehicle traffic) decrease, construction activities performed during these evening hours could result in increased annoyance and potential sleep disruption for occupants of nearby residential dwellings. As shown in Table 3.6-9 typical noise levels generated by commonly

used construction equipment would range from 68 dB to 107 dB. In accordance with City standards the majority of construction activities would occur during daytime hours, when sensitive receivers are less sensitive to increased noise levels. However, nighttime construction may be required and may occur in limited situations if there are scheduling issues with tasks that must be done continuously until completed such as concrete pours. Nighttime construction would occur on a case-by-case basis as permitted by the City, and is not analyzed further.

The EGMC and Elk Grove Standard Construction Specifications Manual include standards for noise-related activities, including exemptions for intermittent noise sources such as construction activities. EGMC Chapter 6.32.100 contained in Title 6, Health and Sanitation, exempts construction noise from the standards set forth in the EGMC between the hours of 6:00 a.m. and 8:00 p.m. If construction occurs in close proximity to residential uses, it is exempt between the hours of 7:00 a.m. to 7:00 p.m. pursuant to General Plan Policy N-1-7. As detailed in Section 6.32.100 of the EGMC, there is also an exemption for unforeseen or unavoidable conditions during construction when the nature of the project necessitates that work continue until completion of a specific phase subject to approval by the City. Adherence to construction noise requirements in the EGMC would reduce the potential for construction noise to occur at the more-sensitive times of day. General Plan Policy N-1-8 would further protect current and future sensitive land uses from construction noise impacts. Under Policy N-1-8, development projects that are subject to discretionary review would be required to assess potential construction noise impacts on nearby sensitive uses and to minimize impacts on those uses.

Since there are no detailed construction plans for the Project it is not possible to determine the exact noise levels from project construction. A standard construction noise scenario was conducted for this analysis, using equipment typical of the loudest construction phase (e.g., site preparation), assuming a worst-case scenario for construction noise disturbance. Equipment used in the modeling included an excavator, dozer, dump truck, front end loader, and grader. Results show that the operation of these five pieces of equipment could result in noise levels as high as 87 L_{eq} dB at 50 feet. Thus, construction noise levels would be loud enough to potentially affect nearby sensitive receivers.

Portions of the LEA Community Plan Area have been previously analyzed in certified CEQA documents for the following projects: Southeast Policy Area Strategic Plan, Laguna Ridge Specific Plan, SouthPoint Policy Area/Sterling Meadows, and Lent Ranch Marketplace Special Planning Area. Mitigation measures from these CEQA documents, as shown in Appendix G, include requirements to reduce construction noise. Mitigation Measure 3.6-1 "Construction Noise Reduction Measures" has been drafted for this SEIR to combine construction noise requirements from previous CEQA documents prepared for the Southeast Policy Area Strategic Plan, Laguna Ridge Specific Plan, and Lent Ranch Marketplace Special Planning Area. This measure contains the same performance standards and is equivalent in effectiveness as mitigation contained in the prior environmental documents. Mitigation Measure 3.6-1 is only applicable to the LEA Community Plan Area and does not supersede mitigation requirements for the other community plan areas outside of the LEA Community Plan Area.

In summary, future construction activity associated with buildout of the Project would be temporary, intermittent, and vary in size and characteristics depending on the type of development. Existing receivers and sensitive land uses may be adversely affected by anticipated noise levels during construction. Construction-related noise generated during the day (7:00 a.m. through 7:00 p.m. in proximity to residential uses and 6:00 a.m. through 8:00 p.m. in other instances) is generally exempt from meeting noise standards, and unforeseen circumstances necessitating work past 7:00 p.m. is also generally exempt, as provided under the EGMC and General Plan Policy N-1-7. However, in certain cases, the City could require a site-specific assessment and require mitigation to reduce construction noise levels on nearby sensitive uses. In addition, Mitigation Measure 3.6-1 would require construction noise control measures to reduce temporary noise at nearby receivers. There is no new significant effect, and the impact is not substantially more severe than the impact identified in the General Plan EIR because, similar to what was identified in the General Plan EIR, the construction noise would be consistent with what is allowed in the EGMC and General Plan. This impact would remain **less than significant**.

General Plan Land Use Designation Amendments

Construction noise anticipated to occur from proposed General Plan land use amendments is included in the overall construction equipment noise modeling associated with the Project. As discussed above under, LEA Community Plan,

impacts from construction noise would be less than significant. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR. This impact would remain **less than significant**.

Grant Line Road Precise Roadway Study

The Precise Study was prepared to analyze potential geometric layouts along Grant Line Road. Buildout of roadway configurations, including all alternatives of the Precise Study, would result in similar noise levels from construction as those anticipated from the build out of the LEA Community Plan as discussed above. Therefore, impacts from construction noise would be less than significant. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR would remain **less than significant**.

South and West Study Areas

Construction noise anticipated within the South and West Study Areas is included in the overall construction equipment noise modeling associated with the Project. As discussed above under, LEA Community Plan, impacts from construction noise would be less than significant. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR would remain **less than significant**.

Mitigation Measures

Adherence to Mitigation Measure 3.6-1 would require specific projects within the LEA Community Plan Area to reduce construction near sensitive land uses. Mitigation Measure 3.6-1, in addition to compliance with General Plan Policy N-1-8, EGMC Section 6.32.100, and the Elk Grove Standard Construction Specifications Manual would reduce construction noise levels. Therefore, the impact to construction noise would remain **less than significant**.

Mitigation Measure 3.6-1 Construction Noise Reduction Measures for the LEA Community Plan Area

The following mitigation measures shall be implemented and specified on subsequent project building and improvement plans:

- ▶ Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and shrouds, in accordance with manufacturers' recommendations.
- ▶ Construction equipment staging areas shall be centrally located on the site or located at the farthest distance possible from nearby residential land uses.
- ▶ All motorized construction equipment and vehicles shall be turned off when not in use.
- ▶ To the extent feasible, alternative construction processes that generate lower noise levels shall be selected. Examples include the use of drilled piles as opposed to impact piles, use of electrified equipment as opposed to combustion engines, and temporary noise barriers or noise curtains installation such that they block the line of sight between the noise source and the receiver.
- ▶ Post visible signs along the perimeter of the construction site that disclose construction times and duration, as well as a contact number for a noise complaint and enforcement manager. The on-site noise complaint and enforcement manager's duties shall include documenting noise complaints, responding to and investigating noise-related complaints, implementing any feasible and appropriate measures to reduce noise at the receiving land uses, and reporting the complaints to City staff on a weekly basis.

Significance after Mitigation

The impact to construction noise would remain **less than significant**.

Impact 3.6-2: Traffic Noise

General Plan EIR Impact 5.10.2 identified that implementation of the General Plan would result in a significant and unavoidable increase in transportation noise, including traffic noise levels along many existing roadways in the City. Further, Impact 5.10.2 notes that the General Plan includes a set of policies that are intended to ensure that new specific proposed development would comply with noise standards and would not adversely impact sensitive land uses from traffic noise. The policies include Policy N-1-1, Policy N-1-2, Policy N-1-4, Policy N-1-5, Policy N-1-6, and Policy N-2-2. Implementation of the Project would result in an exceedance of the City's traffic noise standard as identified in General Plan Policy N-2-2 and an increase in traffic noise as compared to roadway segments analyzed in the General Plan EIR. Therefore, the Project would result in substantially more severe traffic noise impacts than the General Plan EIR. Impacts would be **significant and unavoidable**.

LEA Community Plan Area

The Project includes a series of new land use modifications and designations that would result in increased traffic volumes on major arterial and collector roadways in the City as well as increased traffic volumes on I-5 and SR 99. Buildout anticipated by the Project would also result in new roadways in the LEA Community Plan Area which would increase traffic volumes on new and existing City roadways. These increased traffic volumes could expose existing and future sensitive receivers and noise-sensitive land uses to increased traffic noise. Residential developments, schools, libraries, hospitals, convalescent homes, and places of worship are the most noise-sensitive land uses. As detailed in the Regulatory Setting, the doubling of sound energy results in a 3-dB increase in the sound level and is generally perceptible. This could result in an adverse effect to humans especially during nighttime hours when people typically sleep.

General Plan EIR Impact 5.10.2 identified that implementation of the General Plan would result in a significant increase in transportation noise, including traffic noise levels along many existing roadways in the City. The General Plan EIR found that the buildout of the General Plan would increase traffic noise at all roadway segments above the City's exterior noise standard (60 dB L_{dn}) for residential and other noise-sensitive land uses. See Table 3.6-3 for the full list of noise standards by land uses.

Table 3.6-11 includes modeled traffic noise levels for General Plan buildout and Plus Project conditions, which includes land use designation changes associated with LEA Community Plan as well as the Old Town Policy Area and other proposed land use changes. Buildout of the General Plan would increase traffic noise levels to above the 60 dB L_{dn} standard for all roadway segments analyzed in the General Plan EIR. The Project would also result in increases in traffic noise levels along roadways that are already anticipated in the General Plan EIR to be above the City's 60 dB L_{dn} exterior threshold for sensitive land uses (see Appendix F for traffic noise modeling assumptions and results). Additionally, existing traffic noise levels adjacent to many of the major roadways in the City currently exceed the City's noise standard (60 dB L_{dn}) (see Table 3.6-8). As shown in Table 3.6-11 traffic noise levels on several roadways would decrease from buildout of the Project as compared to the existing General Plan. This would occur because the Project would result in a redistribution of trips to other roadways such that there would be a reduction in traffic noise on several roadway segments analyzed in the General Plan EIR.

However, similar to roadway segments analyzed in the General Plan EIR the Project would result in an increase in noise on the majority of roadway segments as compared to existing conditions, shown in Table 3.6-8. Future roadway noise contours are shown in Figure 3.6-1 and traffic noise levels generated by the Project for all studied roadway segments are included in Appendix F for informational purposes.

Table 3.6-11 Predicted Increases in Traffic Noise Levels

Roadway	From	To	L _{dn} at 50 Feet from Near-Travel-Lane Centerline ¹ (dB L _{dn})		Noise Level Increase (dB)
			General Plan	General Plan Plus Project	
Elk Grove Blvd	Franklin Blvd	Bruceville Rd	73	74.2	1.2
	Bruceville Rd	Big Horn Blvd	74.6	74.5	-0.1
	E. Stockton Blvd	Elk Grove Florin Rd	71.3	69.7	-1.6
	Elk Grove Florin Rd	Waterman Rd	65.2	63.8	-1.4
	Bradshaw Rd	Grant Line Rd	62.4	67.2	4.8
Kammerer Rd	Promenade Pkwy	SR 99	77.4	78.9	1.5
Grant Line Rd	E. Stockton Blvd	Waterman Rd	77.5	79.0	1.5
Bruceville Rd	Big Horn Blvd	Laguna Blvd	70.8	72.4	1.6
	Laguna Blvd	Elk Grove Blvd	71	72.0	1.0
	Elk Grove Blvd	Whitelock Pkwy	71.3	71.4	0.1
	Whitelock Pkwy	Bilby Road	71.2	71.5	0.3
Big Horn Boulevard	Lotz Pkwy	Whitelock Pkwy	72.1	71.2	-0.9
Bilby Rd	Franklin Blvd	Willard Pkwy	64.5	56.1	-8.4
	Willard Pkwy	Bruceville Rd	71.9	62.7	-9.2
Bond Rd	Elk Grove Florin Rd	Waterman Rd	74.1	71.6	-2.5
	Waterman Rd	Bradshaw Rd	72.9	69.2	-3.7
Elk Grove Florin Rd	Calvine Rd	Sheldon Rd	74.3	73.6	-0.7
	Sheldon Rd	Bond Rd	72.1	72.5	0.4
	Bond Rd	Elk Grove Blvd	70.8	67.9	-2.9
Franklin Blvd	Big Horn Blvd	Laguna Blvd	71.4	71.5	0.1
	Laguna Blvd	Elk Grove Blvd	70.9	71.0	0.1
	Elk Grove Blvd	Whitelock Pkwy	68.8	71.9	3.1
Waterman Rd	Sheldon Rd	Bond Rd	69.4	72.1	2.7
	Bond Rd	Elk Grove Blvd	73.8	72.7	-1.1
Bradshaw Rd	Sheldon Rd	Bond Rd	76.3	74.0	-2.3
	Elk Grove Blvd	Grant Line Rd	76	73.2	-2.8
Laguna Blvd	Franklin Blvd	Bruceville Rd	71	72.6	1.6
	Bruceville Rd	Big Horn Blvd	70.4	73.2	2.8
	Big Horn Blvd	Laguna Springs Dr	73.2	74.4	1.2
Lotz Pkwy	Big Horn Blvd	Laguna Springs Dr	65.7	62.8	-2.9
	Laguna Springs Dr	Whitelock Pkwy	67.2	65.2	-2.0
Whitelock Pkwy	Franklin Blvd	Bruceville Rd	64.9	67.7	2.8
	Bruceville Rd	Big Horn Blvd	63.9	68.8	4.9
	Big Horn Blvd	Lotz Pkwy	67	69.8	2.8
Sheldon Rd	Lewis Stein Rd	SR 99	72.6	73.7	1.1
	Elk Grove Florin Rd	Waterman Rd	68.8	69.0	0.2
E. Stockton Blvd	Elk Grove Florin Rd	Grant Line Rd	69.7	67.2	-2.5
Mosher Road	Waterman Rd	Grant Line Rd	67.8	64.2	-3.6
Krammerer Rd Extension	Willard Pkwy	Bruceville Rd	74.8	72.0	-2.8

¹ Substantial increase defined as an increase of 5.0 dB, or greater, where noise levels are less than the City's normally acceptable minimum noise level of 60 dB L_{dn}; 3 dB, or greater, where noise levels range from 60 to 65 dB L_{dn}; and 1.5 dB, or greater, where the noise level exceeds 65 dB L_{dn} without the Project.

Source: Modeled by Ascent Environmental 2022.

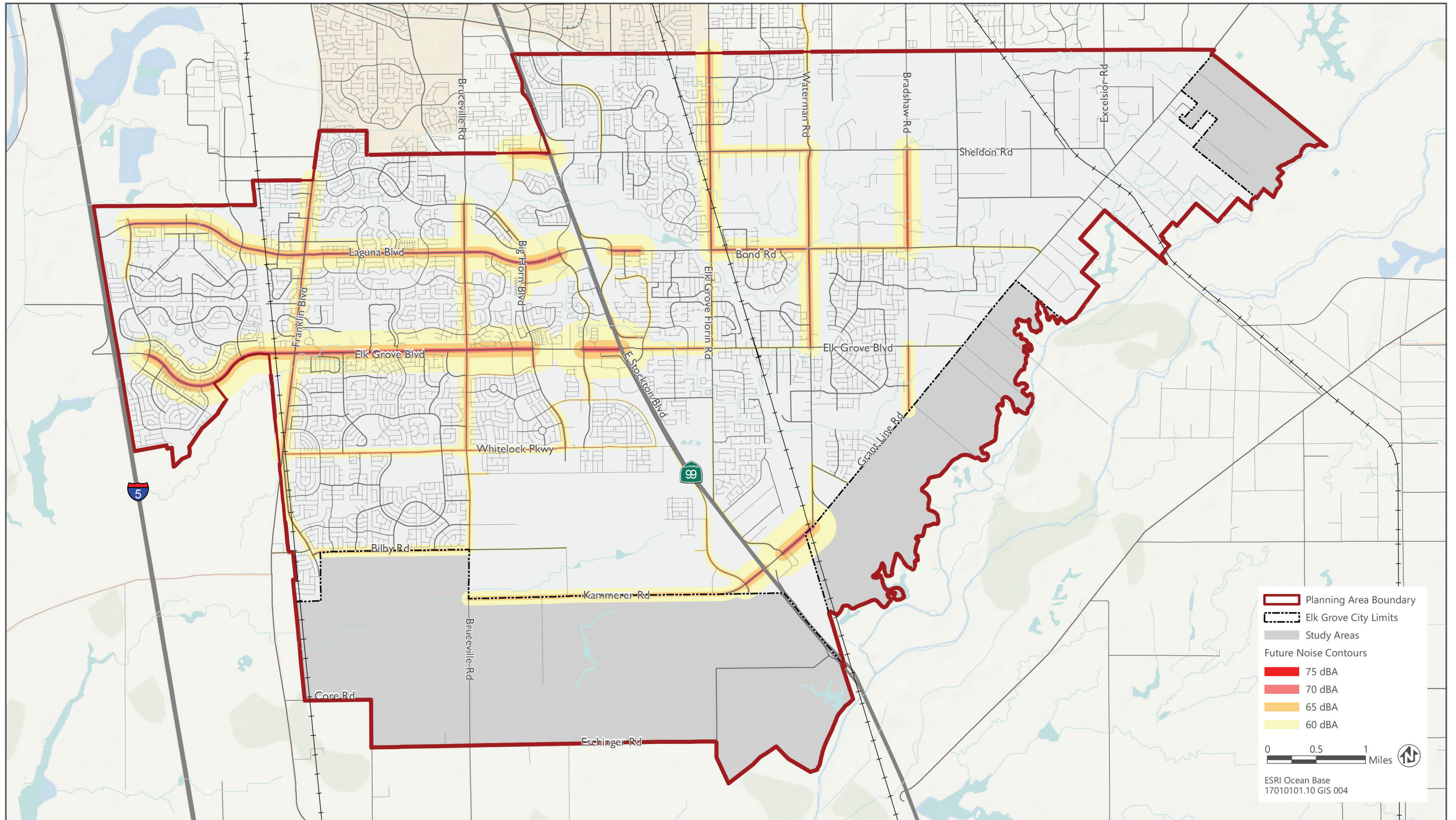
The General Plan includes a set of policies that are intended to ensure that new development would comply with noise standards and would not adversely impact sensitive land uses from traffic noise. These include Policy N-1-1, Policy N-1-2, Policy N-1-4, Policy N-1-5, and Policy N-2-3.

Policy N-1-1 requires that indoor and outdoor areas in new development be located, constructed, and/or shielded from noise sources in order to achieve compliance with the City's noise standards. Policy N-1-2 encourages development projects to use site planning and project design measures before considering using sound barriers to achieve noise standards. Policy N-1-4 and Policy N-1-5 requires the City to protect noise sensitive land uses that are designated in the General Plan. Policy N-2-3 encourages new development to consider alternatives aside from sound walls to reduce noise to acceptable levels in residential areas that were originally constructed without sound walls. However, the General Plan EIR found that while the General Plan policies listed above would serve to limit traffic noise exposure to sensitive receptors, these policies cannot ensure that noise levels would be reduced to levels within the City's noise standards for all locations of sensitive receptors. Therefore, this impact was determined to be significant and unavoidable.

As shown in Table 3.6-11, traffic generated from the Project would result in additional increases in traffic noise levels not previously analyzed as part of the General Plan EIR. Some roadway segments would result in traffic noise increases that would exceed the City's incremental increase noise standards as detailed in General Plan Policy N-2-2. Project traffic noise on the following roadway segments would exceed the thresholds identified in General Plan Policy N-2-2:

- ▶ Elk Grove Boulevard between Bradshaw Road and Grant Line Road
- ▶ Bruceville Road between Big Horn Boulevard and Laguna Boulevard
- ▶ Franklin Boulevard between Elk Grove Boulevard and Whitelock Parkway
- ▶ Waterman Road between Sheldon Road and Bond Road
- ▶ Laguna Boulevard between Franklin Boulevard and Bruceville Road
- ▶ Laguna Boulevard between Bruceville Road and Big Horn Boulevard
- ▶ Whitelock Parkway between Bruceville Road and Big Horn Boulevard
- ▶ Whitelock Parkway between Big Horn Boulevard and Lotz Pkwy

Portions of the LEA Community Plan Area have been previously analyzed in certified CEQA documents for the following projects: Southeast Policy Area Strategic Plan, Laguna Ridge Specific Plan, SouthPoint Policy Area/Sterling Meadows, and Lent Ranch Marketplace Special Planning Area. Mitigation measures from these CEQA documents, as shown in Appendix G, include requirements to reduce traffic noise associated with sensitive land uses. Mitigation Measure 3.6-2 "Operational Noise Reduction Measures" has been drafted for this SEIR to combine construction noise requirements from previous CEQA documents prepared for the Southeast Policy Area Strategic Plan, Laguna Ridge Specific Plan, and Lent Ranch Marketplace Special Planning Area. This measure contains the same performance standards and is equivalent in effectiveness as mitigation contained in the prior environmental documents. Mitigation Measure 3.6-2 is only applicable to the LEA Community Plan Area and does not supersede mitigation requirements for the other community plan areas outside of the LEA Community Plan Area.



Source: adapted by Ascent in 2023.

Figure 3.6-1 General Plan Future Noise Contours

The General Plan EIR determined the traffic noise impact to be significant and unavoidable. As detailed above, the traffic noise generated by the Project would similarly result in some roadway segments exceeding the City's incremental noise increase standard for traffic noise. Further, traffic noise from the Project would cause an additional exceedance of City noise standards for several roadway segments beyond what was determined in the General Plan EIR; thus exposing nearby receivers to higher noise levels than previously analyzed. As such, the Project would result in a substantial increase in severity of a previously identified significant impact. Although, all mitigation identified in the General Plan EIR would still be applicable, and subsequent project applications would be required to submit noise analyses and associated noise attenuation features as part of building plans and/or site designs that may include building treatments to meet City interior noise standards, sound barriers, or other site improvements (e.g., building orientation to address line of sight associated with noise sources), it cannot be ensured that all individual projects under the General Plan could reduce impacts from traffic noise. Therefore, this impact would be **significant and unavoidable**.

General Plan Land Use Designation Amendments

Traffic noise anticipated from the proposed General Plan land use amendments is included in the overall traffic noise modeling associated with the Old Town Policy Area (see Table 3.6-11). As shown in Table 3.6-11 roadways within the Old Town Policy Area would not result in a significant increase in noise from implementation of the Project. There is no new significant effect, and the impact is not more severe than the impact identified in the General Plan EIR. Impacts would be **significant and unavoidable**.

Grant Line Road Precise Roadway Study

The Precise Study was prepared to analyze potential geometric layouts along Grant Line Road. Buildout of roadway configurations, including all alternatives of the Precise Study, would not result in any changes to traffic noise because the proposed roadway configurations would not result in additional traffic on Grant Line Road. There is no new significant effect, and the impact is not more severe than the impact identified in the General Plan EIR. Impacts would remain **significant and unavoidable**.

South and West Study Areas

Traffic noise anticipated within the South and West Study Areas is included in the overall traffic noise modeling associated with the Project. As discussed above under, LEA Community Plan, impacts from traffic noise would exceed the City's noise standards and traffic noise levels determined in the General Plan EIR for roadway segments in the South and West Study Areas (Table 3.6-11). Therefore, the impact would be more severe than the impact identified in the General Plan EIR. Impacts would be **significant and unavoidable**.

Mitigation Measures

In addition to compliance with General Plan policies N-1-1, N-1-4, N-1-5, and N-2-3, development within the LEA Community Plan Area would be subject to Mitigation Measure 3.6-2. Even with application of this mitigation measure, Project impacts would increase the severity of General Plan EIR traffic noise impacts and would be **significant and unavoidable** as it cannot be ensured that all individual projects under the General Plan could reduce impacts from traffic noise.

Mitigation Measure 3.6-2 Operational Noise Reduction Measures for the LEA Community Plan Area

The City shall require acoustical assessments to be prepared as part of subsequent land use development projects in the LEA Community Plan Area. The acoustical assessments shall evaluate potential environmental noise impacts attributable to the subsequent project, anticipated traffic noise condition, stationary noise sources, and the compatibility of proposed land uses in comparison to applicable City noise standards. Where the acoustical analysis determines that noise levels would exceed applicable City noise standards, noise reduction measures shall be identified and included in the subsequent project. Such measures may include, but are not limited to, the incorporation of setbacks, sound barriers, berms, hourly limitations, or equipment enclosures. The emphasis of such measures shall be placed on site planning and Project design. The acoustical analysis shall be prepared in accordance with City requirements (Elk Grove Municipal Code and General Plan).

Significance after Mitigation

Impacts would be **significant and unavoidable**.

Impact 3.6-3: Future Development Could Expose Existing Noise-Sensitive Land Uses to New Non-Transportation Noise Sources that Could Exceed the City's Applicable Noise Standards

General Plan EIR Impact 5.10.3 determined that potential noise generation from future development could expose existing noise-sensitive land uses to new non-transportation noise sources that could exceed the City's applicable noise standards. Specific to residential land uses, the General Plan EIR identified lawn and garden equipment, voices, and amplified music as potential noise sources associated with residential land uses. Operational noise associated with commercial and industrial land uses typically consists of site-specific mechanical building equipment (e.g., heating equipment, HVAC systems) and other types of machinery. The General Plan EIR identified Section 6.32.110 of the EGMC as containing hourly noise standards that apply to non-transportation noise sources. Additionally, General Plan Policy N-2-1 indicates that noise created by new proposed non-transportation noise sources shall be mitigated so as not to exceed noise level standards. Development facilitated by the Project would be required to comply with these standards and would not result in new or substantially more severe noise impacts than addressed in the General Plan EIR. Project impacts would remain **less than significant**.

LEA Community Plan Area

The Project would allow for future development of land uses including residential, commercial, employment center/offices, and public services. Buildout of the Project could potentially result in the exposure of new or existing receivers and noise sensitive land uses to noise levels above the City's established threshold for outdoor noise exposure from non-transportation sources (see Table 3.6-5). Typical stationary and area noise sources include landscaping activities, building maintenance, stationary mechanical equipment (e.g., pumps, generators, HVAC units), garbage collection activities, and commercial and industrial processes.

Noise from proposed residential land uses could increase ambient noise levels, due to typical activities associated with residential land uses, such as lawn and garden equipment, voices, and amplified music. These noise sources would be intermittent in nature and would vary, depending on the specific characteristics of each residential area. Additionally, the Project would allow for development of various nonresidential land uses, including commercial, heavy industrial, light industrial/flex, and public services. Noise sources associated with these land uses can vary depending on the type of business or facility in operation. Noise sources often associated with these uses can include site-specific mechanical building equipment (e.g., heating equipment, HVAC systems) and other types of machinery associated with the use, such as impact processes, electrical machines, internal combustion engines, pneumatic equipment, electric motors, and machine tools. Siting of new commercial and industrial uses as a result of the Project could result in new stationary and area sources as well as exposure of new sensitive land uses to existing stationary and area sources.

Non-transportation noise impacts from development from the General Plan were identified in Impact 5.10.3 of the General Plan EIR. As discussed in the General Plan EIR, Policy N-2-1 would require that noise created by new proposed non-transportation noise sources would be mitigated so as not to exceed the noise level standards presented in Table 3.6-5. Thus, implementation of General Plan Policy N-2-1 and compliance with EGMC Chapter 6.32, which limits the hours of the day when loading activities can take place as well as determines the maximum noise level for stationary equipment would limit noise impacts. Additionally, the type of land uses and associated development resulting from the Project would be consistent with what was analyzed under the General Plan EIR.

Portions of the LEA Community Plan Area have been previously analyzed in certified CEQA documents for the following projects: Southeast Policy Area Strategic Plan, Laguna Ridge Specific Plan, SouthPoint Policy Area/Sterling Meadows, and Lent Ranch Marketplace Special Planning Area. Mitigation measures from these CEQA documents include requirements related to preparation of acoustical assessments to evaluate operational noise standards and land use compatibility. A comprehensive list of mitigation measures from other community plans prior environmental review are included in Appendix G. Mitigation measures from the Laguna Ridge Specific Plan EIR include requirements to demonstrate future projects are in compliance with City noise standards. Southeast Policy Area Strategic Plan mitigation includes preparation of acoustical assessments for future development projects to evaluate operational noise impacts

and land use compatibility. Mitigation for the Lent Ranch Marketplace Special Planning Area includes requirements to reduce exterior and interior noise levels below the City's noise thresholds. Mitigation Measure 3.6-2 "Operational Noise Reduction Measures" has been drafted for this SEIR to combine construction noise requirements from previous CEQA documents prepared for the Southeast Policy Area Strategic Plan, Laguna Ridge Specific Plan, and Lent Ranch Marketplace Special Planning Area. This measure contains the same performance standards and is equivalent in effectiveness as mitigation contained in the prior environmental documents. Mitigation Measure 3.6-2 is only applicable to the LEA Community Plan Area and does not supersede mitigation requirements for the other community plan areas outside of the LEA Community Plan Area. There is no new significant effect, and the impact is not more severe than the impact identified in the General Plan EIR. This impact would remain **less than significant**.

General Plan Land Use Designation Amendments

Operational stationary noise anticipated from the proposed General Plan land use amendments is included in the overall stationary noise analysis associated with the Old Town Policy Area. As discussed above under, LEA Community Plan, impacts from long-term stationary noise would be less than significant. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR; therefore, the impact would remain **less than significant**.

Grant Line Road Precise Roadway Study

The Precise Study was prepared to analyze potential geometric layouts along Grant Line Road. Buildout of roadway configurations, including all alternatives of the Precise Study, would not result in any increased noise levels from non-transportation operational activity because the Precise Study would reconfigure the roadway and would not result in additional trips. There would be no impact. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR; therefore, the impact would remain **less than significant**.

South and West Study Areas

Stationary noise anticipated within the South and West Study Areas is included in the overall stationary noise analysis associated with the Project. As discussed above under, LEA Community Plan, impacts from long-term stationary noise would be less than significant. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR; therefore, the impact would remain **less than significant**.

Mitigation Measures

In addition to compliance with General Plan Policy N-2-1 and EGMC Section 6.32.110, development within the LEA Community Plan Area would be subject to Mitigation Measure 3.6-2, listed above under Impact 3.6-2, that would require subsequent projects to demonstrate compliance with City noise standards and not create a new significant noise sources. This impact would remain **less than significant**.

Significance after Mitigation

This impact would remain less than significant.

Impact 3.6-4: Result in Development Projects Involving that Could Expose Receptors to Excessive Groundborne Vibration

General Plan EIR Impact 5.10.4 determined that potential vibration generation from construction and operation could occur as a result of the Project. Long-term vibration was mainly associated with transit system routes and maintenance activities, and vibration from increased traffic would not be perceptible. Short-term vibration associated with construction could be substantial for activities such as pile driving and vibratory rolling. Adherence to Policy N-1.9 was identified as having a mitigating effect on construction vibration and the impact was determined to be less than significant. Implementation of the Project would be required to comply with these standards and would not result in new or substantially more severe vibration impacts. Project impacts would remain **less than significant**.

LEA Community Plan Area

The Project involves the development of a new community plan area which would provide a walkable urban area in the City with a variety of mobility options and neighborhood streets using the urban planning concept of the transect. The vibration standards in Table 3.6-2 are used by the City as significance thresholds for analyzing vibration impacts. As stated in the table, a vibration of 0.2 in/sec ppv or less typically will not result in structural damage. This same threshold also represents the level at which vibration would be potentially annoying to people in buildings. For most construction projects, groundborne vibration levels would not pose a significant risk to nearby structures or occupants. Construction activities often associated with development projects that do not require the use of pile drivers but involve equipment such as a large dozer, loaded trucks, and a jackhammer would typically generate ground vibration levels of approximately 0.09 in/sec ppv, or less, at 25 feet (FTA 2018). However, the construction of some facilities in the LEA Community Plan Area may require the use of construction equipment that can cause vibrational impacts (i.e., pile drivers) for construction of buildings up to 7 stories, as allowed by the LEA Community Plan. However, it is possible for buildings as tall as 7 stories to be constructed without using high vibratory equipment such as pile drivers. In addition to building construction, road improvement projects (e.g., constructing roadways) often require the use of vibratory rollers, which, when operated close to existing structures, can result in increased levels of annoyance. Ground vibration levels associated with pile drivers can reach levels of approximately 1.52 in/sec ppv at 25 feet. Pile drivers can generate ground vibration levels of 0.2 in/sec ppv at distances up to approximately 200 feet (FTA 2018). Depending on the distance to nearby existing structures, the more vibration-intensive construction activities (e.g., pile driving, vibratory rollers) could potentially exceed the criterion of 0.2 in/sec ppv at nearby structures. These vibration impacts were identified in General Plan EIR Impact 5.10.4.

As described in Elk Grove General Plan Policy N-1-9, for projects involving the use of major vibration-generating equipment (e.g., pile drivers, vibratory rollers) that could generate groundborne vibration levels in excess of 0.2 in/sec ppv, the City may require a project-specific vibration impact assessment to analyze potential groundborne vibrational impacts and may require measures to reduce ground vibration levels. EGMC Chapter 6.32.100 contained in Title 6, Health and Sanitation, exempts construction noise from the standards set forth in the EGMC for non-transportation noise between the hours of 6:00 a.m. and 8:00 p.m., but construction activities may only occur between the hours of 7:00 a.m. and 7:00 p.m. when located in proximity to residential uses; unforeseen circumstances necessitating work past 7:00 p.m. are also generally exempt. This would also reduce the potential for construction-related vibration to occur at the more-sensitive times of day. Subsequent projects would demonstrate compliance through including these requirements on building plans or improvement plans.

Long-term groundborne vibration is most commonly associated with land uses near transit system routes and maintenance activities. Groundborne vibration associated with buses or trucks are not commonly perceptible. Roadway vibration is correlated to the smoothness of the running surface for vehicles. If the roadway is smooth, vehicle groundborne vibration is typically not perceptible (FTA 2018). While the Project includes development that would result in traffic volume increases along major arterial and collector roads throughout the City, these increases in vibration would not be perceptible based on the aforementioned factors. Development of the land uses themselves would not result in the long-term generation of vibration because residential and commercial land uses generally do not have substantial sources of vibration.

Portions of the LEA Community Plan Area have been previously analyzed in certified CEQA documents for the following projects: Southeast Policy Area Strategic Plan, Laguna Ridge Specific Plan, SouthPoint Policy Area/Sterling Meadows, and Lent Ranch Marketplace Special Planning Area. Mitigation measures from these CEQA documents include requirements related to reducing construction vibration. A comprehensive list of mitigation measures from other community plans prior environmental review are included in Appendix G. Mitigation measures from the Laguna Ridge Specific Plan EIR include an assessment of vibration from pile drivers during construction and Southeast Policy Area Strategic Plan mitigation includes preparation of a vibration assessment for projects that would involve major vibration generating equipment during construction (i.e., pile drivers). Mitigation for the Lent Ranch Marketplace Special Planning Area includes a requirement to prepare a vibration assessment for projects that include pile driving. Noise requirements contained in the Elk Grove General Plan policies and Elk Grove Municipal Code as described above, contain the same performance standards and are equivalent in effectiveness as mitigation contained in prior environmental documents. Specifically, Policy N-1-9 requires preparation of a project specific vibration assessment for

projects that would involve major vibratory generating equipment (i.e., pile driver). Therefore, no additional mitigation is required in the LEA Community Plan Area for vibration.

In summary, construction activities in the Project area could generate groundborne vibration. In some cases, vibration levels may be high enough to affect structures or cause annoyance at sensitive receivers. The Project would need to comply with General Plan policies to address the assessment and siting of development that may exceed the City's performance standard for noise-sensitive land uses. These policies would reduce construction vibration below applicable levels. Operational vibration would not be substantial due to the nature of transportation vibration and because the proposed land uses do not generate substantial vibration. There is no new significant effect, and the impact is not more severe than the impact identified in the General Plan EIR. This impact would remain **less than significant**.

General Plan Land Use Designation Amendments

Vibration anticipated from the proposed General Plan land use amendments is included in the overall stationary noise and vibration analysis associated with the Old Town Policy Area. As discussed above under, LEA Community Plan, impacts from short- and long-term vibration would remain **less than significant**. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

Grant Line Road Precise Roadway Study

The Precise Study was prepared to analyze potential geometric layouts along Grant Line Road. Buildout of roadway configurations, including all alternatives of the Precise Study, would result in similar vibration levels from construction and operational activity as those anticipated from the build out of the LEA Community Plan as discussed above. Therefore, impacts from short- and long-term vibration would remain **less than significant**. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

South and West Study Areas

Vibration impacts anticipated within the South and West Study Areas is included in the overall vibration analysis associated with the Project. As discussed above under, LEA Community Plan, impacts from short- and long-term vibration would remain **less than significant**. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

Mitigation Measures

No additional mitigation is required beyond compliance with General Plan Policy N-1-9 and EGMC Section 6.32.100.

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3.7 POPULATION, EMPLOYMENT, AND HOUSING

This section describes the existing population and housing conditions in the Planning Area. Descriptions and analysis in this section are based on information provided by the Elk Grove General Plan, the California Department of Finance (DOF), and the Sacramento Area Council of Governments (SACOG). The analysis includes a description of the methods used for assessment, as well as the potential direct and indirect impacts of Project implementation. The primary source of information used for this analysis is the General Plan EIR (City of Elk Grove 2018, 2019a).

No comments pertaining to population and housing were received in response to the notice of preparation (NOP).

3.7.1 Regulatory Setting

FEDERAL

There are no federal plans, policies, regulations, or laws related to population and housing that are applicable to the Project.

STATE

There are no State plans, policies, regulations, or laws related to population and housing that are applicable to the Project.

LOCAL

Sacramento Area Council of Governments' Metropolitan Transportation Plan/Sustainable Communities Strategy

In 2019, SACOG adopted the 2020 Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS). The MTP/SCS forecasts that the Sacramento region will add 620,000 people, as well as the jobs and housing to support them, between 2016 and 2040 (SACOG 2019a:24).

The majority of the Planning Area is located in an area identified as an Established Community in the MTP/SCS and the southern portion of the Planning Area is identified as Developing Community (SACOG 2019a:Figure 3.5). Local land use plans generally aim to maintain the existing character and land use pattern in these areas, many of which are suburbs. Selective infill development, consistent with existing planning designations, is projected to occur gradually. Nearly two-thirds of the region's new housing and 85 percent of its job growth between 2016 and 2040 is expected to be in Center and Corridor (i.e., downtowns and commercial corridors) and Established Communities (SACOG 2019a:39). Developing Communities are the next increment of urban expansion and identified in local plans as special plan areas, specific plans, or master plans as areas identified for growth (SACOG 2019a:40).

City of Elk Grove General Plan

The 2019 City General Plan is a broad framework for planning the future of Elk Grove. It is the official policy statement of the City Council that is used to guide the private and public development of the City in a manner to gain the maximum social and economic benefit to the citizens. At buildout under the General Plan, the City is expected to have 102,865 dwelling units, 332,254 residents, and 122,155 jobs (City of Elk Grove 2019a:Table 3-2).

The following General Plan policies are applicable to this analysis:

- ▶ **Policy ED-2-1:** Continue to improve Elk Grove's jobs/housing ratio by expanding local employment opportunities, with an emphasis on attracting jobs in sectors and industries that are well matched for the skills of the local workforce.
- ▶ **Policy ED-2-2:** Maximize the use of nonresidential land for employment-generating and revenue-generating uses.

- ▶ **Policy ED-2-4:** Provide for a range of housing options that match the anticipated preferences and income levels of potential workers associated with planned employment-generating projects.
- ▶ **Policy ED-2-5:** Support the creation and retention of jobs that provide sustainable wages and benefits.
- ▶ **Policy RC-3-1:** Integrate economic development and land use planning in Elk Grove with planning for regional transportation systems.
- ▶ **Policy LU-1-2:** Foster development patterns that will achieve a complete community in Elk Grove, particularly with respect to increasing jobs and economic development and increasing the City's jobs-to-employed resident ratio while recognizing the importance of housing and a resident workforce.
- ▶ **Policy LU-1-6:** Support the development of neighborhood-serving commercial uses adjacent to residential areas that provide quality, convenient, and community-serving retail choices in a manner that does not impact neighborhood character.
- ▶ **Policy LU-1-8:** Seek to designate sufficient land in all employment-generating categories to provide opportunities for Elk Grove's working population and jobs in categories matching resident's employment level.
- ▶ **Policy LU-2-1:** Promote a greater concentration of high-density residential, office commercial or mixed-use sites and the population along identified transit corridors and existing commercial corridors, in activity centers, and at other appropriate locations.

3.7.2 Environmental Setting

During the 1990s, Elk Grove's population grew by more than 70 percent, while corresponding job growth during that period occurred primarily in other parts of Sacramento County and the region. Before Elk Grove was incorporated, Sacramento County's General Plan vision for the unincorporated Laguna and Elk Grove Community Plan Areas was primarily that those communities would continue to function as suburbs of Sacramento (City of Elk Grove 2019:5-7). Following incorporation, the City has attracted more businesses, although it still largely serves as a suburb of the City of Sacramento.

POPULATION

The population of the City was estimated to be 176,972 on January 1, 2022 (DOF 2022). The City has an estimated development capacity of 332,254 residents (City of Elk Grove 2019a: Table 3-2). This figure reflects the maximum possible population, as determined by the number of residential units possible at the different maximum densities allowed for each land use designation and the amount of land area within those designations. However, the General Plan does not specify a specific date for development potential, and states that the development capacity is unlikely to be reached because it would require that every lot in Elk Grove be developed to its maximum potential (City of Elk Grove 2019a:3-20).

EMPLOYMENT

Elk Grove has historically functioned as a bedroom community. Many residents work elsewhere, and the City has fewer jobs than residents. According to the City's 2019 Employment Dynamics Report, there were 9,577 business establishments offering employment opportunities in the City as of July 2018, primarily in technology, education, health care, and social services; retail; and administrative services industries (City of Elk Grove 2019b). The number of jobs in the City is projected to increase from 54,359 in 2018 to as many as 122,155 with buildout of the General Plan (City of Elk Grove 2019b: Table B5; City of Elk Grove 2019a: Table 3-2).

HOUSING

The U.S. Census Bureau defines a housing unit as a house, an apartment, a group of rooms, or a single room occupied or intended for occupancy as separate living quarters. College dormitories are considered noninstitutional group quarters and are excluded from the housing unit inventory. For the purpose of population surveys in the

decennial census, individuals are counted at their “usual residence.” “Usual” is defined as the place where the person lives and sleeps most of the time, or the place he or she considers to be his or her usual residence. Therefore, most students living in dormitories would not be included (U.S. Census Bureau 2021).

The total number of housing units in the City was 57,468 as of January 2022, with an average household size of 3.14 persons per unit, compared to an average household size of 2.70 persons in Sacramento County (DOF 2022). Approximately 90 percent of these housing units were attached and detached single-family houses, compared to 71 percent countywide. At buildout of the General Plan, the City has the potential to accommodate 102,865 dwelling units (City of Elk Grove 2019a: Table 3-2).

JOBS/HOUSING BALANCE

A jobs/housing ratio is a calculation of jobs per housing unit available in an area; a perfect balance is expressed as 1:1, or 1.0. A low jobs/housing ratio (less than 1.0) describes a housing-rich community with fewer available jobs for residents, while a high ratio (more than 1.1) describes a jobs-rich area with more jobs available for residents. In a community with a low jobs/housing ratio, working-age residents are more likely to need to commute to work (City of Elk Grove 2019a: 3-9).

Elk Grove is located near Sacramento, which is a large employment center, and generally offers more amenities, services, and a higher quality of life than locations closer to the capital. These factors make the City an attractive housing location for many families and, along with other factors, contribute to a lower jobs/housing ratio (0.84) in Elk Grove than in locations more proximate to the region’s existing employment centers (City of Elk Grove 2019a: 3-9).

The Land Use Plan in the *Elk Grove General Plan* has been designed to support opportunities that would result in a jobs/housing ratio of approximately 1.2 at buildout. This ratio is considerably higher than existing conditions but still below SACOG’s planned regional average of 1.4, indicating that the City will increase its employment base while also continuing to serve an important role as a residential community for employees throughout the region (City of Elk Grove 2019a: 3-10).

3.7.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

Impacts on population and housing were assessed by reviewing existing and anticipated population and housing projections prepared by the *Elk Grove General Plan*, DOF, and SACOG. The Project’s impacts were evaluated by determining their consistency with these estimates and projections. Population and employment growth, as an economic or social change, is not considered a significant effect on the environment (pursuant to State CEQA Guidelines Section 15131). Growth that is consistent with planning documents that have undergone separate environmental evaluation would generally result in similar potential for environmental impacts and the requisite demand for infrastructure would typically be incorporated into the plans of the respective utilities. However, where growth could lead to physical changes, the potential for effects is evaluated. For further discussion of growth-inducing effects, see Chapter 6, “Other CEQA-Mandated Sections.”

THRESHOLDS OF SIGNIFICANCE

A population, employment, and housing impact is considered significant if implementation of the Project would do any of the following:

- ▶ induce substantial unplanned 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); and/or
- ▶ displace substantial numbers of existing people or homes, necessitating the construction of replacement housing elsewhere.

ISSUES NOT DISCUSSED FURTHER

The purpose of the Project is to amend the City's General Plan land use designations to support residential and commercial growth in Elk Grove, specifically in the LEA Community Plan Area, Old Town Policy Area, and West and South Study Areas. The Project would develop the framework for walkable communities with amenities, such as commercial businesses. The update to the City's VMT thresholds and revisions to General Plan EIR Mitigation Measure MM 5.5.1a and MM 5.5.1b would not result in physical development. Therefore, the Project would not remove housing or otherwise displace substantial numbers of people or homes beyond what was evaluated in the General Plan EIR. The Project would have no impact related to the displacement of a substantial number of people or homes and this issue is not discussed further in this SEIR.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.7-1: Induce Substantial Population Growth

General Plan EIR Section 3.3 determined that implementation of the General Plan would exceed SACOG's population and housing projections for Elk Grove. The Project would accommodate up to 1,851 net new dwelling units, 123,923 jobs, and approximately 5,979 net new persons beyond the General Plan. This growth would exceed projections assumed under the City's General Plan and regional planning efforts completed by SACOG. The Project would not indirectly induce unplanned population growth or residential development. Therefore, there is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR. Growth inducement impacts would remain **less than significant**.

LEA Community Plan Area

The Project would increase development capacity in the City through amendments to the land use designations in the City's General Plan. Table 2-2 in Chapter 2, "Project Description," indicates growth projections associated with the Project. While no specific development projects are proposed at this time, subsequent development throughout the General Plan Planning Area, including in the LEA Community Plan Area, would be considered additional population and housing growth above that projected in the General Plan and analyzed in the General Plan EIR. The General Plan EIR disclosed impacts to population and housing and determined there would be a 92 percent increase in population over the City's 2017 population.

Buildout of the Project would add an additional estimated 1,851 new dwelling units, an increase in 1.7 percent over General Plan projections. Total population under Project buildout, within the Planning Area, would increase by 5,979 persons or 1.8 percent as compared to the General Plan. The majority of new dwelling units would occur in the LEA Community Plan Area, which would be built out at a higher density than included in the existing General Plan. The Project would not change the development boundaries of the City's Planning Area. The majority of estimated growth would occur in the LEA Community Plan Area, which would create a more efficient and beneficial use of the area by adding development potential in an area already planned for development. This strategy is consistent with the vision of the MTP/SCS prepared by SACOG.

The difference between existing (2022), existing General Plan forecast, and project forecasts for the Planning Area are shown in Table 3.7-1. SACOG's 2040 projections for Elk Grove estimate that the City will have a population of 202,630 people accommodating 66,508 dwelling units (SACOG 2019b). The anticipated growth under the Project within the City limits is 76,906 dwelling units and a population of 248,406 persons.

Table 3.7-1 Comparison of General Plan and General Plan Amendment Projections

Existing Conditions (2022)	Existing General Plan Projections	General Plan Amendment Projections	Difference	Percent Increase
Residential Units	102,865	104,716	1,851 units	1.7
Population	332,254	338,233	5,979 persons	1.8

Source: See Table 2-2 in Chapter 2, "Project Description."

Changes in population anticipated for the Project may result in the need for construction of infrastructure and services above what was anticipated in the General Plan to accommodate increases in population. Where growth could lead to physical changes beyond those anticipated in the General Plan, the potential for effects are evaluated throughout this SEIR. Specifically, the environmental impacts of population and residential growth associated with increased development beyond that analyzed for the General Plan is evaluated in Sections 3.1 through 3.10 of this SEIR.

The Project would facilitate development beyond SACOG's population and housing projections. However, SACOG estimates population projections for 2040. The Project does not assume full buildout by 2040. Development of proposed housing associated with the Project is anticipated to meet population needs and would occur over Project buildout (30 years or greater). The General Plan does not specify a specific date for development potential, and states that the development capacity is unlikely to be reached because it would require that every lot in Elk Grove be developed to its maximum potential (City of Elk Grove 2019a: 3-20). Additionally, SACOG would update their population projections to reflect new forecasts for each city in the region during the next update. Since the State is currently in an ongoing housing crisis, due to an insufficient housing supply, the Project would assist in meeting the housing needs of the City over the next 30 years or more.

Future development under the Project would be dispersed throughout the Planning Area to specific growth areas, such as the LEA Community Plan Area and would not change the boundaries of the Planning Area. The General Plan EIR disclosed growth projections, the impacts of which were determined to have significant effects for several environmental issue areas analyzed in the General Plan EIR. Although the General Plan EIR did not identify an impact finding for population and housing, impacts associated with buildout of the General Plan related to increased population and housing would have potentially significant effects. Project impacts would not be more severe than the impact identified in the General Plan EIR as analyzed throughout this SEIR. There would be no new significant growth effects. The Project would not indirectly induce unplanned population growth or residential development beyond what was analyzed in the General Plan EIR and impacts would remain **less than significant**.

General Plan Land Use Designation Amendments

Population growth anticipated from proposed land use amendments in the Old Town Policy Area are included in the overall population growth associated with the Project. As discussed above under, LEA Community Plan, impacts to population growth would remain **less than significant**. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

Grant Line Road Precise Roadway Study

The Precise Study was prepared to analyze potential geometric layouts along Grant Line Road. Buildout of roadway configurations, including all alternatives of the Precise Study, would not result in an increase in population or housing. There would be **no impact** from development of the Precise Plan. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

South and West Study Areas

Population growth anticipated within the South and West Study Areas is included in the overall population growth associated with the Project. As discussed above under, LEA Community Plan, impacts to population growth would remain **less than significant**. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

Mitigation Measures

No new mitigation is required.

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3.8 PUBLIC SERVICES AND RECREATION

This section provides an overview of existing public services in the City of Elk Grove and evaluates the potential for implementation of the General Plan Amendments and Update of VMT Standards (Project) to affect availability, service level, and/or capacity of public services, including fire-protection services, police-protection services, parks and recreation, and public schools, and, if such an effect is determined to occur, whether new or expanded facilities would be required that could result in a potentially significant impact to the environment. Other publicly provided utility services, such as water and wastewater treatment, solid waste, electricity, and natural-gas services, are addressed in Section 3.10, "Utilities and Service Systems." The primary source of information used for this analysis is the General Plan EIR (City of Elk Grove 2018, 2019), including updates to the Elk Grove Municipal Code, and recently approved City master plans.

No comments pertaining to public services and recreation were received in response to the notice of preparation (NOP).

3.8.1 Regulatory Setting

FEDERAL

No federal plans, policies, regulations, or laws are applicable to the provision of public services for the Project.

STATE

California Occupational Safety and Health Administration

In accordance with the California Code of Regulations, Title 8, Sections 1270 "Fire Prevention" and 6773 "Fire Protection and Fire Fighting Equipment," the California Occupational Safety and Health Administration has established minimum standards for fire suppression and emergency medical services. The standards include guidelines on the handling of highly combustible materials, fire hose sizing requirements, restrictions on the use of compressed air, access roads, and the testing, maintenance, and use of all firefighting and emergency medical equipment.

California Fire Code

The California Fire Code (CFC) is contained within CCR Title 24. The CFC establishes requirements for development design to safeguard public health, safety and general welfare from the hazards of fire. This includes standards on building design, materials, fire flow, and other suppression provisions. The CFC also regulates the use, handling, and storage requirements for hazardous materials at fixed facilities. The CFC and the California Building Code use a hazard classification system to determine what protective measures are required to protect life and provide fire safety. These measures may include applying construction standards, requiring separation between structures and property lines, and using specialized equipment. To ensure that these safety measures are met, the CFC employs a permit system based on hazard classification. The CFC is updated every 3 years.

California Health and Safety Code

State fire regulations are set forth in Sections 13000 et seq. of the California Health and Safety Code, which includes regulations for building standards (as set forth in the California Building Code); fire protection and notification systems; fire protection devices, such as extinguishers and smoke alarms; high-rise building and childcare facility standards; and fire-suppression training.

Uniform Fire Code (Title 24, Part 9)

The 2022 Uniform Fire Code (Fire Code) (California Code of Regulations, Title 24, Part 9), effective January 1, 2023, contains regulations relating to construction, maintenance, and use of buildings. Topics addressed in the Fire Code include fire department access, fire hydrants, automatic sprinkler systems, fire alarm systems, fire and explosion hazards safety, hazardous materials storage and use, provisions intended to protect and assist fire responders, industrial

processes, and many other general and specialized fire-safety requirements for new and existing buildings and the surrounding premises. The Fire Code also contains specialized technical regulations related to fire and life safety.

Leroy F. Greene School Facilities Act

The Leroy F. Greene School Facilities Act (Chapter 407, Statutes of 1998) places limitations on cities and counties with respect to mitigation requirements for school facilities. It permits school districts to levy fees, based on justification studies, for the purposes of funding construction of school facilities, subject to established limits. The act further states that payment of these fees by a development project is considered adequate to reduce impacts of that project on schools to a less-than-significant level for the purposes of CEQA review and compliance.

School districts that can establish a need by completing an annually updated fee justification study are authorized to collect school impact fees on new residential and commercial/industrial development in accordance with Education Code Section 17620 and Government Code Section 65995. The development school impact fees are intended to provide the local school district's 50 percent share of the cost of new school construction.

The Elk Grove Unified School District (EGUSD) has established school mitigation fees for residential development at \$7.04 per square foot and \$0.78 per square foot for commercial/industrial development (EGUSD 2022a).

Quimby Act

The goal of the 1975 Quimby Act (California Government Code Section 66477) was to require developers to help mitigate the impacts of property improvements by requiring them to set aside land, donate conservation easements, or pay fees for park improvements. The Quimby Act gave authority for passage of land dedication ordinances only to cities and counties, thus requiring special districts to work with cities and/or counties to receive parkland dedication and/or in-lieu fees. The fees must be paid and land conveyed directly to the local public agencies that provide parks and recreation services community-wide. Revenues generated through the Quimby Act cannot be used for the operation and maintenance of park facilities.

Originally, the Quimby Act was designed to ensure "adequate" open space acreage in jurisdictions adopting Quimby Act standards (e.g., 3 to 5 acres per 1,000 residents). In some California communities, the acreage fee was very high where property values were high, and many local governments did not differentiate on their Quimby fees between infill projects and greenbelt developments. In 1982, the Quimby Act was substantially amended via AB 1600. The amendments further defined acceptable uses of or restrictions on Quimby funds, provided acreage/population standards and formulas for determining the exaction, and indicated that the exactions must be closely tied (nexus) to a project's impacts as identified through traffic studies required by CEQA. AB 1600 requires agencies to show a reasonable relationship between the public need for the recreation facility or parkland and the type of development project on which the fee is imposed. Cities or counties with a high ratio of parkland to inhabitants can set a standard of 5 acres per 1,000 residents for new development; those with a lower ratio can only require the provision of up to 3 acres of parkland per 1,000 residents. The calculation of this parkland-to-population ratio is based on a comparison of the population count of the last federal census to the amount of city- or county-owned parkland.

Public Resources Code Section 21151.2

Public Resources Code (PRC) Section 21151.2 requires school district governing boards to give the relevant planning commission a written notice in writing of the proposed acquisition before acquiring title to property for a new school site or for an addition to an existing school site. The planning commission is responsible for investigating the proposed site and providing it, and any related recommendations, to the governing board. EGMC Section 23.10.030 specifies that the Elk Grove City Council shall be responsible for such investigations and recommendations.

Government Code Section 65402

California Government Code Section 65402 requires a school district, prior to acquiring real property, to submit the location, purpose, and extent of such acquisition to the Planning Agency having jurisdiction for a determination as to conformity with the general plan. EGMC Section 23.10.030 specifies that the Elk Grove City Council shall make determinations under this State code section.

Government Code Section 53094

A school district, with a two-thirds vote, may render a city zoning ordinance inapplicable to classroom facilities, except when the proposed use of the property by the school district is for non-classroom facilities. Before a school district can override a local zoning ordinance, it must first comply with expanded coordination and communication requirements. The district also must comply with pre-existing CEQA requirements regarding school site review before overriding local zoning.

LOCAL

City of Elk Grove General Plan

The City General Plan (City of Elk Grove 2019a) contains the following policies relevant to public services and the Project:

- ▶ **Policy ER-4-1:** Cooperate with the Cosumnes Community Services District (CCSD) Fire Department to reduce fire hazards, assist in fire suppression, and promote fire safety in Elk Grove.
- ▶ **Policy ER-4-2:** Work with the [Cosumnes Community Services District (CCSD)] to develop a fire prevention plan that lists major fire hazards, proper handling and storage procedures for hazardous materials, potential ignition sources and their control, and the type of fire protection equipment necessary to control each major hazard.
- ▶ **Policy SAF-1-2:** Encourage the use of Crime Prevention Through Environmental Design (CPTED) principles in the design of projects and buildings, as well as parks and trails.
- ▶ **Policy SAF-1-3:** Coordinate with the CCSD Fire Department to ensure that new station siting and resources are available to serve local needs.
- ▶ **Policy SAF-1-4:** Expand emergency response services as needed due to community growth.
- ▶ **Policy INF-1-2:** Require that water flow and pressure be provided at sufficient levels to meet domestic, commercial, industrial, and firefighting needs.
- ▶ **Policy IFP-1-7:** New development shall fund its fair share portion of impacts to all public facilities and infrastructure as provided for in State law.
- ▶ **Policy IFP-1-8:** Infrastructure improvements must be financed and/or constructed concurrent with or prior to completion of new development.
- ▶ **Policy IFP-1-10:** Except when prohibited by state law, the City will endeavor to ensure that sufficient capacity in all public services and facilities will be available on time to maintain desired service levels and avoid capacity shortages, traffic congestion, or other negative effects on safety and quality of life.

City of Elk Grove Municipal Code

Chapter 16.85: Elk Grove Fire Fee

The City established a fire fee to fund the cost of capital facilities (fire protection facilities and equipment) to meet fire protection service needs by the CCSD. This fee is paid at the issuance of building permits.

Chapter 17.04: California Fire Code

The City adopted the 2019 California Fire Code with some local amendments as set forth in Section 17.04.010. Section 17.04.020 designates the chief of the CCSD Fire Department or authorized designee the authority to enforce this chapter of the Municipal Code.

Elk Grove Unified School District Funding

Elk Grove Unified School District (EGUSD) operations are primarily funded through local property tax revenue that is first accrued in a common statewide pool, and then allocated to each school district based on average daily attendance. State law also permits the charging of development fees to assist the EGUSD in funding capital acquisition and improvements to programs for school facilities, based on documented justification that residential

and nonresidential development projects generate students. The EGUSD allows the imposition of fees that can be adjusted periodically, consistent with SB 50. Current developer fees are \$7.04 per square foot of residential space and \$0.78 per square foot of commercial/industrial space (EGUSD 2022a). The EGUSD also collects a Mello-Roos tax, with the taxes applied at various stages during project review and development.

City of Elk Grove - Park and Recreation Dedication and Fees

EGMC Chapter 22.40 requires tentative subdivision and tentative parcel map applicants to dedicate land or pay an in-lieu fee for the development of neighborhood and community parks and provides a formula for calculating the in-lieu fee. The parkland acquisition and development standard is 5 acres per 1,000 residents. EGMC Chapter 16.80 requires that new residential developments that are not part of a subdivision to dedicate land or pay an in-lieu fee for the development of neighborhood and community parks. The Chapter provides a formula for calculating the in-lieu fee. The parkland acquisition and development standard is 5 acres per 1,000 residents.

In addition to EGMC Chapters 16.80 and 22.40, the City and the Cosumnes Community Services District (CCSD) also have fee programs specific to park development, such as the Southeast Policy Area (SEPA) Park and Trail Fee, the Laguna Ridge Park Fee and Laguna Ridge Supplemental Park Fee, and the CCSD Park Fee. For example, developers of projects in SEPA are required to meet their Quimby obligation (park land dedication or in-lieu fee) pursuant to EGMC Chapters 22.40 or 16.80 and they are also responsible for paying the SEPA Park and Trail Fee, which goes toward park facilities, and trail land and facilities. EGMC Chapter 16.95.022 establishes the SEPA park and trail fee. The Laguna Ridge Specific Plan (LRSP) includes a parks fee for facility construction of new facilities. There is also the Laguna Ridge Supplemental Parks Fee Program, which provides funding for construction of all the local and community parks in LRSP, as well as the land component for parks and parkways that exceed the Quimby standard of 5 acres per 1,000 residents.

Parks and Recreation Master Plan

The Parks and Recreation Master Plan is a joint document prepared and approved by the CCSD and the City. The Master Plan was developed to guide both agencies in providing parks and recreation opportunities for residents in the City and in the CCSD boundaries. The Master Plan establishes a clear direction for the CCSD's core services and responsibilities, defines service priorities and capital investments, and outlines the manner in which the parks and recreation facilities and program services will be funded and delivered (CCSD Parks and Recreation Department 2018).

Elk Grove Bicycle, Pedestrian, and Trails Master Plan

The Elk Grove Bicycle, Pedestrian, and Trails Master Plan (2021) is the expression of the City's desire to have an exemplary off-street multiuse trail system that provides connectivity throughout the City and the wider Sacramento region in order to offer recreational opportunities and an alternative method for transportation for City residents. To achieve this trail system, the City acknowledges the necessity to provide direction on where trails should be located; set design standards and guidelines to describe the desired characteristics of trails; identify funding sources for trail planning, construction, and maintenance; establish prioritization criteria for which trail projects to implement first; and describe the City and interagency collaborative actions required to create the trail system. The City Council adopted the first Trails Master Plan in January 2007, but the plan is continually updated as goals are achieved, as new funding sources become available. The current plan was adopted in May 2021. Additionally, the City has prepared the Laguna Creek Inter-Regional Trail (LCIRT) Master Plan which aims to complement work started on the Elk Grove Bicycle, Pedestrian, and Trails Master Plan by providing greater detail, a holistic approach, and broader geographic scope related specifically to the LCIRT, and further improve connectivity throughout the City's network of trails.

3.8.2 Environmental Setting

FIRE PROTECTION

Fire protection services in the City are provided by CCSD. Services include fire suppression, emergency medical services, technical rescue, and arson and explosion investigations in a 157-square-mile service area covering the City,

Galt, and a portion of unincorporated southern Sacramento County. The service area encompasses a population of more than 207,000 persons. The CCSD has 180 personnel in its Operations Division and operates out of eight fire stations and three facilities (CCSD 2022a). In 2021, the CCSD responded to 22,936 incidents, a 12.9 percent increase from 2020 (Gomez, pers. comm., 2022). The CCSD's fire stations are at the following locations (CCSD 2022b):

- ▶ Fire Station 45, 229 5th Street, central Galt
- ▶ Fire Station 46, 1050 Walnut Avenue, northeast Galt
- ▶ Fire Station 71, 8760 Elk Grove Boulevard
- ▶ Fire Station 72, 10035 Atkins Drive
- ▶ Fire Station 73, 9607 Bond Road
- ▶ Fire Station 74, 6501 Laguna Park Drive
- ▶ Fire Station 75, 2300 Maritime Drive
- ▶ Fire Station 76, 8545 Sheldon Road
- ▶ Fire Station 77, 83500 Poppy Ridge Road (under Construction)

In addition, two new fire stations are planned in the Planning Area: (1) Station 78, to be located along the southern boundary of the City limits near Promenade Parkway and Kammerer Road; and (2) Station 79 to be located within the Eastern Elk Grove Community Plan Area near Grant Line Road along Bradshaw Road.

LAW ENFORCEMENT

California Highway Patrol

The California Highway Patrol Valley Division provides services to the south Sacramento region from the division's South Sacramento office located at 6 Massie Court, Sacramento. The office patrols sections of Interstate 5, State Route 99, U.S. Highway 50, and Business 80, as well as 500 miles of unincorporated county roadways.

Elk Grove Police Department

Police protection services are provided by the Elk Grove Police Department (EGPD) for areas within the City. EGPD is headquartered at 8400 Laguna Palms Way. EGPD is divided into four divisions: the Operations Division, the Investigations Division, the Administrative Services Division, and the Support Services Division. The Operations Division (Patrol) is responsible for responding to calls for services and is made up of eight patrol teams, canine officers, school resource officers, and the crisis response team (EGPD 2019).

The EGPD has an authorized strength of 236 total personnel and 114 sworn officers (City of Elk Grove 2022). The Police Department responded to approximately 85,055 for service in 2022 (EGPD 2022). Note that calls for service and staffing related to animal services have been excluded from this analysis.

EGPD's officer-to-resident population ratio standard is 0.81 sworn police officers per 1,000 residents, and EGPD's response time goal is 5 minutes for Priority 1 calls, which are emergency calls that require immediate assistance from police to prevent serious injury, death, and/or to arrest a violent felon. In 2022, EGPD's actual response time was 5.4 minutes for Priority 1 calls, with 48 percent of calls for service under 5 minutes (Jacobson, pers. comm., 2023).

SCHOOLS

EGUSD provides educational services, including elementary, middle, and high schools, to the City. EGUSD operates 43 elementary schools, nine middle schools, nine high schools, three continuation schools, one K-12 independent study program, one charter school, one virtual online K-8 program and one special education school. In addition, the District offers preschool programs, an adult education program and a career training center for adults (EGUSD 2021a).

To identify school needs, EGUSD has developed a comprehensive districtwide Facilities Master Plan (FMP). The FMP is the blueprint for investments in the educational infrastructure. The FMP indicates that during the 2015-16 school year, there were a total of 63,232 students enrolled. The total number of students projected to be enrolled in EGUSD in 2025-26 is 76,859. This represents a projected increase of 13,600 students. Based on the projected District-wide increase of 13,600 students through 2025, the FMP forecasts the need for ten to twelve new schools through 2025, of which eight to ten are elementary schools with one middle school and one high school (EGUSD 2016).

PARKS AND RECREATION

The CCSD Parks and Recreation Department provides park and recreational services to the City and maintains more than 101 parks that, together, encompass more than 1,000 acres of parks, corridors, creeks, and trails in the Elk Grove community. According to *Plan for Play: Parks, Recreation and Facilities Master Plan*, approximately 5.26 acres of parkland were available per 1,000 population in 2017, and planned parklands would result in a park acreage standard of less than 5 acres per 1,000 population. The master plan concluded that community needs included visitor experiences (restrooms, shade, gathering places), off-street trails, major facilities (multipurpose recreation centers and aquatic centers), sports fields, and park facilities (CCSD Parks and Recreation Department 2018).

The City and CCSD have entered into a Memorandum of Understanding (MOU) concerning the development of park and recreation facilities in the City. The MOU addresses funding, programming, construction, ownership, and maintenance of park and recreational facilities in the geographic limits of the City. The most recent MOU was approved through Resolution 2019-214 (City of Elk Grove 2019b).

3.8.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

Evaluation of potential public service and recreation impacts are based on applicable City standards policies and a review of documents pertaining to the Project, including the General Plan EIR. Impacts on public services and recreation that would result from the Project were identified by comparing existing service capacity and facilities against future, new, or renovated facilities, the construction of which could have physical effects on the environment.

THRESHOLDS OF SIGNIFICANCE

A public services and recreation impact is considered significant if implementation of the Project would do any of the following:

- ▶ Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, to maintain acceptable service ratios, response times, or other performance objectives for any of the public services:
 - fire,
 - police protection,
 - schools,
 - parks, and
 - 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; and/or

- ▶ include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.8-1: Require Construction of New Fire Protection Facilities, Resulting in Adverse Environmental Impacts

The General Plan EIR determined that where new growth areas within the City have been identified, new fire stations are planned to accommodate the anticipated growth and no significant impacts would occur. Compliance with applicable regulations and existing General Plan policies would ensure new fire station siting and resources are available. If new fire protection facilities are proposed, environmental review for the new facility would be conducted as appropriate. Project impacts associated with the construction of needed fire protection facilities would not result in a new or substantially more severe construction impacts than disclosed in the technical sections of the General Plan EIR. Buildout projected under the Project would be required to comply with applicable regulations and policies. Therefore, impacts related to the provision of fire services would remain **less than significant**.

LEA Community Plan Area

Implementation of the Project would increase development capacity in the LEA Community Plan Area, which would result in associated population growth. This increase in population would increase demand for fire protection and emergency medical services, and could require additional firefighters, paramedics, and other personnel. In addition, new development in the LEA Community Plan Area beyond what was evaluated in Impact 5.11.1.1 of the General Plan EIR, may require construction of a new fire station to meet the needs of the LEA Community Plan Area. CCSD has identified a potential location for a future fire station located within the City's Planning Area near Promenade Parkway and Kammerer Road, which would improve emergency response time within the station's traditional service area and serve the LEA Community Plan Area. Construction of the new fire station would occur as the LEA Community Plan Area is built out and would increase fire protection resources and reduce the need for existing fire stations to serve the LEA Community Plan Area. Development of the new fire station in the LEA Community Plan Area would undergo a separate project-specific environmental review process as required by the City and impacts of the new station are not discussed herein.

Pursuant to EGMC Chapter 16.85, Elk Grove Fire Fee, all new development projects, including those in the LEA Community Plan Area, would be required to pay fire protection development fees to fund additional facilities and equipment. These funds would help to pay for costs associated with the development of a new fire station, acquire new equipment, and hire additional firefighters to maintain existing service ratios, if needed. In addition, the CCSD Fire Department receives additional funding through property taxes, fees for service, and grant funding and can, therefore, fund expanded services as new development occurs throughout the LEA Community Plan Area. These funds would help pay for services to support the new fire station and thereby alleviate strain on the City's existing fire service.

Additionally, the General Plan contains policies that, when implemented, would maintain adequate staffing, equipment, and facilities to provide timely and effective responses to emergencies (Policy IFP-1-10) and would require all discretionary development to provide, and existing development to maintain, adequate access for emergency vehicles. The General Plan encourages investment in facilities and infrastructure and services to ensure public safety and improve quality of life, and requires adequate emergency vehicle access in new discretionary development (Policy SAF-1-3; SAF-1-4). In addition, new housing units associated with the Project would be designed to comply with building and fire codes (EGMC Chapter 17.04) and include appropriate fire safety measures and equipment such as fire hydrants and sprinkler systems, smoke detectors, fire extinguishers, and adequate access and egress for emergency vehicles. Thus, the existing and planned fire stations would be sufficient to serve development related to the Project.

Portions of the LEA Community Plan Area have been previously analyzed in certified CEQA documents for the following projects: Southeast Policy Area Strategic Plan, Laguna Ridge Specific Plan, and Lent Ranch Marketplace Special Planning Area. Mitigation measures from the Laguna Ridge Specific Plan includes requirements related to fire protection and emergency services. A comprehensive list of mitigation measures from other community plans prior

environmental review are included in Appendix G. Mitigation measures from the Laguna Ridge Specific Plan EIR include requirements to meet minimum necessary fire flow, provide a permanent fire station, access to open space areas, and provide emergency vehicle turn arounds. Fire protection and emergency services requirements in Elk Grove General Plan policies, Elk Grove Municipal Code, CCSD Fire Department requirements, and LEA Form Based Code, as described above, contain the same performance standards and are equivalent in effectiveness as mitigation contained in prior environmental documents. Therefore, no additional mitigation is required in the LEA Community Plan Area for impacts to fire protection services.

Development of housing units within the LEA Community Plan Area associated with the Project would increase the number of residents in the City, which would increase demand for fire protection and emergency medical services. The LEA Community Plan Area is located within CCSD Fire Department's existing service area and would not require any changes to the department's service area boundary (CCSD 2022c). Therefore, implementation of the Project would not directly affect response times.

There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR. Therefore, impacts related to the provision of fire services for the LEA Community Plan Area would remain **less than significant**.

General Plan Land Use Designation Amendments

Increased demand for fire protection and emergency medical services because of the increased population growth anticipated from proposed land use amendments within the Old Town Policy Area is included in the overall population growth associated with the Project. Additionally, the Old Town SPA is located within the CCSD Fire Department's existing service area and would not require any changes to the department's service area boundary. As discussed above under the LEA Community Plan, impacts to fire protection and emergency medical services would be reduced by compliance with the EGMC and existing General Plan policies. Impact would remain **less than significant**. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

Grant Line Road Precise Roadway Study

Development of Grant Line Road would not induce population growth and there would be no need for increased fire protection services. **No impact** would occur. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

South and West Study Areas

Increased demand for fire protection and emergency medical services as a result of the increased population growth anticipated under the South and West Study Areas is included in the overall population growth associated with the Project. Additionally, the South and West Study Areas are located within the CCSD Fire Department's existing service area and would not require any changes to the department's service area boundary. As discussed above under the LEA Community Plan, impacts to fire protection and emergency medical services would be reduced by compliance with the EGMC and existing General Plan policies. Impact would remain **less than significant**. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

Mitigation Measures

No additional mitigation is required for this impact beyond compliance with EGMC Chapters 16.85 and 17.04 and General Plan Policies ER-4-1, ER-4-2, SAF-1-3, and SAF-1-4.

Impact 3.8-2: Require Construction of New Law Enforcement Facilities, Resulting in Adverse Environmental Impacts

General Plan EIR Impact 5.11.1.2 indicated that police services operates out of a centralized facility at the City Hall complex and additional police services to accommodate development can be accomplished through additional personnel and equipment and no significant impacts would occur. Relative to the General Plan EIR, the Project would not result in new or substantially more severe impacts related to law enforcement. In addition, Elk Grove General Plan Policy SAF-1-1 directs regular monitoring and review of the level of police staffing provided in Elk Grove and ensures that sufficient staffing and resources are available to serve local needs. The addition of new officers and/or administrative staff would not require a new or expanded police facility because EGPD operations would continue within the centralized facility at the City Hall complex and additional police services to accommodate development can be accomplished through additional personnel and equipment. Therefore, impacts related to the provision of law enforcement would remain **less than significant**.

LEA Community Plan Area

Implementation of the Project would increase housing and density, including in the LEA Community Plan Area. The Project could result in an additional 1,851 dwelling units in the City Planning Area beyond what is currently anticipated at buildout under the General Plan. The additional units would result in a potential population increase of up to 5,979 (see Section 3.7 "Population and Housing"). EGPD's service boundaries are contiguous with the City limits (City of Elk Grove 2018). The LEA Community Plan Area is located within the EGPD's existing service area and would not require any changes to the department's service area boundary. EGPD's current officer-to-resident population ratio is 0.81 sworn police officers per 1,000 residents. The EGPD operates out of a centralized facility at the City Hall complex and additional police services to accommodate development can be accomplished through additional personnel and equipment. The main police service campus is growing to accommodate the need for more police department office and storage space.

The General Plan EIR anticipated urbanization of the LEA Community Plan Area and identified that implementation of the General Plan would result in less-than-significant impacts to law enforcement with implementation of General Plan Policy SAF-1-1 (Impact 5.11.2.1, City of Elk Grove 2018: 5.11-7). General Plan Policy SAF-1-1 directs regular monitoring and review of the level of police staffing provided in Elk Grove and ensures that sufficient staffing and resources are available to serve local needs. Similar to funding for fire protection services, new staff and equipment necessary to provide additional law enforcement services would be funded by development impact fees, which would be required to be paid by all proposed development within the City, as well as by ongoing payments of property taxes.

The fiscal impacts that a project may pose to a city is not an environmental impact. As discussed above, indirect development that may be constructed as a result of the Project within the LEA Community Plan Area would result in a potential need for additional Elk Grove police officers. The City collects a Capital Facilities Fee that provides fair share funding towards the construction of new police facilities and acquires new (not replacement) police equipment to serve growth. The City also requires new development to annex into Community Facilities District (CFD) 2003-2, Police Services, which provides funding for various public safety services. In 2022, Elk Grove voters approved Measure E, a 1-cent general sales tax measures. Initial priorities for Measure E revenues may include, among other things, public safety. There is no new significant effect, and the impact is not more severe than the impact identified in the existing General Plan EIR. Therefore, impacts related to expanded police services and facilities for the LEA Community Plan Area would remain **less than significant**.

General Plan Land Use Designation Amendments

Increased demand for new law enforcement facilities because of the increased population growth anticipated from proposed land use amendments within the Old Town Policy Area is included in the overall population growth associated with the Project. Additionally, the Old Town Policy Area is located within the EGPD's existing service area and would not require any changes to the department's service area boundary. As discussed above under the LEA Community Plan, impacts to law enforcement facilities would be reduced by compliance with the EGMC and existing General Plan policies. Impact would remain **less than significant**. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

Grant Line Road Precise Roadway Study

Development of Grant Line Road would not induce population growth and there would be no need for increased police protection services. **No impact** would occur. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

South and West Study Areas

Increased demand for new law enforcement facilities as a result of the increased population growth anticipated under the South and West Study Areas is included in the overall population growth associated with the Project. Contrary to the LEA Community Plan Area and the Old Town SPA, the South and West Study Areas are located outside of the EGPD's existing service area. However, the South and West Study Areas would be subject to General Plan policies and mitigation measures identified in the General Plan EIR to reduce physical environmental effects and provide additional police protection services as the study areas develop. Impact would remain **less than significant**. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

Mitigation Measures

No mitigation is required for this impact beyond compliance with General Plan Policy SAF-1-1.

Impact 3.8-3: Increased Demand for New Public School Facilities

Impact 5.11.3.1 of the General Plan EIR identifies that future development in the City would result in an increase of school-aged children and would require the construction of new public school facilities. As determined by the General Plan EIR, because school facilities would be constructed by the EGUSD the environmental impacts of school construction would be significant and unavoidable. Implementation of the Project would result in an increase in student generation that could require additional school facility needs beyond current General Plan analysis. This would be an increase in impact severity than what was previously identified in General Plan EIR Impact 5.11.3.1. No mitigation measures are available to reduce potentially significant impacts; thus this impact would remain **significant and unavoidable**.

LEA Community Plan Area

As stated previously, implementation of the Project would result in an increase of housing and density throughout the City, including in the LEA Community Plan Area. Overall, the Project could increase the number of dwelling units in the City up to 1,851 units beyond those identified in the current General Plan. This increase of 1,851 net new housing units would result in a potential population increase in the City of up to 5,979 persons when compared to the adopted General Plan (see Section 3.7 "Population and Housing").

With the anticipated development under the Project, there would be an increase in the number of school-aged children that would reside in the City, triggering the need for additional public school facilities. Table 3.8-1 summarizes the EGUSD student generation rates from the School Facility Needs Analysis (EGUSD 2021b).

Table 3.8-1 Potential New Students

Grade Level	Proposed Student Generation Rate	Maximum Potential of Additional Units Beyond Existing General Plan Buildout	New Students
Elementary K-6	0.2415	1,851	447
Middle School 7-8	0.0616		114
High School 9-12	0.1091		202
Total		1,851	763

Calculated by Ascent Environmental in 2022.

Based on the existing student generation factors, the Project could result in an additional 763 students to be enrolled at EGUSD schools beyond what was evaluated in the General Plan EIR. This increase in enrollment would require the construction of one new elementary school; however the need for an additional middle school or high school would not be necessary because there is sufficient capacity to serve additional students. EGUSD has disclosed that the first

annexation project would trigger the need for a new middle school and high school, which may be located south of Kammerer Road. Although, some of the units located within the LEA Community Plan Area within the existing City limits would be accommodated on an interim basis. Anticipated growth under the Project would be in addition to the projected student enrollment, which was developed before adoption of the General Plan. Thus, growth associated with the General Plan and the Project was not factored into EGUSD planning and new or expanded public school facilities will be necessary. It is important to note that residential units associated with the Project would be distributed throughout the LEA Community Planning Area, Old Town Policy Area, and the South and West Study Areas. Depending on the rate of development and the location, the specific need for each school type will vary. For instance, revisions to school assignment boundaries, implemented at the discretion of the district, may be used to accommodate increased growth in some situations. The LEA Community Plan has identified one elementary school site located immediately north of Kammerer Road east of Big Horn Boulevard, which would support proposed elementary school population growth in the area north of Kammerer Road.

California Government Code Section 65995(h) states that "the payment or satisfaction of a fee, charge or other requirement levied or imposed...[is] deemed to be full and complete mitigation of the impacts of any legislative or adjudicative act, or both, involving, but not limited to, the planning, use, or development of real property, or any change in governmental organization or reorganization as defined in Section 56021 or 56073, on the provision of adequate school facilities." All residential development within EGUSD's boundaries would be subject to the EGUSD residential fee in place at the time an application is submitted for a building permit. Under CEQA, payment of EGUSD residential development fees is considered to fully mitigate the need for school facilities generated by Project implementation.

Public Resources Code (PRC) Section 21151.2 requires school district governing boards to give the relevant planning commission a written notice in writing of the proposed acquisition before acquiring title to property for a new school site or for an addition to an existing school site. The planning commission is responsible for investigating the proposed site and providing it, and any related recommendations, to the governing board. In addition, Government Code Section 65402 requires a school district, prior to acquiring real property, to submit the location, purpose, and extent of such acquisition to the City Council for a determination as to conformity with the local General Plan. A school district, with a two-thirds vote, may render a city zoning ordinance inapplicable to classroom facilities, except when the proposed use of the property by the school district is for non-classroom facilities. Before a school district can override a local zoning ordinance, it must first comply with expanded coordination and communication requirements. The district also must comply with pre-existing CEQA requirements regarding school site review before overriding local zoning (Government Code Sections 53094, 65352.2).

Construction or expansion of public school facilities to accommodate population growth within the LEA Community Plan Area could result in significant impacts on such resources as aesthetics, air quality, biology, cultural resources, geology, hazards and hazardous materials, water quality, noise, and transportation that are greater than previously considered in the General Plan EIR. Because the location of any such public school facility has not been determined, it is speculative to address any precise environmental impacts associated with them. The actual impacts of new school facilities would depend upon the specific type and location of those facilities, and therefore project-specific environmental review would be required for subsequent projects. The physical impacts of facility construction for the Project are discussed throughout the General Plan EIR. Because no additional feasible mitigation is available beyond compliance with existing laws and General Plan policies, and payment of EGUSD fees, the impact would remain **significant and unavoidable**.

General Plan Land Use Designation Amendments

Increased demand for new or expanded public school facilities as a result of the increased population growth anticipated from proposed land use amendments within the Old Town Policy Area is included in the overall population growth associated with the Project. The Old Town Policy Area is located within the existing EGUSD Service Area boundary (EGUSD 2022b). However, as discussed above under the LEA Community Plan, construction or expansion of public school facilities to accommodate population growth as a result of the Project may be required, and would be under the jurisdiction of the EGUSD. This impact would remain **significant and unavoidable**.

Grant Line Road Precise Roadway Study

Development of Grant Line Road would not induce population growth, including the number of students. **No impact** would occur.

South and West Study Areas

Increased demand for new or expanded public school facilities as a result of the increased population growth anticipated under the South and West Study Areas are included in the overall population growth associated with the Project. The South and West Study Areas are located within the existing EGUSD Service Area boundary (EGUSD 2022b). However, as discussed above under the LEA Community Plan, construction or expansion of public school facilities to accommodate population growth as a result of the Project may be required, and would be under the jurisdiction of the EGUSD. Nonetheless, because school facilities would be constructed by the EGUSD this impact would remain **significant and unavoidable**.

Mitigation Measures

As stated in the General Plan EIR, no additional feasible mitigation is available beyond compliance with existing laws and General Plan policies, and payment of EGUSD fees. While the EGUSD could and should implement measures to reduce physical environmental effects of school development, the EGUSD is not subject to mitigation adopted by the City. No new enforceable measures are available to the City to mitigate this impact. Therefore, this impact would remain **significant and unavoidable** for the Project as determined in the General Plan EIR.

Impact 3.8-4: Require Construction of New Park or Recreation Facilities, resulting in Adverse Environmental Impacts

Impact 5.11.4.1 of the General Plan EIR identifies that increased development would increase the demand on existing recreational facilities and require the development of new recreational facilities and no significant impacts would occur. Construction of park facilities would be subject to policies, standards, and mitigation measures from the General Plan and the General Plan EIR, or the mitigation identified in project-specific mitigation monitoring and reporting programs. No new or substantially more severe impacts would be associated with implementation of the Project. The impacts of park construction would remain **less than significant**.

LEA Community Plan Area

Implementation of the Project would include additional housing in the LEA Community Plan Area beyond what is currently allowed under the General Plan. This could result in an additional 1,851 dwelling units and a net increase of 5,979 in City population beyond what is currently anticipated at buildout under the General Plan. As a result of proposed population growth and new employment opportunities in the LEA Community Plan Area, both new residents and employees could increase the use of park facilities. CCSD parkland standards, EGMC Chapters 22.40 and 16.80, and General Plan Policy PT-1-3 require a minimum of 5 acres of developed parkland per 1,000 residents. The City has also established requirements for bicycle, pedestrian, and trail facilities as part of new development, either through the City's Bicycle, Pedestrian, and Trails Master Plan, or through the requirements of an area plan; though, these facilities are in addition to the required park facilities. The City requires that private developers proposing residential projects in the City, including the LEA Community Plan Area, either dedicate land for park facilities or pay a fee in lieu of providing parkland. These dedications and fees are collected by the City or CCSD as part of the development process and used for the purpose of developing new park facilities to serve the development for which the fees were paid. The dedication of parkland and the payment of fees in lieu of dedication were identified in Impact 5.11.4.1 of the General Plan EIR.

In addition to parkland requirements established in Policy PT-1-3, Policy PT-1-5 requires assurance of funding for maintenance of parks and/or trails prior to City approval of any Final Subdivision Map that contain or contribute to the need for public parks and facilities. Policy PT-1-6 directs coordination with the CCSD to provide designated park and open space areas in growth areas within the LEA Community Plan Area and requires developers to incorporate open space where appropriate as a condition of approval. Policy PT-1-7 prioritizes the development of new parks and other recreational services, including low-impact facilities and equipment for older adults and the disabled, in

underserved neighborhoods. Policy PT-1-9 encourages park development adjacent to school sites to allow for concurrent use of the facilities when appropriate. The proposed Project also includes Goal LEA-5 and associated policies, which address development of parks and open spaces within the LEA Community Plan.

As part of the CCSD's Parks and Recreation Master Plan update, the City and the CCSD jointly adopted amendments to the Park Design Principles, which established requirements for the siting and sizing of new park facilities, as well as the design characteristics for these facilities. The update to the Parks and Recreation Master Plan and the Park Design Principles was coordinated with the General Plan and describe the service area and design objectives for new parks and recreation facilities in the community.

Any future development located in the LEA Community Plan Area that is constructed under the Project would increase the use of existing and generate new demand for parkland and facilities. The dedication of land or payment of in-lieu fees, in combination with policies in the General Plan, would ensure that impacts related to deterioration of existing parks and recreation facilities would not occur. Although development impact fees are required to ensure a minimum acreage of parkland within the City, including the LEA Community Plan Area, these fees apply to subdivisions and not individual units. Although, as illustrated in Figure 2-2, there are several areas located throughout the LEA Community Plan Area that are designated as Parks and Open Space (P/OS), which would serve proposed development as a result of the Project.

As noted above, the City and the CCSD have entered into an MOU regarding delivery of some parks and recreation facilities within the City's existing boundaries. Development projects outside of the MOU areas that include the construction of recreation facilities would be subject to General Plan policies and mitigation measures identified in the General Plan EIR to reduce physical environmental effects. The CCSD would be responsible for the construction of facilities in the MOU areas and would be required to comply with mitigation monitoring and reporting program (MMRP) from the relevant project-level CEQA document in which the park facilities would be located.

There are no new significant physical effects to parks and recreational facilities and the impact is not more severe than the impact identified in the General Plan EIR. Therefore, impacts related to the provision of park and recreational facilities located within the LEA Community Plan Area would remain **less than significant**.

General Plan Land Use Designation Amendments

Increased demand for new parks or recreational facilities because of the increased population growth anticipated from proposed land use amendments within the Old Town Policy Area is included in the overall population growth associated with the Project. Additionally, the Old Town Policy Area is located within the existing CCSD Parks & Recreation Service Area (CCSD Parks and Recreation Department 2018). However, as discussed above under the LEA Community Plan, construction or expansion of park facilities to accommodate population growth as a result of the Project may be required. Because development in the Old Town would be required to comply with the City and CCSD fee programs specific to park development, impacts would remain **less than significant**. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

Grant Line Road Precise Roadway Study

Development of the Grant Line Road would not induce population growth that would create additional park and recreation demand. **No impact** would occur. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

South and West Study Areas

Increased demand for new parks or recreational facilities because of the increased population growth anticipated under the South and West Study Areas is included in the overall population growth associated with the Project. Additionally, the South and West Study Areas are located within the existing CCSD Parks & Recreation Service Area (CCSD Parks and Recreation Department 2018). However, as discussed above under the LEA Community Plan, construction or expansion of park facilities to accommodate population grown as a result of the Project may be required. Once annexed, the South and West Study Areas would be required to comply with City's and CCSD's fee programs specific to park development. As discussed above in Section 3.8.1, development in the City is required to meet its Quimby obligation (park land dedication or in-lieu fee) pursuant to EGMC Chapters 22.40 and 16.80 and

would also be responsible for paying applicable park development fees and trail improvement fees (e.g., area fees, Citywide Active Transportation Fee). Additionally, parkland requirements established in Policy PT-1-3, PT-1-5, PT-1-7, and PT-1-9 discussed above, would further reduce impacts to parks and recreational facilities. As a result, the impact would remain **less than significant**. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

Mitigation Measures

No mitigation is required for this impact beyond compliance with General Plan Policies PT-1-3, PT-1-5, PT-1-6, and PT-1-9, City and CCSD MOU, and EGMC Chapter 22.40.

3.9 TRANSPORTATION

The section summarizes transportation impacts in the City of Elk Grove Planning Area, as described in the General Plan (City of Elk Grove 2019a) and evaluates the potential transportation impacts resulting from implementation of the Project. This section identifies applicable regulatory requirements and describes the existing transportation system in the vicinity of the Planning Area. It also evaluates impacts related to the generation of vehicle miles traveled (VMT); bicycle, pedestrian, and transit facilities; transportation hazards; and emergency access.

The 2018 City of Elk Grove General Plan Update Draft EIR (General Plan EIR) included Section 5.13, "Transportation," which evaluated the potential effects of the adopted General Plan. The General Plan EIR concluded that there would be less-than-significant impacts related to transportation hazards, emergency access, bicycle facilities, pedestrian facilities, and transit facilities (Impacts 5.13.5, 5.13.6, and 5.13.7). The General Plan EIR concluded that impacts related to VMT impacts would be significant and unavoidable with implementation of all proposed General Plan policies. It was determined that there were no other feasible mitigation measures. The General Plan EIR also concluded that impacts related to traffic operational impacts would be significant and unavoidable with implementation of all feasible mitigation measures. However, pursuant to Senate Bill (SB) 743, Public Resources Code (PRC) Section 21099, and California Code of Regulations (CCR) Section 15064.3(a), generally, VMT is the legally mandated measure of transportation impacts and a project's effect on automobile delay shall no longer constitute a significant impact under CEQA. Therefore, the transportation analysis here-in evaluates impacts using VMT and does not include level of service (LOS) analysis.

The analysis within this section is based on the analysis and findings of the *Model Development Report and VMT Methodology Draft* report prepared by Fehr & Peers in April 2023. The *Model Development Report and VMT Methodology Draft* report is included as Appendix C and provides additional detailed data, modeling, and information related to the transportation analysis.

Comments related to transportation received in response to the notice of preparation (NOP) included impacts to the transit system resulting from the City's proposed upgrade to the Travel Demand Model, consistency with existing plans, and providing pedestrian connectivity and alternative modes of transportation to reduce automobile trips.

3.9.1 Regulatory Setting

The federal and State regulatory setting for transportation provided on pages 3.9-23 through 3.9-25 of the General Plan EIR remain applicable to this analysis. However, an updated description of the adopted changes to the State CEQA Guidelines pursuant to SB 743 that have occurred subsequent to the approval of the General Plan EIR are described below. Additionally, since certification of the General Plan EIR, changes to the regional and local regulatory setting have occurred. These changes are described in detail below.

FEDERAL

There are no new federal laws or regulations addressing transportation that are relevant to the Project.

STATE

Senate Bill 743

SB 743, passed in 2013, required the Governor's Office of Planning and Research (OPR) to develop new State CEQA guidelines that address traffic metrics under CEQA. As stated in the legislation, upon adoption of the new guidelines, "automobile delay, as described solely by LOS or similar measures of vehicular capacity or traffic congestion shall not be considered a significant impact on the environment pursuant to this division, except in locations specifically identified in the guidelines, if any."

In December of 2018, OPR published the most recent version of the *Technical Advisory on Evaluating Transportation Impacts in CEQA* (OPR 2018) which provides guidance for VMT analysis. The Office of Administrative Law approved the updated State CEQA Guidelines and, as of July 1, 2020, implementation of CCR Section 15064.3 of the updated CEQA Guidelines applies statewide.

REGIONAL

Sacramento Area Council of Governments

The Sacramento Area Council of Governments (SACOG) is an association that includes the Counties of El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba, as well as 22 cities, including the City of Elk Grove. As a metropolitan transportation organization, SACOG is required to prepare a long-range transportation plan (the metropolitan transportation plan) for all modes of transportation, including public transit, automobile, bicycle, and pedestrian, every 4 years for the six-county area. In addition to preparing the region's long-range transportation plan, SACOG assists in planning for transit, bicycle networks, clean air, and airport land uses.

Metropolitan Transportation Plan/Sustainable Communities Strategy

SACOG is responsible for preparing and updating the Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) and the corresponding Metropolitan Transportation Improvement Program (MTIP) for the six-county Sacramento region. In response to this requirement, SACOG completed the 2020 MTP/SCS. The purpose of the 2020 MTP/SCS is to establish regional access and identify mobility goals; identify present and future transportation needs, deficiencies, and constraints within the transportation system; analyze potential solutions; estimate available funding; and propose investments. On November 18, 2019, the SACOG Board of Directors adopted the 2020 update to the MTP/SCS. The next update to the MTP/SCS is scheduled for 2024/2025 and is in process.

The Congestion Management Process (CMP) and MTP/SCS are developed as a single integrated document. As part of the MTP/SCS, SACOG's CMP addresses the six-county Sacramento region and the transportation network therein. The CMP focuses on travel corridors with significant congestion and critical access and mobility needs to identify projects and strategies that meet CMP objectives. Transportation projects are nominated by local agencies and analyzed against community priorities identified through public outreach, as well as technical performance and financial constraints.

Metropolitan Transportation Improvement Program

SACOG, the federally designated metropolitan planning organization for the region, prepares and adopts the MTIP approximately every 2 years. The MTIP is a short-term listing of surface transportation projects that receive federal funds, are subject to a federally required action, or are regionally significant. SACOG adopted the 2023-2026 MTIP in September 2022. The 2023-2026 MTIP covers 4 years of programming: federal fiscal years 2023-2026. The project listing in the MTIP provides a detailed description for each individual project in the 2023-2026 MTIP, including those in Sacramento County and the City of Elk Grove.

Regional Bicycle, Pedestrian and Trails Master Plan

SACOG approved the *Regional Bicycle, Pedestrian, and Trails Master Plan* in April 2015 (SACOG 2015). It envisions a complete transportation system that supports healthy living and active communities where bicycling and walking are viable and popular travel choices in a comprehensive, safe, and convenient network. The *Regional Bicycle, Pedestrian, and Trails Master Plan* is intended to guide the long-term decisions for the Bicycle and Pedestrian Funding Program. The projects included in this plan are regionally significant projects that require at least partial regional funding. This plan is not fiscally constrained, so it contains at least 20 years' worth of projects.

Sacramento Region Trail Network Action Plan

SACOG adopted the *Sacramento Region Trail Network Action Plan* in July 2022 (SACOG 2022). It establishes a vision for walking, biking, and rolling throughout the region by planning for a network of trails that reaches key destinations and closes existing gaps. The *Sacramento Region Trail Network Action Plan* establishes the baseline environment, identifies a proposed network of facilities, sets forth goals for the trail network.

LOCAL

City of Elk Grove General Plan

The most recent City General Plan was adopted in December 2019. The Mobility chapter of the General Plan contains policies designed to further the City's mobility strategy. The Mobility chapter incorporates and expands the City's complete streets policies; supports key implementation tools, such as the Bicycle, Pedestrian, and Trails Master Plan, the *Transportation Analysis Guidelines*, and the Climate Action Plan; and identifies measures to support alternative transportation investments, as well as transit-friendly and active transportation-friendly development (City of Elk Grove 2019a). It should be noted that a project's effect on automobile delay is no longer a consideration when identifying a significant impact under CEQA; thus, City General Plan policies related to intersection and roadway performance are not included here.

The following policies and standards related to transportation are relevant to the CEQA analysis of the Project. It should be noted that the Project would result in revisions to several of the policies below, including updates to the VMT threshold.

- ▶ **Policy MOB-1-1:** Achieve State-mandated reductions in VMT by requiring land use and transportation projects to comply with the following metrics and limits. These metrics and limits shall be used as thresholds of significance in evaluating projects subject to CEQA.

Projects that do not achieve the daily VMT limits outlined below shall be subject to all feasible mitigation measures necessary to reduce the VMT for, or induced by, the project to the applicable limits. If the VMT for or induced by the project cannot be reduced consistent with the performance metrics outlined below, the City may consider approval of the project, subject to a statement of overriding considerations and mitigation of transportation impacts to the extent feasible, provided some other stated form of public objective including specific economic, legal, social, technological, or other considerations is achieved by the project.

- (a) **New Development** – Any new land use plans, amendments to such plans, and other discretionary development proposals (referred to as "development projects") are required to demonstrate a 15 percent reduction in VMT from existing (2015) conditions. To demonstrate this reduction, conformance with the following land use and cumulative VMT limits is required:
 - **Land Use** – Development projects shall demonstrate that the VMT produced by the project at buildout is equal to or less than the VMT limit of the project's General Plan land use designation, as shown in Table 6-1 [presented as Table 3.9-1 in this EIR], which incorporates the 15 percent reduction from 2015 conditions.

Table 3.9-1 Vehicle Miles Traveled by Land Use Designation

Land Use Designation	VMT Limit (Daily Per Service Population)
Commercial and Employment Land Use Designations	
Community Commercial	41.6
Regional Commercial	44.3
Employment Center	47.1
Light Industrial/Flex	24.5
Light Industrial	24.5
Heavy Industrial	39.5
Mixed Land Use Designations	
Village Center Mixed Use	41.6
Residential Mixed Use	21.2

Land Use Designation	VMT Limit (Daily Per Service Population)
Public/Quasi Public and Open Space Land Use Designations	
Parks and Open Space ¹	0.0
Resource Management and Conservation ¹	0.0
Public Services	53.1
Residential Land Use Designations	
Rural Residential	34.7
Estate Residential	49.2
Low Density Residential	21.2
Medium Density Residential	20.9
High Density Residential	20.6
Other Land Use Designations	
Agriculture	34.7

Note: VMT = vehicles miles traveled.

¹ These land use designations are not anticipated to produce substantial VMT, because they have no residents and few to no employees. These land use designations therefore have no limit and are exempt from analysis.

Source: City of Elk Grove 2019a.

- **Cumulative for Development Projects in the Existing City** – Development projects within the existing (2017) City limits shall demonstrate that cumulative VMT within the City including the project would be equal to or less than the established Citywide cumulative limit of 6,367,833 VMT (total daily VMT).
- **Cumulative for Development Projects in Study Areas** – Development projects located in Study Areas shall demonstrate that cumulative VMT within the applicable Study Area would be equal to or less than the established limit shown in Table 6-2 [presented as Table 3.9-2 in this SEIR].

Table 3.9-2 Study Area Total Vehicle Miles Traveled Daily Limits

Study Area	VMT Limit (Total VMT at Buildout)
North Study Area	37,622
East Study Area	420,612
South Study Area	1,311,107
West Study Area	705,243

Note: VMT = vehicles miles traveled.

Source: City of Elk Grove 2019a.

- ▶ **Policy MOB-1-2:** Consider all transportation modes and the overall mobility of these modes when evaluating transportation design and potential impacts during circulation planning.
- ▶ **Policy MOB-1-3:** Strive to implement the roadway performance targets (RPT) for operations of roadway segments and intersections, while balancing the effectiveness of design requirements to achieve the targets with the character of the surrounding area as well as the cost to complete the improvement and ongoing maintenance obligations. The Transportation Network Diagram reflects the implementation of the RPT policy at a macro level; the City will consider the specific design of individual segments and intersections in light of this policy and the guidance in the Transportation Network Diagram.

To facilitate this analysis, the City shall use the following guidelines or targets. Deviations from these metrics may be approved by the approving authority (e.g., Zoning Administrator, Planning Commission, City Council).

(a) **Vehicular Design Considerations** – The following targets apply to vehicular mobility:

- **Intersection Performance** – Generally, and except as otherwise determined by the approving authority or as provided in this General Plan, the City will seek to achieve, to the extent feasible and desired, the peak-hour delay targets identified in [General Plan] Table 6-3.
 - **Roadway Performance** – Generally, and except as otherwise determined by the approving authority or as provided in this General Plan, the City will seek to achieve, to the extent feasible and desired, the average daily traffic design targets identified in [General Plan] Table 6-4.
 - **Pedestrian and Bicycle Performance** – The City will seek the lowest stress scores possible for pedestrian and bicycle performance after considering factors including design limitations and financial implications.
- ▶ **Policy MOB-3-1:** Implement a balanced transportation system using a layered network approach to building complete streets that ensure the safety and mobility of all users, including pedestrians, cyclists, motorists, children, seniors, and people with disabilities.
 - ▶ **Policy MOB-3-2:** Support strategies that reduce reliance on single-occupancy private vehicles and promote the viability of alternative modes of transport.
 - **Standard MOB-3-2.a:** Require new development to install conduits for future installation of electric vehicle charging equipment.
 - ▶ **Policy MOB-3-3:** Whenever capital improvements that alter street design are being performed within the public right-of-way, retrofit the right-of-way to enhance multimodal access to the most practical extent possible.
 - ▶ **Policy MOB-3-7:** Develop a complete and connected network of sidewalks, crossings, paths, and bike lanes that are convenient and attractive, with a variety of routes in pedestrian-oriented areas.
 - ▶ **Policy MOB-3-8:** Provide a thorough and well-designed wayfinding signage system to help users of all modes of travel navigate the City in an efficient manner.
 - ▶ **Policy MOB-3-10:** Design and plan roadways such that the safety of the most vulnerable user is considered first using best practices and industry design standards.
 - ▶ **Policy MOB-3-11:** Consider the safety of schoolchildren as a priority over vehicular movement on all streets within the context of the surrounding area, regardless of street classifications. Efforts shall specifically include tightening corner-turning radii to reduce vehicle speeds at intersections, reducing pedestrian crossing distances, calming motorist traffic speeds near pedestrian crossings, and installing at-grade pedestrian crossings to increase pedestrian visibility.
 - ▶ **Policy MOB-3-12:** Provide for safe and convenient paths and crossings along major streets within the context of the surrounding area, taking into account the needs of the disabled, youth, and the elderly.
 - ▶ **Policy MOB-3-13:** Continue to design streets and approve development applications in a manner that reduces high traffic flows and parking demand in residential neighborhoods.
 - ▶ **Policy MOB-3-17:** Ensure new multifamily and commercial developments provide bicycle parking and other bicycle support facilities appropriate for the users of the development.
 - ▶ **Policy MOB-4-1:** Ensure that community and area plans, specific plans, and development projects promote context-sensitive pedestrian and bicycle movement via direct, safe, and pleasant routes that connect destinations inside and outside the plan or project area. This may include convenient pedestrian and bicycle connections to public transportation.
 - ▶ **Policy MOB-5-1:** Support a pattern of land uses and development projects that are conducive to the provision of a robust transit service. Consider amendments to the land use plan, as appropriate, that increase the density and intensity of development along the City's fixed transit alignment and other major transit corridors.
 - ▶ **Policy MOB-5-4:** Support mixed-use and high-density development applications close to existing and planned transit stops.

- ▶ **Policy MOB-5-6:** The City shall work to incorporate transit facilities into new private development and City project designs including incorporation of transit infrastructure (e.g. electricity and fiber-optic cable), alignments for transit route extensions, new station locations, bus stops, and transit patron waiting area amenities (e.g. benches and real-time traveler information screens).
- ▶ **Policy MOB-5-7:** Provide the appropriate level of transit service in all areas of Elk Grove, through fixed-route service in urban areas, and complementary demand response service in rural areas, so that transit-dependent residents are not cut off from community services, events, and activities.
- ▶ **Policy MOB-7-4:** Require new development projects to provide funding or to construct roadway/intersection improvements to implement the City's Transportation Network Diagram. The payment of adopted roadway development or similar fees, including the City Roadway Fee Program and the voluntary I-5 Subregional Fee, shall be considered compliant with the requirements of this policy with regard to those facilities included in the fee program, provided the City finds that the fee adequately funds required roadway and intersection improvements. If payment of adopted fees is used to achieve compliance with this policy, the City may also require the payment of additional fees if necessary to cover the fair share cost of facilities not included in the fee program.
- ▶ **Policy NR-4-4:** Promote pedestrian/bicycle access and circulation to encourage residents to use alternative modes of transportation in order to minimize direct and indirect emissions of air contaminants.
- ▶ **Policy NR-4-5:** Emphasize demand management strategies that seek to reduce single-occupant vehicle use in order to achieve State and federal air quality plan objectives.
- ▶ **Policy SAF-1-6:** Require adequate emergency access for new development projects.

City of Elk Grove Transportation Analysis Guidelines

The *City of Elk Grove Transportation Analysis Guidelines* (City of Elk Grove 2019b) establish the protocol for transportation analysis studies and reports based on the current state-of-the-practice in transportation planning and engineering. As detailed above, a project's effect on automobile delay is no longer a consideration when identifying a significant impact under CEQA; thus, the portions of the *Transportation Analysis Guidelines* not directly applicable to CEQA are not included here.

The *transportation Analysis Guidelines* include guidance for transportation analysis as it pertains to the City General Plan VMT policy significance thresholds (i.e., General Plan Policy MOB-1-1) for CEQA analysis of future projects. The *Transportation Analysis Guidelines* include guidance and requirements for VMT analysis of development projects, including project screening, analysis methodology, significance criteria, impact assessment, and mitigation strategies.

The *Transportation Analysis Guidelines* and City General Plan specify total daily VMT and VMT per service population as the basis for VMT analysis. The following describes these two VMT metrics and their intended use, which implement the policies of the General Plan cited above:

- ▶ **VMT per service population:** Includes the sum of all VMT produced by individual land uses in a project, divided by the sum of total residents living in the project. The VMT per service population metric is used to assess a project against specific land use VMT limits. The Project includes multi-family residential land uses; and thus, the Project is compared to the high density residential VMT limit.
- ▶ **Total daily VMT:** Includes the sum of all daily VMT produced by all uses within the City and the applicable Study Area. Since the Project is located exclusively within the City limits, the Citywide cumulative VMT limit that is outlined in Policy MOB-1-1(a)(ii) is used to assess the Project; the study area VMT limits are not considered. The City refers to this as the cumulative VMT impact.

The *Transportation Analysis Guidelines* include a VMT Screening Map that identifies areas in the City that are exempt from further VMT analysis. These include sites that have been pre-screened through citywide VMT analysis. Pre-screened areas are shown in white and have been determined to result in 15 percent or more below the average service population VMT established for that land use designation if built to the specifications of the Land Use Plan.

The *Transportation Analysis Guidelines* also include VMT screening criteria for land use projects. This screening criteria indicates a project is exempt if it is:

- ▶ A project located within ½ mile of an existing major transit stop or an existing stop along a high-quality transit corridor.
 - For projects located within ½ mile of an existing major transit stop, the presumption of less than significant impact would not apply if project-specific or location-specific information indicates that the project will still generate significant levels of VMT. For example, the presumption might not be appropriate if the project:
 - Has a floor area ratio of less than 0.75
 - Includes substantially more parking for use by residents, customers, or employees of the project than required by the City such that it discourages transit use by making it too convenient to drive.
- ▶ A residential project of <10 dwelling units;
- ▶ A commercial, office, or industrial project of <50,000 square feet;
- ▶ A mixed-use project containing <10 dwelling units and <50,000 square feet of commercial, office, or industrial space;
- ▶ A project that is high density low-income housing on a high-density housing site as designated in the Housing Element (City of Elk Grove 2019b:6).

Additional details related to the VMT calculation process are included in Appendix E of the City of Elk Grove *Transportation Analysis Guidelines*.

The *Transportation Analysis Guidelines* also include guidelines and requirements for multimodal (bicycle, pedestrian, and transit) transportation analysis, hazards related to design, on-site circulation, and construction. However, because specific details about how the Project sites would be developed (e.g., paths, building locations) are unknown at this time, the effects are addressed programmatically.

City of Elk Grove Bicycle, Pedestrian, and Trails Master Plan

In May 2021, the City Council adopted the Bicycle, Pedestrian, and Trails Master Plan (BPTMP) (City of Elk Grove 2021). The BPTMP updates the 2014 plan to establish a long-term vision for improving walking, bicycling, and equestrian uses in Elk Grove and identify a short-term action plan of implementable projects, programs, and policies. The BPTMP provides a strategy to develop citywide walking, bicycling, and equestrian networks that provide access between residential neighborhoods, schools, transit, and jobs (City of Elk Grove 2021). These network improvements are combined with a menu of options for recommended education, encouragement, and evaluation programs to provide a holistic approach to improving active transportation in Elk Grove (City of Elk Grove 2021). Additionally, the BPTMP identifies a plan to implement these projects and programs through prioritization and phasing to ensure implementation is manageable and achievable.

City of Elk Grove Climate Action Plan

The City Climate Action Plan 2019 Update (CAP) was adopted in February 2019 by the City and was incorporated into the current General Plan. Subsequently, the CAP was updated in December 2019. The CAP includes greenhouse gas (GHG) emission reduction targets, strategies, and implementation measures developed to help the City reach these targets. CAP Measure TACM-3 (Intercity Transportation Demand Management) focuses on the implementation of transportation demand measure (TDM) strategies to reduce the use of single-occupancy vehicle trips, with a target of achieving a 15-percent reduction in local commute traffic.

City of Elk Grove Transportation Demand Management Plan Guidelines

To aid the development of transportation demand management (TDM) plans, the City developed the TDM Plan Guidelines (City of Elk Grove 2019c). As detailed in the TDM Plan Guidelines, new nonresidential and mixed-use projects with greater than 50,000 square feet of nonresidential use may be required to develop TDM Plans that promote the use of alternative transportation modes and reduce single-occupancy vehicle trips by employees.

These guidelines identify TDM measures by category that include marketing and promotion, bike facilities, transit benefits, commuter benefits, and parking facilities. The TDM Plan Guidelines outline the requirements for each TDM plan and identify the following for each TDM measure:

- ▶ Measure Requirements – describes the transportation amenity being provided, the amount/frequency of the amenity, and the property owner’s responsibilities. Each TDM measure is assigned a point value between 1 and 5. The higher the value, the more effective the measure is at reducing vehicle travel.
- ▶ Compliance Requirements – identifies the required actions and obligations of the applicant or property owners for compliance with the TDM measure during the development review phase of a project.
- ▶ TDM Plan Annual Progress Report – identifies the annual reporting requirement for the property owners’ TDM coordinator, which includes the number of employees participating in the plan (i.e., by measure) and the commute mode share of employees, along with other performance measures that demonstrate performance.

City of Elk Grove Improvement Standards

The City of Elk Grove Improvement Standards provide guidance and design standards primarily for the purpose of helping land developers with their subdivision projects. The City of Elk Grove Improvement Standards (amended June 22, 2020) require a five-foot bike lane on minor arterials and an eight-foot sidewalk with new development along minor arterial roadways.

Old Town Special Planning Area Design Standards and Guidelines

The Old Town Elk Grove Special Planning Area (SPA) is intended to serve as a guide for future growth and planning effort, while preserving the historical character and ambiance of Old Town (City of Elk Grove 2021). The following transportation related goal and standards apply to the Project:

GOAL: To ensure that automobiles, bicycles, and ultimately pedestrians can move safely and easily between the public right-of-way, parking lots, sidewalks, and buildings.

Standards:

- a. Alleys in Old Town shall comply with the following:
 1. Parcels adjacent to rear alleys shall maintain service access from the rear and provide attractive rear entrances.
 2. On-street loading and unloading shall only be permitted for parcels that are not adjacent to rear or side alleys.
 3. Projects adjacent to alleyways shall improve the appearance of the alleyways per City standards. The utilization of special paving is strongly encouraged.
 4. Existing mid-block north/south alleys shall be utilized for parking access wherever they occur.
 5. An entry gateway arch or similar feature to distinguish the pedestrian corridor and reinforce the continuity of the street wall is required.
 6. Access width for pedestrian corridors (building to building or building to property line) shall meet the standards of the Americans with Disability Act (ADA) and California Building Code (CBC).
- b. Vehicle, bicycle, and pedestrian circulation shall comply with the following:
 1. Primary pedestrian access to all buildings shall be through an entry on the street side.
 2. Vehicle circulation patterns shall be as simple and obvious as possible.
 3. Pedestrian circulation patterns shall be as simple and obvious as possible.
 4. Circulation shall be designed to reduce conflict between vehicles and people. The pedestrian shall take precedence over the vehicle if a conflict arises.

5. Pedestrian scaled lighting is required.
6. Accessibility and safety (non-slip surfaces) shall be provided.
7. Bicycle routes shall be marked and not travel on pedestrian sidewalks or pathways, consistent with the trails plan shown in Figure PTO-2 of the City's General Plan.
8. Facilities and amenities shall be accessible to people with disabilities in accordance with ADA, State, and City guidelines.

Capital SouthEast Connector Joint Powers Authority Project Design Guidelines

The Project Design Guidelines were prepared with the support and collaboration from the member jurisdictions of the Capital SouthEast Connector JPA and most recently updated in 2018. The Project Design Guidelines were developed to establish one guidance document to enable consistent planning and design of the Capital SouthEast Connector. The Project Design Guidelines are a technical tool used for development of a facility to provide clarity in scope, shape, and appurtenant features (Capital SouthEast Connector 2018).

3.9.2 Environmental Setting

This section describes the existing environmental setting, which is the baseline scenario against which Project-specific impacts are evaluated. The environmental setting for transportation includes descriptions of roadway, transit, bicycle, and pedestrian facilities.

The portions of the existing setting related to travel characteristics, roadway system – roadway characteristics, bicycle and pedestrian facilities, and transit facilities provided on pages 5.13-1 through 5.13-22 of the General Plan EIR remain applicable to this analysis.

ROADWAY SYSTEM

The roadway network serving the City consists of the following roadway classifications:

- ▶ **Principal arterials:** Principal arterials provide limited access on high-speed roads with a limited number of driveways and intersections. Principal arterials also allow bicycles, and pedestrians may be permitted in limited locations. Principal arterials are generally designed for longer trips at the county or regional level.
- ▶ **Major arterials:** Major arterials provide controlled access for all transportation modes to enter and leave the urban area. In addition, significant intra-area travel, such as between residential areas and commercial or business areas, should be served by this system. Major arterials can include sidewalks for pedestrian connections, linking land uses to transit. They may have street parking or bike lanes. Arterials range in size from two to eight lanes. Major arterials in the rural area are subject to the separate Rural Roads Improvement Standards and may have separate pedestrian pathways, but no sidewalks.
- ▶ **Minor arterials/collectors:** Minor arterials/collectors are two-lane roadways providing access to all transportation modes, with a focus on local access. Pedestrian connections link land uses to local destinations and transit. The right-of-way associated with arterials/collectors may feature medians, parking lanes, and bike lanes. Arterials/collectors in the rural area are subject to the separate Rural Roads Improvement Standards and may have separate pedestrian and multiuse pathways, but no sidewalks, and may have reduced speed requirements. This classification also includes primary and secondary residential streets.
- ▶ **Local roads:** Local roads provide direct access to most properties and provide access to the higher roadway classifications described above. They are generally designed to discourage through traffic. Local roads are typically two lanes and are designed for low vehicle speeds. In the urban area of the City, they include pedestrian sidewalks. In the rural area, there are no sidewalks.

TRANSIT SYSTEM

Prior to July 2021, transit services within the City consisted of the City e-tran fixed-route bus system, operated under contract by the City by Sacramento Regional Transit. However, in July 2021, the ownership and operation of the system was transferred (annexed) to Regional Transit, who operate the system in parallel with their mainline RT services elsewhere in Sacramento County. E-tran service operates both local and commuter services, and routes are coordinated with buses, light rail, and South County Transit/Link to areas outside Elk Grove. E-tran operates seven local routes within Elk Grove and 10 commuter routes with service to downtown Sacramento and Rancho Cordova. SacRT also operates a paratransit service called e-van within Elk Grove city limits that addresses federal Americans with Disabilities Act (ADA) requirements for fixed-route service and primarily serves ADA-eligible passengers.

BICYCLE AND PEDESTRIAN SYSTEM

The bicycle network serving the City consists of the following bicycle facility classifications as described in the BPTMP:

- ▶ **Class I Shared Use Paths:** Class I shared use paths are paved trails completely separate from the street. They allow two-way travel by people walking and bicycling and are considered the most comfortable facilities for children and inexperienced bicyclists as there are few potential conflicts with people driving.
- ▶ **Class II Bicycle Lanes:** Class II bicycle lanes are striped preferential lanes in the roadway for one-way bicycle travel. Some bicycle lanes include a striped buffer on one or both sides of the lane to increase separation from the traffic lane or from parked cars, where people may open doors into the bicycle lane.
- ▶ **Class III Bicycle Routes:** Class III bicycle routes are signed routes where people bicycling share a travel lane or shoulder with people driving. Because they are shared facilities, bicycle routes are typically appropriate only on quiet, low-speed streets with relatively low traffic volumes.

Some bicycle routes include shared lane markings or “sharrows” that recommend proper bicycle positioning in the center of the travel lane and alert drivers that bicyclists may be present. Others include more robust traffic calming features to promote safety and comfort for people bicycling and are known as “bicycle boulevards.”

- ▶ **Class IV Separated Bikeways:** Class IV separated bikeways are on-street bicycle facilities that are physically separated from motor vehicle traffic by a vertical element or barrier such as a curb, bollards, or vehicle parking aisle. They can allow for one- or two-way travel on one or both sides of the roadway.

The bicycle network in the City primarily consists of Class II bicycle lanes that are striped for one-way bicycle travel; however, there are several Class I bike paths, particularly along area creeks and drainage channels. The City has also started to implement new Class IV bikeways along select corridors, including Franklin Boulevard. As of 2021, the City's bicycle network consisted of 35.2 miles of Class I shared use paths, 91.6 miles of Class II bicycle lanes, 11.2 miles of Class III bicycle routes, and 0.5 miles of Class IV Separated bikeways (City of Elk Grove 2021: 14).

3.9.3 Environmental Impacts and Mitigation Measures

This section describes the analysis techniques, assumptions, and results used to identify impacts of the Project on the transportation system. Transportation impacts are described and assessed, and mitigation measures are recommended for impacts identified as significant or potentially significant.

METHODOLOGY

The following methodologies were used to evaluate impacts of the Project.

Bicycle and Pedestrian Analysis

The bicycle and pedestrian analysis evaluates whether the Project disrupts existing or planned bicycle or pedestrian facilities or conflicts with adopted City non-auto plans, guidelines, policies, or standards.

Transit Analysis

The transit analysis evaluates whether the Project disrupts existing or planned transit facilities and services or conflicts with adopted City non-auto plans, guidelines, policies, or standards.

VMT Analysis Methodology

The City uses VMT per service population and total daily VMT as the basis for VMT analysis. The two VMT metrics and their intended application to project-level VMT analysis are described in Section 3.9.1, "Regulatory Setting," above.

The City desires to achieve a reduction in VMT through a combination of land use and mobility actions and has developed a VMT analysis process for land use projects depicted in Figure 3.9-1. The VMT analysis process for projects as detailed in Figure 3.9-1 includes the following four steps:

- ▶ Step 1 (Project Type) – Determine if the project is ministerial or discretionary or if the project is exempt from VMT analysis.
- ▶ Step 2 (Project Location) – Determine if VMT analysis is necessary based on project location and determine the Project's VMT limit by land use designation.
- ▶ Step 3 (Analyze Project VMT) – Determine the Project's VMT and compare to the VMT limit by land use designation (from Step 2) to determine if VMT mitigation is necessary.
- ▶ Step 4 (Project VMT Limit Compliance) – Identify VMT reduction mitigation measures and significance of VMT impacts with mitigation.

The Project would involve updating the General Plan to include revisions of Chapter 6, "Mobility," to incorporate results of the upgraded Travel Demand Model to SACSIM19. EGSIM20 is the City of Elk Grove Travel Demand Model, which is a modified version of the Sacramento Area Council of Governments SACSIM19 Travel Demand Model. Thus, Project-generated VMT was estimated using the City's EGSIM20 travel demand forecasting model. The future EGSIM20 model represents General Plan buildout for the City and land uses and transportation projects for the region as included in the 2020 Metropolitan Transportation Plan and was refined to include several planned developments, such as the LEA Community Plan. Additional details regarding the traffic model updates are available in Appendix C.

VMT Impact Analysis

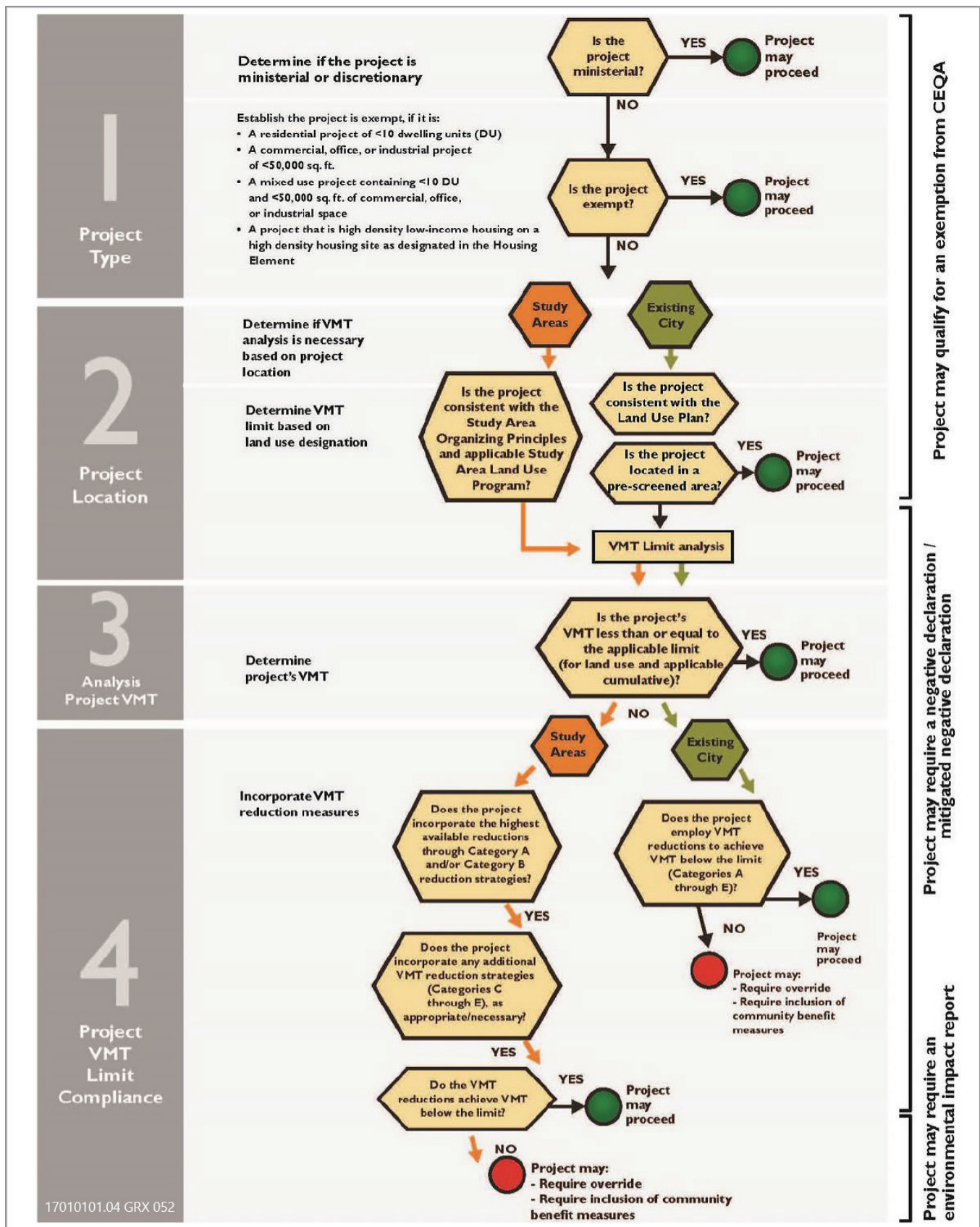
The Project must demonstrate that the Project-generated VMT is within both the land use and cumulative VMT thresholds established in the General Plan such that:

1. VMT per service population at buildout is equal to or less than the VMT per service population limit of the applicable land use designation as defined in Table 6-1 of the City General Plan (presented as Table 3.9-1 in this EIR); and
2. The Project-generated VMT would not cause the City, cumulatively at General Plan buildout, to exceed the City's established total VMT limit in each study area as defined in Table 6-2 of the City General Plan (presented as Table 3.9-2 in this EIR).

It should be noted that the Project includes updates to both the land use and cumulative VMT thresholds in Chapter 6, Mobility of the General Plan, as described in the "Methodology" section above.

Transportation Hazards and Emergency Access

This analysis evaluates whether Project construction and/or operations could create transportation hazards or inadequate emergency access from Project construction or site design.



Source: Image produced and provided by the City of Elk Grove in 2019.

Figure 3.9-1 Current VMT Evaluation Process for Land Use Projects

THRESHOLDS OF SIGNIFICANCE

The significance criteria used to evaluate Project impacts on transportation under CEQA are based on Appendix G of the State CEQA Guidelines, as well as thresholds of significance adopted in the City General Plan and the City *Transportation Analysis Guidelines*.

The following describes the significance criteria used to identify impacts on the transportation and circulation system for the proposed Project.

VMT

An impact on VMT would be significant if implementation of the Project would:

- ▶ result in an exceedance of the VMT limit of the project's General Plan land use designation daily VMT per service population, which incorporates the 15-percent reduction from 2020 conditions, or
- ▶ result in an exceedance of the established Citywide cumulative limit for total daily VMT.

Transit, Bicycle, and Pedestrian Facilities

An impact on transit, bicycle, and pedestrian facilities would be significant if implementation of the Project would:

- ▶ conflict with an applicable program, plan, ordinance, or policy establishing measures of effectiveness for the performance of addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities.

Transportation Hazards Related to a Geometric Design Feature or Incompatible Uses

An impact on transportation hazards related to a geometric design feature would be significant if implementation of the Project would:

- ▶ result in designs for on-site circulation, access, and parking areas that fail to meet City or industry standard design guidelines.

Emergency Access

An impact on emergency access would be significant if implementation of the Project would:

- ▶ result in inadequate emergency access.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.9-1: Result in an Exceedance of City of Elk Grove General Plan VMT Thresholds

General Plan Impact 5.13.3 identified that implementation of the General Plan would result in increased VMT that would be significant and unavoidable. Project-generated VMT per service population associated with buildout of the Project would result in an exceedance of the City's VMT per service population threshold for several land use designations. The addition of Project-generated total daily VMT within the City could also result in an exceedance of the established Citywide limit of 6,367,833 VMT. The Project VMT modeling, limits, and results were calculated using a different base year (i.e., 2020), a revised calculation methodology, and new modeling tool (i.e., EGSIM20) than that of the General Plan EIR. Because of this, the changes in VMT associated with implementation of the Project, and more specifically the revisions to the model and VMT limits, are not comparable to the VMT estimates in the General Plan. Therefore, it cannot be assured that development under the Project would be able to achieve the VMT per service population limits for individual land use types or the required reduction in total daily VMT within the City with implementation of all feasible mitigation, the impact would remain **significant and unavoidable**.

As part of the Project, the General Plan would be updated to include revisions to Chapter 6, Mobility, to incorporate results of the upgraded Travel Demand Model to SACSIM19, which is used to calculate VMT. These revisions would include updates to the VMT limits in General Plan Table 6-1 and Table 6-2 under Policy MOB-1-1. EGSIM20 is the City of Elk Grove Travel Demand Model, which is a modified version of the Sacramento Area Council of Governments

SACSIM19 Travel Demand Model. Relative to SACSIM19, EGSIM20 includes calibration refinements to the base year (2020) model to include more detailed traffic analysis zones, roadway network updated Internal-External and External-Internal (I-X and X-I) travel for the SR 99 and I-5 model gateways and updated the base year land use inputs in the City to 2020 conditions. The model was then validated year 2020 pre-pandemic conditions, consistent with Caltrans guidance. The future EGSIM20 model represents General Plan buildout for the City and regional growth per the 2020 MTP/SCS to 2040, and was refined to include several planned developments, such as the LEA Community Plan Area. The model and associated calculation methodology was revised to more accurately estimate VMT in the City. In addition to VMT updates in the General Plan, the Project would revise the City of Elk Grove *Transportation Analysis Guidelines* for consistency with the General Plan amendments. Revisions to the *Transportation Analysis Guidelines* would include VMT projections from the Travel Demand Model version EGSIM20 and updated land use and cumulative VMT limits, and a revised screening map. VMT updates would include all aspects of the project including General Plan land use amendments for the Old Town Policy Area, South and West Study Areas, and Grant Line Road Precise Roadway Study. Additional details regarding the traffic model updates are available in Appendix C.

The VMT limit in General Plan Table 6-1 and Table 6-2 under Policy MOB-1-1, would be revised as part of the Project. General Plan Table 6-1 includes the daily VMT limits for projects to achieve the State-mandated goal of 15 percent below existing (2015) conditions based on the modeling conducted for the General Plan using SACSIM15. Updated VMT limits by land use designation calculated and revised using the updated model (i.e., EGSIM20) as part of the Project are shown in Table 3.9-3 (also provided in Chapter 2, "Project Description," as Table 2-3). The limit for cumulative total daily VMT would also be updated as part of the Project. New development projects in the City would need to demonstrate that cumulative VMT within the City for a future project would be less than or equal to the revised cumulative limit of 8,039,802 total daily VMT, which is 1,671,969 above the current cumulative daily VMT limit in the General Plan of 6,367,833. General Plan Table 6-2 would be updated to include cumulative development in the Study Areas, as shown in Table 3.9-4 (also provided in Chapter 2, "Project Description," as Table 2-4).

Table 3.9-3 Vehicle Miles Traveled Limits by Land Use Designation

Land Use Designation	VMT Limit (daily per service population)		
	2019 General Plan	Project	Change (2019 General Plan – Project)
Commercial and Employment Land Use Designations			
Community Commercial (CC)	41.6	29.4	12.2
Regional Commercial (RC)	44.3	29.4	14.9
Employment Center (EC)	47.1	19.3	27.8
Light Industrial/Flex (LI/FX)	24.5	24.2	0.3
Light Industrial (LI)	24.5	24.2	0.3
Heavy Industrial	39.5	23.4	16.1
Mixed Use Land Use Designations			
Mixed Use Village Center (VCMU)	41.6	18.6	23.0
Residential Mixed Use (RMU)	21.2	19.7	1.5
Transect Based-Land Use Designations			
General Neighborhood Residential (T3-R)	NA	21.2	-
Neighborhood Center Low (T3)	NA	20.0	-
Neighborhood Center Medium (T4)	NA	21.1	-
Neighborhood Center High (T5)	NA	17.0	-
Public/Quasi Public and Open Space Land Use Designations			
Parks and Open Space (P/OS)	NA ¹	NA ¹	-

Land Use Designation	VMT Limit (daily per service population)		
	2019 General Plan	Project	Change (2019 General Plan – Project)
Resource Management and Conservation (RMC)	NA ¹	NA ¹	-
Public Services (PS)	NA	19.3	-
Residential Land Use Designations			
Rural Residential (RR)	34.7	25.0	9.7
Estate Residential (ER)	49.2	22.2	27.0
Low Density Residential (LDR)	21.2	20.2	1.0
Medium Density Residential (MDR)	20.9	19.6	1.3
High Density Residential (HDR)	20.6	18.6	2
Other Land Use Designations			
Agriculture (AG)	34.7	25.2	9.5
Study Areas	NA ²	NA ²	-
Tribal Trust Lands	NA ³	NA ³	-

Notes: VMT = vehicle miles traveled. VMT limit is 85% of average base year VMT per service population for parcels with land use designations. VMT limit is average buildout VMT per service population for parcels with land use designations.

¹ These land use designations are not anticipated to produce substantial VMT, as they have no residents and few to no employees. These land use designations therefore have no limit and are exempt from analysis.

² Lands within the Study Areas shall be analyzed based upon their ultimate land use designation, not the interim “Study Area” designation.

³ Tribal Trust Lands are exempt from VMT analysis as they are not subject to City policy

Source: Information provided by Fehr & Peers in 2023.

Table 3.9-4 Study Area Total Vehicle Miles Traveled Daily Limits

Study Area	VMT Limit (Total VMT at Buildout)		
	2019 General Plan	Project	Change (2019 General Plan – Project)
City	6,367,833	8,039,802	(1,671,969)
North Study Area	37,622	27,132	10,490
East Study Area	420,612	574,028	(153,416)
South Study Area	1,311,107	1,769,671	(458,564)
West Study Area	705,243	751,049	(45,806)

Note: () = negative number. Total VMT refers to VMT based on all trips that have one end in a specific location. This is calculated using model origin – destination trip matrix. Fully accounts for entire trip length within SACOG region.

Source: Information provided by Fehr & Peers in 2023.

As shown in Table 3.9-3, VMT limits for all land use designations under the Project would be reduced as compared to the 2019 General Plan, which used the SACSIM15 model to estimate VMT. However, the changes in VMT associated with implementation of the Project, and more specifically the revisions to the model and VMT limits, are not comparable to the VMT estimates in the General Plan because the revised VMT estimates were calculated using a new model (EGSIM20), a refined version of the model used for the General Plan. Similarly, the changes in VMT shown in Table 3.9-4 are not comparable to the VMT estimates in the General Plan due to the changes in calculation methodology from the new model.

As detailed above, the change in VMT between the General Plan and the Project is a result of the revised calculation methodology and new modeling tool (i.e., EGSIM20) used to quantify VMT. Additionally, the revisions to the VMT limits in Chapter 6, Mobility of the General Plan along with the corresponding information in the *2019 City of Elk Grove Transportation Analysis Guidelines* are simply test updates that provide more accurate estimates of the City's existing VMT as well as future VMT based on buildout of the General Plan and does not alter the General Plan in any other way.

Project Generated VMT for the LEA Community Plan Area, General Plan Land Use Designation Amendments, and South and West Study Areas

The revised calculation methodology and new modeling tool (i.e., EGSIM20) were used to estimate existing (2020) VMT, upon which the updated VMT limits are based. Additionally, total VMT and VMT per service population was quantified for all land use designations associated with buildout of the Project. The revised VMT modeling detailed in Table 3.9-5 includes all Project-generated changes to the General Plan.

As shown in Table 3.9-5, Project-generated VMT per service population would be reduced for all land uses as compared to the base year (2020). Therefore, while the proposed land use changes as part of the Project would increase residential and mixed-use development increased density would improve VMT efficiency on a per capita basis for specific land uses. New land uses proposed as part of the Project, such as new mixed-use land use designations, do not have a base year for comparison as there is no existing use within the General Plan Planning Area that matches or is comparable. VMT limits for these land uses are based on total cumulative VMT in the City. With the reductions in VMT per service population anticipated under the Project an exceedance of the VMT per service population threshold would still occur for a variety of land use designations. The following land use designations would experience an exceedance of VMT limits: Community Commercial, Regional Commercial, Light Industrial, Public Services, Estate Residential, Low Density Residential, Medium Density Residential, and High Density Residential.

Table 3.9-5 VMT per Service Population by Land Use Types

	Base Year			Buildout Land Use			VMT Limit ¹
	Service Pop	Total VMT	VMT per Service Pop	Service Pop	Total VMT	VMT per Service Pop	
Commercial and Employment Land Use Designations							
Community Commercial	10,373	325,768	31.4	15,939	463,466	29.1	29.4
Regional Commercial	9,639	305,755	31.7	16,218	480,513	29.6	29.4
Employment Center	8,590	204,220	23.8	27,321	530,222	19.4	19.3
Light Industrial/Flex ²	—	—	—	188	3,442	18.3	24.2
Light Industrial	8,525	225,168	26.4	28,874	701,975	24.3	24.2
Heavy Industrial	1,831	57,138	31.2	4,650	107,870	23.2	23.4
Mixed Use Land Use Designations²							
Village Center Mixed Use	—	—	—	1,381	25,750	18.6	18.6
Residential Mixed Use	—	—	—	1,144	22,572	19.7	19.7
Transect-3	—	—	—	10,648	225,191	21.2	21.2
Transect-3R	—	—	—	6,794	135,587	20.0	20.0
Transect-4	—	—	—	6,342	133,730	21.1	21.1
Transect-5	—	—	—	9,443	160,441	17.0	17.0
Public/Quasi Public and Open Space Land Use Designations							
Parks and Open Space	—	—	—	—	—	—	—
Resource Management and Conservations	—	—	—	—	—	—	—
Public Services	4,057	92,184	22.7	6,567	144,287	22.0	19.3
Residential Land Use Designations							
Rural Residential	4,995	147,890	29.6	6,992	174,752	25.0	25.0
Estate Residential	8,573	207,440	24.2	35,847	797,248	22.2	22.2
Low Density Residential	142,284	3,230,237	22.7	200,337	4,045,908	20.2	20.2
Medium Density Residential	7,208	151,469	21.0	22,633	443,033	19.6	19.6

	Base Year			Buildout Land Use			VMT Limit ¹
	Service Pop	Total VMT	VMT per Service Pop	Service Pop	Total VMT	VMT per Service Pop	
High Density Residential	15,168	316,033	20.8	46,180	860,116	18.6	18.6
Other Land Use Designations							
Agriculture	—	—	—	—	—	—	25.2

Notes: VMT limit is – average buildout VMT per service population for parcels with mixed land use designation

¹ VMT limit is – 85 percent of average base year VMT per service population for parcels with land use designation

² VMT limit is - average buildout VMT per service population for parcels with mixed land use designation

Source: Information provided by Fehr & Peers in 2023.

The increase of total daily VMT within the City resulting from implementation and buildout of the Project would be 9,456,103. Thus, estimated total daily VMT in the City would result in an exceedance of both the established Citywide limit of 6,367,833 VMT and the proposed Citywide limit of 8,039,802. Although the VMT modeling, limits, and results summarized in Table 3.9-5 were calculated using a different base year (i.e., 2020), a revised calculation methodology, and new modeling tool (i.e., EGSIM20); Citywide VMT would increase from approximately 7,491,568 with implementation of the current General Plan to 9,456,103 with implementation of the Project. The increase in Citywide VMT of approximately 1,964,535 associated with implementation and buildout of the project indicates that even with the changes in VMT modeling and quantification detailed above, the Project-generated VMT would continue to exceed applicable Citywide thresholds. While total VMT would increase as part of the Project proposed land use changes would result in more efficient VMT per capita. However, as detailed above, with implementation and buildout of the Project, individual land use designations would experience an exceedance of VMT per service population limits and total daily VMT within the City. The VMT impact in both the General Plan EIR and the Housing and Safety Element SEIR were determined to be significant and unavoidable with implementation of all feasible mitigation. Therefore, although the VMT modeling and estimates detailed in Table 3.9-5 are not directly comparable to the those contained within the General Plan, all applicable General Plan policies would apply and consistent with the determination in the General Plan, no additional feasible mitigation is available beyond compliance with those General Plan policies. Because it cannot be assured that development under the Project would be able to achieve the VMT per service population limits for individual land use types or the required reduction in total daily VMT within the City, the impact would remain **significant and unavoidable**.

Grant Line Road Precise Roadway Study

The Precise Study was prepared to analyze potential geometric layouts along Grant Line Road. Buildout of roadway configurations, including all alternatives of the Precise Study, would not result in the inducement of any additional VMT beyond that which was already anticipated under the General Plan and the SouthEast Connector project. Therefore, **impacts would be less than significant**. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

Mitigation Measures

No additional feasible mitigation is available beyond compliance with the General Plan Policies MOB-1-1, MOB-3-1 through MOB-3.9, MOB-3-10 through MOB-3-13, MOB-3-14 through MOB-3-17, MOB-4-1 through MOB-4-5, MOB-5-1 through MOB-5-10, and Mitigation Measure 3.13-1 from the Housing Element SEIR.

Significance after Mitigation

No additional feasible mitigation is available for the Project beyond what is required in the General Plan and Housing Element SEIR. Measures available to further reduce VMT within the Planning Area, such as tolling roads, are outside of the City’s jurisdiction and thus infeasible for the Project. Therefore, the impact to VMT remains **significant and unavoidable**.

Impact 3.9-2: Impacts on Transit, Bicycle, and Pedestrian Facilities

General Plan EIR Impact 5.13.7 identified that implementation of the General Plan would not result in conflicts with plans, policies, or programs for transit, bicycle, and pedestrian facilities. Implementation of the Project would be subject to and implement General Plan policies applicable to transit, bicycle, and pedestrian facilities and service. Additionally, subsequent development projects under the Project would be subject to all applicable City guidelines, standards, and specifications related to transit, bicycle, or pedestrian facilities. Therefore, there is no new significant effect, and the impact is not more severe than what was addressed in the General Plan EIR. Project impacts would remain **less than significant**.

LEA Community Plan Area

The intent of development within the LEA Community Plan Area would be to provide a walkable urban area in the City with a variety of mobility options and neighborhood streets. Development facilitated by the Project within the LEA Community Plan Area would be subject to, and designed in accordance with City plans, policies, and programs for transit, bicycle, and pedestrian facilities. Specifically, implementation of the development within the LEA Community Plan Area would be subject to and implement General Plan and BPTMP policies applicable to transit, bicycle, and pedestrian facilities and service. Additionally, subsequent project site designs would be required to incorporate improvements consistent with applicable City guidelines, standards, and specifications related to transit, bicycle, or pedestrian facilities. This would include the requirements of the LEA Special Planning Area (the LEA Form Based Code), which identifies the number of bicycle parking stalls for various land uses and activities, as well as required street sections, which include a variety of pedestrian, bicycle, and vehicular improvements.

General Plan Policy MOB-1-2 encourages consideration of all transportation modes when evaluating transportation design. Policy MOB-3-1 calls for implementation of a balanced transportation system to ensure the safety and mobility of pedestrians, cyclists, motorists, children, seniors, and people with disabilities. To encourage the use of transit, General Plan Policy MOB-5-4 supports mixed-use and high-density development applications close to existing and planned transit stops, while Policies MOB-5-6 and MOB-5-7 encourage the provision of the appropriate level of transit service in all areas of the City and the extension of bus rapid transit and/or light rail service (referred to as "fixed transit") to existing and planned employment centers. Policies MOB-3-7 and MOB-3-8 call for a complete and connected network of sidewalks, crossings, paths, and bike lanes and a wayfinding signage system. Additionally, development within the LEA Community Plan Area would be subject to the most recent adopted version of the BPTMP at the time of project consideration. Subsequent development projects in the LEA Community Plan Area would be subject to and designed in accordance with all applicable City bicycle, pedestrian, and transit guidelines, standards, and specifications. Finally, for residential portions of the LEA Community Plan Area, Policy H-1-3 of the Housing Element would promote development where affordable housing in proximity to public transit or bus service.

Therefore, with implementation of the General Plan and BPTMP, and all applicable City guidelines, standards, and specifications, development facilitated by the LEA Community Plan Area would not conflict with adopted policies, plans, or programs for transit, bicycle, or pedestrian facilities. Therefore, there is no new significant effect, and the impact is not more severe than what was addressed in the General Plan EIR. The Project would continue to have a **less-than-significant** impact to transit, bicycle, and pedestrian facilities.

General Plan Land Use Designation Amendments

Transit, bicycle, and pedestrian facility impacts anticipated from proposed land use amendments in the Old Town Policy Area are included in the overall analysis associated with the Project. Additionally, the Project would comply with the access standards in the existing Old Town SPA Design Standards and Guidelines and planned updates to these standards by the City to ensure that automobiles, bicycles, and pedestrians can move safely and easily between the public right-of-way, parking lots, sidewalks, and buildings. As discussed above under, LEA Community Plan Area, impacts to transit, bicycle, and pedestrian facilities would remain **less than significant**. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

Grant Line Road Precise Roadway Study

The Precise Study was prepared to analyze potential geometric layouts along a 2.7-mile section on Grant Line Road between Bond Road and Calvine Road in the City which is Segment C of the Capital SouthEast Connector (Connector). Alternatives analyzed in the Precise Study include alternatives for signal and roundabout traffic control at intersections. Signal alternatives would provide 12-foot lanes, raised medians of 7 feet to 14 feet wide, 6-foot outside shoulders, and a separated 10-foot multi-use path on the west side of Grant Line Road. Roundabout alternatives would have the same lane configuration/cross-section between intersections as the signalized alternatives with the exception of in the commercial zone, where the median would be reduced to 4 feet and the multi-use path to 8 feet to reduce the right-of-way impacts.

Buildout of roadway configurations, including all alternatives of the Precise Study, would not conflict with transit, bicycle, or pedestrian facilities. Roadway improvements associated with the Precise Study would be required to meet City of Elk Grove Design Standards and comply with General Plan and BPTMP policies which promote increased use of alternative modes of transportation. Additionally, the JPA requires that planning and design of the Connector be conducted in accordance with American Association of State Highway and Transportation Officials (AASHTO) "A Policy on Geometric Design of Highways and Streets," most current edition. As discussed above under, LEA Community Plan Area, impacts to transit, bicycle, and pedestrian facilities would remain **less than significant**. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

South and West Study Areas

Transit, bicycle, and pedestrian facility impacts anticipated within the South and West Study Areas would be subject to the same General Plan and BPTMP policies to add transit, bicycle, and pedestrian infrastructure as the LEA Community Plan Area. As discussed above under, LEA Community Plan Area, impacts to transit, bicycle, and pedestrian facilities would be **less than significant**. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

Mitigation Measures

No additional mitigation is required beyond compliance with the *Bicycle, Pedestrian, and Trails Master Plan* and General Plan Policies MOB-1-2, MOB-3-1, MOB-3-7, MOB-3-8, MOB-5-4, MOB-5-6, MOB-5-7, and H-1-3.

Impact 3.9-3: Substantially Increase Hazards Because of a Design Feature or Incompatible Uses

No significant design hazard impacts were identified in the General Plan EIR. Implementation of the Project would be subject to, and constructed in accordance with, applicable roadway design and safety guidelines and General Plan policies. Therefore, the Project would not increase hazards because of a roadway design feature or incompatible uses. There is no new significant effect, and the impact is not more severe than what was addressed in the General Plan EIR. The Project would continue to result in a **less-than-significant** impact to transportation hazards.

LEA Community Plan Area

Development facilitated by the LEA Community Plan Area, including building development and emergency access improvements, would be subject to and designed in accordance with City standards and specifications which address potential design hazards including sight distance, driveway placement, and signage and striping. Additionally, any new transportation facilities, or improvements to such facilities associated with development under the LEA Community Plan Area would be constructed based on industry design standards and best practices consistent with General Plan Policy MOB-3-10, which stresses that the safety of the most vulnerable user is a priority. Therefore, there is no new significant effect, and the impact is not more severe than that what was addressed in the General Plan EIR. Development of the LEA Community Plan Area would continue to be a **less-than-significant** impact to transportation hazards.

General Plan Land Use Designation Amendments

Transportation related hazards anticipated from proposed land use amendments in the Old Town Policy Area would be required to adhere to the same regulations, standards, and General Plan policies as the LEA Community Plan Area.

As discussed above under, LEA Community Plan Area, impacts from hazards would remain less than significant. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

Grant Line Road Precise Roadway Study

The Precise Study was prepared to analyze potential geometric layouts along Grant Line Road. Buildout of roadway configurations, including all alternatives of the Precise Study, would comply with City design standards and would be subject to City review; thus, the improvements included in the Precise Study would not substantially increase hazards related to transportation. Additionally, as part of the Connector, any improvements to the portion of Grant Line Road studied in the Precise Study would also be subject to Connector project design guidelines except for where design exceptions are required due to constraints. Additionally, the JPA requires that planning and design of the Connector be conducted in accordance with American Association of State Highway and Transportation Officials (AASHTO) "A Policy on Geometric Design of Highways and Streets," most current edition.

As discussed above under, LEA Community Plan Area, impacts from hazards would continue to be **less than significant**. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

South and West Study Areas

Transportation related hazards anticipated within the South and West Study Areas would be required to adhere to the same regulations, standards, and General Plan policies as the LEA Community Plan Area. As discussed above under, LEA Community Plan Area, impacts from hazards would continue to be **less than significant**. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

Mitigation Measures

No additional mitigation is required beyond General Plan Policy MOB-3-10 and compliance with City standards and specifications.

Impact 3.9-4: Result in Inadequate Emergency Access

The internal circulation network and any changes to the external circulation network associated with the development facilitated by the Project would be subject to review by the City of Elk Grove and responsible emergency service agencies; thus, ensuring that the Project would be designed to meet all applicable emergency access and design standards and adequate emergency access would be provided. There is no new significant effect, and the impact is not more severe than what was addressed in the General Plan EIR. The Project would continue to result in a **less-than-significant** impact.

LEA Community Plan Area

Emergency access associated with development facilitated by the LEA Community Area would be subject to review by the City of Elk Grove and responsible emergency service agencies including the City and Cosumnes Community Services District Fire Department; thus, ensuring the Project would be designed to meet all emergency access and design standards. Additionally, the Policy SAF-1-6 requires adequate emergency access for new development projects. Therefore, adequate emergency access would be provided and there is no new significant effect. Additionally, the impact is not more severe than the impact identified in the General Plan EIR. This impact would remain **less than significant**.

General Plan Land Use Designation Amendments

Amendments to the General Plan in the Old Town Policy Area would primarily consist of land use changes and would not include any substantial changes to the roadway network. Additionally, impacts to emergency access from proposed land use amendments in the Old Town Policy Area would be subject to review by the City of Elk Grove and responsible emergency service agencies, similar to the LEA Community Plan Area. As discussed above under, LEA Community Plan Area, emergency access impacts would remain **less than significant**. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

Grant Line Road Precise Roadway Study

The Precise Study was prepared to analyze potential geometric layouts along Grant Line Road. Buildout of roadway configurations, including all alternatives of the Precise Study, would not degrade emergency access because the improvements in the Precise Study would be required to meet City design standards related to emergency access and are subject to review by the City of Elk Grove and responsible emergency service agencies. As discussed above under, LEA Community Plan Area, impacts to emergency access would remain **less than significant**. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

South and West Study Areas

Transportation related hazards anticipated within the South and West Study Areas would be subject to review by the City of Elk Grove and responsible emergency service agencies, similar to the LEA Community Plan Area. As discussed above under, LEA Community Plan Area, impacts to emergency access would remain **less than significant**. There is no new significant effect and the impact is not more severe than the impact identified in the General Plan EIR.

Mitigation Measures

No additional mitigation is required beyond compliance with City and Cosumnes Community Services District Fire Department standards.

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3.10 UTILITIES AND SERVICE SYSTEMS

This section describes current conditions relative to utilities and service systems in Elk Grove. It also includes a description of capacities, analysis of environmental impacts, and recommendations for mitigation measures for any significant or potentially significant impacts that could result from implementation of the Project. The primary source of information used for this analysis is the General Plan EIR (City of Elk Grove 2018, 2019), as well as applicable updated regulatory and environmental setting conditions.

No comments pertaining to utilities and service systems were received in response to the notice of preparation (NOP).

3.10.1 Regulatory Setting

WATER

FEDERAL

Safe Drinking Water Act

As mandated by the Safe Drinking Water Act (Public Law 93-523), passed in 1974, the US Environmental Protection Agency (EPA) regulates contaminants of concern to domestic water supply. Such contaminants are defined as those that pose a public health threat or that alter the aesthetic acceptability of the water. These types of contaminants are regulated by EPA primary and secondary maximum contaminant levels (MCLs). MCLs and the process for setting these standards are reviewed every 3 years. Amendments to the Safe Drinking Water Act enacted in 1986 established an accelerated schedule for setting drinking water MCLs. EPA has delegated responsibility for California's drinking water program to the State Water Resources Control Board Division of Drinking Water (SWRCB-DDW). SWRCB-DDW is accountable to EPA for program implementation and for adoption of standards and regulations that are at least as stringent as those developed by EPA.

STATE

Urban Water Management Plan

In 1983, the California Legislature enacted the Urban Water Management Planning Act (UWMPA) (California Water Code Sections 10610–10656). The UWMPA states that every urban water supplier that provides water to 3,000 or more customers, or that provides more than 3,000 acre-feet (af) of water annually, should make every effort to ensure the appropriate level of reliability in its water service sufficient to meet the needs of its various categories of customers during normal, dry, and multiple dry years. This effort includes the adoption of an urban water management plan (UWMP) by every urban water supplier and an update of the plan every 5 years on or before December 31 of every year ending in a five or zero. The UWMPA has been amended several times since 1983, with the most recent amendment occurring with SB 318 in 2004. With the passage of SB 610 in 2001, additional information is required to be included as part of an urban water management plan if groundwater is identified as a source of water available to the supplier. An urban water supplier is required to include in the plan a description of all water supply projects and programs that may be undertaken to meet total projected water use. The UWMPA and SB 610 are interrelated; the UWMP is typically relied upon to meet the requirements of SB 610.

California Safe Drinking Water Act

The SWRCB-DDW is responsible for implementing the federal SDWA and its updates, as well as California statutes and regulations related to drinking water. State primary and secondary drinking-water standards are promulgated in California Code of Regulations (CCR) Title 22, Sections 64431–64501.

The California Safe Drinking Water Act (CA SDWA) was passed in 1976 to build on and strengthen the federal SDWA. The CA SDWA authorizes DHS to protect the public from contaminants in drinking water by establishing MCLs that are at least as stringent as those developed by EPA, as required by the federal SDWA.

Groundwater Management Act

The Groundwater Management Act was first introduced in 1992 as Assembly Bill (AB) 3030 and has since been modified by Senate Bill (SB) 1938 in 2002, AB 359 in 2011, and the Sustainable Groundwater Management Act (SGMA) (SB 1168, SB 1319, and AB 1739) in 2014. The intent of the acts is to encourage local agencies to work cooperatively to manage groundwater resources within their jurisdictions and to provide a methodology for developing a groundwater management plan.

SGMA became law on January 1, 2015 and applies to all groundwater basins in the State (Water Code Section 10720.3). By enacting the SGMA, the legislature intended to provide local agencies with the authority and the technical and financial assistance necessary to sustainably manage groundwater within their jurisdiction (Water Code Section 10720.1).

NPDES Permit for the Sacramento Regional Water Treatment Plant

The quality of the effluent that can be discharged to waterways in the Sacramento area by the Sacramento Regional Wastewater Treatment Plant (SRWTP) is established by the Central Valley RWQCB through waste discharge requirements (WDRs) that implement the NPDES permit. WDRs are updated at least every 5 years. A new permit must be issued in the event of a major change or expansion of the facility. In April 2016, the Central Valley RWQCB issued Order No. R5-2016-0020, NPDES No. CA 0077682, to Sacramento Regional County Sanitation District (Regional San) for its Sacramento Regional Wastewater Treatment Plant (SRWTP), which treats wastewater from its service area before discharging the treated effluent to the Sacramento River. The water quality objectives established in the Central Valley RWQCB Basin Plan are protected, in part, by Order No. R5-2016-0020, NPDES No. CA 0077682. Currently, the SRWTP is permitted for a discharge of up to 181 million gallons per day (mgd) of treated effluent to the Sacramento River.

California Integrated Waste Management Act

The California Integrated Waste Management Act of 1989 (AB 939) required all California cities and counties to reduce the volume of waste deposited in landfills by 50 percent by the year 2000 and requires all California cities and counties to continue to remain at 50 percent or higher for each subsequent year. The purpose of AB 939 is to reduce the amount of solid waste generated and extend the life of landfills.

AB 939 requires each California city and county to prepare, adopt, and submit to California Department of Resources Recycling and Recovery (CalRecycle) a source reduction and recycling element (SRRE) that demonstrates how the jurisdiction will meet the act's mandated diversion goals. Each jurisdiction's SRRE must include specific components defined in PRC Sections 41003 and 41303. In addition, the SRRE must include a program for management of solid waste generated within the jurisdiction that is consistent with the following hierarchy: (1) source reduction, (2) recycling and composting, and (3) environmentally safe transformation and land disposal. Included in this hierarchy is the requirement to emphasize and maximize the use of all feasible source reduction, recycling, and composting options in order to reduce the amount of solid waste that must be disposed of by transformation and land disposal (PRC Sections 40051, 41002, and 41302).

CalRecycle Model Ordinance

Subsequent to the Integrated Waste Management Act, additional legislation was passed to assist local jurisdictions in accomplishing the goals of AB 939. The California Solid Waste Re-use and Recycling Access Act of 1991 (SB 1327) (PRC Sections 42900–42911) required CalRecycle to approve a model ordinance for adoption by any local government for the transfer, receipt, storage, and loading of recyclable materials in development projects by March 1, 1993. The act also required local agencies to adopt a local ordinance by September 1, 1993, or to allow the model ordinance to take effect.

LOCAL

Sacramento Central Groundwater Authority

The Sacramento Central Groundwater Authority (SCGA) manages groundwater in the Central Basin portion of the South American Subbasin. The SCGA was formed in 2006 through a joint powers agreement signed by the Cities of Elk Grove, Folsom, Rancho Cordova, and Sacramento and the County of Sacramento. Among its many purposes, the SCGA is responsible for managing the use of groundwater in the Central Basin to ensure long-term sustainable yield and for facilitating a conjunctive use program. The framework for maintaining groundwater resources in the Central Basin is the Sacramento County Water Agency (SCWA) Groundwater Management Plan, which includes specific goals, objectives, and an action plan to manage the basin. The plan also prescribes a well protection program to protect existing private domestic wells and agricultural well owners from declining groundwater levels resulting from increased groundwater pumping due to new development in the basin (SCWA 2016a).

Water Forum Agreement

The Water Forum is made up of a diverse group of businesses, agricultural leaders, environmentalists, citizen groups, water managers, and local governments from Sacramento, Placer, and El Dorado counties. These stakeholders came together in 2000 to form an agreement for water management with the goals of providing a reliable and safe water supply for the region's economic health through the year 2030 and preserving the fishery, wildlife, recreation, and aesthetic values of the lower American River. The Water Forum Agreement was formalized through a Memorandum of Understanding whereby all signatories agreed to carry out the actions specified for them. SCGA relied on the negotiated volume of groundwater production referred to in the Water Forum Agreement as the basis for the groundwater yield thresholds.

Sacramento County Water Agency Zone 40 Water Supply Master Plan

The Water Forum Agreement is the foundation for the Zone 40 Water Supply Master Plan (WSMP), which was adopted in February 2005 by the Sacramento County Water Agency. The Zone 40 WSMP describes available water supply and makes recommendations to meet future water demands in Zone 40 through 2030 through implementation of a regional conjunctive use program that balances the use of groundwater, surface water, and recycled water supplies. SCWA prepared amendments to the 2005 Zone 40 WSMP to address the sufficiency of water supply for the West Jackson, Jackson Township, and NewBridge projects (SCWA 2016b, cited in City of Elk Grove 2018). The existing City limits are within the boundaries of the Zone 40 WSMP, but the West and South Study Areas are not located in the buildout area identified in this plan.

Sacramento County Water Agency Zone 40 2016 Water Supply Infrastructure Plan

In 2006, SCWA prepared the Water Supply Infrastructure Plan (WSIP), which identified the water supply infrastructure needs necessary to support buildout of Zone 40. SCWA updated the plan in 2016 to reflect changes in the Zone 40 water supply portfolio, adoption of the Sacramento County General Plan, and completion of the Freeport Regional Water Project. The 2016 WSIP (includes water demand factors, growth projections, and estimates of projected water demand and supply (SCWA 2016b, cited in City of Elk Grove 2018). It also identifies recommended infrastructure types, locations, and timing to meet future demand through buildout. The West and South Study Areas are not located within the buildout area of the 2016 WSIP.

South American Subbasin Groundwater Sustainability Plan

The Groundwater Sustainability Agencies that consists of the SCGA, Omochumne-Hartnell Water District (OHWD), Sloughhouse Resource Conservation District, North Delta GSAs, Reclamation District 551 (RD 551), and Sacramento County adopted the 2021 *South American Subbasin Groundwater Sustainability Plan (SASb GSP)* in compliance with SGMA. The SASb GSP identifies that the long-term average annual sustainable groundwater yield of the South American Subbasin is 235,000 AFY. Project and management actions that would contribute to the achievement of the sustainability goal of the SASb GSP include the following:

- ▶ Existing projects that include diversification of water supplies (Freeport Regional Water Project, Vineyard Surface Water Treatment Plant, and conjunctive use improvements).

- ▶ Near-term planned project that include the Sacramento Regional County Sanitation District Harvest Water project, OHWD Groundwater Recharge Project, Regional Conjunctive Use Program, and Sacramento Area Flood Control Agency Flood-MAR. (Northern Delta Groundwater Sustainability Agency et al. 2021: 4-1 – 4-22)

The SASb GSP is currently under review by the California Department of Water Resources.

Sacramento Regional County Sanitation District

Sacramento Regional Wastewater Treatment Plant 2020 Master Plan

The SRWTP 2020 Master Plan provides a phased program of recommended wastewater treatment facilities and management programs to accommodate planned growth and to meet existing and anticipated regulatory requirements through the year 2020. The Master Plan addresses both public health and environmental protection issues while ensuring reliable service at affordable rates for Regional San customers. The Master Plan's key goals are to provide sufficient capacity to meet growth projections and an orderly expansion of SRWTP facilities, to comply with applicable water quality standards, and to provide for the most cost-effective facilities and programs from a watershed perspective (Regional San 2008).

Regional Interceptor Master Plan 2000

Regional San has prepared a long-range master plan for the large-diameter interceptors that transport wastewater to the SRWTP, which includes interceptor upgrades/expansions to accommodate anticipated growth through 2035 (Regional San 2000).

City of Elk Grove Source Reduction and Recycling Element

In response to AB 939, the City prepared an SSRE that includes policies and programs that will be implemented by the City to achieve the State waste reduction mandates. As required by AB 939, the SRRE must project the amount of disposal capacity needed to accommodate the waste generated within the City for a 15-year period. In addition, the jurisdictional mandated goal is 50 percent diversion, with diversion meaning source reduction, recycling, composting, and related activities.

Space Allocation and Enclosure Design Guidelines for Trash and Recycling

EGMC Chapter 30.90, Space Allocation and Enclosure Design Guidelines for Trash and Recycling, provides recycling and waste collection requirements for all development in the City. Integrated collection areas with recycling components assist in the reduction of waste materials, thereby prolonging the life of landfills and promoting environmentally sound practices, and help the City meet the State-mandated recycling requirements described previously in this subsection.

The guidelines include information and resources for designing trash and recycling sites that will be used by building occupants in new developments or significant remodels. Conventional recycling and green waste recycling must be designed into the site along with the trash capacity. The California Solid Waste Reuse and Recycling Access Act of 1991 requires new commercial and multifamily developments of five units or more, or improvements that add 30 percent or more to the existing floor area, to include adequate, accessible, and convenient areas for collecting and loading recyclable materials.

Construction and Demolition Debris Reduction, Reuse, and Recycling

EGMC Chapter 30.70, Construction and Demolition Debris Reduction, Reuse, and Recycling, makes construction and demolition debris recycling mandatory for all new construction (with a valuation greater than \$200,000) and demolition projects. Materials required to be recycled include scrap metal, inert materials (concrete, asphalt paving, bricks, etc.), corrugated cardboard, wooden pallets, and clean wood waste. A waste management plan must be completed to identify waste that would be generated by a project as well as the proposed recycling and hauling methods. During construction and/or demolition, a waste log must be maintained on the project area and submitted to the City at project completion.

Commercial Refuse Hauler Fee

EGMC Chapter 30.50, Nonresidential Haulers, provides information relating to the setting, charging, collecting, and enforcement of nonresidential refuse hauler fees, as well as establishing registration requirements stating that all nonresidential waste haulers operating, conducting business, or providing solid waste services must register with the City and receive a registration decal to operate and remit an amount based on their diversion performance.

City of Elk Grove General Plan

The following policies and standards are applicable to the Project.

- ▶ **Policy INF-1-1:** Water supply and delivery systems shall be available in time to meet the demand created by new development.
 - **Standard INF-1-1.a:** The following shall be required for all subdivisions to the extent permitted by State law:
 - Proposed water supply and delivery systems shall be available at the time of tentative map approval to the satisfaction of the City. The water agency providing service to the project may use several alternative methods of supply and/or delivery, provided that each is capable individually of delivering water to the project.
 - The agency providing water service to the subdivision shall demonstrate prior to the City's approval of the Final Map that sufficient capacity shall be available to accommodate the subdivision plus existing development, and other approved projects in the same service area, and other projects that have received commitments for water service.
 - Off-site and on-site water infrastructure sufficient to provide adequate water to the subdivision shall be in place prior to the approval of the Final Map or their financing shall be assured to the satisfaction of the City, consistent with the requirements of the Subdivision Map Act.
 - Off-site and on-site water distribution systems required to serve the subdivision shall be in place and contain water at sufficient quantity and pressure prior to the issuance of any building permits. Model homes may be exempted from this policy as determined appropriate by the City, and subject to approval by the City.
- ▶ **Policy INF-1-3:** Establish and expand recycled water infrastructure for residential, commercial, industrial, and recreational facilities and support the use of reclaimed water for irrigation wherever feasible.
- ▶ **Policy IFP-1-7:** New development shall fund its fair share portion of impacts to all public facilities and infrastructure as provided for in State law.
- ▶ **Policy IFP-1-8:** Infrastructure improvements must be financed and constructed concurrent with or prior to completion of new development.
 - **Standard IFP-1-8.a:** Establish concurrency measures to ensure infrastructure adequately serves future development:
 - Coordinate public facility and service capacity with the demands of new development.
 - Require that the provision of public facilities and service to new development does not cause a reduction in established service levels for existing residents.
 - Ensure that new infrastructure will meet the required level of service standards set by the City's General Plan and Municipal Code.
 - **Standard IFP-1-8.b:** Phase new development in expansion areas to occur where public services and infrastructure exist or may be extended to serve the public interest with minimal impact.
- ▶ **Policy NR-3-4:** Ensure adequate water supply is available to the community by working with water providers on facilities, infrastructure, and appropriate allocation.

- ▶ **Policy NR-3-5:** Continue to coordinate with public and private water users, including users of private wells, to maintain and implement a comprehensive groundwater management plan.
- ▶ **Policy NR-3-6:** Continue interagency partnerships to support water conservation.
- ▶ **Policy NR-3-7:** Continue to eliminate water use inefficiencies and maintain ongoing communication with water suppliers to ensure sustainable supply.
- ▶ **Policy NR-3-8:** Reduce the amount of water used by residential and nonresidential uses by requiring compliance with adopted water conservation measures.
- ▶ **Policy NR-3-9:** Promote the use of greywater systems and recycled water for irrigation purposes.
- ▶ **Policy NR-3-10:** Improve the efficiency of water use at City facilities through retrofits and employee education.
- ▶ **Policy NR-3-11:** Promote upgrades to existing buildings to support water conservation.
- ▶ **Policy NR-3-12:** Advocate for native and/or drought-tolerant landscaping in public and private projects.
 - **Standard NR-3-12.a:** Require the planting of native and/or drought-tolerant landscaping in landscaped medians and parkway strips to reduce water use and maintenance costs.
- ▶ **Policy ER-6-6:** Work with the Sacramento County Water Agency and water utilities to support programs and conservation activities intended to help water customers voluntarily conserve approximately 10 percent over time.
- ▶ **Policy ER-6-7:** Enforce the City's water-efficient landscape ordinance that is as strict or stricter than the State Water Resources Control Board regulations affecting local water agencies, and ensure future state updates are incorporated in some form to the City's ordinance. Provide opportunity for and encourage public reporting of violations.
- ▶ **Policy INF-2-1:** Sewage conveyance and treatment capacity shall be available in time to meet the demand created by new development, or shall be assured through the use of bonds or other sureties to the City's satisfaction.
 - **Standard INF-2-1.a:** The following shall be required for all development projects, excluding subdivisions:
 - Sewer/wastewater treatment capacity shall be available at the time of project approval.
 - All required sewer/wastewater infrastructure for the project shall be in place at the time of project approval, or shall be assured through the use of bonds or other sureties to the City's satisfaction.
 - **Standard INF-2-1.b:** The following shall be required for all subdivisions to the extent permitted by State law:
 - Sewage/wastewater treatment capacity shall be available at the time of tentative map approval.
 - The agency providing sewer service to the subdivision shall demonstrate prior to the City's approval of the Final Map that sufficient capacity shall be available to accommodate the subdivision plus existing development, and other approved projects using the same conveyance lines, and projects which have received sewage treatment capacity commitments.
 - On-site and off-site sewage conveyance systems required to serve the subdivision shall be in place prior to the approval of the Final Map, or their financing shall be assured to the satisfaction of the City, consistent with the requirements of the Subdivision Map Act.
 - Sewage conveyance systems in the subdivision shall be in place and connected to the sewage disposal system prior to the issuance of any building permits. Model homes may be exempted from this policy as determined appropriate by the City, and subject to approval by the City.
- ▶ **Policy CIF-1-1:** Facilitate recycling, reduction in the amount of waste, and reuse of materials to reduce the amount of solid waste sent to landfill from Elk Grove.
- ▶ **Policy CIF-1-2:** Reduce municipal waste through recycling programs and employee education.
 - **Standard CIF-1-2.a:** Recycle waste materials for all municipal construction and demolition projects.

City of Elk Grove Municipal Code

EGMC Chapter 14.10: Water Efficient Landscape Requirements

EGMC Chapter 14.10 identifies water management practices and water waste prevention for existing landscapes. It specifies requirements for planning, designing, installing, maintaining, and managing water efficient landscapes in new construction and rehabilitated projects.

EGMC Title 30: Solid Waste Management

EGMC Chapter 30.50 identifies requirements for commercial hauling such as required qualifications, vehicle specifications, and transportation specifications. Chapter 30.70 identifies requirements related to debris reduction, reuse, and recycling for new construction and demolition projects in the City. Specifically, Chapter 30.70 identifies requirements to recycle or divert no less than 65 percent of construction material and complete a waste management plan. Chapter 30.90 identifies space allocation and enclosure design guidelines for trash and recycling. For example, guidelines are provided for location and dimension of commercial trash and recycling enclosures.

3.10.2 Environmental Setting

WATER SUPPLY

This subsection provides information on water supplies that would be used by and may be available to proposed new development proposed under the Project. The Update of VMT Standards involves updated language and information regarding VMT thresholds and guidelines, and would not require any water supply for implementation. The VMT thresholds are not discussed further in this section. This subsection also discusses the availability and adequacy of existing and planned water treatment and conveyance infrastructure.

There are three water service providers in the Elk Grove Planning Area: SCWA; Elk Grove Water District (EGWD), which is a department of the Florin Resource Conservation District; and the OHWD. The SCWA is both a retail urban water supplier and a wholesale water supplier; it provides retail water supply to the City, as well as portions of unincorporated Sacramento County and the City of Rancho Cordova. The EGWD serves an area of approximately 13 square miles in the City limits east of SR 99. Part of its supply is water purchased from the SCWA.

Sacramento County Water Agency

The SCWA manages water supplies in Sacramento County, and boundaries of the SCWA are identical to the county boundaries. Water supplies consist of surface water, groundwater, recycled water, and purchased water. As authorized by the Sacramento County Water Agency Act in 1952, the agency may contract with the federal government and the State of California with respect to the purchase, sale, and acquisition of water. The service area is divided into eight systems, the largest of which are the Mather Sunrise and Laguna Vineyard systems. The City, within City limits, is in the Laguna Vineyard system.

The SCWA constructs and operates water supply infrastructure as well as some drainage systems. Zones have been approved by the Sacramento County Board of Supervisors to “finance, construct, acquire, reconstruct, maintain, operate, extend, repair, or otherwise improve any work or improvement of common benefit to such zone” (SCWA 2022). There are eight water and drainage zones, some of which are for drainage and long-range planning for water resources development. Other zones are specifically for planning, design, and construction of major water supply facilities that benefit the zone. Each zone encompasses a unique geographic area of benefit to achieve the desired objectives. Funding derived from a zone can only be used to benefit that zone.

Zone 40 comprises the Mather Sunrise and Laguna Vineyard potable water system service areas. The southern boundary of the Zone 40 service area is Kammerer Road, and the eastern boundary is the Cosumnes River. The western boundary is Interstate 5, and the northern boundary is irregularly shaped, extending through unincorporated Sacramento County from the Florin area northeast to the City of Rancho Cordova. A portion of the City not served by the EGWD is located in SCWA Zone 40.

Zone 40 is divided into three service areas (north, central, and south). The Laguna Vineyard water system consists of the central service area (CSA) and the south service area (SSA). The City limits are in the CSA and SSA. The CSA is east of SR 99 and is supplied by surface water from the Vineyard Surface Water Treatment Plant (SWTP) and groundwater. The EGWD, also in the CSA, is between the wholesale area and SR 99. The SSA is west of SR 99 and is supplied by a mix of surface water, groundwater, and recycled water. Both the CSA and SSA are predominantly residential.

Water Supplies

The SCWA uses purchased water, surface water, groundwater, and recycled water as sources of water supply. The California Department of Water Resources defines purchased water as water purchased from other suppliers, including non-self-supplied surface water. Surface water is defined as self-supplied water that is drawn from streams, lakes, and reservoirs. There is not a specific actual delivery identified for portions of the City served by Zone 40 supply. Zone 40 groundwater supplies consist of a total existing capacity of 68.17 million gallons per day (MGD) with an anticipated expansion of 63.83 MGD (EGWD 2021).

Purchased Water

The SCWA has two sources of purchased water: the Central Valley Project (CVP) and the City of Sacramento's American River Place of Use (POU) Supply.

Central Valley Project Water

CVP water consists of the following:

- ▶ SMUD 1 Assignment – 15,000 acre-feet per year (AFY) of Sacramento Municipal Utility District's (SMUD) CVP contract water has been assigned to the SCWA under the terms of an agreement with SMUD.
- ▶ SMUD 2 Assignment – 15,000 AFY of SMUD's CVP contract water has been assigned to the SCWA under the terms of an agreement with SMUD.
- ▶ CVP Water Public Law 101-514 ("Fazio" Water) – The SCWA has entered into a contract with the US Bureau of Reclamation for 22,000 AFY. Of this total, 7,000 AFY has been subcontracted to the City of Folsom for diversion from Folsom Lake. The remaining 15,000 AFY will be diverted by the SCWA from the Sacramento River. (SCWA 2016a, p. 6-1)

The SCWA's total CVP supply is subject to reductions in dry years.

City of Sacramento's American River Place of Use

A portion of Zone 40 lies within the City of Sacramento's American River POU. The City of Sacramento has a pre-1914 water right to the American River with a POU boundary that extends beyond the City's boundary and includes a portion of Zone 40. The amount of water available to serve the POU area within Zone 40 is estimated to be 9,300 AFY. SCWA is planning for the future wholesale delivery of American River water within the POU (SCWA 2016a: 6-2). The City is not located in the POU.

Surface Water

The SCWA has an appropriative water supply that consists of self-supplied surface water drawn from the Sacramento River. In February 2008, the SWRCB approved the SCWA's appropriative right permit application to divert water from the American and Sacramento Rivers (Permit 21209). The amount of appropriated water available for use could range up to 71,000 AFY in wet years, primarily during the winter months. This water would be diverted at the Freeport diversion on the Sacramento River. Since the SCWA's demand is low in the winter months, it is possible that not all of this supply could be utilized without the ability to store the water (SCWA 2021).

Groundwater

The SCWA's water supply portfolio includes groundwater. The Laguna Vineyard system, which supplies the City, is supplied by groundwater as well as purchased water, surface water, and a small amount of recycled water. The Laguna Vineyard system depends on mostly groundwater during dry years when available surface water supplies are reduced. The groundwater is supplied by a system of groundwater wells and groundwater treatment plants. The

other seven public water systems in the SCWA are completely reliant on groundwater. The SCWA system obtains water from the Sacramento Valley Groundwater Basin, South American Subbasin. The City overlies the Central Basin portion of the South American Subbasin.

The South American Subbasin is not in critical overdraft or adjudicated. The Groundwater Sustainability Agencies that consist of the Sacramento Central Groundwater Authority (SCGA), Omochumne-Hartnell Water District (OHWD), Sloughhouse Resource Conservation District, North Delta GSAs, Reclamation District 551 (RD 551), and Sacramento County adopted the 2021 *South American Subbasin Groundwater Sustainability Plan (SASb GSP)* in compliance with SGMA. The SASb GSP identifies that the long-term average annual sustainable groundwater yield of the South American Subbasin is 235,000 AFY. Project and management actions that would contribute to the achievement of the sustainability goal of the SASb GSP include the following:

- ▶ Existing projects that include diversification of water supplies (Freeport Regional Water Project, Vineyard Surface Water Treatment Plant, and conjunctive use improvements).
- ▶ Near-term planned projects that include the Sacramento Regional County Sanitation District Harvest Water project, OHWD Groundwater Recharge Project, Regional Conjunctive Use Program, and Sacramento Area Flood Control Agency Flood-MAR. (Northern Delta Groundwater Sustainability Agency et al. 2021: 4-1 – 4-22).

The GSP estimate for the long-term sustainable average annual yield of 235,000 AFY factors SCWA's groundwater needs, as documented in SCWA's Water Supply Assessment provided in Appendix H (SCWA 2023).

Other Water Supply Sources Recycled Water

Regional San is responsible for the collection, treatment, disposal, and reuse of wastewater throughout most of the urbanized areas of Sacramento County. This includes much of the area where the SCWA provides retail water service. Through an agreement, Regional San has successfully implemented a nominal capacity of 5 million gallons per day (mgd) water recycling program with the SCWA. This program provides recycled water for Regional San on-site uses and for large commercial irrigation customers within a portion of the Laguna Vineyard water system service area (e.g., commercial, industrial, right-of-way landscaping, schools, and parks). Recycled water is a desirable source of water for outdoor landscape irrigation and other nonpotable uses because of its high reliability and its independence of hydrologic conditions in any given year. Regional San's objective is to increase recycled water use in the Sacramento region during peak irrigation months to approximately 30 to 40 mgd. Water recycling at this scale will allow Regional San to better manage its effluent discharge to the Sacramento River and could help Sacramento area water purveyors improve water supply availability and reliability (SCWA 2016a: 6–8).

Water Transfers

Water transfers are water supplies obtained from various water users that hold surface water rights on the Sacramento River and the American River upstream of the SCWA's points of diversion. To obtain these supplies, the SCWA would enter into purchase and transfer agreements with other entities that hold these surface water rights. The assumed quantity of other water supplies is 9,600 AFY in dry years and no supplies transferred in wet years. The amount of needed water transfer supplies would vary depending on the amount of supplies needed to close the gap between supply and demand (SCWA 2016a: 6–14).

SCWA Water Supply and Demand

The SCWA 2020 UWMP (2021) provides estimates of existing and future water supply availability and demand for the areas it serves. In 2020, retail deliveries within Zone 40 were approximately 31,000 AFY (SCWA 2021). The projected reasonably available water supply volume for SCWA's water systems through 2045, during a normal climate year considering facility capacity constraints, is presented in Table 3.10-1. The increase in supply is the result of planned projects that will expand infrastructure capacity to allow the SCWA to use more of its available water supplies (i.e., it is not due to the acquisition of new or additional supplies) (SCWA 2021, Table 5-3). The projected annual availability of each water supply is constrained by available water infrastructure capacity (SCWA 2016a: 6-17; 2021).

Table 3.10-1 SCWA’s Zone 40 Reasonably Available Volume of Water Supplies Compared to Demand (Normal Year)

Supply-Demand	2025	2030	2035	2040	2045
Normal Year					
Supply total	159,096	164,096	174,096	174,096	174,096
Demand total	46,235	54,494	62,006	68,143	74,388
Surplus	112,861	109,602	112,090	105,953	99,708

Source: SCWA 2021, Table 5-3.

Groundwater represents a substantial part of the SCWA’s water supply portfolio to meet projected demand, particularly for the area that includes the City. The SCWA 2020 UWMP (SCWA 2021: Table 3-31) provides projections of “reasonably available” groundwater volume, based on groundwater supply capacity, with safe yield not quantified. As shown in Table 3.10-2, the reasonably available groundwater volume would remain the same for normal, single-dry, and multiple-dry year scenarios, ranging from 41,000 AFY in 2025, increasing to 46,000 AFY in 2030, and 56,000 AFY in 2035, 2040, and 2045. Therefore, to meet demand during dry years, the SCWA would seek to supplement its reduced CVP supplies with the use of other surface water supplies (SCWA 2021: Table 3-31). The SASb GSP identifies that the long-term sustainable groundwater yield of the South American Subbasin is 235,000 AFY.

Table 3.10-2 Zone 40 Projected Groundwater Production through 2045 (acre-feet per year)

Total Supply	2025	2030	2035	2040	2045	
Normal	41,000	46,000	56,000	56,000	56,000	
Single Dry Year	41,000	46,000	56,000	56,000	56,000	
Multi-Year Drought	Year 1	41,000	46,000	56,000	56,000	56,000
	Year 2	41,000	46,000	56,000	56,000	56,000
	Year 3	41,000	46,000	56,000	56,000	56,000
	Year 4	41,000	46,000	56,000	56,000	56,000
	Year 5	41,000	46,000	56,000	56,000	56,000

Source: SCWA 2021, Table 3-31.

A comparison of supply and demand for single-dry and multiple-dry year scenarios for SCWA’s water supply use is presented in Table 3.10-3. The multiple-dry year scenario mimics the water supply conditions of 2013 through 2015 when CVP allocations were 100 percent, 75 percent, and 25 percent of the average use of supplies during the previous three years.² The demands are the same as the normal year demands, but as explained for the single-dry year scenario, the second through fifth year demands might be lower if demand reduction mandates are imposed by the State (SCWA 2021: Tables 5-3 and 5-4).

Table 3.10-3 SCWA’s Zone 40 Projected Supply-Demand Comparison for Single-Dry and Multiple-Dry Year Scenarios

Supply-Demand	2025	2030	2035	2040	2045
Single-Dry Year					
Supply total	87,199	92,676	103,926	105,176	107,676
Demand total	48,547	57,219	65,106	71,551	78,107
Surplus	38,652	35,457	38,820	33,625	29,569
Multiple-Dry Year – First Year					
Supply total	111,954	118,386	132,136	135,886	143,386
Demand total	48,547	57,219	65,106	71,551	78,107
Surplus	63,407	61,167	67,030	64,335	65,279

Supply-Demand	2025	2030	2035	2040	2045
Multiple-Dry Year – Second Year					
Supply total	99,576	105,531	118,031	120,531	125,531
Demand total	48,547	57,219	65,106	71,551	78,107
Surplus	51,029	48,312	52,925	48,980	47,424
Multiple-Dry Year – Third Year					
Supply total	87,199	92,676	103,926	105,176	107,676
Demand total	48,547	57,219	65,106	71,551	78,107
Surplus	38,652	35,457	38,820	33,625	29,569
Multiple-Dry Year – Fourth Year					
Supply total	95,054	100,531	111,781	113,031	115,531
Demand total	48,547	57,219	65,106	71,551	78,107
Surplus	46,507	43,312	46,675	41,480	37,424
Multiple-Dry Year – Fifth Year					
Supply total	107,431	113,386	125,886	128,386	133,386
Demand total	48,547	57,219	65,106	71,551	78,107
Surplus	58,884	56,167	60,780	56,835	55,279

Source: SCWA 2021, Tables 5-3 and 5-4.

SCWA Water Supply Infrastructure

Existing Surface Water Treatment and Conveyance Facilities

SCWA surface water supplies for Zone 40 are diverted from the Sacramento River at Freeport and through the City of Sacramento's Sacramento River SWTP. Surface water diverted from the Sacramento River at the Freeport diversion structure is conveyed through the Freeport Regional Water Authority pipeline, treated at the Vineyard SWTP, and then delivered via a SCWA 6-inch pipeline to the Zone 40 service area. The current capacity of the Vineyard SWTP is 50 mgd with an ultimate capacity of 100 mgd. The Vineyard SWTP currently provides treated surface water primarily to customers in the CSA with a smaller amount supplied to customers in the SSA.

Surface water diverted from the Sacramento River and treated at the Sacramento River SWTP is provided to the SSA through the Franklin Intertie, which has capacity of 11.1 mgd. Water from the intertie flows into the SSA through two routes. A dedicated transmission main connects to SCWA's Dwight Road facility where the supply is pumped into the SSA. Water from the intertie is also supplied to the SSA through an in-line booster pump that connects directly to the SSA distribution system.

Existing water distribution facilities in Zone 40 include storage tanks and pipelines. Three pipelines cross SR 99 and hydraulically connect the CSA and the SSA at Sheldon Road, Bond Road, and Grant Line Road. The two nearest points of connection to major SCWA infrastructure related to the City are water transmission mains along Bilby Road at West Stockton Boulevard and at the Grant Line Road/SR 99 interchange.

Existing Groundwater Production, Treatment, and Conveyance Facilities

Groundwater is supplied to Zone 40 from wells that are connected to groundwater treatment plants (GWTPs) and from wells that pump directly into the distribution system (direct feed). Each GWTP consists of wells that are manifolded into a treatment plant, a ground-level storage tank, and a pump station. Zone 40 has 14 active storage tanks. Eleven of the storage tanks are located at GWTPs. These tanks are used to meet the peak hour increment of demand that is greater than the maximum day demand as well as emergency and fire flow demands. Most GWTPs are supplied by more than one well. Treated water from the GWTPs flows into the ground-level storage tanks and is subsequently pumped into the distribution system. The pump stations are typically sized larger than the GWTP capacities so that peak hour supply can be pumped to the distribution system from the storage tanks.

The CSA is supplied water from five groundwater treatment plants and the Vineyard SWTP. There are also three direct feed wells that supply the CSA. In the case of the Dwight Road GWTP in the SSA, the pump station is sized larger than the GWTP to also pump the Franklin Intertie supply into the SSA. The direct feed wells pump directly into the distribution system and do not require treatment. Direct feed wells are located in some areas of the CSA and SSA. The SCWA also has some wells that were drilled and planned to be equipped in the future. The existing capacity of groundwater facilities and of the Vineyard SWTP (50 MGD) each is sufficient to meet the CSA's existing water demand.

The SSA is supplied water from four GWTPs and from the Franklin Intertie. There are six direct feed wells that supply the SSA. The SSA also receives some supply from the CSA. The three existing connections between the CSA and SSA can be used to supply surface water or groundwater to the SSA. The CSA has minimal to no spare surface water capacity in a wet/average year and no groundwater capacity in a dry year on the maximum demand day (SCWA 2016b).

Planned Facilities

Currently the SCWA is not planning to develop any additional water supply sources in its service area. However, SCWA's planned potable projects include improvements to its treatment and delivery systems, specifically the Vineyard Water Treatment Plants (Phase 2), which would provide an additional 50 mgd of capacity to the SCWA system to deliver water throughout the Zone 40 area (SCWA 2021).

Elk Grove Water District

EGWD is a department of the Florin Resource Conservation District and operates the Elk Grove Water District's water system. The EGWD provides service to residents and businesses within an approximately 13-square-mile area in the City limits. The service area is bounded to the north by Sheldon Road, to the east by Grant Line Road, to the south by Union Industrial Park, and to the west by SR 99. The Sheldon/Rural Area Community Plan and Eastern Elk Grove Community Plan areas are in the eastern part of the EGWD service area boundary, though no services are provided in the Sheldon/Rural Area.

The EGWD's service area is separated into two subareas. Service Area 1 relies entirely on groundwater from seven wells and a potable groundwater treatment plant owned by the EGWD (Railroad Street Treatment and Storage Facility). Service Area 2 is served by water purchased from the SCWA, which delivers both surface water and groundwater from its conjunctive use operations; but as a matter of practice, water served to customers in Service Area 2 is almost entirely derived from SCWA's production wells (EGWD 2021, p. 3-1). The EGWD provides water service to approximately 12,890 residential, commercial/institutional, irrigation, and industrial service connections (EGWD 2021: 2-1).

The EGWD covers approximately 3 percent of the entire Central Basin. Considering the Central Sacramento County Groundwater Management Plan's (2006) overall estimated sustainable groundwater yield of 273,000 AFY, the EGWD has 9,168 AFY of groundwater available within its service area. In 2015, the district supplied 5,312 acre-feet of water, 1,914 of which was supplied by the SCWA, and 3,398 of which was produced from the EGWD's groundwater wells. The EGWD projects that total demand for both service areas would increase from 7,694 AFY in 2020 to 8,059 AFY in 2040, and that there would be sufficient water to meet current needs and anticipated future demand (EGWD 2016: Table 4-5, Table 4-6, p. 3-10 and p. 4-10). The EGWD assumed most growth would be in Service Area 2, which would consist of approximately 2,900 new residential accounts, including single-family and multi-family, and an anticipated future water use forecast of 1,400 acre-feet per year of new residential and non-residential use by 2045, for a total of 8,180 acre-feet per year for both existing and projected new future water use (EGWD 2021). EGWD is located within the South American Subbasin of the Sacramento Valley Groundwater Basin that has a GSP. The GSP for the South American Subbasin estimates a long-term sustainable average annual yield of 235,000 AFY and provided for SCWA's groundwater needs (SASb GSAs 2021).

Anticipated development because of the proposed Project within the Elk Grove Old Town Specific Planning Area is located within the EGWD's service area (EGWD 2021: 2-2).

Climate Change

Climate change is anticipated to have an impact on water supplies. Changes in weather patterns resulting from increases in global average temperature could bring about a decreased proportion and total amount of precipitation

falling as snow. This phenomenon is predicted to result in an overall reduction of snowpack in the Sierra Nevada. Runoff from precipitation and snowmelt from the Sierra Nevada is the main source of surface water supply for SCWA and other purveyors in the City, as well as in the entire Sacramento region and much of the rest of the State. During the summer months, irrigation and agricultural runoff are the main sources of surface water. Most streams are intermittent and historically dry during the summer; however, urbanization and agricultural practices have resulted in low summer flows consisting of runoff.

The US Bureau of Reclamation has evaluated the risks and impacts of climate change in the Sacramento River Basin, which is detailed in the Sacramento and San Joaquin Climate Impact Assessment. The report incorporates an overview of the current climate and hydrology of California's Central Valley as well as projections of hydrologic changes that the basin may experience because of climate change. The report projects a north-to-south trend of decreasing annual average precipitation throughout the 21st century. Additionally, the report predicts a shift to an increase in the rate of winter runoff and a decrease in precipitation falling as snow in the winter months. These shifts in precipitation patterns may result in an exceedance of surface water capacity earlier in the year. If flow rates exceed the capacity of reservoirs in the Sacramento and American River watersheds, fresh water would need to be released to accommodate river flow, which comprises a source of potable water that previously would have been stored in the Sierra Nevada snowpack. These conditions are already affecting summer water supply in the county (Ascent Environmental 2017).

A quantitative vulnerability assessment prepared by the Regional Water Authority included in the American River Basin Integrated Regional Water Management Plan (IRWMP) evaluated the effects on both surface water and groundwater. The assessment indicates that surface water supplies would be reduced and would be mostly associated with reduced diversions from the American River. Climate change is also anticipated to have an impact on groundwater. Also noted is that increased groundwater pumping would occur to meet urban and agricultural demands, i.e., the long-term average groundwater pumping in the Central Basin would increase by 6 percent. Groundwater elevations would decrease from 6 to 15 feet from the baseline condition in the SCWA's service area. Planned actions to address these vulnerabilities include decreasing urban per capita water demand and continuing current efforts such as implementing conjunctive use management, recycled water use, and interconnections between adjacent water purveyors (SCWA 2016a: Section 6.11). As noted under the discussion of the SASb GSP, groundwater modeling identify a potential -100 to -6,200 acre-foot per year impact to groundwater storage when climate change was factored future groundwater storage.

WASTEWATER

Sacramento Regional County Sanitation District

The Sacramento Regional County Sanitation District (Regional San) provides wastewater treatment for the City. Regional San serves approximately 1.4 million residents, industrial and commercial customers, and owns and operates the regional wastewater conveyance system. Regional San manages wastewater treatment, major conveyance, and wastewater disposal (Regional San 2022). Regional San is in the process of merging with the Sacramento Area Sewer District, though the merger is not expected to be completed for several years.

Sacramento Area Sewer District

The Sacramento Area Sewer District (SacSewer) serves as one contributing agency to Regional San. The SacSewer provides wastewater collection and conveyance services in the urbanized unincorporated area of Sacramento County, in the Cities of Citrus Heights, Elk Grove, and Rancho Cordova, and in a portion of the Cities of Sacramento and Folsom. SacSewer owns, operates, and maintains a network of 4,500 miles of main line and lower lateral pipes within a 270 square-mile area (SacSewer 2022).

SacSewer trunk sewer pipes function as conveyance facilities to transport the collected wastewater flows to the Regional San interceptor system. The existing City trunk line extends southeast from the SRWTP influent diversion structure to Laguna Boulevard, then parallel to SR 99 along East Stockton Boulevard, extending close to the southern City boundary.

Sacramento Regional Wastewater Treatment Plant

The SRWTP, operated by Regional San, is located on 900 acres of a 3,550-acre site between I-5 and Franklin Boulevard, north of Laguna Boulevard. The remaining 2,650 acres serve as a “bufferland” between the SRWTP and nearby residential areas.

The SRWTP has 169 miles of pipeline. Wastewater is treated by accelerated physical and natural biological processes before it is discharged to the Sacramento River (Regional San 2022).

An upgrade of the SRWTP is currently under way. The upgrade, known as the EchoWater Project, is required to be built by 2023 to meet new water quality requirements that were issued by the Central Valley RWQCB as part of Regional San’s 2010 NPDES permit. The requirements are designed primarily to help protect the Delta ecosystem downstream by removing most of the ammonia and nitrates and improving the removal of pathogens from wastewater discharge. The upgrade will include deployment of new treatment technologies and facilities and will increase the quality of effluent discharged into the Sacramento River and ensure that the SRWTP discharge constituents are below permitted discharge limits specified in the NPDES permit. Flows to the SRWTP have decreased because of water conservation efforts over the last 15 years. Further, adequate capacity for wastewater is anticipated well into the future. Flows in 2021 were approximately 124 million gallons per day (mgd), compared to the current permitted capacity of 181 mgd. It is not anticipated that Regional San will need to consider further improvements to the SRWTP until after 2050. The SRWTP has also been master planned to accommodate additional growth beyond the planning year to 350 mgd ADWF of treatment capacity (Regional San 2008: 15; 2022).

Septic Service

Sacramento County Environmental Management Department

The Sacramento County Environmental Management Department (EMD) provides mandated regulatory services in food service, hazardous materials, solid waste facilities, and septic service. The EMD is responsible for regulating septic systems within the county. The eastern portions of the City, which includes primarily agriculture and rural residential land uses, are generally served by individual septic systems.

SOLID WASTE

Republic Services, formerly known as Allied Waste, provides residential solid waste services in the City under an exclusive franchise agreement. Solid waste generated by commercial and multifamily residential developments is served by registered commercial haulers or county-authorized recyclers (City of Elk Grove 2018).

Landfill Capacity

Solid waste generated in the City is taken to a variety of landfills. Table 3.10-4 shows landfills used by the City and the permitted and remaining capacities of those landfills. As shown in Table 3.10-4, half of the landfills serving City waste haulers have over 80 percent remaining capacity (CalRecycle 2022).

Table 3.10-4 Disposal Facilities and Remaining Capacities

Site Name	Remaining Capacity	Percentage of Remaining Capacity (%)	Remaining Capacity Date	Total Capacity
Altamont Landfill & Resource Recovery	65,400,000	52.6	6/30/2016	124,400,000
Foothill Sanitary Landfill	125,000,000	90.6	6/10/2010	138,000,000
Sacramento County Landfill (Kiefer)	112,900,000	96.2	9/12/2005	117,400,000
L and D Landfill	3,115,900	15.2	7/2/2020	20,500,000
Bakersfield Metropolitan (Bena) SLF	32,808,260	61.9	7/1/2013	53,000,000
North County Landfill & Recycling Center	35,400,000	85.9	12/31/2009	41,200,000
Recology Hay Road	30,433,000	82.3	7/28/2010	37,000,000

Site Name	Remaining Capacity	Percentage of Remaining Capacity (%)	Remaining Capacity Date	Total Capacity
Keller Canyon Landfill	63,408,410	84.5	11/16/2004	75,018,280
Forward Landfill, Inc.	24,720,669	41.8	1/31/2020	59,160,000
Potrero Hills Landfill	13,872,000	16.7	1/1/2006	83,100,000

Source: CalRecycle 2022.

3.10.3 Environmental Impacts and Mitigation Measures

METHODOLOGY

This section analyzes utility and service system impacts that may occur from the proposed amendments to the General Plan associated with the Project. The evaluation of utility and service impacts is based on review of published information and reports, and consultation with utility service providers. The analysis considers the impact analysis provided in the General Plan EIR, and focused review of the extent of land use and density change associated with the Project. The analysis is focused on whether the Project would result in impacts on utilities and service systems not previously considered in the General Plan EIR. Energy impacts are addressed in Section 3.4, "Energy."

Off-site infrastructure impacts are not evaluated in this Draft SEIR because approval of the Project would not trigger the construction of infrastructure improvements.

Water Demand

Table 5.14-4 of the General Plan EIR shows the water demand factors for each General Plan land use designation and calculates the water demand for each land use based on acreage. Using the water demand factors for each existing and proposed land use, this Draft SEIR calculates the difference in water demand that would occur with implementation of the land use changes because of the Project.

Wastewater Treatment and Disposal

For purposes of this analysis, as is standard practice in the industry, the estimated additional wastewater that would be generated by the Project is assumed to be equal to the additional water demand.

THRESHOLDS OF SIGNIFICANCE

A utilities and service systems impact is considered significant if implementation of the Project would do any of the following:

- ▶ require or result in the relocation or construction of new or expanded water, or wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects;
- ▶ have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years;
- ▶ result in a determination by the wastewater treatment provider that 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;
- ▶ generate solid waste in excess of State or local standards or in excess of the capacity of local infrastructure;
- ▶ negatively impact the provision of solid waste services or impair the attainment of solid waste reduction goals;
- ▶ conflict with federal, state, and local management and reduction statutes and regulations related to solid waste; and/or
- ▶ conflict with or obstruct implementation of a sustainable groundwater management plan.

ISSUES NOT DISCUSSED FURTHER

Impacts to Water Supply and Treatment

The VMT Standards Update will revise VMT thresholds that are consistent with the City’s most recent VMT model. The proposed VMT Standards Update would not result in development, infrastructure improvements, or the demand for water. There would be no impact to water supply and treatment, and this impact is not discussed further.

Impacts to Wastewater

The VMT Standards Update will revise VMT thresholds that are consistent with the City’s most recent VMT model. The proposed VMT Standards Update would not result in development, infrastructure improvements, or produce wastewater. There would be no impact to wastewater, and this impact is not discussed further.

Impacts to Solid Waste

The VMT Standards Update will revise VMT thresholds that are consistent with the City’s most recent VMT model. The proposed VMT Standards Update would not result in development, infrastructure improvements, or produce solid waste. There would be no impact to solid waste, and this impact is not discussed further.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Impact 3.10-1: Adverse Impacts on Sufficient Water Supply, Infrastructure, and Treatment

General Plan Impact 5.12.1.1 identified significant and unavoidable water supply impacts because of the anticipated new water demand as a result of proposed development located outside of City limits but within the Study Areas. Implementation of the Project could generate additional demand for water supplies from increased development. Development facilitated by the Project would result in 3.12 mgd of water demand. However, the additional demand is minor compared with existing and projected water demand and water supplies. Therefore, the additional water demand resulting from the Project would not result in a new or substantially more severe water supply impacts than was addressed in the General Plan EIR. Project impacts would remain **significant and unavoidable**.

LEA Community Plan Area

Implementation of the Project would not, in and of itself, construct new residential, commercial, and industrial development in the City. However, the Project would promote the construction of additional housing, commercial, and industrial development in the LEA Community Plan Area through the proposed land use changes.

Implementation of the Project would increase the number of dwelling units in the City by up to 1,851 units, including in the LEA Community Plan Area, over development anticipated in the adopted General Plan through amendments to General Plan land uses for the overall Project (LEA Community Plan Area and other land use designation changes). Table 5.12-4 of the General Plan EIR shows the water demand factors for each General Plan land use designation and calculates the water demand for each land use based on acreage. Using the water demand factors for each existing and proposed land use, Table 3.10-5 shows the new water demand that would occur with implementation of the land use changes as proposed by the Project. As shown below, the Project would result in a water demand of approximately 3,505 AFY.

Table 3.10-5 Anticipated Water Demand under the General Plan Amendments

General Location	Project Area	Acreage	Proposed General Plan Designation	Demand Factor	Proposed General Plan Designation Water Demand (AF/year)
North of Kammerer Road	Northern portion of LEA Community	17.5	CC	2.02	35
		53.7	EC	2.02	108
		47.3	ER	1.37	65

General Location	Project Area	Acreage	Proposed General Plan Designation	Demand Factor	Proposed General Plan Designation Water Demand (AF/year)
	Plan Area & Old Town Policy Area	79.9	HDR	3.33	266
		354.7	LDR	2.44	865
		53.1	LI	2.02	107
		122.8	MDR	2.89	354
		114.7	P/OS	2.80	321
		32.2	PS	0.81	26
		113.0	RMC	0.81	92
		8.8	RMU	2.44	21
		42.7	T-3	2.44	214
		71.8	T-3R	2.44	175
		57.3	T-4	2.89	165
		13.7	T-5	3.33	4646
		20.8	VCMU	2.15	45
		39.8	Tribal Trust	NA	NA
63.7	Zoo ¹	NA	223		
Subtotal					2,906
South of Kammerer Road	South and West Study Areas & southern portion of LEA Community Plan Area	6.64	P/OS	2.80	19
		105.03	T-3	2.44	256
		96.73	T-3R	2.44	236
		24.13	T-4	2.89	70
		5.46	T-5	3.33	18
Subtotal					599
Total					3,505

¹ Table conservatively assumes operation of the New Zoo in Elk Grove, which is a separate City project.

Calculated by Ascent using water demand factors shown in the LEA WSA (SCWA 2023).

The General Plan EIR noted that water demand and supply projections associated with the development within the existing City limits under the prior General Plan were accounted for in SCWA's 2015 UWMP (City of Elk Grove 2018:5.12-21). However, the updated 2020 UWMP estimates demands associated with the current General Plan through 2045. Therefore, almost all the new and unplanned demand under the General Plan would be the result of future development in the Study Areas.

General Plan EIR Table 5.12-3 presented SCWA's projected supply and demand comparison for single-dry and multiple-dry year scenarios. For 2020, SCWA estimates a water demand of 52,241 AFY with projected surpluses ranging from 22,959 AFY to 35,659 AFY. For 2040, SCWA estimates a water demand of 86,047 AFY with surpluses ranging from 4,752 AFY to 18,853 AFY. The 2020 UWMP estimates a water demand in 2040 of 68,143 AFY for Zone 40, which includes the LEA Community Planning Area within the City limits (SCWA 2023).

As calculated in Table 3.10-5 above, the Project would require a total water demand of approximately 3,505 AFY. The Water Supply Assessment (WSA) prepared for the LEA Community Plan Area determined that the LEACP Study Area (LEA Community Plan Area within the City limits) would have a water demand of approximately 3,669 AFY (SCWA 2023). However, the LEACP Study Area includes the Southeast Policy Area (as revised), South Pointe Policy Area, and portions of the Lent Ranch Special Plan Area. Because the WSA includes developments outside the LEA Community

Plan Area the estimated AFY in the WSA exceeds that for the Project (see Appendix H). This analysis conservatively assumes all new water demand for the proposed land use changes and does not account for the difference between water demand for existing and proposed land uses. As identified in Table 3.10-5, approximately 2,906 AFY of this demand would occur within the existing City boundaries (north of Kammerer Road) currently serviced by SCWA and EGWD. Water would be supplied for the project through a combination of groundwater and surface water, with a small portion of recycled water. Initial water demands for the project would be met with groundwater. Surface water would be provided from existing entitlements diverted from the Sacramento River and treated at the Vineyard Surface Water Treatment Plant. Therefore, SCWA surplus water supplies would be adequate to accommodate project demand while still meeting the current and projected water demands of existing customers in the next 20 years (SCWA 2023). Project water demands outside of the City boundaries (south of Kammerer Road) are estimated at 599 AFY and would occur outside of the existing service boundary of SCWA. This would increase anticipated water demands of the Study Areas identified in the General Plan EIR.

Any subsequent development described in the Project would be subject to the Elk Grove General Plan policies and actions that assist in the provision of water treatment facilities and water supply. General Plan Policy INF-1-1 requires that water supply and delivery systems must be available in time to meet the demand created by new development, or shall be assured using bonds or other sureties to the City's satisfaction. This policy would ensure that water treatment and infrastructure is not compromised by proposed development identified for the Project. Additionally, the Project is not expected to alter how water infrastructure is anticipated to be extended in the LEA Community Plan Area. Water deliveries to the LEA Community Planning Area would be made through connecting to the existing water supply pipeline mains surrounding the LEA Community Planning Area and infrastructure internal to the development as shown in Section 2.0, "Project Description" (SCWA 2023). Therefore, Project would not result in new or substantially more severe impacts than was addressed in the General Plan EIR.

Portions of the LEA Community Plan Area have been previously analyzed in certified CEQA documents for the following projects: Southeast Policy Area Strategic Plan, Laguna Ridge Specific Plan, SouthPoint Policy Area/Sterling Meadows, and Lent Ranch Marketplace Special Planning Area. The Laguna Ridge Specific Plan adopted Mitigation Measure MM 4.6.1.1a requires demonstration of adequate water supplies and infrastructure consistent with the Laguna Ridge Specific Plan Water Study, while Laguna Ridge Specific Plan adopted Mitigation Measure MM 4.6.1.1b requires the use of water conservation measures in landscaping and building design. As identified above, a WSA has been prepared that identifies adequate water supplies and infrastructure facilities for the LEA Community Plan Area. The Elk Grove Municipal Code includes requirements for water conservation in project design, such as Municipal Code Chapter 14.10 that identifies water management practices and water waste prevention for existing landscapes. It specifies requirements for planning, designing, installing, maintaining, and managing water efficient landscapes in new construction and rehabilitated projects. Therefore, no additional mitigation is required in the LEA Community Plan Area for water supply provision.

The General Plan EIR concluded that no additional feasible mitigation was available beyond compliance with General Plan policies and implementation of Mitigation Measure 5.12.1.1 (which, as discussed above, is only applicable to Study Area lands outside of the existing City boundaries) and concluded that Impact 5.12.1.1 was significant and unavoidable. While additional water demand from implementation of the Project would add to identified significant and unavoidable water supply impacts associated with General Plan Study Areas, it would not result in a substantially more severe impacts regarding water supply than was addressed in the General Plan EIR. Project impacts would therefore remain **significant and unavoidable**.

General Plan Land Use Designation Amendments

Increased water demand because of the increased population growth and housing development anticipated from proposed land use amendments within the Old Town Policy Area is included in the overall population and development growth associated with the Project. EGWD currently supplies water to the Old Town Policy Area and would not require any changes to the City's service area boundary. As shown in Table 3.10-5, the Project would require a total water demand of approximately 3,505 AFY. Only a minor portion of the 2,906 AFY water demand would be needed in the Old Town Policy Area. EGWD has 9,168 AFY of groundwater available within its service areas. The EGWD projects that total demand for both service areas would increase from 7,694 AFY in 2020 to 8,059 AFY in

2040, and that there would be sufficient water to meet current needs and anticipated future demand (EGWD 2016: Table 4-5, Table 4-6, p. 3-10 and p. 4-10). The additional water demand from implementation of the proposed General Plan land use designation amendments for the Old Town Policy Area would not result in a new or substantially more severe impacts regarding water supply than was addressed in the General Plan EIR. Project impacts would therefore remain **significant and unavoidable**.

Grant Line Road Precise Roadway Study

Development of Grant Line Road would not result in additional water demand. **No impact** would occur. Implementation of the Grant Line Road Precise Roadway Study would not result in a new or substantially more severe impacts regarding water supply than was addressed in the General Plan EIR.

South and West Study Areas

Increased water demand because of the increased population growth and housing development proposed under the South and West Study Areas are included in the overall population and development growth associated with the Project. The South and West Study Areas are not within SCWA's current service area. Development south of Kammerer Road would require additional water demand and infrastructure not accounted for in SCWA's UWMP. As shown in Table 3.10-5, the projected water demand for the Project area located outside of SCWA's service area (south of Kammerer Road) are estimated to be approximately 599 AFY. This analysis conservatively assumes all new water demand south of Kammerer Road and does not account for the difference between water demand for existing and proposed land uses. General Plan EIR Impact 5.12.1.1 evaluated the sufficiency of water supplies to serve up to approximately 48,000 new homes in South and West Study Areas, and noted that implementation of the General Plan would increase demand for domestic water supply, which could result in the need for additional water supplies. General Plan Policy INF-1-1 requires that water supply and delivery systems must be available in time to meet the demand created by new development. However, the development of future water supplies by the SCWA (if determined by the SCWA to be necessary) could result in environmental impacts, some of which may be significant.

Mitigation Measure 5.12.1.1 was incorporated to reduce potential effects from additional water supply from SCWA, which is only applicable to Study Area lands in the City's Planning Area that would be annexed into the City. Since the South and West Study Areas would be annexed into the City, this measure would apply to all anticipated new housing developments in both of these Study Areas as a result of the Project. While additional water demand from implementation of the Project would add to identified significant and unavoidable water supply impacts associated with General Plan Study Areas, it would not result in a substantially more severe impacts regarding water supply than was addressed in the General Plan EIR. Project impacts would remain **significant and unavoidable**.

Mitigation Measures

No additional mitigation is required beyond compliance General Plan Policy INF-1-1 and Mitigation Measure 5.12.1.1.

Impact 3.10-2: Adverse Impacts on Wastewater Treatment Capacity

General Plan EIR Impact 5.12.2.1 evaluated whether implementation of the General Plan would increase demand for wastewater treatment. General Plan EIR Impact 5.12.2.2 evaluated whether implementation of the General Plan would require the construction of new or expanded wastewater infrastructure, which could result in impacts to the physical environmental effects. The analyses both concluded that while the General Plan would increase demand for wastewater treatment, facility plans would have sufficient capacity to serve the additional wastewater; the impacts were found to be less than significant. Development facilitated by the Project could generate approximately 3.12 mgd of wastewater that would increase wastewater generation anticipated under the adopted General Plan. The SRWTP has adequate capacity to accommodate additional growth. Therefore, the additional wastewater services resulting from the provision of new development and an increase in residents as part of the Project would not result in a new or substantially more severe impacts than was addressed in the General Plan EIR. Project impacts would remain **less than significant**.

LEA Community Plan Area

As discussed in Impact 3.10-1 and shown in Table 3.10-5 above, development facilitated by the Project north of Kammerer Road would result in a water demand of 2,960 AFY. Based on this water demand, development facilitated by the Project (LEA Community Plan Area and other General Plan land use designation changes) could result in approximately 2.79 mgd of wastewater generated.

As noted above, flows to the SRWTP have decreased because of water conservation efforts over the last 15 years. Further, adequate capacity for wastewater is anticipated well into the future. Flows in 2021 were approximately 124 mgd, compared to the more current permitted capacity of 181 mgd (Regional San 2022). It is not anticipated that Regional San will need to consider further improvements to the SRWTP until after 2050. The SRWTP has been master planned to accommodate additional growth beyond the planning horizon to 350 mgd ADWF of treatment capacity (Regional San 2008:15).

Planned facility expansion are based on projected growth rates provided by SACOG. The construction of future treatment facilities will occur in incremental stages to best accommodate the growth rates. If the actual growth rate is slower than projected, construction of the next increment of treatment capacity can be delayed. Conversely, if the growth rate is faster than projected, the next increment of treatment capacity can be constructed earlier than anticipated (Regional San 2008: 14). As a result, additional wastewater generation associated with the Project would not exceed capacity of the treatment plant.

Portions of the LEA Community Plan Area have been previously analyzed in certified CEQA documents for the following projects: Southeast Policy Area Strategic Plan, Laguna Ridge Specific Plan, SouthPoint Policy Area/Sterling Meadows, and Lent Ranch Marketplace Special Planning Area. The Laguna Ridge Specific Plan adopted Mitigation Measure MM 4.6.2.1 requires demonstration of a permanent wastewater system consistent with the Preliminary Sewer Master Plan for the Laguna Ridge Specific Plan. As identified above, there is adequate wastewater capacity for the LEA Community Plan Area. Therefore, no additional mitigation is required in the LEA Community Plan Area for wastewater service.

Construction impacts associated with extension, expansion, and/or replacement of on-site wastewater system facilities may result in temporary aesthetic impacts, disturbance of biological and/or cultural resources, conversion of agricultural land, temporary air emissions, soil erosion and water quality degradation, handling of hazardous materials, temporary excessive noise, and temporary construction traffic. However, these impacts are considered throughout this Draft SEIR. The additional demand from implementation of the Project would not result in a new or substantially more severe impacts regarding wastewater treatment capacity within the LEA Community Plan Area than was addressed in the General Plan EIR. This impact would remain **less than significant**.

General Plan Land Use Designation Amendments

Increased water demand or generation of wastewater as a result of development anticipated from proposed land use amendments within the Old Town Policy Area is included in the overall population and development growth associated with the Project. Additionally, the Old Town Policy Area is located within SacSewer and Regional San's wastewater service area and would not require any changes to the service area boundary. Additionally, the SRWTP has been master planned to accommodate additional growth, including development that is anticipated in the Old Town Policy Area because of proposed land use amendments. Therefore, the additional wastewater services resulting from the provision of new housing as part of the Project would not result in a new or substantially more severe impacts. This impact would be remain **less than significant**.

Grant Line Road Precise Roadway Study

Development of Grant Line Road would not result in additional generation of wastewater. **No impact** would occur. Development facilitated by the Precise Roadway Study would not result in a new or substantially more severe impacts.

South and West Study Areas

Increased generation of wastewater in the South and West Study Areas are included in the overall population and development growth associated with the Project. The South and West Study Areas, which are located outside of City limits and the SRWPT boundary, would be subject to General Plan policies and mitigation measures identified in the

General Plan EIR to reduce effects associated with wastewater generation once these areas are annexed into the City, prior to development. As shown in Table 3.10-5, the projected water demand for the area south of Kammerer Road would equate to approximately 0.012 mgd of wastewater. This analysis conservatively assumes all new wastewater generation south of Kammerer Road and does not account for the difference between wastewater for existing and proposed land uses. The South and West Study Areas are not within SRWTP's current service area. Development south of Kammerer Road would require additional wastewater treatment and infrastructure not accounted for by SRWTP. However, the additional 0.012 mgd of wastewater for the Project would be minor compared to existing wastewater treatment. SRWTP has been master planned to accommodate additional growth, including development that is anticipated in the South and West Study Areas. Therefore, the additional wastewater services resulting from the provision of new housing as part of the Project would not result in a new or substantially more severe impacts. This impact would remain **less than significant**.

Mitigation Measures

No mitigation is required for this impact.

Impact 3.10-3: Adverse Impacts on Landfill Capacity and Compliance with Applicable Solid Waste Regulations

General Plan EIR Impact 5.12.3.1 concluded that increased demand for solid waste services associated with implementation of the General Plan would not result in significant environmental impacts. Implementation of the Project could result in increased solid waste generation associated with proposed residential, commercial, and industrial development that would require redesignation of General Plan land uses. There is substantial remaining capacity in the landfills serving local waste haulers, with an average remaining capacity of more than 70 percent. All future development projects associated with the Project would be required to comply with all applicable solid waste regulations, including the City's Space Allocation and Enclosure Design Guidelines for Trash and Recycling. Therefore, the additional solid waste services resulting from the Project would not result in a new or substantially more severe impacts than was addressed in the General Plan EIR. Project impacts would remain **less than significant**.

LEA Community Plan Area

General Plan EIR Impact 5.12.3.1 evaluated the increased demand for solid waste collection and landfill capacity that would occur under the General Plan, which resulted in 331,223 tons per year. As discussed in the General Plan EIR, based on CalRecycle data, the City achieved a per capita disposal rate in 2016 of 2.8 pounds per capita per day, which is lower than the State's disposal rate target for the City of 5.9 pounds per capita per day (City of Elk Grove 2018: 5.12-36). Based on disposal rate factors considered in the General Plan EIR, the analysis concluded that implementation of the General Plan would not generate solid waste in excess of State or local standards or in excess of the capacity of the local infrastructure, negatively impact the provisions of solid waste services, or impact the attainment of solid waste reduction goals. Thus, the impact was concluded to be less than significant.

Implementation of the Project would result in the construction of additional development in the LEA Community Plan Area. This could result in an additional 1,851 additional residential units beyond the number assumed in the General Plan EIR, which could result in approximately 5,979 additional residents. Using the most recent solid waste disposal rate of 1.11 tons per resident per year (equivalent to 6.7 pounds per day), buildout anticipated under the Project would generate approximately 6,632 tons of additional solid waste per year beyond the amount of solid waste assumed in the General Plan EIR (CalRecycle 2019). This represents an increase of approximately 2 percent beyond the total solid waste generated as discussed in the General Plan EIR and would result in a minor increase compared to anticipated solid waste generation.

Future construction located within the LEA Community Plan Area because of the Project would also generate construction debris. However, the City's construction diversion rate was estimated at over 50 percent in 2018 (City of Elk Grove 2018). Thus, implementation of the City's existing recycling programs and associated regulation would substantially reduce the volume of generated waste that would be disposed of in landfills. In addition, EGMC Section

30.70.030(C) requires that all projects recycle or divert at least 65 percent of the material collected at the construction site, not including excavated soil and land clearing debris.

Waste generated by proposed buildout within the LEA Community Plan Area would be hauled by several permitted haulers as selected by the individual developer, and wastes would be hauled to a permitted landfill for disposal as selected by the hauler. Republic Services and the other permitted haulers that serve the City would need to expand services to meet this projected future demand, which would be funded by service fees imposed on customers. As shown in Table 3.10-4, there is substantial remaining capacity in the landfills serving local waste haulers, with an average remaining capacity of more than 70 percent. Therefore, proposed development within the LEA Community Plan Area would be served by solid waste management companies and landfills with sufficient capacity to serve the future development.

In addition, all future development projects within the LEA Community Plan Area would be required to comply with all applicable solid waste regulations, including the City's Space Allocation and Enclosure Design Guidelines for Trash and Recycling. Compliance with these regulations would be ensured through the development review process. Therefore, because new residential development within the LEA Community Plan Area would not generate solid waste in excess of State or local standards or in excess of the capacity of the local infrastructure, negatively affect the provisions of solid waste services, or affect the attainment of solid waste reduction goals. The additional demand from buildout of the Project would not result in a new or substantially more severe impacts regarding solid waste than was addressed in the General Plan EIR. This impact would remain **less than significant**.

General Plan Land Use Designation Amendments

Increased solid waste because of the increased population growth and housing development anticipated from proposed land use amendments within the Old Town is included in the overall population and development growth associated with the Project. Additionally, the Old Town is located within the City's solid waste service area and would not require any changes to the City's service area boundary. As discussed above under the LEA Community Plan, impacts to the City's solid waste services and landfills would be reduced by compliance to the City's Space Allocation and Enclosure Design Guidelines for Trash and Recycling and existing General Plan policies. Impact would remain **less than significant**. Development planned under the General Plan land use designations would not result in a new or substantially more severe impacts regarding water supply than was addressed in the General Plan EIR.

Grant Line Road Precise Roadway Study

Development of Grant Line Road would result in additional solid waste during the construction phase of the Project. However, the volume of waste generated during construction would be minimal and within the current landfill capacity. Development of the Grant Line Road would not induce population growth, and as a result no additional solid waste would be generated during operation of Grant Line Road. Therefore, the construction solid waste generated because of the construction of Grant Line Road would not result in a new or substantially more severe impacts than was addressed in the General Plan EIR. Impacts would remain **less than significant**.

South and West Study Areas

Increased solid waste because of the increased population growth and development anticipated in the South and West Study Areas is included in the overall population and development growth associated with the Project. The South and West Study Areas, which are located outside of City limits, would be subject to General Plan policies and mitigation measures identified in the General Plan EIR to reduce effects associated with solid waste. However, solid waste services would be added to the South and West Study Areas upon annexation to the City. Although, anticipated solid waste generated in the South and West Study Areas would be similar to what was analyzed in the General Plan EIR, as a result of comparable development intensity and population growth proposed by the Project. As a result, the impact would remain **less than significant**. Development within the South and West Study Areas would not result in a new or substantially more severe impacts regarding water supply than was addressed in the General Plan EIR.

Mitigation Measures

No additional mitigation is required beyond compliance with the City's existing recycling programs and associated regulations, we well as EGMC Section 30.70.030(C).

Impact 3.10-4: Adverse Impacts on Groundwater Resources and Conflicts with a Groundwater Sustainability Plan

While General Plan Impact 5.9.7 did not address conflicts with a groundwater sustainability plan, it did identify significant and unavoidable groundwater impacts because of the anticipated new water demand from the General Plan may exceed the annual sustainable yield of the groundwater from the Central Basin portion of the South American subbasin because of proposed development located outside of City limits but within the Study Areas. Implementation of the Project would generate additional demand for water supplies from increased development that could add to groundwater resource impacts identified in the General Plan EIR. Future development and water service providers would participate management actions that implement South American Subbasin Groundwater Sustainability Plan and maintain groundwater production at or below the long-term average annual sustainable yield of 235,000 AFY. The Project's additional water demand is minor compared with existing and projected water demand and is not expected to result in the exceedance of the long-term average annual sustainable yield. The Project would also be subject to applicable management actions to meet the groundwater sustainability goal of the South American Subbasin Groundwater Sustainability Plan. Therefore, the additional water demand resulting from the Project would not result in a new or substantially more severe groundwater impacts than was addressed in the General Plan EIR. The Project would also not result in conflicts with the South American Subbasin Groundwater Sustainability Plan. Project impacts would remain **significant and unavoidable**.

As described in Impact 3.10-1, subsequent development of the proposed General Plan land use amendments (LEA Community Plan, Old Town Policy Area, and South and West Study Areas) would increase water demands beyond what was previously evaluated in the General Plan EIR Impact 5.12.1.1. Water supplies for the LEA Community Plan Area would be provided by SCWA, which uses both surface water and groundwater, with minimal recycled water, to meet domestic water needs. The Project's increase in water demands could also result in additional groundwater production beyond what was addressed in General Plan EIR Impact 5.9.7. The SASb GSP identifies the long-term average annual sustainable yield of groundwater to be 235,000 AFY. While the Project may increase groundwater use beyond what was evaluated in the General Plan EIR, it is not expected that the water demand would exceed the long-term average annual sustainable yield when factoring total water demand (3,505 AFY) and SCWA's anticipated groundwater use of 56,000 AFY in 2035, 2040, and 2045 under dry year conditions. SCWA has identified a system of sixteen separate well fields throughout Zone 40, with two future wells located in the LEA Community Planning Area (SCWA 2023). A distributed groundwater extraction strategy was selected by SCWA to minimize drawdown effects of pumping by spreading extraction over a wide geographic area. In addition, water service providers for the Project would participate and/or implement projects and management actions that have been identified in the GSP to the achievement of groundwater sustainability. The Grant Line Road Precise Roadway Study would refine the roadway configuration of Grant Line Road and would not alter planned land uses in a manner that would alter groundwater use.

Therefore, the additional water demand resulting from the Project would not result in a new or substantially more severe groundwater impacts than was addressed in the General Plan EIR. The Project would also not result in conflicts with the SASb GSP. Project impacts would remain **significant and unavoidable**.

Mitigation Measures

No additional feasible mitigation available beyond compliance with existing laws, proposed General Policies, and General Plan Mitigation Measure MM 5.12.1.1.

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3.11 ENVIRONMENTAL IMPACTS AND MITIGATION ADDRESSED IN PREVIOUS EIRS

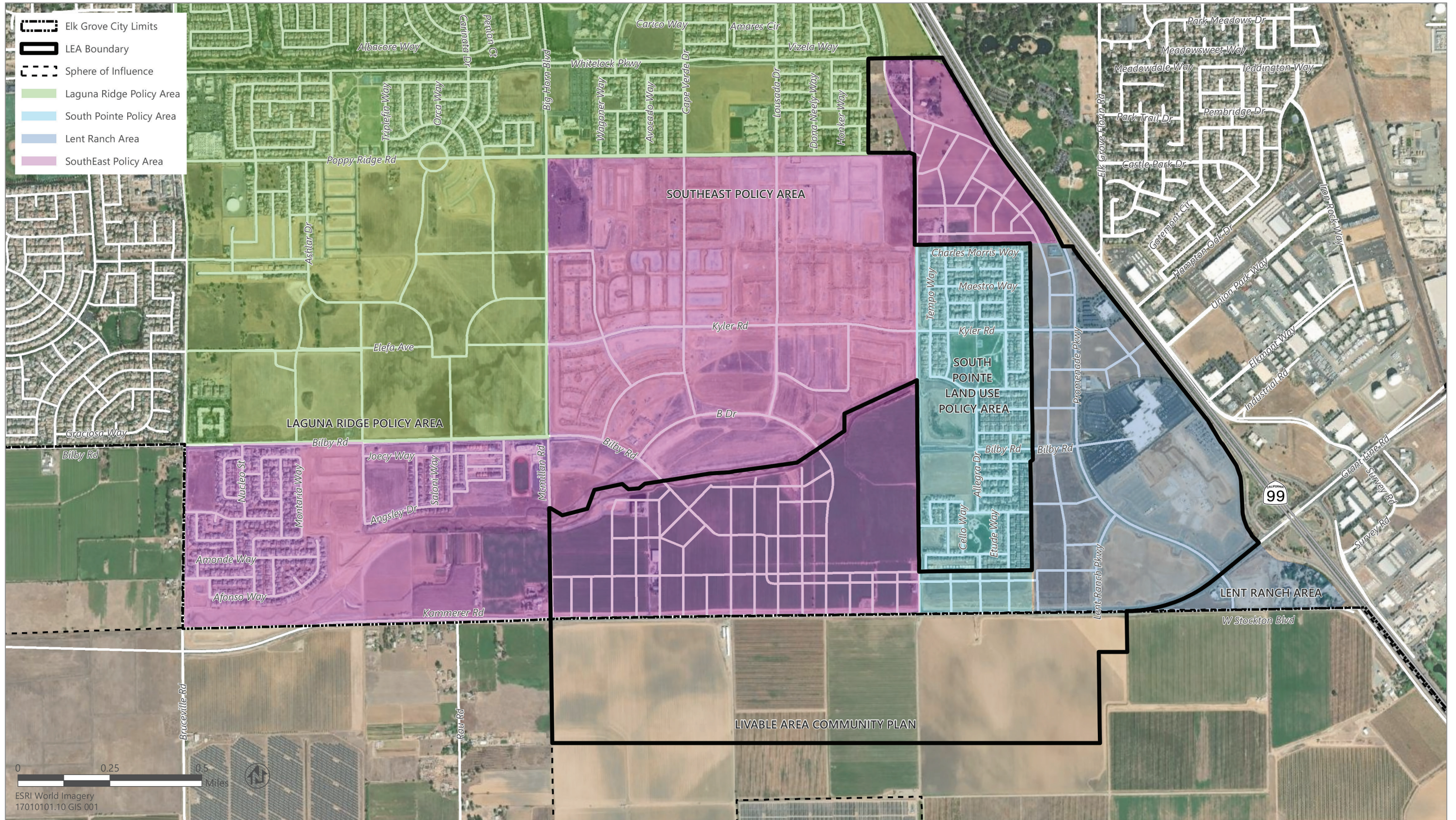
CEQA allows a lead agency to limit the detail of discussion of environmental effects that are not potentially significant (PRC Section 21100, State CEQA Guidelines Section 15128). Following research and analysis of technical studies and data, it was determined that the Project would not result in significant environmental impacts on agriculture, biological resources, geology and soils, hazard and hazardous materials, hydrology and water quality, and land use. Approved projects and certified EIRs that address these issue areas and cover the land area within the proposed LEA Community Plan Area are listed below. The General Plan EIR provides the most recent programmatic analysis of the EIRs identified below. Figure 3.11-1 identifies the geographic extent of the environmental analyses of the following focused plans:

- ▶ General Plan Update (adopted January 2019) and EIR (State Clearinghouse 2017062058): programmatically evaluated General Plan policy and land use designations for the City and its Planning Area.
- ▶ Southeast Policy Area Strategic Plan (adopted June 2014 – referred to as Southeast Policy Area in the General Plan) and EIR (State Clearinghouse 2013042054) (see Figure 3.11-1).
- ▶ Laguna Ridge Specific Plan (adopted June 2004 and amended December 2019 – referred to as the Laguna Ridge Policy Area in the General Plan) and EIR (State Clearinghouse 2000082139) (see Figure 3.11-1).
- ▶ Lent Ranch Marketplace Special Planning Area (various Districts approved June 2001, June 2008, December 2008, and October 2014 – referred to as the Lent Ranch Policy Area in the General Plan) and EIR (State Clearinghouse 1997122002) (see Figure 3.11-1).
- ▶ Sterling Meadows Tentative Subdivision Map (approved May 2008) and EIR (State Clearinghouse 1999122067), referred to as the SouthPoint Policy Area in the General Plan.

Pursuant to State CEQA Guidelines Section 15162 an SEIR may be prepared if an EIR has been certified for a project and if one or more of the following conditions are met: 1) substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; 2) substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or 3) there is new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete. This section utilizes State CEQA Guidelines Section 15162 to analyze Project impacts as compared to findings in the General Plan EIR and from prior project level environmental reviews that include portions of the LEA Community Plan Area.

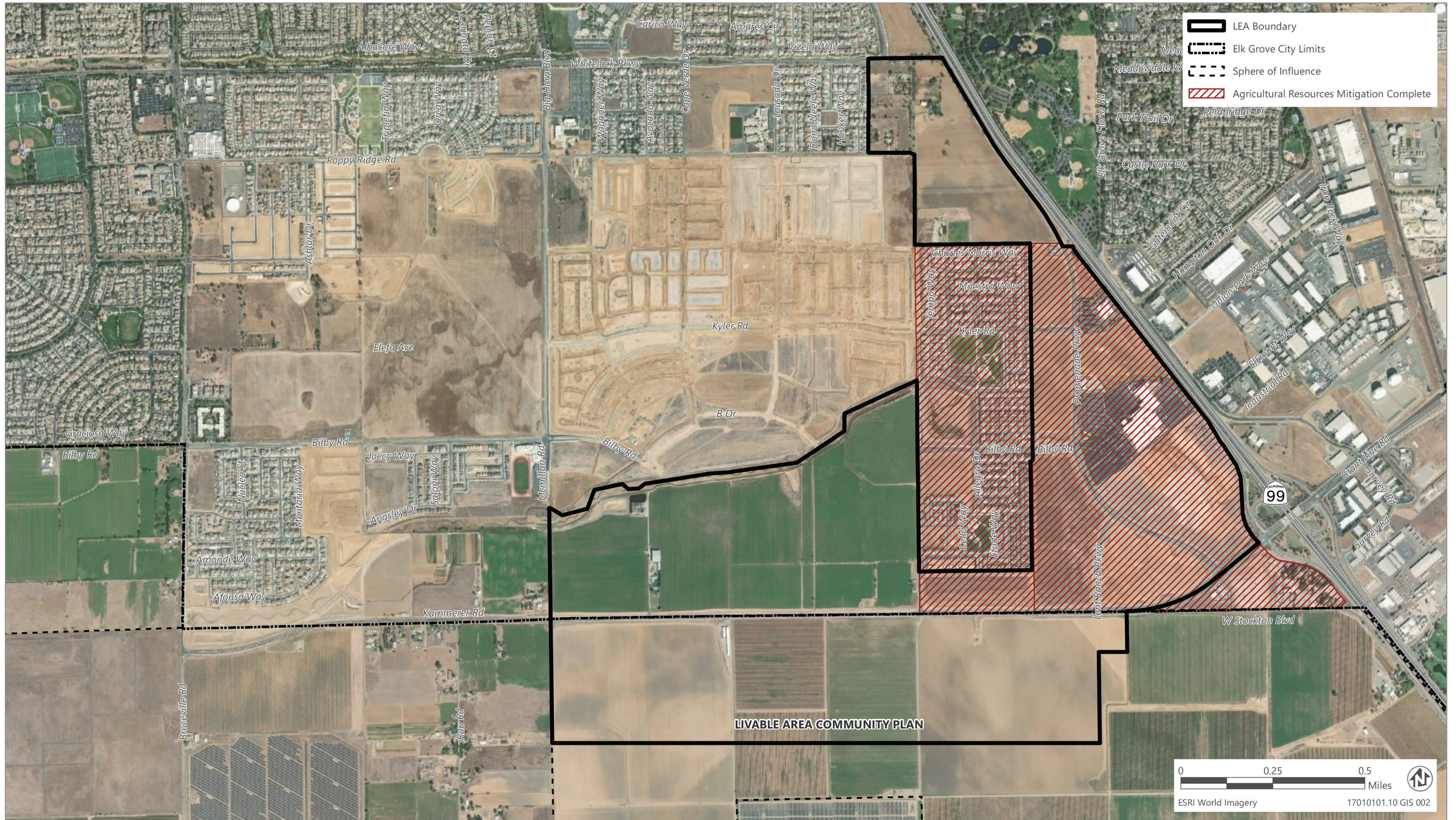
Impacts to these environmental resource areas are analyzed below, including reference to adopted mitigation measures. Project impacts were determined not to be more severe than the impacts or new impacts identified in the General Plan EIR and the applicable EIRs identified above. Each subsection includes a brief setting with any updates to the regulatory or environmental setting; applicable General Plan policies; impact analysis; and an impact finding with any adopted mitigation measures that currently apply to the LEA Community Plan Area. Please refer to Appendix G for a full list of mitigation measures from the General Plan EIR and other EIRs that would apply to future projects being built in the LEA Community Plan Area. In cases where there are multiple adopted mitigation measures from different EIRs that address the same impact topic, a new mitigation measure is identified to be applied only to the LEA Community Plan Area to avoid conflicts from implementation of adopted mitigation monitoring programs for approved projects. Areas within the LEA Community Plan Area where agricultural and biological resources mitigation have been complete are shown in Figures 3.11-2 and 3.11-3.

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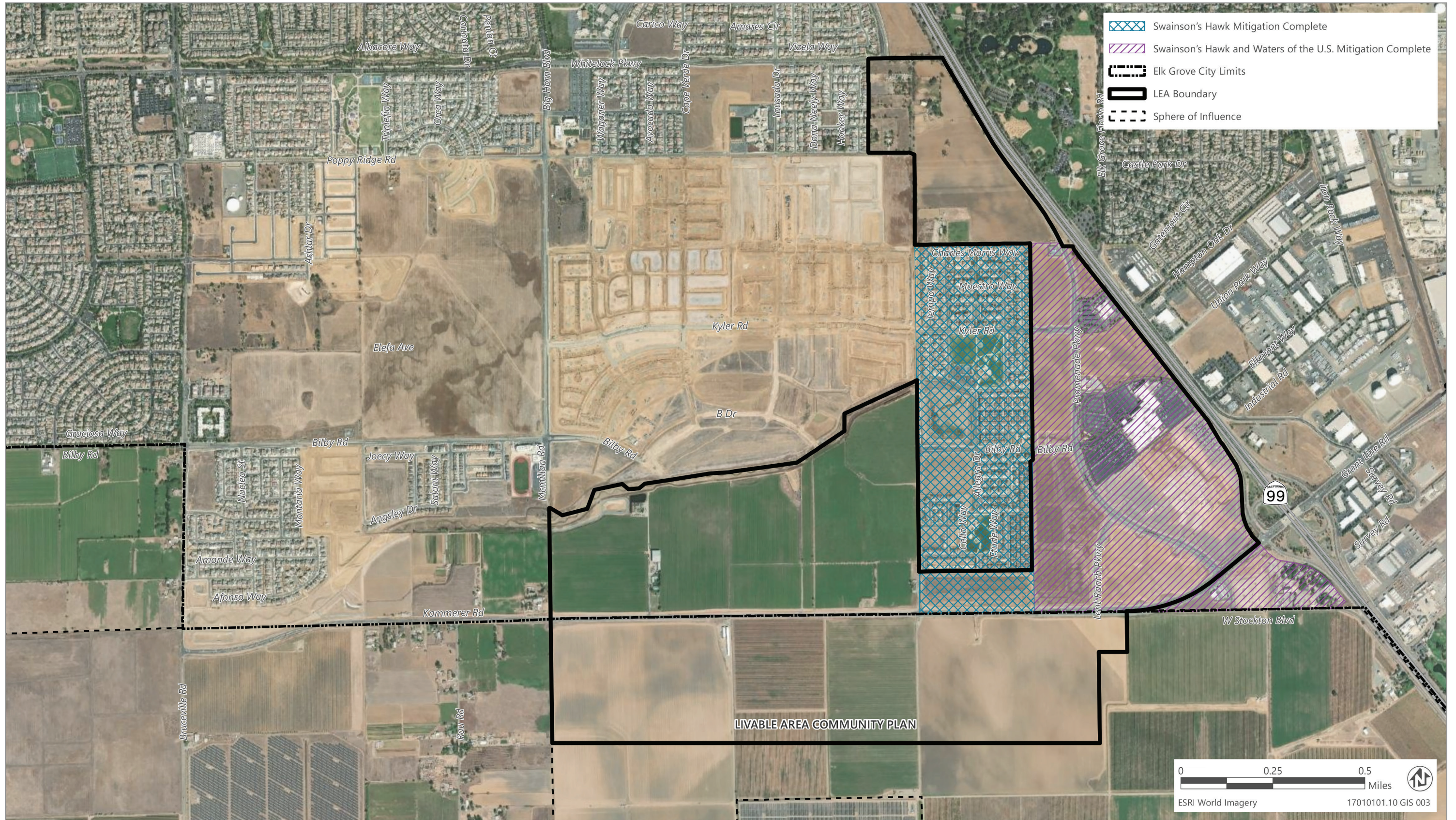
Source: Ascent Environmental 2023.

Figure 3.11-1 Livable Employment Area and Overlapping Policy Areas



Source: Ascent Environmental 2023.

Figure 3.11-2 Livable Employment Area Completed Agricultural Resources Mitigation



Source: Ascent Environmental 2023.

Figure 3.11-3 Livable Employment Area Completed Biological Resources Mitigation

3.11.1 Agricultural Resources

ENVIRONMENTAL SETTING

As described in the General Plan EIR the Planning Area includes 149,573 acres of Important Farmland (Prime Farmland, Farmland of Statewide Importance, Unique Farmland) (City of Elk Grove 2019). All 348 acres of Prime Farmland are located outside the 2019 City limits in the South and West Study Areas. Approximately 627 acres of Important Farmland are located within the City limits, including in the LEA Community Plan Area. Important Farmland is also located east of Grant Line Road. There are approximately 2,892 acres of agricultural land under Williamson Act Contract in the Planning Area, of which 172 acres are in the City limits (DOC 2023). Active Williamson Act properties are located south of Kammerer Road in the LEA Community Plan Area and South and West Study Areas. Properties north of Kammerer Road were not renewed in 2002 and 2003 and are no longer under Williamson Act Contract; however, removal of the Agricultural Preserve established under the Williamson Act may still be required. The majority of the LEA Planning Area and South and West Study Areas, including areas designated as Farmland, remain undeveloped. There are no designated Farmland or Williamson Act Contract lands in the Old Town Policy Area.

GENERAL PLAN POLICIES

The following General Plan policies are applicable to the Project:

- ▶ **Policy AG-1-2:** As appropriate, protect agricultural lands from conversion.
- ▶ **Policy AG-1-3:** Recognize the right of existing agricultural uses to continue as long as individual owners/farmers desire. As appropriate for the neighborhood, allow for buffers or feathering of lot sizes where appropriate between farmland and urban uses. Additionally, continue implementing the City's Right to Farm regulations and property title disclosures to notify prospective buyers of agricultural activities in the area.
 - **Standard AG-1-3.a:** Notify prospective buyers of property adjacent to agricultural land through the title report that they could be subject to inconvenience or discomfort resulting from accepted farming activities pursuant to provisions of the City's right-to-farm regulations
- ▶ **Policy AG-1-5:** Protect agricultural lands from future risk of conversion by requiring mitigation of the loss of qualified agricultural lands at a 1:1 ratio.
- ▶ **Policy AG-1-6:** Limit the siting of projects with land uses that might result in conflicts near existing agriculture due to noise, air quality, or odors.

ENVIRONMENTAL IMPACT ANALYSIS

Implementation of the proposed Project would allow for development in areas of the Planning Area that are designated Important Farmland and/or under Williamson Act contract. Additionally, the Project would place urban land uses adjacent to primary agricultural land uses. Placing urban land uses adjacent to agriculture may impair agricultural production. However, the Project would not increase the total area impacted by development as compared to the General Plan EIR and the associated EIRs identified above, but would result in denser development in the LEA Community Plan Area and South and West Study Areas than what was analyzed in the General Plan EIR. The Project would not incorporate any new parcels featuring Important Farmland beyond what was originally analyzed in the General Plan EIR. Similarly, the Project would not result in further land use conflicts with agriculture because the Project would not result in additional parcels being developed, beyond what was analyzed in the General Plan EIR. Agricultural impacts were determined to be significant and unavoidable in the General Plan EIR and certified CEQA documents that cover portions of the LEA Community Plan Area (i.e., Southeast Policy Area Strategic Plan EIR, Laguna Ridge Specific Plan EIR, Sterling Meadows Tentative Subdivision Map, and Lent Ranch Marketplace Special Planning Area). Because this issue was evaluated in the General Plan EIR and other previous EIRs and the proposed

footprint of development has not changed from the General Plan EIR there would be no additional agricultural impacts as a result of implementing the Project. Therefore, this impact would remain **significant and unavoidable**.

IMPACT FINDING AND MITIGATION

There is no new significant effect, and the impact is not more severe than the impact identified in the General Plan EIR. As noted above, this impact would remain significant and unavoidable. Subsequent development would be required to comply with applicable General Plan policies and applicable regulations related to agricultural resource preservation. As discussed above portions of the LEA Community Plan Area have been analyzed in certified CEQA documents. Mitigation Measure MM 5.2.1 "Agricultural Resources Preservation" has been drafted for this SEIR to combine agricultural resources requirements from previous CEQA documents prepared for the Southeast Policy Area Strategic Plan, Laguna Ridge Specific Plan, and Lent Ranch Special Planning Area. This measure contains the same performance standards and is equivalent in effectiveness as mitigation contained in the prior environmental documents. Mitigation Measure MM 5.2.1 is only applicable to the LEA Community Plan Area and does not supersede mitigation requirements for the other community plan areas outside of the LEA Community Plan Area. No mitigation measures are available beyond compliance with policies listed above, state regulations, mitigation measures included in previous EIRs covering the Planning Area, and Mitigation Measure MM 5.2.1. A comprehensive list of mitigation measures from other community plans prior environmental review are included in Appendix G. Areas within the LEA Community Plan Area where agricultural resources mitigation has been complete are shown in Figure 3.11-2. Even with the application of this mitigation measure, this impact would remain **significant and unavoidable**.

Mitigation Measure 3.11-1 Agricultural Resources Preservation for the LEA Community Plan Area

The applicant of subsequent development projects in the LEA Community Plan Area shall protect one acre of existing farmland land of equal or higher quality for each acre of Prime Farmland, Unique Farmland or Farmland of Statewide Importance that would be developed as a result of the Project. The Project mitigation acreage must be located within Sacramento County. This protection may consist of the establishment of farmland conservation easement, farmland deed restriction or other appropriate farmland conservation mechanism that ensures the preservation of that land from conversion in perpetuity but may also be utilized for compatible wildlife habitat conservation efforts (e.g., Swainson's hawk foraging habitat mitigation). In deciding whether to approve the land proposed for preservation by the Project applicant, the City shall consider the benefits of preserving farmlands in proximity to other protected lands. The farmland/wildlife habitat must have adequate water supply to support agricultural use. The preservation of off-site farmland shall be done prior to the City's approval of the project's first grading permit. Grading plans shall include the acreage and type of farmland impacted. In addition, the City shall impose the following minimum conservation easement content standards:

- a) All owners of the agricultural/wildlife habitat mitigation land shall execute the document encumbering the land.
- b) The document shall be recordable and contain an accurate legal description of the agricultural/wildlife habitat mitigation land.
- c) The document shall prohibit any activity which substantially impairs or diminishes the agricultural productivity of the land. If the conservation easement is also proposed for wildlife habitat mitigation purposes, the document shall also prohibit any activity which substantially impairs or diminishes the wildlife habitat suitability of the land.
- d) The document shall protect any existing water rights necessary to maintain agricultural uses on the land covered by the document and retain such water rights for ongoing use on the agricultural/wildlife habitat mitigation land.
- e) Interests in agricultural/habitat mitigation land shall be held in trust by an entity acceptable to the City and/or the City in perpetuity. The entity shall not sell, lease, or convey any interest in agricultural/wildlife habitat mitigation land which it shall acquire without the prior written approval of the City.
- f) The applicant shall pay to the City an agricultural/wildlife habitat mitigation monitoring fee to cover the costs of administering, monitoring and enforcing the document in an amount determined by the receiving entity, not to

exceed 10 percent of the easement price paid by the applicant, or a different amount approved by the City Council, not to exceed 15 percent of the easement price paid by the applicant.

- g) The City shall be named a beneficiary under any document conveying the interest in the agricultural/wildlife habitat mitigation land to an entity acceptable to the City.
- h) If any qualifying entity owning an interest in agricultural/wildlife habitat mitigation land ceases to exist, the duty to hold, administer, monitor and enforce the interest shall be transferred to another entity acceptable to the City.
- i) Before committing to the preservation of any particular farmland pursuant to this measure, the Project proponent shall obtain the City's approval of the farmland proposed for preservation.

3.11.2 Biological Resources

ENVIRONMENTAL SETTING

As described in the General Plan EIR, the Project area is located in mostly urban or rural development, cropland, vineyard and irrigated pasture with minimal areas of annual grassland, stream, and freshwater marsh. The majority of the Planning Area is already heavily modified from its natural habitat and is routinely disturbed by human activity. Due to the high levels of disturbance, urban areas are considered low quality habitat for wildlife. However, migratory birds and other common species may utilize the habitat, such as common raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), American crow (*Corvus brachyrhynchos*), mourning dove (*Zenaida macroura*), and northern mockingbird (*Mimus polyglottos*). Rural areas provide higher quality habitat for wildlife due to there being less humanmade structures, impervious surfaces, and anthropomorphic noise and light pollution. In addition, vernal pools and other wetlands can still be found in rural areas and provide niche habitat for certain special-status species, including species officially listed as threatened or endangered by the state of California or the federal government. Due to their ability to provide habitat to unique plant and wildlife species, vernal pools are considered sensitive natural communities by the California Department of Fish and Wildlife (CDFW). Jurisdictional waters of the United States and state, along with isolated wetlands, provide a variety of functions for plants and wildlife. Wetlands and other water features provide habitat, foraging, cover, and migration and movement corridors for both special-status and common species.

An updated database search was completed for the LEA Community Plan Area to determine if there is potential for any additional species to occur. The California Natural Diversity Database (CNDDDB) and California Native Plant Society (CNPS) Rare Plant Inventory nine-quad search, eBird, and the US Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) Resource List were reviewed for the Project. Results show that one plant species, Sanford's arrowhead (*Sagittaria sanfordii*) and several wildlife species have potential to occur in the LEA Community Plan Area (Table 3.11-1). The bolded species in Table 3.11-1 have previously recorded occurrences within or around the LEA Community Plan Area. Appendix H provides a list of species considered but removed from further evaluation because there is no habitat suitable for these species in the LEA Community Plan Area. Franklin's Bumble bee (*Bombus franklini*) was listed as endangered under the California Endangered Species Act (CESA) in 2021, after adoption of the General Plan EIR. Based on database searches and literature review, the Project area is considered outside of the species' range and is not included further in this analysis (Xerces Society 2023).

Table 3.11-1 Special Status Wildlife Species with Potential to Occur in the Project Vicinity

Species Common Name	Species Scientific Name	Species with Potential to Occur or Previous Observations in the LEA Community Plan Area
Cooper's Hawk	<i>Accipiter cooperii</i>	May occur
Tricolored blackbird	<i>Agelaius tricolor</i>	May Occur
burrowing owl	<i>Athene cunicularia</i>	Known to Occur
ferruginous hawk	<i>Buteo regalis</i>	May occur

Species Common Name	Species Scientific Name	Species with Potential to Occur or Previous Observations in the LEA Community Plan Area
Swainson's hawk	<i>Buteo swainsoni</i>	Known to Occur
northern harrier	<i>Circus hudsonius</i>	May occur
Valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	May occur
white-tailed kite	<i>Elanus leucurus</i>	May occur
western pond turtle	<i>Emys marmorata</i>	May occur
Greater sandhill crane	<i>Grus canadensis tabida</i>	May occur
loggerhead shrike	<i>Lanius ludovicianus</i>	May occur
western red bat	<i>Lasiurus frantzii</i>	May occur
song sparrow (modesto pop)	<i>Melospiza melodia pop 1</i>	May occur
Giant gartersnake	<i>Thamnophis gigas</i>	M occur

Source: CNDDDB 2023, CNPS 2023, and USFWS 2023.

GENERAL PLAN POLICIES

The following General Plan policies are applicable to the Project:

- ▶ **Policy LU-5-4:** Require high standards of architectural and site design, and apply strong design controls for all development projects, both public and private, for the enhancement and development of community character and for the proper transition between areas with different types of land uses. Design standards shall address new construction and the reuse and remodeling of existing buildings.
 - **Standard LU-5-4a:** Nonglare glass shall be used in all nonresidential buildings to minimize and reduce impacts from glare. Buildings that are allowed to use semi-reflective glass must be oriented so that the reflection of sunlight is minimized. This requirement shall be included in subsequent development applications.
- ▶ **Policy NR-1-2:** Preserve and enhance natural areas that serve, or may potentially serve, as habitat for special-status species. Where preservation is not possible, require that appropriate mitigation be included in the project.
 - **Standard NR-1.2a:** Require a biological resources evaluation for private and public development projects in areas identified to contain or possibly contain special-status plant and animal species.
 - **Standard NR-1.2b:** Require development projects to retain movement corridor(s) adequate (both in size and in habitat quality) to allow for continued wildlife use based on the species anticipated in the corridor.
 - **Standard NR-1.2c:** Development adjacent to a natural stream(s) shall provide a "stream buffer zone" along the stream. "Natural streams" shall be generally considered to consist of the following, subject to site-specific review by the City:
 - Deer Creek
 - Elk Grove Creek
 - Laguna Creek and its tributaries
 - Morrison Creek
 - Strawberry Creek
 - White House Creek

The following are examples of desired features for this transition zone; the specific design for each transition zone shall be approved on a case-by-case basis by the City.

Stream buffer zones shall measure at least 50 (fifty) feet from the stream centerline (total width of 100) feet or more, depending on the characteristics of the stream, and shall include:

1. Sufficient width for a mowed fire-break (where necessary), access for channel maintenance and flood control, and for planned passive recreation uses.
2. Sufficient width to provide for:
 - a. Quality and quantity of existing and created habitat,
 - b. Presence of species as well as species sensitivity to human disturbance,
 - c. Areas for regeneration of vegetation,
 - d. Vegetative filtration for water quality,
 - e. Corridor for wildlife habitat linkage,
 - f. Protection from runoff and other impacts of urban uses adjacent to the corridor, and
 - g. Trails and greenbelts.
3. The stream buffer zone shall not include above ground water quality treatment structures designed to meet pollutant discharge requirements.

- ▶ **Policy NR-1-4:** Avoid impacts to wetlands, vernal pools, marshland, and riparian (streamside) areas unless shown to be technically infeasible. Ensure that no net loss of wetland areas occurs, which may be accomplished by avoidance, revegetation, restoration onsite or through creation of riparian habitat corridors, or purchase of credits from a qualified mitigation bank.
- ▶ **Policy NR 1-5:** Recognize the value of naturally vegetated stream corridors, commensurate with flood control and public desire for open space, to assist in removal of pollutants, provide native and endangered species habitat, and provide community amenities.
- ▶ **Policy NR-1-6:** Encourage the retention of natural stream corridors, and the creation of natural stream channels where improvements to drainage capacity are required.
 - **Standard NR 1-6a:** Stream crossings shall be minimized and be aesthetically compatible with the natural appearance of the stream channel. The use of bridges and other stream crossings with natural (unpaved) bottoms shall be encouraged to minimize impacts to natural habitat.
 - **Standard NR 1-6b:** Uses in the stream corridors shall be limited to recreation and agricultural uses compatible with resource protection and flood control measures. Roads, parking, and associated fill slopes shall be located outside of the stream corridor, except at stream crossings.
 - **Standard NR 1-6c:** Open space lands within a stream corridor shall be required to be retained as open space as a condition of development approval for projects that include a stream corridor. Unencumbered maintenance access to the stream shall be provided.
 - **Standard NR 1-6d:** To the extent possible, retain natural drainage courses in all cases where preservation of natural drainage is physically feasible and consistent with the need to provide flood protection. Where a stream channel is to be created, such man-made channels shall be designed and maintained such that they attain functional and aesthetic attributes comparable to natural channels.
- ▶ **Policy NR-1-9:** Encourage development clustering where it would facilitate on-site protection of woodlands, grasslands, wetlands, stream corridors, scenic areas, or other appropriate features such as active agricultural uses and historic or cultural resources under the following conditions and requirements. Clustering shall not be allowed in the Rural Area.

- Urban infrastructure capacity is available for urban use.
 - On-site resource protection is appropriate and consistent with other General Plan policies.
 - The architecture and scale of development are appropriate for and consistent with the intended character of the area.
 - Development rights for the open space area are permanently dedicated and appropriate long term management, with funding in perpetuity, is provided for by a public agency or another appropriate entity.
 - Suitability for preservation in place
 - Biological value
 - Aesthetic value
 - Shade benefits
 - Water quality benefits
 - Runoff reduction benefits
 - Air quality benefits (pollutant reduction)
- ▶ **Policy NR-2-2:** Maximize tree canopy coverage on public lands and in open spaces by continuing to plant new trees and ensuring sufficient right-of-way width for new developments to provide tree plantings.
 - ▶ **Policy NR-2-3:** Maintain tree health and canopy coverage throughout Elk Grove by managing and caring for all trees on public lands.
 - ▶ **Policy NR-2-4:** Preserve and plant trees in appropriate densities and locations to maximize energy conservation and air quality benefits.
 - ▶ **Policy NR-2-5:** Ensure that trees that function as an important part of the City's or a neighborhood's aesthetic character or as natural habitat on public and private land are retained or replaced to the extent possible during the development of new structures, roadways (public and private, including roadway widening), parks, drainage channels, and other uses and structures.
 - ▶ **Policy NR-2-6:** Promote the planting of drought-resistant shade trees with substantial canopies as part of private development projects and require, where feasible, site design that uses trees to shade rooftops, parking facilities, streets, and other facilities.
 - ▶ **Policy NR-2-7:** Support regional and community-led arborization efforts, including the joint annual campaign by the Sheldon Community Association and the Greater Sheldon Road Estates Homeowners Association to increase native oak tree cover in the Rural Area.
 - ▶ **Policy NR-3-1:** Ensure that the quality of water resources (e.g., groundwater, surface water) is protected to the extent possible.
 - ▶ **Policy NR-3-2:** Integrate sustainable stormwater management techniques in site design to reduce stormwater runoff and control erosion.
 - **Standard NR-3-2.a:** Where feasible, employ on-site natural systems such as vegetated bioswales, living roofs, and rain gardens in the treatment of stormwater to encourage infiltration, detention, retention, groundwater recharge, and/or on-site water reuse.
 - **Standard NR-3-2.b:** Roads and structures shall be designed, built and landscaped so as to minimize erosion during and after construction.
 - **Standard NR-3-2.c:** Post-development peak storm water run-off discharge rates and velocities shall be designed to prevent or reduce downstream erosion, and to protect stream habitat.
 - **Policy NR-3-13:** Advocate for native and/or drought-tolerant landscaping in public and private projects.

- **Standard NR-3-13.a:** Require the planting of native and/or drought-tolerant landscaping in landscaped medians and parkway strips to reduce water use and maintenance costs.

CITY REGULATIONS THAT ADDRESS BIOLOGICAL RESOURCES

City of Elk Grove Municipal Code Chapter 16.130: Swainson’s Hawk Impact Mitigation Fees

Chapter 16.130 mitigates impacts from typical urban development projects and requires mitigation for the loss of Swainson’s hawk habitat at a 1:1 ratio. Mitigation can be achieved through purchase of City-owned credits for projects 40 acres or less. For projects larger than 40 acres, options for achieving mitigation through the code include the direct transfer to the City of a Swainson’s hawk habitat conservation easement along with an easement monitoring endowment or the purchase of credits at a CDFW-approved conservation bank. The easement must be surveyed to determine whether it is suitable Swainson’s hawk foraging habitat.

City of Elk Grove Municipal Code Chapter 19.12: Tree Preservation and Protection

Chapter 19.12 provides regulations for tree preservation and protection.

The regulations apply to four types of trees as follows:

- ▶ landmark trees, which are trees specifically identified for protection by the City Council;
- ▶ trees of local importance, which are trees of specific varieties greater than 6 inches in diameter;
- ▶ secured trees, which are trees that were protected as part of the development process for residential subdivisions and commercial developments; and
- ▶ trees on City property or in the public right-of-way.

Work on or removal of any of these four types of trees requires prior approval in the form of a Tree Permit from the City of Elk Grove. Project applicants shall contact the City Current Planning Division to determine whether their tree requires a Tree Permit prior to completing work.

Arborist Review

Prior to the consideration of a request for tree removal by the designated approving authority or grading within the critical root zone of a qualified tree, the applicant shall retain an International Society of Arboriculture–certified arborist to prepare a report. The report shall identify the basis, if any, for supporting the removal of the qualified tree(s) and shall be subject to review by the City Arborist. The arborist report shall include an analysis of the following factors:

- ▶ the condition of the tree with respect to disease, general health, damage, structural integrity, and whether or not the tree acts as a host for an organism that is parasitic to another species of tree that is in danger of being exterminated by the parasite;
- ▶ the number of existing trees on the subject property, on adjacent property, and immediately proximate to the subject tree(s) as deemed relevant by the City Arborist, and the effect of the tree removal upon public health, public safety, and the prosperity of surrounding trees;
- ▶ the number of healthy trees that a given parcel of land will support, with and without the proposed development;
- ▶ the effect of tree removal on soil stability/erosion, particularly near water courses, near drainage ditches, or on steep slopes, or the effect on runoff interception;
- ▶ present and future shade potential with regard to solar heating and cooling;
- ▶ identification of alternatives that would allow for the preservation of the tree(s) proposed for removal; and
- ▶ any other information the City Arborist finds pertinent (e.g., site conditions, other vegetation, and utility service).

Mitigation for Tree Loss

As part of the approval of a tree permit for removal of a qualified tree, the designated approving authority shall require mitigation for the loss of the tree consistent with Chapter 19.12, Article IV (Mitigation for Tree Loss). The requirement for mitigation may be waived under those circumstances as provided in Section 19.12.180 (Alternative Mitigation Requirements). Mitigation for qualified tree loss shall be provided at a ratio of 1 new inch diameter at breast height (DBH) of tree for each inch DBH lost (1:1 ratio) unless alternative mitigation is approved by the City.

ENVIRONMENTAL IMPACT ANALYSIS

Implementation of the proposed Project would allow for development in portions of the Planning Area that may contain sensitive biological resources, such as special-status and sensitive plant and wildlife species, sensitive habitats (including wetlands [waters of the State and waters of the U.S.]), and wildlife movement. Oak trees in the northern portion of the LEA Community Plan Area and elsewhere throughout the City may be impacted by development under the Project. Additionally, proposed buildings in the LEA Community Planning Area would be as tall as seven stories. Taller buildings have the potential to result in bird collisions as the result of artificial nighttime lighting and building glare. Bird collisions with buildings was not specifically addressed in the General Plan EIR.

The Project would not change the extent of land disturbance from what was evaluated in the General Plan EIR (no change in the City's planned development footprint). Although Franklin's Bumble bee was listed in 2021 following certification of the General Plan EIR, there is no suitable habitat for the bumble bee in the Project vicinity. A windshield survey of the LEA Community Plan Area on March 19, 2023 performed by a qualified biologist confirmed that biological resources have not changed significantly since adoption of the General Plan in 2019. New suitable habitat for species does not occur in the LEA Community Planning Area.

Oak trees and other protected tree species would be subject to Elk Grove Municipal Code Section 19.12 for protection and replacement of trees. As part of the approval of a tree permit for removal of a qualified tree, the City requires mitigation for the loss of the tree consistent with Chapter 19.12, Article IV (Mitigation for Tree Loss). The requirement for mitigation may be waived under those circumstances as provided in Section 19.12.180 (Alternative Mitigation Requirements). Mitigation for qualified tree loss shall be provided at a ratio of 1 new inch diameter at breast height (DBH) of tree for each inch DBH lost (1:1 ratio) unless alternative mitigation is approved by the City. Additionally, the Project would be subject to General Plan policies, specifically policies NR-2-2, NR-2-3, NR-2-4, and NR-2-5 to maximize tree canopy coverage, maintain tree health, preserve and plant trees, and ensure trees function as natural habitat for wildlife in the City.

Buildings in the LEA Planning Area would be constructed to minimize the potential for birds strikes. Projects would be required to implement lighting standards consistent with Elk Grove Municipal Code Chapter 23.56 and glare requirements included in Standard LU-5-4a. Requirements with lighting standards would reduce artificial nighttime lighting that might attract birds to buildings, while Standards LU-5-4a requires nonglare glass in all nonresidential buildings to minimize and reduce impacts from glare. Reduction in lighting and glare would minimize bird strikes. The proposed LEA form-based code includes architectural standards and guidelines that address building materials, building size, and lighting that would make future buildings visible as physical barriers and minimize conditions that create confusing reflections to birds that might cause them to strike buildings generally consistent with recommendations of the American Bird Conservancy (American Bird Conservancy 2015). For example, proposed LEA form-based code provisions would prohibit highly-reflective, mirrored, heavily-tinted and opaque glazing in windows and would require taller buildings to break-up building facades through building articulation, setbacks, patios, and decks that would make buildings visible to birds and avoid collisions. The Project would not change the extent of land disturbance from what was evaluated in the General Plan EIR. The mortality of common birds resulting from building collisions is not expected to eliminate or reduce local populations below self-sustaining levels.

Impacts to biological resources were determined to be significant and unavoidable under project and cumulative conditions in the General Plan EIR. Biological resource impacts in the LEA Community Plan Area were also previously addressed and mitigation measures adopted for the Southeast Policy Area Strategic Plan EIR, Laguna Ridge Specific Plan EIR, and Lent Ranch Marketplace Special Planning Area. Because this issue was evaluated in the General Plan EIR and other previous EIRs and the proposed footprint of development has not changed from the General Plan EIR nor

are there any new sensitive species or habitat, there would be no additional biological resources impacts as a result of implementing the Project. Therefore, this impact would remain **significant and unavoidable**.

IMPACT FINDING AND MITIGATION

There is no new significant effect, and the impact is not more severe than the impact identified in the General Plan EIR. Subsequent development would be required to comply with applicable General Plan policies and applicable regulations related to biological resources. Impacts to sensitive species would remain significant and unavoidable, as analyzed in the General Plan EIR. As discussed above, portions of the LEA Community Plan Area have been analyzed in certified CEQA documents. Mitigation Measures 3.11-2 through 3.11-11 have been drafted for this SEIR to combine biological resources requirements from previous CEQA documents prepared for the Southeast Policy Area Strategic Plan, Laguna Ridge Specific Plan, and Lent Ranch Marketplace Special Planning Area. These measures contain the same performance standards and are equivalent in effectiveness as mitigation contained in the prior environmental documents. Mitigation Measures 3.11-2 through 3.11-11 are only applicable to the LEA Community Plan Area and do not supersede mitigation requirements for the other community plan areas outside of the LEA Community Plan Area. No mitigation measures are available beyond compliance with policies listed above, state regulations, mitigation measures included in previous EIRs covering the Planning Area, and Mitigation Measures 3.11-2 through 3.11-11. A comprehensive list of mitigation measures related to biological resources from other prior environmental review are included in Appendix G. Areas within the LEA Community Plan Area where biological resources mitigation has been complete are shown in Figure 3.11-3. Even with the application of these mitigation measures, impacts to biological resources would remain **significant and unavoidable**.

Mitigation Measures 3.11-2 Special Status Plant Preconstruction Surveys for the LEA Community Plan Area

Applicants for any projects shall retain a qualified biologist(s) to conduct a preliminary evaluation of the specific project site to determine whether freshwater emergent wetland, or irrigation/drainage ditch habitats occur within the specific project site. If any of these habitats are identified within the specific project site, surveys in and adjacent to (within 100 feet, where appropriate) the proposed impact area, including new construction access routes, shall be conducted to determine the presence/absence of special-status plant species, including Sanford's arrowhead.

Surveys shall be conducted in accordance with CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (2009). These guidelines require that rare plant surveys be conducted at the proper time of year when rare or endangered species are both evident and identifiable. Field surveys shall be scheduled to coincide with known flowering periods and/or during appropriate developmental periods that are necessary to identify the plant species of concern. Survey results shall be submitted to the City for review and approval.

If no special status plant species are found in or adjacent to (within 100 feet) proposed impact areas, no further mitigation is required.

If any special status plant species are found in or adjacent to (within 100 feet) proposed impact areas during the surveys, these plant species shall be avoided to the greatest extent feasible. Any special status plant species that are identified adjacent to the project area, but not proposed to be disturbed by the project, shall be protected by barrier fencing to ensure that construction activities and material stockpiles do not impact any special-status plant species. These avoidance areas shall be identified on site plans and/or, tentative subdivision maps.

If project-related impacts will result in the loss of occupied habitat for a special-status plant species, mitigation to ensure that the special-status plant species population is not reduced below to self-sustaining levels, avoid elimination of the plant community, or reduce the range of the plant species based on the technical analysis of the qualified biologist and applicable agency (e.g., U.S. Fish and Wildlife and California Department of Fish and Wildlife) input/guidance. Mitigation may include redesign of the subsequent project to avoid the plant species and permanent preservation of onsite plant species population, transplantation of the plant species to habitat suitable for the plant species, or offsite mitigation banks.

Plans for avoidance, minimization, and mitigation (if appropriate) shall be prepared and submitted to the City of Elk Grove at the time of application for the City's review and approval. Surveys shall occur no more than two years prior to groundbreaking of the subsequent project.

Mitigation Measures 3.11-3 Valley Elderberry Longhorn Beetle Avoidance and Minimization in the LEA Community Plan Area

Applicants shall retain a qualified biologist to survey for the presence of elderberry shrubs with stems measuring greater than 1-inch diameter at ground level. Surveys shall be conducted in accordance with the USFWS 1999 Conservation Guidelines for the Valley Elderberry Longhorn Beetle. If no elderberry shrubs with one or more stems measuring 1 inch or greater in diameter at ground level are documented, no further mitigation is required. Survey results shall be submitted to the City for review and approval. If an elderberry shrub(s) with one or more stems measuring 1 inch or greater in diameter at ground level is documented, and a 100-foot avoidance buffer can be maintained around the shrub, the following protective measures shall be implemented:

- 1) Fence and flag all areas to be avoided during construction activities. In areas where encroachment into the 100-foot buffer has been approved by the USFWS, provide a minimum setback of at least 20 feet from the dripline of each elderberry plant.
- 2) Brief contractors on the need to avoid damaging the elderberry plants and the possible penalties for not complying with these requirements.
- 3) Erect signs every 50 feet along the edge of the avoidance area with the following information: "This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment." The signs should be clearly readable from a distance of 20 feet and must be maintained for the duration of construction.
- 4) Instruct work crews about the status of the beetle and the need to protect its elderberry host plant.
- 5) Restore any damage done to the buffer area (area within 100 feet of elderberry plants) during construction. Provide erosion control and revegetate with appropriate native plants.
- 6) Continue to protect buffer areas after construction from adverse effects of the project. Measures such as fencing, signs, weeding, and trash removal are usually appropriate.
- 7) Do not use insecticides, herbicides, fertilizers, or other chemicals that might harm the beetle or its host plant in the buffer areas or within 100 feet of any elderberry plant with one or more stems measuring 1 inch or more in diameter at ground level.
- 8) Project applicants shall provide a written description of how the buffer areas are to be restored, protected, and maintained after construction is completed to the USFWS and the City.
- 9) Mowing of grasses/ground cover shall only occur from July through April to reduce fire hazard. No mowing shall occur within 5 feet of elderberry plant stems. Mowing shall be done in a manner that avoids damaging plants (e.g., stripping away bark through careless use of mowing/trimming equipment).

If elderberry plants cannot be avoided, they must be transplanted to a conservation area in accordance with the 2017 USFWS guidelines, with USFWS approval. A plant that is unlikely to survive transplantation because of poor condition or location, or a plant that would be extremely difficult to move because of access problems, may be exempted from transplantation through consultation with the USFWS. In addition to transplanting all elderberry shrubs, additional elderberry seedlings or cuttings shall be planted at a 3:1 ratio (new plantings to affected stems). Native plants shall also be planted at a 1:1 ratio (native tree/plant species to each elderberry seedling or cutting). Stock of saplings, cuttings, and seedlings shall be obtained from local sources. If the parent stock is obtained from a distance greater than 1 mile from the conservation area, the USFWS must approve the plant donor sites prior to initiation of revegetation work. Planting or seeding the conservation area with native herbaceous species is encouraged.

Mitigation Measures 3.11-4 Giant Garter Snake Avoidance and Minimization in the LEA Community Plan Area

For projects with potential to impact giant garter snake (GGS) habitat, applicants shall have a qualified biologist perform a preconstruction survey within 30 days prior to commencement of construction activities within 200 feet of all aquatic habitats potentially suitable for GGS. In order to protect snakes, de-watering of areas shall not occur prior to completion of the pre-construction surveys.

If aquatic habitat potentially suitable for giant garter snake would be filled, the aquatic habitat shall be dewatered at least 15 days before fill. Dewatering of aquatic habitat for construction purposes shall not occur between October 1 and April 15, except for areas within a cofferdam, unless authorized by USFWS. Any dewatered habitat must remain dry for at least 15 consecutive days after April 15 and before excavation or filling of the dewatered habitat.

All construction activities within 200 feet of aquatic habitat suitable for giant garter snakes shall be conducted during the snake's active season of May 1 to October 1 so that snakes can move and avoid danger, and a monitoring biologist shall be retained by the City and funded by the project applicant to routinely monitor construction activities within 200 feet of aquatic habitat. For any construction outside of the snake's active period, USFWS will be consulted to determine whether additional measures are necessary to avoid or minimize potential impacts during the inactive season and avoid take. The applicant shall implement the avoidance and minimization measures outlined in *Appendix C Standard Avoidance and Minimization Measures During Construction Activities in Giant Garter Snake (Thamnophis gigas) Habitat* (USFWS 1997) whenever working within 200 feet of aquatic habitats potentially suitable for GGS. If a snake is encountered during construction activities, the monitoring biologist shall contact the City and will have the authority to stop construction activities until appropriate corrective measures have been completed or it is determined that the snake will not be harmed.

GGS encountered during construction activities should be allowed to move away from construction activities on their own. Capture and relocation of trapped or injured individuals can only be attempted by personnel or individuals with current USFWS recovery permits pursuant to Section 10(a) 1(A) of the ESA. The biologist shall be required to report any incidental take to the USFWS immediately. The project area shall be re-inspected whenever a lapse in construction activity of two weeks or greater has occurred. This mitigation measure does not apply to land areas where surveys within the active period of the snake have been conducted and no snakes were found.

In areas where aquatic habitats potentially suitable for giant garter snake are being retained on the site:

- ▶ A qualified biologist shall install temporary exclusion fencing around suitable upland habitat within 200 feet of aquatic habitat to prevent giant garter snakes from entering the work area during construction. The fencing shall be maintained for the duration of the construction activities;
- ▶ Ground disturbance, spoils, and equipment storage and other project activities shall not be allowed within the fenced area; and
- ▶ Water quality shall be maintained and construction runoff into wetland areas shall be limited using hay bales, filter fences, vegetative buffer strips, or other accepted equivalents. However, no plastic, monofilament, jute, or similar matting to control erosion that could entangle snakes shall be placed in the project area.

Mitigation Measures 3.11-5 Burrowing Owl Avoidance and Minimization in the LEA Community Plan Area

For projects with potential burrowing owl habitat, applicants shall retain a qualified biologist to determine whether suitable nesting habitat occurs within 500 feet of the specific project site within 30 days prior to any construction activities outside of the breeding season (September 1 through January 31). If suitable habitat exists, focused surveys must be performed by a qualified biologist in accordance with the CDFW's *Staff Report on Burrowing Owl Mitigation*, published March 7, 2012. Surveys shall be repeated if project activities are suspended or delayed more than 15 days during nesting season.

If no burrowing owls are detected, no further mitigation is required. If active burrowing owl nest sites are detected, the project applicant shall implement the avoidance, minimization, and mitigation methodologies outlined in the CDFW's *Staff Report on Burrowing Owl Mitigation* prior to initiating project-related activities that may impact burrowing owls. Burrowing owl surveys are valid for one year from the date of the survey.

Mitigation Measures 3.11-6 Migratory Bird Preconstruction Survey in the LEA Community Plan Area

If clearing and/or construction activities would occur during the nesting bird season (February 1 through September 1), preconstruction surveys to identify active non-raptor native bird nests protected under the Migratory Bird Treaty Act or California Fish and Game Code Section 3503 shall be conducted by a qualified biologist within 14 days of construction initiation on specific project sites. Focused surveys must be performed by a qualified biologist for the purpose of determining the presence/absence of active nest sites within the proposed impact area and a 500-foot buffer (if accessible). Surveys shall be repeated if construction activities are delayed or postponed for more than 30 days.

If active nest sites are identified within 500 feet of project activities, impacts on nesting birds shall be avoided by establishing appropriate buffers around active nest sites identified during focused surveys to prevent disturbance to the nest. Project activity shall not commence within the buffer areas until a qualified biologist has determined that the young have fledged, the nest is no longer active, or reducing the buffer would not likely result in nest abandonment. Buffer size for common, non-raptor bird species shall be determined by a qualified biologist. Factors to be considered for determining buffer size shall include presence of natural buffers provided by vegetation or topography, nest height above ground, baseline levels of noise and human activity, species sensitivity, and proposed project activities. Generally, buffer size for these species shall be at least 20 feet. The size of the buffer may be adjusted if a qualified biologist, determines that such an adjustment shall not be likely to adversely affect the nest. Any buffer reduction for a special-status species shall require consultation with CDFW and/or the City. Periodic monitoring of the nest by a qualified biologist during project activities shall be required if the activity has potential to adversely affect the nest, the buffer has been reduced, or if birds within active nests are showing behavioral signs of agitation (e.g., standing up from a brooding position, flying off the nest) during project activities, as determined by the qualified biologist.

Mitigation Measures 3.11-7 Raptor Nesting Preconstruction Survey in the LEA Community Plan Area

If clearing and/or construction activities would occur during the raptor nesting season (January 15–August 15), preconstruction surveys to identify active raptor nests shall be conducted by a qualified biologist within 14 days of construction initiation in specific project sites. Focused surveys must be performed by a qualified biologist for the purposes of determining presence/absence of active nest sites within the proposed impact area, including construction access routes and a 1,000-foot buffer. If no active nests are found, no further mitigation is required. Surveys shall be repeated if construction activities are delayed or postponed for more than 30 days.

If active white-tailed kite or other raptor (excluding Swainson's hawk) nest sites are identified within 1,000 feet of project activities, the applicant shall impose a 500-foot setback of all active nest sites prior to commencement of any project construction activities to avoid construction or access-related disturbances to nesting raptors. Project related activities (i.e., vegetation removal, earth moving, and construction) will not occur within the setback until the nest is deemed inactive. Activities permitted within setbacks and the size of setbacks may be adjusted through consultation with the CDFW and/or the City.

Trees containing white-tailed kite or other raptor (excluding Swainson's hawk) nests that must be removed as a result of project implementation shall be removed during the non-breeding season (September 1–January 1). Swainson's hawks are State listed as a threatened species; therefore, impacts to Swainson's hawk nest trees require regulatory authorization from the CDFW prior to removal.

Mitigation Measures 3.11-8 Swainson's Hawk Avoidance and Minimization in the LEA Community Plan Area

The City shall require future project applicants to implement the measures to mitigate the potential loss of Swainson's hawk foraging habitat. For any project 40 acres and greater the following measure shall be implemented to reduce impacts to Swainson's hawk foraging habitat:

- ▶ The project applicant shall acquire conservation easements or other instruments to preserve suitable foraging habitat for Swainson's hawk. The location of mitigation parcels as well as conservation instruments protecting them shall be approved by the City.
- ▶ The amount of land preserved shall be at a ratio provided in Chapter 16.130 Swainson's Hawk Mitigation Fees of the Elk Grove Municipal Code for each acre developed at the project site. In deciding whether to approve the land proposed for preservation by the Project applicant, the City shall consider the benefits of preserving lands in proximity to other

protected lands. The preservation of land shall be done prior to any site disturbance, such as clearing or grubbing, or the issuance of any permits for grading, building, or other site improvements, whichever occurs first.

- ▶ The applicant shall implement the following minimum conservation easement content standards, or such other requirements as may be updated by the City Council from time-to-time and as provide in Chapter 16.130:
 - The land to be preserved must be found to be suitable Swainson's hawk foraging habitat as determined by the City based on substantial evidence.
 - The land shall be protected through either fee title or conservation easement ("legal agreement") acceptable to the City of Elk Grove.
 - The legal agreement shall be recordable and contain an accurate legal description of the mitigation land.
 - The legal agreement shall prohibit any activity, which in the sole discretion of the City, substantially impairs or diminishes the land's capacity as suitable Swainson's hawk foraging habitat.
 - If the land's suitability as foraging habitat is related to existing agricultural uses on the land, the legal agreement shall protect any existing water rights necessary to maintain such agricultural uses on the land covered by the document and retain such water rights for ongoing use on the mitigation land.
 - The applicant shall pay or cause to be paid to the City a mitigation monitoring fee to cover the costs of administering, monitoring, and enforcing the document in an amount determined by the City or a third-party receiving entity approved by the City, not to exceed 10% of the easement price paid by the applicant, or a different amount approved by the City Council.
 - Interests in mitigation land shall be held in trust by an entity acceptable to the City and/or the City in perpetuity. The entity shall not sell, lease, or convey any interest in mitigation land without the prior written approval of the City.
 - The City shall be named a beneficiary under any legal agreement conveying the interest in the mitigation land to an entity acceptable to the City and the City shall receive indemnification, defense and indemnity in any legal agreement.
 - If any qualifying entity owning an interest in mitigation land ceases to exist, the duty to hold, administer, monitor and enforce the interest shall be transferred to another entity acceptable to the City or to the City.
- ▶ Before committing to the preservation of any land, the project proponent shall obtain the City's approval of the land proposed for preservation. This mitigation measure may be fulfilled in combination with a mitigation measure imposed on the project requiring the preservation of agricultural land as long as the agricultural land is suitable Swainson's hawk habitat as determined by the City in its sole discretion.

For any project less than 40 acres (smaller projects shall still mitigate pursuant to Chapter 16.130) the following measure shall be implemented to reduce impacts to Swainson's hawk foraging habitat:

- ▶ Prior to any site disturbance, such as clearing or grubbing, or the issuance of any permits for grading, building, or other site improvements, whichever occurs first, the project applicant shall preserve at the Chapter 16.130 prescribed ratio land of similar equally suitable habitat for each acre of habitat lost. This land shall be protected through a fee title or conservation easement acceptable to the City of Elk Grove, or
- ▶ Prior to any site disturbance, such as clearing or grubbing, or the issuance of any permits for grading, building, or other site improvements, whichever occurs first, the project applicant shall submit payment of Swainson's hawk impact mitigation fee per acre of habitat impacted (payment shall be at a 1:1 ratio) to the City of Elk Grove in the amount set forth in the Elk Grove Municipal Code.

Mitigation Measures 3.11-9 Western Pond Turtle Avoidance and Minimization in the LEA Community Plan Area

The City shall require future project applicants to implement the following measures to avoid the potential loss of western pond turtles:

- ▶ Projects shall be planned and designed to avoid aquatic habitats that could support western pond turtle to the extent that is technically feasible and appropriate. Avoidance shall be deemed technically feasible and appropriate if the habitat may be preserved on-site while still obtaining the project purpose and objectives and if the preserved habitat features (i.e., aquatic habitats) could reasonably be expected to continue to function as suitable habitat for western pond turtle following project implementation.
- ▶ A preconstruction survey for western pond turtle shall be conducted by a qualified biologist prior to work in suitable aquatic habitat. If no pond turtles are observed, no further mitigation is necessary.
- ▶ If pond turtles are observed, a qualified biologist, with approval from CDFW, shall relocate pond turtles from to the nearest area with suitable aquatic habitat that will not be disturbed by project related construction activities.
- ▶ Construction within 500 feet of aquatic habitat known to support western pond turtles shall be conducted outside of the nesting season (March-August) unless a nesting survey conducted by a qualified biologist determines there are no active nests or hatchlings present in the proposed construction area.

Mitigation Measure 3.11-10 Western Red Bats Avoidance and Minimization in the LEA Community Plan Area

The City shall require future project applicants to implement the following measures to avoid the potential loss of western red bats:

- ▶ A qualified biologist shall conduct surveys for roosting western red bats prior to any tree removal. If evidence of bat use is observed, the number of bats using the roost will be determined. Bat detectors may be used to supplement survey efforts. If no evidence of bat roosts is found, then no further study shall be required.
- ▶ If tree roosting bats are found, bats shall be excluded from the roosting site before the tree is removed. A mitigation program addressing compensation, exclusion methods, and roost removal procedures shall be developed by a qualified biologist in consultation with CDFW before implementation. Exclusion efforts may be restricted during periods of sensitive activity (e.g., during hibernation or while females in maternity colonies are nursing young). Once it is confirmed that bats are not present in the original roost site, the tree may be removed.

Mitigation Measure 3.11-11 Wetland Avoidance and Minimization in the LEA Community Plan Area

If there is potential for wetlands to occur on a project site, project applicants shall retain a qualified wetland consultant to determine if state or federally protected wetlands or other waters are present. If potential waters of the United States or state are identified, the project applicant shall submit a delineation report to the U. S. Army Corps of Engineers (USACE) and the Regional Water Quality Control Board (RWQCB) for verification or jurisdictional determination. The verified delineation will be submitted to the City for its records. If the project site supports a lake, river, or stream, the project applicant shall complete a notification of lake and streambed alteration and submit it to CDFW. Pursuant to California Code of Regulations, a stream is defined as a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This can include human-created waterways.

Project applicants shall ensure that their specific projects would result in no net loss of state or federally protected waters through impact avoidance, impact minimization, and/or compensatory mitigation, as determined in CWA Section 404 and 401 permits and/or Waste Discharge Requirements and a California Fish and Game Code Section 1602 Lake and Streambed Alteration Agreement. Evidence of compliance with this mitigation measure shall be provided prior to construction and grading activities for each proposed project.

3.11.3 Geology and Soils

ENVIRONMENTAL SETTING

As described in the General Plan EIR, City's Planning Area is primarily underlain by the Riverbank Formation and does not have a high potential of seismic events and geologic hazards. The Planning Area has a low potential for liquefaction and wind erosion and higher potential for expansive soil and liquefaction impacts. There are two formations in the Planning Area, Laguna Formation and Riverbank Formation, that have the potential to contain paleontological resources. There have been no changes to the geologic setting of the Planning Area since adoption of the General Plan EIR.

GENERAL PLAN POLICIES

The following General Plan policies are applicable to the Project:

- ▶ Policy ER-3-1: Support efforts by federal, State, and other local jurisdictions to investigate local seismic and geological hazards and support those programs that effectively mitigate these hazards.
- ▶ Policy ER-3-2: Seek to ensure that new structures are protected from damage caused by geologic and/or soil conditions.

CITY REGULATIONS THAT ADDRESS GEOLOGY AND SOILS

City of Elk Grove Municipal Code

Chapter 16.04 (California Building Code)

Chapter 16.04 of the Municipal Code consists of the adoption of the most recent edition of the CBC, Title 24, Part 2, Volumes 1 and 2, published by the International Code Council, administrative sections, Chapter 29, Appendices C, I, and O; and amendments, as adopted by the Building Standards Commission of the State of California and codified at Title 24, Part 2, in the CCR.

Chapter 16.44 (Land Grading and Erosion Control)

Chapter 16.44 of the Municipal Code establishes administrative procedures, minimum standards of review, and implementation and enforcement procedures for controlling erosion, sedimentation, and other pollutant runoff, including construction debris and hazardous substances used on construction sites, and disruption of existing drainage and related environmental damage caused by land clearing, grubbing, grading, filling, and land excavation activities. The chapter applies to projects that would disturb 350 cubic yards or more of soil. The intent of the Chapter is to minimize damage to surrounding properties and public rights-of-way, minimize degradation of water quality in watercourses, minimize disruption of natural or City-authorized drainage flows caused by construction activities, and make projects comply with the provisions of the City's NPDES Permit Number CA0082597, issued by the RWQCB. The City of Elk Grove is a co-permittee on an NPDES permit, along with Sacramento County and the Cities of Sacramento, Folsom, Galt, and Citrus Heights.

ENVIRONMENTAL IMPACT ANALYSIS

The Planning Area is not located in an area susceptible to seismic ground failure, including surface rupture, liquefaction, or landslides. However, implementation of the proposed Project would allow for development in areas of the Planning Area that are designated as having high potential for expansive soils. As discussed in Section 3.10, "Utilities and Service Systems" the Project would connect to existing utilities and septic systems would not be permitted.

The Project would result in higher density development in the LEA Planning Area but would not increase the total area impacted by development nor would it incorporate any new parcels featuring natural characteristics than what

was originally analyzed in the General Plan EIR. Similarly, there would be no change to the development footprint in the South and West Policy Areas, Old Town Policy Area, and as part of the Precise Study. The Project would not change the extent or character of land disturbance from what was evaluated in the General Plan EIR (no change in the City's planned development footprint). Therefore, the Project would not result in additional parcels being developed, beyond what was analyzed in the General Plan EIR. Impacts to expansive soils would remain less than significant with compliance with City standards in the municipal code, as shown above. There would be potential impacts to paleontological resources when development would occur on the Laguna Formation and/or Riverbank Formation. Paleontological resources impacts would remain less than significant with implementation of adopted General Plan Mitigation Measure MM 5.6.5 for unanticipated discovery of resources.

Geology and soils impacts were determined to be less than significant with mitigation in the General Plan EIR and certified CEQA documents that cover portions of the LEA Community Plan Area (i.e., Southeast Policy Area Strategic Plan EIR, Laguna Ridge Specific Plan EIR, Sterling Meadows Tentative Subdivision Map, and Lent Ranch Marketplace Special Planning Area). Because this issue was evaluated in the General Plan EIR and other previous EIRs and the proposed footprint of development has not changed from the General Plan EIR there would be no additional geology and soils impacts as a result of implementing the Project. Therefore, this impact would remain **less than significant** with mitigation.

IMPACT FINDING AND MITIGATION

There is no new significant effect, and the impact is not more severe than the impact identified in the General Plan EIR. As noted above, this impact would remain less than significant with mitigation. Subsequent development would be required to comply with applicable General Plan policies, Elk Grove Municipal Code (which include erosion control standards comparable to mitigation measures identified in Appendix G), and Mitigation Measure MM 5.6.5 "Paleontological Resources Avoidance and Minimization" (below). Impacts would remain less than significant or less than significant with implementation of Mitigation Measure MM 5.6.5 to protect paleontological resources, as included in the General Plan EIR. Compliance with policies listed above, state regulations, mitigation measures included in previous EIRs covering the Planning Area, and Mitigation Measure MM 5.6.5 would reduce impacts related to geology and soils. A comprehensive list of mitigation measures from previous EIRs, including requirements for preparation of an erosion control plan and reduction of fugitive dust, that would apply to community plan areas are included in Appendix G. The reader is referred to Section 3.2, "Air Quality," for a further discussion of dust mitigation. With the application of this mitigation measure, impacts to geology and soils would remain **less than significant** with mitigation.

Mitigation Measure MM 5.6.5 Paleontological Resources Avoidance and Minimization

Before the start of any earthmoving activities, the project owner shall retain a qualified scientist (e.g., geologist, biologist, paleontologist) to train all construction personnel involved with earthmoving activities, including the site superintendent, regarding the possibility of encountering fossils, the appearance and types of fossils likely to be seen during construction, and proper notification procedures should fossils be encountered. Training on paleontological resources shall also be provided to all other construction workers but may use videotape of the initial training and/or written materials rather than in-person training.

If any paleontological resources (fossils) are discovered during grading or construction activities within the project area, work shall be halted immediately within 50 feet of the discovery, and the City shall be immediately notified. The project owner will retain a qualified paleontologist to evaluate the resource and prepare a recovery plan in accordance with Society of Vertebrate Paleontology guidelines (SVP 2010). The recovery plan may include but is not limited to a field survey, construction monitoring, sampling and data recovery procedures, museum storage coordination for any specimen recovered, and a report of findings. Recommendations in the recovery plan that are determined by the City to be necessary and feasible will be implemented by the applicant before construction activities resume in the area where the paleontological resources were discovered.

3.11.4 Hazards and Hazardous Materials

ENVIRONMENTAL SETTING

As described in the General Plan EIR the Planning Area contains 54 listed contaminated sites. Of the 54 listed sites, most are school sites and all but three of the sites are listed as completed-case closed, certified closure, no action required, or no further action required. The Suburban Propane facility, the only facility in the City that handles large quantities of hazardous materials, is located east of State Route 99 and north of Grant Line Road. Two natural gas lines and one hazardous liquid transmission line exist in the Planning Area. Since adoption of the General Plan there are four "open/active" sites listed in the City (DTSC 2023, SWRCB 2023):

- ▶ Obie's Dump, 8437 Sheldon Road – Active
- ▶ The Gun Room, 9221 Survey Road – Open – Site Assessment
- ▶ Conoco Asphalt Terminal, 10090 Waterman Road – Open – Assessment and Interim Remedial Action
- ▶ Arco #2123, 8500 Elk Grove Boulevard – Open – Verification Monitoring

No other changes to the regulatory or environmental setting, including changes to the fire hazard severity zones, for hazardous materials have occurred since adopted of the General Plan EIR.

GENERAL PLAN POLICIES

The following General Plan policies are applicable to the Project:

- ▶ Policy EM-1-1: Seek to maintain acceptable levels of risk of injury, death, and property damage resulting from reasonably foreseeable safety hazards.
- ▶ Policy ER-1-4: Work to identify and eliminate hazardous waste releases from both private companies and public agencies.
 - Standard EIR-1-4.a: Industries which store and process hazardous or toxic materials shall provide a buffer zone between the installation and the property boundaries sufficient to protect public safety, the adequacy of which will be determined by the City of Elk Grove.
- ▶ Policy ER-1-5: Storage of hazardous materials and waste will be strictly regulated, consistent with State and federal law.
 - Standard EIR-1-5a: Future land uses that are anticipated to utilize hazardous materials or waste shall be required to provide adequate containment facilities to ensure that surface water and groundwater resources are protected from accidental releases. This shall include double-containment, levees to contain spills, and monitoring wells for underground storage tanks, as required by local, state and federal standards.
 - Standard EIR-1-5.b: Prior to site improvements for properties that are suspected or known to contain hazardous materials and sites that are listed on or identified on any hazardous material/waste database search shall require that the site and surrounding area be reviewed, tested, and remediated for potential hazardous materials in accordance with all local, state, and federal regulations.
- ▶ Policy ER-1-6: Seek to ensure that all industrial facilities are constructed and operated in accordance with up-to-date safety and environmental protection standards.
- ▶ Policy ER-1-7: To the extent feasible, uses requiring substantial transport of hazardous materials should be located such that traffic is directed away from the City's residential and commercial areas.
- ▶ Policy ER-4-1: Cooperate with the Consumnes Community Services District Fire Department to reduce fire hazards, assist in fire suppression, and promote fire safety in Elk Grove.

- Standard ER-4-1.a: Require, where appropriate, on-site fire suppression systems for all new commercial and industrial development to reduce the dependence on fire department equipment and personnel.
 - Standard ER-4-1.b: Require the installation of earthquake-triggered automatic gas shut-off sensors in high-occupancy facilities and in industrial and commercial structures.
- Policy SAF-1-6: Require adequate emergency access for new development projects.

ENVIRONMENTAL IMPACT ANALYSIS

The sites listed above as “open/active” are not located in the LEA Community Plan Area, Old Town Policy Area, Precise Study Area, or South and West Policy Areas. The EIR certified for the City’s 2019 General Plan Update evaluated the potential for impacts related to hazards and hazardous materials in the City’s Planning Area. The Project would result in increased density of development, but would not change the extent or character of land disturbance from what was evaluated in the General Plan EIR (no change in the City’s planned development footprint) or introduce a new land use that could create hazards. Increased density of development could result in an increased transport or use of hazardous materials. However, hazardous material use and transport would be required to comply with state, regional, and local hazardous materials regulations, as analyzed in the General Plan EIR.

Increased density could result in congestion during evacuation for a major natural disaster. Arterial and collector roadways are the main evacuation routes in the City. Within the LEA Community Plan Area Kammerer Road is designated as an evacuation route and was determined to be uncongested during all peak periods for a westbound evacuation (City of Elk Grove 2022). To accommodate additional development the Project would widen Kammerer Avenue to an urban avenue with two vehicular lanes in each direction and a 12-foot median. Widening Kammerer Road provide increased opportunity for emergency access and evacuation from the LEA Community Plan Area. Additionally, the Project would adhere to Elk Grove Municipal Chapter 22.110 that requires new subdivisions to have adequate public access for safety and emergency egress. For subdivisions of forty units or more, two points of public access are required. Similarly, General Plan Policy SAF-1-6 requires adequate emergency access for new development projects. See Section 3, “Environmental Impacts” for a discussion of wildfire hazards.

Hazardous materials impacts were determined to be less than significant with mitigation in the General Plan EIR. The Project would not change the development footprint for the LEA Community Plan Area, Old Town Policy Area, Precise Study Area, or South and West Policy Areas and there would not be additional development within 0.25 mile of a school. Because this issue was evaluated in the General Plan EIR and other environmental documents for the City’s special planning areas and the proposed footprint of development has not changed from the General Plan EIR there would be no additional hazardous materials impacts as a result of implementing the Project. Therefore, this impact would remain **less than significant** with mitigation.

IMPACT FINDING AND MITIGATION

There is no new significant effect, and the impact is not more severe than the impact identified in the General Plan EIR. Projects would be required to comply with applicable regulations, General Plan policies, and mitigation measures. Impacts would remain less than significant or less than significant with Mitigation Measure MM 5.5.2 “Hazardous Materials Evaluation” to require evaluation of future development sites with a Phase I Environmental Site Assessment, as analyzed in the General Plan EIR. Additionally, as discussed above portions of the LEA Community Plan Area have been analyzed in certified CEQA documents. Mitigation Measure 3.11-12 “Soil Contaminant Evaluation,” 3.11-13 “Asbestos Prevention,” and 3.11-14 “Utility Hazard Avoidance” have been drafted for this SEIR to combine hazardous material requirements from previous CEQA documents prepared for the Southeast Policy Area Strategic Plan, Laguna Ridge Specific Plan, Sterling Meadows Tentative Subdivision Map, and Lent Ranch Marketplace Special Planning Area. These measures contain the same performance standards and are equivalent in effectiveness as mitigation contained in the prior environmental documents. The mitigation measures listed below are only applicable to the LEA Community Plan Area and do not supersede mitigation requirements for the other community plan areas outside of the LEA Community Plan Area. No mitigation measures are available beyond compliance with policies listed above,

state regulations, mitigation measures included in previous EIRs covering the Planning Area, Mitigation Measure MM 5.5.2, and Mitigation Measures 3.11-12 through 3.11-14. A comprehensive list of mitigation measures from other community plans prior environmental review are included in Appendix G. With the application of these mitigation measures to the LEA Community Plan Area, impacts to hazards would remain **less than significant** with mitigation.

Mitigation Measure MM 5.5.2 Hazardous Materials Evaluation

Prior to approval of improvement plans, grading permits, and or demolition permits for properties in the Planning Area that have not already been evaluated for the potential for the presence of hazardous materials and hazardous conditions, Phase I ESAs shall be prepared by a qualified professional. Each Phase I ESA shall assess the potential for hazards and provide recommendations whether additional investigation (Phase II ESA) should be completed. If determined necessary, a Phase II ESA shall be conducted to determine the lateral and vertical extent of soil, groundwater, and/or soil vapor contamination, as recommended by the Phase I ESA. The City shall not issue a grading or building permit for a site where contamination has been identified until remediation or effective site management controls appropriate for the site use have been completed consistent with applicable regulations and to satisfy the Sacramento County Environmental Management Department, the California Department of Substances Control, and/or Central Valley Regional Water Quality Control Board, as appropriate. If the Phase I ESA determines there are no recognized environmental conditions, no further action is required. However, the City shall ensure any grading or improvement plan or building permit includes a statement that if hazardous materials contamination is discovered or suspected during construction activities, all work in the vicinity of the contamination shall stop immediately until a qualified professional has evaluated the site and determined an appropriate course of action.

Mitigation Measure 3.11-12 Soil Contaminant Evaluation for the LEA Community Plan Area

With each improvement plan and/or grading plan application, the Project applicant shall include a detailed assessment of soil contamination associated with previous herbicide/pesticide use on the site. Soil sampling shall be conducted within the areas of potential herbicide/pesticide contamination. If substances are detected at concentrations that could pose a health hazard and/or violate local, State, or federal health standards, remediation of the affected areas shall be undertaken in accordance with the requirements of the City of Elk Grove and the Sacramento County Environmental Management Department. Development of the site shall not commence until the site is deemed remediated and clear for development by the City in consultation with the Sacramento County Environmental Management Department.

Mitigation Measure 3.11-13 Asbestos and Lead Prevention in the LEA Community Plan Area

Prior to the issuance of demolition permits for existing onsite structures constructed prior to 1979, asbestos material sampling shall be conducted to determine if asbestos containing building materials are present. Any identified asbestos containing building materials present in each of the structures to be dismantled shall be removed under acceptable engineering methods and work practices by a licensed asbestos abatement contractor prior to removal. These practices include, but are not limited to: containment of the area by plastic, negative air filtration, wet removal techniques, and personal respiratory protection and decontamination. The process shall be designed and monitored by a California Certified Asbestos Consultant. The abatement and monitoring plan shall be developed and submitted for review and approval by the Sacramento Metropolitan Air Quality Management District.

Prior to the issuance of demolition permits for existing onsite structures that were constructed prior to 1970, all loose and peeling paint shall be removed and disposed of by a licensed and certified lead paint removal contractor, in accordance with local, State, and federal regulations. The demolition contractor shall be informed that all paint on the buildings shall be considered as containing lead. The contractor shall take precautions in accordance with local, state, and federal regulations to protect his/her workers, the surrounding community, and to dispose of construction waste containing lead paint.

Mitigation Measure 3.11-14 Utility Hazard Avoidance in the LEA Community Plan Area

Prior to approval of improvement plans and/or a grading permit for development of properties that contain transformers, the City Planning Department shall consult with SMUD, which owns and operates the transformers, to

determine whether onsite transformers are to be abandoned, moved, upgraded, etc. Together, the City Planning Department and SMUD shall develop a plan for dealing with all of the transformers located within the Project area. Future actions associated with the transformers may be implemented as individual development Projects are proposed.

3.11.5 Hydrology and Water Quality

ENVIRONMENTAL SETTING

The City of Elk Grove is located in the Sacramento River watershed and Laguna Creek is the main creek that flows through the City (City of Elk Grove 2018). Urban runoff within the Planning Area is conveyed through a storm drainage and a flood control collection system with underground pipes and natural and constructed channels. Even with the City's storm drainage system there is potential for flooding. Additionally, the City is subject to dam inundation in the event of a dam failure at Folsom Dam or Sly Park Dam.

The City is located in the Sacramento Valley Groundwater Basin, South American Subbasin. Groundwater in the Basin generally occurs in a shallow aquifer zone or in an underlying deeper aquifer zone. Water quality in the Subbasin is generally good, although iron and manganese are common and some occurrences of arsenic and nitrate occur (City of Elk Grove 2018). Groundwater in the City moves from sources of recharge to areas of discharge. Groundwater extraction from the South American Subbasin has resulted in a general lowering of groundwater elevation and is managed by the Sacramento Central Groundwater Authority (SCGA). Groundwater is also a component of the Sacramento Water Agency's water supply portfolio and groundwater supply is projected during preparation of the Urban Water Management Plan.

The Groundwater Sustainability Agencies that consists of the SCGA, Omochumne-Hartnell Water District (OHWD), Sloughhouse Resource Conservation District, North Delta GSAs, Reclamation District 551 (RD 551), and Sacramento County adopted the 2021 *South American Subbasin Groundwater Sustainability Plan (SASb GSP)* in compliance with SGMA. The SASb GSP identifies that the long-term average annual sustainable groundwater yield of the South American Subbasin is 235,000 AFY. Project and management actions that would contribute to the achievement of the sustainability goal of the SASb GSP include the following:

- ▶ Existing projects that include diversification of water supplies (Freeport Regional Water Project, Vineyard Surface Water Treatment Plant, and conjunctive use improvements).
- ▶ Near-term planned project that include the Sacramento Regional County Sanitation District Harvest Water project, OHWD Groundwater Recharge Project, Regional Conjunctive Use Program, and Sacramento Area Flood Control Agency Flood-MAR. (Northern Delta Groundwater Sustainability Agency et al. 2021: 4-1 – 4-22).

GENERAL PLAN POLICIES

The following General Plan policies are applicable to the Project:

- ▶ **Policy NR-3-2:** Integrate sustainable stormwater management techniques in site design to reduce stormwater runoff and control erosion.
- ▶ **Standard NR-3-2.a:** Where feasible, employ on-site natural system such as vegetated bioswales, living roofs, and rain gardens in the treatment of stormwater to encourage infiltration, detention, retention, groundwater recharge, and/or on-site water reuse.
- ▶ **Standard NR-3-2.b:** Roads and structures shall be designed, built and landscaped so as to minimize erosion during and after construction.
- ▶ **Standard NR-3-2.c:** Post-development peak storm water run-off discharge rates and velocities shall be designed to prevent or reduce downstream erosion, and to protect stream habitat.

- ▶ **Policy NR-3-3:** Implement the City's National Pollutant Discharge Elimination System permit through the review and approval of development projects and other activities regulated by the permit.
- ▶ **Policy ER-2-2:** Require that all new projects not result in new or increased flooding impacts on adjoining parcels or on upstream and downstream areas.
- ▶ **Policy ER-2-6:** Development shall not be permitted on land subject to flooding during a 100-year event, based on the most recent floodplain mapping prepared by FEMA or updated mapping acceptable to the City of Elk Grove. Potential development in areas subject to flooding may be clustered onto portions of a site which are not subject to flooding, consistent with other policies of the General Plan.
- ▶ **Policy ER-2-7:** A buildable area outside the 100-year floodplain must be present on every residential lot sufficient to accommodate a residence and associated structures. Fill may be placed to create a buildable area only if approved by the City and in accordance with all other applicable policies and regulations. The use of fill in the 100-year floodplain to create buildable area is strongly discouraged and shall be subject to review to determine potential impacts on wildlife, habitat, and flooding on other parcels.
- ▶ **Policy ER-2-8:** The City will not enter into a development agreement, approve a building permit or entitlement, or approve a tentative or parcel map for a project located within an urban level of flood protection area, identified in Figure 8-2, unless it meets one or more established flood protection findings. Findings shall be based on substantial evidence, and substantial evidence necessary to determine findings shall be consistent with criteria developed by the DWR.
- ▶ **Policy ER-2-11:** Vehicular access to the buildable area of all parcels must be at or above the 10-year flood elevation.
- ▶ **Policy ER-2-12:** Creation of lots whose access will be inundated by flows resulting from a 10-year or greater storm shall not be allowed. Bridges or similar structures may be used to provide access over creeks or inundated areas, subject to applicable local, State, and federal regulations.
- ▶ **Policy ER-2-17:** Require all new development projects to incorporate runoff control measures to minimize peak flows of runoff and/or assist in financing or otherwise implementing comprehensive drainage plans.
- ▶ **Policy ER-2-18:** Drainage facilities shall be properly maintained to ensure their proper operation during storms.

SOUTHEAST POLICY AREA DRAINAGE STUDY

The Southeast Policy Area Drainage Study covers portions of the LEA Community Plan Area. The study prepared for the Southeast Policy Area recommends a multi-functional drainage system to accommodate future development in the watershed and to enhance the natural stream and habitat values (City of Elk Grove 2014). The multi-functional corridor would include a low flow channel that is stable and self-sustaining, and meanders within a larger floodway corridor. The larger floodway corridor would provide flood conveyance and wetland habitat. Detention basins would be constructed along the floodway to provide storage volume and opportunity to establish riparian habitat. While the Project would modify land uses within a portion of the area covered by the Southeast Policy Area Drainage Study, the core facilities of improvements to the Shed C Drainage Channel and construction of three detention basins, along with trunk drainage pipelines, would remain substantially similar to that described in the Drainage Study.

CITY REGULATIONS THAT ADDRESS WATER RESOURCES

City of Elk Grove Storm Drainage Master Plan

The City's comprehensive Storm Drain Master Plan identifies drainage concepts for upgrading the existing storm drainage and flood control collection system. It identifies and analyzes existing drainage deficiencies throughout the City, provides a range of drainage concepts for the construction of future facilities required to serve the City at buildout of the existing General Plan, and establishes criteria for selecting and prioritizing projects. The Storm Drain Master Plan may also be used for the development of a capital drainage financing program (City of Elk Grove 2011).

City of Elk Grove Municipal Code

Municipal Code Chapter 15.12: Stormwater Management and Discharge Control

Municipal Code Chapter 15.12 provides authority to the City for inspection and enforcement related to control of illegal and industrial discharges to the City storm drainage system and local receiving waters. It also addresses the requirement for BMPs and regulations to reduce pollutants in the City's stormwater.

Municipal Code Chapter 16.44: Land Grading and Erosion Control

Municipal Code Chapter 16.44 establishes administrative procedures, standards for review and implementation, and enforcement procedures for controlling erosion, sedimentation, other pollutant runoff, and the disruption of existing drainage and related environmental damage to ensure compliance with the City's NPDES permit. The chapter requires, before grading activities begin, that a detailed set of plans be developed that include measures to minimize erosion, sediment, and dust created by development activities.

Municipal Code Chapter 16.50: Flood Damage Prevention

Municipal Code Chapter 16.50 regulates development in flood-prone areas through specific siting and design requirements consistent with FEMA regulations.

ENVIRONMENTAL IMPACT ANALYSIS

The EIR certified for the City's 2019 General Plan Update evaluated the potential for impacts related to hydrology and water quality in the City's Planning Area. As a result of increased density implementation of the Project may result in an increase in the amount of impervious surfaces within the Planning Area compared to what was analyzed in the General Plan EIR. Development facilitated by the Project would be in compliance with the City's drainage and water quality standards, and Elk Grove Municipal Code Chapter 15 and Chapter 16. Specifically, development would be required to comply with the municipal separate storm sewer systems (MS4) permit as regulated through Chapter 15.12 of the Elk Grove Municipal Code. Chapter 16.44 of the Elk Grove Municipal Code requires implementation of measures to minimize erosion, sediment, dust, and other pollutant runoff during construction. Chapter 16.44 also requires projects that would increase drainage flows and have the potential to exceed the capacity of existing drainage facilities to identify, on project plans, the improvements needed to accommodate increased flows, thus ensuring any increase to the amount of impervious surfaces will result in no new impacts. Additionally, the LEA Community Plan Area, Precise Study area, South and West Study Areas, and Old Town Policy Area are not located in designated flood zones or dam inundation zones (City of Elk Grove 2018). Therefore, areas proposed for development under the Project are not at risk from flooding.

Hydrology and water quality impacts related to water quality, flooding, groundwater recharge, and drainage were determined to be less than significant in the General Plan EIR and certified CEQA documents that cover portions of the LEA Community Plan Area (i.e., Southeast Policy Area Strategic Plan EIR, Laguna Ridge Specific Plan EIR, and Sterling Meadows Tentative Subdivision Map, Lent Ranch Marketplace Special Planning Area). Specifically, the planned drainage facilities serving the LEA Community Plan area were considered in the Southeast Policy Area Strategic Plan EIR and the Lent Ranch EIR and Sterling Meadows EIR. The Project would not change the extent or character of land disturbance from what was evaluated in the General Plan EIR. Because this issue was evaluated in the General Plan EIR and other previous and the proposed footprint of development has not changed from the General Plan EIR there would be no additional hydrology impacts as a result of the Project. Therefore, this impact would remain **less than significant**.

Impacts related to groundwater and groundwater sustainability are discussed in Section 3.10, "Utilities and Service Systems." As discussed therein, impacts to groundwater and groundwater sustainability would remain significant and unavoidable.

IMPACT FINDING AND MITIGATION

There is no new significant effect, and the impact is not more severe than the impact identified in the General Plan EIR. Projects would be required to comply with applicable General Plan policies and applicable regulations related to hydrology and water quality. As discussed above portions of the LEA Community Plan Area have been analyzed in certified CEQA documents. Mitigation Measure 3.11-15 “Stormwater Retention” and Mitigation Measure 3.11-16 “Drainage Report” have been drafted for this SEIR to combine hydrological resources requirements from previous CEQA documents prepared for the Southeast Policy Area Strategic Plan, Laguna Ridge Specific Plan, and Lent Ranch Marketplace Special Planning Area. These measures contain the same performance standards and are equivalent in effectiveness as mitigation contained in the prior environmental documents. Mitigation Measure 3.11-15 and 3.11-16 are only applicable to the LEA Community Plan Area and do not supersede mitigation requirements for the other community plan areas outside of the LEA Community Plan Area. A comprehensive list of mitigation measures from other community plans prior environmental review are included in Appendix G. With the application of these mitigation measures to the LEA Community Plan Area, impacts to hydrology and water quality would remain **less than significant** with mitigation.

Mitigation Measure 3.11-15 Stormwater Retention for the LEA Community Plan Area

Grading plans for individual development projects in the LEA Community Plan Area shall be designed in such a way to direct all overland flow into proposed on-site detention basins. If this is not feasible, separate stormwater quality treatment facilities shall be constructed and a detailed drainage study shall be completed which demonstrates that the overall flood control and hydromodification goals for the watershed, contained in the City’s Storm Drainage Master Plan, are still met.

Mitigation Measure 3.11-16 Drainage Report for the LEA Community Plan Area

New development in the LEA Community Plan Area shall be accompanied by site-specific drainage report. The project drainage report shall be reviewed and approved by the City prior to improvement plan approval for new development. The project drainage report shall include, at a minimum, written text addressing existing conditions, the effects of project improvements, all appropriate calculations, a watershed map, potential increases in downstream flows and volumes, proposed on-site improvements, and drainage easements, if necessary, to accommodate flows from the site. The sites specific drainage plans shall ensure that peak flows from developed areas do not exceed pre-development conditions. Site-specific drainage reports shall demonstrate consistency with the Southeast Policy Area Drainage Study.

3.11.6 Land Use and Planning

ENVIRONMENTAL SETTING

Elk Grove has a wide array of land uses. A suburban setting is concentrated primarily in the western portion of the City and the eastern portion includes a large rural community. The City has a range of housing options, historic district, parks system, and a business community. The General Plan provides the framework for the City to expand employment opportunities, continue to provide a variety of housing options, and develop greater recreational opportunities. The Old Town Policy Area is the City’s historic center and the LEA Community Plan Area includes some areas that were previously part of the Southeast Policy Area, South Pointe Land Use Policy Area, and the Lent Ranch Marketplace Policy Area. The South and West Study Areas are designed in the General Plan to provide a mix of residential, industrial, employment, and public service developments.

GENERAL PLAN POLICIES

The following General Plan goals are applicable to the Project:

- ▶ **GOAL LU-1:** A coordinated development pattern.
 - ▶ This goal is implemented through policies LU-1-1 through LU-1-10.

- ▶ **GOAL LU-2:** A focus on infill.
 - ▶ This goal is implemented through policies LU-2-1 through LU-2-4.
- ▶ **GOAL LU-3:** Expansion with purpose.
 - ▶ This goal is implemented through policies LU-3-1 through LU-3-34.
- ▶ **GOAL LU-4:** Thriving activity centers.
 - ▶ This goal is implemented through Policy LU-4-1.
- ▶ **GOAL LU-5:** Consistent, high-quality urban design.
 - ▶ This goal is implemented through policies LU-5-1 through LU-5-12.
- ▶ **GOAL LU-6:** Context-appropriate development of land use policy areas.
 - ▶ This goal is implemented through policies LU-6-1 through LU-6-10.
- ▶ **GOAL LU-7:** An established, protected, and supported rural area.
 - ▶ This goal is implemented through Policy LU-7-1.
- ▶ **GOAL H-1:** Adequate sites to accommodate the City's housing needs.
 - ▶ This goal is implemented through policies H-1-1 through H-1-5.
- ▶ **GOAL H-2:** Adequate housing stock to meet the needs of lower-income households and special needs groups.
 - ▶ This goal is implemented through policies H-2-1 through H-2-5.
- ▶ **GOAL H-3:** Development regulations that remove constraints to the maintenance, improvement, and development of housing.
 - ▶ This goal is implemented through policies H-3-1 through H-3-3.
- ▶ **GOAL H-5:** Housing opportunities for all persons, regardless of race, religion, sex, marital status, ancestry, national origin, color, familial status, or disability.
 - ▶ This goal is implemented through Policy H-5-1.
- ▶ **GOAL H-6:** Preserved assisted (subsidized) housing developments for lower-income households.
 - ▶ This goal is implemented through Policy H-6-1.
- ▶ **GOAL ED-1:** A diverse and balanced mix of land uses.
 - ▶ This goal is implemented through policies ED-2-1 through ED-2-5.
- ▶ **GOAL ED-2:** More residents employed locally.
 - ▶ This goal is implemented through policies ED-1-1 through ED-1-5.
- ▶ **GOAL ED-3:** Successful local businesses.
 - ▶ This goal is implemented through policies ED-3-1 and ED-3-2.
- ▶ **GOAL RC-1:** A new regional employment center.
 - ▶ This goal is implemented through policies RC-1-1 through RC-1-15.
- ▶ **GOAL RC-3:** Regional mobility and infrastructure to support the local economy.
 - ▶ This goal is implemented through policies RC-3-1 through RC-3-5.

ENVIRONMENTAL IMPACT ANALYSIS

The EIR certified for the City's 2019 General Plan Update evaluated the potential for impacts related to land uses and plans in the City's Planning Area. No significant land use impacts were identified in the General Plan EIR. The Project would amend the land uses in the LEA Community Plan Area, Old Town Policy Area, and South and West Study Areas. The Lent Ranch Land Use Policy Area and a portion of the South Study Area would be incorporated into the LEA Community Plan as part of the Project. The LEA Community Plan Area would be organized with three transects (sub-urban zone, general urban zone, and urban center zone) and around four centers, providing denser development than envisioned in the General Plan. Additionally, the LEA Community Plan would include new land use designations to achieve the transect based development. The South Study Area would serve as the second phase of the LEA that would build off development to the north. The land use district designations would be adjusted to increase industrial development with transitional neighborhoods and high density residential development. The West Study Area would include additional high density residential development, and rural and estate residential development. The Project would promote more mixed-use development in the Old Town Policy Area as land uses would be updated to encourage retail and commercial uses in proximity to similar enterprises in Old Town with surrounding housing consistent with General Plan policy provisions. Additionally, implementation of preferred alternatives in the Precise Study would result in changes to Grant Line Road.

Land use and roadway changes that would be implemented by the Project are designed to further implement the vision, intent, and goals of the General Plan, therefore, creating no new land use impacts. Additionally, proposed development would be consistent with goals and policies in the General Plan, as discussed throughout this SEIR. The Project would not change the extent or character of land disturbance from what was evaluated in the General Plan EIR (no change in the City's planned development footprint). Therefore, this impact would remain **not significant**.

IMPACT FINDING AND MITIGATION

Projects would be required to comply with applicable General Plan policies and applicable regulations related to land use. There is no new significant effect, and the impact is not more severe than the impact identified in the General Plan EIR.

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4 CUMULATIVE IMPACTS

4.1 INTRODUCTION TO THE CUMULATIVE ANALYSIS

This Draft SEIR provides an analysis of cumulative impacts of the proposed General Plan Amendments and Update of VMT Standards (Project), as required by Section 15130 of the State CEQA Guidelines. The goal of such an exercise is twofold: first, to determine whether the overall long-term impacts of all such projects would be cumulatively significant, and second, to determine whether the incremental contribution to any such cumulatively significant impacts of the Project would be “cumulatively considerable” (and thus significant). (See State CEQA Guidelines Sections 15130[a]–[b], Section 15355[b], Section 15064[h], and Section 15065[c]; and *Communities for a Better Environment v. California Resources Agency* [2002] 103 Cal. App. 4th 98, 120.) In other words, the required analysis intends first to create a broad context in which to assess cumulative impacts, viewed on a geographic scale beyond the Project site itself, and then to determine whether the Project’s incremental contribution to any significant cumulative impacts from all projects is itself significant (i.e., “cumulatively considerable”).

Cumulative impacts are defined in State CEQA Guidelines Section 15355 as “two or more individual effects which, when considered together, are considerable or which compound or increase other environmental impacts.” A cumulative impact occurs from “the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects.” Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time” (State CEQA Guidelines Section 15355[b]).

4.2 CUMULATIVE IMPACT ANALYSIS METHODOLOGY

Consistent with State CEQA Guidelines Section 15130, the discussion of cumulative impacts in this Draft SEIR focuses on significant and potentially significant cumulative impacts. Section 15130(b) of the State CEQA Guidelines provides, in part, the following:

[t]he discussion of cumulative impacts shall reflect the severity of the impacts and their likelihood of occurrence, but the discussion need not provide as great detail as is provided for the effects attributable to the project alone. The discussion should be guided by the standards of practicality and reasonableness, and should focus on the cumulative impact to which the identified other projects contribute rather than the attributes of other projects which do not contribute to the cumulative impact.

A proposed project is considered to have a significant cumulative effect if:

- ▶ the cumulative effects of development without the project are not significant and the project’s additional impact is substantial enough, when added to the cumulative effects, to result in a significant impact, or
- ▶ the cumulative effects of development without the project are already significant and the project contributes measurably to the effect.

The term “measurably” is subject to interpretation. The standards used herein to determine measurability are that the impact must be noticeable to a reasonable person or must exceed an established threshold of significance (defined throughout the resource sections in Chapter 3 of this Draft SEIR). This cumulative analysis also assumes that all mitigation measures identified in Chapter 3 to mitigate Project impacts are adopted and implemented and that all elements of the design-build performance criteria that would minimize environmental effects are implemented.

The State CEQA Guidelines (Section 15130) identify two basic methods for establishing the cumulative environment in which the project is to be considered: the use of a list of past, present, and probable future projects, or the use of adopted projections from a general plan, other regional planning document, or a certified EIR for such a planning document. This analysis uses a combination of the list and planning document approach, as described further below.

The cumulative impact analysis provided in this chapter evaluates whether the Project could result in potentially new cumulatively considerable impacts or an increase in the severity of previously identified cumulative impacts that were identified in the General Plan EIR pursuant to State CEQA Guidelines Section 15162(b).

4.3 CUMULATIVE SETTING

The 2019 *City of Elk Grove General Plan* is a broad framework for planning the future of the City. It is the official policy statement of the City Council that is used to guide the private and public development of the City in a manner to gain the maximum social and economic benefit to the citizens. The Planning Area for the General Plan includes both land within City boundaries (42 square miles, or 34,956 acres) and lands outside the City in unincorporated Sacramento County to the south and east (12.2 square miles, or 8,008 acres) in four study areas.

Development within the current City limits is anticipated to generate a maximum of 72,262 dwelling units, 233,406 residents, and 81,784 jobs from buildout of the 2019 General Plan. Assuming future annexation and development of the study areas, buildout under the 2019 General Plan would result in a maximum of 102,865 dwelling units, 332,254 residents, and 122,155 jobs (City of Elk Grove 2019:Table 3-2). The EIR for the General Plan analyzes the full development potential of the General Plan Land Use Diagram, including the study areas, compared to existing (2015) conditions (City of Elk Grove 2018).

The General Plan Land Use Diagram was amended in January 2021 as part of the adoption of the Southeast Industrial Area Specific Plan associated with annexation. The Southeast Industrial Area includes 561 acres south of Grant Line Road and east of the Union Pacific Railroad tracks and State Route 99 within the City's sphere of influence. The Southeast Industrial Area was designated as Public Open Space/Recreation in the General Plan, which was amended to a designation of Light Industrial uses, resulting in reduction of recreation and mixed General Commercial and Office uses. The SEIR prepared for the Southeast Industrial Area Specific Plan considered impacts associated with annexation and buildout of the Southeast Industrial Area.

The adoption of the 2021 Housing Element Update in May 2021 also amended the General Plan Land Use Diagram to allow for an additional 2,745 dwelling units and an increase in population of 8,773 persons above what was assumed in the General Plan EIR.

4.4 ANALYSIS OF CUMULATIVE IMPACTS

Because the General Plan is essentially a set of guidelines for projects that could occur within the timeframe of the General Plan, the Plan itself represents the cumulative development scenario for the reasonably foreseeable future in the City. Therefore, the analysis presented in this Draft SEIR generally represents a cumulative analysis of Elk Grove as a whole over the General Plan planning horizon (updated as noted above) described above. In instances where other cumulative development in neighboring jurisdictions or within the region as a whole could contribute to impacts generated by the proposed General Plan, those impacts, as well as the context, are discussed in the cumulative impact discussion that follows the project-specific impacts in each section.

As indicated above, CEQA requires that an EIR include an assessment of the cumulative impacts that could be associated with project implementation. This assessment involves examining project-related effects on the environment in the context of similar effects that have been caused by past or existing projects, as well as the anticipated effects of future projects. An EIR must discuss the cumulative impacts of a project when its incremental effect will be cumulatively considerable. Although project-related impacts may be individually minor, the cumulative effects of these impacts, in combination with the impacts of other projects, could be significant under CEQA and must be addressed (CEQA Guidelines, Section 15130[a]). Section 15130(a)(3) states that an EIR may determine that a project's contribution to a significant cumulative impact will be rendered less than cumulatively considerable, and thus not significant, if a project is required to implement or fund its fair share of a mitigation measure or measures designed to alleviate the cumulative impact. Section 15130(b) indicates that the level of detail of the cumulative analysis need not be as great as for the project impact analyses; that it should reflect the severity of the impacts and their likelihood of occurrence; and that it should be focused, practical, and reasonable.

The following sections contain a discussion of the cumulative effects anticipated from implementation of the Project, together with related projects and planned development, for each of the environmental issue areas evaluated in this Draft SEIR. The analysis herein analyzes whether, after implementation of Project-specific mitigation that minimize environmental effects, the residual impacts of the Project would cause a cumulatively significant impact or would contribute considerably to existing or anticipated (without the Project) cumulatively significant effects that were identified in General Plan EIR. Where the Project would so contribute, additional mitigation is recommended where feasible.

4.4.1 Aesthetics

General Plan EIR Impact 5.1.4 evaluated whether implementation of the General Plan, in addition to other reasonably foreseeable projects in the region, would introduce new development into undeveloped agricultural and rural areas that would have a cumulatively considerable contribution to impacts on visual character. The analysis noted that although individual development projects would be responsible for incorporating mitigation to minimize their visual impacts, the net result would be a general conversion of areas with an open, rural character to a more urban and developed character. The change in character associated with that development would be a significant cumulative impact. The General Plan would be a continuation of the overall urbanization of the City and would extend the City's developed area along the urban edge. Therefore, the General Plan's contribution to the change in character is cumulatively considerable and significant and unavoidable.

Impact 4-1: Cumulative Visual Resource Impacts

As identified in Impact 3.1-1 of this Draft SEIR, the LEA Community Plan Area is in an area planned for urban development in the General Plan EIR. Development proposed as part of the Project would be similar to development analyzed in the General Plan EIR. Proposed General Plan amendments, specifically in Old Town Policy Area, would result in improved conditions as well as features compatible with the historical and visual character of the City, including Old Town, which is surrounded by existing development. Development proposed in the South and West Study Areas would convert the rural visual character to an urban/suburban developed character as envisioned and analyzed in the General Plan EIR. Land use district designations would be adjusted to increase industrial development in the South and West Study Areas that would be compatible with proposed future development. Proposed changes to Grant Line Road would not impact the overall aesthetic quality or existing visual resources in that area. There is no new significant effect, and the impact is not more severe than the impact identified in the General Plan EIR. Therefore, the Project would not result in a new or greater contribution to cumulative effects to visual resources beyond what was identified in the General Plan EIR. The Project's contribution to the significant cumulative impact would be less than cumulatively considerable, though the impact would remain **cumulatively considerable** and **significant and unavoidable** as identified in the General Plan EIR.

Mitigation Measures

No additional mitigation is required beyond compliance with EGMC Chapter 19.12 and Section 23.16.080.

Impact 4-2: Cumulative Light and Glare Impacts

General Plan EIR Impact 5.1.5 evaluated whether implementation of the General Plan, in addition to other reasonably foreseeable projects in the region, would introduce new development into undeveloped agricultural and rural areas, increasing nighttime lighting and daytime glare and contributing to regional skyglow. The General Plan EIR concluded that this would be a cumulatively considerable impact. While future development projects in the City would be required to comply with the design guidelines, EGMC Chapter 23.56 for lighting standards, and General Plan policies and standards, the adverse effects of adding new light and glare sources to areas that currently have little to no on-site lighting would substantially contribute to the cumulative impact. These impacts cannot be mitigated to less than significant, and the impact would remain **cumulatively considerable** and **significant and unavoidable** as identified in the General Plan EIR.

As identified in Impact 3.1-2 of this Draft SEIR, the proposed development within the LEA Community Plan Area and the Old Town Policy Area would create nighttime lighting within the City similar to conditions anticipated for the planned urban land uses for the City under the General Plan. Proposed development within the South and West Study Areas would introduce nighttime lighting currently located within a rural setting. However, changes to land use designations and zoning, as a result of the Project, would allow nighttime lighting within the South and West Study Areas that would be consistent with future development and was analyzed as such in the General Plan EIR. Minimal nighttime lighting would result from the improvements proposed to Grant Line Road. Future development of sites identified by the Project would be required to comply with applicable requirements regarding light and glare. There is no new significant effect, and the impact is not more severe than the impact identified in the General Plan EIR. Therefore, the Project would not result in a new or greater contribution to cumulative effects to visual resources beyond what was identified in the General Plan EIR. The Project's contribution to the significant cumulative impact would be less than cumulatively considerable, though the impact would remain **cumulatively considerable and significant and unavoidable** as identified in the General Plan EIR.

Mitigation Measures

No additional mitigation is required for this impact.

4.4.2 Air Quality

The geographic context for cumulative impacts related to air quality is regional for criteria air pollutant and ozone precursors and includes the Sacramento Valley Air Basin and Sacramento County within the jurisdiction of the Sacramento Metropolitan Air Quality Management District (SMAQMD), and the context is local for toxic air contaminants and odors. Cumulative development in the region will continue to increase the concentration of pollutants from construction activities, traffic, natural gas combustion in buildings, area sources, and stationary sources, but this increase would be partially offset by State and federal policies that set emissions standards for mobile and nonmobile sources.

The City General Plan EIR identified cumulative air quality impacts from buildout of the City and Planning Area as cumulatively considerable and significant and unavoidable (City of Elk Grove 2019).

Impact 4-3: Cumulative Air Quality Impacts

The General Plan EIR Impact 5.3.7 identified that implementation of the General Plan would exacerbate existing regional problems with criteria air pollutants and ozone precursors that would result in a significant and unavoidable cumulative impact.

As identified in Impacts 3.2-1, through 3.2-3, the Project could result in construction and operational air pollutant emissions in exceedance of development and buildout conditions assumed in the General Plan EIR and its current land use designations. Air quality emissions are expected to be slightly greater than the General Plan because the Project would result in additional residential development and an increase in population. However, all development under the Project would be required to comply with General Plan policies and standards and SMAQMD Basic Construction Emission Control Practices. These additional emissions would still result in greater contribution to cumulative effects to air quality beyond what was identified in the General Plan EIR. As a result, Project's contribution to the significant cumulative impact **would be cumulatively considerable and significant and unavoidable**.

As identified in Impact 3.2-4 the Project would generate mobile source TACs similar to what was anticipated under buildout conditions as described in the General Plan EIR. Transportation impacts associated with the Project are inherently a cumulative impact analysis as it compares the Project to City General Plan VMT standards associated with buildout of the City. Therefore, TAC emissions from the Project **would not be cumulatively considerable**.

Mitigation Measures

No additional mitigation is available to address this impact beyond implementation of Mitigation Measures 3.2-1 and 3.2-2 and compliance with General Plan policies NR-4-1, MOB-1-1, and Standard MOB-3-2a, Municipal Code Sections 16.07.200 through 16.07.500 and 23.58.120, and SMAQMD Basic Construction Emission Control Practices.

4.4.3 Archaeological, Historical, and Tribal Cultural Resources

The cumulative context associated with the Project includes proposed, planned, reasonably foreseeable, and approved projects in the Planning Area and surrounding region. Much development has occurred in the region prior to protections for historic and prehistoric resources. This past urban development in the region has likely resulted in adverse impacts to historical and prehistoric resources, and there is potential for present and future development activities to affect as-yet undiscovered cultural resources, tribal cultural resources, and human remains. Federal, State, and local laws provide protections for historical resources, but protection may not always be feasible. For these reasons, the cumulative effects of future development on cultural resources, tribal cultural resources, and human remains are considered significant.

Impact 4-4: Historic Resources, Archaeological Resources, Tribal Cultural Resources, and Human Remains

General Plan EIR Impact 5.5.2 evaluated whether implementation of the General Plan would have the potential to contribute to cumulative impacts on cultural resources, including archaeological and historic resources, as well as interred human remains, and determined that the impact was less than cumulatively considerable. The past, present, and foreseeable projects have affected, or will affect, cultural resources throughout the region despite the federal, State, and local laws designed to protect them. These laws have led to the discovery, recording, preservation, and curation of artifacts and historic structures; however, more have been destroyed in the period before preservation efforts began or are inadvertently destroyed during grading and excavation for construction. For these reasons, cumulative impacts on cultural resources in the region are significant. The analysis noted that implementation of mitigation measures MM 5.5.1a and MM 5.5.1b would ensure that the General Plan's contribution to the cumulative impact would remain **less than cumulatively considerable** as identified in the General Plan EIR.

As identified in Impacts 3.3-1, 3.3-2, 3.3-3, and 3.3-4 of this Draft SEIR, development facilitated by the Project would include development of previously disturbed areas where undiscovered subsurface resources may exist similar in extent to the General Plan because the extent of assumed land disturbance would not change from what was evaluated in the General Plan EIR. While the Project would increase the density of development compared to what was assumed in the General Plan EIR, development facilitated by the Project would be required to comply with adopted mitigation measures requiring a cultural resources study and handling of discoveries. Adherence to applicable codes and regulations as well as implementation of Mitigation Measures MM 5.5.1a and MM 5.5.1b, as revised for the Project, would ensure that the Project's contribution to the cumulative impact are offset. Therefore, the Project would not result in a new or greater contribution to cumulative effects to historic resources, archaeological resources, tribal cultural resources, and human remains beyond what was identified in the General Plan EIR. The Project's contribution to the significant cumulative impact **would remain less than cumulatively considerable** as identified in the General Plan EIR.

Mitigation Measures

No additional mitigation is required beyond compliance with General Plan policies HR-2-1, adopted Mitigation Measures 5.5-1a and 5.5-1b, compliance with California PRC Section 5097 et seq. and 21081.3, and California Health and Safety Code Section 7050.5.

4.4.4 Energy

The geographic area considered for cumulative impacts related to energy use includes the Sacramento Municipal Utility District (SMUD) and Pacific Gas and Electric Company (PG&E) service areas. SMUD and PG&E employ various

programs and mechanisms to support the provision of electricity and natural gas services to new development and recoup costs of new infrastructure. Connection fees are typically charged through standard billing for services.

Several other currently planned and approved projects would also receive electricity service from SMUD and natural gas service from PG&E. These projects would also consume energy related to transportation (i.e., gasoline and diesel consumption for passenger vehicles, trucks, buses, and other vehicles) and construction. These projects would be required to implement energy efficiency measures in accordance with the California Energy Code to reduce energy demand from buildings and would likely implement transportation demand management considerations to reduce vehicle trips and miles traveled, which would reduce fuel consumption. There is no evidence to suggest that implementation of development would result in a significant cumulative energy impact related to the wasteful or inefficient use of energy.

The City General Plan EIR identified less than cumulatively considerable energy impacts from buildout of the City and Planning Area (City of Elk Grove 2019).

Impact 4-5: Cumulative Impacts Related to Energy

Impact 5.7.3 of the General Plan EIR evaluated whether implementation of the proposed land uses under the General Plan would result in the wasteful, inefficient, or unnecessary consumption of energy. The General Plan EIR concluded that construction-related energy expenditures would be less than significant due to the inherent short-term nature of construction. The General Plan EIR also determined that operational energy usage would be less than significant because future development would comply with applicable future versions of the California Energy Code. Also, the General Plan and Climate Action Plan (CAP) included policies and actions that would reduce energy consumption.

Implementation of the Project would also be subject to the energy efficiency actions of the California Energy Code and CAP and would not result in a substantial increase in energy use or wasteful energy use beyond what was anticipated in the General Plan EIR. As noted in Section 3.4, "Energy," of this Draft SEIR, more densely operated land uses would improve the energy efficiency of the City's residences on a per capita basis as compared to the less dense land uses currently included in the existing General Plan. Therefore, the Project would not result in a new or greater contribution to cumulative effects to energy use beyond what was identified in the General Plan EIR. The Project's contribution to the significant cumulative impact **would remain less than cumulatively considerable** as identified in the General Plan EIR.

Mitigation Measures

No additional mitigation is required beyond compliance with the City's CAP, including measures BE-1, BE-5, BE-6, BE-7, BE-8, and ACM-5, and Municipal Code Chapter 16.07 and Section 23.58.120.

4.4.5 Greenhouse Gas Emissions and Climate Change

Climate change is a global problem. Greenhouse gases (GHGs) are global pollutants, unlike criteria air pollutants and toxic air contaminants, which are pollutants of regional and local concern. Whereas most pollutants with localized air quality effects have relatively short atmospheric lifetimes (approximately 1 day), GHGs have long atmospheric lifetimes (1 year to several thousand years). GHGs persist in the atmosphere long enough to be dispersed around the globe. Although the lifetime of any GHG molecule depends on multiple variables and cannot be determined with any certainty, it is understood that more carbon dioxide (CO₂) is emitted into the atmosphere than is sequestered by ocean uptake, vegetation, and other forms of sequestration. Of the total annual human-caused CO₂ emissions, approximately 55 percent are estimated to be sequestered through ocean and land uptake every year, averaged over the last 50 years, whereas the remaining 45 percent of human-caused CO₂ emissions remain stored in the atmosphere (IPCC 2013:467).

No single project alone would measurably contribute to an incremental change in the global average temperature or to global or local climates or microclimates. From the standpoint of CEQA, GHG impacts relative to global climate change are inherently cumulative.

The City General Plan EIR identified cumulative GHG impacts from buildout of the City and Planning Area as cumulatively considerable and significant and unavoidable by 2050 (City of Elk Grove 2019).

Impact 4-6: Contribute to Cumulative Impacts Related to Greenhouse Gas Emissions and Climate Change

As described in Section 3.5, “Greenhouse Gas Emissions and Climate Change,” the discussion of GHG emissions associated with the Project is inherently a cumulative impact analysis. As identified in Impact 3.5-1 the Project would result in a substantially more severe impact than what was addressed in the General Plan EIR, and impacts would be significant and unavoidable. GHG emissions from one project cannot, on their own, result in changes in climatic conditions; therefore, the emissions from one project must be considered in the context of their contribution to cumulative global emissions.

Implementation of the Project would result in both direct and indirect GHG emissions. Emission would be reduced during Project compliance with the 2019 CAP and associated General Plan policies consistent with local GHG emissions reduction targets that were developed in consideration of the statewide 2030 reduction target established by SB 32 and the 2017 Scoping Plan. However, since adoption of the General Plan and current CAP the state has adopted more stringent reduction targets for carbon neutrality. The regulatory landscape during the preparation General Plan EIR changed to include reduction of GHG emission 85 percent below 1990 levels by 2045 (AB 1279), and carbon neutrality by 2045 (AB 1279). The City is currently in the process of updating the existing CAP to align with long-term GHG reduction goals set forth by AB 1279. The new CAP intends to include policies that will extend beyond 2030 to 2045.

While the City is in the process of updating their CAP, anticipated to be complete in 2024, to meet the most recent regulatory requirements development facilitated by the Project may conflict with statewide reduction goals for 2045 and 2050 until the CAP is adopted. Therefore, with the change in the regulatory landscape the Project would result in a greater contribution to cumulative effects to GHG emissions and climate change beyond what was identified in the General Plan EIR. Thus, the Project’s contribution to the significant cumulative impact would be **cumulatively considerable and significant and unavoidable**.

Mitigation Measures

No additional mitigation is available beyond compliance with Measures BE-1, BE-4, BE-5, BE-6, BE-7, BE-8, and ACM-5 from the 2019 CAP and Municipal Code Chapter 16.07 and Section 23.58.120.

4.4.6 Noise

The City General Plan EIR identified traffic noise impacts from buildout of the City and Planning Area as cumulatively considerable and significant and unavoidable (City of Elk Grove 2019).

Impact 4-7: Contribute to Cumulative Traffic Noise

As shown in Table 3.6-11, implementation of the Project would result in the exceedance of City incremental increase standards as detailed in General Plan Policy N-2-2. The Project would generate a substantial increase in traffic noise levels above those anticipated under the General Plan buildout because the Project would result in new trips on area roadways. The discussion of traffic noise impacts associated with the Project is inherently a cumulative impact analysis as it compares the Project to City General Plan trips associated with buildout of the City and surrounding areas. This could contribute to adverse health effects to humans from sleep disturbance. Therefore, the Project would in a greater contribution to traffic noise impacts beyond what was identified in the General Plan EIR. Therefore, the Project’s contribution to substantial effects related to traffic noise would be **cumulatively considerable and significant and unavoidable**.

Mitigation Measures

No mitigation is required beyond compliance with General Plan policies N-1-1, N-1-4, N-1-5, and N-2-3, and Mitigation Measure 3.6-2.

Impact 4-8: Contribute to Cumulative Construction and Development Noise and Vibration

Because construction noise and vibration are localized effects, only construction projects that occur close to one another could combine to result in a cumulative noise or vibration effect. Therefore, noise and vibration from construction projects outside of the City's Planning Area would not contribute to noise and vibration impacts in the City. This would be a less than cumulatively considerable impact. Construction activities in the City associated with future development projects may result in increases in noise levels surrounding individual project sites and may expose noise-sensitive land uses to intermittent vibration and noise levels above the City's applicable standards. As discussed previously, this construction activity would be intermittent and highly localized in nature. This cumulative impact was identified in General Plan EIR Impact 5.10.6. As discussed under Impacts 3.6-1, 3.6-3, and 3.6-4, subsequent development under the Project would in similar construction and operational noise impacts as current land uses under the General Plan and policies and the City's Municipal Code would reduce the severity of noise and vibration impacts. Because General Plan Impacts 5.10.3 and 5.10.4 note that operational noise and vibration, respectively, from buildout of the General Plan would be less than significant, cumulative impacts would also be less than significant. There is no new significant effect, and the impact is not substantially more severe than the impact identified in the EIR. As a result, this impact would be less than cumulatively considerable, though the impact would remain **cumulatively considerable** and **significant and unavoidable** as identified in the General Plan EIR.

Mitigation Measures

No additional mitigation is required beyond compliance with General Plan Policy N-1-8, Municipal Code Section 6.32.100, the Elk Grove Construction Specifications Manual, and Mitigation Measure 3.6-1.

4.4.7 Population and Housing

The cumulative setting for population growth is the City Planning Area. The Project would amend the General Plan to accommodate anticipated changes in the City. As set forth by state law, the General Plan serves as the primary planning document for the City. Subordinate documents and plans are required to be consistent with the General Plan. The Project would amend the General Plan land use map and policies as described in Chapter 2, "Project Description." The Project has been developed to accommodate growth projections for the City and would assist the region in addressing the State housing crisis under cumulative conditions. The Project would not induce unplanned population growth. Thus, the cumulative impact would not be significant.

Impact 4-9: Cumulative Population Growth

As identified in Impact 3.7-1 of this Draft SEIR, the Project would increase development capacity in the City through amendments to the land use designations in the City's General Plan. Changes in population anticipated for the Project would result in the need for construction of new housing, infrastructure, and services above what was anticipated in the General Plan to accommodate increases in population. However, development of proposed housing associated with the Project is anticipated to meet population needs and would occur over Project buildout (30 years or more). Future development under the Project would be dispersed throughout the Planning Area to specific growth areas, such as the LEA Community Plan Area. Therefore, the Project would not induce unplanned population growth or residential development throughout the region. The Project would not result in a new or greater contribution to cumulative population growth beyond what was identified in the General Plan EIR. Thus, the Project's contribution to cumulative population growth would remain **less than cumulatively considerable** as identified in the General Plan EIR.

Mitigation Measures

No mitigation is required.

4.4.8 Public Services and Recreation

FIRE PROTECTION AND EMERGENCY MEDICAL SERVICES

The cumulative setting for fire and emergency medical services includes all approved, proposed, and reasonably foreseeable development projects in the service area of the Cosumnes Community Services District (CCSD) Fire Department.

Impact 4-10: Cumulative Impacts to Fire Protection and Emergency Medical Services

General Plan EIR Impact 5.11.1.2 evaluated whether Implementation of the General Plan, in combination with other development within the CCSD's service area, would increase demand for fire protection and emergency medical services. The analysis noted that funding from property taxes, development impact fees, and other sources of funding would provide sufficient resources to expand the department's staff, equipment, and facilities to accommodate future growth within the CCSD service area. The analysis concluded that the impact would not be cumulatively significant.

As identified in Impact 3.8-1 of this Draft SEIR, compliance with General Plan policies would ensure new fire station siting and resources are available and that required environmental review would be conducted as specific fire protection facilities are proposed. Development facilitated by the Project would be required to pay development fees and property taxes that would fund fire protection services. Impacts associated with the construction of needed fire protection facilities would not exceed construction impacts disclosed in the technical sections of the General Plan EIR. Therefore, the Project would not result in a new or greater contribution to cumulative effects related to fire protection and emergency medical services beyond what was identified in the General Plan EIR. Thus, the Project's contribution to substantial effects related to fire protection and emergency medical services would remain **less than cumulatively considerable** as identified in the General Plan EIR.

Mitigation Measures

No additional mitigation is required beyond compliance with EGMC Chapter 16.85 and 17.04 and General Plan policies ER-4-1, ER-4-2, SAF-1-3, and SAF-1-4.

LAW ENFORCEMENT

The cumulative setting for law enforcement services includes all approved, proposed, and reasonably foreseeable development projects located in the LEA Community Plan Area and in Old Town Elk Grove, which are served by the Elk Grove Police Department (EGPD). The South and West Study Areas are located outside of the EGPD's existing service area.

Impact 4-11: Cumulative Law Enforcement Impacts

General Plan EIR Impact 5.11.2.2 evaluated whether Implementation of the General Plan, in combination with other development would increase demand for law enforcement services. The analysis noted that because additional police services to accommodate development can be accomplished through additional personnel and equipment, the impact would not be cumulatively significant.

As identified in Impact 3.8-2 of this Draft SEIR, the addition of new officers to serve future development would not require a new or expanded police facility because EGPD operations would continue within the centralized facility at the City Hall complex. The City collects fees that provides fair share funding towards the construction of new police facilities and acquires new (not replacement) police equipment to serve growth. Although the South and West Study Areas are located outside of the EGPD's existing service, these study areas would be subject to General Plan policies and mitigation measures identified in the General Plan EIR, which would subsequently reduce physical environmental effects and provide additional police protection services as the study areas develop. Therefore, the Project would not result in a new or greater contribution to cumulative effects related to law enforcement beyond what was identified in the General Plan EIR. Thus, the Project's contribution to substantial effects related to law enforcement would remain **less than cumulatively considerable** as identified in the General Plan EIR.

Mitigation Measures

No additional mitigation is required beyond compliance with General Plan Policy SAF-1-1.

PUBLIC SCHOOLS

The cumulative setting for public schools is the service area of the Elk Grove Unified School District (EGUSD).

Impact 4-12: Cumulative Public School Impacts

General Plan EIR Impact 5.11.3.2 evaluated whether implementation of the General Plan, in combination with other development in the EGUSD service area, would result in the increase of school-aged children, which would require the construction of new public school facilities, which could have impacts on the environment. The analysis noted that given EGUSD's current shortage of classroom space and the potential for additional development to further increase demand for school space, and thus school construction, the cumulative impact would be significant.

As identified in Impact 3.8-3 of this Draft SEIR, implementation of the Project could result in an additional 763 students to be enrolled at EGUSD schools, which could require additional school facility needs beyond current General Plan buildout. The analysis noted that no additional feasible mitigation is available beyond compliance with existing laws and General Plan policies. While the EGUSD could and should implement mitigation measures to reduce physical environmental effects of new school development, the EGUSD is not subject to mitigation adopted by the City. No enforceable measures are available. Therefore, the Project's contribution would remain **cumulatively considerable and significant and unavoidable** as determined in the General Plan EIR.

Mitigation Measures

No new mitigation is available to reduce Project contributions.

Impact 4-13: Cumulative Impacts to Parks and Recreation Facilities

General Plan EIR Impact 5.11.4.2 evaluated whether the General Plan would result in a cumulative increase in demand for parkland and recreational facilities, the construction of which could impact the physical environment. The analysis concluded that the is impact would not be cumulatively significant.

As identified in Impact 3.8-4 of this Draft SEIR, the City and the CCSD have entered into a memorandum of understanding (MOU) regarding delivery of some parks and recreation facilities within the City's existing boundaries. Development projects outside of the MOU areas that include the construction of recreation facilities would be subject to General Plan policies and mitigation measures identified in the General Plan EIR to reduce physical environmental effects. The CCSD would be responsible for the construction of facilities in the MOU areas and would be required to comply with mitigation monitoring and reporting program (MMRP) from the relevant project-level CEQA document in which the park facilities would be located. Therefore, the construction of park facilities would be subject to policies, standards, and mitigation measures from the General Plan and this SEIR, or the mitigation identified in project specific MMRPs. The Project would not result in a new or greater contribution to cumulative effects related to parks and recreation facilities beyond what was identified in the General Plan EIR. Thus, the Project's contribution to substantial effects related to parks and recreational facilities would remain **less than cumulatively considerable** as identified in the General Plan EIR.

Mitigation Measures

No additional mitigation is required beyond compliance with General Plan policies PT-1-3, PT-1-5, PT-1-6, and PT-1-9, City and CCSD MOU, and EGMC Chapter 22.40.

4.4.9 Transportation

The geographic context for cumulative impacts related to transportation is the City and the Planning Area. While the City General Plan EIR identified no cumulatively considerable impacts related to transit, bicycle, pedestrian, and traffic safety, vehicle miles traveled (VMT) impacts from buildout of the City and Planning Area were identified cumulatively

considerable and significant and unavoidable because the effectiveness of VMT reductions strategies is not certain. In addition, disruptive changes occurring in transportation, such as transportation network companies (i.e., Uber, Lyft), autonomous vehicles, Mobility as a Service (i.e., ride-sharing, carsharing), Amazon (increased deliveries), may increase VMT (City of Elk Grove 2019:3.15-60).

Impact 4-14: Cumulative Impacts on Vehicle Miles Traveled

The discussion of VMT impacts associated with the Project in Impact 3.9-1 of this Draft SEIR is inherently a cumulative impact analysis as it compares the Project to City General Plan VMT standards associated with buildout of the City. As detailed under Impact 3.9-1 of this Draft SEIR, the addition of Project-generated total daily VMT within the City would increase and would exceed the established Citywide limit of 6,367,833 VMT similar what was identified in the General Plan EIR. Therefore, the Project would not result in a substantial contribution to cumulative VMT impacts beyond what was identified in the General Plan EIR and would continue to be **cumulatively considerable and significant and unavoidable** as identified in the General Plan EIR.

Mitigation Measures

Implementation of Mitigation Measure 3.13-1 would reduce Project VMT.

Impact 4-15: Cumulative Impacts on Transit, Bicycle, and Pedestrian Facilities

General Plan EIR Impact 5.13.7 identified that implementation of the General Plan would not result in conflicts with plans, policies, or programs for transit, bicycle, and pedestrian facilities. As described in Impact 3.14-2 of this Draft SEIR, implementation of the Project would be subject to and implement General Plan policies applicable to transit, bicycle, and pedestrian facilities and service. The intent of development within the LEA Community Plan Area would be to provide a walkable urban area in the City with a variety of mobility options and neighborhood streets and the Grant Line Road Precise Plan would include a multi-use path for alternative forms of transportation. Additionally, subsequent development projects under the Project would be subject to all applicable City guidelines, standards, and specifications related to transit, bicycle, or pedestrian facilities. Therefore, the Project would not result in a new or greater contribution to cumulative effects related to transit, bicycle, and pedestrian facilities beyond what was identified in the General Plan EIR. Thus, the Project's contribution to substantial effects related to transit, bicycle, and pedestrian facilities would remain **less than cumulatively considerable** as identified in the General Plan EIR.

Mitigation Measures

No additional mitigation is required beyond compliance with the *Bicycle, Pedestrian, and Trails Master Plan* and General Plan Policies MOB-1-2, MOB-3-1, MOB-3-7, MOB-3-8, MOB-5-4, MOB-5-6, MOB-5-7, and H-1-3.

Impact 4-16: Cumulative Hazards Due to a Design Feature or Incompatible Uses

No significant design hazard impacts were identified in the General Plan EIR. Implementation of the Project would be subject to, and constructed in accordance with, applicable roadway design and safety guidelines and General Plan policies. Therefore, the Project would not result in a new or greater contribution to cumulative effects related to hazards due to a design feature or incompatible uses beyond what was identified in the General Plan EIR. Thus, the Project's contribution to substantial effects related to design features or incompatible uses would remain **less than cumulatively considerable** as identified in the General Plan EIR.

Mitigation Measures

No additional mitigation is required beyond General Plan Policy MOB-3-10.

4.4.10 Utilities and Service Systems

WATER SUPPLY

The cumulative setting for water supply is the boundary of the SCWA, EGWD, and the area south of Kammerer Road in the West and South Study Areas. The boundary of the SCWA includes the entire City as well as portions of the cities of Sacramento and Rancho Cordova. EGWD services an area of approximately 13 square miles in the City limits east of SR 99.

Impact 4-17: Cumulative Water Service Impacts

General Plan EIR Impact 5.12.1.3 evaluated whether Implementation of the General Plan, in combination with other development would contribute to cumulative demand for domestic water supply. While the demand associated with the General Plan could be accommodated in the short term by the surplus identified by the SCWA, in the long term, General Plan demand would be greater than this surplus. Therefore, this impact would be cumulatively significant and the General Plan's contribution would be cumulatively considerable.

As identified in Impact 3.10-1 of this Draft SEIR, the development facilitated by the Project would result in an increase in water demand as compared to the General Plan. Similar to the General Plan the Project would result in water services south of the City in the South and West Study Areas. However, the increase in water demand in the Planning Area would be minor compared with existing and projected demand, supply, and surplus. The additional water demand from implementation of the Project would not result in a new or substantially more severe impacts regarding water supply than was addressed in the General Plan EIR. Therefore, the Project would not result in a new or greater contribution to cumulative effects related to water service beyond what was identified in the General Plan EIR. Water supply continue to be **cumulatively considerable and significant and unavoidable** as identified in the General Plan EIR.

Mitigation Measures

No additional mitigation is required beyond compliance General Plan Policy INF-1-1 and General Plan Mitigation Measure 5.12.1.1, which would address potential effects from water supply from SCWA outside the City limits.

WASTEWATER

The cumulative setting for wastewater impacts would be the Regional San service area and the area south of Kammerer Road in the West and South Study Areas. Regional San service area includes portions of unincorporated Sacramento County as well as the Cities of Citrus Heights, Elk Grove, Folsom, Rancho Cordova, Sacramento, and West Sacramento and the communities of Courtland and Walnut Grove.

Impact 4-18: Cumulative Wastewater Impacts

General Plan EIR Impact 5.12.2.3 evaluated whether Implementation of the General Plan, in combination with other development in the Regional San service area, would generate new wastewater flows requiring conveyance and treatment. Future development in the Regional San service area would result in an incremental cumulative demand for wastewater and related services, and the construction of new and expanded wastewater facilities would provide additional capacity to accommodate current and future demand. The construction of these facilities would result in associated environmental impacts. This impact would be cumulatively significant.

As identified in Impact 3.10-2 of this Draft SEIR, the proposed development under the Project could generate approximately 3.12 million gallons per day (mgd) of wastewater. The Sacramento Regional Wastewater Treatment Plant (SRWTP) has been master planned to accommodate additional growth, including development that is anticipated in the South and West Study Areas. The Project would not result in a new or greater contribution to cumulative effects related to wastewater beyond what was identified in the General Plan EIR. Thus, the Project's contribution to substantial effects related to wastewater would be less than cumulatively considerable, though the impact would remain **cumulatively considerable and significant** as identified in the General Plan EIR.

Mitigation Measures

No mitigation is required.

SOLID WASTE

The cumulative setting for solid waste impacts is the service areas of the landfills that serve the Planning Area.

Impact 4-19: Cumulative Solid Waste Impacts

General Plan EIR Impact 5.12.3.2 evaluated whether implementation of the General Plan, in combination with other development in other jurisdictions that contribute to regional landfills, would generate solid waste, thereby increasing demand for hauling and disposal services. The analysis concluded that the cumulative impact would not be significant and the General Plan's contribution would not be cumulatively considerable.

As identified in Impact 3.10-3 of this Draft SEIR, proposed development as a result of the Project could result in increased solid waste generation associated with proposed development. The analysis noted that there is substantial remaining capacity in the landfills serving local waste haulers, with an average remaining capacity of more than 70 percent. Additionally, future development associated with the Project would be required to comply with applicable solid waste regulations, including the City's Space Allocation and Enclosure Design Guidelines for Trash and Recycling. Therefore, the Project would not result in a new or greater contribution to cumulative effects related to solid waste beyond what was identified in the General Plan EIR. Thus, the Project's contribution to substantial effects related to solid waste would remain **less than cumulatively considerable** as identified in the General Plan EIR.

Mitigation Measures

No additional mitigation is required beyond compliance with the City's existing recycling programs and associated regulations, as well as Municipal Code Section 30.70.030(C).

GROUNDWATER

Impact 4-20: Cumulative Groundwater Use

General Plan EIR Impact 5.9.7 evaluated whether development of the Planning Area, in combination with other development in the Central Basin, would increase demand for groundwater and could potentially interfere with recharge of the aquifer. The analysis noted that implementation of the General Plan would increase demand for water resources, a portion or all of which would be met with groundwater, at the discretion of the Sacramento County Water Agency (SCWA). Because additional groundwater could be needed to serve the Study Areas, the impact would be cumulatively significant and unavoidable.

As discussed in Impact 3.10-4 of this Draft SEIR, the additional water demand from implementation of the Project additional water demand is minor compared with existing and projected water demand and is not expected to result in the exceedance of the long-term average annual sustainable yield. The Project would also be subject applicable management actions to meet the groundwater sustainability goal of the South American Subbasin Groundwater Sustainability Plan. Therefore, the Project would not result in a new or greater contribution to cumulative effects related to groundwater beyond what was identified in the General Plan EIR. Thus, the Project's contribution to substantial effects related to groundwater would be less than cumulatively considerable, though the impact would remain **cumulatively considerable** and **significant and unavoidable** as identified in the General Plan EIR.

Mitigation Measures

No mitigation is required.

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5 ALTERNATIVES

5.1 INTRODUCTION

CCR Section 15126.6(a) (State CEQA Guidelines) requires EIRs to describe:

a range of reasonable alternatives to the project, or to the location of the project, which would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project, and evaluate the comparative merits of the alternatives. An EIR need not consider every conceivable alternative to a project. Rather, it must consider a range of potentially feasible alternatives that will avoid or substantially lessen the significant adverse impacts of a project, and foster informed decision making and public participation. An EIR is not required to consider alternatives that are infeasible. There is no ironclad rule governing the nature or scope of the alternatives to be discussed other than the rule of reason.

This section of the State CEQA Guidelines also provides guidance regarding what the alternatives analysis should consider. Subsection (b) further states the purpose of the alternatives analysis is as follows:

Because an EIR must identify ways to mitigate or avoid the significant effects that a project may have on the environment (Public Resources Code Section 21002.1), the discussion of alternatives shall focus on alternatives to the project or its location which are capable of avoiding or substantially lessening any significant effects of the project, even if these alternatives would impede to some degree the attainment of the project objectives, or would be more costly.

The State CEQA Guidelines require that the EIR include sufficient information about each alternative to allow meaningful evaluation, analysis, and comparison with the proposed project. 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 alternative must be discussed, but in less detail than the significant effects of the project as proposed (CCR Section 15126.6[d]).

The State CEQA Guidelines further require that the “no project” alternative be considered (CCR Section 15126.6[e]). The purpose of describing and analyzing a no project alternative is to allow decision makers to compare the impacts of approving a proposed project with the impacts of not approving the proposed project. If the no project alternative is the environmentally superior alternative, CEQA requires that the EIR “shall also identify an environmentally superior alternative among the other alternatives” (CCR Section 15126.6[e][2]).

In defining “feasibility” (e.g., “feasibly attain most of the basic objectives of the project”), CCR Section 15126.6(f)(1) states, in part:

Among the factors that may be taken into account when addressing the feasibility of alternatives are site suitability, economic viability, availability of infrastructure, general plan consistency, other plans or regulatory limitations, jurisdictional boundaries (projects with a regionally significant impact should consider the regional context), and whether the proponent can reasonably acquire, control or otherwise have access to the alternative site (or the site is already owned by the proponent). No one of these factors establishes a fixed limit on the scope of reasonable alternatives.

In determining what alternatives should be considered in the EIR, it is important to consider the objectives of the project, the project’s significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, as noted above, EIRs must contain a discussion of “potentially feasible” alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made by the lead agency’s decision-making body—here, the City of Elk Grove. (See PRC Sections 21081.5, 21081[a] [3].)

5.2 CONSIDERATIONS FOR SELECTION OF ALTERNATIVES

5.2.1 Attainment of Project Objectives

As described above, one factor that must be considered in selection of alternatives is the ability of a specific alternative to attain most of the basic objectives of the Project (CCR Section 15126.6[a]). Chapter 2, "Project Description," articulates the following Project objectives:

- ▶ create a physical environment that supports the growth of 21st century employment opportunities;
- ▶ develop walkable communities with amenities that attract and retain businesses and residents;
- ▶ update the City's VMT thresholds consistent with the most recent model while maintaining consistency with the policy provisions of the Mobility Chapter of the General Plan for efficient transportation systems in the City;
- ▶ refine the requirements for General Plan EIR Mitigation Measure MM 5.5.1a and MM 5.5.1b to improve its implementation; and
- ▶ establish design and implementation provisions for Segments A2 and C of the Capital SouthEast Connector.

5.2.2 Environmental Impacts of the General Plan Amendments and Update of Vehicle Miles Traveled Standards Project

Sections 3.1 through 3.10 and Chapter 4 of this Draft SEIR address the environmental impacts of implementation of the proposed Project. Potentially feasible alternatives were developed with consideration of avoiding or lessening the significant, and potentially significant, adverse impacts of the Project, as identified in Chapters 3 and 4 of this Draft SEIR and summarized below. If an environmental issue area analyzed in this Draft SEIR is not addressed below, it is because no new significant impacts were identified for that issue area beyond the General Plan EIR.

- ▶ Impact 3.2-2: Operational Air Quality
- ▶ Impact 3.5-1: Project Generated Greenhouse Gas (GHG) Emissions
- ▶ Impact 3.6-2: Increased Traffic Noise
- ▶ Impact 4-3: Cumulative Air Quality Impacts
- ▶ Impact 4-6: Cumulative GHG Emissions
- ▶ Impact 4-8: Cumulative Traffic Noise Impacts

AIR QUALITY

Impact 3.2-2: Impact 5.3.2 and 5.3.6 of the General Plan EIR determined that long-term operational emissions of ROG, NO_x, PM₁₀, and PM_{2.5} would be substantial and could substantially contribute to a violation of the NAAQS and CAAQS for ozone and PM and conflict with air quality attainment efforts. As determined in the General Plan EIR, emissions would exceed SMAQMD's thresholds of significance and this impact was concluded to be significant and unavoidable. Development facilitated by the Project would result in emissions that would further exceed the SMAQMD thresholds of significance. Additional residential development and population growth anticipated by the Project would increase emissions as compared to the General Plan. This would be a substantial increase in the impact of severity that was previously identified in General Plan EIR Impact 5.3.2 and 5.3.6. No additional mitigation measures are available to reduce this impact; thus this impact would be significant and unavoidable.

GREENHOUSE GAS EMISSIONS

Impact 3.5-1: Impact 5.7.2 of the General Plan EIR evaluated the General Plan's potential to conflict with long-term statewide GHG reduction goals for 2050. The General Plan EIR determined that development under the General Plan had the potential to conflict with statewide GHG reduction goals for 2050 because the measures of the CAP would only be sufficient to reduce GHG emissions to 2.9 MTCO₂ per capita. Impact 5.7.2 found the General Plan to have significant and unavoidable climate change impacts. Development facilitated by the Project would result in emission that would exceed those estimated under the General Plan. The City's current CAP does not account for carbon neutrality and is insufficient to meet 2045 and 2050 targets for GHG emissions. While the City is in the process of updating their CAP to meet the most recent regulatory requirements, development facilitated by the Project may conflict with statewide reduction goals for 2045 and 2050. Impacts were determined to be significant and unavoidable in the General Plan EIR. The Project would have a substantial increase in the impact of severity that was previously identified in General Plan EIR Impact 5.7.2. No additional mitigation measures are available to reduce this impact; thus this impact would be significant and unavoidable.

NOISE

Impact 3.6-2: Impact 5.10.2 of the General Plan EIR identified that implementation of the General Plan would result in a significant increase in transportation noise, including traffic noise levels along many existing roadways in the City. As determined by the General Plan EIR, buildout of the General Plan would increase traffic noise at all roadway segments above the City's exterior noise standard (60 dB L_{dn}) for residential and other noise-sensitive land uses. Impacts from traffic noise were determined to be significant and unavoidable. Implementation of the Project would result in further increases in traffic noise levels on several roadway segments (see Table 3.6-11 in Section 6, "Noise") as compared to the General Plan. This would be a substantial increase in the impact of severity that was previously identified in General Plan EIR Impact 5.10.2. No mitigation measures are available to reduce this impact; thus this impact would be significant and unavoidable.

CUMULATIVE IMPACTS

Impact 4-3: Cumulative Air Quality Impacts. General Plan EIR Impact 5.3.7 identified that implementation of the General Plan would exacerbate existing regional problems with criteria air pollutants and ozone precursors that would result in a significant and unavoidable cumulative impact. The Project would generate a substantial increase in operational air quality emissions in exceedance of the SMAQMD thresholds. Additional residential development and population growth anticipated by the Project in addition to regional development would increase emissions as compared to the General Plan. The Project's contribution to this impact would be substantial increase in the impact of severity than was previously identified in General Plan EIR and thus a cumulatively considerable and unavoidable impact.

Impact 4-6: Cumulative GHG Impacts. General Plan EIR Impact 5.7.2 identified that implementation of the General Plan would conflict with long-term statewide GHG reduction goals for 2050. The Project would generate a substantial increase in GHG emissions as compared to the General Plan. The discussion of GHG impacts associated with the Project is inherently a cumulative impact analysis as no single project alone would measurably contribute to an incremental change in the global average temperature or to global or local climates or microclimates. The Project's contribution to this impact would be substantial increase in the impact of severity than was previously identified in General Plan EIR and thus a cumulatively considerable and unavoidable impact.

Impact 4-8: Cumulative Noise Impacts. General Plan EIR Impact 5.10.2 evaluated whether implementation of the General Plan, in combination with surrounding development, would result in a traffic noise impact. The Project would generate a substantial increase in traffic noise levels above those anticipated under the General Plan buildout because the Project would result in new trips on area roadways. The discussion of traffic noise impacts associated with the Project is inherently a cumulative impact analysis as it compares the Project to General Plan trips associated with buildout of the City and surrounding areas. The Project's contribution to this impact would be substantial

increase in the impact of severity than was previously identified in General Plan EIR and thus a cumulatively considerable and unavoidable impact.

5.3 ALTERNATIVES CONSIDERED BUT NOT EVALUATED FURTHER

As described above, State CEQA Guidelines Section 15126.6l provides that the range of potential alternatives for the project shall include those that could feasibly accomplish most of the basic objectives of the project and could avoid or substantially lessen one or more of the significant effects. Alternatives that fail to meet the fundamental project purpose need not be addressed in detail in an EIR (*In re Bay-Delta Programmatic Environmental Impact Report Coordinated Proceedings* (2008) 43 Ca¹4th 1143, 1165–1167).

In determining what alternatives should be considered in the EIR, it is important to acknowledge the objectives of the project, the project's significant effects, and unique project considerations. These factors are crucial to the development of alternatives that meet the criteria specified in Section 15126.6(a). Although, as noted above, EIRs must contain a discussion of "potentially feasible" alternatives, the ultimate determination as to whether an alternative is feasible or infeasible is made by lead agency decision maker(s). (See PRC Section 21081[a][3].) At the time of action on the Project, the decision maker(s) may consider evidence beyond that found in this EIR in addressing such determinations. The decision maker(s), for example, may conclude that a particular alternative is infeasible (i.e., undesirable) from a policy standpoint and may reject an alternative on that basis provided that the decision maker(s) adopt a finding, supported by substantial evidence, to that effect, and provided that such a finding reflects a reasonable balancing of the relevant economic, environmental, social, and other considerations supported by substantial evidence (*City of Del Mar v. City of San Diego* [1982] 133 Cal.App.3d 401, 417; *California Native Plant Society v. City of Santa Cruz* [2009] 177 Cal.App⁴th 957, 998).

The EIR should also identify any alternatives that were considered by the lead agency but were rejected during the planning or scoping process and briefly explain the reasons underlying the lead agency's determination.

The following alternative was considered by the City of Elk Grove but is not evaluated further in this Draft SEIR.

5.3.1 Alternative Location for the LEA Community Plan

This alternative would include the LEA Community Plan Area in another area of the City. An offsite location for development proposed as part of the LEA Community Plan would reduce impacts associated with land coverage, based on the conversion of existing parcels in the LEA Community Plan Area to a denser land use. This alternative was rejected as it would not meet the Project objective to enhance land uses along the Kammerer Road corridor.

5.4 ALTERNATIVES SELECTED FOR DETAILED ANALYSIS

The following alternatives are evaluated in this Draft SEIR:

- ▶ **Alternative 1: No Project Alternative** assumes continued implementation of the City's 2019 General Plan. The LEA Community Plan Area, Old Town Policy Area, South Study Area, and West Study Area would retain their current General Plan and zoning designations. In addition, roadway improvements would not occur along Grant Line Road as detailed in the Precise Plan. And General Plan EIR Mitigation Measure MM 5.5.1a and MM 5.5.1b would remain as currently written in the General Plan EIR.
- ▶ **Alternative 2: Lent Ranch Alternative** includes retaining the existing zoning and land use designations in the Lent Ranch Policy Area.
- ▶ **Alternative 3: Reduced Project Alternative** includes removing the area south of Kammerer Road from the LEA Community Plan and retaining the existing zoning and land use designations in the Old Town Policy Area.

Further details on these alternatives, and an evaluation of their environmental effects relative to those of the proposed Project, are provided below. For purposes of comparison with the other action alternatives, conclusions for each technical area are characterized as “impacts” that are greater, similar, or less to describe conditions that are worse than, similar to, or better than those of the proposed Project.

5.4.1 Alternative 1: No Project Alternative

Under the No Project Alternative, the City would continue to implement the adopted General Plan, including recent amendments adopted for the 2021 Housing Element and the Safety Element. No land use or zoning changes to implement the LEA Community Plan Area, Old Town Policy Area, South Study Area, or West Study Area would be made. Adopted General Plan mitigation measures MM 5.5.1a and MM 5.5.1b would not be modified under this alternative. The Form Based Code designed for the LEA Community Plan Area would not be adopted. In addition, Grant Line Road would not be realigned as envisioned in the Precise Plan. The No Project Alternative would result in the continuation of existing conditions and planned development of the City. No new significant environmental impacts or an increased severity of environmental impacts identified in the General Plan EIR would occur under this alternative because it would retain the currently General Plan land use designations and policy provisions.

5.4.2 Alternative 2: Lent Ranch Alternative

Under the Lent Ranch Alternative, existing zoning and land uses within the Lent Ranch Policy Area would remain as described in the General Plan. Other aspects of the Project (LEA Community Plan Area west of the Lent Ranch Policy Area, Old Town Policy Area, South and West Study Areas, Precise Plan, VMT updates, and adopted General Plan Mitigation Measure MM 5.5.1a and MM 5.5.1b) would remain the same as analyzed throughout this SEIR. The Lent Ranch Policy Area is approximately 295 acres in the eastern portion of the Project proposed LEA Community Plan Area located north of Kammerer Road and west of State Rout (SR) 99. The Lent Ranch Policy Area is covered by a Development Agreement that is valid until 2025 and the terms of the agreement would remain for this alternative. Under this alternative the Lent Ranch Policy Area would retain the General Plan use designations of Commercial, Commercial/Office, and High Density Residential and zoning designation of Special Plan Area. The remainder of the LEA Community Plan would be implemented as proposed for the Project. This alternative would result in an increase in commercial and office development and a decrease in transect based residential development as proposed by the Project. This alternative would include development of 280 residential units and 280 acres of commercial/office development. Therefore, this alternative would result in a reduction in development density as compared to the Project, which would include development of over 300 residential units in the Lent Ranch Policy Area.

AESTHETICS

As discussed in Section 3.1, “Aesthetics,” of this Draft SEIR, the Project would result in less-than-significant impacts related to changes in visual character and new sources of substantial light or glare from new high density residential development. Under this alternative, there would be less dense development as the Lent Ranch Policy Area would retain the existing General Plan land use designations. Buildings would not be as tall as compared to the Project reducing potential shadow and visual effects. Transect based development would not occur, including development of proposed Center 3, resulting in less dense development affording more views of the surrounding landscape. Thus, development of Alternative 2 would result in less of an impact related to changes to the existing visual character of the area, as well as fewer new sources of nighttime lighting in the area. (*Less*)

AIR QUALITY

As discussed in Section 3.2, “Air Quality,” of this Draft SEIR, the Project would result in significant and unavoidable impacts related to air emissions during operation. Under the Lent Ranch Alternative, 280 residential units and 280 acres of commercial/office land uses would be developed. This would be a reduction in development as compared to

the Project. This alternative would still generate construction emissions as all sites are already anticipated for development under the General Plan. However, this alternative would result in reduced operational air pollutant emissions because it would result in reduced development potential in the Lent Ranch Policy Area. However, the development proposed under this Alternative would still emit a substantial amount of operational emissions as compared to the General Plan EIR. *(Less)*

ARCHAEOLOGICAL, HISTORICAL, AND TRIBAL CULTURAL RESOURCES

As discussed in Section 3.3, "Archaeological, Historical, and Tribal Cultural Resources," implementation of adopted mitigation measures from the General Plan EIR would ensure that Project impacts would be less than significant. The Lent Ranch Alternative would involve earthmoving activities similar to those of the Project, which could result in the disturbance, destruction, or alteration of known or as-yet-undiscovered/unrecorded archaeological resources, tribal cultural resources, or human remains. This alternative would reduce development in the Lent Ranch Policy Area as compared to the Project, including less residential development. Although this alternative would reduce the intensity of operations in the LEA Community Plan Area, site disturbance would be similar as the Project because Lent Ranch Policy Area would still allow for commercial/office and residential development under their current General Plan land use designations. Therefore, the impacts under the Lent Ranch Alternative would be similar to those under the Project. *(Similar)*

ENERGY

As discussed in Section 3.4, "Energy," of this Draft SEIR, the Project would result in less than significant environmental impacts related to wasteful, inefficient, or unnecessary consumption of energy and would not conflict with or obstruct plans for renewable energy or energy efficiency. Likewise, the Lent Ranch Alternative would not result in significant energy impacts. However, this Alternative would have lower energy demands as compared to the Project because of the reduced development potential in the Lent Ranch Policy Area. Therefore, energy impacts under the Lent Ranch Alternative would be less than those under the Project. *(Less)*

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

As discussed in Section 3.5, "Greenhouse Gas Emissions and Climate Change," the Project would result in significant and unavoidable impacts related to GHGs and climate change. Under the Lent Ranch Alternative, the intensity of site development would be reduced; therefore, less operation-related GHG emissions would be generated than under the Project. Construction emissions for this alternative and the Project are anticipated to be similar because the Lent Ranch Policy Area would have the same development footprint. However, development facilitated by the Project would still have the potential to conflict with statewide reduction goals for 2045 and 2050. GHG operation-related emission impacts under the Lent Ranch Alternative would be less than under the Project, but remain significant and unavoidable. *(Less)*

NOISE AND VIBRATION

As discussed in Section 3.6, "Noise and Vibration," of this Draft SEIR, the Project would result in less-than-significant impacts related to noise and vibration during construction and operation, and significant and unavoidable impacts related to traffic noise. Future development under the Lent Ranch Alternative, like all development in the City, would be required to adhere to the Elk Grove Construction Specifications Manual requirements regarding allowable times and hours of work and noise control measures. As development under the Lent Ranch Alternative would be less intense than under the Project, it is expected that the reduction in development potential would result in lower traffic noise impacts on Kammerer Road as compared to the Project. However, traffic noise on other roadway segments throughout the City, such as Laguna Boulevard would continue to exceed City noise standards. Although impacts would be slightly less than the Project, impacts would remain significant and unavoidable. *(Less)*

POPULATION AND HOUSING

As discussed in Section 3.7, "Population and Housing," of this Draft SEIR, the Project would accommodate up to 1,851 new dwelling units and approximately 5,979 new residents. This growth would exceed projections assumed under the City's General Plan and regional planning efforts completed by SACOG. The Lent Ranch Alternative would include reduced residential development and increased commercial/office land uses. Therefore, the number of dwelling units and anticipated population growth under this alternative would result in fewer impacts to population and housing as compared to the Project. (*Less*)

PUBLIC SERVICES AND RECREATION

As discussed in Section 3.8, "Public Services and Recreation," of this Draft SEIR, the Project would generate additional residents, which would increase the need for additional fire protection and law enforcement services and additional parks. However, these services are funded through a variety of sources (e.g., property taxes, development impact fees, fees for services) and are expanded as needed to accommodate additional population growth. For parks, City Municipal Code Chapter 22.40 and General Plan Policy PT-1-3 require a minimum of 5 acres of developed parkland per 1,000 residents, though some specific plan areas may require additional acreage. Because this alternative would develop fewer residential units than anticipated by the Project, there would be less impact than under the Project.

As discussed in Section 3.12, "Public Services and Recreation," of this Draft SEIR, the Project would result in significant and unavoidable impacts related to public school construction and associated environmental impacts due to the increase in students that would be generated. It should be noted that the General Plan EIR also concluded that implementation of the General Plan would have significant and unavoidable impacts on public schools because while the EGUSD could and should implement measures to reduce physical environmental effects of school development, the EGUSD is not subject to mitigation adopted by the City. Under the Lent Ranch Alternative, a reduced amount of residential units would reduce the number of students needing school facilities as compared to the Project. However, even under the Lent Ranch Alternative, additional students would be generated as compared with the General Plan. Thus, while the Lent Ranch Alternative would not result in as much of a population increase as the Project, it would generate additional students. While the impact would remain significant and unavoidable under the Lent Ranch Alternative, it would be less than under the Project. (*Less*)

TRANSPORTATION

As discussed in Section 3.9, "Transportation," of this Draft SEIR, the Project would result in significant and unavoidable impacts related to VMT. Reduced development under the Lent Ranch Alternative would result in a reduction in estimated total daily VMT as compared to the Project because this alternative would have less development. However, population growth under the Lent Ranch Alternative would be less than the project likely resulting in a similar VMT per service population as the Project. Similar to the Project VMT modeling and estimates for this alternative are not directly comparable to the those contained within the General Plan. All applicable General Plan policies would apply and consistent with the determination in the General Plan, no additional feasible mitigation is available beyond compliance with those General Plan policies. Therefore, while the impact would remain significant and unavoidable under the Lent Ranch Alternative, it would be slightly less than under the Project for total daily VMT. (*Less*)

UTILITIES AND SERVICE SYSTEMS

As discussed in Section 3.10, "Utilities and Service Systems," of this Draft EIR, the Project would result in less-than-significant impacts related to utilizes and service systems. Because the Lent Ranch Alternative would not include as many new residential units as the proposed Project, this alternative would be expected result in lower demand for utilities and service systems. Thus, while both the Project and the Lent Ranch Alternative would result in a net increase in the number of residential units in the City beyond the assumptions of the General Plan EIR, this alternative would result in fewer net new residents and demand for utilities would be less than under the proposed Project. (*Less*)

5.4.3 Alternative 3: Reduced Project Alternative

Under the Reduced Project Alternative the land uses south of Kammerer Road within the LEA Community Plan would retain their existing General Plan land use designations and zoning. Old Town Policy Area would also retain its existing land use and zoning designations. The rest of the Project (South and West Study Areas, Precise Plan, VMT updates, and General Plan EIR Mitigation Measure MM 5.5.1a and MM 5.5.1b) would remain the same as analyzed throughout this SEIR. The existing area south of Kammerer Road in the LEA Community Plan Area would retain its Activity District land use as part of the South Study Area. Permitted land uses in the Activity District include Community Commercial, Regional Commercial, Light Industrial/Flex, Heavy Industrial, High Density Residential, and Public Services. Development in the Old Town Policy Area under the Reduced Project Alternative would continue with existing land uses and zoning designations. This alternative would result in reduced development density as compared to the Project, which would include residential development throughout the area south of Kammerer Road and in the Old Town Policy Area.

AESTHETICS

As discussed in Section 3.1, "Aesthetics," of this Draft SEIR, the Project would result in less-than-significant impacts related to changes in visual character and new sources of substantial light or glare from new high density residential development. Under this alternative, there would be less dense development as the area south of Kammerer Road would retain the existing General Plan land use designations. Buildings would not be as tall and development would not be as intense as envisioned by the Project. In the Old Town Policy Area development would continue to be consistent with the distinct historic character of the area and would not be as intense as envisioned by the Project. Thus, development of Alternative 3 in accordance with existing zoning and land use designations would result in less of an impact related to changes to the existing visual character of the area, as well as fewer new sources of nighttime lighting in the area. (*Less*)

AIR QUALITY

As discussed in Section 3.2, "Air Quality," of this Draft SEIR, the Project would result in significant and unavoidable impacts related to air emissions during operation. Under the Reduced Project Alternative, there would be commercial, industrial, and public services development and a reduction in residential development south of Kammerer Road and overall reduced development in the Old Town Policy Area. This would be a reduction in development density as compared to the Project. Because the sites removed from the Project would be built out according to their existing zoning and land use designations, they would still generate construction emissions as all sites are already anticipated for development under the General Plan. However, this alternative would result in reduced operational air pollutant emissions because it would consist of less development than the Project. However, the development proposed under this Alternative would still emit a substantial amount of operational emissions as compared to the General Plan EIR and impacts would remain significant and unavoidable. (*Less*)

ARCHAEOLOGICAL, HISTORICAL, AND TRIBAL CULTURAL RESOURCES

As discussed in Section 3.3, "Archaeological, Historical, and Tribal Cultural Resources," implementation of adopted mitigation measures from the General Plan EIR would ensure that Project impacts would be less than significant. The Reduced Project Alternative would involve earthmoving activities similar to those of the Project, which could result in the disturbance, destruction, or alteration of known or as-yet-undiscovered/unrecorded archaeological resources, tribal cultural resources, or human remains. This alternative would reduce development density in the area south of Kammerer Road and in the Old Town Policy Area as compared to the Project, including less residential development. Although this alternative would reduce the intensity of operations in the LEA Community Plan Area and Old Town Policy Area, site disturbance would be similar as the Project because this alternative would still allow for commercial, industrial, and residential development under their current General Plan land use designations. Therefore, the impacts under the Lent Ranch Alternative would be similar to those under the Project. (*Similar*)

ENERGY

As discussed in Section 3.4, "Energy," of this Draft SEIR, the Project would result in less than significant environmental impacts related to wasteful, inefficient, or unnecessary consumption of energy and would not conflict with or obstruct plans for renewable energy or energy efficiency. Likewise, the Reduced Project Alternative would not result in significant energy impacts. However, this Alternative would have lower energy demands as compared to the Project because of the reduced intensity of use that would be developed with residential units. Therefore, energy impacts under the Reduced Project Alternative would be less than those under the Project. *(Less)*

GREENHOUSE GAS EMISSIONS AND CLIMATE CHANGE

As discussed in Section 3.5, "Greenhouse Gas Emissions and Climate Change," the Project would result in significant and unavoidable impacts related to GHGs and climate change. Under the Reduced Alternative, the intensity of site development south of Kammerer Road and within the Old Town Policy Area would be reduced; therefore, less operation-related GHG emissions would be generated than under the Project. Construction emissions for this alternative and the Project are anticipated to be similar because south of Kammerer Road and the Old Town Policy Area would have the same development footprint. However, development facilitated by the Project would still have the potential to conflict with statewide reduction goals for 2045 and 2050. GHG operation-related emission impacts under the Reduced Project Alternative would be less than under the Project, but remain significant and unavoidable. *(Less)*

NOISE AND VIBRATION

As discussed in Section 3.6, "Noise and Vibration," of this Draft SEIR, the Project would result in less-than-significant impacts related to noise and vibration during construction and operation, and significant and unavoidable impacts related to traffic noise. Future development under the Reduced Project Alternative, like all development in the City, would be required to adhere to the Elk Grove Construction Specifications Manual requirements regarding allowable times and hours of work and noise control measures. As development under the Reduced Project Alternative would be less intense than under the Project, it is expected that the reduction in new dwelling units and intensity of land uses would result in lower traffic noise impacts on Kammerer Road and Kammerer Road extension as compared to the Project. However, traffic noise on other roadway segments throughout the City, such as Laguna Boulevard are anticipated to continue to exceed City noise standards. Although impacts would be slightly less than the Project, impacts would remain significant and unavoidable. *(Less)*

POPULATION AND HOUSING

As discussed in Section 3.7, "Population and Housing," of this Draft SEIR, the Project would accommodate up to 1,851 new dwelling units and approximately 5,979 new residents. This growth would exceed projections assumed under the City's General Plan and regional planning efforts completed by SACOG. The Reduced Project Alternative would include less residential development and increased commercial, industrial, and public services land uses. Therefore, the number of dwelling units and anticipated population growth under this alternative would result in fewer impacts to population and housing as compared to the Project. *(Less)*

PUBLIC SERVICES AND RECREATION

As discussed in Section 3.8, "Public Services and Recreation," of this Draft SEIR, the Project would generate additional residents, which would increase the need for additional fire protection and law enforcement services and additional parks. However, these services are funded through a variety of sources (e.g., property taxes, development impact fees, fees for services) and are expanded as needed to accommodate additional population growth. For parks, City Municipal Code Chapter 22.40 and General Plan Policy PT-1-3 require a minimum of 5 acres of developed parkland per 1,000 residents, though some specific plan areas may require additional acreage. Because this alternative would develop fewer residential units than anticipated by the Project, there would be less impact than under the Project.

As discussed in Section 3.12, “Public Services and Recreation,” of this Draft SEIR, the Project would result in significant and unavoidable impacts related to public schools due to the increase in students that would be generated. It should be noted that the General Plan EIR also concluded that implementation of the General Plan would have significant and unavoidable impacts on public schools because while the EGUSD could and should implement measures to reduce physical environmental effects of school development, the EGUSD is not subject to mitigation adopted by the City. Under the Reduced Project Alternative, there would be less residential units, which would reduce the number of students generated as compared to the Project. However, even under the Reduced Project Alternative, additional students would be generated as compared to the General Plan. Thus, while the Reduced Project Alternative would not result in as much of a population increase as the Project, it would generate additional students. While the impact would remain significant and unavoidable under the Reduced Project Alternative, it would be less than under the Project. *(Less)*

TRANSPORTATION

As discussed in Section 3.9, “Transportation,” of this Draft SEIR, the Project would result in significant and unavoidable impacts related to VMT. Reduced development under this alternative would result in a reduction in estimated total daily VMT as compared to the Project because this alternative would have less development. However, population growth under the Reduced Project Alternative would be less than the Project likely resulting in a similar VMT per service population as the Project. Similar to the Project VMT modeling and estimates for this alternative are not directly comparable to the those contained within the General Plan. All applicable General Plan policies would apply and consistent with the determination in the General Plan, no additional feasible mitigation is available beyond compliance with those General Plan policies. Therefore, while the impact would remain significant and unavoidable under the Reduced Project Alternative, it would be less than under the Project for total daily VMT. *(Less)*

UTILITIES AND SERVICE SYSTEMS

As discussed in Section 3.10, “Utilities and Service Systems,” of this Draft EIR, the Project would result in less-than-significant impacts related to utilizes and service systems. Because the Reduced Project Alternative would not include as many new residential units as the proposed Project south of Kammerer Road and in the Old Town Policy Area, this alternative would be expected result in lower demand for utilities and service systems. Thus, while both the Project and the Reduced Project Alternative would result in a net increase in the number of residential units in the City beyond the assumptions of the General Plan EIR, this alternative would result in fewer net new residents and demand for utilities would be less than under the proposed Project. *(Less)*

5.5 ENVIRONMENTALLY SUPERIOR ALTERNATIVE

Because the No Project Alternative (described above in Section 5.4.1) would avoid all adverse impacts resulting from the Project analyzed in Chapter 3, it is the environmentally superior alternative. However, the No Project Alternative would not meet the Project objectives.

When the environmentally superior alternative is the No Project Alternative, the State CEQA Guidelines (Section 15126.6[d][2]) require selection of an environmentally superior alternative from among the other action alternatives evaluated. As illustrated in Table 5-1, below, the Reduced Project Alternative would be the environmentally superior action alternative as it would involve the least amount of development.

Table 5-1 Summary of Environmental Effects of the Alternatives Relative to the Project

Environmental Topic	Alternative 1: No Project Alternative	Alternative 2: Lent Ranch Alternative	Alternative 3: Reduced Project Alternative
Aesthetics	Less	Less	Less
Air Quality	Less	Less	Less
Archaeological, Historical, and Tribal Cultural Resources	Less	Similar	Similar
Energy	Less	Less	Less
Greenhouse Gas Emissions and Climate Change	Less	Less	Less
Noise	Less	Less	Less
Population and Housing	Less	Less	Less
Public Services	Less	Less	Less
Transportation	Less	Less	Less
Utilities and Service Systems	Less	Less	Less

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6 OTHER CEQA-MANDATED SECTIONS

6.1 GROWTH INDUCEMENT

PRC Section 21100(b)(5) specifies that the growth-inducing impacts of a project must be addressed in an EIR. Section 15126.2(e) of the State CEQA Guidelines provides the following guidance for assessing growth-inducing impacts of a project:

Discuss the ways in which the proposed project could foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment. Included in this are projects which would remove obstacles to population growth (a major expansion of a wastewater treatment plant might, for example, allow for more construction in service areas). Increases in the population may tax existing community service facilities, requiring construction of new facilities that could cause significant environmental effects. Also, discuss the characteristics of some projects which may encourage and facilitate other activities that could significantly affect the environment, either individually or cumulatively. It must not be assumed that growth in any area is necessarily beneficial, detrimental, or of little significance to the environment.

A project can induce growth directly, indirectly, or both. Direct growth inducement would result if a project involved construction of new housing. Indirect growth inducement would result, for instance, if implementing a project resulted in:

- ▶ substantial new permanent employment opportunities (e.g., commercial, industrial, or governmental enterprises);
- ▶ substantial short-term employment opportunities (e.g., construction employment) that indirectly stimulates the need for additional housing and services to support the new temporary employment demand; or
- ▶ removal of an obstacle to additional growth and development, such as removing a constraint on a required public utility or service (e.g., construction of a major sewer line with excess capacity through an undeveloped area).

Growth inducement itself is not an environmental effect but may foreseeably lead to environmental effects. If substantial growth inducement occurs, it can result in secondary environmental effects, such as increased demand for housing, demand for other community and public services and infrastructure capacity, increased traffic and noise, degradation of air or water quality, degradation or loss of plant or animal habitats, conversion of agricultural and open space land to urban uses, and other effects.

6.1.1 Growth-Inducing Impacts of the Project

POPULATION GROWTH

As discussed in the General Plan EIR, growth under the General Plan would allow for the future construction of up to 45,397 new homes within the Planning Area at a wide range of types and densities. Construction of these homes would increase the City's population by approximately 155,282 residents, from 2022 estimates, to a total of 332,254 at Project build out. With the proposed amendment to the General Plan the estimated population at build out would increase by 5,979 residents as compared to the current General Plan. The General Plan EIR recognized that future urban development outside of the City limits may be appropriate to accommodate future growth and identified Study Areas as possible annexation areas for the City to accommodate such growth. The Project identifies the LEA Community Plan Area as a new community plan that overlaps with the South Study Area.

New population growth as a result of the Project would increase the population in the Planning Area and exceed projections assumed under the current General Plan as well as the regional planning efforts completed by SACOG. However, the increase in population as a result of the Project would be dispersed throughout the Planning Area to specific growth areas, such as the LEA Community Plan Area and infill areas established in the General Plan. Development of proposed housing associated with the Project is anticipated to meet population needs and would occur over Project buildout (30 years or more). Where growth could lead to physical changes beyond those anticipated in the General Plan, the potential for effects are evaluated throughout this SEIR.

GROWTH EFFECTS ASSOCIATED WITH INFRASTRUCTURE IMPROVEMENTS

The Project would directly induce growth through increases in residential development potential and density in the LEA Community Plan Area and the Old Town Policy Area. The City's infrastructure and public services are largely provided by other public and private service providers (e.g., Sacramento County Water Agency and Elk Grove Water District for water supply, Sacramento Regional County Sanitation District and Sacramento Area Sewer District for wastewater service, Sacramento Municipal Utility District for electrical service) that utilize master plans for guiding planned facility and service expansions that are subject to environmental review under CEQA. The General Plan identifies future growth in the Study Areas, such as the South Study Area, that are outside of some service boundaries for utility providers. The General Plan EIR evaluated impacts from providing services outside of the existing service boundaries for agencies such as the Sacramento County Water Agency and Sacramento Regional County Sanitation District. Some infrastructure may need to be expanded to address the increase in development proposed under the Project. However, the Project would not require infrastructure to be extended outside of areas for growth already identified in the General Plan and its EIR.

The General Plan includes proposed roadway improvements that have been designed to support the General Plan Land Use Policy. The General Plan does not include any provisions requiring the oversizing of infrastructure facilities to serve growth not anticipated in the General Plan Land Use Policy Map. The Project does not include any specific infrastructure improvements and also does not include any oversized infrastructure or infrastructure extensions that would result in growth. There would be no new significant effect from the Project and the impact is not more severe than of that originally identified in the General Plan EIR.

ENVIRONMENTAL EFFECTS OF GROWTH

The General Plan and proposed amendments would induce further population and job growth in the City as well as potentially induce growth outside of the City (e.g., within the Study Areas). Proposed roadway improvements would support such growth within the City. As a result, the General Plan and proposed amendments are considered to be growth-inducing. The environmental effects of this growth within the City and Study Areas is addressed in the General Plan EIR. The Project does not propose to locate residential units in areas not anticipated for residential or urban development in the General Plan and General Plan EIR. The environmental effects of the implementation of the Project are discussed in Sections 3.1 through 3.10 and Chapter 4 of this Draft SEIR.

6.2 SIGNIFICANT AND UNAVOIDABLE ADVERSE IMPACTS

The State CEQA Guidelines Section 15126.2(c) requires EIRs to include a discussion of the significant environmental effects that cannot be avoided if the proposed project is implemented. The following impacts are considered substantially more severe than impacts identified in the General Plan EIR and are significant and unavoidable; that is, no feasible mitigation is available to reduce these impacts to a less-than-significant level:

- ▶ Impact 3.2-2: Operational Air Quality
- ▶ Impact 3.5-1: Project Generated Greenhouse Gas (GHG) Emissions
- ▶ Impact 3.6-2: Increased Traffic Noise

- ▶ Impact 4-3: Cumulative Air Quality Impacts
- ▶ Impact 4-6: Cumulative GHG Emissions
- ▶ Impact 4-8: Cumulative Traffic Noise Impacts

6.3 SIGNIFICANT AND IRREVERSIBLE ENVIRONMENTAL CHANGES

The State CEQA Guidelines (Section 15126) require a discussion of the significant irreversible environmental changes that would be involved in a project if it were implemented. The irreversible and irretrievable commitment of resources is the permanent loss of resources for future or alternative purposes. Irreversible and irretrievable resources are those that cannot be recovered or recycled or those that are consumed or reduced to unrecoverable forms.

As noted in Chapter 2, "Project Description," of this Draft SEIR, the Project would result in up to 1,851 new dwelling units beyond what was evaluated in the General Plan EIR and currently provided for under the General Plan. While the Project would increase development intensities, all Project parcels were already anticipated for various levels of development under the General Plan (City of Elk Grove 2019). While development intensity throughout the Planning Area would increase, the Project could result in a reduced level of commercial development as compared with that anticipated by the General Plan. Additionally, the Project would not increase the City's development footprint because development was assumed to occur in the LEA Planning Area, Old Town Policy Area, and South and West Study Areas as part of General Plan buildout. Implementation of the Project could result in the irreversible and irretrievable commitment of material resources and energy during construction and operation of future development, including:

- ▶ construction materials, such as soil, rocks, wood, concrete, glass, and steel;
- ▶ water supply for expended development potential; and
- ▶ energy expended in the form of electricity, gasoline, diesel fuel, and oil for equipment and transportation vehicles that would be needed for Project construction.

Because the General Plan EIR already evaluated the commitment of material resources and energy, the Project's use of these nonrenewable resources is expected to account for a minimal portion of the region's resources and would not affect the availability of these resources for other needs in the region. As discussed in Section 3.4, "Energy," Project implementation would not result in the long-term inefficient use of energy or natural resources. Therefore, long-term Project operation would not result in substantial long-term consumption of energy and natural resources beyond what was evaluated in the General Plan EIR.

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8 REFERENCES

Executive Summary

No references cited in this chapter.

Chapter 1 Introduction

No references cited in this chapter.

Chapter 2 Project Description

City of Elk Grove. 2022. Figures adapted from Elk Grove GIS Figures. Available:

<https://www.elkgrovecity.org/departments-and-divisions/geographic-information-systems-maps>. Accessed December 12, 2022.

Fehr & Peers. 2023 (April). Model Development Report and VMT Methodology. Prepared for the City of Elk Grove.

Chapter 3 Environmental Impacts and Mitigation Measures

No references cited in this chapter.

Section 3.1 Aesthetics

California Department of Transportation. 2022. California Scenic Highway Program, District 3 - Scenic Highway Program. Available: <https://dot.ca.gov/caltrans-near-me/district-3/d3-programs/d3-maintenance/d3-scenic-hwy-program>. Accessed: October 26, 2022.

Caltrans. See California Department of Transportation.

City of Elk Grove. 2018 (July). *City of Elk Grove General Plan Update Draft Environmental Impact Report*. SCH No. 2017062058

———. 2019 (December). *City of Elk Grove General Plan*. Elk Grove, CA.

Section 3.2 Air Quality

California Air Resources Board. 2003. HARP Users Guide Version 1.0. Stationary Source Division, Sacramento, California.

———. 2013. The California Almanac of Emissions and Air Quality. Available: <https://ww2.arb.ca.gov/our-work/programs/resource-center/technical-assistance/air-quality-and-emissions-data/almanac>. Accessed November 20, 2020.

———. 2017. Sacramento Region Air Quality Plans. Available: <https://ww2.arb.ca.gov/our-work/programs/california-state-implementation-plans/nonattainment-area-plans/sacramento-region>. Accessed May 13, 2020.

———. 2019a. EMFAC Off-Model Adjustment Factors to Account for the SAFE Vehicle Rule Part One. Published November 20, 2019. Available: https://ww3.arb.ca.gov/msei/emfac_off_model_adjustment_factors_final_draft.pdf. Accessed November 18, 2020.

———. 2019b. Air Quality Standards and Area Attainment Designations. Available: <https://ww2.arb.ca.gov/resources/documents/maps-state-and-federal-area-designations#:~:text=CARB%20makes%20State%20area%20designations,sulfide%2C%20and%20visibility%20reducing%20particles>. Accessed November 20, 2020.

———. 2020. Overview: Diesel Exhaust and Health webpage. Available: <https://ww2.arb.ca.gov/resources/overview-diesel-exhaust-and-health>. Accessed November 20, 2020. CAPCOA. See California Air Pollution Control Officers Association.

- . 2022 (December). Final 2022 Scoping Plan. Available: <https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents> (Accessed January 2023).
- CARB. See California Air Resources Board.
- City of Elk Grove. 2018 (July). *City of Elk Grove General Plan Update Draft Environmental Impact Report*. SCH No. 2017062058
- . 2019. *General Plan: A Brighter Future*. Available: http://www.elkgrovecity.org/UserFiles/Servers/Server_109585/File/Departments/Planning/Projects/General%20Plan/GPU/Amend_2019-12/GP_Complete_web_2019-12.pdf. Accessed November 20, 2020.
- Office of Environment Health Hazard Assessment. 2015. Guidance Manual for Preparation of Health Risk Assessments. Available: <https://oehha.ca.gov/media/downloads/crn/2015guidancemanual.pdf>. Accessed November 20, 2020.
- OEHHA. See Office of Environment Health Hazard Assessment.
- Sacramento Metropolitan Air Quality Management District. 2016 (June). Guide to Air Quality Assessment in Sacramento County Chapter 7: Odors. Available: <http://www.airquality.org/LandUseTransportation/Documents/Ch7Odors%20FINAL6-2016.pdf>. Accessed October 23, 2019.
- . 2019 (April). Guide to Air Quality Assessment in Sacramento County—Chapter 3 Appendix: Off-Site Mitigation Fees. Available: <http://www.airquality.org/LandUseTransportation/Documents/Ch3Off-SiteMitigationFeesFinal4-2019.pdf>. Accessed November 20, 2020.
- . 2020. Guide to Air Quality Assessment in Sacramento County: Chapter 9: Program-Level Analysis of General Plans and Area Plans. Available: <http://www.airquality.org/LandUseTransportation/Documents/Ch9ProgramLevel4-30-2020.pdf>. Accessed February 11, 2021.
- San Joaquin Valley Air Pollution Control District. 2015. Application for Leave to File Amicus Curiae Brief of San Joaquin Valley Unified Air Pollution Control District in Support of Defendant and Respondent, County of Fresno and Real Party in Interest and Respondent, Friant Ranch, L.P. Dated April 2, 2015. Available: <https://www.courts.ca.gov/documents/7-s219783-ac-san-joaquin-valley-unified-air-pollution-control-dist-041315.pdf>. Accessed February 11, 2021.
- SCAQMD. See South Coast Air Quality Management District.
- Seinfeld, J. H., and S. N. Pandis. 1996. *Atmospheric Chemistry and Physics: From Air Pollution to Climate Change*. John Wiley & Sons, Inc. Hoboken, NJ.
- SJVAPCD. See San Joaquin Valley Air Pollution Control District.
- SMAQMD. See Sacramento Metropolitan Air Quality Management District.
- South Coast Air Quality Management District. 2015. Application of the South Coast Air Quality Management District for Leave to File Brief of Amicus Curiae in Support of Neither Part and Proposed Brief of Amicus Curiae. Available: <https://www.courts.ca.gov/documents/9-s219783-ac-south-coast-air-quality-mgt-dist-041315.pdf>. Accessed February 11, 2021.
- U.S. Environmental Protection Agency. 2016. National Ambient Air Quality Standards Table. Available: <https://www.epa.gov/criteria-air-pollutants/naaqs-table>. Accessed November 20, 2020.
- . 2020a. Greenbook—8-Hour Ozone 2015 Nonattainment Areas. Data current as of October 31, 2020. Available: <https://www3.epa.gov/airquality/greenbook/jbcty.html>. Accessed November 11, 2020.
- . 2020b. Criteria Air Pollutants Homepage. Last Updated November 17, 2020. Available: <https://www.epa.gov/criteria-air-pollutants>. Accessed February 11, 2021.

Western Regional Climate Center. 2002. Prevailing Wind Direction. Available: https://wrcc.dri.edu/Climate/comp_table_show.php?stype=wind_dir_avg. Accessed November 20, 2020.

———. 2016. Sacramento Executive Airport Climate Summary: 11/10/1941 to 06/09/2016. Available: <https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca7630>. Accessed November 20, 2020.

WRCC. See Western Regional Climate Center.

Section 3.3 Archaeological, Historical, and Tribal Cultural Resources

City of Elk Grove. 2016 (February). *Existing Conditions Report for the General Plan Update*.

———. 2018 (July). *City of Elk Grove General Plan Update Draft Environmental Impact Report*. SCH No. 2017062058

———. 2019a (December). *City of Elk Grove General Plan*. Elk Grove, CA.

———. 2019b (December). *Old Town Elk Grove Special Planning Area Existing Conditions Analysis*. Elk Grove, CA.

InContext. 2020 (May 12). *CEQA Cultural Resources Study: Proposed California Northstate University Medical Center Campus Project*. Fair Oaks, CA.

Sacramento LAFCo. See Sacramento Local Agency Formation Commission.

Sacramento Local Agency Formation Commission. 2017 (December). *Draft Environmental Impact Report for the Bilby Ridge Sphere of Influence Amendment LAFC# 04-16*. Sacramento, CA. SCH# 2017042071. Prepared by: Ascent Environmental, Sacramento, CA.

Section 3.4 Energy

California Air Pollution Control Officers Association. 2017. CalEEMod Users Guide. Available: http://www.aqmd.gov/docs/default-source/caleemod/01_user-39-s-guide2016-3-2_15november2017.pdf?sfvrsn=4. Accessed August 28, 2020.

California Department of Transportation. 2008. *2007 California Motor Vehicle Stock, Travel and Fuel Forecast*. Available: https://planning.lacity.org/eir/8150Sunset/References/6.0.%20Other%20CEQA%20Considerations/OTHER.03_2008%20California%20Motor%20Vehicle%20Stock,%20Travel%20and%20Fuel%20Forecast.pdf. Accessed December 11, 2020.

California Energy Commission. 2019 (November). *Final Staff Report, 2019 California Energy Efficiency Action Plan*.

———. 2021. *Draft 2022 Energy Code Multifamily and Nonresidential Compliance Manual*. Available: <https://www.energy.ca.gov/programs-and-topics/programs/building-energy-efficiency-standards/2022-building-energy-efficiency>. Accessed September 2022.

———. 2023. 2010-2021 CEC-A15 Results. Available: <https://www.energy.ca.gov/media/3874>. Accessed April 18, 2023.

California Energy Commission and California Air Resources Board. 2003. *Reducing California's Petroleum Dependence*. Available: <https://babel.hathitrust.org/cgi/pt?id=uc1.31822028852200&view=1up&seq=3>. Accessed December 14, 2022.

———. 2022. 2022 Integrated Energy Policy Report Update. Available: <https://www.energy.ca.gov/data-reports/reports/integrated-energy-policy-report/2022-integrated-energy-policy-report-update>

Caltrans. See California Department of Transportation.

CAPCOA. See California Air Pollution Control Officers Association.

CEC. See California Energy Commission.

CEC and CARB. See California Energy Commission and California Air Resources Board.

City of Elk Grove. 2018 (July). *City of Elk Grove General Plan Update Draft Environmental Impact Report*. SCH No. 2017062058

- . 2019 (December). *City of Elk Grove General Plan*. Elk Grove, CA.
- EIA. See US Energy Information Administration.
- Governor's Office of Planning and Research, California Energy Commission, and California Natural Resources Agency. 2018. *California's Fourth Climate Change Assessment*. Available: <https://www.energy.ca.gov/sites/default/files/2019-07/Statewide%20Reports-%20SUM-CCCA4-2018-013%20Statewide%20Summary%20Report.pdf>. Accessed November 4, 2019.
- Intergovernmental Panel on Climate Change. 2014. *Climate Change 2014 Synthesis Report Summary for Policymakers*. Available: https://www.ipcc.ch/site/assets/uploads/2018/02/AR5_SYR_FINAL_SPM.pdf. Accessed November 4, 2019.
- IPCC. See Intergovernmental Panel on Climate Change.
- OPR, CEC, and CNRA. See Governor's Office of Planning and Research, California Energy Commission, and California Natural Resources Agency.
- Sacramento Municipal Utility District. 2023. *2021 Power Content Label*. Available: <https://www.energy.ca.gov/filebrowser/download/4674>. Accessed April 18, 2023.
- SMUD. See Sacramento Metropolitan Utility District.
- US Energy Information Administration. 2020. *California Energy Consumption by End-Use Sector, 2017*. Last Updated November 15, 2018. <https://www.eia.gov/state/?sid=CA#tabs-2>. Accessed December 11, 2020.
- US Environmental Protection Agency. 2022 (March). *EPA Restores California's Authority to Enforce Greenhouse Gas Emission Standards for Cars and Light Duty Trucks*. Available: <https://www.epa.gov/newsreleases/epa-restores-californias-authority-enforce-greenhouse-gas-emission-standards-cars-and>. Accessed: February 2023.
- ### Section 3.5 Greenhouse Gas Emissions and Climate Change
- California Air Resources Board. 2016. *Technical Evaluation of the Greenhouse Gas Emissions Reduction Quantification for the Sacramento Area Council of Governments' SB 375 Sustainable Communities Strategy*. Available: https://ww2.arb.ca.gov/sites/default/files/2020-06/Technical_Evaluation_of_the_GHG_Emissions_Reduction_Quantification_for_the_SACOG_SB_375_SCS_September_2016.pdf. Accessed December 14, 2020.
- . 2017 (November). *California's 2017 Climate Change Scoping Plan*. Available: https://ww3.arb.ca.gov/cc/scopingplan/scoping_plan_2017.pdf. Accessed February 13, 2020.
- . 2018a. *2018 ZEV Action Plan*. Available: <https://static.business.ca.gov/wp-content/uploads/2019/12/2018-ZEV-Action-Plan-Priorities-Update.pdf>. Accessed February 13, 2020.
- . 2018b. *SB 375 Regional Greenhouse Gas Emissions Reduction Targets*. Approved by the California Air Resources Board March 22, 2018. Available: <https://www.arb.ca.gov/cc/sb375/finaltargets2018.pdf>. Accessed February 13, 2020.
- . 2021. *California Greenhouse Gas Emissions for 2000 to 2019: Trends of Emissions and Other Indicators*. Available: https://ww2.arb.ca.gov/sites/default/files/classic/cc/ca_ghg_inventory_trends_2000-2019.pdf. Accessed August 2022.
- . 2022 (December). *Final 2022 Scoping Plan*. Available: <https://ww2.arb.ca.gov/our-work/programs/ab-32-climate-change-scoping-plan/2022-scoping-plan-documents> (Accessed January 2023).
- California Energy Commission. 2021. *2019 Total System Electric Generation*. Available: <https://www.energy.ca.gov/data-reports/energy-almanac/california-electricity-data/2020-total-system-electric-generation/2019>. Accessed August 2022.

- California Environmental Protection Agency, California Natural Resources Agency, California Department of Food and Agriculture, California Air Resources Board, and California Strategic Growth Council. 2019 (January). *Draft California 2030 Natural and Working Lands Climate Change Implementation Plan*. Available: <https://ww3.arb.ca.gov/cc/natandworkinglands/draft-nwl-ip-1.3.19.pdf>. Accessed February 13, 2020.
- California Natural Resources Agency. 2018. *Safeguarding California Plan: 2018 Update*. Available: <http://resources.ca.gov/docs/climate/safeguarding/update2018/safeguarding-california-plan-2018-update.pdf>. Accessed February 13, 2020.
- CAPCOA. See California Air Pollution Control Officers Association.
- CARB. See California Air Resources Board.
- CEC. See California Energy Commission.
- City of Elk Grove. 2018 (July). *City of Elk Grove General Plan Update Draft Environmental Impact Report*. SCH No. 2017062058
- . 2019a (December). *City of Elk Grove General Plan*. Elk Grove, CA.
- . 2019b (December). *City of Elk Grove Climate Action Plan: 2019 Update*. Elk Grove, CA.
- CNRA. See California Natural Resources Agency.
- Employment Development Department. 2020. Employment Industry Data: Historical Monthly Data Excel Sheet. Available: <https://www.labormarketinfo.edd.ca.gov/data/employment-by-industry.html>. Accessed August 27, 2020.
- EPA. See U.S. Environmental Protection Agency.
- European Commission Joint Research Centre. 2018 (March 16). Climate Change Promotes the Spread of Mosquito and Tick-Borne Viruses. Available: <https://www.sciencedaily.com/releases/2018/03/180316111311.htm>. Accessed February 13, 2020.
- Governor's Office of Planning and Research. 2017. Technical Advisory on Evaluation Transportation Impacts in CEQA. Available: http://opr.ca.gov/docs/20180416-743_Technical_Advisory_4.16.18.pdf. Accessed February 13, 2020.
- Governor's Office of Planning and Research, California Energy Commission, and California Natural Resources Agency. 2018 (August 27). *California's Changing Climate: A Summary of Key Findings from California's Fourth Climate Change Assessment*. Available: <https://www.energy.ca.gov/sites/default/files/2019-07/Statewide%20Reports-%20SUM-CCCA4-2018-013%20Statewide%20Summary%20Report.pdf>. Accessed February 13, 2020.
- Greenhouse Gas Protocol. No Date. Global Warming Potential Values. Available: https://www.ghgprotocol.org/sites/default/files/ghgp/Global-Warming-Potential-Values%20%28Feb%2016%202016%29_1.pdf. Accessed December 14, 2020.
- Intergovernmental Panel on Climate Change. 2007. Fourth Assessment Report. Available: <https://www.ipcc.ch/assessment-report/ar4/>. Accessed February 13, 2022.
- . 2013. Chapter 6, Carbon and Other Biogeochemical Cycles. Pages 465–570 in *Climate Change 2013: The Physical Science Basis. Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Available: http://www.climatechange2013.org/images/report/WG1AR5_ALL_FINAL.pdf. Accessed February 13, 2022.
- . 2014. Fifth Assessment Report. Available: https://www.ipcc.ch/site/assets/uploads/2018/02/SYR_AR5_FINAL_full.pdf. Accessed February 13, 2022.
- IPCC. See Intergovernmental Panel on Climate Change.
- Lister, Bradford C. and Andres Garcia. 2018. *Climate-Driven Declines in Arthropod Abundance Restructure a Rainforest Food Web*. Available: <https://www.pnas.org/content/pnas/115/44/E10397.full.pdf>. Accessed February 13, 2020.

- National Highway Traffic and Safety Administration. 2020 (March 31). NHTSA and EPA Finalize CAFE and Carbon Dioxide Standards for Model Years 2021 – 2026. Available: <https://www.nhtsa.gov/corporate-average-fuel-economy/safe>. Accessed July 28, 2020.
- National Oceanic and Atmospheric Administration. 2019 (February 6). *2018 Fourth Warmest Year in Continued Warming Trend, According to NASA, NOAA*. <https://climate.nasa.gov/news/2841/2018-fourth-warmest-year-in-continued-warming-trend-according-to-nasa-noaa/>. Accessed February 13, 2020.
- NHTSA. See National Highway Transportation Safety Administration.
- NOAA. See National Oceanic and Atmospheric Administration.
- OPR. See Governor’s Office of Planning and Research.
- SACOG. See Sacramento Area Council of Governments.
- Sacramento Area Council of Governments. 2019. *2020 Metropolitan Transportation Plan and Sustainable Communities Strategy*. Available: https://www.sacog.org/sites/main/files/file-attachments/2020_mtp-scs.pdf?1580330993. Accessed December 14, 2020.
- Sacramento Metropolitan Air Quality Management District. 2020a. *Guide to Air Quality Assessment in Sacramento County*. Chapter 6, “Greenhouse Gas Emissions.” Available: <http://www.airquality.org/LandUseTransportation/Documents/Ch6GHG4-25-2020.pdf>. Accessed December 14, 2020.
- . 2020b. *Guide to Air Quality Assessment in Sacramento County* Chapter 9, “Program-Level Analysis of General Plans and Area Plans.” Available: <http://www.airquality.org/LandUseTransportation/Documents/Ch9ProgramLevel4-30-2020.pdf>. Accessed December 14, 2020.
- . 2021. *Guide to Air Quality Assessment in Sacramento County*, Chapter 6, “Greenhouse Gas Emissions.” Available: <http://www.airquality.org/LandUseTransportation/Documents/Ch6GHG2-26-2021.pdf>. Accessed May 2023.
- SMAQMD. See Sacramento Metropolitan Air Quality Management District.
- United Nations. 2015. Paris Agreement. Available: https://unfccc.int/sites/default/files/english_paris_agreement.pdf. Accessed February 13, 2020.
- U.S. Environmental Protection Agency. 2019a. Affordable Clean Energy Rule. Available: <https://www.epa.gov/stationary-sources-air-pollution/affordable-clean-energy-rule>. Last updated July 19, 2019. Accessed February 13, 2020.
- . 2019b. Trump Administration Announces One National Program Rule on Federal Preemption of State Fuel Economy Standards. Available: <https://www.epa.gov/newsreleases/trump-administration-announces-one-national-program-rule-federal-preemption-state-fuel>. Last updated September 19, 2019. Accessed February 13, 2020.
- Wade, Samuel. Branch chief. Transportation Fuels Branch, Industrial Strategies Division, California Air Resources Board, Sacramento, CA. June 30, 2017—e-mail to Austin Kerr of Ascent Environmental regarding whether the Low Carbon Fuel Standard applies to fuels used by off-road construction equipment.

Section 3.6 Noise and Vibration

- Airnav. 2022. Sky West Estates Airport, Elk Grove, CA. Available: <https://www.airnav.com/airport/CL04>. Accessed November 22, 2022.
- California Department of Transportation. 2013 (September). *Technical Noise Supplement to the Traffic Noise Analysis Protocol*. Report No. CT-HWANP-RT-13-069.25.2. Available: <https://dot.ca.gov/-/media/dot->

- media/programs/environmental-analysis/documents/env/tens-sep2013-a11y.pdf. Accessed: November 22, 2022.
- . 2020 (April). *Transportation and Construction Vibration Guidance Manual*. Available: <https://dot.ca.gov/-/media/dot-media/programs/environmental-analysis/documents/env/tcvgm-apr2020-a11y.pdf>. Accessed: November 13, 2020.
- Caltrans. See California Department of Transportation
- City of Elk Grove. 2018 (July). *City of Elk Grove General Plan Update Draft Environmental Impact Report*. SCH No. 2017062058. Available: https://www.elkgrovecity.org/sites/default/files/city-files/Departments/Planning/Projects/General%20Plan/GPU/DraftMaterials_201807/EIR/0510_Noise.pdf. Accessed: November 22, 2022.
- . 2019 (December). *City of Elk Grove General Plan*. Elk Grove, CA. Available: https://www.elkgrovecity.org/sites/default/files/city-files/Departments/Planning/Projects/General%20Plan/GPU/Adopted_2019-02/GP/Chapter_08.pdf. Accessed: November 21, 2022.
- . 2022 (May). *Standard Construction Specifications Manual*. Available: [2022-standard-construction-specifications.pdf](https://www.elkgrovecity.org/files/2022-standard-construction-specifications.pdf) (elkgrovecity.org)
- EPA. See U.S. Environmental Protection Agency.
- Federal Highway Administration. 2006 (January). *Roadway Construction Noise Model User's Guide*. Washington, D.C. Prepared by the Research and Innovative Technology Administration, Cambridge, MA. Available: https://www.gsweventcenter.com/Draft_SEIR_References/2006_01_Roadway_Construction_Noise_Model_User_Guide_FHWA.pdf. Accessed: November 23, 2022.
- Federal Transit Administration. 2018 (September). *Transit Noise and Vibration Impact Assessment Manual*. Report No. 0123. Available: https://www.transit.dot.gov/sites/fta.dot.gov/files/docs/research-innovation/118131/transit-noise-and-vibration-impact-assessment-manual-fta-report-no-0123_0.pdf. Accessed: November 22, 2022.
- Fehr & Peers. 2023 (May). Model Development Report and VMT Methodology.
- FHWA. See Federal Highway Administration.
- FTA. See Federal Transit Administration.
- Governor's Office of Planning and Research. 2017. *State of California General Plan Guidelines*. Sacramento, CA. Available: https://opr.ca.gov/docs/OPR_COMPLETE_7.31.17.pdf. Accessed: November 22, 2022.
- OPR. See Governor's Office of Planning and Research.
- SACOG. See Sacramento Area Council of Governments.
- Sacramento Area Council of Governments. 1992 (December). *Franklin Field Comprehensive Land Use Plan*. Available: https://www.sacog.org/sites/main/files/file-attachments/franklin_field_clup_amend_dec_1992_-_93-016.pdf. Accessed: November 22, 2022.
- . 1999 (May). *Sacramento Executive Airport Comprehensive Land Use Plan*. Available: <https://www.sacog.org/sites/main/files/file-attachments/sacramentoexecclup.pdf>. Accessed: November 22, 2022.
- SkyVector. 2022. Borges-Clarksburg Airport. Available: <https://skyvector.com/airport/CN13/Borges-Clarksburg-Airport>. Accessed November 23, 2022.
- U.S. Environmental Protection Agency. 1971 (December). *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances*. Washington, DC. Prepared by Bolt Baranek and Newman. Available: <https://nepis.epa.gov/Exe/ZyPDF.cgi/9101NN31.PDF?Dockey=9101NN31.PDF>.

Section 3.7 Population, Employment, and Housing

- California Department of Finance. 2022. E-5 Population and Housing Estimates for Cities, Counties, and the State, 2011–2019, with 2020 Census Benchmark. Available: <http://www.dof.ca.gov/Forecasting/Demographics/Estimates/E-5/>. Accessed October 5, 2022.
- City of Elk Grove. 2018 (July). *City of Elk Grove General Plan Update Draft Environmental Impact Report*. SCH No. 2017062058. Available: https://www.elkgrovecity.org/sites/default/files/city-files/Departments/Planning/Projects/General%20Plan/GPU/DraftMaterials_201807/EIR/0510_Noise.pdf. Accessed: November 22, 2022.
- . 2019a. *City of Elk Grove General Plan*. Adopted February 27, 2019.
- . 2019b. (September) Elk Grove Employment Dynamics Report. Available: https://cdn5-hosted.civiclive.com/UserFiles/Servers/Server_109585/File/Departments/Economic%20Development/reports-and-studies/Elk-Grove-Dynamics-Study-2019.pdf. Accessed October 5, 2020.
- DOF. See California Department of Finance.
- EDD. See California Employment Development Department.
- SACOG. See Sacramento Area Council of Governments.
- Sacramento Area Council of Governments. 2019a (November). *2020 Metropolitan Transportation Plan/Sustainable Communities Strategy*.
- . 2019b. SACOG 2016–2040 Forecast. Available online: <https://www.sacog.org/post/sacog-2020-mtpscsc-modeling-projections-2016-and-2040>. Accessed October 19, 2022.
- U.S. Census Bureau. 2021. Group Quarters/Residence Rules. Available: <https://www.census.gov/topics/income-poverty/poverty/guidance/group-quarters.html>. Last revised November 22, 2021. Accessed October 5, 2022.

Section 3.8 Public Services and Recreation

- Ascent Environmental. 2022. Proposed student generation rate calculated by Bryn Kirk of Ascent Environmental regarding the General Plan Amendments and Update of VMT Standards Project.
- City of Elk Grove. 2018 (July). *City of Elk Grove General Plan Update Draft Environmental Impact Report*. SCH No. 2017062058. Elk Grove, CA.
- . 2019a (December). *City of Elk Grove General Plan*. Available: http://www.elkgrovecity.org/UserFiles/Servers/Server_109585/File/Departments/Planning/Projects/General%20Plan/GPU/Amend_2019-12/GP_Complete_web_2019-12.pdf. Accessed October 19, 2022.
- . 2019b (September 25). Resolution No. 2019-214. A Resolution of the City Council of the City of Elk Grove Approving Three Memorandums of Understanding with the Cosumnes Community Services District Concerning the Development of Park and Recreation Facilities, Landscape Trail and Park Maintenance, and Special Events (CEQA Exempt). Available: https://cityofelkgrove.hosted.civiclive.com/UserFiles/Servers/Server_109585/File/City%20Government/City%20Clerk/Resolutions/2019/09-25-19_10.1_2019-214.pdf. Accessed: October 19, 2022.
- . 2022. *City of Elk Grove Annual Budget: Fiscal Year 2022–2023*. Available: https://www.elkgrovecity.org/sites/default/files/city-files/Departments/Finance/budget/2022/FY%202022-23%20Final%20Budget_06.03.22.pdf. Accessed February 6, 2023.
- CCSD. See Cosumnes Community Services District.
- Cosumnes Community Services District. 2018. Parks and Recreation Department. *Plan for Play: Parks, Recreation & Facilities Master Plan*. Available: <https://www.yourcsd.com/DocumentCenter/View/8606/CSD-Plan-for-Play-2018>. Accessed October 19, 2022.

- . 2022a. Our Department. Available: <https://www.yourcsd.com/157/Our-Department>. Accessed: October 19, 2022.
- . 2022b. Stations & Facilities. Available: <https://www.yourcsd.com/175/Stations-Facilities>. Accessed: October 19, 2022.
- . 2022c. Fire Department Strategic Plan 2022-2027. Available: <https://www.yourcsd.com/DocumentCenter/View/23006/2022-2027-Cosumnes-CSD-Fire-Department-Strategic-Plan?bidId=>. Accessed: October 24, 2022.
- EGUSD. See Elk Grove Unified School District.
- Elk Grove Police Department. 2019. About Us. Available: http://www.elkgrovepd.org/about_us. Accessed October 19, 2022.
- . 2022. 2022 Annual Report. Available: THE ELK GROVE POLICE DEPARTMENT 2022 ANNUAL REPORT (arcgis.com). Accessed May 19, 2022.
- Elk Grove Unified School District. 2016 (February). *Facilities Master Plan 2015–2025 Update*. Available: https://www.egusd.net/documents/Departments/Facilities-and-Planning/EGUSD_FMP.pdf. Accessed October 19, 2022.
- . 2021a. Enrollment Information. Available: <https://www.egusd.net/StudentsFamilies/ResourcesSupports/Enrollment-Information/index.html>. Accessed October 19, 2022.
- . 2021b (June). *School Facilities Needs Analysis*. Elk Grove, CA. Prepared by O'Dell Planning & Research, Oakdale, CA. Available: <https://www.egusd.net/documents/Departments/Facilities-and-Planning/EGUSD-SFNA-2021-Bd-Adopted-8-10-21.pdf>. Accessed October 25, 2022.
- . 2022a. Facilities and Planning. Available: <https://www.egusd.net/Departments/Facilities-and-Planning/index.html>. Accessed: October 19, 2022.
- . 2022b. SchoolSite Locator. Available: <https://portal.schoolsitelocator.com/apps/ssl/?districtcode=06545>. Accessed: October 25, 2022.
- Jacobson, Elizabeth. Office of the Chief. Elk Grove Police Department, Elk Grove, CA. May 31, 2023—email to Christopher Jordan of City of Elk Grove regarding police services for the Elk Grove General Plan Amendments Project.
- Gomez, Elenice. District Clerk. Cosumnes CSD Administrative Services, Elk Grove, CA. October 27, 2022—email to Bryn Kirk of Ascent Environmental regarding fire protection services for the General Plan Amendments and Update of VMT Standards Project.

Section 3.9 Transportation

- California Governor's Office of Planning and Research. 2018 (April). *Technical Advisory on Evaluating Transportation Impacts in CEQA*. Available: https://opr.ca.gov/docs/20180416-743_Technical_Advisory_4.16.18.pdf
- Capital SouthEast Connector Joint Powers Authority. 2018. *Project Design Guidelines*. Available: https://www.connectorjpa.net/uploads/8/3/3/5/83350278/2018_01_10_draft_pdg_update_v5-redlined_w.attachments.pdf.
- City of Elk Grove. 2019a (February). *City of Elk Grove General Plan: Mobility Element*. Available: https://www.elkgrovecity.org/sites/default/files/city-files/Departments/Planning/Projects/General%20Plan/GPU/Adopted_2019-02/GP/Chapter_06.pdf.
- City of Elk Grove. 2019b (February). *City of Elk Grove Transportation Analysis Guidelines*. Available: <https://www.elkgrovecity.org/sites/default/files/city->

files/Departments/Planning/Projects/General%20Plan/GPU/Adopted_2019-02/EG_Traffic_Analysis_Guidelines_CC%20Final_Adopted_2019-02-27.pdf.

City of Elk Grove. 2019c (August). *City of Elk Grove Transportation Demand Management Plan Guidelines*. Available: https://cdn5-hosted.civiclive.com/UserFiles/Servers/Server_109585/File/Departments/Planning/Application/tdm_plan_guidelines_v1.0.pdf.

City of Elk Grove. 2021 (February). *Bicycle, Pedestrian, and Trails Master Plan*. Available: <https://www.elkgrovecity.org/sites/default/files/city-files/Departments/SPI/BPTMP/EG%20BPTMP%20February%202021%20Design%20Protocols.pdf>.

OPR See California Governor's Office of Planning and Research

SACOG See Sacramento Area Council of Governments

Sacramento Area Council of Governments. 2015 (April). *Regional Bicycle, Pedestrian, and Trails Master Plan*. Available: https://www.sacog.org/sites/main/files/file-attachments/bicycle_pedestrian_trails_master_plan_2015.pdf?1493414181.

_____. 2022 (June). Sacramento Regional Trail Network Action Plan. Available: https://www.sacog.org/sites/main/files/file-attachments/final_plan.pdf?1659374844

Section 3.10 Utilities and Service Systems

Ascent Environmental. 2017. *Climate Change Vulnerability Assessment for the Sacramento County Climate Action Plan*. https://planning.saccounty.gov/PlansandProjectsIn-Progress/Documents/Climate%20Action%20Plan/Climate%20Change%20Vulnerability%20Assessment.pdf?source=post_page-----. Accessed: October 26, 2022.

California Department of Resources Recycling and Recovery. 2019. "California's 2019 Per Capita Disposal Rate Estimate." Available: <https://calrecycle.ca.gov/lgcentral/goalmeasure/disposalrate/mostrecent/>. Accessed: December 16, 2022.

_____. 2022. "SWIS Facility/Site Search." Available: <https://www2.calrecycle.ca.gov/SolidWaste/Site/Search>. Accessed: October 26, 2022.

CalRecycle. See California Department of Resources Recycling and Recovery.

City of Elk Grove. 2018 (July). *City of Elk Grove General Plan Update Draft Environmental Impact Report*. SCH No. 2017062058. Elk Grove, CA.

_____. 2019. (February). *City of Elk Grove General Plan*. Available: http://www.elkgrovecity.org/UserFiles/Servers/Server_109585/File/Departments/Planning/Projects/General%20Plan/GPU/Amend_2019-12/GP_Complete_web_2019-12.pdf. Accessed December 22, 2022.

_____. 2022. (October). Zoo Infrastructure Analysis: Table 1 – Proposed Water Demand – Southeast Policy Area (SEPA).

EGWD. See Elk Grove Water District.

Elk Grove Water District. 2016. *2015 Urban Water Management Plan*. Available: <https://www.egwd.org/wp-content/uploads/UWMP-2015.pdf>. Accessed: November 11, 2022.

_____. 2021. *2020 Urban Water Management Plan*. Available: <https://www.egwd.org/wp-content/uploads/EGWD-2020-UWMP-Final-06-17-21.pdf>. Accessed: October 26, 2022.

Northern Delta Groundwater Sustainability Agency et al. 2021. *South American Subbasin Groundwater Sustainability Plan*. Available: <https://sgma.water.ca.gov/portal/gsp/preview/111>. Prepared by Larry Walker Associates, Woodward & Curran, Kennedy Jenks, Stockholm Environmental Institute, and HDR.

Regional San. See Sacramento Regional County Sanitation District.

Sacramento Area Sewer District. 2022. *Serving Our Customers*. Available: <https://www.sacsewer.com/serving-our-customers>. Accessed: October 26, 2022.

Sacramento County Water Agency. 2006 (February). *Central Sacramento County Groundwater Management Plan*. Available: https://scgah2o.saccounty.gov/documents/CSCGMP_final.pdf. Accessed: December 22, 2022.

———. 2023. *Water Supply Assessment for the Livable Employment Area Community Plan - City of Elk Grove General Plan Amendment*

Sacramento Regional County Sanitation District. 2000. *Regional Interceptor Master Plan 2000*. Available: https://www.regionalsan.com/sites/main/files/file-attachments/final_draft_executive_summary.pdf. Accessed: October 26, 2022.

———. 2008. *2020 Master Plan Final Executive Summary, Sacramento Regional Wastewater Treatment Plant*. Available: https://www.regionalsan.com/sites/main/files/file-attachments/exec-sum_0.pdf. Accessed: October 26, 2022.

———. 2022. *"About Us."* Available: <https://www.regionalsan.com/about-us>. Accessed: October 26, 2022.

Sacramento County Water Agency. 2016a. *2015 Urban Water Management Plan*. <http://www.waterresources.saccounty.net/Documents/2015%20UWMP.pdf>. Accessed: November 1, 2022.

———. 2016b. *Zone 40: Water System Infrastructure Plan Update*. <https://waterresources.saccounty.gov/Zone%2040/WSIP%202016%20Final%20Report%20Website.pdf>. Accessed: November 11, 2022.

———. 2021. *2020 Urban Water Management Plan*. <https://waterresources.saccounty.gov/scwa/Pages/AboutUs.aspx#:~:text=Among%20its%20powers%2C%20the%20Board%20has%20the%20authority,There%20are%20currently%20eight%20Water%20Agency%20Zones.%20Projects>. Accessed: November 1, 2022.

———. 2022. *About Us*. <https://waterresources.saccounty.gov/scwa/Documents/Engineering%20Reports/SCWA%202020%20UWMP%20-%20Final%20%2806.24.21%29.pdf>. Accessed: October 26, 2022.

———. 2023. *Water Supply Assessment for Livable Employment Area Community Plan – City of Elk Grove General Plan Amendment*. Prepared by Sacramento County Water Agency May 2023 for the City of Elk Grove.

SASb GSAs. See South American Subbasin Groundwater Sustainability Agencies.

SacSewer. See Sacramento Area Sewer District.

SCWA. See Sacramento County Water Agency.

South American Subbasin Groundwater Sustainability Agencies. 2021 (October). *Final South American Subbasin Groundwater Sustainability Plan*. Available: http://sasbgroundwater.org/assets/pdf/resources/complete/SASbGSP_FINAL_01212022.pdf. Accessed: May 2023.

Section 3.11 Environmental Impacts and Mitigation Addressed in Previous EIRs

American Bird Conservancy. 2015. *Bird-Friendly Building Design*. Available: https://abcbirds.org/wp-content/uploads/2015/05/Bird-friendly-Building-Guide_2015.pdf. Accessed: June 1, 2023.

California Department of Conservation. 2023. *California Williamson Act Enrollment Finder*. Available: <https://gis.conservation.ca.gov/portal/home/webmap/viewer.html?webmap=18f7488c0a9d4d299f5e9c33b312f312>. Accessed: April 2023.

California Department of Toxic Substances Control. 2023. *EnviroStor Database*. Available: <https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=elk+grove%2C+california>. Accessed: February 2023.

- California Native Plant Society. 2023. Inventory of Rare and Endangered Plants of California (online edition, v9-01 1.5). Available: <http://www.rareplants.cnps.org>. Accessed April 2023.
- California Natural Diversity Database. 2023. Results of electronic records search. Sacramento: California Department of Fish and Wildlife, Biogeographic Data Branch. Accessed April 2023.
- City of Elk Grove. 2011 (December). City of Elk Grove Storm Drainage Master Plan. Available: <https://www.elkgrovecity.org/sites/default/files/city-files/Departments/Public%20Works/Drainage/storm-drainage-master-plan-12-11.pdf>. Accessed February 2023.
- . 2014 (January). Southeast Policy Area Drainage Study. Elk Grove, CA.
- . 2018 (July). *City of Elk Grove General Plan Update Draft Environmental Impact Report*. SCH No. 2017062058
- . 2019 (December). *City of Elk Grove General Plan*. Elk Grove, CA.
- . 2022 (October). *City of Elk Grove General Plan Chapter 12: Technical Appendix*. Elk Grove, CA.
- CNDDB. See California Natural Diversity Database.
- CNPS. See California Native Plant Society
- Department of Toxic Substances Control. 2023. EnviroStor Database. City of Elk Grove. Available: <https://www.envirostor.dtsc.ca.gov/public/map/?myaddress=elk+grove>. Accessed February 2023.
- DOC. See California Department of Conservation.
- DTSC. See Department of Toxic Substances Control.
- Society of Vertebrate Paleontology. 2010. Handbook for Society of Vertebrate Paleontology. Available: <https://vertpaleo.org/governance-documents/>.
- State Water Resources Control Board. 2023. GeoTracker Database. Available: <https://geotracker.waterboards.ca.gov/map/?CMD=runreport&myaddress=elk+grove%2C+CALifornia>. Accessed: February 2023.
- SVP. See Society of Vertebrate Paleontology.
- U.S. Fish and Wildlife Service. 1997. Appendix C Standard Avoidance and Minimization Measures During Construction Activities in Giant Garter Snake (*Thamnophis gigas*) Habitat. Available: https://esadocs.defenders-cci.org/ESAdocs/consultation/ggs_appendix_c.pdf
- . 2023. Information for Planning and Consulting. Database Search. Accessed April 2023.
- USFWS. See U.S. Fish and Wildlife Service
- Xerces Society for Invertebrate Conservation. 2023. Bumble Bee Watch. <https://xerces.org/blog/tag/bumble-bee-watch>. Accessed April 2023.

Chapter 4 Cumulative Impacts

- City of Elk Grove. 2018 (July). *City of Elk Grove General Plan Update Draft Environmental Impact Report*. SCH No. 2017062058. Elk Grove, CA.
- . 2019 (December). *City of Elk Grove General Plan*. Elk Grove, CA.
- Intergovernmental Panel on Climate Change. 2013. Chapter 6, Carbon and Other Biogeochemical Cycles. Pages 465–570 in *Climate Change 2013: The Physical Science Basis. Working Group I Contribution to the Fifth Assessment Report of the Intergovernmental Panel on Climate Change*. Available: http://www.climatechange2013.org/images/report/WG1AR5_ALL_FINAL.pdf. Accessed February 13, 2020
- IPCC. See Intergovernmental Panel on Climate Change.

Chapter 5 Alternatives

No references cited in this chapter.

Chapter 6 Other CEQA Sections

City of Elk Grove. 2019 (December). *City of Elk Grove General Plan*. Elk Grove, CA. Available:

http://www.elkgrovecity.org/UserFiles/Servers/Server_109585/File/Departments/Planning/Projects/General%20Plan/GPU/Amend_2019-12/GP_Complete_web_2019-12.pdf. Accessed October 19, 2022.

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Appendix A

Notice of Preparation and
Scoping Comments



DEVELOPMENT SERVICES – PLANNING

8401 LAGUNA PALMS WAY • ELK GROVE, CALIFORNIA 95758

TEL: 916.683.7111 • FAX: 916.691.3175 • www.elkgrovecity.org

NOTICE OF PREPARATION OF A SUBSEQUENT ENVIRONMENTAL IMPACT REPORT

DATE: February 18, 2022

TO: Responsible and Trustee Agencies, Organizations, and Interested Parties

LEAD AGENCY: City of Elk Grove
Contact: Christopher Jordan, Director of Strategic Planning and Innovation
8401 Laguna Palms Way
Elk Grove, CA 95758

SUBJECT: Subsequent Environmental Impact Report for the City of Elk Grove General Plan Amendments and Update of Vehicle Miles Traveled Standards

In discharging its duties under Section 15021 of the California Environmental Quality Act (CEQA) Guidelines, the City of Elk Grove (as lead agency, hereinafter “City” or “Elk Grove”) intends to prepare a subsequent environmental impact report (SEIR), consistent with Section 15162 of the State CEQA Guidelines (Title 14 of the California Code of Regulations, hereinafter the “CEQA Guidelines”), for the General Plan Amendments and Update of Vehicle Miles Traveled Standards (the “Project,” described later in this document). In accordance with Section 15082 of the CEQA Guidelines, the City has prepared this notice of preparation (NOP) to provide the Office of Planning and Research, responsible and trustee agencies, and other interested parties with sufficient information describing the Project and its potential environmental effects.

The City made the determination to prepare an SEIR following preliminary review of the Project. Pursuant to CEQA Guidelines Section 15063(a), because an EIR is needed, an initial study has not been prepared. Probable environmental effects of the Project are described in the attached Project summary.

As specified by the CEQA Guidelines, the NOP will be circulated for a 30-day review period. The comment period runs from February 18, 2022 to March 21, 2022. The City welcomes public input during the review period. If the City has not received either a response or a well-justified request for additional time by a responsible agency by the end of the review period, the City may presume that the responsible agency has no response (CEQA Guidelines Section 15082[b][2]).

CEQA provides for a Lead Agency to facilitate one or more Scoping Meetings, which provide opportunity for determining the scope and content of the EIR. Traditionally, the City hosts one Scoping Meeting for agencies and the general public during the NOP comment period. In accordance with State and local health orders limiting in-person public meetings, the City is providing an alternative method for the Scoping Meeting. A video presentation by staff, introducing the Project and outlining the CEQA process, is available for review at the website URL listed below. The website also provides a method for directly providing comments. This video and comment opportunity will be available at the above link throughout the NOP comment period (February 18, 2022 to March 21, 2022).

Comments may also be submitted in writing during the review period and addressed to:

City of Elk Grove
Office of Strategic Planning and Innovation
c/o Christopher Jordan
8401 Laguna Palms Way
Elk Grove, CA 95758
cjordan@elkgrovecity.org
http://www.elkgrovecity.org/city_hall/departments_divisions/city_manager/strategic_planning_and_innovation/kammerer_road_urban_design_study

PROJECT LOCATION AND SETTING

The City is located in Sacramento County and consists of approximately 42.7 square miles within its boundary (see Figure 1). Land uses are regulated under the City General Plan, which was comprehensively updated in 2019. The City General Plan established a Planning Area (approximately 31,238 acres) that includes lands outside the current City limits. Existing land uses in the City consist of residential at varying densities, commercial, office, industrial, park, and open space (see Figure 2). The Planning Area primarily consists of agricultural lands and rural residential uses. Nearby natural open space and habitat areas include the Stone Lakes National Wildlife Refuge and the Sacramento River to the west, the Cosumnes River Preserve to the south, and the Regional County Sanitation District bufferlands to the northwest. Major roadway access to the City is provided by Interstate 5 and State Route 99.

PROJECT DESCRIPTION

The Project consists of the following components that are further described below: General Plan amendments to establish the Livable Employment Area Community Plan (Livable Employment Area Community Plan); update of City vehicle miles traveled (VMT) thresholds and guidelines (VMT Update); incorporation of siting for the future Zoo (Zoo Site); and various other General Plan land use adjustments.

Livable Employment Area Community Plan

The Kammerer Road Urban Design Study established a new vision for development along the Kammerer Road and Promenade Parkway corridors as well as redefined the cross-section for Kammerer Road itself. The Livable Employment Area Community is the implementation of the Kammerer Road Urban Design Study that consists of amendments to the General Plan Land Use Diagram and to General Plan chapters 2 (Vision), 3 (Planning Framework), 4 (Rural and Urban Development), 5 (Economic Development) 6 (Mobility), 9 (Community and Area Plans), and 10 (Implementation) to establish Transect-based land use designations and policy provisions for the development of a mixed-use (residential, live-work spaces, retail, and office uses) neighborhood at varying intensities and heights (see summary below). Figure 3 identifies the proposed land use designation changes to the General Plan Land Use Diagram. This action would not expand the City’s boundaries or study areas. As part of this change, the Southeast Policy Area (SEPA) Community Plan and South Pointe Policy Area (South Point) would be reduced and the Lent Ranch project area would be eliminated, with the new Livable Employment Area Community Plan taking their place. The new Livable Employment Area Community Plan would also serve as an overlay to portions of the South Study Area, providing land use and planning guidance for future annexation applications in that area, supplementing the provisions of the South Study Area Land Use Program provided in Chapter 4 (Rural and Urban Development).

Four new General Plan Land Use Designations would be established as part of the Project. These would be applied within the Livable Employment Area Community Plan and are summarized below.

Proposed Transect-Based Land Use Designations

General Neighborhood Residential (T3-R) Development Characteristics	
Residential Density:	Minimum: 10.0 du/ac Maximum: 20.0 du/ac
Building Intensity:	Maximum FAR of 1.0

General Neighborhood Residential (T3-R)
General Neighborhood uses are typically characterized by small-lot single-family residential development (attached or detached), duplexes, townhomes, and small apartment buildings, but may also include small live-work spaces, home-offices or workspaces, and bed and breakfast inns. Limited amounts of local serving retail and small office structures, particularly at intersections are also permitted. Generally, buildings, are not taller than 3 stories, and are surface parked, in the side or rear of the lot.

Neighborhood Center Low (T3) Development Characteristics	
Residential Density:	Minimum: 14.0 du/ac Maximum: 30.0 du/ac
Building Intensity:	Maximum FAR of 2.0

Neighborhood Center Low (T3)
Neighborhood Center Low includes the same uses and densities as T3-R, however, a mix of uses is permitted throughout, with no preference provided for residential uses. Typically, buildings, are not taller than 3 stories, and are surface parked, in the side or rear of the lot.

Neighborhood Center Medium (T4) Development Characteristics	
Residential Density:	Minimum: 20.0 du/ac Maximum: 40.0 du/ac
Building Intensity:	Maximum FAR of 5.0

Neighborhood Center Medium (T4)
Neighborhood Center Medium uses are typically characterized by Neighborhood Center Medium includes a diverse mix of uses at higher intensities than T3. Residential building types generally include townhomes and urban apartment buildings, as well as live-work spaces. Retail, hotel, and office uses are permitted. Generally, buildings, are not taller than 5 stories, and may have a mix of garage and or surface parking in the rear of the lot or the middle of the block, screened from view.

Neighborhood Center High (T5) Development Characteristics	
Residential Density:	Minimum: 40.0 du/ac Maximum: 100.0 du/ac
Building Intensity:	Maximum FAR of 7.0

Neighborhood Center High (T5)
Neighborhood Center High includes a diverse mix of uses at higher intensities than T4. Many individual buildings may have a mix of uses. Residential building types generally include apartment buildings as well as live-work spaces. Retail and Office uses as are hotels. Typically, buildings, are not taller than 7 stories, and will have garage screened from view or below ground.

VMT Update

This Project would upgrade the City's Travel Demand Model from SACSIM15 to SACSIM19. The City's vehicle miles traveled (VMT) thresholds and guidelines would be updated based upon the new model and a new threshold for transportation projects would be established. The VMT Update would develop a new VMT screening tool for development projects (and potentially transportation projects) that cannot be screened out based on project characteristics or location but are generally too small to warrant a full model run.

Zoo Site

The Project would, as part of the Livable Employment Area Community Plan, designate an approximately 60-acre site for a future zoo. The site would be designated as Park on the General Plan Land Use Plan (see Figure 4). The design and details of operation of the Zoo would be developed as part of a separate project and environmental review. No land use entitlements to allow construction and operation of the Zoo would occur as part of this action. This Subsequent EIR would programmatically evaluate the conceptual design of the Zoo Site, including consideration of animal habitats, restaurants, parking, and support services for the animals and patrons. The anticipated annual attendance for the zoo is 1,000,000 patrons.

Other Land Use Adjustments

The Project also consists of various other adjustments to the General Plan Land Use Plan, including amendments in the Old Town area. The revisions allow for more mixed-use development along the corridor, with residential uses up to 40 dwelling units per acre, building heights up to 45 feet tall, and floor-area-ratios (FAR) up to 2.0, dependent upon land use district.

Table 1. Summary of Proposed Old Town Development Standards

Zone	Residential Density (units per acre)		Non-Residential FAR		Height (feet)	
	Minimum	Maximum	Minimum	Maximum	Minimum	Maximum
Commercial Mixed Use	15.1	40.0	n/a	1.0	25	45
Village Mixed-Use	12.1	40.0	n/a	2.0	30	45
Neighborhood Mixed-Use	15.1	40.0	n/a	2.0	25	45
High Density Residential	15.1*	40.0	n/a	n/a	25	40
Low Density Residential	4.1	7.0	n/a	n/a	n/a	30

Note: In the High Density Residential zone, sites identified in the Housing Element of the General Plan as contributing to meeting the City’s share of the Regional Housing Needs Allocation have a minimum density of 20.1 units per acre.

General Plan Development Capacity

The proposed revisions to the General Plan would result in an update to the development capacity as provided in Table 3-2 of the General Plan. Revisions to the table are shown below in Table 2, with deletions shown in ~~strikeout~~ and additions in bold.

Table 2. Revisions to General Plan Development Capacity

	Acres	Dwelling Units	Population ¹	Employment (Jobs)	Jobs/Housing Ratio
Existing Development Total ²	31,449	53,829	171,059	45,463	0.84
General Plan Total	34,956	102,865 104,716	332,254 338,233	127,463 123,923	1.24 1.18
City Limits	29,946	72,262 76,906	233,406 248,406	81,784 72,788	
Study Areas Subtotal	8,008	30,603 27,810	98,848 89,826	45,679 51,135	
North Study Area	646	323	1,043	0	
East Study Area	1,772	4,806	15,523	9,183	
South Study Area	3,675	16,250 12,320	52,488 39,764	30,367 36,332	
West Study Area	1,915	9,224 10,361	29,794 33,466	6,129 5,620	

Table Notes: Number may not sum due to rounding

1. Based on 3.23 persons per household, average.

2. Existing development represents 2017 population and dwelling unit information and derived from 2013 jobs data (the most current year available at the time of writing the General Plan).

REQUIRED APPROVALS

Actions to be taken by the City to adopt the Project include, but are not limited to:

- ▶ certification of the SEIR prepared for the Project,
- ▶ adoption of General Plan amendments that accomplish the following:
 - Comprehensive update to the Southeast Area Community Plan, removing XXX acres
 - Elimination of the Lent Ranch Policy Area
 - Creation of the Livable Employment Area Community Plan
 - Comprehensive update to the Planning Framework (Chapter 3 of the General Plan), including the Land Use Plan and Transportation Plan,
 - Revisions to the Mobility Chapter (Chapter 6) of the General Plan to reflect the transfer of transit services to Sacramento Regional Transit,
 - Revisions to Chapters 2 (Vision), 4 (Urban and Rural Development), 5 (Economy and the Region), and 10 (Implementation) for internal consistency of the General Plan,
- ▶ adoption of new Zoning provisions for the Livable Employment Area Community Plan area, and
- ▶ adoption of the updated City's VMT thresholds and guidance.

PROBABLE ENVIRONMENTAL EFFECTS

The SEIR will evaluate whether implementing the proposed Project would potentially result in one or more significant environmental effects. The following issue areas will be addressed in the SEIR:

- ▶ Aesthetics
- ▶ Air Quality
- ▶ Cultural and Tribal Cultural Resources
- ▶ Energy
- ▶ Greenhouse Gases and Climate Change
- ▶ Noise and Vibration
- ▶ Population and Housing
- ▶ Public Services
- ▶ Recreation
- ▶ Transportation
- ▶ Utilities and Service Systems

Issues Scoped Out from Analysis in the EIR

The City anticipates that the Project would have less-than-significant or no impacts on the following environmental issue areas. These areas will not be discussed in the SEIR for the reasons discussed below.

Agriculture and Forestry Resources

No forestry resources or timberlands are in the City or its Planning Area. The EIR certified for the City's 2019 General Plan Update evaluated the potential for impacts on agricultural resources in the City's Planning Area. Because this issue

was evaluated in that document and no additional agricultural impacts (no change in the City's planned development footprint) would occur because of implementing the General Plan Amendments, this issue will not be discussed in the SEIR.

Biological Resources

The EIR certified for the City's 2019 General Plan Update evaluated the potential for impacts on biological resources in the City's Planning Area. Because the Project would not change the extent of land disturbance from what was evaluated in the General Plan Update EIR (no change in the City's planned development footprint), this issue will not be discussed in the SEIR.

Geology and Soils

The EIR certified for the City's 2019 General Plan Update evaluated the potential for impacts related to geology and soils in the City's Planning Area. Because the Project would not change the extent or character of land disturbance from what was evaluated in the General Plan Update EIR (no change in the City's planned development footprint), this issue will not be discussed in the SEIR.

Hazards and Hazardous Materials

The EIR certified for the City's 2019 General Plan Update evaluated the potential for impacts related to hazards and hazardous materials in the City's Planning Area. Because the Project would not change the extent or character of land disturbance from what was evaluated in the General Plan Update EIR (no change in the City's planned development footprint) or introduce a new land use that could create hazards, this issue will not be discussed in the SEIR.

Hydrology and Water Quality

The EIR certified for the City's 2019 General Plan Update evaluated the potential for impacts related to hydrology and water quality in the City's Planning Area. Because the Project would not change the extent or character of land disturbance from what was evaluated in the General Plan Update EIR (no change in the City's planned development footprint), this issue will not be discussed in the SEIR.

Land Use and Planning

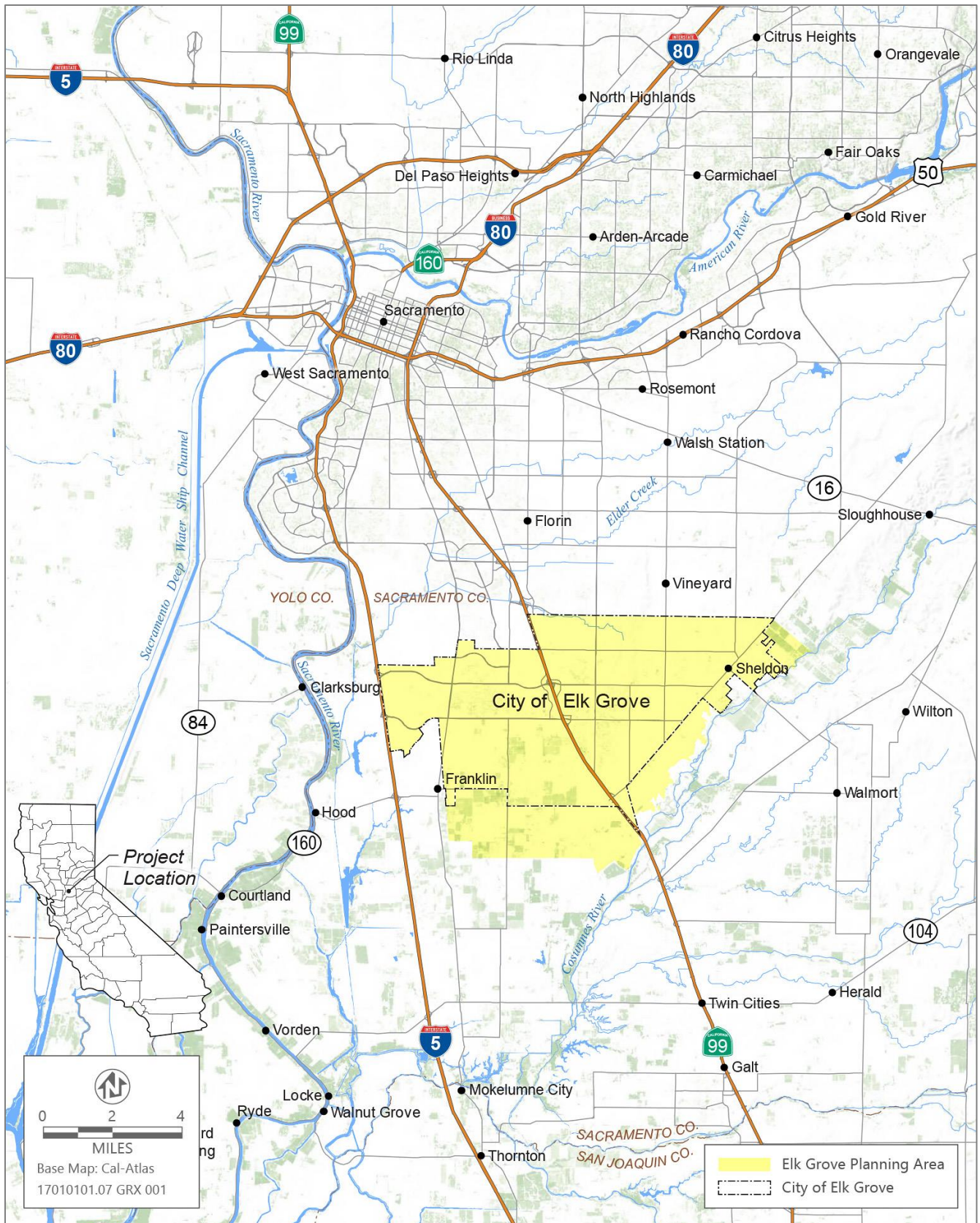
The EIR certified for the City's 2019 General Plan Update evaluated the potential for impacts related to land uses and plans in the City's Planning Area. Because the Project would not change the extent or character of land disturbance from what was evaluated in the General Plan Update EIR (no change in the City's planned development footprint), this issue will not be discussed in the SEIR.

Mineral Resources

No significant mineral resources have been identified in the City. The Project would not change the extent of land disturbance from what was evaluated in the General Plan Update EIR (no change in the City's planned development footprint). Therefore, this issue will not be discussed in the SEIR.

Wildfire

The City is not located in or near a Very High Fire Hazard Severity Zone. Therefore, there would not be a significant impact related to wildfire, and this issue will not be discussed in the SEIR.



Source: Ascent Environmental 2019

Figure 1 Regional Location Map

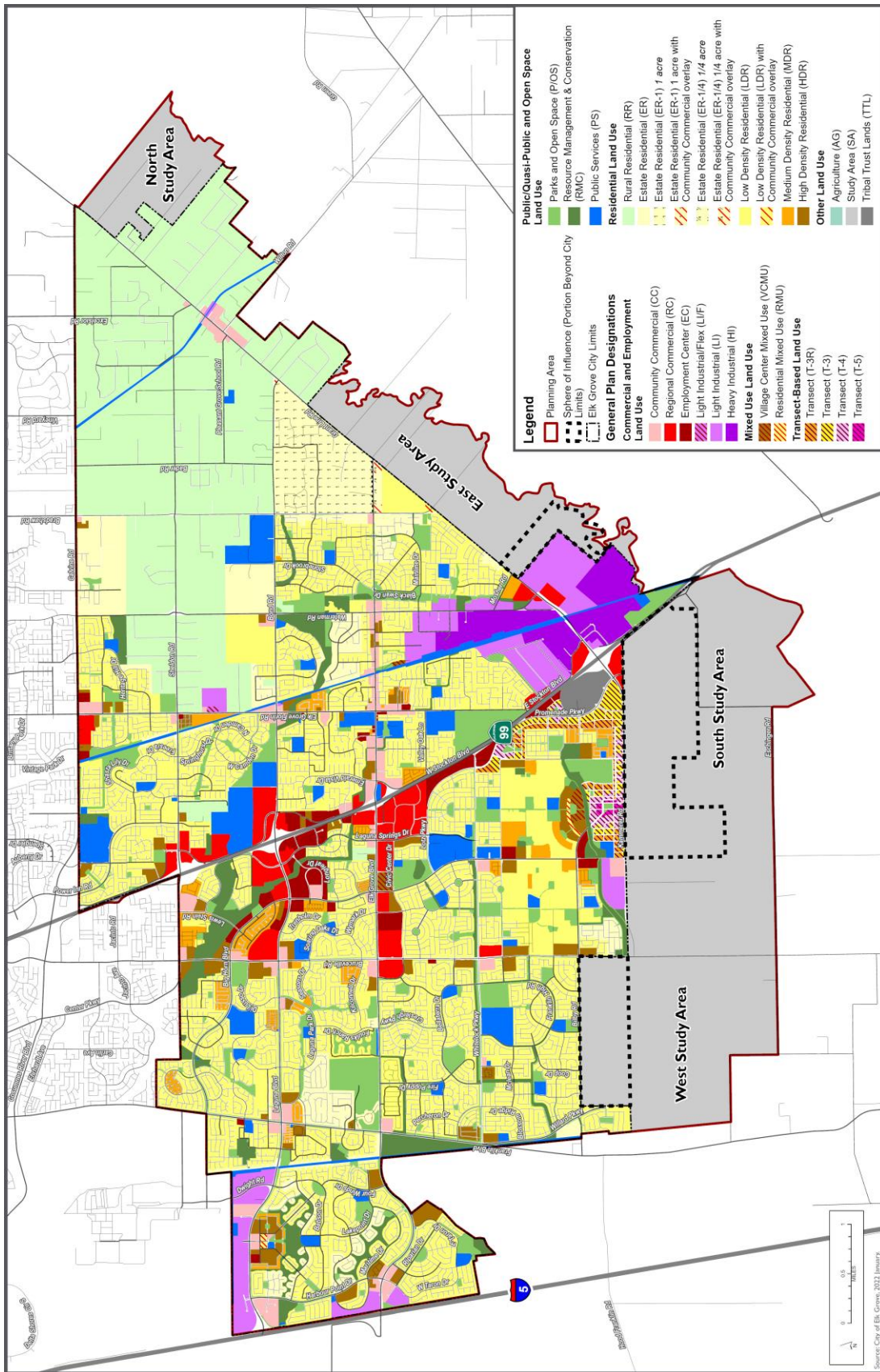


Figure 2 Proposed General Plan Land Use Map

NATIVE AMERICAN HERITAGE COMMISSION

February 22, 2022

Governor's Office of Planning & Research

Feb 25 2022

Christopher Jordan
City of Elk Grove
8401 Laguna Palms Way
Elk Grove, CA 95758

STATE CLEARING HOUSE

Re: 2022020463, General Plan Amendments and Update of Vehicle Miles Traveled Standards Project, Sacramento County

Dear Mr. Jordan:

The Native American Heritage Commission (NAHC) has received the Notice of Preparation (NOP), Draft Environmental Impact Report (DEIR) or Early Consultation for the project referenced above. The California Environmental Quality Act (CEQA) (Pub. Resources Code §21000 et seq.), specifically Public Resources Code §21084.1, states that a project that may cause a substantial adverse change in the significance of a historical resource, is a project that may have a significant effect on the environment. (Pub. Resources Code § 21084.1; Cal. Code Regs., tit.14, § 15064.5 (b) (CEQA Guidelines §15064.5 (b))). If there is substantial evidence, in light of the whole record before a lead agency, that a project may have a significant effect on the environment, an Environmental Impact Report (EIR) shall be prepared. (Pub. Resources Code §21080 (d); Cal. Code Regs., tit. 14, § 5064 subd.(a)(1) (CEQA Guidelines §15064 (a)(1))). In order to determine whether a project will cause a substantial adverse change in the significance of a historical resource, a lead agency will need to determine whether there are historical resources within the area of potential effect (APE).

CEQA was amended significantly in 2014. Assembly Bill 52 (Gatto, Chapter 532, Statutes of 2014) (AB 52) amended CEQA to create a separate category of cultural resources, "tribal cultural resources" (Pub. Resources Code §21074) and provides that a project with an effect that may cause a substantial adverse change in the significance of a tribal cultural resource is a project that may have a significant effect on the environment. (Pub. Resources Code §21084.2). Public agencies shall, when feasible, avoid damaging effects to any tribal cultural resource. (Pub. Resources Code §21084.3 (a)). **AB 52 applies to any project for which a notice of preparation, a notice of negative declaration, or a mitigated negative declaration is filed on or after July 1, 2015.** If your project involves the adoption of or amendment to a general plan or a specific plan, or the designation or proposed designation of open space, on or after March 1, 2005, it may also be subject to Senate Bill 18 (Burton, Chapter 905, Statutes of 2004) (SB 18). **Both SB 18 and AB 52 have tribal consultation requirements.** If your project is also subject to the federal National Environmental Policy Act (42 U.S.C. § 4321 et seq.) (NEPA), the tribal consultation requirements of Section 106 of the National Historic Preservation Act of 1966 (154 U.S.C. 300101, 36 C.F.R. §800 et seq.) may also apply.

The NAHC recommends consultation with California Native American tribes that are traditionally and culturally affiliated with the geographic area of your proposed project as early as possible in order to avoid inadvertent discoveries of Native American human remains and best protect tribal cultural resources. Below is a brief summary of portions of AB 52 and SB 18 as well as the NAHC's recommendations for conducting cultural resources assessments.

Consult your legal counsel about compliance with AB 52 and SB 18 as well as compliance with any other applicable laws.



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AB 52 has added to CEQA the additional requirements listed below, along with many other requirements:

- 1. Fourteen Day Period to Provide Notice of Completion of an Application/Decision to Undertake a Project:** Within fourteen (14) days of determining that an application for a project is complete or of a decision by a public agency to undertake a project, a lead agency shall provide formal notification to a designated contact of, or tribal representative of, traditionally and culturally affiliated California Native American tribes that have requested notice, to be accomplished by at least one written notice that includes:

 - a.** A brief description of the project.
 - b.** The lead agency contact information.
 - c.** Notification that the California Native American tribe has 30 days to request consultation. (Pub. Resources Code §21080.3.1 (d)).
 - d.** A "California Native American tribe" is defined as a Native American tribe located in California that is on the contact list maintained by the NAHC for the purposes of Chapter 905 of Statutes of 2004 (SB 18). (Pub. Resources Code §21073).
- 2. Begin Consultation Within 30 Days of Receiving a Tribe's Request for Consultation and Before Releasing a Negative Declaration, Mitigated Negative Declaration, or Environmental Impact Report:** A lead agency shall begin the consultation process within 30 days of receiving a request for consultation from a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project. (Pub. Resources Code §21080.3.1, subs. (d) and (e)) and prior to the release of a negative declaration, mitigated negative declaration or Environmental Impact Report. (Pub. Resources Code §21080.3.1 (b)).

 - a.** For purposes of AB 52, "consultation shall have the same meaning as provided in Gov. Code §65352.4 (SB 18). (Pub. Resources Code §21080.3.1 (b)).
- 3. Mandatory Topics of Consultation If Requested by a Tribe:** The following topics of consultation, if a tribe requests to discuss them, are mandatory topics of consultation:

 - a.** Alternatives to the project.
 - b.** Recommended mitigation measures.
 - c.** Significant effects. (Pub. Resources Code §21080.3.2 (a)).
- 4. Discretionary Topics of Consultation:** The following topics are discretionary topics of consultation:

 - a.** Type of environmental review necessary.
 - b.** Significance of the tribal cultural resources.
 - c.** Significance of the project's impacts on tribal cultural resources.
 - d.** If necessary, project alternatives or appropriate measures for preservation or mitigation that the tribe may recommend to the lead agency. (Pub. Resources Code §21080.3.2 (a)).
- 5. Confidentiality of Information Submitted by a Tribe During the Environmental Review Process:** With some exceptions, any information, including but not limited to, the location, description, and use of tribal cultural resources submitted by a California Native American tribe during the environmental review process shall not be included in the environmental document or otherwise disclosed by the lead agency or any other public agency to the public, consistent with Government Code §6254 (r) and §6254.10. Any information submitted by a California Native American tribe during the consultation or environmental review process shall be published in a confidential appendix to the environmental document unless the tribe that provided the information consents, in writing, to the disclosure of some or all of the information to the public. (Pub. Resources Code §21082.3 (c)(1)).
- 6. Discussion of Impacts to Tribal Cultural Resources in the Environmental Document:** If a project may have a significant impact on a tribal cultural resource, the lead agency's environmental document shall discuss both of the following:

 - a.** Whether the proposed project has a significant impact on an identified tribal cultural resource.
 - b.** Whether feasible alternatives or mitigation measures, including those measures that may be agreed to pursuant to Public Resources Code §21082.3, subdivision (a), avoid or substantially lessen the impact on the identified tribal cultural resource. (Pub. Resources Code §21082.3 (b)).

- 7. Conclusion of Consultation:** Consultation with a tribe shall be considered concluded when either of the following occurs:
- a.** The parties agree to measures to mitigate or avoid a significant effect, if a significant effect exists, on a tribal cultural resource; or
 - b.** A party, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached. (Pub. Resources Code §21080.3.2 (b)).
- 8. Recommending Mitigation Measures Agreed Upon in Consultation in the Environmental Document:** Any mitigation measures agreed upon in the consultation conducted pursuant to Public Resources Code §21080.3.2 shall be recommended for inclusion in the environmental document and in an adopted mitigation monitoring and reporting program, if determined to avoid or lessen the impact pursuant to Public Resources Code §21082.3, subdivision (b), paragraph 2, and shall be fully enforceable. (Pub. Resources Code §21082.3 (a)).
- 9. Required Consideration of Feasible Mitigation:** If mitigation measures recommended by the staff of the lead agency as a result of the consultation process are not included in the environmental document or if there are no agreed upon mitigation measures at the conclusion of consultation, or if consultation does not occur, and if substantial evidence demonstrates that a project will cause a significant effect to a tribal cultural resource, the lead agency shall consider feasible mitigation pursuant to Public Resources Code §21084.3 (b). (Pub. Resources Code §21082.3 (e)).
- 10. Examples of Mitigation Measures That, If Feasible, May Be Considered to Avoid or Minimize Significant Adverse Impacts to Tribal Cultural Resources:**
- a.** Avoidance and preservation of the resources in place, including, but not limited to:
 - i.** Planning and construction to avoid the resources and protect the cultural and natural context.
 - ii.** Planning greenspace, parks, or other open space, to incorporate the resources with culturally appropriate protection and management criteria.
 - b.** Treating the resource with culturally appropriate dignity, taking into account the tribal cultural values and meaning of the resource, including, but not limited to, the following:
 - i.** Protecting the cultural character and integrity of the resource.
 - ii.** Protecting the traditional use of the resource.
 - iii.** Protecting the confidentiality of the resource.
 - c.** Permanent conservation easements or other interests in real property, with culturally appropriate management criteria for the purposes of preserving or utilizing the resources or places.
 - d.** Protecting the resource. (Pub. Resource Code §21084.3 (b)).
 - e.** Please note that a federally recognized California Native American tribe or a non-federally recognized California Native American tribe that is on the contact list maintained by the NAHC to protect a California prehistoric, archaeological, cultural, spiritual, or ceremonial place may acquire and hold conservation easements if the conservation easement is voluntarily conveyed. (Civ. Code §815.3 (c)).
 - f.** Please note that it is the policy of the state that Native American remains and associated grave artifacts shall be repatriated. (Pub. Resources Code §5097.991).
- 11. Prerequisites for Certifying an Environmental Impact Report or Adopting a Mitigated Negative Declaration or Negative Declaration with a Significant Impact on an Identified Tribal Cultural Resource:** An Environmental Impact Report may not be certified, nor may a mitigated negative declaration or a negative declaration be adopted unless one of the following occurs:
- a.** The consultation process between the tribes and the lead agency has occurred as provided in Public Resources Code §21080.3.1 and §21080.3.2 and concluded pursuant to Public Resources Code §21080.3.2.
 - b.** The tribe that requested consultation failed to provide comments to the lead agency or otherwise failed to engage in the consultation process.
 - c.** The lead agency provided notice of the project to the tribe in compliance with Public Resources Code §21080.3.1 (d) and the tribe failed to request consultation within 30 days. (Pub. Resources Code §21082.3 (d)).

The NAHC's PowerPoint presentation titled, "Tribal Consultation Under AB 52: Requirements and Best Practices" may be found online at: http://nahc.ca.gov/wp-content/uploads/2015/10/AB52TribalConsultation_CalEPAPDF.pdf

SB 18

SB 18 applies to local governments and requires local governments to contact, provide notice to, refer plans to, and consult with tribes prior to the adoption or amendment of a general plan or a specific plan, or the designation of open space. (Gov. Code §65352.3). Local governments should consult the Governor's Office of Planning and Research's "Tribal Consultation Guidelines," which can be found online at: https://www.opr.ca.gov/docs/09_14_05_Updated_Guidelines_922.pdf.

Some of SB 18's provisions include:

1. **Tribal Consultation**: If a local government considers a proposal to adopt or amend a general plan or a specific plan, or to designate open space it is required to contact the appropriate tribes identified by the NAHC by requesting a "Tribal Consultation List." If a tribe, once contacted, requests consultation the local government must consult with the tribe on the plan proposal. **A tribe has 90 days from the date of receipt of notification to request consultation unless a shorter timeframe has been agreed to by the tribe.** (Gov. Code §65352.3 (a)(2)).
2. **No Statutory Time Limit on SB 18 Tribal Consultation**. There is no statutory time limit on SB 18 tribal consultation.
3. **Confidentiality**: Consistent with the guidelines developed and adopted by the Office of Planning and Research pursuant to Gov. Code §65040.2, the city or county shall protect the confidentiality of the information concerning the specific identity, location, character, and use of places, features and objects described in Public Resources Code §5097.9 and §5097.993 that are within the city's or county's jurisdiction. (Gov. Code §65352.3 (b)).
4. **Conclusion of SB 18 Tribal Consultation**: Consultation should be concluded at the point in which:
 - a. The parties to the consultation come to a mutual agreement concerning the appropriate measures for preservation or mitigation; or
 - b. Either the local government or the tribe, acting in good faith and after reasonable effort, concludes that mutual agreement cannot be reached concerning the appropriate measures of preservation or mitigation. (Tribal Consultation Guidelines, Governor's Office of Planning and Research (2005) at p. 18).

Agencies should be aware that neither AB 52 nor SB 18 precludes agencies from initiating tribal consultation with tribes that are traditionally and culturally affiliated with their jurisdictions before the timeframes provided in AB 52 and SB 18. For that reason, we urge you to continue to request Native American Tribal Contact Lists and "Sacred Lands File" searches from the NAHC. The request forms can be found online at: <http://nahc.ca.gov/resources/forms/>.

NAHC Recommendations for Cultural Resources Assessments

To adequately assess the existence and significance of tribal cultural resources and plan for avoidance, preservation in place, or barring both, mitigation of project-related impacts to tribal cultural resources, the NAHC recommends the following actions:

1. Contact the appropriate regional California Historical Research Information System (CHRIS) Center (http://ohp.parks.ca.gov/?page_id=1068) for an archaeological records search. The records search will determine:
 - a. If part or all of the APE has been previously surveyed for cultural resources.
 - b. If any known cultural resources have already been recorded on or adjacent to the APE.
 - c. If the probability is low, moderate, or high that cultural resources are located in the APE.
 - d. If a survey is required to determine whether previously unrecorded cultural resources are present.
2. If an archaeological inventory survey is required, the final stage is the preparation of a professional report detailing the findings and recommendations of the records search and field survey.
 - a. The final report containing site forms, site significance, and mitigation measures should be submitted immediately to the planning department. All information regarding site locations, Native American human remains, and associated funerary objects should be in a separate confidential addendum and not be made available for public disclosure.

- b.** The final written report should be submitted within 3 months after work has been completed to the appropriate regional CHRIS center.
- 3.** Contact the NAHC for:
- a.** A Sacred Lands File search. Remember that tribes do not always record their sacred sites in the Sacred Lands File, nor are they required to do so. A Sacred Lands File search is not a substitute for consultation with tribes that are traditionally and culturally affiliated with the geographic area of the project's APE.
 - b.** A Native American Tribal Consultation List of appropriate tribes for consultation concerning the project site and to assist in planning for avoidance, preservation in place, or, failing both, mitigation measures.
- 4.** Remember that the lack of surface evidence of archaeological resources (including tribal cultural resources) does not preclude their subsurface existence.
- a.** Lead agencies should include in their mitigation and monitoring reporting program plan provisions for the identification and evaluation of inadvertently discovered archaeological resources per Cal. Code Regs., tit. 14, §15064.5(f) (CEQA Guidelines §15064.5(f)). In areas of identified archaeological sensitivity, a certified archaeologist and a culturally affiliated Native American with knowledge of cultural resources should monitor all ground-disturbing activities.
 - b.** Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the disposition of recovered cultural items that are not burial associated in consultation with culturally affiliated Native Americans.
 - c.** Lead agencies should include in their mitigation and monitoring reporting program plans provisions for the treatment and disposition of inadvertently discovered Native American human remains. Health and Safety Code §7050.5, Public Resources Code §5097.98, and Cal. Code Regs., tit. 14, §15064.5, subdivisions (d) and (e) (CEQA Guidelines §15064.5, subds. (d) and (e)) address the processes to be followed in the event of an inadvertent discovery of any Native American human remains and associated grave goods in a location other than a dedicated cemetery.

If you have any questions or need additional information, please contact me at my email address: Pricilla.Torres-Fuentes@nahc.ca.gov.

Sincerely,

Pricilla Torres-Fuentes

Pricilla Torres-Fuentes
Cultural Resources Analyst

cc: State Clearinghouse

Appendix B

General Plan Amendments

**Proposed General Plan Revisions
Kammerer UDS Implementation – Draft Dated June 2, 2023**

Proposed changes are shown in ~~strikeout~~ (for deleted text) and underline (for added text).

Changes to Chapter 2 (Vision)

Chapter 2 (Vision) shall be amended as follows:

Chapter 2 Vision

The Community Vision for Elk Grove, expressed through a Vision Statement and a series of Supporting Principles, is a declaration of the kind of community that Elk Grove wants to become in the future and sets the course for this General Plan. The Community Vision draws upon findings derived from research into existing conditions, demographics, and trends in Elk Grove, and was crafted based on input provided by the community during a visioning process. The City conducted community engagement events between August and December of 2015 to identify key values and issues, with subsequent outreach activities that allowed for refinement of the Community Vision. City staff and officials contributed their feedback at joint City Council/Planning Commission study sessions. Representatives from organizations with an interest in the community shared their visions through focused interviews. Members of the public offered input at mobile workshops conducted at community events held throughout the City and at an all-day visioning workshop.

COMMUNITY VISION

The Community Vision establishes the basis for General Plan goals and policies. The Vision Statement describes the values and aspirations for Elk Grove in the future. It identifies key characteristics necessary for sustaining what is important to the community and for Elk Grove to achieve its potential. The Vision Statement is supported by nine Supporting Principles, statements that together contribute to the larger Community Vision and provide more specific guidance for General Plan goals and policies.

VISION STATEMENT

The City of Elk Grove is... A great place to make a home, a great place to work, and a great place to play. Our community is diverse, healthy, safe, and family-oriented, with thriving schools and plentiful parks, shops, and places to work. Agriculture, rural homes, and urban life flourish together. Our natural resources, including water and open spaces, are protected and offer a variety of recreational opportunities. Community members travel easily by automobile, by bicycle, on foot, or using transit. The City is proactive in making daily life healthy and sustainable—considering the needs of future generations while protecting what is valued today. Well-maintained infrastructure and the right mix of services and amenities draw new and dynamic businesses and development to Elk Grove. Development is guided to ensure responsible growth and opportunities for a diversity of individuals who call Elk Grove home

SUPPORTING PRINCIPLES

Regional Goals & Influence – Our Regional Neighbors Know Us & Our Contributions

Elk Grove occupies a prominent place in the regional dialogue. The City's identity and brand are clear in the minds of its neighbors, and our unique sense of place makes our City an appealing destination to live, work and visit. Our contributions to the region continue to strengthen that identity and include recreational opportunities, higher education, job centers, and quality neighborhoods. City officials engage with other cities, Sacramento County, and other partners to plan and build for an ever more dynamic region. The City's employment potential within the regional economy is fulfilled.

New businesses have emerged, providing new employment centers that support technology and build from our agricultural roots. Both housing and jobs are available in the community, providing flexible opportunities for many lifestyles including the opportunity to live-work-and play, within the distance that can be walked in twenty-minutes.

Infill Development & Outward Expansion – Development Fills in the Gaps & Expansion Occurs with Purpose

Unfinished, undeveloped gaps found throughout the City become opportunities to develop economically successful compact and walkable additions that provide added value to our community as well as new job opportunities and lifestyle improvements while reducing dependence on single occupancy vehicles. Existing small businesses are protected even as we invite in new businesses and different economic opportunities. New development plans are grounded by community needs and market demand, and are carried out efficiently and holistically. New housing built in a variety of shapes and sizes to meet the needs and desires of our diverse community also fills in these gaps.

Infill development is consistently executed with programs that address impacts and encourage innovative urban design and building solutions. A creative growth management strategy allows expansion to occur when economic need, community vision, and regional goals align. There is a strong system in place to guarantee that as the community accommodates new neighbors and new jobs, it continues to maintain and improve facilities and services, such as schools, roads, and parks. Our development review process works to ensure that new development is compatible with surrounding neighborhoods and to preserve the character of our community.

Economic Vitality – Our Economy is Diverse & Balanced & Enhances Quality of Life

Major employment centers make their home in Elk Grove, and where appropriate are seamlessly connected to emerging neighborhoods and expanded transit options providing employment opportunities and stimulating ancillary businesses as well. We continue to invite businesses that are competitive in the region and set the stage to attract these businesses by providing resources and amenities they need. Old and new businesses together improve our lives by providing new jobs as well as convenient places to access amenities and entertainment. Elk Grove has a diverse economy that builds from our heritage, but also invites in new and changing industries. Higher education and technical training are available to our community members as they pursue diverse job opportunities in these new industries. The City is leading the way in innovative technology infrastructure, technical education opportunities, sports activities and entertainment, and a safe and crime-free environment. Employment centers are set in exciting and vibrant neighborhoods and districts with great quality-of-life amenities including pedestrian friendly design and a mix of uses to attract and retain the best and the brightest in their respective disciplines. ~~These~~ All these features combined attract business and offer a better quality of life for individuals and families of all incomes, ages, abilities, and backgrounds.

Growth and development in the City are built with our historic resources and identity in mind. These businesses bolster the community by providing jobs, services, goods, and recreational opportunities for residents.

Community Identity – City Core, Heritage & Well-Known Neighborhoods

The City includes a civic core that offers central gathering spaces which all community members may enjoy and feel welcome in. The City and community organizations partner to foster a thriving and safe civic core. Successful projects and annual events enhance vitality and camaraderie in this place.

Old Town Elk Grove continues to protect and showcase our heritage for the enjoyment of residents and visitors alike. This unique district is a source of pride and identity for Elk Grove residents.

All of our neighborhoods are built around our top-notch parks and schools. Preservation and change in our neighborhoods are guided by values of diversity, neighborly spirit, and small-town character.

Rural Areas – Protecting Our Farming Heritage & Rural Life

We celebrate the Rural Area and its heritage, and balance that heritage with other needs, services, and lifestyles desired in Elk Grove. The Rural Area is valued in our community for its aesthetic and cultural significance, as well as the economic and educational opportunities that agriculture provides. Our commitment to maintaining the Rural Area is clear and codified in core planning documents through programs that preserve the aesthetics and style of our rural heritage. Agricultural producers and other land uses remain good neighbors, each with desired services and infrastructure needs fully met.

Open Space & Resource Management – Outdoor Recreation Is Right Outside Our Door

Our parks and trails are high quality and highly valued, providing regional destinations for outdoor recreation and active living. We continue to enhance and maintain our recreational open spaces so that they are safe, connected, and accessible to all. Our trails connect easily to other trails and parks in the region, and community gardens are a source of local food and local involvement. Homes in the Livable Employment Area are for the most part within an 1/8 mile of pocket parks or playgrounds, and ¼ mile from civic greens or parks.

Multimodal & Active Transportation – Moving Around Anywhere, Any Way

Our residents, workers, and visitors need to move about efficiently, and have a variety of ways to do so. Connected transportation networks, regional coordination, and public and active transportation options are priorities for our community. Connected and mobile community members have the ability to travel within the City and to other places in the region by a variety of methods, with seamless transitions between modes and regions. Our community has roadways in place that allow for efficient movement and safe travel spaces for all modes of travel. New roadways follow the principles of “Complete Streets”. The infrastructure and facilities for pedestrians, bicyclists, and transit users are clean, safe, and well maintained, and walkways and bike lanes are continuous and complete with convenient connections to local and regional transit. Amenities such as bus shelters make riding transit comfortable and convenient in our community. We are committed to extending transit service with good frequency and route coverage to future expansion areas of the City.

Sustainable & Healthy Community – Clean, Green Practices & Healthy Living

Sustainable practices are at the forefront of environmental concerns in Elk Grove. Organizations, businesses, and residents desire a city that is adaptive to and resilient against climate change, is a leader in conservation, and embraces innovations in green technologies. The City layout and land uses promote healthy living, with healthy grocery options and destinations nearby that people can get to by walking and biking. The City’s residents and businesses recognize the importance of responsible resource use, and they work together to conserve and use water and energy to their full potential. The City follows good, innovative design principles for urban spaces and infrastructure to enhance sustainability and resiliency.

Coordinated Services, Technology, & Infrastructure – Services for the Needs of All Residents

Safety and services are important to all members of our community, and services for youth, seniors, and disadvantaged families are readily available. Entertainment and social centers create a thriving and diverse economy and give residents a place to shop, play, and relax. The City ensures that important services in our community, including social, housing, transportation, health, and education, are available and efficiently obtainable for community members who choose or need them to thrive.

Changes to Chapter 3 (Planning Framework)

Chapter 3 (Planning Framework) shall be amended as follows:

Chapter 3 Planning Framework

INTRODUCTION

Three fundamental components of this General Plan describe how the Community Vision will be realized in the Planning Area: the Land Use Plan, the Transportation Plan, and the Resource Conservation Plan. Together, these plans establish a physical framework for General Plan goals and policies. These components describe how land may be developed, how people and goods will get around, and how important natural resources will be protected in the future as Elk Grove becomes the community described in the Community Vision. They are presented together in this chapter along with background information describing how each plan was prepared in order to provide structure for goals and policies in subsequent chapters that support achieving the plans.

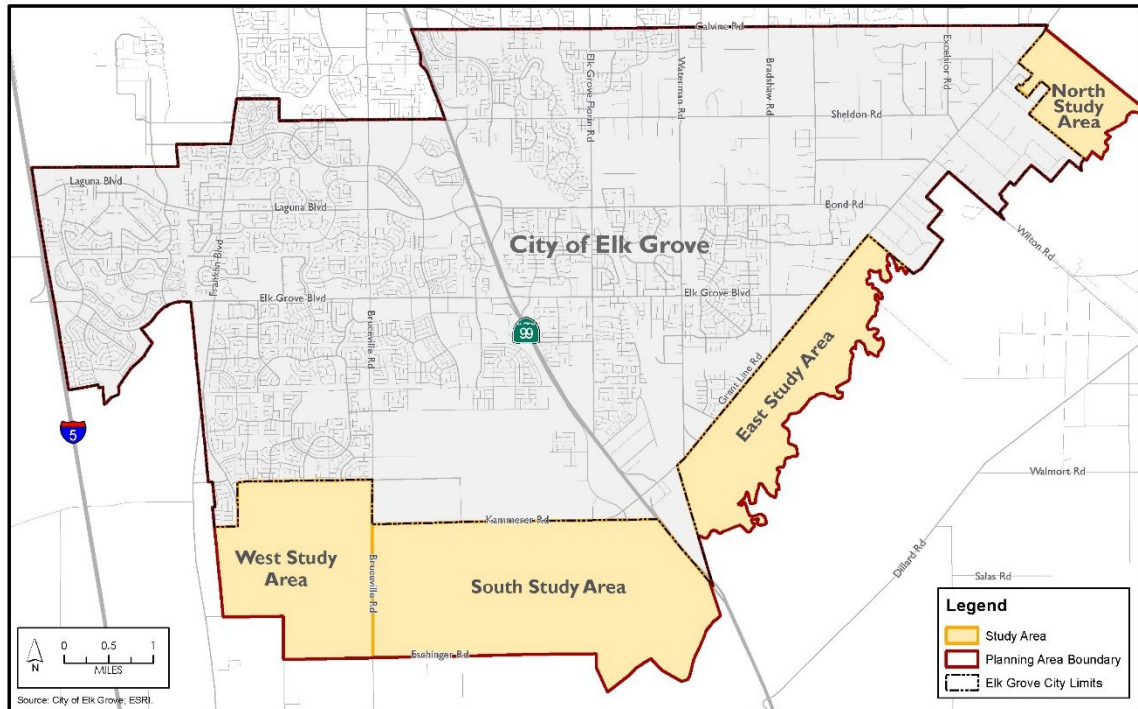
CITY LIMITS AND STUDY AREAS

As noted in Chapter 1: Introduction, the General Plan addresses all lands located in the Planning Area, which comprise both the City limits and an area located beyond the City that relates to its future planning goals. Within the Planning Area, four areas have been identified for potential expansion of the City limits, as shown in Figure 3-1. These areas are referred to as Study Areas, as described below.

- The North Study Area is an approximately 646-acre area adjacent to both the northeastern corner of the City limits and to Grant Line Road near the Sheldon area. The eastern boundary generally follows the 100-year floodplain boundaries.
- The East Study Area is an approximately 1,772-acre area southeast of Grant Line Road, running along the City boundary between existing 5-acre developments along Equestrian Drive and the railroad tracks to the southwest.
- The South Study Area is an approximately 3,675-acre area south of the City limit, with the north boundary at Kammerer Road the southern edge of the Livable Employment Area; the south boundary at Eschinger Road, and the southeast corner dipping south and following the Cosumnes River back northeast to the east boundary at State Route 99; and the west boundary following Bruceville Road.
- The West Study Area is an approximately 1,914-acre area south of the City limit with a north boundary at Bilby Road; an east boundary along Bruceville Road; a south boundary at Eschinger Road, then north along Ed Rau Road and back west along Core Road; and a west boundary at the Union Pacific Railroad tracks.

It is the City's desire that these Study Areas provide options for future development when there is a demonstrated community benefit or need. While the Study Areas include much land currently (2017) classified as Farmland of Statewide or Local Importance, the City recognizes that there are limited opportunities for planned, orderly, efficient development of the City other than in these areas.

Figure 3-1: General Plan Study Areas



Development in the Study Areas may provide opportunities for achieving the Community Vision that may not otherwise be accomplished through development exclusively within the City’s existing limits. A growth strategy that balances economic need, community vision, and regional goals will guide potential expansion and development of the Study Areas, as identified in Chapter 4: Urban and Rural Development.

Change is a constant process observed over a specified time frame. Over the next several decades, Elk Grove expects a certain continuing level of change resulting from forces such as population growth, changing demographics, the need to replace aging buildings and improve existing homes, and an ever-evolving economy. Physical changes are guided by development that almost exclusively occurs through private forces based on market demand.

Varying levels of future change will occur throughout Elk Grove. There will be areas of the City where existing character and function will be largely preserved (such as single-family neighborhoods and rural areas). There will be older commercial corridors where reinvestment can benefit and enhance the community, including but not limited to: Elk Grove-Florin Road between Bond Road and Elk Grove High School, and Elk Grove Boulevard between SR-99 and Old Town. Certain locations will be transformed by new development projects that provide jobs and/or housing for community members and new residents. This chapter describes these envisioned changes, the planned distribution and development density or intensity of future uses, and how land use goals will be achieved throughout the Planning Area and within each land use designation.

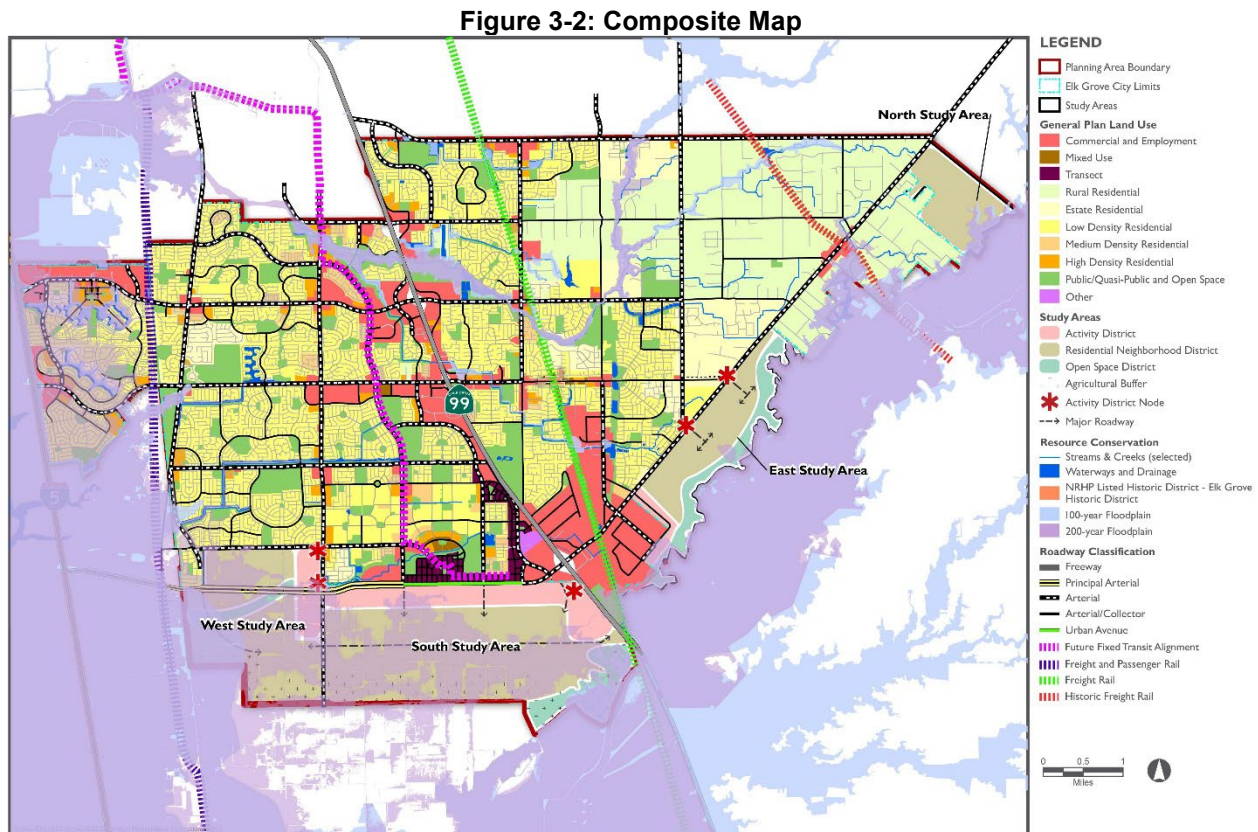
Land use is often considered the heart of the General Plan. The Land Use Diagram accounts for future changes by categorizing and mapping where housing, shopping areas, services, jobs, and open spaces are located today and where they are planned for the future. It considers existing land uses and anticipates where future development is expected to occur, based on market trends as well as input from the public and local decision-makers.

If land use is the heart of the General Plan, the transportation network is its circulatory system. The Transportation Network Diagram accounts for future roadways, pathways, and trails that meet the needs of all users, including motorists, pedestrians, bicyclists, public transportation users, individuals with

disabilities, and seniors. The transportation system is a key public facility in Elk Grove that provides access to and mobility within the community and contributes to the design and character of the area. The design, location, and capacity of transportation infrastructure are based on intended priorities and levels of use as dictated by surrounding land uses and local and regional economic drivers.

Open space and conservation of natural resources are critical to the health and happiness of the City. The Resource Conservation Diagram identifies areas the City will endeavor to preserve and protect, including parks, waterways, ecological preserves, and places of historic significance. It also identifies areas within the 100-year and 200- year floodplains.

The **Composite General Plan Map** represents a composite of the Land Use Diagram, Transportation Network Diagram, and the Resource Conservation Diagram, illustrating their key components at a high level, as depicted in **Figure 3-2**. The Composite General Plan Map has been designed to achieve the Community Vision, while optimizing the performance of future land uses with respect to key objectives, including achieving a desirable jobs/housing ratio, reducing vehicle miles traveled (VMT) and greenhouse gas emissions, improving energy efficiency, and enhancing overall quality of life through a range of land uses and amenities.



THE LAND USE PLAN

The Land Use Plan establishes ~~49-24~~ different land use designations within ~~five-six~~ broad categories and identifies the density and/or intensity (as defined on pages 3-9 and 3-10) of development that may occur within each designation. The Land Use Diagram, presented later as Figure 3-4, illustrates in spatial form the general location and distribution of these land uses and intensities within the existing City. Land Use Programs for each Study Area, presented in Chapter 4: Urban and Rural Development, guide how areas outside the existing City may develop or be conserved in the future. Together, these strategies describe the future community form and character that Elk Grove residents, businesses, and decision-makers wish to achieve and a means to get there.

KEY CONSIDERATIONS

A number of key considerations form the basis for the Land Use Plan, as described below.

Employment Growth and Jobs/Housing Balance

A healthy and sustainable economy is a critical component of the City's overall health and is often a prerequisite to achieving community goals including infrastructure improvements, adequate services, safety, and maintenance. Numerous factors determine the City's economic health, including the number and diversity of businesses, the number of jobs in relation to the resident workforce, resident income and wages, resident and business spending patterns, and levels of employment.

A jobs/housing ratio is a calculation of jobs per housing units available in a given area; a perfect balance is expressed as 1:1, or 1.0. A low jobs/housing ratio (less than 1.0) describes a housing-rich community with fewer available jobs for residents, while a high ratio (more than 1.0) describes a jobs-rich area with more jobs available for residents. In a community with a low jobs/housing ratio, working-age residents are more likely to need to commute to work, which, depending on their mode of travel, can contribute to regional congestion and air pollution and can increase individual time lost, stress, and travel costs. Establishing a better balance between jobs and housing can enhance quality of life and improve environmental conditions.

The Land Use Plan provides opportunities for a higher future jobs/housing ratio in Elk Grove than exists today. Elk Grove is located near Sacramento, which, as the State capital, is a large employment center. The City has relatively lower housing prices and generally offers more amenities than locations closer to the capital. These factors make the City an attractive housing location for many families, which, among other factors, contributes to a lower jobs/housing ratio (0.84) in Elk Grove compared to locations more proximate to the region's existing employment centers.

However, because Elk Grove is located at the edge of the Sacramento region, adding new jobs in Elk Grove without commensurate housing may be problematic. If the jobs added are not matched to the skill set of employees, workers will continue to commute to jobs in Elk Grove from locations such as Natomas, Rancho Cordova, Folsom, and elsewhere in the region, contributing to longer commute times and higher VMT. To support reductions in both of these indicators and to improve resident quality of life, the Land Use Plan has been designed to support opportunities that would result in a jobs/housing ratio of approximately 1.2 at buildout. This ratio is considerably higher than existing conditions, but still below SACOG's planned regional average of 1.4, indicating that Elk Grove will increase its employment base while also continuing to serve an important role as a residential community for employees throughout the region.

The Land Use Plan is also designed to support the creation of a Major Employment Center according to SACOG's definition in the MTP/SCS. SACOG defines a Major Employment Center as an area (a) that supports concentrations of at least 10,000 "base" jobs (i.e., including manufacturing, office, medical, educational, and service employment, and excluding sectors like retail and restaurant uses), at an average density of eight or more jobs per acre; and (b) where 80 percent or more of the uses within the center are employment, not residential. While Elk Grove has both a substantial workforce and a concentration of jobs today (2017), there is a mismatch between the skills, experience, and aspirations of the local workforce and the employment opportunities that are locally available (see Chapter 12 for more information). The Land Use Plan has been designed to accommodate numerous locations that, when built out, would meet these criteria.

Rural Area Preservation

Rural areas, cropland, and irrigated pasture make up roughly one-third of Elk Grove's current land area. Much of this area, known as the Rural Area (or the Sheldon Area), has been identified by the community as an area with unique characteristics. The rural lifestyle of this area is typified by homes on lots generally 2 acres in size or larger. The Rural Area lacks the infrastructure typically found in an urban or suburban community, such as sidewalks, curbs and gutters, and widened, improved roads. The Rural Area is not part of the public sewer system; rather, parcels use individual or small combined septic systems. Most residents

maintain their own wells for water. Another defining feature of the Rural Area is dedication to its agricultural roots, as small farms and livestock are allowed throughout the area.

Since incorporation, the City has established and affirmed a policy to retain the built and natural character of the Rural Area and to limit infrastructure. The Rural Area has enjoyed a level of self-determination, and protecting rural character is viewed as a fundamental local priority. Questions arise on a routine basis regarding why Elk Grove has sought outward expansion that is potentially inconsistent with regional plans and priorities, and the answers are related, in part, to preservation of the Rural Area. The growth strategy underlying the Land Use Plan maintains and codifies the City's long-standing commitment to maintain the heritage and character of the Rural Area. Many of the key preservation concepts are detailed in the Sheldon/Rural Area Community Plan presented in Chapter 9: *Community and Area Plans*.

Transit-Supportive Land Uses

Two key principles underlying the General Plan are providing for forms of urban development that are accessible by public transit and promoting development that supports levels of transit ridership that make quality public transit service in Elk Grove financially feasible. Land use and transit are closely linked and, if carefully planned and designed, can be mutually beneficial. Urban development that includes a diverse mix of active uses (e.g., residential, retail, services) and is dense enough to place high numbers of people near transit stops supports efficient transit service. Transit service that runs frequently and provides convenient routes throughout a community also encourages more people to use transit for their daily transportation needs, making more locations attractive and feasible for development.

With this principle in mind, the Land Use Plan establishes land uses and corresponding development densities in appropriate locations of the City that will support efficient and high-quality transit service, giving residents and workers a broader range of transportation options. Transit routes, stations, and pickup locations will be selected to meet circulation needs, corridor functionality, and appropriateness within the neighborhood. In this way, the Land Use Plan supports the Transportation Plan as well as the goals and policies in Chapter 6: Mobility. These transit-supportive land uses will also help achieve other community goals related to air quality and greenhouse gas emissions, which are discussed in Chapter 7: Community and Resource Protection.

MEASURING AND CHARACTERIZING LAND USE

Density and intensity are two closely related concepts used to describe and measure the mass of buildings or other structures that occupy a given land area. For example, an urban downtown is a high-density form of development, while a typical single-family residential neighborhood represents a low-density form. Similarly, development intensity refers to the degree or scale of development on a site. High intensity development is characterized by larger, more concentrated, and potentially multiple-story buildings on a site, preferably with parking accommodated in garages, whereas low-intensity development is characterized by smaller-scale building footprints with surface parking that may leave more open areas on a lot.

The density of residential land use is generally measured in terms of the number of dwelling units per gross acre (du/ac) of land (see definition of gross in Chapter 11); except that the Transect-Based Land Use Designations shall be based on net acre. The intensity of nonresidential (i.e., commercial or industrial) land use, as well as that of mixed land use areas, is generally measured in terms of floor area ratio (FAR), which describes the number of square feet of building on a site relative to the site's land area. FAR calculates the gross floor area of a building divided by the total net area of the site, expressed as a ratio. FAR generally excludes roof-top utility and surface or structured parking; see EGMC Title 23 for specifics on how to calculate FAR. The higher the FAR, the more intense the building may be on a site. For example, a site with 10,000 square feet of net land area would have a different FAR depending on the size of the building placed on the site, as shown in **Figure 3-3**.

Density and building intensity are among the most important factors in shaping the character of the built environment. Higher-intensity built environments have a distinctly different "feel" and character than neighborhoods with a lower intensity of buildings and more open space. However, other factors such as design (e.g., architecture, site planning, landscaping) are also influential in defining the look, feel, and

appeal of any built environment, whether low or high intensity. Density, intensity, and design of development must be carefully considered when seeking to create or preserve the character of a community in both newly developed areas and through changes to existing neighborhoods.

LAND USE DESIGNATIONS

This section describes the City’s land use designations and the accompanying development characteristics for each. Development characteristics that are permitted under each land use designation include residential density and building intensity (as applicable). The land use designations are grouped into ~~five~~ six categories as follows and outlined below:

- Commercial and Employment Land Use Designations
- Mixed Use Land Use Designations
- Transect-Based Land Use Designations
- Public/Quasi-Public and Open Space Land Use Designations
- Residential Land Uses Use Designations
- Other Land Uses Use Designations

...

Mixed Use Land Use Designations

Village Center Mixed Use (VCMU) Development Characteristics	
Residential Density:	Minimum: 12.1 du/ac Maximum: 40.0 <u>80.0 du/ac</u>
Building Intensity:	Maximum FAR of 2.0

Village Center Mixed Use (VCMU)

Village Center Mixed uses are generally characterized by pedestrian-oriented development, including integrated public plazas, with mixes of uses that focus on ground-floor commercial retail or office uses and allow residential or office uses above. Vertical integration should be prioritized along public transportation corridors and in activity nodes. Single-use buildings may also be appropriate when integrated into the overall site through horizontal mixes of uses, including public plazas, emphasizing pedestrian-oriented design. The predominant use is intended to be office, professional, or retail use in any combination, and may be supported by residential uses.

Village Centers are generally located along transit corridors with access from at least one major roadway. Secondary access may be allowed from minor or local roadways

...

Transect-Based Land Use Designations

<u>General Neighborhood Residential (T3-R) Development Characteristics</u>	
Residential Density:	Minimum: 10.0 du/ac Maximum: 20.0 du/ac
Building Intensity:	Maximum FAR of <u>1.0</u>

General Neighborhood Residential (T3-R)

General Neighborhood uses are generally characterized by small-lot single-family residential development (attached or detached), duplexes, townhomes, and small apartment buildings, but may also include small live-work spaces, home-offices or workspaces, and bed and breakfast inns. Limited amounts of local serving retail and small office structures, particularly at intersections are also permitted. Buildings are typically not taller than 3 stories and are surface parked (on the side or rear of the lot), though additional height may be allowed through zoning provisions.

Neighborhood Center Low (T3) Development Characteristics	
Residential Density:	Minimum: 14.0 du/ac Maximum: 30.0 du/ac
Building Intensity:	Maximum FAR of 2.0

Neighborhood Center Low (T3)
 Neighborhood Center Low includes similar uses and densities as T3-R, however, a mix of uses is permitted throughout, with no preference provided for residential uses. Buildings are typically not taller than 3 stories and are surface parked (on the side or rear of the lot), though additional height may be allowed through zoning provisions.

Neighborhood Center Medium (T4) Development Characteristics	
Residential Density:	Minimum: 20.0 du/ac Maximum: 40.0 du/ac
Building Intensity:	Maximum FAR of 5.0

Neighborhood Center Medium (T4)
 Neighborhood Center Medium uses are generally characterized by a diverse mix of uses residential and commercial uses at higher intensities than T3. Residential building types generally include townhomes and urban apartment buildings, as well as live-work spaces. Retail, hotel, and office uses are permitted. Buildings are typically not taller than 5 stories (though additional height may be allowed through zoning provisions) and may have a mix of garage and or surface parking in the rear of the lot or the middle of the block, screened from view.

Neighborhood Center High (T5) Development Characteristics	
Residential Density:	Minimum: 40.0 du/ac Maximum: 100.0 du/ac
Building Intensity:	Maximum FAR of 7.0

Neighborhood Center High (T5)
 Neighborhood Center High includes a diverse mix of uses at higher intensities than T4. Many individual buildings may have a mix of uses. Residential building types generally include apartment buildings as well as live-work spaces. Retail and Office uses as are hotels. Buildings are typically not taller than 7 stories (though additional height may be allowed through zoning provisions) and will have parking in garages that are screened from view or below ground.

...

LAND USE CONSISTENCY MATRIX

Table 3-1 illustrates the base zoning districts, which implement the land use designations shown on the Land Use Diagram (Figure 3-4) and described above.

**Table 3-1:
Consistency Matrix**

LAND USE DESIGNATION	CONSISTENT ZONING DISTRICT(S) ¹
COMMERCIAL AND EMPLOYMENT LAND USE DESIGNATIONS	
Community Commercial (CC)	LC, Limited Commercial GC, General Commercial
Regional Commercial (RC)	AC, Auto Commercial SC, Shopping Center
Employment Center (EC)	BP, Business and Professional Office MP, Industrial-Office Park
Light Industrial/Flex (LI/FX)	LI/FX, Light Industrial/Flex
Light Industrial (LI)	MP, Industrial-Office Park LI, Light Industrial
Heavy Industrial (HI)	HI, Heavy Industrial
MIXED USE LAND USE DESIGNATIONS	
Mixed Use Village Center (VCMU)	VCMU, Village Center Mixed Use
Residential Mixed Use (RMU)	RMU, Residential Mixed Use

TRANSECT-BASED LAND USE DESIGNATIONS	
General Neighborhood Residential (T3-R)	T3-R: General Neighborhood Residential
Neighborhood Center Low (T3)	T3: Neighborhood Center Low
Neighborhood Center Medium (T4)	T4: Neighborhood Center Medium
Neighborhood Center High (T5)	T5: Neighborhood Center High
PUBLIC/QUASI-PUBLIC AND OPEN SPACE LAND USE DESIGNATION	
Parks and Open Space (P/OS)	O, Open Space Land Use PR, Park and Recreation C-O, Commercial Recreation
Resource Management and Conservation (RMC)	O, Open Space Land Use
Public Services (PS)	PS, Public Services Any zoning
RESIDENTIAL LAND USE DESIGNATIONS	
Rural Residential (RR) ²	AR-10, Agricultural Residential AR-5, Agricultural Residential AR-2, Agricultural Residential
Estate Residential (ER)	AR-1, Agricultural Residential RD-1, Very Low Density Residential RD-2, Very Low Density Residential RD-3, Very Low Density Residential RD-4, Low Density Residential
Low Density Residential (LDR)	RD-4, Low Density Residential ³ RD-5, Low Density Residential RD-6, Low Density Residential RD-7, Low Density Residential
Medium Density Residential (MDR)	RD-8, Medium Density Residential RD-10, Medium Density Residential RD-12, Medium Density Residential RD-15, Medium Density Residential RM-1, Mobile Home
High Density Residential (HDR)	RD-18, Medium-High Density Residential RD-20, High Density Residential RD-25, High Density Residential RD-30, High Density Residential RD-40, High Density Residential
OTHER LAND USE DESIGNATIONS	
Agriculture (AG)	AR-10, Agricultural Residential AG-20, Agriculture AG-80, Agriculture
Study Areas (SA)	AR-5, Agricultural Residential AR-10, Agricultural Residential AG-20, Agriculture AG-80, Agriculture
Tribal Trust Lands (TTL)	Exempt from local regulations

Notes:

1. Special Purpose Zoning Districts including SP (Specific Plan) and SPA (Special Planning Area), may be considered consistent with any of the land use designations.
2. Lots smaller than 2 gross acres and/or zoned AR-1 within the Rural Area Community Plan that existed as legal lots as of November 19, 2003 are considered consistent with the Rural Residential General Plan designation.
3. Subdivisions approved prior to August 2006 and zoned RD-4 that do not meet the minimum density requirements of the Low Density Residential designation may still be consistent with the designation, provided the lot sizes within the subdivision comply with the lot size range provided herein.

LAND USE DIAGRAM

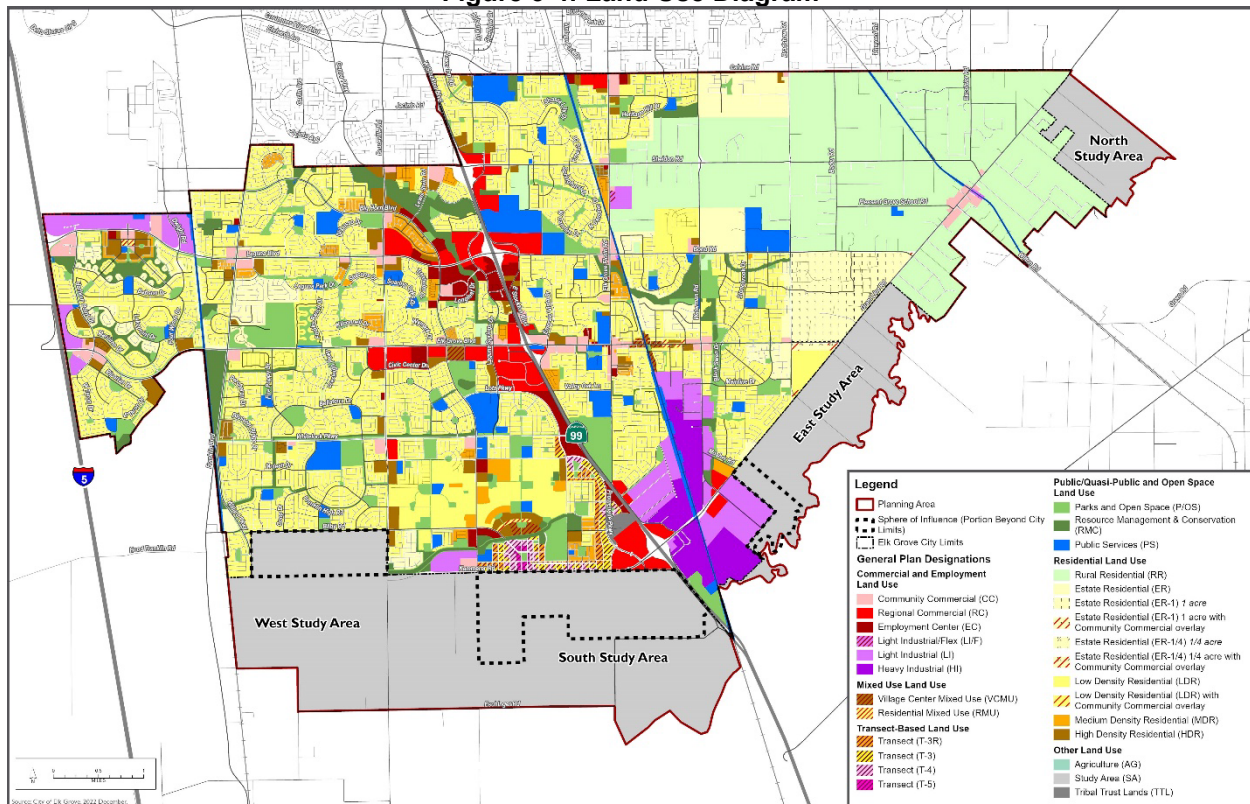
The Land Use Diagram (**Figure 3-4**) illustrates the future development pattern in Elk Grove by applying the 19 Land Use Designations described above to the Planning Area in the context of the street network, the existing City limits, and the Study Areas.

DEVELOPMENT CAPACITY

Table 3-2 identifies the development capacity associated with the planned distribution of land uses described in the Land Use Plan. As the density and intensity standards for each land use designation are implemented by future development projects and land use decisions, the activities occurring on properties will (consistent with the General Plan) transition from one activity to another, and land uses and intensities will shift to align with the intent of this Plan.

The General Plan does not directly specify a maximum population for Elk Grove. The maximum possible number of residential units is determined by the different maximum densities allowed for each land use designation and the amount of land area within that designation. However, this maximum number of units is unlikely to be reached because every lot in Elk Grove would need to be developed to its maximum potential. Because much of the Planning Area is built out and existing buildings are generally in good condition, these changes will primarily occur on underutilized or vacant properties in the City and the Study Areas. Forecasting assumptions using reasonable inferences to determine the realistic expected development that could occur in Elk Grove after development or redevelopment of all properties that are expected to be developed, or redeveloped, are reflected in the development capacity

Figure 3-4: Land Use Diagram



LAND USE POLICY AREAS

The City has also established a number of Land Use Policy Areas to reflect existing and pending major development project approvals or to reflect the need for more detailed land use planning at a future date.

These Policy Areas, illustrated in **Figure 3-5**, typically specify the types of land uses to be permitted as well as desired circulation and infrastructure improvements. The City currently contains six Policy Areas. The objectives as well as goals and policies for specific Land Use Policy Areas are located in Chapter 4: *Urban and Rural Development*.

COMMUNITY AND SPECIFIC PLANS

The City uses a variety of tools to implement the General Plan. Two particular tools are community plans and specific plans. Community plans and specific plans are designed to implement the goals and policies of the General Plan for a defined geographic area of the City by providing greater specificity, covering some or all of the following topics: land use and infrastructure needs, economic development approach, design and development standards, and development phasing and implementation. Community plans differ from specific plans in that they are part of the General Plan (see Chapter 9: Community and Area Plans) and contain policy direction for a defined area, while specific plans are separately adopted documents (not a component of the General Plan) that implement General Plan policies.

**Table 3-2:
 General Plan Development Capacity**

	Acres	Dwelling Units	Population ¹	Employment (Jobs)	Jobs/Housing Ratio
Existing Development Total ²	31,449	53,829	171,059	45,463	0.84
General Plan Total	34,956	<u>102,865</u> <u>104,716</u>	<u>332,254</u> <u>338,233</u>	<u>127,463</u> <u>123,923</u>	<u>1.24</u> <u>1.18</u>
City Limits	29,946	<u>72,262</u> <u>76,906</u>	<u>233,406</u> <u>248,406</u>	<u>81,784</u> <u>72,788</u>	
Study Areas Subtotal	8,008	<u>30,603</u> <u>27,810</u>	<u>98,848</u> <u>89,826</u>	<u>45,679</u> <u>51,135</u>	
North Study Area	646	323	1,043	0	
East Study Area	1,772	4,806	15,523	9,183	
South Study Area	3,675	<u>16,259</u> <u>12,320</u>	<u>52,488</u> <u>39,764</u>	<u>30,367</u> <u>36,332</u>	
West Study Area	1,915	<u>9,224</u> <u>10,361</u>	<u>29,794</u> <u>33,466</u>	<u>6,129</u> <u>5,620</u>	

Table Notes: Number may not sum due to rounding

1. Based on 3.23 persons per household, average.

2. Existing development represents 2017 population and dwelling unit information and derived from 2013 jobs data (the most current year available at the time of writing the General Plan).

In conjunction with the General Plan, the City maintains community plans that correspond to certain Land Use Policy Areas. A community plan addresses a particular sub-area or community within the overall planning area and refines the policies of the General Plan as they apply to these smaller geographic areas. A community plan must contain specific development policies adopted for the identified area and measures to implement those policies, so that the policies which apply to each parcel of land can be determined. Community plans are adopted as part of the General Plan and are implemented by local ordinances such as the City's zoning and subdivision regulations.

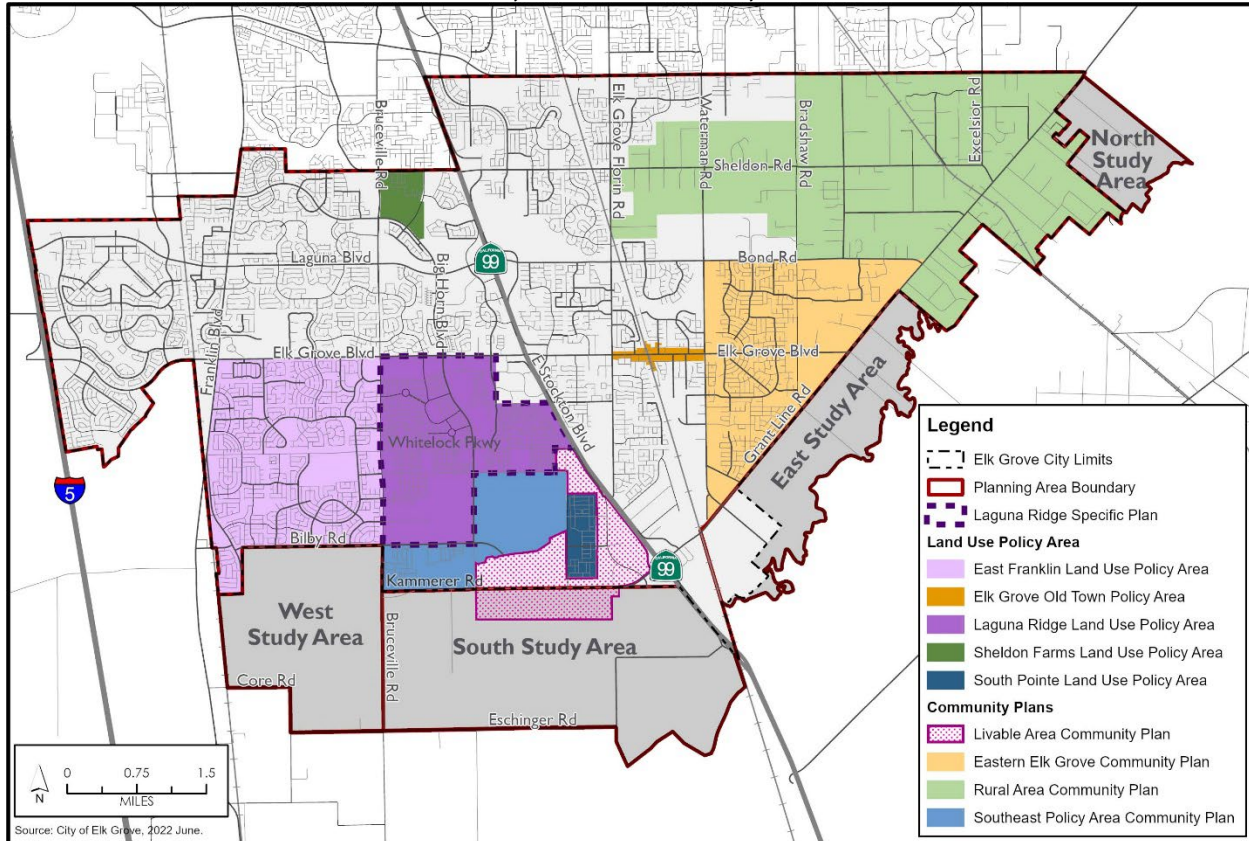
The Southeast Policy Area Community Plan, the Livable Employment Area Community Plan, Sheldon/Rural Area Community Plan, and Eastern Elk Grove Community Plan are components of the General Plan, presented in Chapter 9: Community and Area Plans. Community plans for other Land Use Policy Areas will be created and maintained as resources allow.

The City of Elk Grove has one adopted specific plan, the Laguna Ridge Specific Plan. The primary focus of this plan has been to highlight community characteristics unique to Laguna Ridge and to customize the

planning process and land use regulations and requirements that apply to this area of the City. The Laguna Ridge Specific Plan relies on existing development standards in the Zoning Code.

Locations of each of these plans and policy areas in Elk Grove are illustrated in **Figure 3-5**.

FIGURE 3-5: COMMUNITY PLANS, SPECIFIC PLANS, AND LAND USE POLICY AREAS



STUDY AREAS

As discussed above, the General Plan addresses four areas located beyond the City known as Study Areas. These areas have been identified for potential expansion of the City limits. The City has developed specific objectives and development requirements to achieve those objectives for each area, which are contained in Chapter 4: Urban and Rural Development.

STATE MANDATES

Affordable Housing

The Land Use Plan and the Housing Element of the City’s General Plan are closely linked. The Land Use Plan is required under State law to show the location and distribution of sufficient land, with appropriate use designations, to provide for construction of the number of housing units that the City must accommodate according to the Regional Housing Needs Allocation (RHNA). The housing inventory sites that can accommodate future housing growth in Elk Grove are shown in Chapter 4: *Urban and Rural Development* (see Figure 4-9) and have been incorporated into the land use designations appropriate to accommodate the densities necessary to facilitate the construction of affordable housing.

Military Facilities

The State of California (Government Code Section 65302(2)) requires that each local jurisdiction’s general plan consider the potential impact of new growth on military readiness activities carried out on military facilities located in the vicinity of that jurisdiction.

While there are no military bases, installations, or operating facilities located within the Planning Area or within a reasonable distance of the City, there is a military recruitment center located at 9163 E. Stockton Boulevard. This center serves as a physical training facility for enlisted personnel living in the area. No impacts to military operations have been identified as a result of continued development of the City. The recruitment center is located within a retail shopping center and the surrounding area is substantially developed. This General Plan does not propose any major land use or circulation changes in the area that would impact these operations.

Additional military operations that may occur within the Planning Area are generally limited to general equipment and personnel movement and overflight of aircraft to or from Travis Air Force Base, Beale Air Force Base, or Mather Field. Additional Coast Guard air operations occur at McClellan Field.

Disadvantaged Communities

A city is required in its general plan to identify and describe any disadvantaged unincorporated communities that exist within a city's sphere of influence (SOI).¹ If any such communities are identified, the City must analyze the water, wastewater, stormwater drainage, and structural fire protection needs for each of these communities and identify financial funding alternatives for the extension of services to any identified communities. No such communities are located within the Planning Area.²

THE TRANSPORTATION PLAN

The Transportation Plan addresses the many ways in which people and goods move from place to place in Elk Grove and the surrounding region. It identifies and describes the overall transportation system and network, including roadways, freight and passenger rail lines, public transit (including light rail and buses), and infrastructure and facilities for bicycles and pedestrians.

The Transportation Plan, along with the accompanying Transportation Network Diagram, presents an integrated and balanced approach to meeting the current and future circulation needs of users of all modes of transportation, including drivers of private vehicles, public transit passengers, and those using active forms of transportation such as walking and biking. It lays out a series of transportation network designations—the roadway network, the transit network, and the active transportation network (bike, pedestrian, and equestrian facilities)—and is closely linked to the physical layout of land uses established in the Land Use Plan. Along with related policies in Chapter 6: Mobility, the Transportation Plan provides for a range of mobility options in Elk Grove and helps to meet other General Plan goals and objectives, such as improving air quality and reducing greenhouse gas emissions.

KEY CONSIDERATIONS

A number of key considerations form the basis for the Transportation Plan, including the following:

Activity Centers

Areas focused on intensive pedestrian activity, such as Old Town, the Civic Center (District56), and the future SEPA Village Center, the urban centers of the Livable Employment Area, and activity centers in the Study Areas require specific design treatment and planning considerations. A greater focus on pedestrian and bicycle infrastructure in these areas will allow for safe, comfortable, and convenient active transportation choices by designing roads, pathways, and facilities with these users in mind. Essential to walking and biking is a complete and connected system of sidewalks, crosswalks, off-street multiuse paths, painted bike lanes and signposted bike routes, along with amenities that enhance pedestrian comfort, convenience, and visibility and are incorporated into street and pathway design. The Transportation Plan prioritizes pedestrian, bicycle, or transit mobility within specific pedestrian-oriented areas and directs updates to street standards to implement enhanced infrastructure serving such modes of travel.

Fixed-Transit

~~Fixed transit includes public transportation services that run along an established route at high frequencies, with enhanced stops/stations, signal preemption, and, where possible, a dedicated right-of-way. It may include trains or bus rapid transit that function on an established and generally unchanging~~

~~schedule or timetable, or the extension of RT Light Rail from Sacramento into Elk Grove. Fixed transit routes typically consist of express fixed routes, such as commuter lines with fewer stops, or as feeder or circulator routes, which transport passengers from a neighborhood or employment area to stops along a connecting bus or rail line.~~

~~Transit services include a range of alternative vehicle-mobility, including bus and rail. Traditional public transit in Elk Grove are run by the City through its e-tran public service is operated by Sacramento Regional Transit and includes both local and commuter bus service and on-demand microtransit. The service runs through the City's commercial core and along major arterials, serving locations such as the Laguna Gateway Shopping Center, the Elk Grove Marketplace, and the Elk Grove Auto Mall, District56, as well as the transfer center at Cosumnes River College just outside of the City. Historically, the transit service's functionality and efficiency have been limited due to various fiscal constraints and overall system design. The dominant boarding and alighting location for local service is Cosumnes River College, indicating that more than half of all local trips are to places outside of Elk Grove. Differences between weekday and weekend service, low local route frequencies, and inadequate schedules and recovery times are also cited as major contributing factors to ridership. A Comprehensive Operational Analysis (COA) adopted by the City in April 2017 implements service changes that are designed to address several of these ridership attraction issues while further recognizing the present financial conditions that limit higher frequencies and enhanced service capabilities. The new system that began operations in October 2017 incorporates design features that better coordinate local and commuter routes and schedules in order to address efficiency issues and ridership attraction. Services will continue to be monitored and adjusted to improve the overall efficiency and attract greater ridership, and funding opportunities will be sought to implement future high frequency services that are sustainable. E-tran's The commuter service, to and from downtown Sacramento and Rancho Cordova, tends to be has historically been well utilized, but would benefit from reduced time on arterial streets, expansion of peak period times, and improvements to park-and-ride lots. Changing commute patterns because of increased telework are a potential constraint on the commuter service in the years ahead.~~

~~Fixed transit services, which do not currently exist in the City, are ones that run along an established route at high frequencies, with enhanced stops/stations, signal preemption, and, where possible, a dedicated right-of-way. It may include light rail or bus rapid transit. Fixed transit routes typically consist of express fixed routes, such as commuter lines with fewer stops, or as feeder or circulator routes, which transport passengers from a neighborhood or employment area to stops along a connecting bus or rail line.~~

~~Amtrak also provides fixed route heavy passenger inter-city rail service through the eastern part of Elk Grove. As of 2017 there was no with no train stops in the City. However, the Opportunities exist for additional fixed route passenger rail services through the San Joaquin Joint Powers Authority, operators of the Amtrak San Joaquin and Altamont Corridor Express (ACE) services, is planning an expansion from Stockton to Sacramento with a stop in Elk Grove. Services are anticipated post-2024 and would provide heavy and regional rail service in Elk Grove and other interregional services. However, the ultimate determination of service connections to Elk Grove would be based on funding availability and coordination with the passenger rail service providers, including the San Joaquin Joint Powers Authority.~~

The Transportation Plan has been designed to support ongoing local bus and commuter service, as well as the potential for future fixed transit service and heavy/regional rail. Roadway cross sections for certain arterials include lanes and rights-of-way reserved for fixed transit use. The Land Use Plan also anticipates future fixed rail transit service by promoting development of mixed-use, transit-supportive development projects in areas along planned fixed transit alignments that are designated Village Center Mixed Use, and Residential Mixed Use, and Transect.

Goods Movement

The movement of freight is a crucial aspect of the regional transportation and economy. Goods movement takes place in Elk Grove in several forms: large trucks traveling through on freeways connecting west to ports, or inland to deliver goods or access major commercial and industrial facilities in the city; and trains running along the two Union Pacific Railroad lines passing through the City. Freight movement supports a strong economy and delivers products needed by both residents and businesses. It also has environmental

and health impacts on nearby communities. Trucks can produce additional noise, wear and tear on roadways, and air pollution, and may carry loads that contain hazardous materials.

The City recognizes the essential role of goods movement as well as its potential impacts. The General Plan attempts to balance these with the need to increase economic growth and prosperity, reduce environmental impacts in communities most affected by goods movement, and provide safe, reliable, efficient, and well-maintained freight movement facilities.

Accessibility

Providing access for individuals is a key aspect of any transportation system. The system must provide both mobility, a path to get from one place to another, as well as infrastructure that allows individuals to reach their destinations safely and efficiently. Consequently, transportation planning must account for the connectivity of the grid; the ways in which the rights-of-way accommodate the needs of motorists, pedestrians, bicyclists, public transportation users, individuals with disabilities, and seniors; and getting users onto and off of the rights-of-way. Examples of infrastructure that can provide accessibility include ADA-compliant sidewalks and crossings, appropriate signaling that accommodates all users, wide and protected bike and pedestrian pathways, and bike and pedestrian amenities such as street trees, benches, and wayfinding signage. Chapter 6: *Mobility* includes goals and policies regarding accessibility for all users of Elk Grove's transportation system.

Efficiency and Mobility

California's Senate Bill 743 (2013) established that a project's effect on automobile delay does not constitute a significant environmental impact under the California Environmental Quality Act (CEQA). The State has been studying various alternative metrics to replace this analysis and has settled on the concept of VMT, which is a measurement tool used to identify environmental impacts (e.g., air quality, noise, greenhouse gas emissions) associated with automobile travel and to determine if mitigation measures are required under CEQA. While VMT does not reflect potential congestion or how mitigation measures for VMT would relieve congestion associated with development, it does produce a much stronger evaluation of the distance traveled and how many more cars will be on the road as a result of the development, and provides information to assess air emissions impacts that would directly result.

The City is not limited to using CEQA to evaluate the effects of land development projects on congestion and to identify remedies for congested conditions. Managing and remedying congestion using efficiency metrics remains a consideration for the City in the land development approval process.

As described in Chapter 6: *Mobility*, this General Plan identifies performance standards for the circulation system that evaluate both efficiency and mobility. The Transportation Plan accommodates both the range of travel modes and the roadway widths and functions needed to achieve the City's desired levels of performance for both efficiency and mobility, including a new VMT standard designed to comply with CEQA.

TRANSPORTATION NETWORK

The City is required by the Complete Streets Act to plan for a balanced, multimodal transportation network that meets the needs of all users, including motorists, pedestrians, bicyclists, public transportation users, individuals with disabilities, and seniors. The transportation system is a public facility in Elk Grove that provides access to and mobility within the community and contributes to the design and character of the area.

The Transportation Network Diagram presented in **Figure 3-6** represents the recommended circulation system for Elk Grove. The City has established roadway classifications, which are based on intended priorities and levels of use by all types of users. The classifications relate to nearby land uses and circulation within the Planning Area and throughout the larger region. Roadway classifications are discussed in Chapter 6: *Mobility*.

The Transportation Network Diagram also identifies active transportation components that provide for access and safety of pedestrians and bicyclists and for fixed transit. More detailed policies and plans for

active users are located in the Bicycle, Pedestrian, and Trails Master Plan. Future fixed transit sites are an ongoing point of discussion and planning for Elk Grove and the larger region.

The roadway classifications identified in **Figure 3-7** are based on intended priorities and levels of use by pedestrians, bicyclists, transit vehicles, delivery vehicles, and automobiles in relation to nearby land uses and circulation within the Planning Area and to the larger region. The roadway classifications, in combination with the classification descriptions, are tools the City uses to accomplish land use and transportation goals and policies as well as related policies throughout the General Plan. Specific roadway dimensions for each classification are provided in the City’s Roadway Improvement Standards.

FIGURE 3-6: TRANSPORTATION NETWORK DIAGRAM

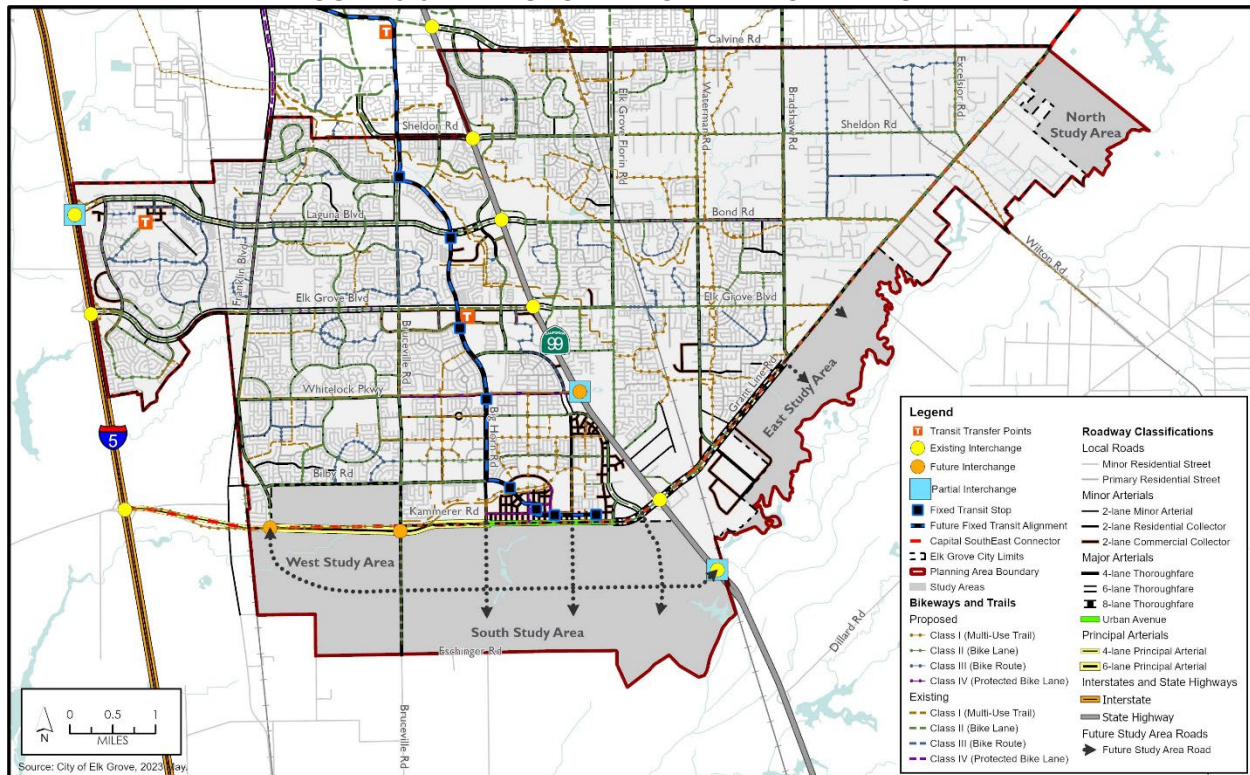
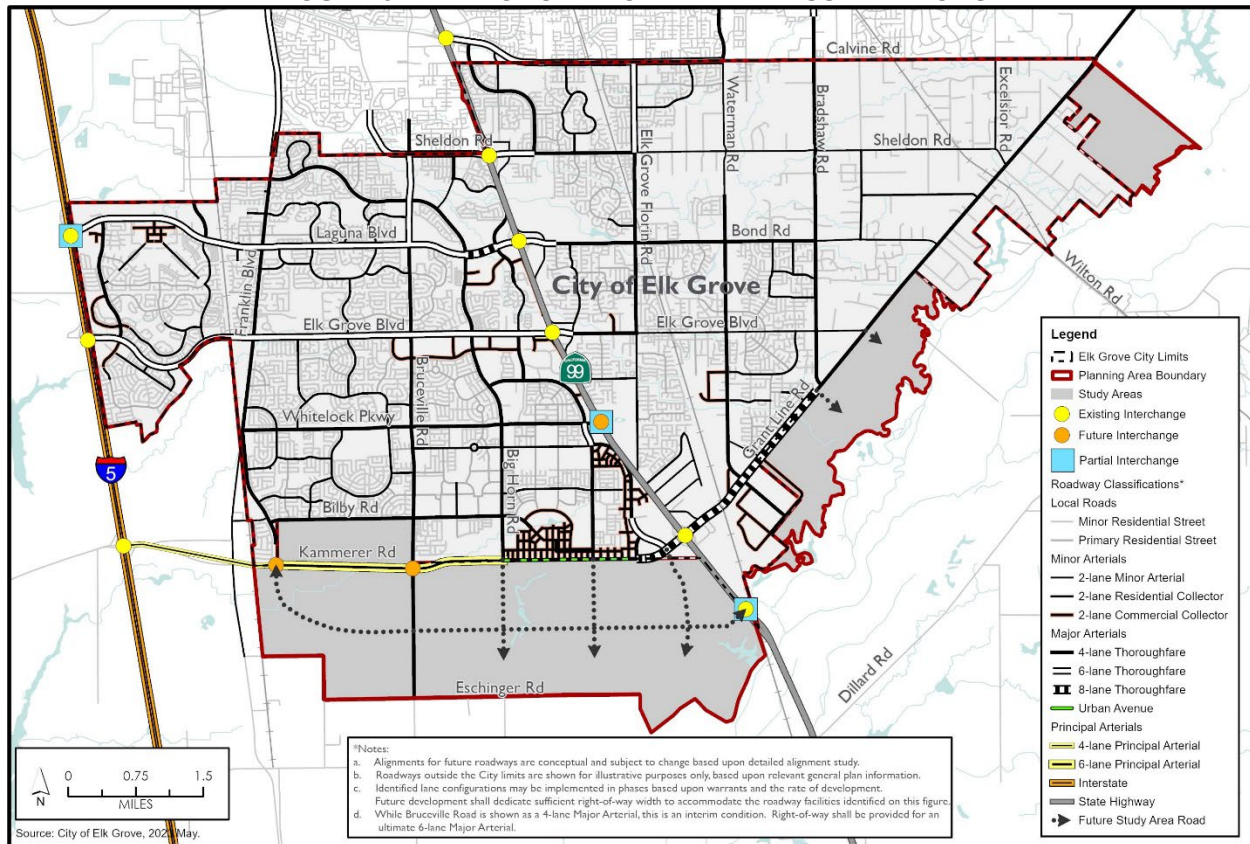


FIGURE 3-7: ELK GROVE ROADWAY CLASSIFICATIONS



Interstates and State Highways

State highways provide mostly uninterrupted travel by car, bus, or trucks, and are designed for high speeds over long distances. They have fully controlled access through on- and off-ramps, typically with separation between opposing traffic flows. Driveways and alternative modes of transportation such as walking or bicycling are forbidden, and intersections may only occur as freeway interchanges. There are two State highways that cross through the Planning Area: Interstate 5 and California 99.

Principal Arterials

Principal arterials provide limited access on high-speed roads with a limited number of driveways and intersections. Principal arterials also allow bicycles, and pedestrians may be permitted in limited locations. Principal arterials are generally designed for longer trips at the county or regional level.

Major Arterials

Major arterials provide controlled access for all transportation modes to enter and leave the urban area. In addition, significant intra-area travel, such as between residential areas and commercial or business areas, should be served by this system. Major arterials can include sidewalks for pedestrian connections, linking land uses to transit. They may have street parking or bike lanes. Major arterials range in size from 4 to 8 lanes and include the following sub-types.

- **Thoroughfare** – Throughfares are the primary form of major arterials and consist of a divided roadway with pedestrian sidewalks in landscape corridors and on-street bicycle facilities.
- **Urban Avenue** - Urban Avenues are often referred to as Multi-way Boulevards. They consist of four-vehicular lanes and a median divide. A slip lane frontage assembly in each direction provides an attractive street for commercial and residential activity. The low traffic speed/volume environment is safe for a bike lane which is buffered by a parking lane and tree lined sidewalks that create a safe ambience for pedestrians and cyclists alike. This type of frontage road provides high

value. It also has a 16' lane to turn into the frontage road- which gives access to local streets-reducing traffic on the Urban Avenue itself.

Minor Arterial/Collectors

Minor arterial/collectors are two-lane roadways providing access to all transportation modes, with a focus on local access. Pedestrian connections link land uses to local destinations and transit. The right-of-way associated with minor arterial/collectors may feature medians, parking lanes, and bike lanes. Arterial/collectors in the Rural Area are subject to the separate Rural Roads Improvement Standards, and may have separate pedestrian and multiuse pathways, but no sidewalks, and may have reduced speed requirements. This listing ~~also includes the following sub-types. Primary and Secondary Residential Streets.~~

- **Minor Arterial** – Minor Arterials are extensions of the Major Arterials but are 2 lane facilities. Examples include Elk Grove Boulevard through Old Town and many of the arterials in the Rural Area.
- **Commercial Collector** – Commercial Collectors are 2 lane facilities found in commercial areas.
- **Residential Collector** – Residential Collectors are found in residential neighborhoods and connect the neighborhood with Major Arterials.

Local Roads

Local roads provide direct access to most properties and provide access to the higher roadway classifications described above. They are generally designed to discourage through traffic. Local roads are typically two-lanes and are designed for low vehicle speeds. In the urban area of the City they include pedestrian sidewalks. In the Rural Area there are no sidewalks. This listing includes the following sub-types.

- **Primary Residential Street** – Primary Residential Streets have wider street widths and often include detached landscape corridors along the street shoulder. This street type allows for residents to take access from the street.
- **Minor Residential Street** – Minor Residential Streets are the predominant street within residential neighborhoods. They provide direct access to homes.

State Mandates

Complete Streets

The Complete Streets Act (California Government Code Sections 65040.2 and 65302) requires that the General Plan include a plan for a multimodal network that meets the needs of all users in a safe and convenient manner. The City must identify how the transportation network will accommodate the needs of all users of streets, roads, and highways for safe and convenient travel. Because no two communities or streetscapes are alike, complete streets must be tailored to the area in context.

As previously mentioned, there is a significant Rural Area in Elk Grove. While the design of complete streets in the Rural Area differs from that in urban or suburban settings, a number of tools are available to improve multimodal access in the area. The Transportation Plan recognizes the different role and context of rural roadways while also accommodating complete streets considerations. Some examples of techniques used to design complete streets in the Rural Area include roadway design options that incorporate wide shoulders, offering options for various modes without designating formal facilities for these purposes, and providing connections to regional trails near rural areas.

Correlation with the Land Use Plan

There is a strong connection and interdependence between land use patterns and transportation systems. Roads, transit infrastructure and routes, and other components of transportation systems are major factors in shaping land development. Conversely, each land use and its spatial layout has a major impact on people's transportation choices and patterns. A dispersed pattern of low-density development creates and reinforces a dependence on automobiles as the primary mode of transportation, while medium- or higher-density development characterized by a mix of residential and commercial land uses in close proximity tends to encourage other modes of travel, such as public transit, walking, and bicycling. For these reasons, it is important to coordinate land use planning and transportation planning. California Government Code

Section 65302 specifically calls for local governments to integrate planning for transportation/circulation and land use in their general plans.

The Transportation Plan is coordinated with the Land Use Plan, and Chapter 6: *Mobility* includes policies that recognize driving as a significant mode of transportation while also promoting other modes of travel such as transit, walking, and biking. As noted above, the General Plan's land use policies encourage transit supportive land uses in appropriate areas of the City. Together, the transportation policies and land use policies aim to maximize transportation choices for residents and workers in Elk Grove, as well as to preserve the character and identity of the community.

THE RESOURCE CONSERVATION PLAN

The Resource Conservation Plan identifies current and future natural, undeveloped areas of the City, as well as public open spaces (passive and active recreation areas). In addition to the urbanized areas described and addressed in the Land Use Plan and the Transportation Plan, Elk Grove encompasses a mix of agricultural land uses and natural community types. Agricultural land uses include cropland, irrigated pasture, vineyards, and orchards. Several natural communities are also present, such as annual grasslands, mixed riparian scrub, mixed riparian woodland, valley oak riparian woodland, and blue oak woodland. Aquatic resources such as open water, streams, seasonal wetlands, and freshwater marshes are located throughout the Planning Area. The General Plan addresses policies related directly to habitat conservation in Chapter 7: *Community and Resource Protection* and policies related to agricultural land in Chapter 4: Urban and Rural Development.

Parks, recreation, and open space are important components of the quality of life for residents of Elk Grove. Parks and recreation services in Elk Grove are provided by the Cosumnes Community Services District (CCSD). The City and CCSD work collaboratively to plan for, fund, design, and construct new park facilities. In addition, the City designs, funds, and operates the Civic Center and Old Town Plaza.

A vital component of the Community Vision is retention, conservation, and management of open space in the Planning Area. Although many areas within the current City limits and the Study Areas are envisioned to be developed with urban uses, the City recognizes that there are also many important agricultural and open space resources located throughout the Planning Area. The Resource Conservation Plan identifies specific natural open spaces, water resources, parks, trails, and agricultural lands that the City has prioritized to protect and conserve. The City is committed to preserving valuable natural resources, balancing conservation with development and growth demands on land in the area. The Resource Conservation Diagram identifies these key resources. The Resource Conservation Plan also ensures that the City's vision for open space, as well as other habitat and conservation needs in the Planning Area, is articulated to the County of Sacramento, the Sacramento Local Agency Formation Commission (LAFCo), and other agencies and stakeholders in the area outside the City limits.

KEY CONSIDERATIONS

Habitat Conservation

Although no natural open spaces are located within the City, its urban parks and waterways provide habitat. There are also several notable open spaces in adjacent jurisdictions, such as the Stone Lakes National Wildlife Refuge and the Cosumnes River Preserve. Access to nearby open spaces for recreation and enjoyment of nature is important to Elk Grove residents. Habitat conservation for ecological diversity is also a valuable resource and a priority of the region and the State. The City recognizes that future development in Elk Grove could have impacts on these resources, since an increase in the local population would result in higher and more intensive use of nearby existing habitats of importance. Several plant and animal species present in the Planning Area are listed as threatened or endangered at the State and/or national level, including Swainson's hawk and the valley elderberry longhorn beetle.

Habitat conservation and agricultural protection is also covered on the regional level in great detail by the adopted South Sacramento Habitat Conservation Plan (SSHCP), a regional approach to addressing issues related to urban development, habitat conservation, and agricultural protection in southern Sacramento County and within the jurisdictions of Sacramento County, the City of Galt, and the City of Rancho Cordova.

The SSHCP consolidates environmental efforts to protect and enhance wetlands (primarily vernal pools) and upland habitats to provide ecologically viable conservation areas. It also minimizes regulatory hurdles and streamline the permitting process for development projects. While the SSHCP does not apply to areas within the existing City limits, the North, East, and portions of the West Study Area may utilize it to streamline their permitting and mitigation. Nothing in the SSHCP compels projects to utilize the SSHCP as the mitigation program.

Agricultural Preservation

Active agricultural uses are present on lands located east and south of the City and include both row crops and agricultural processing activities. The City wishes to ensure that agricultural practices south of the Study Areas may continue without conflict with new residential and commercial development built as identified in the Land Use Plan. To limit potential conflicts, the City will require land use densities and designs that make use of ‘feathering’ and ‘buffering’ concepts. Feathering of densities ensures that lower-density uses, such as Estate Residential, are located closest to agricultural uses, and uses with increasing densities are located in closer proximity to the more built-up areas of the City. Chapter 4: Urban and Rural Development includes land use diagrams that apply feathering and buffering concepts in the South, West, and East Study Areas.

Floodplain Management

Flooding affects a large part of the Planning Area. The areas most susceptible to flooding are located in the eastern portion of Elk Grove. In the Sheldon area, local flooding is widespread but generally minor; the flat land causes floodwaters to spread out, reducing threats to life. Along the eastern and southern edges of the Planning Area, the Cosumnes River represents a major flood hazard. Flood risk in Elk Grove is assessed using the 100-year floodplain and the 200-year floodplain. These floodplain zones are defined by the Federal Emergency Management Agency (FEMA). A 100-year floodplain zone estimates inundation areas based on a flood that has a 1 percent chance of occurring in any given year. A 200-year floodplain zone estimates inundation areas based on a flood that has a one-half percent chance of occurring in any given year. California State law and subsequent regional plans require assessment and specific requirements for new development in the 200-floodplain for all jurisdictions in the Delta region.

The Resource Conservation Diagram (**Figure 3-8**) identifies areas located in the 100- year and 200-year floodplains. Additional flood risk information as well as related goals and policies are found in Chapter 7: Community and Resource Protection.

Other Natural Hazards

In accordance with State law, Elk Grove tracks and evaluates the risk to the community of other potential hazards, including earthquake fault zones and liquefaction, unstable soils, fire, watershed quality and replenishment, and dam inundation. Risks associated with these hazards and policies for mitigation are discussed in Chapter 8: Services, Health, and Safety.

RESOURCE DESIGNATIONS

The General Plan identifies the following categories of important open space and natural resources within the City. These categories address the four categories of open space required by the California Government Code. The following summarizes the key components of each category and how they are addressed in the General Plan. The location of these resources, as described below, are identified on Figure 3-8.

Recreation

This category identifies places that support recreation, including both public parks and public trails. Parks and recreation services in Elk Grove are provided by the CCSD, an independent special district agency that is not affiliated with the City. As of 2018, the CCSD owns and maintains over 90 parks, more than a dozen miles of off-street trails, several aquatic complexes, and numerous community and recreation centers.

Parks are categorized by scale and uses. Park categories include neighborhood, community, regional, sports complexes and golf facilities, special use (including indoor spaces and specialized sport spaces), greenbelts and trails, and open space and natural areas. Additional parks are planned within the Study Areas, as described in Chapter 4: Urban and Rural Development. The City and the CCSD have a joint goal of providing a minimum of 5 acres of park land per 1,000 residents. Currently (2017), there are

approximately 5.36 acres of parkland per 1,000 residents, providing a basis for the City/CCSD parkland standard.

The City has several existing and planned separated bike and pedestrian pathways that offer connections to other recreation resources in the City and to nearby major resources such as Stone Lakes National Wildlife Refuge, the Sacramento Regional County Sanitation District Bufferlands, and the Cosumnes River Ecological Reserve.

Historic, Cultural, and Scenic Resources

This category identifies places that support cultural preservation and enrichment. Agricultural landscapes and large or clustered adult trees are typical scenic resources found in Elk Grove. Notable historic, cultural, and scenic sites include listed historic buildings sprinkled across the City, the potential Winemaker Historic District, the Old Town neighborhood, and the Sheldon Rural area. These latter two areas are addressed in community plans that include specific goals and policies to protect and preserve the resources therein (see Chapter 9: *Community and Area Plans*.)

Natural Resource Preservation

This category includes areas that provide habitat for protected animal or plant species. Elk Grove has several conservation easements to protect habitat for threatened species, including Swainson's hawk. Waterways are often critical habitat areas, and several streams, creeks, and flood channels run through the City.

Natural Resource Management

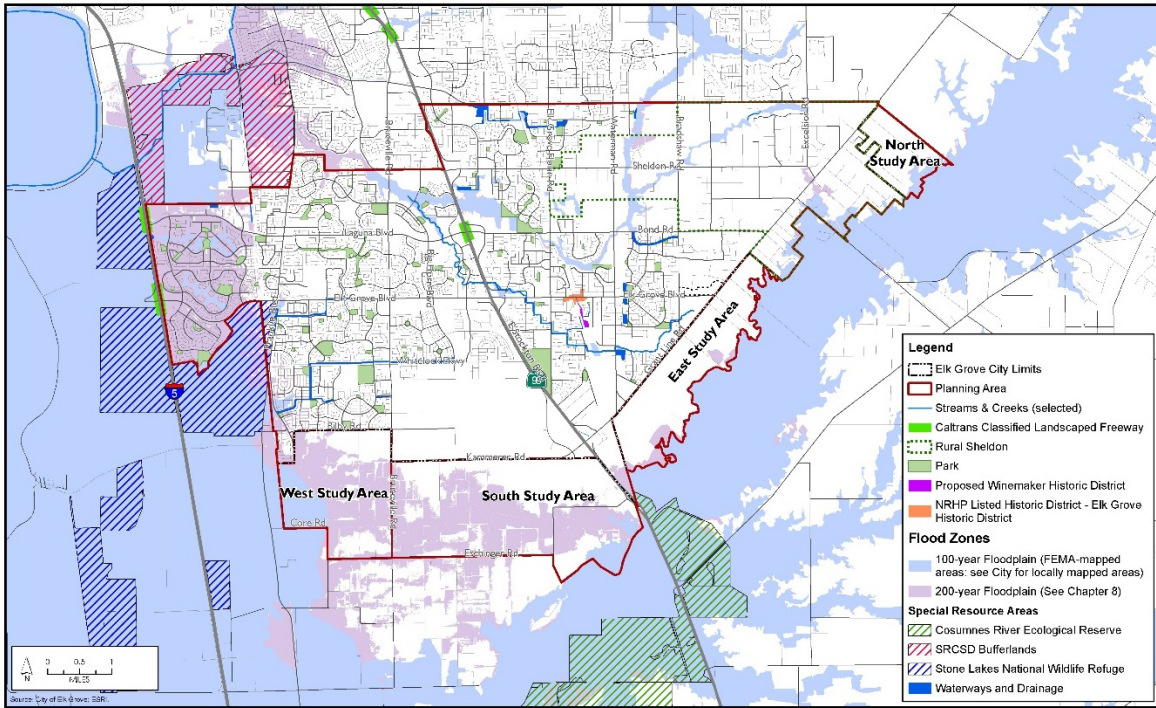
Additional natural resources of importance in the Planning Area include water recharge basins and flood channels located throughout the City, and agricultural lands that will remain in production until developed according to the Land Use Plan.

RESOURCE CONSERVATION DIAGRAM

Portions of the Planning Area that are designated for conservation are identified on the Resource Conservation Diagram (**Figure 3-8**). These areas have been identified in coordination with areas that are defined for existing and future urban development in the Land Use Plan.

Parks and recreational spaces are distributed in and among developed areas to provide green space and facilitate contact with nature in urban and suburban living environments, and to offer opportunities for recreation and active living in close proximity to residential areas. Environmentally sensitive areas (terrestrial and aquatic), lands with high value as natural habitat for plant and animal species, and lands that create safety buffers for hazards around urbanized areas (e.g., floodplains) are assigned resource designations so that they are protected from urban encroachment.

FIGURE 3-8: RESOURCE CONSERVATION DIAGRAM



Changes to Chapter 4 (Urban and Rural Development)

Chapter 4 (Urban and Rural Development) shall be amended as follows:

Chapter 4 Urban and Rural Development

OVERVIEW

The City of Elk Grove is often characterized by both urban and rural land uses. Both sides of SR 99 are surrounded by urban development, and the original location of Elk Grove (Old Town) is on the eastern side of SR 99 oriented around the Union Pacific railroad tracks (the Fresno Subdivision Line). In the future, urban and higher-density residential and commercial uses will continue to be concentrated in these areas as strategic infill. Elk Grove also includes areas that are, and are envisioned to remain, low-density suburban or rural in character, and future development in these locations will be limited. This chapter presents policies to strategically focus high-quality new growth in existing and expanding urban areas, while preserving and enhancing neighborhoods and existing character.

The chapter also establishes a pathway for strategic expansion, allowing growth beyond the current City limits in the Study Areas in a manner that aligns with broader economic and sustainability goals. These policies outline a path for the City to annex new areas that will result in a coordinated development pattern with enhanced connectivity, employment centers, and new housing options, while minimizing conflicts with surrounding land uses.

In coordinating future development of the City and the adjacent Study Areas, priority will be given to the goals of ensuring quality housing, enhancing connectivity across neighborhoods and to the wider region, and achieving economic prosperity and high-quality community design.

The Urban and Rural Development chapter contains goals and policies addressing three topics listed below, which are each assigned a one- or two-letter acronym. Within each topic, the following goals and policies further the Community Vision and Supporting Principles.

Land Use (LU)

- GOAL LU-1: A Coordinated Development Pattern
- GOAL LU-2: A Focus on Infill
- GOAL LU-3: Expansion with Purpose
- GOAL LU-4: Thriving Activity Centers
- GOAL LU-5: Consistent, High-Quality Urban Design
- GOAL LU-6: Context-Appropriate Development of Land Use Policy Areas
- GOAL LU-7: An Established, Protected, and Supported Rural Area

Housing (H)

- GOAL H-1: Adequate Sites to Accommodate the City's Housing Needs
- GOAL H-2: ~~Adequate Housing Stock to Meet the Needs of Lower Income Households and Special Needs Groups~~ Adequate housing stock to meet the needs of extremely low-, very low-, low-, and moderate-income households and special-needs groups
- GOAL H-3: Development Regulations that Remove Constraints to the Maintenance, Improvement, and Development of Housing
- GOAL H-4: ~~Conserved and Improved Affordable Housing Conditions~~ Maintenance and improvement of affordable housing conditions
- GOAL H-5: Housing Opportunities for All Persons, Regardless of Race, Religion, Sex, Marital Status, Ancestry, National Origin, Color, Familial Status, or Disability
- GOAL H-6: Preserved Assisted (Subsidized) Housing Developments for Lower-Income Households

Agriculture (AG)

- GOAL AG-1: Integrated and Sustained Agriculture
- GOAL AG-2: Urban Agriculture That Is Environmentally Sustainable and a Healthy Food Source

RELATIONSHIP TO OTHER CHAPTERS

The *Urban and Rural Development* chapter closely relates to the *Planning Framework*, *Community and Resource Protection*, and *Community and Area Plans* chapters.

- The *Planning Framework* chapter identifies desired future uses for all lands in the Planning Area and helps to shape future urban and rural development.
- The *Community and Resource Protection* chapter identifies community resources located throughout both urban and rural areas of Elk Grove—cultural, social, and natural—and identifies policies to protect those resources.
- The *Community and Area Plans* chapter outlines the community and area plans that will guide development in both infill areas and outward expansion areas in more detail.

SUPPORTING PRINCIPLES

The *Urban and Rural Development* chapter addresses the following three Supporting Principles:

Development Fills in the Gaps & Expansion Occurs with Purpose. This principle envisions that undeveloped and/or underutilized lands throughout the City will be developed as infill with quality establishments. It envisions that new infill developments will include community-serving businesses and a variety of housing types. This chapter establishes infill as the preferred form of development and identifies areas that are appropriate for infill projects. At the same time, the principle recognizes the opportunity for carefully planned and purposeful expansion through new development outside the existing City limits and annexation of those areas into the City's jurisdiction. This type of expansion and annexation can help Elk Grove achieve its goals related to providing new housing and jobs and promoting economic development.

City Core, Heritage & Well-Known Neighborhoods. This principle recognizes that the City has a thriving civic core and a well-preserved Old Town that provide gathering spaces for the entire community. It also calls for preservation of the quality of Elk Grove's neighborhoods. This chapter establishes the Civic Core, Old Town, and other strategic urban locations as activity centers and promotes a mix of uses, greater density, and transit access to these centers. New mixed-use land use designations and zoning districts will invite a wider variety of uses that serve neighborhoods and are safe and accessible for walking and bicycling. In addition, this chapter sets forth Land Use Policy Areas to provide more detailed direction for new development in established neighborhoods as well as community design standards for public spaces in these neighborhoods.

Protecting Our Farming Heritage & Rural Life. This principle celebrates the City's rural heritage and calls for preservation of the character of rural areas of Elk Grove. This chapter includes policies to protect and enhance existing rural neighborhoods and creates programs that support agricultural production and agritourism.

URBAN AND RURAL DEVELOPMENT: CONCEPTS AND POLICY FRAMEWORK

FOCUSED GROWTH

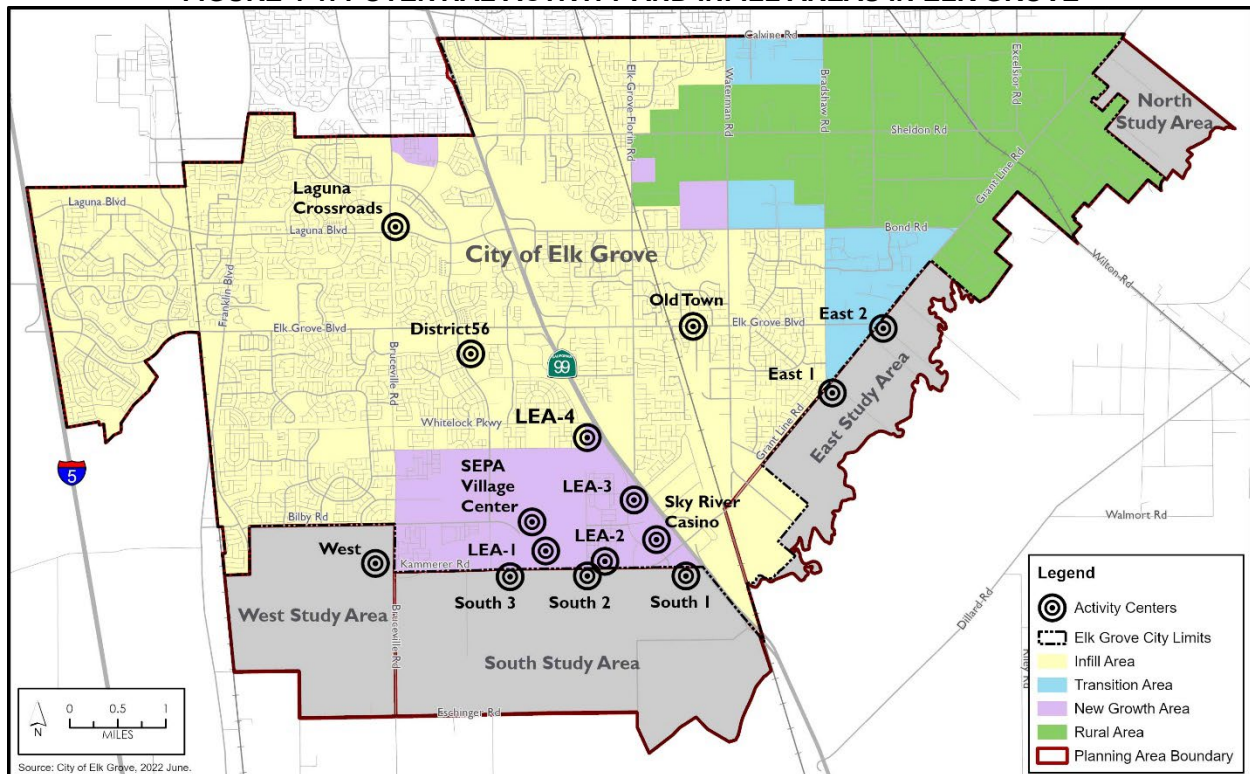
Elk Grove has historically functioned as a bedroom community, consisting primarily of low-density, single-family residential development and neighborhood-serving commercial uses. In recent decades, Elk Grove has expanded its focus, encompassing new growth in its more urban areas. During that time, the City has experienced growth that is both urban and suburban in nature, including a range of densities and styles of housing as well as commercial, office, and industrial uses. Most of the newer development has been concentrated west of SR 99. In the future, the City envisions continued development in specific growth areas to create several activity centers, with concentrations of commercial and civic uses and higher-density housing on or near the main corridors, that are comfortable to get to and around for pedestrians and

bicyclists. These activity centers will include the Civic Center, Old Town, the Village Center of the Southeast Policy Area (SEPA), the Livable Employment Area, Laguna Crossroads shopping center, Lent Ranch, and others that may emerge as the City evolves (e.g., in the Study Areas). These activity centers, sometimes called nodes, are intended to serve as central locations for community gathering and social activities, as well as access to services and entertainment, and to function as engines of economic growth and job creation.

In addition, properties that are vacant or underutilized and surrounded by existing development are considered potential infill sites. Infill is anticipated primarily in areas adjacent to or near major transportation corridors including SR 99, existing and future transit corridors, the Civic Center, and in undeveloped pockets of the City. Smaller infill development projects may also be appropriate throughout much of the City, with the exception of the Rural Area.

The locations of primary activity centers, as well as those areas of the City where infill development of vacant or underutilized properties is appropriate, are identified in Figure 4-1.

FIGURE 4-1: POTENTIAL ACTIVITY AND INFILL AREAS IN ELK GROVE



EXPANSION WITH PURPOSE

With limited opportunities to accommodate growth within the existing City limits, the City embraces greenfield development as a strategy to accommodate additional growth and development that benefits the community. Greenfield development can allow for new commercial and industrial growth that creates jobs and for new affordable housing to meet the region’s deficiency, while maintaining the density and character of development that has come to define the community. New growth is anticipated in certain areas both within and beyond the current City limits, as illustrated in **Figure 4-1**. Areas identified for new growth in the City are vacant or contain agricultural uses, and have been approved for new development. These areas include the Sterling Meadows project, the Lent Ranch area, and SEPA and the portion of the Livable Employment Area within the (2021) City limits. Additionally, the four Study Areas are identified as new growth areas that may accommodate future development beyond the current City limits. It is the City’s intent

that these Study Areas offer options for future development when there is a demonstrated community benefit or need.

The goals and policies presented in this chapter offer opportunities for new industries and job creation in the City and beyond into the Study Areas. The Study Areas are described through three Land Use Districts that guide future development—the Activity District, the Residential Neighborhood District, and the Open Space/Conservation District—each with specific development criteria regarding location, density, design, and use that connects back to the General Plan Land Use Categories.

NEIGHBORHOODS AND COMMUNITY CHARACTER

Elk Grove comprises several unique and defined neighborhoods with both urban and rural character. These neighborhoods feature parks, recreation centers, and high-quality schools that are valuable resources for the community. As the City matures and changes, established residential neighborhoods and amenities are intended to be preserved, with their land uses generally remaining consistent and their existing community character enhanced.

Notably, there is a large rural community in the eastern portion of the City, known as the Rural Area (see Figure 4-1). The Rural Area reflects Elk Grove's rural and agricultural heritage and culture and contributes to community values and diversity by offering residents a rural lifestyle characterized by ranch-style homes on large lots (2 acres or greater) with open space or farmland nearby. The Rural Area lacks the infrastructure typically found in an urban or suburban community, such as sidewalks, curbs and gutters, street lighting, or public water and sewer.

The areas identified in Figure 4-1 as Transition Areas are places characterized by a transition from the more urban areas to the Rural Area on the east side of the City. These areas may be designated as Estate Residential or Open Space to transition from the large lots in the Rural Area to the smaller Low-Density Residential lots. The primary purpose of Transition Areas is to buffer the Rural Area from higher-density development in the immediate vicinity.

LAND USE POLICY AREAS

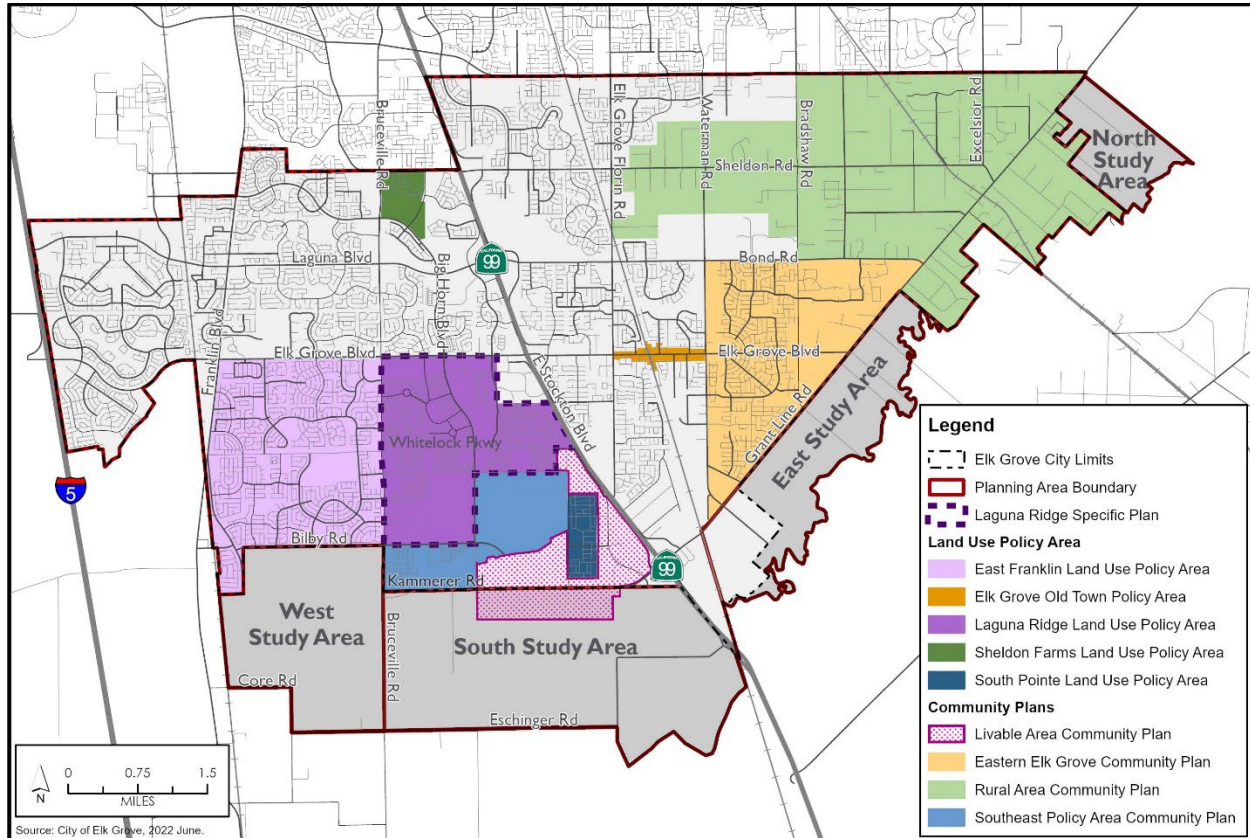
Further development guidance is provided for certain areas of the City through the establishment of Land Use Policy Areas. These Land Use Policy Areas are shown in Figure 4-2, and specific policies for each are contained in this chapter. The Land Use Policy Areas include:

- East Franklin Land Use Policy Area: This area encompasses 2,740 acres of land that includes parks, schools, shopping centers, and more than 10,000 homes. It is the successor to the East Franklin Specific Plan, which was adopted by Sacramento County in April 2000, just prior to City incorporation. The area has been developing since the early 2000s and is an established community with few remaining infill sites. Any new development should reflect the existing residential character and enhance its active transportation connectivity and neighborhood services and amenities.
- Laguna Ridge Land Use Policy Area: The Laguna Ridge area is addressed in detail in the Laguna Ridge Specific Plan. The General Plan designates land use categories for the Laguna Ridge area and requires that the Specific Plan be used to implement the General Plan policies for the area. The Laguna Ridge Specific Plan area is included in the General Plan as a Policy Area to ensure that the Specific Plan serves to implement the policy direction of the General Plan for Laguna Ridge.
- ~~Lent Ranch Land Use Policy Area: Located at the northwest corner of Kammerer Road and SR 99, the Lent Ranch Policy Area provides approximately 295 acres for regional retail, office, high density residential, and entertainment uses. Development of the site is regulated by the Lent Ranch Marketplace Special Planning Area (SPA).~~
- Old Town Land Use Policy Area: This area encompasses a federally recognized Historic District and is the historic “center” of town. Infill development in Old Town should enhance the historic character and preserve it for current and future residents. To the extent feasible, infill should rehabilitate existing structures with minimal disruption to the lifestyle of residents. The development

of an activity center with regional shopping and entertainment opportunities is part of the City’s vision for this area. Site development is regulated by the Old Town SPA.

- South Pointe Land Use Policy Area: The South Pointe area is an approximately 200180-acre site located between the SEPA Community Plan and the ~~Lent Ranch Policy Area~~ Livable Employment Area Community Plan, just north of Kammerer Road and east of (future) Lotz Parkway. Residential development was approved on the site as part of the Sterling Meadows Subdivision in 2008. ~~Bilby Road, which runs through a portion of the area, is planned as the corridor for a new transit service. Portions of the site are appropriate for high density commercial, and office uses, consistent with an Employment Center as defined in the *Economy and the Region* chapter (see Chapter 5), should existing approvals expire before construction.~~
- Sheldon Farms Land Use Policy Area: Sheldon Farms is an approximately 146-acre area made up of two sites, one of which ~~was~~, as of ~~2018~~2021, ~~vacant being developed and the other rural residential.~~ The sites are planned to contain a mixed-use village, a range of residential densities, and open space uses. Development of this area will support expanded and future transit services. Development should include street-level retail, access to transit, and should be designed to enhance walkability.

FIGURE 4-2: COMMUNITY PLAN AND LAND USE POLICY AREAS



COMMUNITY PLANS, SPECIFIC PLANS, AND SPECIAL PLANNING AREAS, AND COMMUNITY PLANS

The City has specific plans and SPAs, identified in the Zoning Code, that implement guidance for each Land Use Policy Area. A specific plan is a document designed to implement the goals and policies of the General Plan for a defined geographic area of the City by providing greater specificity for land use and infrastructure needs, design and development standards, and development phasing and implementation. The City of Elk Grove has one adopted specific plan, the Laguna Ridge Specific Plan. The primary focus of this plan has been to highlight the characteristics that are unique to Laguna Ridge and to customize the

~~planning process and land use regulations and requirements that apply to this area of the City. The Laguna Ridge Specific Plan relies on the existing development standards in the Zoning Code.~~

~~SPAs are a zoning tool used to regulate property in areas throughout the City that have unique environmental, historic, architectural, or other features which require special conditions not provided through the application of standard zoning regulations. They may be used to protect certain resources in the City from incompatible land uses and to preserve and enhance areas with unique social, architectural, or environmental characteristics that require special considerations and are not adequately addressed by zoning districts. SPAs may establish development standards for minimum lot area, building setbacks, lot width and depth, and building height that differ slightly from Citywide development standards. Development is encouraged to incorporate a variety of housing designs and densities for these areas, such as mixed-use commercial/residential and garden homes. However, all new development shall maintain minimum densities based on the General Plan designation(s) for the area. The SPAs may allow for a greater variety of design treatments and densities.~~

~~Some areas of the City require more detailed policy guidance, which is contained in a community or area plan, as detailed in the Community and Area Plans chapter (see Chapter 9). Community plans differ from specific plans in that the former are part of a city's general plan and contain development policies for a defined area, while the latter are separately adopted documents (not a component of the general plan) with a focus on the implementation of general plan policies. In Elk Grove, community plans include:~~

- ~~• SEPA Community Plan~~
- ~~• Elk Grove Rural Area Community Plan~~
- ~~• East Elk Grove Community Plan~~

Some areas of the City require more detailed policy guidance than the broader policies of the General Plan require. To address this, the City has a variety of tools from which to draw upon. The first is a community or area plan, which is part of this general plan and contains development policies exclusively for that defined area in Elk Grove. The City's community plans include:

- Livable Employment Area Community Plan
- Southeast Policy Area (SEPA) Community Plan
- Elk Grove Rural Area Community Plan
- East Elk Grove Community Plan

The next tool is a specific plan, which is a document designed to implement the goals and policies of the General Plan for a defined geographic area of the City by providing greater specificity for land use and infrastructure needs, design and development standards, and development phasing and implementation. Specific plans differ from community plans in terms of the level of detail and relationship to the General Plan. Where community plans are part of the General Plan (and, therefore, focus more on policy), a specific plan is an implementation tool of the General Plan and is subject to specific State and local content requirements, including a phasing and financing strategy. Specific Plans also incorporate details on infrastructure requirements and, as such, are a good one-stop-shop for summarizing how development will occur within a given area. The City prefers that a specific plan rely on the development standards provided in the Citywide Zoning Code, rather than including deviations or creating new zones. Elk Grove has two adopted specific plans, the Laguna Ridge Specific Plan and the Southeast Industrial Area Specific Plan.

SPAs are a zoning tool used to regulate property in areas throughout the City that have unique environmental, historic, architectural, or other features which require special regulations not provided through the application of standard zoning regulations. They may be used to protect certain resources in the City from incompatible land uses and to preserve and enhance areas with unique social, architectural, or environmental characteristics that require special considerations and are not adequately addressed by zoning districts. SPAs may establish development standards for minimum lot area, building setbacks, lot width and depth, and building height that differ slightly from Citywide development standards. Development is encouraged to incorporate a variety of housing designs and densities for these areas, such as mixed-use commercial/residential and garden homes. However, all new development shall maintain minimum

densities based on the General Plan designation(s) for the area. The SPAs may allow for a greater variety of design treatments and densities. A listing of the SPAs in the City may be found in the Zoning Code.

COMMUNITY DESIGN

Elk Grove desires high-quality public spaces. In addition to preserving the existing character of the community through Land Use Policy Areas and Community Plans, this chapter includes general policies to enhance public spaces, including both the public right-of-way and the built elements that define streets as public spaces. Attractive community design is promoted through streetscape design and integrated architectural style requirements, pedestrian amenities, and placemaking components such as public art and community gateways, the details of which are often determined through specific design guidelines and zoning requirements.

JOB CREATION

Because Elk Grove has historically functioned as a bedroom community, many residents work elsewhere, and the City has a lower number of jobs as compared to residents. Additional commercial, office, and retail uses would increase the jobs/ housing ratio by boosting the number of jobs available in the City. This in turn would reduce commute times for some residents who could choose to work locally.

The range and distribution of land uses influence a city's economic conditions, including the number and types of jobs and the potential for economic development. The City desires to foster economic opportunity through carefully planned and coordinated urban and rural development. Land use policies and regulations in urban areas to encourage activity nodes and employment centers can create employment opportunities in various sectors, including professional services, healthcare, and technology. Similarly, land use policies in rural areas can foster agricultural production and agritourism-related jobs. The Economy and the Region chapter (see Chapter 5) of this General Plan includes further direction, goals, and policies to enhance economic development in Elk Grove.

JOBS AND HOUSING NEEDS

An appropriate balance between jobs and housing can enhance the quality of life and improve environmental conditions. However, because the City is located at the edge of the Sacramento region, adding new jobs in Elk Grove without also adding new housing could be problematic as it could cause new commute patterns where employees who live elsewhere in the region are attracted towards Elk Grove for employment opportunities. Further, if the jobs added within the City are not matched to the skill set of employees who reside in the City, workers will continue to commute to jobs outside Elk Grove despite these job gains. Additional housing in Elk Grove will allow greater flexibility for workers who choose to live closer to their places of employment. Conditions that support a variety of housing types for all income levels will allow Elk Grove to continue to serve an important role as a residential community.

ACCESSIBLE SERVICES AND AMENITIES

There is an important link between the diversity of land uses, job creation, and the accessibility of goods, services, entertainment, and amenities. In the past, residents of Elk Grove may have had to travel to other areas of the county to meet their daily needs for shopping, services, and entertainment. The City's Land Use Plan and policies now promote the development of activity centers, a greater mix of land uses, and easy access by pedestrians and bicyclists to these centers. The intended results are to facilitate easier access for residents to quality amenities and services and to limit the number and length of car trips.

PRESERVING AGRICULTURE

The City is committed to retaining the community's farming heritage, and preserving the Rural Area is a fundamental part of the City's housing and economic development strategy. The City recognizes that preserving large lots and rural infrastructure is an important strategy to balance new infill development within the existing City limits. In addition to supporting residents' desire for a rural lifestyle, the City supports related economic activities such as farmers markets, harvest events, and farm-to-fork dining.

GOALS AND POLICIES: LAND USE GOAL

LU-1: A COORDINATED DEVELOPMENT PATTERN

The City recognizes the value of using its authority to regulate land use in Elk Grove, the location and configuration of new development, and the design of public and private buildings and facilities to create an attractive, vibrant community that fulfills the goals expressed in the General Plan. The Planning Framework chapter (see Chapter 3) includes the Land Use Diagram (see Figure 3-4), which illustrates the planned uses for lands in Elk Grove and the Study Areas outside the City limits. The following policies provide further direction for new development in the City. To reinforce Elk Grove's commitment to fostering more complete urban spaces and employment centers while preserving traditional neighborhoods and rural areas, the following policies promote the City's economic well-being by setting aside lands for uses that will generate employment. The policies also promote the creation of safe, livable, and complete neighborhoods where daily activities may be accomplished within a short walking distance.

Policies: Development Pattern

Also consult Chapter 7: Community and Resource Protection for Air Pollutant Emissions Requirements policies related to buffering for sensitive land uses and odor-producing uses; Chapter 8: Services, Health and Safety for policies related to siting and land uses in areas subject to hazards; *Chapter 9 Community and Area Plans* for policies related to sub-areas of the City; and *Chapter 5: Economy and the Region* for Local Employment Opportunities policies.

Policy LU-1-1: Reference the land use designation descriptions and Table 3-1 Consistency Matrix, as identified in the *Planning Framework* chapter (see Chapter 3), in the assignment of zoning categories and in the review of proposed projects.

Policy LU-1-2: Foster development patterns that will achieve a complete community in Elk Grove, particularly with respect to increasing jobs and economic development and increasing the City's jobs-to-employed resident ratio while recognizing the importance of housing and a resident workforce.

Policy LU-1-3: Multifamily housing development should be located according to the general criteria as identified in Policy H-1-3 (see page 4-45).

Policy LU-1-4: Land uses in the vicinity of areas designated as Heavy Industry should include transitions in intensity, buffers, or other methods to reduce potential impacts on residential uses. Buffers may include land designated for other uses, such as light industry, commercial, or open spaces.

Policy LU-1-5: To support intensification of identified growth areas, restrict new development on properties in rural and transitional areas.

Policy LU-1-6: Support the development of neighborhood-serving commercial uses adjacent to residential areas that provide quality, convenient, and community-serving retail choices in a manner that does not impact neighborhood character.

Policy LU-1-7: Encourage disclosure of potential land use compatibility issues including but not limited to noise, dust, and odors, in order to provide potential purchasers with complete information to make informed decisions about purchasing property.

Policies: Employment Land Uses

Policy LU-1-8: Seek to designate sufficient land in all employment-generating categories to provide opportunities for Elk Grove's working population and jobs in categories matching resident's employment level.

Policy LU-1-9: Encourage employee-intensive commercial and industrial uses to locate within walking distance of fixed transit stops. Encourage regional public transit providers to provide or increase coordinated services to areas with high concentrations of residents, workers, or visitors.

Policy LU-1-10: The City discourage changes in the land use map that reduce or eliminate properties designated for employment uses, while at the same time encourage the development of employment uses within mixed-use areas.

GOAL LU-2: A FOCUS ON INFILL

Properties that are vacant or in some way underutilized and surrounded by development on multiple sides are considered potential infill sites by the City, as generally illustrated in Figure 4-1. The City supports the development of these infill sites into economically viable projects that contribute to the community's overall fabric. These sites can contribute space for offices, manufacturing, or light industrial employment, satisfy the retail and service needs of the surrounding neighborhood, and/or provide for the housing needs of the community.

Policies: Infill Development

Policy LU-2-1: Promote a greater concentration of high-density residential, office commercial or mixed-use sites and the population along identified transit corridors and existing commercial corridors, in activity centers, and at other appropriate locations.

Policy LU-2-2: Support new development within the existing City limits by investing in public infrastructure.

Policy LU-2-3: Prioritize and incentivize development in infill areas identified in Figure 4-1.

Policy LU-2-4: Require new infill development projects to be compatible with the character of surrounding areas and neighborhoods, support increased transit use, promote pedestrian and bicycle mobility, and increase housing diversity.

GOAL LU-3: EXPANSION WITH PURPOSE

As described in the Planning Framework, four Study Areas have been identified for potential expansion of the City limits, as illustrated in Figure 4-3. It is the City's desire that these Study Areas provide an option for future development when there is a demonstrated community benefit or need. While the Study Areas include classified as Farmland of Statewide or Local Importance as of 2018, the City recognizes that there are limited opportunities for planned, orderly, and efficient future development other than in these areas. Development in the Study Areas may offer opportunities to achieve the City's Community Vision that may not otherwise be accomplished through development within the existing City limits.

The City will review all sphere of influence amendment applications, annexation applications, rezoning requests, specific plans or area plans, subdivision maps, and development agreements relative to both general siting criteria that apply to all Study Areas and the applicable Land Use Program for each Study Area. Proposed projects deemed to be consistent with the general siting criteria and applicable Land Use Program may be considered consistent with the General Plan and may not require a General Plan Amendment. Where the City identifies an inconsistency, a General Plan Amendment will be necessary prior to or in conjunction with approval of any subsequent development application(s).

Future development of the Study Areas will require the creation of new and expanded infrastructure. The City intends for new development to ensure availability of adequate infrastructure as part of all phases of development consistent with the General Plan, which may require both on-site and off-site improvements. Further, it is the City's expectation that the costs associated with development, maintenance, and operation of this infrastructure and related City services be sufficiently funded by the proposed development and not create a burden on existing residents and businesses.

Policies: Study Area Organizing Principles

Policy LU-3-1: Ensure that future development in the Study Areas is consistent with the City’s Vision and Supporting Principles by implementing the Study Area organizing principles provided herein.

Study Area Organizing Principles

The City envisions that future development within the Study Areas will occur within a broader organizing framework of land use principles (referred to as organizing principles). Development shall occur within one or more of the following three districts, which are described in more detail on the following pages.

1. Activity District, which focuses on higher densities and intensities of retail, services, employment, and residential uses.
2. Residential Neighborhood District, where residential development, with neighborhood-serving retail and parks and schools, occurs.
3. Open Space/Conservation District, which includes large urban parks, open spaces, and agriculture-related uses.

Figure 4-4, *Conceptual Illustration of General Siting Criteria*, illustrates how these districts and other community components (including parks and roadways) shall generally be organized. This graphic is included primarily for illustrative purposes and does not reflect any specific development proposal. As future land planning and development entitlements occur, these districts, as they are found in each Study Area, will be refined into the specific land use designations of this General Plan. Development in each district shall comply with the general standards below, as well as with specific Land Use Programs unique to each Study Area.

Policies: Activity District General Components

The Activity District includes higher densities and intensities of retail, services, employment, and residential uses. Activity Districts should be linked and supported by an interconnected network of streets and open spaces, with residential uses located within walking distance, facilitating options such as transit, biking, and walking for access to services and to the Residential Neighborhood District areas. **Figure 4-4** illustrates how various land uses and public spaces (e.g., streets) are intended to work together to implement this concept. This graphic is included primarily for illustrative purposes and does not reflect any specific development proposal. Each Activity District will have one or more activity nodes, which represent the center of commercial or employment uses, typically located at a major intersection or near a transit stop.

Policy LU-3-2: Employment land uses in Activity Districts should meet the following guidelines:

- Regional Commercial and Employment Center uses should be located along major arterial roadways and generally within one-quarter mile of major intersections and/or planned or existing transit stops.
- Community Commercial uses larger than 15 acres should be located along collector and arterial roadways, and adjacent to Mixed Use, Medium Density Residential, or High Density Residential uses.
- Regional Commercial and Community Commercial uses should be sited within walking distance (generally one-half mile) of planned or existing transit stops.
- Uses that may generate very high service populations (employees and/or customers) should be located within one-quarter mile of planned or existing transit stops.
- Heavy Industrial and Light Industrial uses should be buffered from Residential uses by Public Service, Open Space, or Commercial uses.

Policy LU-3-3: ~~Mixed-use Transect-based~~ land uses in Activity Districts ~~should shall implement meet~~ the following ~~guidelines:~~ the provisions of the *Livable Employment Area Community Plan* as provided in Chapter 9 and the provisions of the corresponding zoning designations.

- ~~• Publicly accessible community gathering spaces such as central plazas should be included.~~
- ~~• Vertical (multistory) mixed-use projects should include retail or service uses on the first floor fronting the street, where economically feasible.~~

- ~~• Mixed use projects should be located within one-quarter mile of major intersections and planned or existing transit stops.~~
- Parking should be located internally on the site, as opposed to fronting on public roads where feasible; structured parking is encouraged where feasible.

Policy LU-3-4: Residential land uses in Activity Districts should meet the following guidelines:

- High Density Residential uses shall be located within one-quarter mile of major intersections and planned or existing transit stops.
- Housing should be buffered via building designs or other features from uses that produce loud noises that frequently exceed 65 decibels.

Policy LU-3-5: Public and Quasi-Public land uses in Activity Districts should meet the following guidelines:

- Acreages for parks shall meet or exceed the minimums required by City and/or Cosumnes Community Services District standard(s).
- Acreages for Public Services land uses shall meet or exceed the minimums required by any applicable standards, including land to support future school sites.
- Proposed development projects should maximize efficiency of service delivery. New development should be located adjacent to existing development and should be connected or linked to uses with similar service and utility needs.
- Schools, community centers, and park and recreation sites shall be connected to nearby residential neighborhoods through separated pedestrian and bicycle pathways.
- Consistent with the Park Design Principles adopted by the Cosumnes Community Services District and the City, local and neighborhood parks shall be located within residential areas and not along arterial roads. Community parks may be located on arterials.

Policies: Residential Neighborhood District General Components

The Residential Neighborhood District includes a range of densities and housing types, as well as lower-density mixed-use and neighborhood-serving commercial, service, and retail uses. It also includes schools and parks. The district should be linked and supported by an interconnected network of streets and open spaces, facilitating options such as transit, biking, and walking for access to services within the district and to Activity Districts.

Policy LU-3-6: Employment and Mixed Use land uses in Residential Neighborhood Districts should meet the following guidelines:

- Serve the neighborhood by providing for services, goods, or entertainment desired by the district's residential population.
- Be located within one-half mile of major intersections and planned or existing transit stops.
- Fit with the surrounding neighborhood character.

Policy LU-3-7: Residential land uses in Residential Neighborhood Districts should meet the following guidelines:

- Rural Residential uses should be buffered from higher-intensity uses with Open Space, Community Commercial, or Estate or Low Density Residential uses.
- Low Density Residential uses should not be located adjacent to Heavy Industrial land uses.
- Medium and High-Density Residential uses should be located within one-half mile of planned or existing transit stops, planned or existing commercial uses, and planned or existing Parks or Open Space areas.
- Agriculture uses should be buffered from higher-intensity uses that may result in conflict, including residential uses in the Estate Residential land use designation and those uses of higher density. Buffering should occur within new development areas and shall include interim buffers for phased development such that the physical and economic integrity of agricultural lands is maintained.

Policy LU-3-8: Public and Quasi-Public land uses in Residential Neighborhood Districts should meet the following guidelines:

- Acreages for parks shall meet or exceed the minimums required by City and/or Cosumnes Community Services District standard(s).
- Acreages for Public Services land uses shall meet or exceed the minimums required by any applicable standards, including land to support future school sites.
- Proposed development projects should maximize efficiency of service delivery. New development should be located proximate to existing development and should be connected or linked to uses with similar service and utility needs.
- Schools, community centers, and park and recreation sites shall be connected to nearby residential neighborhoods through separated pedestrian and bicycle pathways.

Policies: Open Space/Conservation District General Components

The Open Space/Conservation District includes large urban parks, open spaces, agriculture-related uses, and natural resources such as rivers or streams and related floodplains. Only agriculture-related uses, public buildings, and public infrastructure, including parks and open space, should be located in this district. The district should be linked by a robust network of access trails and paths for biking and walking to Residential Neighborhood Districts and Activity Districts, unless such infrastructure would disrupt the rural character or resource conservation efforts.

- **Policy LU-3-9:** Public, Open Space, and Conservation land uses in Open Space/Conservation Districts should meet the following guidelines: Provide a buffer between residential, commercial, and industrial uses.
- In areas designed to promote open space or recreational uses over conservation uses, provide nonvehicular access points within one-half mile of all residential uses.
- Be publicly accessible and, where feasible, be integrated with surrounding land uses.
- Maximize connectivity for both humans and animal life by connecting to an integrated network of passive and active open space corridors and uses.
- Contain all areas located in the 100-year or 200-year floodplain, unless this would result in “islanding” of higher-density land uses. Areas located in the 100-year or 200-year floodplain shall be retained for agriculture if it is the existing use, continues to be economically viable, and would not result in islanding of higher-density land uses. Policy

LU-3-10: Public and Quasi-Public land uses in Open Space/ Conservation Districts should meet the following guidelines

- Acreages for parks shall meet or exceed the minimums required by City and/or Cosumnes Community Services District standard(s).
- Acreages for Public Services land uses shall meet or exceed the minimums required by any applicable standards, including land to support future school sites.
- Proposed development projects should maximize efficiency of service delivery. New development should be located adjacent to existing development and should be connected or linked to uses with similar service and utility needs.
- Schools, community centers, and park and recreation sites shall be connected to nearby residential neighborhoods through separated pedestrian and bicycle pathways, unless such infrastructure would disrupt rural character or resource conservation efforts.

Policies: Study Area Land Use Programs

Policy LU-3-11: Ensure that future development in the Study Areas is consistent with the City’s Vision and Supporting Principles by implementing the Study Area Land Use Programs, as follows:

Study Area Land Use Programs

The Land Use Programs guide the appropriate balance between land development and conservation in each Study Area, using the organizing principles as a basis. The Land Use Programs will be used to guide the approval and development of individual projects in a manner that promotes long-term achievement of

the Community Vision and Supporting Principles. The Land Use Program for each Study Area consists of the following:

1. General development objectives, describing the vision for the individual Study Area.
2. Conceptual land use character graphics that illustrate the appropriate siting of the various Land Use Districts.
3. Land Use Program standards, which describe the future land use designations that will implement the Land Use Districts and the desired land use range (based on the gross acreage of the individual Study Area).

Policies: North Study Area Development Pattern

The North Study Area and the location of Land Use Districts within it are shown in Figure 4-5. The planning objective for the North Study Area is to create a rural residential neighborhood consistent with, and as an extension of, the Elk Grove Rural Area Community Plan. Only Rural Residential development and agriculture-related uses will be allowed in the Study Area.

The Capital SouthEast Connector is located along the northwestern boundary of the North Study Area (Grant Line Road). See the Mobility chapter (Chapter 6) for policies related to the transportation network.

Policy LU-3-12: Ensure that land use plans submitted for properties in the North Study Area are consistent with the following Land Use Diagram (Figure 4-5) and program standards (Table 4-1).

No changes to Figure 4-5 or Table 4-1

Policies: East Study Area Development Pattern

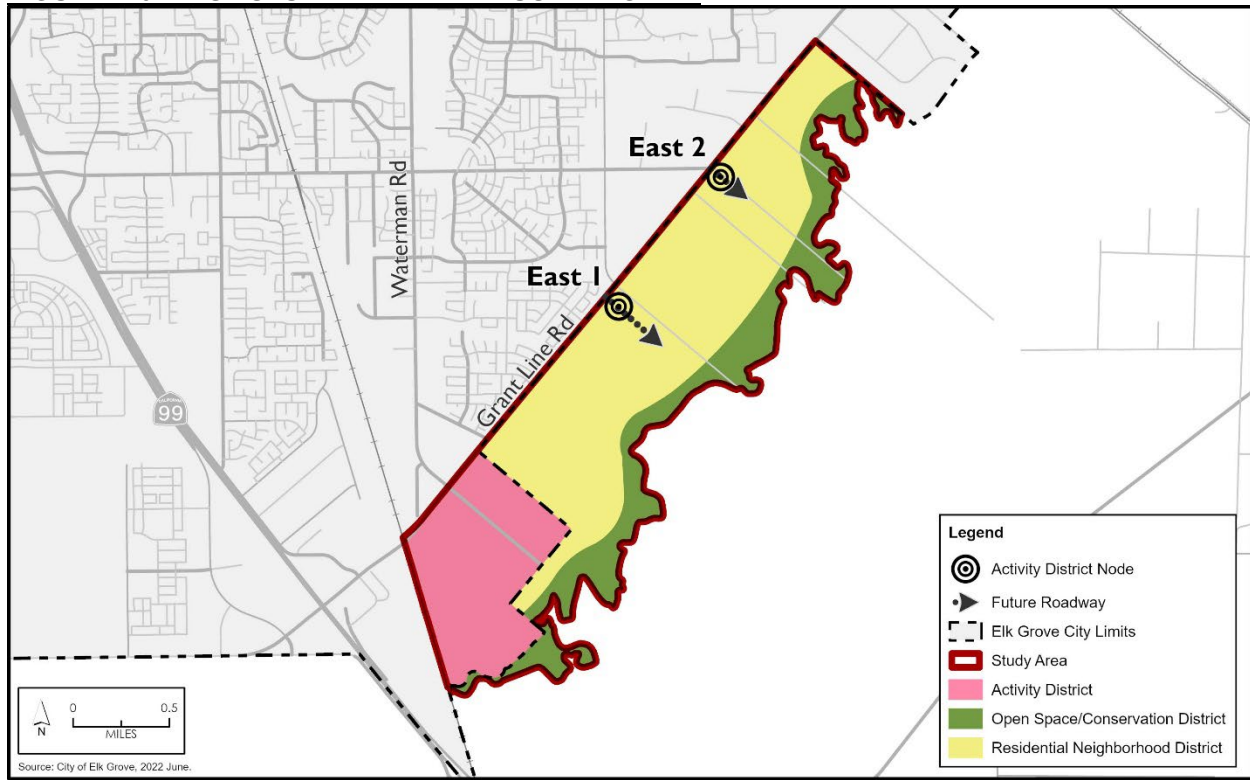
The East Study Area and the location of Land Use Districts within it are shown in Figure 4-6. The planning objective for the East Study Area is to create a mix of employment activities in the southwest area that transition to residential neighborhoods towards the northeast. Employment uses will function as an extension adjoining industrial development to the north/northwest. The employment uses envisioned for the East Study Area will focus on industrial, office, and regional retail uses and include a regional recreation and sports center.

In the central and northeastern portions of the East Study Area, uses will transition to residential neighborhoods that are compatible with existing neighborhoods to the north of Grant Line Road, as well as with the rural and agricultural areas located to the northeast and southeast. Opportunities for community-oriented commercial uses exist at major intersections along Grant Line Road at Bradshaw Road and Elk Grove Boulevard.

The Capital SouthEast Connector is located along the northwestern boundary of the East Study Area (Grant Line Road). See the Mobility chapter (Chapter 6) for policies related to the transportation network.

Policy LU-3-13: Ensure that the land use plans submitted for properties in the East Study Area are consistent with the following Land Use Diagram (Figure 4-6) and program standards (Table 4-2).

FIGURE 4-6: EAST STUDY AREA LAND USE DIAGRAM



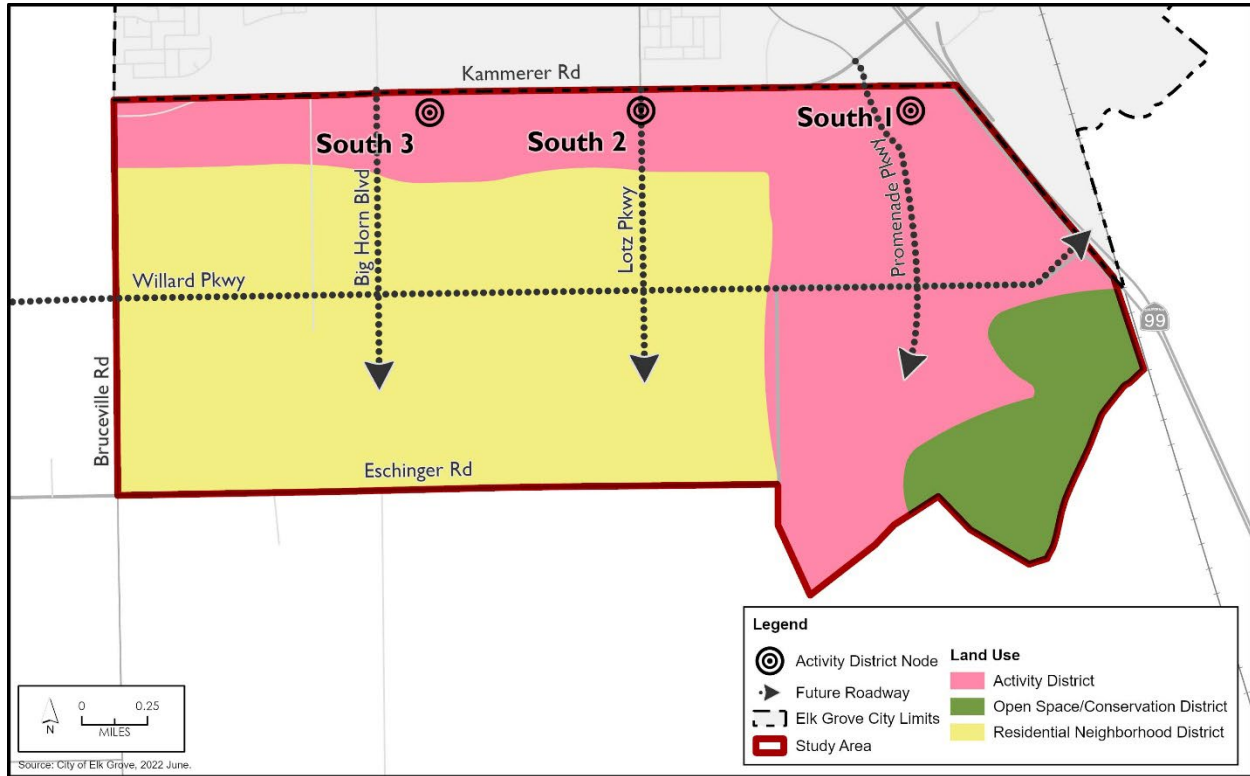
No changes to Table 4-2

Policies: South Study Area Development Pattern

The South Study Area and the location of Land Use Districts within it are shown in Figure 4-7. The planning objective for the South Study Area is to serve as a second phase of the Livable Employment Area ~~create a new major employment activity center that builds off of development to the north~~SEPA's business parks and meets SACOG's MTP/SCS standards for a Major Employment Center, comprising high-intensity office, industrial flex space, and light industrial uses. The balance of the activity center should include a range of ~~Village Center Mixed Use, Medium Density Residential, and High Density Residential neighborhoods with strong transit access~~ shall focus on industrial and other regional uses. Along with higher density uses, there ~~There~~ must also be easily accessible open space areas, parks, recreational sites, and public services available to residents and workers. The Open Space/Conservation District will maintain agricultural lands for the long term and serve as a buffer to the Cosumnes River. The Residential Neighborhood District will allow for a range of residential neighborhoods. Development proximate to the existing Eschinger Road will serve as a buffer to the agricultural land south of the Study Area. From a circulation perspective, parallel access to Kammerer Road will be via a new arterial located approximately halfway between Kammerer Road and Eschinger Road ~~(an extension of Willard Parkway from the west)~~. Eschinger Road will maintain its rural character and not serve as an arterial into the Study Area.

Policy LU-3-14: Ensure that land use plans submitted for properties in the South Study Area are consistent with the following Land Use Diagram (Figure 4-7) and program standards (Table 4-3).

FIGURE 4-7: SOUTH STUDY AREA LAND USE DIAGRAM



**Table 4-3:
 South Study Area Land Use District Program Standards**

Land Use District	Designations Allowed In District	Desired Land Use Range (Gross Acreage Basis) ^{1, 2}	
Activity District	Community Commercial (CC)	3%-8%	2%-5%
	Regional Commercial (RC)	3%-8%	2%-5%
	Employment Center (EC)	5%-10%	3%-5%
	Light Industrial/Flex (LI/FX)		
	Light Industrial (LI)	3%-8%	20%-25%
	Heavy Industrial (HI)		
	Residential Mixed Use (RMU)	1%-5%	
	Village Mixed Use (VCMU)	1%-5%	
	General Neighborhood Residential (T3-R)	3%-4%	
	Neighborhood Center Low (T3)	3%-4%	
	Neighborhood Center Medium (T4)	2%-3%	
	Neighborhood Center High (T5)		
High Density Residential (HDR)	1%-3% or as needed to meet RHNA		
Public Services (PS)	1%-3% or as needed to support land uses		
Residential Neighborhood District	Community Commercial (CC)	4%-5%	1%-2%
	Rural Residential (RR)		
	Estate Residential (ER)	45%-50%	30%-45%

	Low Density Residential (LDR)		1,650-1,840 <u>1,100-1,650</u> acres
	Medium Density Residential (MDR)	8% -13% or as needed to meet RHNA	295-480 acres
	High Density Residential (HDR)		
	Residential Mixed Use (RMU)		
	Medium Density Residential (MDR)	3%-5%	<u>110-185</u> acres
	High Density Residential (HDR)	5%-8% or as needed to meet RHNA	<u>185-295</u> acres
	Parks and Open Space (P/OS)	5%-10% or as needed to support land uses	185-370 acres
	Public Services (PS)	1% 3% <u>3%-8%</u> or as needed to support land uses	35-110 <u>110-295</u> acres
Open Space/Conservation District	Resource Management and Conservation (RMC)	3%-8% <u>5%-10%</u> or as needed to meet resource conservation standards and/or to provide floodplain buffer	110-295 <u>180-370</u> acres
	Public Services (PS)	1% 3% <u>0%-1%</u> or as needed to support land uses	35-110 <u>0-35</u> acres

Note:

1. Land use designations shall occur within the percentage range as listed. For those land uses with a percent range listed “or as needed,” if an amount more than the stated range is required in order to achieve the necessary amount of parks or other public services needed to serve the development, or increased higher density housing to comply with the City’s RHNA, the other land use percentages shall be adjusted, as determined by the City Council, in order to achieve the development pattern for this study area.

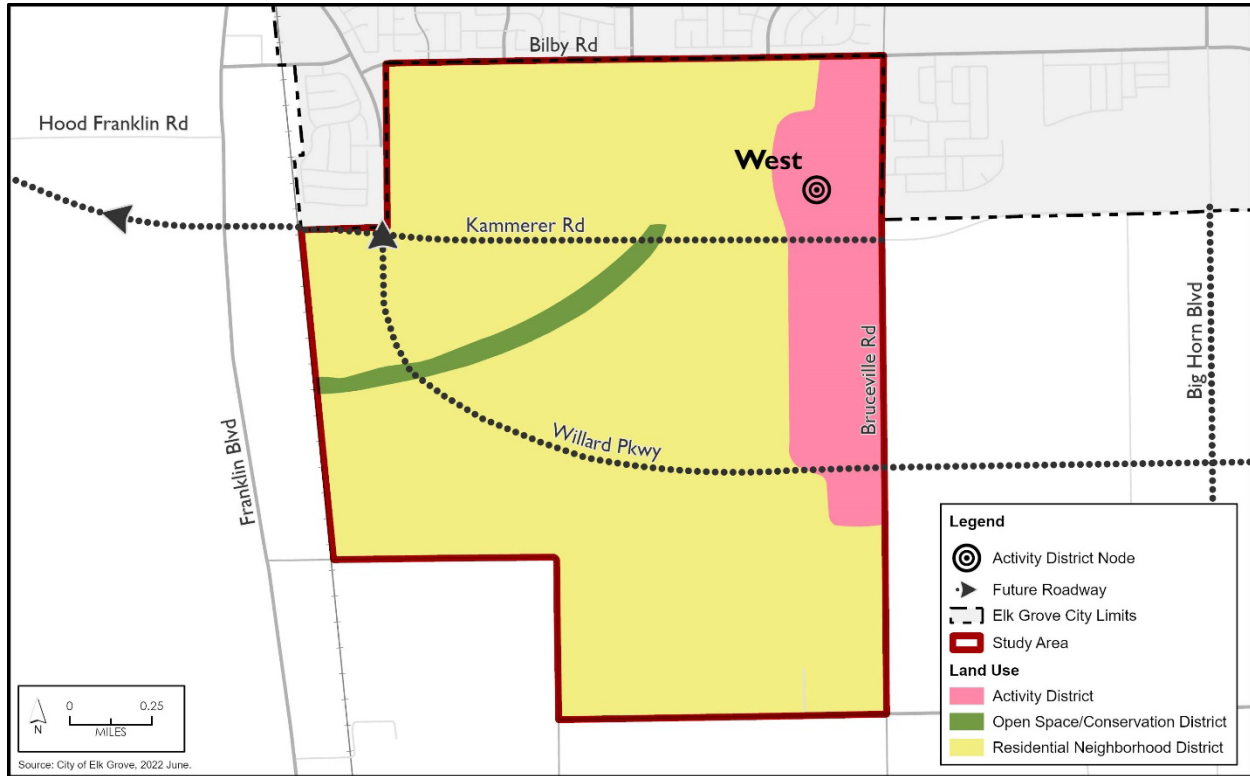
2. Acreage range provided is based upon the gross acreage of the study area and the percent range listed. Where a discrepancy occurs between the two, the percentage shall control.

Policies: West Study Area Development Pattern

The West Study Area and the location of Land Use Districts within it are shown in Figure 4-8. The planning objective for the West Study Area is to create a diverse, walkable residential neighborhoods featuring parks, public services, and lower-intensity employment opportunities. The Study Area will include a range of residential densities, including High Density Residential, Medium Density Residential, Low Density Residential, and Estate Residential housing. Development options rely on completing the extension of Kammerer Road to meet Interstate 5. Willard Parkway shall extend south into the Study Area before turning east into the South Study Area. Development proximate to the existing Eschinger Road and Core Road will serve as a buffer to the agricultural land south of the Study Area. Resource conservation land will also be located along waterways (e.g., Shed C channel) to protect water resources and guard against flood hazards.

Policy LU-3-15: Ensure that land use plans submitted for properties in the West Study Area are consistent with the following Land Use Diagram (Figure 4-8) and program standards (Table 4-4)

FIGURE 4-8: WEST STUDY AREA LAND USE DIAGRAM



**Table 4-4:
 West Study Area Land Use District Program Standards**

Land Use District	Designations Allowed In District	Desired Land Use Range (Gross Acreage Basis) ^{1, 2}	
Activity District	Community Commercial (CC)	1%-3%	20-60 acres
	Employment Center (EC)	3%-8% <u>3%-5%</u>	58-155 <u>60-100</u> acres
	High Density Residential (HDR)	1%-3% <u>5%-8%</u> or as needed to meet RHNA	20-60 <u>110-150</u> acres
	Public Services (PS)	1%-3% or as needed to support land uses	20-60 acres
Residential Neighborhood District	Community Commercial (CC)	1%-3%	20-60 acres
	Rural Residential (RR)		
	Estate Residential (ER)	50%-55% <u>50%-60%</u>	950-1,050 <u>950-1,150</u> acres
	Low Density Residential (LDR)		
	Medium Density Residential (MDR)	15%-20%	285-385 acres
	High Density Residential (HDR)		
	Medium Density Residential (MDR)	<u>8%-10%</u>	<u>150-190</u> acres
	High Density Residential (HDR)	3%-5% or as needed to meet RHNA	<u>60-100</u> acres
Park and Open Space (P/OS)	5%-10% <u>8%-15%</u> or as needed to support land uses	95-190 <u>150-290</u> acres	

	Public Services (PS)	1% 5% 5%-8% or as needed to support land uses	20-95 100-150 acres
Open Space/Conservation District	Resource Management and Conservation (RMC)	3% 8% or as needed to meet resource conservation standards and/or to provide floodplain buffer	60-115 acres
	Public Services (PS)	1% 3% or as needed to support land uses	20-60 acres
	Resource Management and Conservation (RMC)	2% 8% or as needed to support land uses	40-150 acres
	Public Services (PS)		

Note:

1. Land use designations shall occur within the percentage range as listed. For those land uses with a percent range listed “or as needed,” if an amount more than the stated range is required in order to achieve the necessary amount of parks or other public services needed to serve the development, or increased higher density housing to comply with the City’s RHNA, the other land use percentages shall be adjusted, as determined by the City Council, in order to achieve the development pattern for this study area.

2. Acreage range provided is based upon the gross acreage of the study area and the percent range listed. Where a discrepancy occurs between the two, the percentage shall control.

Policies: City Expansion Policy

LU-3-16: Support applications (both public and private projects which are in conformance with the General Plan) to the Sacramento LAFCo to expand the City’s Sphere of Influence and corporate boundaries that implement this General Plan. Expansion of the City limits shall occur only within the identified Study Areas, as shown in Figure 4-3, when in conformance with the policies contained herein.

Policy LU-3-17: Seek to have the area outside of the City’s Sphere of Influence but within the Planning Area designated as an Area of Concern, consistent with Sacramento LAFCo policy.

Policy LU-3-18: Work with Sacramento County to establish agreement(s) regarding Sphere of Influence amendments, a master tax sharing agreement applicable to future annexations, and potentially a master agreement relative to the fair share of regional housing needs.

Policy LU-3-19: Work with the Cosumnes Community Services District (and other affected agencies and independent districts, as necessary) to promote expansion of its Sphere of Influence and territory by LAFCo so that its services may continue to be provided to the residents of Elk Grove as annexations occur.

Policy LU-3-20: Prezone all properties subject to an annexation application prior to the initiation of an annexation application with LAFCo. The pre zoning shall be consistent with the General Plan.

Policy LU-3-21: Accept annexation proposals when located within the City’s Sphere of Influence and contiguous with the existing City limits at the time of application, providing a contiguous development pattern.

Policy LU-3-22: Identify a mitigation program for critical habitat for special status species known to occur within the Study Areas. A proposed project determined to have a significant impact to habitat for special status species shall implement all feasible mitigation measures established in the program, including but not limited to land dedication (which may be located either inside or outside the corresponding Study Area) or fee payment, or both.

Policy LU-3-23: Annex additional land into the City, as appropriate, where the proposed project implements the Community Vision and regional growth objectives.

Policy LU-3-24: Ensure that annexation proposals provide a demonstrated community benefit, such as incentives through the project that include transportation, utility, park, and other public improvements or that address mobility or service needs, or impact fees that support such improvements. The City may establish zoning incentives, density bonuses, or other land use tools where higher development potential may be allowed based on contributions toward desired community benefits. Policies: Annexation Criteria and Submittal Requirements

Policy LU-3-25: Allow expansion when economic need, the Community Vision, and regional goals align.

Policy LU-3-26: Require annexation proposals to demonstrate compliance with all of the following criteria:

- **Criteria 1.** The annexation proposal is consistent with the applicable Land Use Program and Study Area organizing principles.
- **Criteria 2.** The annexation proposal is consistent with the City’s multimodal transportation goals, including integration of alternative transportation facilities as applicable.
- **Criteria 3.** The annexation proposal provides for the planned, orderly, efficient development of the City within near-term time frames, recognizing opportunities or limitations to achieving substantially the same project within the existing City consistent with the General Plan. Options to achieve this criteria include, but are not limited to, a market demand/feasibility analysis.
- **Criteria 4.** The annexation proposal is consistent with and furthers the Community Vision, as shown by demonstrating one or more of the following:
 - How the proposal furthers regional goals
 - How the proposal facilitates development of a regional attractor (e.g., Major Employment Center) or use that implements one or more of the General Plan Supporting Principles.
 - How the proposal furthers General Plan goals or objectives. - How the proposal provides key infrastructure or facilities needed to maintain or improve community service levels.
- **Criteria 5.** The annexation proposal does not reduce safety, utility, and infrastructure service levels within the City limits to less than the acceptable service standards or work level standards adopted by the City or the applicable service agency.
- **Criteria 6.** The annexation proposal identifies the source of future water supply for areas proposed for new development, in compliance with the Sustainable Groundwater Management Act.

Policy LU-3-27: Require that the following items be submitted with all annexation applications:

- **Land Plan.** A land plan addressing land use, circulation, infrastructure, public facilities, and public services for the subject property, and interfaces with planned facilities and services for the balance of the subject Study Area or the adjacent Study Area(s) or the existing City. Sufficient detail shall be provided to determine consistency with the applicable Land Use Program and allow for rezoning of properties.
- **Infrastructure Plan.** An infrastructure plan identifying the backbone infrastructure necessary to serve the subject property, and interfaces with planned facilities and services for the balance of the subject Study Area or the adjacent Study Area(s) or the existing City. A process for phasing of infrastructure shall be identified (if improvements are to be phased), and connections to existing and planned infrastructure beyond the limits of the subject property and/or Study Area may be required.
- **Financing Plan and Fiscal Analysis.** A financing plan and fiscal analysis indicating anticipated funding for the infrastructure identified in the infrastructure plan. The fiscal analysis shall evaluate the impact of development and the associated construction and maintenance of infrastructure on the City’s general fund.
- **Service Level Analysis.** An analysis of service levels for safety, utility, and infrastructure facilities at buildout of the proposed land plan. The analysis will compare service levels at buildout of the proposed land plan with adopted City or agency service standards or established work level standards.
- **Performance Standards.** An analysis of the projected vehicle miles traveled (VMT) and greenhouse gas emissions for the proposed development.

- **Market Study.** A market study demonstrating demand for the uses identified in the land plan. The market study should consider the local and regional market as well as the availability and feasibility of sites located within the City limits that may support similar development.
- **Supporting Principles.** A list and discussion of which General Plan Supporting Principle(s) are implemented by the proposal and why. Particular attention should be given to meeting economic need, the Community Vision, and regional goals.

Policy LU-3-28: Except as otherwise determined by the City Council, require that applications for annexation be provided as specific plans. The format, content, and structure of each specific plan shall be consistent with State law and local regulations, to the satisfaction of the City. In considering if a specific plan will not be required, the City shall give consideration to the size of the project, the proposed mix of uses, and other factors as it deems relevant.

Policy LU-3-29: While the City encourages property owners within each Study Area to work together proactively and with the City to address common planning issues, each development/annexation proposal is not required to individually plan its entire Study Area.

Policies: Infrastructure Financing Policy

LU-3-30: When reviewing subsequent land use entitlements (e.g., tentative map, conditional use permit) that deviate from the land plan approved as part of an annexation process, the City may require an updated fiscal analysis if the proposed development materially varies from the development contemplated in the fiscal analysis prepared for the annexation, and/ or a substantial change in market or other financial conditions has occurred.

Policy LU-3-31: Only allow projects in growth areas that are proposed in tandem with infrastructure improvements that minimize potential burden from the new project to existing ratepayers.

Policy LU-3-32: Establish funding mechanisms for the expansion of public services and infrastructure to ensure new development is carrying its cost burden.

Policies: Service Levels

Policy LU-3-33: Ensure infrastructure and facilities are planned and designed to meet projected future demands.

Policy LU-3-34: Ensure backbone infrastructure and facility improvements are installed concurrent with projected development demands to meet adopted City or agency service standards or adopted work level standards.

GOAL LU-4: THRIVING ACTIVITY CENTERS

The City envisions continued development in specific areas to create multiple activity centers that could include some combination of civic, commercial, and recreational uses which will provide a central gathering space for community members. Activity center locations will include the Civic Center, Old Town, the Village Center of SEPA, the centers of the Livable Employment Area, ~~Lent Ranch~~, Laguna Crossroads shopping center, the Activity Centers in the Study Areas, and others that may emerge as the City evolves. These activity centers are intended to provide central locations for community gathering and social activities, facilitate access to services and entertainment, and function as engines of economic growth and job creation. To reinforce and enhance the civic core, the City will improve pedestrian- and bicycle-oriented connectivity and support pedestrian-friendly commercial and other supporting uses in the area.

Each activity center will provide for a vertical or horizontal mix of land uses and be transit accessible. The exact locations and boundaries, as well as detail density and intensity, mix of land uses, and specific design

and access requirements, are reflected in zoning requirements, design guidelines, and/or district development plans that will be developed for each area.

Policies: Activity Centers

Policy LU-4-1: Establish activity centers as community gathering places characterized by the following design element related actions:

- Devote portions of street frontage to commercial, cultural, and recreation uses to meet the needs of residents in nearby neighborhoods.
- Ensure development includes spaces available to the public for community events and gatherings.
- Prioritize pedestrian and bicycle access.
- Ensure local and regional transit connections are provided throughout each activity center.
- Provide a mechanism to ensure development occurs in line with a cohesive design theme established for each activity center.
- Incorporate public art in central locations.

GOAL LU-5: CONSISTENT, HIGH-QUALITY URBAN DESIGN

“Urban design” generally refers to the design of public and private buildings and spaces. Good urban design is essential in creating attractive, appealing, and livable districts and neighborhoods. The City recognizes that the public’s interest is served by ensuring that new development in Elk Grove is of a high level of design and quality.

Policies: Street-front Visual Character

Also consult Chapter 8: Services, Health and Safety for Utility Undergrounding policies which affect the visual character of right-of-way.

Policy LU-5-1: Ensure that new development reflects the City’s desire to create a high-quality, attractive, functional, and efficient built environment.

Policy LU-5-2: Provide and implement regulations that encourage high-quality signage, ensure that businesses and organizations can effectively communicate through sign displays, promote wayfinding, achieve visually vibrant streetscapes, and control excessive visual clutter.

Policy LU-5-3: Reduce the unsightly appearance of overhead and aboveground utilities by requiring the undergrounding of appropriate services within the urban areas of the City.

Standard LU-5-3.a: New utility facilities should be located underground to the extent possible. Facilities to be placed underground should include electrical transformers (where consistent with the guidelines of the electrical utility), water backflow preventers, and similar items.

Standard LU-5-3.b: Require that existing overhead utility facilities be undergrounded as a condition of project approval. This shall include electrical service lines under 69kV. Electrical service lines of 69kV and higher are encouraged to be undergrounded.

Policy LU-5-4: Require high standards of architectural and site design, and apply strong design controls for all development projects, both public and private, for the enhancement and development of community character and for the proper transition between areas with different types of land uses. Design standards shall address new construction and the reuse and remodeling of existing buildings.

Standard LU-5-4.a: Nonglare glass shall be used in all nonresidential buildings to minimize and reduce impacts from glare. Buildings that are allowed to use semi-reflective glass must be oriented so that the reflection of sunlight is minimized. This requirement shall be included in subsequent development applications.

Policy LU-5-5: Improve the visual appearance of business areas and districts by applying high standards for architectural design, landscaping, and signs for new development and the reuse or remodeling of existing buildings.

Policy LU-5-6: When resources are available, seek to enliven the public right-of-way with attractive landscaping, public art, lighting, civic landmarks, sidewalk cafés, gateways, water features, interpretive/wayfinding signage, farmers markets, festivals, outdoor entertainment, pocket parks, street furniture, plazas, squares, or other amenities in spaces for public use.

Policy LU-5-7: Encourage incorporation of publicly accessible spaces, such as plazas or squares, into new commercial and mixed-use developments.

Policy LU-5-8: Require developers to provide pedestrian amenities, such as trees, lighting, recycling and refuse containers, seating, awnings, and/or art, in pedestrian areas along project frontages. Where appropriate, install pedestrian amenities in public rights-of-way.

Policy LU-5-9: Emphasize placemaking design principles in new development projects.

Standard LU-5-9.a: Prioritize the pedestrian by implementing the following measures:

- Minimize parking areas and curb cuts along commercial street frontages.
- Encourage a vertical and horizontal mix of land uses.
- Provide urban plazas and gathering spaces in commercial and multifamily development.
- Provide pedestrian amenities such as lighting, landscaping, and benches.

Standard LU-5-9.b: Encourage public art in all new large-scale development projects equal to or greater than 100,000 square feet.

Policy LU-5-10: Consider ways for the City to formally recognize examples of outstanding private development projects or practices, such as establishing an annual award program for architecture, site design, historical preservation, and/or landscaping treatment.

Policy LU-5-11: Design neighborhoods and buildings in a manner that is likely to prevent crime and provides security and safety for people and property when feasible.

Policies: Low Impact Development

Policy LU-5-12: Integrate sustainable stormwater management techniques in site design to reduce stormwater runoff and control erosion, during and after construction.

Standard LU-5-13.a: Where feasible, require on-site natural systems such as vegetated bioswales, green roofs, and rain gardens in the treatment of stormwater to encourage infiltration, detention, retention, groundwater recharge, and/or water reuse on-site.

GOAL LU-6: CONTEXT-APPROPRIATE DEVELOPMENT OF LAND USE POLICY AREAS

Land Use Policy Area: Old Town

Policy LU-6-1: Maintain and improve the aesthetic quality and architectural diversity of the Old Town historical district.

Land Use Policy Area: ~~Lent Ranch~~

~~Policy LU-6-2: Support development of Lent Ranch to achieve a thriving activity center with distinct urban character.~~

~~Policy LU-6-3: Implement the Lont Ranch SPA with developments that meet the land use requirements and conform to the vision of the eight-district concept established therein.~~

Land Use Policy Area: Laguna Ridge

Policy LU-6-42: Land uses in the Laguna Ridge Policy Area shall conform to the general layout of land uses shown in the Land Use Diagram in the Planning Framework (see Chapter 3).

Policy LU-6-53: Development in the Laguna Ridge Policy Area shall take place under the guidance of a Specific Plan which includes land use designations, development standards, infrastructure standards, infrastructure plans, a financing plan, and design guidelines and implementation.

Policy LU-6-64: The Laguna Ridge Specific Plan and any related implementation plans (including, but not limited to, capital facilities plans and public facilities financing plans) shall be consistent with this General Plan and shall be used to implement the land use and other policies of this General Plan.

Land Use Policy Area: Sheldon Farms

Policy LU-6-75: Ensure that street fronts provide a positive pedestrian experience through street-level retail, appropriate setbacks, open window architecture, and pedestrian amenities.

Policy LU-6-86: Support the development of transit-friendly land uses and densities in the Land Use Policy Area, consistent with the City-preferred alignment and station locations for fixed route transit.

Land Use Policy Area: South Pointe

~~Policy LU-6-97: Support potential changes to the South Pointe Policy Area that incorporate retail, office, and light industrial/flex land uses along Kammerer Road. Land uses in the South Pointe Policy Area shall conform to the land uses shown in the Land Use Diagram in the Planning Framework (see Chapter 3) and shall include a range of residential uses with parks and other public facilities.~~

~~Policy LU-6-10: Prioritize land development of the type and scale in the South Pointe Policy Area to allow for and support a fixed rail or bus rapid transit service with regional connectivity.~~

GOAL LU-7: AN ESTABLISHED, PROTECTED, AND SUPPORTED RURAL AREA

A defining feature of the Rural Area is the community's dedication to preserving the agricultural and rural lifestyle of the area as an important part of Elk Grove's heritage. Small farms and the keeping of livestock are allowed throughout the Rural Area. Residents of this area have generally indicated that they value preserving the rural feel of their community, as well as the existing type and character of infrastructure. The community recognizes that retaining its farming heritage is an important economic strategy. In addition to attracting residents who desire this lifestyle, certain economic activities are encouraged in the Rural Area, including farmers markets, harvest events, and farm-to-fork dining.

Detailed standards for development, roadway design, utilities, and land uses and zoning densities in the Rural Area are provided in the Sheldon/Rural Area Community Plan (see Chapter 9: Community and Area Plans).

Policies: Rural Area Preservation

Also consult Chapter 9: Community and Area Plans for policies specific to the Sheldon/Rural Area

Policy LU-7-1: Development in the Rural Area shall take place under the guidance of a Sheldon/Rural Area Community Plan that includes land use designations, development standards, infrastructure standards, infrastructure plans, a financing plan, and design guidelines and implementation.

...

No changes to the Housing or Agricultural sections of this chapter

Changes to Chapter 5 (Economy and the Region)

Chapter 5 (Economy and the Region) shall be amended as follows:

Chapter 5 ECONOMY AND THE REGION

OVERVIEW

A healthy and sustainable economy is a critical component of Elk Grove's overall well-being and enables City government to achieve and sustain community goals, such as enhanced resident employment options, reduced commute times, and an overall higher quality of life through the generation of wealth in the community. A healthy economy also provides the City with needed revenue for infrastructure improvements, core City services, safety, and maintenance. A range of factors determine the economic health of a city, including the number and diversity of businesses, the number and diversity of jobs in relation to the resident workforce, levels of employment, resident income and wages, and resident and business spending patterns.

Elk Grove has a complex local economy; it is currently a bedroom community, but is also the second largest City in the Sacramento region. The City contains a highly educated multicultural resident population that primarily works in government, healthcare, education, and tech industries. The City is home for commuters who travel to other cities to work but has a significant and growing business base of its own that employs a mix of residents and imported daily workers.

In addition, there is a strong relationship between Elk Grove's local economy and that of the greater Sacramento and San Joaquin Valley regions, and the eastern portions of the Bay Area and Silicon Valley. The City's economy and its residents rely on the flow of jobs, goods, and capital from these surrounding areas. The success of these larger regions in attracting and retaining a diversity of companies and jobs affects Elk Grove in a multitude of ways, particularly given the relationship between many City residents and employment opportunities in other jurisdictions. How the City is positioned in the Sacramento region is especially important both politically and economically. The City benefits from coordination on regional economic development efforts with outside organizations and public agencies, such as Sacramento County, the City of Sacramento, the Sacramento Metropolitan Chamber of Commerce, the Sacramento Area Council of Governments, the Greater Sacramento Economic Council, and the San Joaquin Valley Partnership.

The City seeks to maintain and enhance many of the economic patterns present in the community today, while at the same time becoming a more self-sufficient and self-sustaining economy by:

- growing and diversifying its business and employment base;
- building up its emerging employment centers;
- supporting residents' commutes to employment centers outside the City, while also supporting opportunities to provide local employment options that reduce commute burdens;
- increasing residents' overall quality of life through better lifestyle amenities;
- establishing effective rural-urban connections that preserve both land use types;
- preserving Elk Grove's unique identity and heritage; and
- contributing to regional economic development and transportation goals.

The Economy and the Region chapter contains goals and policies addressing the following two topics, which are each assigned a two-letter acronym. Within each topic, the following goals further the Community Vision and Supporting Principles.

Economic Development (ED)

- **GOAL ED-1:** A Diverse and Balanced Mix of Land Uses
- **GOAL ED-2:** More Residents Employed Locally
- **GOAL ED-3:** Successful Local Businesses

Regional Coordination (RC)

- **GOAL RC-1:** A New Regional Employment Center
- **GOAL RC-2:** Strong Interagency Coordination on Economic Development Efforts
- **GOAL RC-3:** Regional Mobility and Infrastructure to Support the Local Economy

RELATIONSHIP TO OTHER CHAPTERS

The Economy and the Region chapter most closely relates to the Urban and Rural Development, Mobility, and Community and Resource Protection chapters, as follows.

- The Urban and Rural Development chapter (Chapter 4) presents policies related to land uses and development intensities allowed in various locations, which have major impacts on the number and types of businesses and jobs that exist or can exist in the City.
- The Mobility chapter (Chapter 6) lays out the City's policies for an efficient, multimodal transportation system. It is essential to have strong and well functioning transportation connections within the City and region, and between Elk Grove and other cities in the state and beyond, to ensure the efficient movement of people and goods on which a healthy economy depends. Providing a range of transportation modes for people to commute to work or school can support a thriving job market. Reducing traffic congestion also improves quality of life, which in turn contributes to a prosperous region.
- The Community and Resource Protection chapter (Chapter 7) includes policies to ensure the conservation and protection of natural and cultural resources, as well as other community assets that contribute to the quality of life in Elk Grove. The viability and strength of the local and regional economy depend on maintaining a clean, healthy environment and a vibrant community where people want to live and work. In turn, a robust economy ensures that the City and the community have the necessary resources to properly care for and protect the environment and other important resources.

SUPPORTING PRINCIPLES

The Economy and the Region chapter carries out the following Supporting Principles:

Our Economy Is Diverse & Balanced & Enhances Quality of Life. This principle calls for a strong, diverse, and balanced local economy that supports existing and prospective businesses, from large to small, and attendant job growth, revenue generation, and capital investment. The policies in this chapter aim to strengthen the economy in Elk Grove through a number of measures. These include increasing economic diversity by offering a broad range of companies, jobs, goods, and services in the City. In addition, the City seeks to attract new businesses in targeted industries including government, healthcare, corporate office, higher education, light and advanced manufacturing, and other types of industries (e.g., retail, entertainment, hospitality) that enhance resident quality of life.

Our Regional Neighbors Know Us & Our Contributions. This principle speaks to Elk Grove's place and function within the larger Sacramento region, and relationship to nearby regions such as San Joaquin Valley, the San Francisco Bay Area, and Silicon Valley. Since the economy in Elk Grove is strongly influenced by regional factors and trends, the policies in this chapter aim to enhance the City's prominence in the regional economy in a variety of ways. These include establishing a major regional employment center in Elk Grove pursuant to the regional transportation and land use strategy (discussed in further detail on pages 5-8 and 5-9); improving coordination between the City and regional agencies and organizations on economic development matters; and strengthening Elk Grove's linkages to the regional transportation network to support local economic development.

GOALS AND POLICIES: ECONOMIC DEVELOPMENT

THE LOCAL ECONOMY

Historical Economic Conditions

Elk Grove's economy was predominantly agricultural from the time of its founding in 1850 and continued that way for nearly a century. However, starting in the 1950s, job growth in Sacramento and elsewhere spurred a steady increase of residents to Elk Grove who commuted to Sacramento or other predominantly northern destinations for work—a trend that continues today. During the 1990s, Elk Grove's population grew by more than 70 percent, while corresponding job growth during that period was primarily happening in other parts of Sacramento County and the region. Sacramento County's General Plan vision for the unincorporated Laguna and Elk Grove Community Plan Areas was primarily that those communities would continue to function as suburbs of Sacramento.

The City of Elk Grove was incorporated on July 1, 2000, establishing control over land use and development services. In 2003, the City completed its first comprehensive General Plan, establishing a long-term vision for the community, including a desire to both preserve a rural lifestyle in portions of east Elk Grove and boost economic development and local employment. In 2011, the City established an Economic Development Department to facilitate economic growth in the community and ensure the success of its businesses.

Recent Jobs and Housing Trends

According to the City's 2016 Employment Dynamics Report, at the end of 2013 the City had 44,806 jobs at 8,710 business establishments. Between 2000 (the year the City incorporated) and 2013, the City added 6,603 businesses (net of known losses), an 8.7 percent average annual increase. Over the same period, the City added 29,601 jobs (net of known losses), an 11.5 percent average annual increase. Only 11 percent of job growth and 5 percent of business growth was due to annexation. At the end of 2013, Elk Grove's 25 largest employers employed 34.4 percent of the City's total employment base, 65 percent of businesses employed less than 150 people, and 37 percent of businesses and 11 percent of jobs were home-based. Elk Grove was impacted by the national housing and banking crisis known as the Great Recession in the late 2000s, similar to other communities in California and throughout the country. From an employment standpoint, however, Elk Grove was impacted only modestly.

By the early 2010s, the local economy began to recover from the recession. Elk Grove added 11,499 jobs and 2,705 businesses between 2009 and 2013.¹ The largest employers are a mix of public and private entities, including educational institutions, healthcare institutions, major retailers, and technology companies.

Elk Grove's jobs/housing ratio was approximately 0.86:1 in 2013. A potential implication of this indicator is that a high proportion of residents commute elsewhere for work, based either on limited employment opportunities available in the City or a mismatch in the types of jobs or wages available and the skills of the workforce.

Figure 5-1 shows the change in the jobs/housing ratio in Elk Grove between 2000 and 2013. As the graph illustrates, there has been a general upward trend in the jobs/housing ratio since the mid-2000s (i.e., a greater number of jobs relative to the number of housing units in the City). The increase in the jobs/housing ratio has been most significant in the years following the recession—rising from 0.71 to 0.86, an increase of 21 percent, between 2010 and 2013. This demonstrates that not only is the absolute number of jobs in Elk Grove growing, but also that the balance between jobs and housing is improving despite significant housing unit growth over the same time period. This potentially indicates that a greater number of residents have the option to work in Elk Grove as opposed to commuting elsewhere in the region.

The Future Economy

Elk Grove is a fast-growing community, known for its family-friendly features, competitive living costs, affordable housing options and top-notch public schools, parks, and recreation programs. Elk Grove is a multicultural community, with many prosperous households, and is a community of choice for many

millennials. Elk Grove is also an affordable and business-friendly location for companies to grow in or relocate to within an emerging major metropolitan region with excellent access and proximity to the Bay Area and to neighboring states. The City intends to build on and market these strengths, and implement strategies to grow, diversify, and balance the economy with increased employment, entertainment, recreation, and housing opportunities.

Strategies to achieve the vision for economic vitality require a focus on the following objectives, as identified in the goals and policies included in this chapter:

- Establishing land use policies, regulations, programs, and incentives that encourage desired development at appropriate locations.
- Attracting new businesses in targeted industries, in accessible employment centers throughout the City.
- Retaining and expanding existing businesses.
- Developing an entrepreneurial and startup culture and ecosystem in which small businesses can launch and thrive.
- Developing needed and enhanced lifestyle amenities (retail, restaurants, entertainment, recreation, and civic facilities).
- Developing increased hospitality and visitation assets to foster increased business and personal travel to the City.
- Attracting companies that more closely align with resident skills and work choices.
- Maintaining low resident unemployment by increasing available local jobs that align with resident skills, wages, and work choices; connecting resident workers with regional workforce services and local employers; and assisting Elk Grove companies with their hiring needs.
- Increasing the City's jobs/housing ratio while providing a greater diversity of housing options.
- Building critical public and private infrastructure and utilities to serve employment centers.
- Coordinating effectively with neighboring jurisdictions, regional agencies, and service providers on economic development matters.

GOAL ED-1: A DIVERSE AND BALANCED MIX OF LAND USES

The City of Elk Grove is a developing community with the opportunity to expand its existing commercial and employment base. As described in Chapter 3: Planning Framework, flexible land use designations allow the City to accommodate shifts in market trends over time, which will facilitate new investment and complementary land uses to meet local and regional shopping needs, provide a broader range of job opportunities to improve the jobs/housing ratio, and grow the City's tax base. The City's vision is for Elk Grove to be a community in which people can live, work, shop, and play.

Policies: Business Diversity

Policy ED-1-1: Allow for a variety of sizes and types of commercial development in order to attract a diverse range of job opportunities and types.

Policy ED-1-2: Promote programs and services that support a diverse local economy.

Policies: Business Attraction and Expansion

The reader should also consult *Chapter 3: Planning Framework* and *Chapter 4: Urban and Rural Development* for additional policies related to infill and expansion areas that accommodate a variety of business types.

Policy ED-1-3: Encourage the full and efficient use of vacant and underutilized parcels in appropriately designated areas to support the development and expansion of targeted commercial uses.

Policy ED-1-4: Use public/private partnerships as a means to revitalize existing employment and/or retail spaces, and to catalyze development of vacant sites.

Policy ED-1-5: Support existing and prospective businesses that contribute to meeting Elk Grove’s strategic economic goals and facilitate their relocation and expansion as appropriate.

GOAL ED-2: MORE RESIDENTS EMPLOYED LOCALLY

The City will seek to increase the number of jobs in Elk Grove to improve the jobs/ housing ratio, and increase the number of Elk Grove residents employed by Elk Grove businesses to reduce commute times.

The reader should also consult *Chapter 4: Urban and Rural Development* for Development Patterns policies related to allowances for minor changes in residential configurations and densities under certain conditions.

Policies: Local Employment Opportunities

Policy ED-2-1: Continue to improve Elk Grove’s jobs/housing ratio by expanding local employment opportunities, with an emphasis on attracting jobs in sectors and industries that are well matched for the skills of the local workforce.

Policy ED-2-2: Maximize the use of nonresidential land for employment-generating and revenue-generating uses.

Policy ED-2-3: Support efforts to provide residents with training opportunities, in particular helping residents acquire new skills needed for employment opportunities in coordination with targeted industries.

Policy ED-2-4: Provide for a range of housing options that match the anticipated preferences and income levels of potential workers associated with planned employment-generating projects.

Policy ED-2-5: Support the creation and retention of jobs that provide sustainable wages and benefits.

GOAL ED-3: SUCCESSFUL LOCAL BUSINESSES

As part of its overall economic development strategy, the City will make special efforts to encourage local businesses that reflect, strengthen, and reinforce a balanced and diverse economy in Elk Grove.

Policies: Businesses Reflecting Local Values

Policy ED-3-1: Promote a thriving locally owned business sector in a diversity of industries, particularly in the civic core, Old Town, and the retail portion of the Rural Area.

Policy ED-3-2: Support existing and prospective small and homebased businesses and enable them to launch and grow into larger thriving, successful companies and employers.

GOALS AND POLICIES: REGIONAL COORDINATION

ELK GROVE AND THE REGIONAL ECONOMY

Elk Grove is part of the Sacramento Metropolitan Region, which includes six counties (Sacramento, El Dorado, Placer, Sutter, Yolo, and Yuba); the cities in these counties share economic conditions and a common labor market. The region is served by the agency known as the Sacramento Area Council of Governments (SACOG). SACOG 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, the Metropolitan Transportation Plan/ Sustainable Communities Strategy (MTP/SCS), SACOG allocates the distribution of affordable housing in the region and assists in planning for transit, bicycle networks, clean air, and airport land uses.

It is part of Elk Grove’s vision to play a unique and active role in the region. In terms of the economy, that goal consists of two parts. First, Elk Grove seeks to better establish itself in the regional market as an activity and employment center by attracting additional high-quality jobs, enhanced amenities, visitation, and additional tax revenue to the City. Second, Elk Grove seeks to support the economic growth, circulation, and sustainability goals established for the region. To achieve the former, the City will encourage the growth of businesses in targeted industries and at targeted locations by providing a regulatory framework, business support, and infrastructure to attract these new businesses. To achieve the latter, in addition to local activities, the City will work to meet the goals set by regional plans.

~~A major aspect of SACOG’s 2016 MTP/SCS is planning for Major Employment Centers in the region. Major Employment Centers are defined by SACOG as areas: (a) that support concentrations of at least 10,000 “base” jobs (i.e., including manufacturing, office, medical, educational, and service employment, and excluding sectors like retail and restaurant uses) at average densities of eight or more jobs per acre; and (b) where 80 percent or more of the uses within the center are employment, not residential. SACOG has identified existing Major Employment Centers in the region. Elk Grove recognizes the benefits of having a Major Employment Center identified in the City for inclusion in future updates to the MTP/SCS, including the ability to bring new jobs, employ residents, and provide new services and amenities for the community. The City’s economic, land use, and transportation policies are intended to enable the growth of a Major Employment Center in the south-central portion of the Planning Area, as shown in **Figure 5-2**.~~

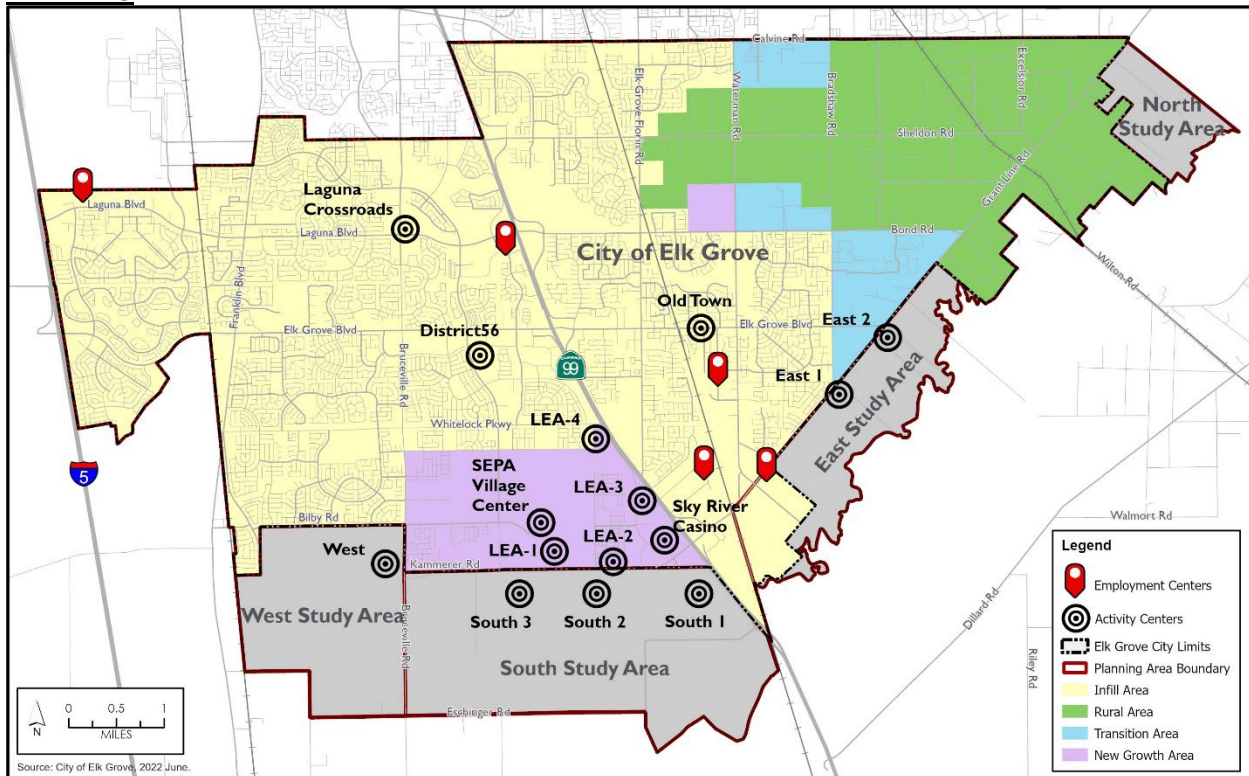
~~In addition, the City wishes to develop additional concentrations of employment at various strategic locations, including but not limited to SEPA, the Laguna Springs Corporate Center, and the Laguna West Commercial Area. While these areas will not all meet the specific parameters of a Major Employment Center, as established by SACOG, all are an important component of the City’s economic strategy. Policies that support these areas refer to ‘employment centers,’ which can be differentiated from the Major Employment Center shown in Figure 5-2.~~

The development of activity and employment centers in the City provides opportunities to employ residents locally, improving opportunities for work-life balance and reducing vehicle miles traveled. It also provides opportunities to diversify the City’s employment and tax base, improving community sustainability.

Several activity and employment centers exist in the City and there are multiple opportunities for creating new centers in the future. **Figure 5-2** illustrates the locations of these existing and planned centers. The development of these will occur over time and as market conditions provide.

Elk Grove also recognizes that jobs in the retail, restaurant, hospitality, and related sectors are, and will continue to be, important to Elk Grove. The City’s economic strategy includes actions to continue to foster these types of employment uses in the community.

FIGURE 5-2: ~~DESIRED FUTURE MTP/SCS EMPLOYMENT CENTERS~~ EXISTING AND PLANNED CENTERS



GOAL RC-1: A REGIONAL EMPLOYMENT CENTER WITHIN THE REGION

Elk Grove aims to become a center within the larger region, providing opportunities for employment, recreation, education, retail, industry, and residential development. This objective aligns with regional goals for economic development, sustainability and resiliency, and quality of life. recognizes that in addition to facilitating and supporting businesses as well as encouraging development of a Major Employment Centers and other employment centers locally, the City will need to work with regional entities to meet the goals identified in regional plans. This goal includes achieving a Major Employment Center designation in the City in a future MTP/SCS.

Policies: Employment Centers

The reader should also consult Chapter 4: Urban and Rural Development for additional policies establishing the type of land uses and growth allowed within the Major Employment Center and other employment centers as well as Chapter 9: Community Plans for a description of the Livable Employment Area.

Policy RC-1-1: Establish and maintain a sufficient area for business and job locations, including office and industrial to achieve Major Employment Center status in the Sacramento region’s Metropolitan Transportation Plan/Sustainable Communities Strategy.

Policy RC-1-2: Continue efforts to attract larger employers in target industries.

Policy RC-1-3: Continue to invest in public infrastructure to attract target industries to Elk Grove, such as improved broadband capacity and reliability, road and protected bike lane construction and maintenance, safe and adequate pedestrian facilities including crosswalks, and shaded sidewalks, public transit, new and upgraded public utilities, great public spaces including urban plazas and parks, and adequate community services.

Policy RC-1-4: Encourage the facilitation and attraction of companies in emerging industries, both known or to be identified, in both private and public sectors. Many emerging technology companies prefer to be located in exciting, vibrant communities with great quality-of-life amenities that are able to attract and retain the best and the brightest in their respective disciplines.

Standard RC-1-4a: Create a public realm allowing venture capitalists, technology entrepreneurs, creative engineers, and designers to mix and network.

Standard RC-1-4b: Create places that will inspire architects, artists, engineers, and others employing design thinking to mix with one another as well as technology professionals to inspire and be inspired. This will require great placemaking and a vital public realm.

Policy RC-1-5: ~~In addition to establishing a primary Major Employment Center (see Policy RC-1-1), consider~~ Consider options to develop additional employment activity centers in portions of the City with enough available undeveloped land and potential sufficient transit access to support such a center. The reconstruction of Kammerer Road as a Throughfare and Urban Avenue provides an opportunity for the City to advance this initiative by targeting the centers toward the type of employment centers that will appeal to companies and employees participating in the knowledge economy of 21st century.

GOAL RC-2: STRONG INTERAGENCY COORDINATION ON ECONOMIC DEVELOPMENT EFFORTS

Encouraging new businesses to locate in Elk Grove will require coordination with regional partners and a focus on providing the infrastructure needed to support employment centers, including both base jobs and targeted industries.

Policies: Interagency Coordination

Policy RC-2-1: Coordinate with adjacent cities, counties, and the Sacramento Area Council of Governments on local land use and transportation planning efforts.

Policy RC-2-2: Coordinate with regional planning agencies working on land use and environmental issues, and cooperate in the implementation of programs consistent with General Plan policy.

Policy RC-2-3: Support efforts to coordinate education and job training programs among the Elk Grove Unified School District, Los Rios Community College District (Cosumnes River College), other community college districts and local colleges and universities, employment training and service agencies, and employers.

Policy RC-2-4: Improve interagency coordination during the development review process for major commercial developments, to provide faster, more streamlined, cost-effective, and predictable review and approval processes, thereby making it easier for businesses to locate or expand in Elk Grove.

Policy RC-2-5: Coordinate with regional economic development agencies on economic development and related issues, and cooperate in the implementation of coordinated programs consistent with General Plan policy and City-adopted economic development strategies.

GOAL RC-3: REGIONAL MOBILITY AND INFRASTRUCTURE TO SUPPORT THE LOCAL ECONOMY

Transportation infrastructure and transportation choices are a major determinant for regional and local economic success. The City will work to ensure that the transportation network and related infrastructure serve the economic needs of the local community and region. These facilities are further addressed in *Chapter 6: Mobility*.

Policies: Regional Mobility

The reader should also consult *Chapter 6: Mobility* for additional policies related to regional mobility.

Policy RC-3-1: Integrate economic development and land use planning in Elk Grove with planning for regional transportation systems.

Policy RC-3-2: Ensure that decisions regarding transportation between regions result in benefits to the Elk Grove community, including decisions regarding regional roadways, airport, port, and passenger and freight rail services.

Policy RC-3-3: Coordinate and participate with the City of Sacramento, Sacramento Area Council of Governments, Sacramento County, the Capital SouthEast Connector Joint Powers Authority, Caltrans, and other regional and local agencies on roadway improvements that are shared by the jurisdictions in order to improve operations, including joint transportation planning efforts, roadway construction, and funding.

Policy RC-3-4: Advocate for fixed-route transit service in Elk Grove as part of a coordinated regional network designed and routed to serve Major Employment Centers, employment, residential, and shopping centers, and colleges and universities.

Policy RC-3-5: Identify and advocate for future, as yet unknown or fully developed, transportation technologies that would be of benefit to Elk Grove and surrounding regions.

Changes to Chapter 6 (Mobility)

MOB-1 in Chapter 6 (Mobility) shall be amended as follows:

GOAL MOB-1: A CONNECTED TRANSPORTATION NETWORK THAT PROVIDES FOR THE SAFE AND EFFICIENT MOVEMENT OF PEOPLE AND GOODS ACROSS ALL MODES WHILE ACCOUNTING FOR ENVIRONMENTAL EFFECTS

Since the City's incorporation, and for decades before as an unincorporated community in the county, development in Elk Grove (and much of California in general) embraced more highways, expanded intersections, widened roads, and intricate, indirect residential street patterns. Elk Grove's land use and transportation pattern emphasized the automobile as the primary mode of transportation in terms of behavior, accommodation, and facility development.

Through this General Plan, the City desires to provide roadways that allow efficient movement and safe travel spaces for all modes of travel, while limiting the social, environmental, and fiscal impacts that can result from extensive road systems, vehicles on the road, and vehicle miles traveled (VMT). At the same time, the City wishes to allow new development consistent with the General Plan to proceed without undue confusion or extensive delays.

The City will use VMT as a measure of transportation effectiveness in development review to provide a local process for compliance with both State targets and procedures and with expectations when projects exceed thresholds of significance. VMT reductions can be achieved through a diverse land use mix that includes both employment and service uses, allowing residents to meet daily needs within a short distance from their homes. This reduces trip lengths and improves access to alternative transportation modes (e.g., walking, bicycle, transit). The City will use RPT to ensure that roadways have the capacity to accommodate vehicles and to safely convey bicyclists and pedestrians.

Policies: Vehicle Miles Traveled Limits

Policy MOB-1-1: Achieve State-mandated reductions in VMT by requiring land use and transportation projects to comply with the following metrics and limits. These metrics and limits shall be used as thresholds of significance in evaluating projects subject to CEQA.

Projects that do not achieve the daily VMT limits outlined below shall be subject to all feasible mitigation measures necessary to reduce the VMT for, or induced by, the project to the applicable limits. If the VMT for or induced by the project cannot be reduced consistent with the performance metrics outlined below, the City may consider approval of the project, subject to a statement of overriding considerations and mitigation of transportation impacts to the extent feasible, provided some other stated form of public objective including specific economic, legal, social, technological or other considerations is achieved by the project.

(a) **New Development** – Any new land use plans, amendments to such plans, and other discretionary development proposals (referred to as “development projects”) are required to demonstrate a 15 percent reduction in VMT from existing (2015) conditions. To demonstrate this reduction, conformance with the following land use and cumulative VMT limits is required:

(i) **Land Use** – Development projects shall demonstrate that the VMT produced by the project at buildout is equal to or less than the VMT limit of the project's General Plan land use designation, as shown in Table 6-1, which incorporates the 15 percent reduction from 2015 conditions.

**Table 6-1:
 Vehicle Miles Traveled Limits by Land Use Designation**

LAND USE DESIGNATION	VMT LIMIT (DAILY PER SERVICE POPULATION)
COMMERCIAL AND EMPLOYMENT LAND USE DESIGNATIONS	
Community Commercial (CC)	41.6 29.4
Regional Commercial (RC)	44.3 29.4
Employment Center (EC)	47.1 19.3
Light Industrial/Flex (LI/FX)	24.5 24.2
Light Industrial (LI)	24.5 24.2
Heavy Industrial (HI)	39.5 23.4
MIXED USE LAND USE DESIGNATIONS	
Mixed Use Village Center (VCMU)	41.6 19.3
Residential Mixed Use (RMU)	21.2 19.4
TRANSECT-BASED LAND USE DESIGNATIONS	
General Neighborhood Residential (T3-R)	20.1
Neighborhood Center Low (T3)	21.4
Neighborhood Center Medium (T4)	20.9
Neighborhood Center High (T5)	16.6
PUBLIC/QUASI-PUBLIC AND OPEN SPACE LAND USE DESIGNATION	
Parks and Open Space (P/OS) ^a	0.0 n/a ¹
Resource Management and Conservation (RMC) ^a	0.0 n/a ¹
Public Services (PS)	53.4 n/a ¹
RESIDENTIAL LAND USE DESIGNATIONS	
Rural Residential (RR)	34.7 24.9
Estate Residential (ER)	49.2 22.3
Low Density Residential (LDR)	21.2 20.2
Medium Density Residential (MDR)	20.9 17.9
High Density Residential (HDR)	20.6 18.6
OTHER LAND USE DESIGNATIONS	
Agriculture (AG)	34.7 25.2
Study Areas	n/a ²
Tribal Trust Lands	n/a ³

Notes:

A1. These land use designations are not anticipated to produce substantial VMT, as they have no residents and few to no employees. These land use designations therefore have no limit and are exempt from analysis.

2. Lands within the Study Areas shall be analyzed based upon their ultimate land use designation, not the interim “Study Area” designation.

3. Tribal Trust Lands are exempt from VMT analysis as they are not subject to City policy.

ii) **Cumulative for Development Projects in the Existing City** – Development projects within the ~~existing (2017)~~ City limits shall demonstrate that cumulative VMT within the City including the project would be equal to or less than the established Citywide cumulative limit of ~~6,367,833~~ 8,039,802 VMT (total daily VMT).

(iii) **Cumulative for Development Projects in Study Areas** – Development projects located in Study Areas shall demonstrate that cumulative VMT within the applicable Study Area would be equal to or less than the established limit shown in Table 6-2.

**Table 6-2:
 Study Area Total Vehicle Miles Traveled Daily Limits**

STUDY AREA	VMT LIMIT (TOTAL VMT AT BUILDOUT)
North Study Area	37,622 27,132
East Study Area	420,612 574,028
South Study Area	1,311,107 1,796,671
West Study Area	705,243 751,049

(b) **Transportation Projects** – Transportation projects likely to lead to a substantial or measurable increase in VMT shall:

(i) **Not increase VMT per service population.** Projects must demonstrate that the VMT effect of the project does not exceed the project’s baseline condition VMT.

(ii) **Be consistent with the regional projections and plans.** The project shall be specifically referenced or listed in the region’s MTP/ SCS and accurately represented in the accompanying regional travel forecasting model. Qualifying Subject transportation projects that are not consistent with the MTP/SCS shall also instead demonstrate that the cumulative VMT effect does not increase regional VMT per service population.

...

MOB-3 in Chapter 6 (Mobility) shall be amended as follows:

GOAL MOB-3: ALL STREETS IN THE CITY ARE COMPLETE AND SENSITIVE TO CONTEXT

Complete streets are designed for safety and accessibility by all users and all modes of transportation. A well-designed complete street acknowledges that transportation may include vehicles as well as pedestrians, bicyclists, and public transit, and that streets will be traveled by a variety of individuals with a wide range of needs, destinations, and abilities.

The City is required by the Complete Streets Act to plan for a balanced, multimodal transportation network that meets the needs of all users (e.g., motorists, pedestrians, bicyclists, children, individuals with disabilities, seniors, movers of commercial goods, and users of public transportation).¹ The City must identify how streets, roads, and highways will accommodate the needs of all users for safe and convenient travel in a manner that is suitable to the surrounding rural, suburban, and/or urban context. Therefore, the policies contained herein shall apply to all types of streets in the City, including both public and private streets.

The Complete Streets Act allows the City to consider different policies, standards, and implementation measures that are context sensitive. The City recognizes that the roadway system is a major component of the “feel” of the community. Therefore, the City’s Complete Streets policies recognize the need for modified design standards in certain areas of Elk Grove that are consistent with the character of the neighborhood but still facilitate access by all users.

Policies: Complete Streets Design

See Chapter 9 for policies specifically related to complete streets in the Sheldon/ Rural Area Community Plan Area.

Policy MOB-3-1: Implement a balanced transportation system using a layered network approach to building complete streets that ensure the safety and mobility of all users, including pedestrians, cyclists, motorists, children, seniors, and people with disabilities.

Policy MOB-3-2: Support strategies that reduce reliance on single-occupancy private vehicles and promote the viability of alternative modes of transport.

Standard MOB-3-2.a: Require new development to install conduits for future installation of electric vehicle charging equipment.

Policy MOB-3-3: Whenever capital improvements that alter street design are being performed within the public right-of-way, retrofit the right-of-way to enhance multimodal access to the most practical extent possible.

Policy MOB-3-4: As new roads are constructed, assess how the needs of all users can be integrated into the street design based on the local context and functional classification.

Policy MOB-3-5: Strive to balance needs for personal travel, goods movement, parking, social activities, business activities, and ease of maintenance when planning, operating, maintaining, and expanding the roadway network.

Policy MOB-3-6: Execute complete streets design in accordance with neighborhood context and consistent with specific guidance in community plans or area plans, as applicable.

Policy MOB-3-7: Develop a complete and connected network of sidewalks, crossings, paths, and bike lanes that are convenient and attractive, with a variety of routes in pedestrian-oriented areas.

Policy MOB-3-8: Provide a thorough and well-designed wayfinding signage system to help users of all modes of travel navigate the City in an efficient manner.

Policy MOB-3-9: As funds become available, provide for the operation and maintenance of facilities for bicycle and pedestrian networks proportionate to the travel percentage milestone goals for each mode of transportation in the Bicycle, Pedestrian, and Trails Master Plan.

Policy MOB 3-10: Design Kammerer Road to be an Urban Avenue, as shown in Figure 3-7, supported by an adjacent street grid.

Policies: Safety for All Users of the Mobility System

Policy MOB-3-4011: Design and plan roadways such that the safety of the most vulnerable user is considered first using best practices and industry design standards.

Policy MOB-3-4112: Consider the safety of schoolchildren as a priority over vehicular movement on all streets within the context of the surrounding area, regardless of street classifications. Efforts shall specifically include tightening corner-turning radii to reduce vehicle speeds at intersections, reducing pedestrian crossing distances, calming motorist traffic speeds near pedestrian crossings, and installing at grade pedestrian crossings to increase pedestrian visibility.

Policy MOB-3-4213: Provide for safe and convenient paths and crossings along major streets within the context of the surrounding area, taking into account the needs of the disabled, youth, and the elderly.

Policy MOB-3-4314: Continue to design streets and approve development applications in a manner that reduces high traffic flows and parking demand in residential neighborhoods.

Policies: Vehicle Parking

Policy MOB-3-4415: Regulate the provision and management of parking on private property to align with parking demand, with consideration for access to shared parking opportunities.

Policy MOB-3-4516: Utilize reduced parking requirements when and where appropriate to promote walkable neighborhoods and districts and to increase the use of transit and bicycles.

Policy MOB-3-4617: Establish parking maximums, where appropriate, to prevent undesirable amounts of motor vehicle traffic in areas where pedestrian, bike, and transit use are prioritized.

Policy MOB-3-4718: Ensure new multifamily and commercial developments provide bicycle parking and other bicycle support facilities appropriate for the users of the development.

MOB-5 in Chapter 6 (Mobility) shall be amended as follows:

GOAL MOB-5: A SAFE, CONNECTED, AND CONVENIENT TRANSIT SYSTEM

Providing transit service for residential and commercial areas and ensuring continued connections to the larger transit network in the Sacramento region are important components of mobility in Elk Grove. An array of viable and desirable transit options can greatly increase mobility for residents and employees and aid significantly in achieving VMT reduction goals.

Improved access to transit and increased transit service are particular priorities along the future fixed transit alignment (see Transportation Network Diagram, Chapter 3), in the activity centers (see Figure 4-1: Potential Activity and Infill Areas in Elk Grove, Chapter 4), in higher-density residential areas, and in employment and entertainment areas. However, transit access is important in many areas of Elk Grove so that transit-dependent residents can access needed services, employment, and social connections.

Components of the transit system in the region include ~~the City's~~ Sacramento Regional Transit's local and commuter ~~e-tran system, Sacramento Regional Transit's~~ light rail and bus systems, and Amtrak and ACE rail services. ~~Only the e-tran bus and an Amtrak thruway bus to the Sacramento Amtrak station operated in Elk Grove in 2017.~~

City E-Tran Service Local and Commuter Bus

~~E-tran is a fixed route bus system operated by the City of Elk Grove that~~ Sacramento Regional Transit provides both local and commuter bus services in Elk Grove. Routes are coordinated with buses, light rail, and South County Transit/Link (SCT Link) to areas outside Elk Grove. ~~The City~~ Regional Transit also operates a paratransit service ~~called e-van which~~ that addresses federal Americans with Disabilities Act (ADA) requirements for ~~fixed route service~~ and primarily serves ADA-eligible passengers, such as disabled and elderly community members.

Sacramento Regional Transit Light Rail/High-Capacity Fixed Transit

The City views light rail (or other high-capacity fixed transit, such as bus rapid transit) as an important part of the overall transit plan for Elk Grove, including the use of light rail to connect workers to current and future employment centers in the City. ~~Many extensions and connections for Elk Grove are being considered by both the City and Regional Transit.~~ The planned route for this service is illustrated on the Transportation Network Diagram in Chapter 3. However, current funding constraints must be addressed to advance planning and construction efforts. The City will work closely with Regional Transit, SACOG, and other jurisdictions in the region to identify funding strategies and other resources that could advance the ~~most feasible regional transit~~ services and infrastructure.

Amtrak Commuter Interregional/Interstate and Intercity/Interurban Rail

Amtrak is a national passenger rail service that offers both medium and long-distance service throughout the country. Amtrak operates interregional and interstate passenger train service through a station in downtown Sacramento, with regular service to Los Angeles and Seattle (via the Coast Starlight) and Chicago (via the California Zephyr). ~~The City supports the provision of efficient connections for the Elk Grove community to the larger Amtrak system through the Sacramento Valley Station.~~

~~The City of Elk Grove is considering the potential development of a multimodal facility that may allow for a new commuter rail (Amtrak) station to provide commuter service between Sacramento and Bakersfield, as well as a convenient location to access and transfer between transit services such as local and commuter buses~~

The San Joaquin Joint Powers Authority (SJJPA) operates the Amtrak San Joaquin services, which currently runs through the City but without a rail stop; a connecting bus is available to Stockton. SJJPA also operates the Altamont Corridor Express (ACE) service from Stockton to San Jose. The SJJPA is pursuing an expansion of both systems, which would create a station in Elk Grove for both Amtrak and ACE services.

Land Use Coordination

The expansion of transit infrastructure and vehicles must be paired with supportive land use planning for compact development and a mix of uses both in the City and in the wider region. The region has established a vision for land use and transportation for all of Sacramento County called the Preferred Blueprint Scenario. The Preferred Blueprint Scenario depicts a way for the region to grow through the year 2050 in a manner generally consistent with growth principles established by SACOG. The Preferred Blueprint Scenario is part of SACOG's Metropolitan Transportation Plan/Sustainable Communities Strategy (MTP/SCS) for 2035, the long-range transportation plan for the six-county region. It also serves as a framework to guide local government in growth and transportation planning through 2050.

Policies: Transit-Supportive Land Use Planning

Policy MOB-5-1: Support a pattern of land uses and development projects that are conducive to the provision of a robust transit service. Consider amendments to the land use plan, as appropriate, that increase the density and intensity of development along the City's fixed transit alignment and other major transit corridors.

Policy MOB-5-2: Advocate for the City's preferred fixed transit alignment for light rail (or bus rapid transit) from north of the city through ~~to the Southeast Policy Area Livable Employment Area~~ and ensure proposed projects are complementary to such an alignment.

Policy MOB-5-3: Consult with the Sacramento Regional Transit District when identifying and designing complete streets improvements near likely light rail alignment corridors in order to prioritize access to and use of transit to sites along that corridor.

Policy MOB-5-4: Support mixed-use and high-density development applications close to existing and planned transit stops.

Policy MOB-5-5: Promote strong corridor connections to and between activity centers that are safe and attractive for all modes.

Policy MOB-5-7: The City shall work to incorporate transit facilities into new private development and City project designs including incorporation of transit infrastructure (e.g. electricity and fiber-optic cable), alignments for transit route extensions, new station locations, bus stops, and transit patron waiting area amenities (e.g. benches and real-time traveler information screens).

...

Changes to Chapter 9 (Community and Area Plans)

The Southeast Policy Area Community Plan shall be amended as follows:

SOUTHEAST POLICY AREA COMMUNITY PLAN

In July 2012, the City Council directed staff to initiate master planning (in the form of a strategic plan) for the Southeast Policy Area (SEPA). ~~The~~ SEPA includes a high-level supportive infrastructure analysis (including traffic/transportation planning, drainage, water, and wastewater), community design guidelines and standards, and programmatic environmental review.

The SEPA Community Plan forms the overall policy basis for successive programs, regulations, and guidelines for development of the Plan Area. All subsequent actions and development approvals must be consistent with this Community Plan, as well as with the overall General Plan and subsequent regulations.

PLAN SETTING

~~The~~ SEPA is approximately ~~4,185~~ 840 acres and is surrounded by several major existing and planned roadways. Kammerer Road is planned as a four to six-lane arterial in the General Plan and has further been identified as part of the route for the Capital SouthEast Connector, forming a link between Elk Grove, south Sacramento County, Rancho Cordova, Folsom, and El Dorado County. Light rail/fixed transit service is planned to extend from Cosumnes River College, along Big Horn Boulevard, through ~~the~~ SEPA.

It is also important to note ~~that the SEPA is bisected by~~ presence of the Shed C drainage channel. This drainage channel takes stormwater from SEPA and the ~~Lent Ranch~~ Livable Employment Area and the detention basin on the Sterling Meadows property (South Pointe Policy Area) and carries it ~~through the agricultural properties~~ to the Stone Lakes National Wildlife Refuge. The man-made Shed C drainage channel ~~primarily serves~~ has historically served agricultural purposes. A preliminary analysis of the Shed C drainage channel was conducted as part of the City's Storm Drainage Master Plan. Additional analyses and improvement studies were necessary and contemplated in the Storm Drainage Master Plan.

GUIDING PRINCIPLES

In March 2013, the City Council identified a series of Guiding Principles for the SEPA. The Guiding Principles identify the overall objectives of the Community Plan and guide the formulation of the land use plan and the policies and standards in the Community Plan and accompanying documents. With the creation and adoption of the Livable Employment Area (which abuts and was created, in part, from SEPA), these Principles and policies have been comprehensively updated.

Vision Statement

The primary objective for ~~the~~ SEPA is to ~~plan for a range of job opportunities that are supported by a balanced mix of locally oriented retail uses and residential densities. The SEPA will be a regional destination for both employment activities and entertainment provide a transition in density and intensity of development from the traditional suburban residential neighborhoods to the north (e.g., Laguna Ridge) to the Livable Employment Area to the south and east.~~ The SEPA will integrate with surrounding land uses through the incorporation of parks and open space, trails, and landscape buffers. A complete transportation network made up of roadways, sidewalks, trails, and transit (including future light rail and/or bus rapid transit) will allow for the safe and effective movement of people and goods within the Plan Area and connect them with other parts of the City and the region. Development will be of quality design and materials that contribute to the sense of place and identity for the area.

Employment-Oriented Development

~~At its core, the SEPA is an employment oriented development—meaning it is a community intended to support and encourage the development of employment uses. It does this by:~~

- ~~• Creating opportunities for a range of employment prospects without predisposing any one use.~~
- ~~• Providing nearby places for employees to live at a variety of price points.~~

- ~~• Providing services for employees, including daily shopping and education.~~
- ~~• Offering recreational opportunities for employees in employment areas and the larger community.~~
- ~~• Presenting a feasible range of choices for employees on how to get to work (e.g., car, bus, walking, biking).~~
- ~~• Engaging corporate attention and applying the power of public/private partnerships. • Creating a total community—not individual, unrelated projects.~~

Guiding Principles

The following principles outline an overarching development framework for the SEPA.

I. Urban Design/Public and Private Realm Design

- Create a strong sense of identity, community, neighborhood, and development at a personal scale.
- Implement quality urban design elements throughout the Plan Area by incorporating locally and environmentally sensitive landscaping, site amenities (e.g., sidewalk furniture, pedestrian lighting, bike racks), and complementary architectural design.
- Locate land uses so that they are complementary to each other, thereby reducing the potential for interface conflicts.

II. Land Use

- Create a plan with a mix of land uses, including employment and residential opportunities supported by commercial and neighborhood-oriented uses and services such as parks, pedestrian and bike paths/trails, and recreational opportunities.
- Provide flexibility in the for varying and increasing intensity and density of land uses to respond to changes in economic, market, and social factors while maintaining land use compatibility.
- ~~• Employment Opportunities/ Jobs Development~~
 - ~~○ Designate sufficient employment-oriented land uses to create job opportunities and improve the jobs/housing balance in the City.~~
 - ~~○ Locate employment uses throughout the Plan Area to take advantage of transportation corridors and proximity to other land uses.~~
 - ~~○ Locate a large block of employment uses including both office and industrial/flex space to offer opportunities for development of an office park/ campus.~~
 - ~~○ Provide synergistic opportunities between employment land uses and supporting retail/commercial and residential uses.~~
- Mixed Uses
 - Encourage mixed-use development (e.g., mixed-use buildings with retail uses on the ground floor and office or residential on upper floors) within a community core that includes a future transit station (e.g., light rail or bus-rapid transit) as part of a village center. Centrally locate Locate the community core in the Plan Area along the Shed C Channel between Big Horn Boulevard and Lotz Parkway and make it easily accessible for a range of uses and services.
- Residential Uses
 - Provide a diverse range of housing densities and product types from low-density estate housing to higher-density multifamily residential opportunities.
 - Encourage multifamily residential uses to be located near transit facilities and, where feasible, near commercial and employment uses.
- Public Services and Community-Oriented Uses
 - Locate educational facilities in the most effective locations for successful attendance, usefulness to the community, and utilization of existing and future public transit facilities.
 - Provide landscaped paseos and/or other off-street pedestrian and cycling amenities, increasing walkability and pedestrian connectivity throughout the Plan Area as well as into adjacent properties. Provide linkages in both east–west and north–south directions.
 - Create a plan that makes active and passive park facilities available at a level consistent with City and Cosumnes Community Services District (CCSD) policies.
 - ~~○ Identify the drainage infrastructure within the Plan Area as dual use facilities, incorporating both drainage functions and recreation opportunities as possible. Recreation opportunities could include active trail amenities along the channel, enhanced landscaping, golfing, and other features as feasible.~~

III. Circulation

- Organize land uses and provide linkages to allow for a significant percentage of Plan Area employees, students, and residents to be located within close proximity of, and have easy access to, existing and future transit facilities.
- Provide the sufficient intensity of employment and residential opportunities to attract and maintain an appropriate level of public transit services.
- Create landscaped parkways and pedestrian and bicycle connections throughout the Plan Area to provide linkages between internal land uses and to surrounding areas.
- Design a circulation system that adequately supports the anticipated level of traffic in the Plan Area.

IV. Environmental Sensitivity

- Design the Plan Area in a manner which comprehensively addresses drainage and flood control for both on-site and off-site properties.
- Create a self-mitigating plan that, to the extent feasible, incorporates environmental mitigation measures into project design.
- Promote the efficient use of energy and resources.

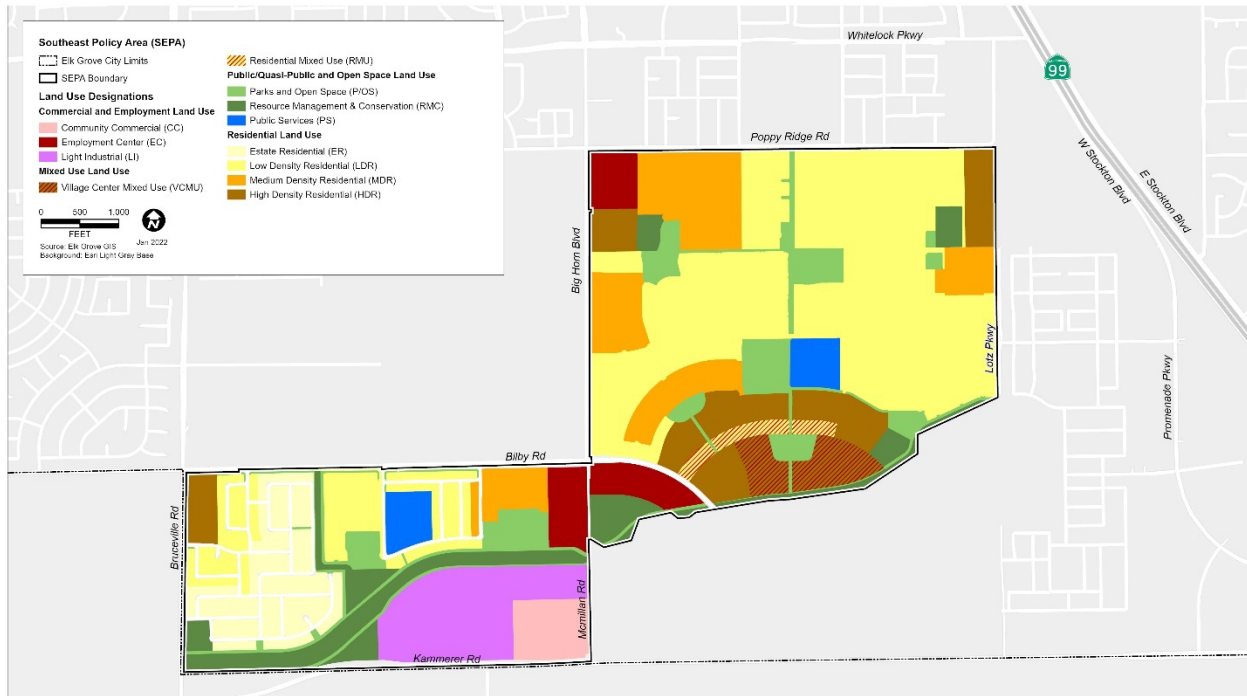
V. Contextual Compatibility

- Develop a plan that recognizes the right of existing uses (both within the Plan Area and adjacent), including agricultural/rural residences, to continue and to minimize impacts upon these uses during the transition from rural to urban/suburban uses.
- Create a plan compatible with adjacent ~~properties~~ Plan Areas. Accommodate connectivity of roadways, pedestrian and bicycle access, and recreation facilities across Plan Area boundaries.
- ~~Create a plan that complements existing and planned commercial corridors and centers within the City.~~

LAND USE PLAN

The General Plan's Land Use Diagram is one of the most important functions of the General Plan, as the map and policies will determine the City's future land uses and character. The land plan for the SEPA is equally critical. The SEPA Land Use Map (Figure SEPA-1) illustrates the planned uses for properties in the Community Plan area and is consistent with the land use categories described in Chapter 3: Planning Framework.

FIGURE SEPA-1: SOUTHEAST POLICY AREA LAND USE MAP



GOALS AND POLICIES: SOUTHEAST POLICY AREA COMMUNITY PLAN

The following goals and policies apply to the SEPA and are in addition to, and in support of, the Citywide policies and actions in the General Plan.

GOAL SEPA-1: AN EFFICIENT ROADWAY NETWORK

Policies: Circulation Policy SEPA-1-1: Develop an efficient roadway network across the Plan Area. Major roadways shall continue the street network established by adjacent developments. Local roads should extend the established roadway pattern to the extent feasible.

Policy SEPA-1-2: Establish protocols for the timing and phasing of roadway improvements that reflect the level of development that is occurring.

Standard SEPA-1-2.a: Backbone roads shall be constructed concurrent with projected development demands both on-site (within the Plan Area) and off-site (outside the Plan Area) to meet City standards

Standard SEPA-1-2.b: The City shall either establish a process for, or require applicants to provide, analysis to ensure adequate infrastructure is in place prior to the demands of the proposed development.

Standard SEPA-1-2.c: No tentative maps or building permits for projects not requiring tentative maps shall be approved within the Plan Area until such time as off-site infrastructure needs and thresholds have been identified.

Standard SEPA-1-2.d: All roadways, pedestrian facilities, and bike routes or bikeways shall be constructed in logical and complete segments, connecting from intersection to intersection, to provide safe and adequate access with each phase of development as conditioned with the approval of tentative maps.

Standard SEPA 1-2.e: Roadways shall consist of the full section from curb to curb, streetlights, sidewalks, and median landscaping, where applicable. Phased construction of sidewalks, temporary asphalt sidewalks, and other measures may be allowed at the discretion of the City. Roadside landscaping (and walls where required) shall be installed concurrent with adjacent development consistent with project phasing. The City may allow the design and construction of portions of arterial or thoroughfare roadways to be deferred where capacity associated with such portions is not immediately needed, provided such deferral is consistent with General Plan Standard MOB-7-1.a, as set forth in the General Plan and/ or applicable environmental document(s). If the deferral involves improvements within or adjacent to a development and the improvements are not eligible under the Elk Grove Roadway Fee Program, the City will require the developer to make an in-lieu payment pursuant to Elk Grove Municipal Code Chapter 12.03 (Street Improvements) or establish and/or participate in a finance mechanism acceptable to the City to fund the deferred improvements.

Standard SEPA-1-2.f: All development shall comply with the requirements of the Landscape Planning Protocol Manual for SEPA to the satisfaction of the City.

Policy SEPA-1-3: Provide for the future extension of fixed-route transit service through the Plan Area via Big Horn Boulevard and Bilby Road.

Standard SEPA 1-3.a: Development shall dedicate (in fee title or through irrevocable offers of dedication) sufficient right-of-way along the planned alignment for track/ dedicated right-of-way, electrical infrastructure (to the extent necessary), and station platforms.

Standard SEPA 1-3.b: A transit facility shall be constructed as part of the Village Center. The facility should include areas for boarding/off-loading, and, to the extent feasible, park-and-ride, drop-off zones, and transfers between public transportation modes (e.g., local bus to fixed transit).

GOAL SEPA-2: THE CREATION OF AQUATIC AND UPLAND HABITAT

Policies: Conservation and Air Quality

Policy SEPA-2-1: Ensure that the ~~realignment~~ reconstruction of the Shed C drainage channel provides area for both drainage of stormwater from the Plan Area and the restoration (to the extent they currently exist) and creation of aquatic and upland habitat in conformance with requirements of the environmental agencies.

GOAL SEPA-3: AN EMPLOYMENT-ORIENTED DEVELOPMENT

Policies: Economic Development

Policy SEPA-3-1: ~~Verify that the land plan for the SEPA has a substantive impact on the jobs/housing ratio in the City by providing acreage for the establishment of one or more business parks.~~ **Policy SEPA-3-2:** ~~Encourage and support the development of jobs producing uses (e.g., office, industrial) within the Plan Area.~~

GOAL SEPA-43: A WIDE RANGE OF HOUSING TYPES

Policies: Housing

Policy SEPA-43-1: Support a wide range of housing types in the Plan Area. Residential developers are encouraged to be innovative and responsive to the changing lifestyles of future residents and trends toward transit, telecommuting, zero-emissions vehicles, and others.

Policy SEPA-43-2: Encourage the following housing types to incorporate affordable housing opportunities throughout the community: residential units placed above retail uses, live-work housing units, secondary dwelling units, and a mix of duplex and fourplex units within single-family residential areas.

Policy SEPA-43-3: Encourage residential developers to provide upscale housing through lower densities and additional amenities. Upscale housing is intended to attract move-up homebuyers who wish to move to or remain in the Elk Grove area. Homes with custom-style features would help create a more diverse and interesting neighborhood. Custom-style features could include high-quality exterior building materials, larger lot sizes, and varied setbacks. Large lots would include those that are 6,500 square feet or larger. Other features included in upscale housing are architectural variations, quality landscaping, extra vehicle storage, homeowners associations, and other attractive marketing features.

GOAL SEPA-54: QUALITY DEVELOPMENT

Policies: Land Use

~~**Policy SEPA-54-1:** Interpret the land plan (see Figure SEPA-1) with sufficient flexibility so as to allow the rearrangement of land uses and provide a more varied mix of densities and/or lot sizes without triggering amendments to the land plan. In making this determination, the City shall ensure: (a) Consistency with the vision, Guiding Principles, and other policies of the Community Plan. (b) Consistency with the overall density and intensity of development contemplated by the land plan. (c) Consistency with the general distribution of land uses as specified in the land plan.~~

Policy SEPA-54-21: Ensure that development in the Plan Area is of quality architectural character and contributes to a positive image of the City.

Standard SEPA-54-21.a: All development shall comply with the requirements of the Architectural Style Guide for SEPA to the satisfaction of the City.

Standard SEPA-54-21.b: All development shall implement the public realm urban design features (e.g., project monumentation/signage, lighting, benches) specified in the SEPA SPA and the Landscape Planning Prototype Manual that visually unify the Plan Area and help establish a sense of place.

~~**Policy SEPA-5-3:** Include sufficient land in the land plan for employment-generating uses that significantly contribute to the City's employment base.~~

~~Standard SEPA-54-3.a: Amendments to the land plan affecting employment-generating land (e.g., office, light industrial/flex) shall:~~

- ~~• Not result in a reduction of acreage for employment-generating land from that provided at initial adoption in July 2014; and~~
- ~~• Be located on a site or sites with equal or higher development potential (e.g., along arterials, collectors, and/or transit corridors; land configuration and size allow for efficient and practical development); and~~
- ~~• Require a super-majority (4/5) vote of the City Council to approve.~~

~~**Policy SEPA-54-4:** Encourage employment areas to provide supporting retail service uses, within either a primary use building or a stand-alone building.~~

~~Standard SEPA-5-4.a: Office-supporting retail and service uses within employment areas shall have reduced development standards (e.g., parking) when compared to retail uses in commercial areas.~~

Policy SEPA-54-53: Make certain that the center heart of the SEPA consists of a community Village Center that includes a mix of uses (commercial, office, residential) and civic spaces and serves as the focal point of the Plan Area.

Policy SEPA-54-6: Ensure that retail uses located in the Village Center Mixed Use designation are complementary to ~~the regional retail uses in adjacent projects~~ adjoining plan areas.

GOAL SEPA-65: ACCEPTABLE NOISE LEVELS

Policies: Noise

Policy SEPA-65-1: Except as provided herein, require that all development in the SEPA complies with the City's noise standards and policies as outlined in the General Plan and the Municipal Code.

GOAL SEPA-76: A CONNECTED PARKS, TRAILS, AND OPEN SPACE NETWORK

Policies: Parks, Trails, and Open Space

Policy SEPA-76-1: Develop an off-street trail network that connects employment and residential areas with parks, school, mixed-use, and commercial-service areas.

Standard SEPA-76-1.a: Backbone trail facilities shall be constructed concurrently with backbone infrastructure (e.g., roadway) facilities.

Standard SEPA-76-1.b: To the extent feasible, trails that cross major roadway (arterial or major collectors) shall be grade-separated. The City encourages the trail to be placed under roads and to be constructed as part of the roadway system. Specifically, the trails along Shed C shall be grade separated where they cross Big Horn Boulevard and Bilby Road.

Policy SEPA-76-2: Require that parks are provided in the SEPA at a minimum of 5 acres of park land per 1,000 residents.

Policy SEPA-76-3: Ensure that parks are developed as an integral part of the community.

Standard SEPA-76-3.a: Parks shall be ~~generally~~ located in the areas shown on the land use plan. Precise configuration of park sites shall be determined at the time of Tentative Subdivision Map approval for each residential project.

Standard SEPA-76-3.b: Parks and open space areas shall be linked by a public pedestrian and bicycle circulation system.

Standard SEPA-76-3.c: To the extent feasible, parks shall, at a minimum, ~~shall~~ be bordered on two sides by streets in order to facilitate public access and surveillance, and on three sides when feasible. The remaining one or two sides may be bordered by other land uses such as schools, open spaces, or residential uses.

Standard SEPA-76-3.d: Parks shall be designed, and features within them oriented, to minimize noise and visual impacts on adjoining development.

Standard SEPA-76-3.e: Where parks are adjacent to drainage corridors or parkways, require the park to include pedestrian connections to these facilities.

Standard SEPA-76-3.f: Ensure that parks adjacent to drainage corridors or parkways include appropriate fencing or plant buffering to separate active recreation areas in the park from the drainage corridor.

Standard SEPA-76-3.g: Require that all parklands, paseos, and other open space be dedicated to the City, as well as all drainage and publicly maintained roadside landscape corridors.

Standard SEPA-76-3.h: Continue to implement provisions in the SEPA SPA regarding joint-use park and drainage facilities on a case-by-case basis. Ultimate designs for these facilities, if approved, shall balance active park land needs with drainage facility design requirements.

GOAL SEPA-87: AN AREA-WIDE INFRASTRUCTURE SYSTEM

Policies: Public Facilities and Finance

Drainage

Policy SEPA-87-1: Establish an area-wide drainage infrastructure system, consistent with the Citywide Storm Drainage Master Plan, which reflects natural ecological and hydrological systems.

Standard SEPA-87-1.a: New development shall implement the Drainage Master Plan.

Policy SEPA-87-2: Establish a drainage system pursuant to the needs of the adopted land plan in the Community Plan. Review and approve all phased drainage facilities prior to implementation. Phased facilities shall be reviewed to ensure consistency with the concepts in the Drainage Master Plan and successful implementation of the ultimate facilities identified in the plan.

Policy SEPA-87-3: Ensure that adequate drainage facilities are in place and operational concurrent with each new increment of development.

Infrastructure Financing

Policy SEPA-87-4: Support financing opportunities for public infrastructure across the Plan Area.

Policy SEPA-87-5: Ensure the long-term financing of public infrastructure. Prior to approval of a Final Map, or issuance of building permits for projects that do not require a tentative map, require the subject property to be included in a finance district that provides ongoing maintenance funding for the following:

- Public parkways;
- Parks and open space;
- Landscape corridors;
- Trails;
- Landscaped medians;
- Environmental preserves;
- Sound walls and other barrier and property fencing;
- Entryway monuments; and
- A fair share contribution to the community center.

Valuing Public and Quasi-Public Lands

Policy SEPA-87-6: Land necessary for the development of public infrastructure and facilities that serve the SEPA Community Plan and which are included in a development impact fee program or public facilities financing plan shall be compensated at fair market value based upon an appraisal. Water and Sewer Infrastructure

Policy SEPA-87-7: Support the efficient and timely development of water and sewer infrastructure in the Plan Area.

GOAL SEPA-98 SUSTAINABLE DESIGN

Policies: Sustainability

Policy SEPA-98-1: Require development in the Plan Area to provide opportunities for implementation of sustainable design principles. Design opportunities include, but are not limited to, the following:

- Orienting homes and buildings in an east–west alignment for southern exposure to take advantage of passive or natural heating or cooling.
- Incorporating photovoltaic and other renewable energy systems into building and site design.
- Incorporating low-impact development features, such as bioswales and permeable materials for paved areas.
- Utilizing a roadway network with a clear, logical hierarchy that is organized on a modified grid. Connectivity to adjacent areas, including potential future development, is encouraged.
- Features that reduce the Urban Heat Island effect, including cool roofs, walls and pavement, locally appropriate green roofs and walls, and shading.

Goal RA-3 (Context Sensitive Mobility) in the Rural Area Community Plan shall be amended as follows:

GOAL RA-3: CONTEXT-SENSITIVE MOBILITY

Recognizing that a complete street in a rural area is different from a complete street in a more urban setting, the following policies encourage design flexibility to ensure that the rural context in the Sheldon/Rural Area remains intact when improvements to the street network are being planned and implemented.

Policies: Mobility Improvements

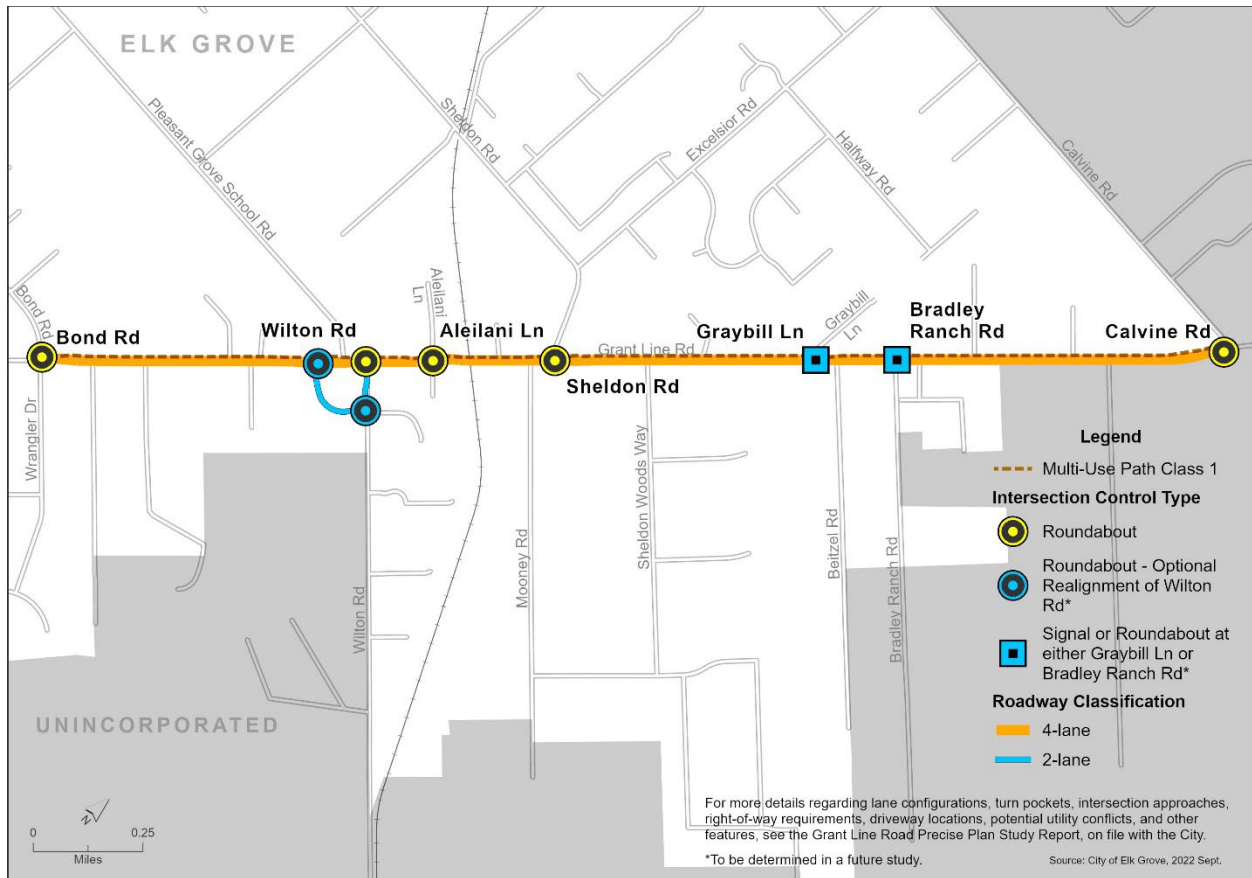
Policy RA-3-1: Make context-sensitive design improvements to roadways in the Rural Area, when warranted, consistent with the Rural Road Improvement Policy and consistent with the intent of the Complete Streets Act.

Policy RA-3-2: In planning and implementing street projects, allow flexibility in design to maintain sensitivity to local conditions and a local sense of place, including preservation of mature native trees.

Policy RA-3-3: Support improvements necessary to ensure safe, efficient, and improved access for mobility in the Rural Area consistent with the Rural Road Improvement Policy.

Policy RA-3-4: ~~When planning improvements~~ Improvements to Grant Line Road shall implement the Grant Line Road Precise Plan, as illustrated in Figure RA-2, which implements coordinate local and regional planning activities and projects, including the Capital SouthEast Connector. Design ~~These improvements to be consistent with~~ support the local context including driveway accessibility, needs of larger vehicles and agricultural trailers, and the regional intent of the roadway.

FIGURE RA-2: GRANT LINE ROAD PRECISE PLAN



The introduction text to Goal EEG-1 and accompanying Table EEG-1 in the Eastern Elk Grove Community Plan shall be amended as follows:

GOAL EEG-1: DEFINED RESIDENTIAL COMMUNITIES

The EEG Community Plan comprises two residential communities: the East Elk Grove sub-area and the Triangle sub-area. East Elk Grove is governed by a set of residential unit caps, while the Triangle is governed by minimum residential lot sizes that can be used to establish a maximum development level. The East Elk Grove sub-area has a total maximum buildout of 4,378 4,416 dwelling units with unit allocations designated to individual properties, as established under the East Elk Grove Specific Plan. The City tracks residential development in this sub-area and maintains records to ensure compliance with the maximum allowable dwelling units for each designated property. Individual property accounting will continue to be tracked by the City. Table EEG-1 summarizes the status of total dwelling units approved against the maximum allowable dwelling units in the East Elk Grove sub-area as of the date of adoption of this Community Plan. The anticipated dwelling unit capacity for the Triangle sub-area is also included.

Policies: Community Plan Land Use and Character

Policy EEG-1-1: (East Elk Grove Sub-Area):

Development within the East Elk Grove sub-area shall conform to the development capacity limits provided in Table EEG-1 and the land use map provided in Figure EEG-1. Uses shall generally transition from

commercial and industrial development along Waterman Road (west of the powerline corridor) to suburban residential development in the central area, to larger residential lots along Bradshaw Road. Residential development shall be designed with more suburban development patterns and characteristics, including curbs and gutters, sound walls along arterial roadways, sidewalks, and street lights.

TABLE EEG-1: EASTERN ELK GROVE DEVELOPMENT CAPACITY

Plan Sub-Area	Existing Residential Development (2018)	Future Residential Development	Total Residential Development
East Elk Grove	3,747	634 669	4,378 <u>4,416</u>
Triangle¹	297	769	1,066
Total	4,044	1,400 <u>1,438</u>	5,444 <u>5,482</u>

Notes:

1. Based on average buildout of residential properties. Does not represent a maximum allowable residential dwelling unit capacity. The Triangle Sub-Area is subject to the minimum residential density as provided in this General Plan and the lot size requirements as provided in the Triangle Special Planning Area (zoning provisions). Buildout estimate is for information purposes only.

...

The New Livable Employment Area Community Plan shall be added to Chapter 9 as follows:

THE LIVABLE EMPLOYMENT AREA COMMUNITY PLAN

In 2019, the City Council directed staff to study how to leverage the value of a planned new thoroughfare, Kammerer Road, beyond its ability to carry vehicle traffic, but to lay the foundation for economic development in the form of a 21st century employment center. The charge was to connect transportation with land-use planning and design in recognition that the most economically, socially, and environmentally successful communities, are walkable and contain a mix of uses. There is a reason that the regions of the country leading the world in venture capital funding are walkable urban places. In the old, auto-dominated model, one drives from one business park to the next. However, in livable employment centers, everything is happening within a 1-mile radius. Technology investors have argued that it's about running into people and building relationships, because people want to work with and invest in people they know and trust.

The Kammerer Road and Promenade Parkway corridors provide an opportunity to develop a walkable, urban area for Elk Grove. Roadway facilities can be reimagined as more than traditional arterials and collectors, to a more finely grained network providing a higher density of intersections which is more typical of high-value, walkable urban communities. The reconstruction of Kammerer Road as urban avenue provides an opportunity for the City to advance these initiatives by targeting them toward the type of employment centers that will appeal to companies and employees participating in the knowledge economy of 21st century.

PLAN SETTING AND RELATIONSHIP TO OTHER PARTS OF THIS GENERAL PLAN

The Livable Employment Area encompasses approximately 1,150 Acres. It includes some areas that were previously part of the Southeast Policy Area (SEPA), as well as areas that were previously part of the South Pointe Land Use Policy Area and the Lent Ranch Marketplace Policy Area. It also overlays a portion of the South Study Area; as this area develops, future land plans will incorporate the planned land uses and circulation system.

The land plan, as shown in Figure LEA-1, is developed using the urban planning concept of the Transect. The Transect defines a series of zones that transition from sparse rural farmhouses to the dense urban core (Figure LEA-2). Each zone is fractal in that it contains a similar transition from the edge to the center of the neighborhood. For the Livable Employment Area, Transects T-3, T-4, and T-5 have been selected. An additional T-3R has been created, which leverages the density and street structure of the T-3 but focuses the uses on more residential activities. The basic uses and densities/intensities for these Transects are described in Chapter 3 (Planning Framework) and will be implemented in a new Special Planning Area document, adopted as part of the City's Municipal Code.

Utilizing the Transect, the land plan is organized around four centers. Each center is defined with higher densities/intensities of uses (typically T-4 and T-5), with the areas between centers having relatively lower intensities (T-3 and T-3R). The character of each center is defined by both the assemblage of diverse and dense land use and the features of the public realm, including plazas, parks, and other gathering spaces and access to public transit (typically light rail/fixed transit or, in some instances, traditional or other bus service). The location of the centers is shown in Figure LEA-3.

Figure LEA-1: Location and Land Plan for the Livable Employment Area Community Plan

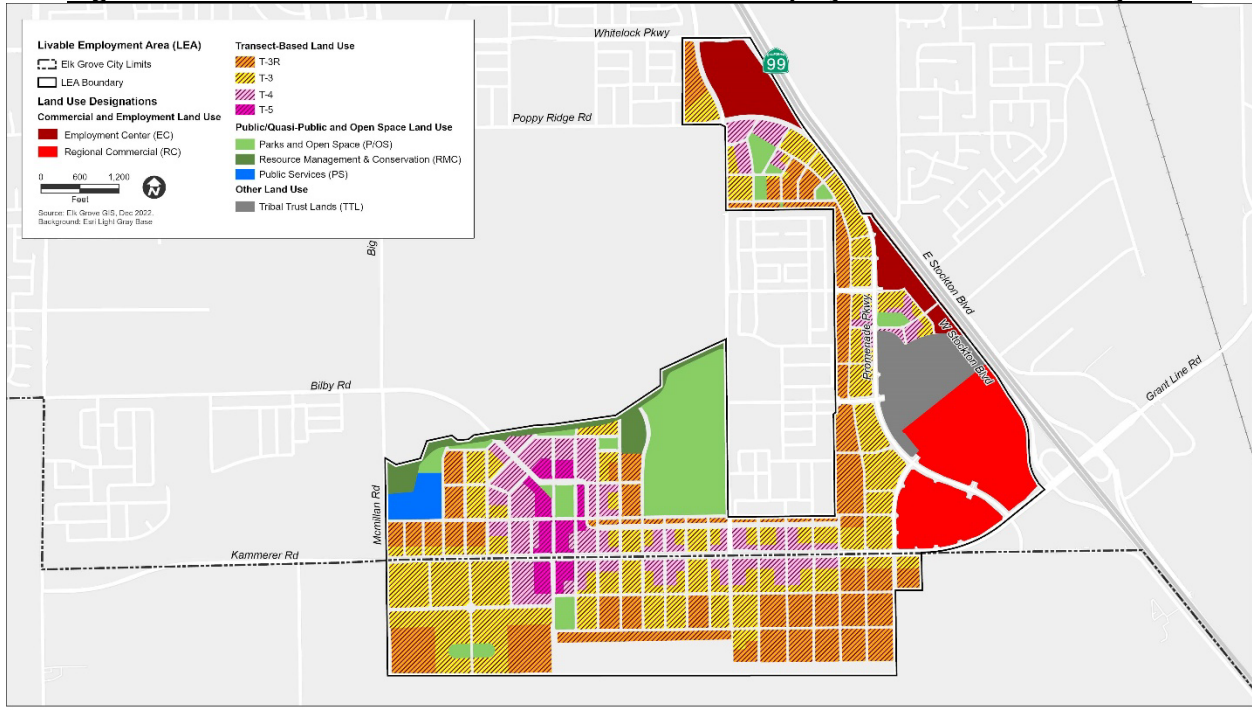


Figure LEA-2: Transect of Urbanism

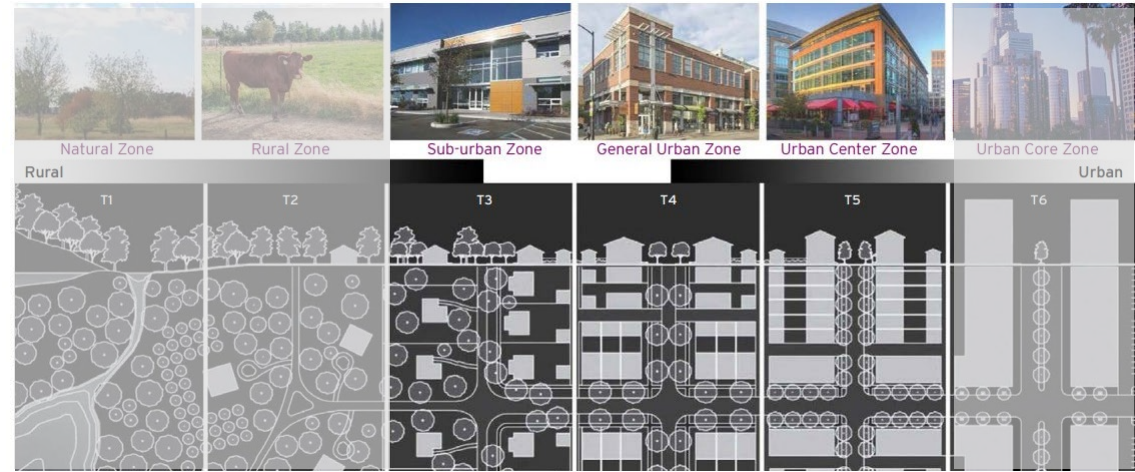


Figure LEA-3: Center Locations



GUIDING PRINCIPALS

Vision Statement

The primary objective for the Livable Employment Area is to create a physical environment that supports the growth of 21st century employment opportunities. The epicenters of advanced research and application of the sciences and technologies that will survive through the 21st Century and beyond must be set in a walkable, exciting, vibrant community with great quality-of-life amenities that will attract and retain the best and the brightest in their respective disciplines.

To that end the Livable Employment Area will be a place where:

- Venture capitalists, technology entrepreneurs and creative engineers and designers can mix and network.
- Inventors and entrepreneurs can walk or bike to work, or lunch, and enjoy the cultural amenities of the immediate neighborhood, the City, or the region.
- Artists, architects and other designers mix with one another as well as technology professionals to inspire and be inspired.
- Old and young can easily access public squares, greens, and parks and trails.
- A variety of mobility options allow for ease of movement within the area to the region at large.
- Neighborhood streets (inclusive of the roadways and adjoining sidewalks and bike lanes/facilities) are valued beyond their ability to carry traffic. These elements of the public realms serve as significant urban places in and of themselves, because they are where neighbors, friends, and colleagues meet and socialize. They are supported with sidewalk cafes, lively plazas, and restful parks.

Guiding Principles

The following principles outline an overarching development framework for the Livable Employment Area

1. Urban Design/Public and Private Realm Design:

- Create neighborhoods with distinct and differentiated centers.

- Encourage mixed-use development patterns - both horizontal and vertical mixes – to bring daily necessities within an easy walk of many residents, reducing stress on transportation systems.
- Multi-modal connectivity between adjoining neighborhoods and activity centers is key to unlocking the value of mixed-use infill development, which builds value by offering convenient access to nearby jobs, housing, recreation and commercial amenities.
- Emphasize Place-making by carefully coordinating public circulation and open space networks with existing and new private development, allowing each new increment of development to add value to surrounding, connected neighborhoods and properties.
- Create new local street networks and walkable block structures within the existing large parcels.
- Ensure that new development fronts those streets with human-scale, pedestrian-oriented frontages.
- Encourage shared parking arrangements at various scales for different mixes of uses.
- Refine the design of Kammerer Road itself to increase its compatibility with each of the subareas through which it passes.

II. Land Use

- Locate the four-new centers around future transit stations (LRT or Bus) and implement principles of Transit Oriented Development (TOD) around these Station Areas. TOD is a growth strategy whose ultimate objective is to bring people and businesses close enough to transportation options so that people utilize transit from home to work, to school, to shopping, and to recreational opportunities.
- Create a range of densities (both housing and commercial) at each Station Area, which will allow new development to meet varying market conditions. The range of densities should be developed on a graduated scale from the center of a station area to its edge, known as the Transect of Urbanism. This shall be the basis for Zoning Regulations governing this area.
- The Livable Employment Area is diverse and includes a mix of places to work, live, learn, shop and play – all within a walkable area. These mixed use communities will be more resilient and engender collaboration – one of the hallmarks of the modern employment center. Diversity can exist along a cross-section of an entire Neighborhood regardless of who owns which parcel of land or even when it is developed. In other words, not every building needs to be mixed-use for the diversity of a neighborhood to emerge.

III. Circulation

- Organize neighborhoods around centers, at which future light rail/fixed transit stations or feeder bus stops are located.
- Develop Kammerer Road as a Urban Avenue.
- Implement a Circulation Plan that
 - Promotes higher rates of walking, bicycling, and transit than other parts of the City.
 - Incorporates safety features and design elements that recognize safety as more important than speed.
 - Includes safe spaces for all users (e.g., pedestrians, cyclists, transit, motorists).
- Connect Kammerer Road to an adjacent street grid that features an interconnected pattern of neighborhood streets and walkable blocks. Ensure that intersection density achieves at least 150 intersections per square mile.
- Create “complete streets”, which are designed and operated to enable safe use and support mobility for all users. Those include people of all ages and abilities, regardless of whether they are travelling as drivers, pedestrians, bicyclists, or public transportation riders.
- Provide links to larger regional trail and bicycle networks. Include infrastructure to accommodate ride-, bike, scooter-, and carsharing.
- Create the occasional “pedestrian priority streets”, a shared street characterized by narrow widths, and absence of curbs and sidewalks. Vehicles are slowed by placing trees, planters, parking areas, and other obstacles in the street

- Designated Bike Lanes. Protected lanes for cyclists mean safer roads for people on bikes and people in cars and on foot which consequently motivates residents and workers to cycle more often.

IV. Environmental Sensitivity

Seek to achieve carbon neutrality in development through efficiency and moderation in the use of materials, and energy. Utilize a conscious approach to energy and ecological conservation in the design of the built environment.

- Development within the Plan Area should incorporate the latest in blue/green infrastructure. Examples include stormwater management that captures and treats rainwater before releasing to a storm drain system. This would include integrating storm water management into the design of streets and parking areas and even green roofs, where practicable.
- Implement the latest CalGreen Building Code requirements and any higher efficiency provisions of the City's Climate Action Plan. Support solutions that provide renewable energy solutions at the district or Plan Area level.
- Streets should include native or adapted street trees as part of the infrastructure. Not only do these provide shade, thereby reducing the urban heat island effect, but they also help with the re-absorption of water into the ground for recharge while absorbing sediments and other pollutants.
- Emphasize the importance of natural daylighting in new construction, which not only provides many aesthetic and health benefits, but can lead to substantial energy savings.

V. Contextual Compatibility

- Develop a plan that recognizes the right of existing uses (both within the Plan Area and adjacent), including agricultural/rural residences, to continue in the near-term and to minimize impacts upon these uses until they are ready to convert to urban uses.
- Provide for connectivity of roadways, pedestrian and bicycle access, and recreation facilities between the Plan Area and adjoining development.

LAND USE PLAN

The General Plan's Land Use Diagram is one of the most important functions of the General Plan, as the map and policies will determine the City's future land uses and character. The land plan for the Livable Employment Area is equally critical. The Livable Employment Area Land Use Map (Figure LEA-1) illustrates the planned uses for properties in the Community Plan area and is consistent with the land use categories described in Chapter 3: *Planning Framework*.

GOALS AND POLICIES: LIVABLE EMPLOYMENT AREA COMMUNITY PLAN

The following goals and policies apply to the Livable Employment Area Community Plan and are in addition to, and in support of, the Citywide policies and actions in the General Plan.

LEA-1: THE DEVELOPMENT OF FOUR MIXED-USE PEDESTRIAN-FRIENDLY CENTERS

Policies: Circulation

Policy LEA -1-1: Identify a route close to Kammerer Road for an extension of the fixed route transit from Sacramento with at and at least two additional station locations.

Policy LEA- 1-2: Identify at least two additional locations along or near Promenade Parkway for significant bus stops/transfer locations that define the locations of Centers 3 and 4.

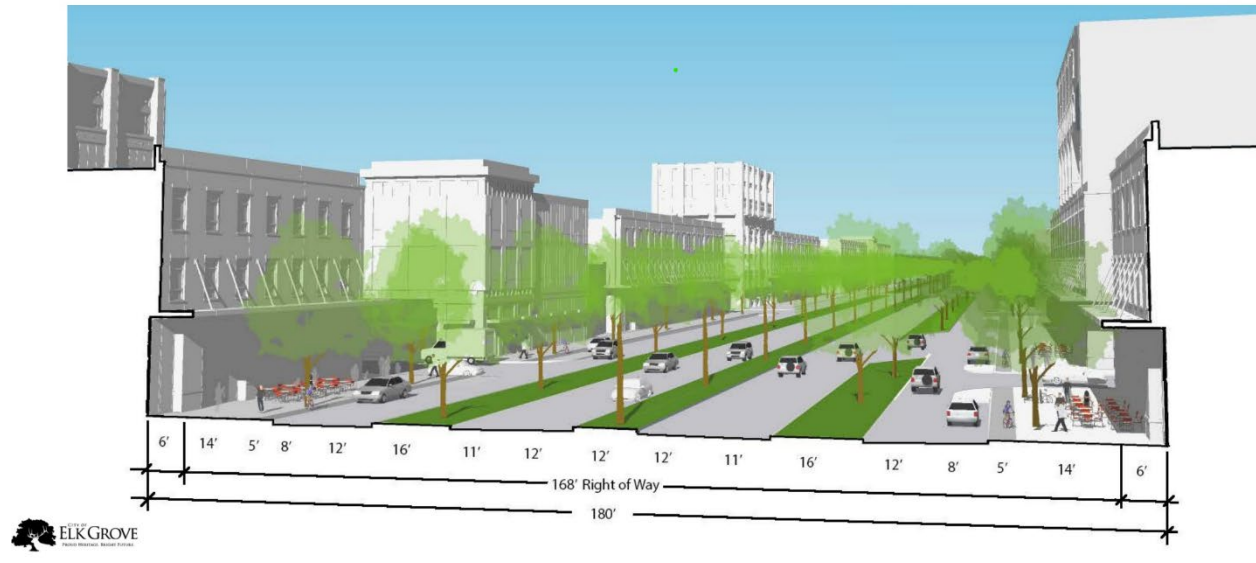
Policy LEA-1-3: Within the Livable Employment Area construct Kammerer Road as a "urban avenue"/"multi-way boulevard". See Figure LEA-4.

Standard LEA-1-3.a: The multi-way boulevard shall consist of two vehicular lanes in each direction (total of four lanes) and a 12' median. Adjacent to and on each side of this roadway, construct a one-way slip lane to provide an attractive and pedestrian streetscape for residences and commercial activity.

Standard LEA 1-3.b: Design these slip lanes to have a low traffic speed/volume making them safe for a bike lane which should be buffered by a parking lane and tree lined sidewalks.

Standard LEA 1-3.c: Separating the slip lane from the main thoroughfare shall be a 16' median allowing space for through traffic to merge into the slip lane, which in turn will provide access to local streets.

Figure LEA-4: Kammerer Road Urban Avenue/Multi-way Boulevard



Policy LEA-1-4: The Livable Employment Area shall be developed with a grid of streets.

Standard LEA 1-4.a: New development shall be designed as part of the street grid and have an intersection density of no less than 150 vehicular intersections per square mile.

Standard LEA 1-4.b: Within each block, service roads, such as alleys, lanes, and driveways, as well as pedestrian and bicycle only passages should be provided. The combined number of vehicular street and non-vehicular (pedestrian passages) intersections should exceed 300 intersections per square mile.

Standard LEA 1-4.c: Establish and implement provisions for the phasing of the street grid system, including the use of Irrevocable Offers of Dedication to the City. Only allow for phased implementation where the ultimate right of way is secured as part of the first phase development and long-term implementation and construction is assured.

Policy LEA 1-5: Require that the street network be designed to define blocks whose perimeters (measured as the sum of all sides) should generally not exceed: 3,000 feet in T3 Zones; 2,500 feet in T4 Zones; and 2,000 feet in T5 Zones.

Policy LEA 1-6: Future development should be designed such that new streets intersect at other streets forming the street grid. Streets in new developments should connect to existing streets in existing development where at all possible.

Policy LEA 1-8: Require that large lot developments, such as shopping centers, be designed to allow transformation to the street grid standards in Policies LEA 1-3, and 1-4, over time. Drive aisles in shopping centers are to form part of the street grid and should be designed to meet the standards of city streets (with appropriate sidewalks and streetscape) so that parking fields can be converted to blocks with the drive aisles as streets

Policy LEA 1-9: Cul-de-sacs and other non-through streets (such as loop roads) should be minimized and used to accommodate specific site conditions only (e.g., abutting drainage facilities).

Policy LEA 1-10: Require that all new thoroughfares are designed under a “Complete Streets” policy consisting, generally, of vehicular lanes and Public Frontages (the latter of which will vary from street to street). Consider Class 2 or Class 3 bicycle lanes on all streets. The Public Frontage is an ensemble that is tailored to specific street types and includes sidewalks, curbs, planters, bicycle facilities, and street trees.

Policy LEA 1-11: Require that streets are designed in context with the urban form and desired design speed of the Transect Zones through which they pass. Streets may include vehicular lanes in a variety of widths for parked and for moving vehicles, including bicycles.

Standard LEA-1-11.a: Vehicular lane width should generally not exceed 10’ in T-3 and T-4 zones, and 11’ in T-5 zones, except for the through lanes of Kammerer Road.

Policy 1-12: A bicycle network consisting of Bicycle Trails, Bicycle Routes and Bicycle Lanes should also be provided.

Policy 1-13: Within the Transect Zones (T3 through T5), pedestrian comfort is a primary consideration of Street Design. Design conflict between vehicular and pedestrian movement generally shall be decided in favor of the pedestrian.

LEA-2: LIVEABLE EMPLOYMENT AREA DEVELOPMENT

Policies: Structure and Organization

Policy LEA 2-1: Implement the recommended organization and structure of neighborhood areas and mixed-use centers in relation to Kammerer Road and Promenade Parkway and the existing and proposed street network development patterns as shown in Figures LEA-1, LEA-2, LEA-3, and LEA-4.

Policy LEA-2-2: Within the Livable Employment Area, established new zoning regulations that implement the Transect concept through a new Special Planning Area. The Special Planning Area shall be formatted as Form-Based Code, calibrated to the applicable transect zones to ensure that building form and placement, as well as the design of streets and public spaces support evolution of walkable, thriving, public realm.

Policy LEA 2-3: Identify the locations and characteristics of the four centers, including application of the Transect, proposed land use and circulation patterns, public space, and building forms.

Policy LEA 2-4

- Center 1 is to be the most urban of all the centers, a high concentration of retail centers and offices as well as higher density residential development. Buildings will range from two to seven stories, though additional height may be allowed.

What is a Form-Based Code?

A Form-Based Code is a type of development regulation that prioritizes the form of buildings, rather than the use within them. This contrasts with traditional zoning regulations, which tend to be more use-based.

Form-based codes address the relationship between building facades and the public realm, the form and mass of buildings in relation to one another, and the scale and types of streets and blocks.

- Center 2 is to be considered the gateway to the Plan Area and contain the terminus station of the light rail line. Development shall include be urban in style while providing a transition to the existing single family neighborhood to the north.
- Center 3 is to take advantage of the adjacent Sky River Casino and embrace surrounding development.
- Center 4 has important streets connecting in it, including to State Route 99. This center will also have adjacent expansion opportunities

LEA-3: PARKING IS “RIGHT-SIZED” FOR FUTURE REQUIREMENTS

Policies: Parking

Policy LEA 3-1: Utilize Transportation Demand Management solutions (TDMs) to reduce the requirements for parking particularly at employment centers including incentives for car-pooling, parking cash-out strategies, subsidized transit passes for employees and incorporating changing rooms with showers for employees who bike or who walk long distances to work.

Policy LEA 3-2: Minimize (or eliminate) off-street parking requirements. Parking maximums should be explored in future discussions as trends and paradigms evolve. Couple this with residential parking permits to ensure that on-street parking in residential areas is preserved for use by the residents. Consider phased reductions in parking requirements as densities increase over time.

Policy LEA 3-3: Where off-street parking requirements exist, consider creation of a fee in lieu system allowing developers to pay into a parking fund that will provide for the construction of centralized parking for common use.

Policy LEA 3-4: Un-bundle off-street parking from the land uses it was built to serve, so that any excess parking can be leased on the open market.

Policy LEA 3-5: Utilize fair-market managed on-street parking at parking meters where parking is in demand. Set the price (utilizing computer-controlled meters) so that one out of every nine spaces is always available.

Policy LEA 3-6: In lower intensity areas, such as T-3 and T-4 zones, where surface parking may be the norm, screen such lots from primary street frontages with buildings, and from secondary street frontages with screening devices such as fences, walls or hedges when buildings are not feasible along those edges.

Policy LEA 3-7: In higher intensity areas, such as higher density T4 zones and T5 zones, parking should, ultimately, be placed in garages. Such garages should be screened and out of view from primary streets and be lined with active uses to enhance the pedestrian experience.

LEA-4: A HEALTHY AND SAFE COMMUNITY

Policies: Pedestrian and Bicycle Oriented Design

Policy LEA 4-1: Pedestrian comfort is prioritized throughout the area, though appropriately sized, tree-shaded sidewalks

Policy LEA 4-2: Design standards emphasize the continuity of public frontages with buildings or landscape edges while discouraging surface parking lots and/or blank walls.

Policy LEA 4-3: The frequency of vehicular intersections is at least 150 / square mile allowing multiple opportunities for pedestrians to cross streets.

Policy LEA 4-4: Mid-block pedestrian crossings are provided where blocks are unusually long

Policy LEA 4-5: Intersections are designed to reduce the distance pedestrians have to cross through the use of curb-extensions and reduced curb-return radii.

Policy LEA 4-6: Crime Prevention through Environmental Design (CPTED) principles, which emphasize “eyes on the street” are utilized in the design of the public realm

Policy LEA 4-7: Schools sites should be provided, sized, and designed to support walking to school as the norm.

Policy LEA 4-7: Create a bicycle plan which provides Class I or IV bike facilities on the heaviest trafficked streets, Class II routes on lesser trafficked but through streets, and Class III routes on more intimate neighborhood streets.

Policy LEA 4-8: Build in areas for bike racks and bike-share stations in the higher intensity T-4 and T-5 areas of the plan area.

LEA-5: A NETWORK OF PARKS AND OPEN SPACES INTEGRATED INTO THE DEVELOPMENT AREA

Policies: Parks and Open Space

Policy LEA 5-1: Parks shall be generally located in the areas shown on the land use plan. Precise configuration of park sites shall be determined at the time of Tentative Subdivision Map approval.

Policy LEA 5-2: Require that each center include at least 5% of its Urbanized area to Civic or Public Space with there being at least one main Civic Space within 800 feet of the geographic center of each sub-area.

Policy LEA 5-3: Within 800 feet of every lot provided for Residential use, a Civic Space designed and equipped as a playground should be provided.

Policy LEA 5-4: Civic Spaces including Plazas and Squares shall be defined by building on at least one side, or up to three sides, and activated by ground floor uses.

Policy LEA 5-5: Parks shall be fronted by streets and buildings ensuring “eyes on the park” except on sides adjacent to drainage corridors and parkway.

Policy LEA 5-6: Require that Parks shall be designed for users of all ages.

Policy LEA 5-7: Require that all parklands, paseos, and other open space, as well as all drainage and publicly maintained roadside landscape corridors, be dedicated to the City and/or CCSD, as applicable.

##

Appendix C

Fehr & Peers VMT Memo

Model Development Report and VMT Methodology

May 31, 2023

Prepared By:

FEHR & PEERS

Prepared for

City of Elk Grove



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1 Introduction

The report presents the Activity-Based Travel Demand Model (ABM) built for the City of Elk Grove. This report describes the following elements of the model development process:

- Base Year Model Development
- Model Calibration
- Model Validation
- Future Year Model Development
- Vehicle Miles of Travel (VMT) Threshold Development

Activity-Based Travel Demand Model

A travel demand model is a computer program that estimates traffic levels and travel patterns for a specific geographic area. Travel demand models use current travel behavior to predict future travel patterns from a sample of travel behavior data. Activity-based models are based on the principle that travel demand is derived from people's daily activity patterns. Activity-based models predict which activities are conducted when, where, for how long, for and with whom, and the travel choices they will make to complete them. ABMs use a tour-based structure to represent and model travel patterns. Tours are defined as chains of trips beginning and ending at the same location.

The model consists of input files that summarize the area's population and household characteristics, roadway network, travel characteristics, and other key factors. Using this data, the model performs a series of calculations to determine the activities that are generated throughout the day, number of trips generated, the beginning and ending location of each trip, and the route taken by the trip. The model's output includes projections of trip details for individuals in the model area, VMT, traffic volumes on roadways, and peak hour turning movements at selected intersections.

Benefits of Activity-Based Models

Travel demand models are valuable tools for preparing long-range transportation planning studies, like the City's General Plan. The travel model can be used to estimate the average daily and peak hour traffic volumes on the major roads in response to planned population and employment growth, changes in transportation infrastructure, policy assumptions, and provides a consistent platform to analyze different land use and transportation scenarios.

Activity based models represent an emerging practice in regional transportation planning. The genesis and continued support for ABM development is derived from the challenges of modern transportation planning, especially for distinguishing between the social outcomes of transportation policy and the underlying

choices made by travelers¹. ABMs account for value-of-time distribution among the population and account for the full range of costs and utilities associated with travel. ABMs account for changes in travel behavior due to person-level attributes of an individual (age, gender, race, occupation status, etc.). As a result, ABMs allow for evaluating the effect of alternative policies on individuals travel behavior such VMT mitigation strategies.

EGSIM20

EGSIM20 is the city of Elk Grove Travel Demand Model, which is a modified version of the latest ABM developed by Sacramento Area Council of Governments (SACOG) known as SACSIM19. EGSIM20 can be used for many purposes related to the planning and design of the City of Elk Grove's transportation system. The following lists potential uses of the model.

- Update the land use and circulation elements of planning documents such as City's General Plan and transportation mitigation fee program.
- Evaluate the impacts of land development proposals.
- Support the development of transportation sections of CEQA documents.
- Support the preparation of project development reports for Caltrans.

In the near term, EGSIM20 will be used for the following purposes:

- Update the land use and circulation elements of General Plan Amendment (Kammerer Urban Design Study)
- Evaluate VMT and design of Whitelock Parkway Interchange
- Evaluate impacts of Elk Grove Zoo
- Evaluate impacts of Elk Grove Crossing (Annexation Project)
- Evaluate impacts of Bilby Ridge (Annexation Project)
- Evaluate impacts of Other land use and transportation projects

Scenario Years for the City of EGSIM20

The model has two scenario years:

- Base Year Model – 2019/2020 Pre-Pandemic Conditions
- Future Year Model – General Plan Buildout Model (Beyond 2040)

¹ Activity Based Models, Travel Forecasting Resource, https://tfresource.org/topics/Activity_based_models.html

2 Base Year Model Development

The EGSIM20 base year (2020) travel demand model development began with the 2019 version of the SACSIM model that has a base year of 2016. Refinements to the model in the city included adding a more detailed traffic analysis zones (TAZ), adding detail to the roadway network, and updating the base year land use inputs to 2020 conditions. The model's activity generation process was unchanged.

This chapter discusses the methodology used to update the roadway network, TAZs, and land use inputs.

2.1 Roadway Network Development

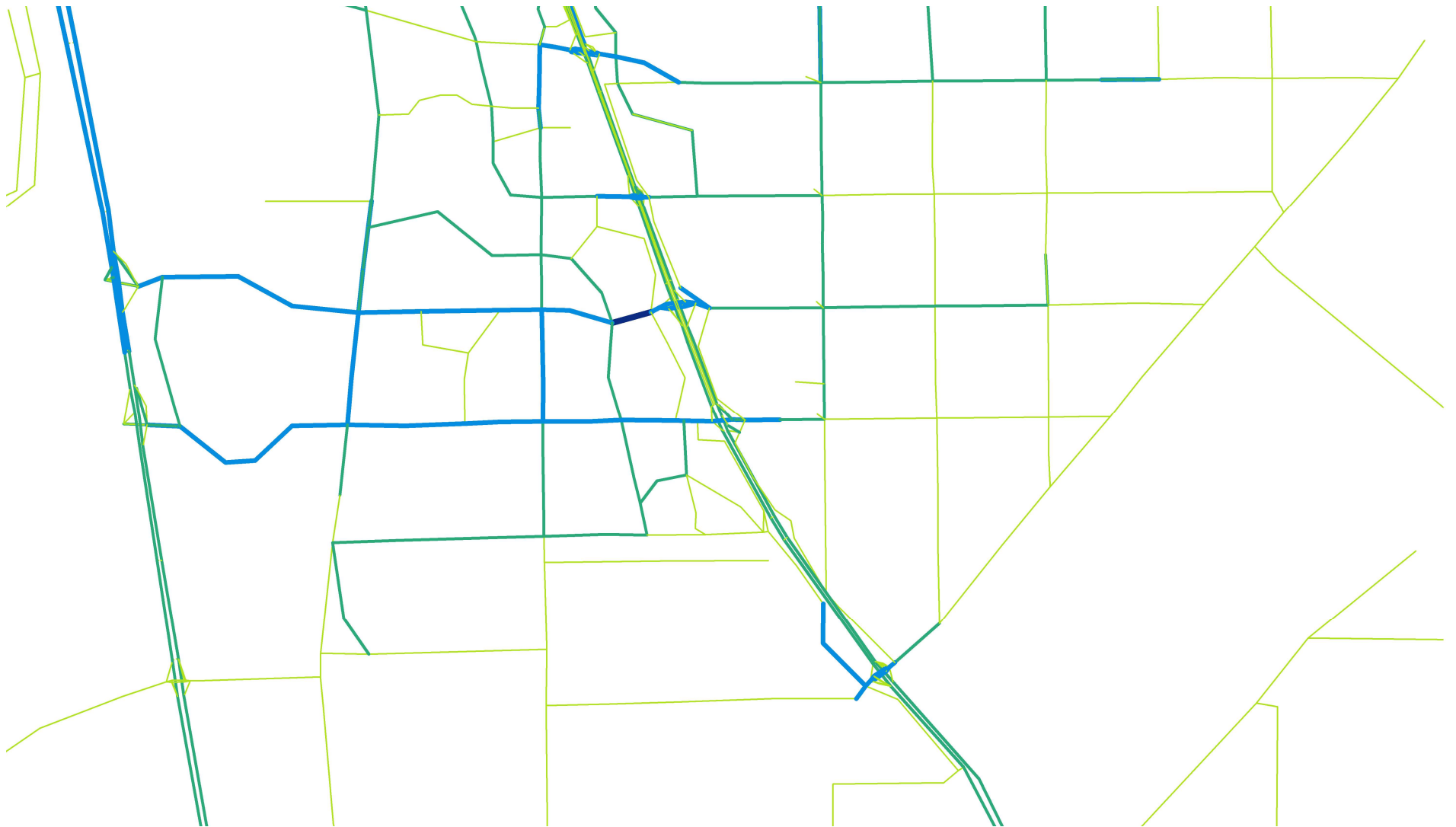
The 2020 base year roadway network was developed from the SACSIM19 base year network. SACSIM19 is a regional model and hence only includes roadways designated as major collectors and above (i.e., arterials, highways, and freeways). Therefore, more detail in the City of Elk Grove was needed to better replicate travel in the city. The roadway network detail added in the city included many collector roadways, local roadways (represented by TAZ connections), and new arterial and collector roadways constructed since 2016. We added the roadway details using the following sources:

- Previous General Plan and Fee Program models
- Latest Maps and Areal imagery (Google Earth and Open streets maps)
- Field Review

Where necessary, the number of directional travel lanes, roadway capacity, free-flow speeds, and permitted turning movements (particularly for special link connections to TAZs call centroids) were updated to replicate 2020 conditions. Chapter 3 (Model Calibration) includes additional discussion of model network refinements. The following model input files were modified:

1. *2016_base.net*
2. *2016_tranline.txt*

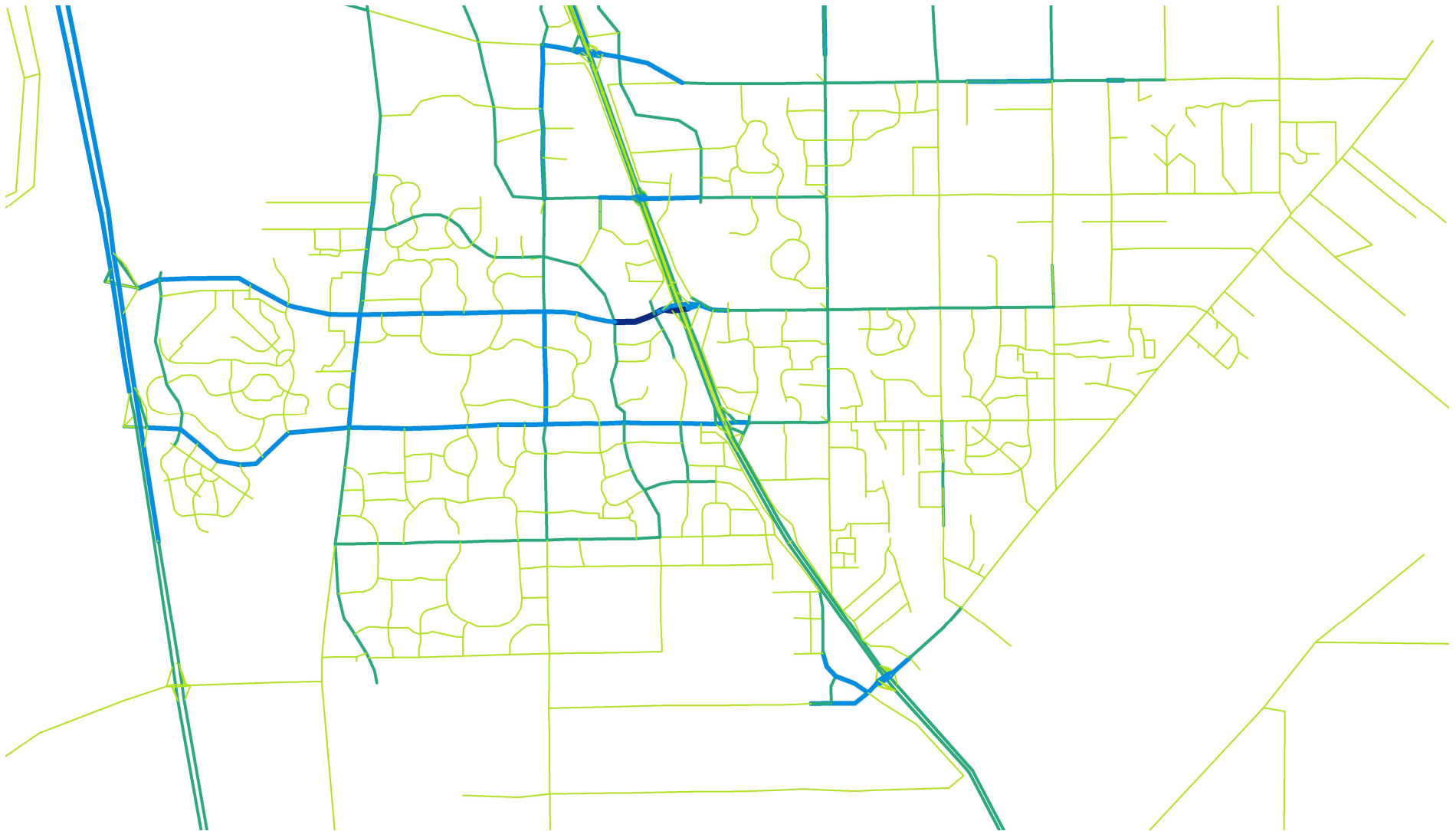
Figure 1 shows the "off-the-shelf" SACSIM19 base year model roadway network in the City of Elk Grove and **Figure 2** shows the final base year model network after refinements. The refinements resulted in an increase of 440 lane mile of roadway.



- 4 lanes in each direction or more
- 3 lanes in each direction
- 2 lanes in each direction
- 1 lane in each direction



Figure 1
SACSIM19 - Base Year
Roadway Network



- 4 lanes in each direction or more
- 3 lanes in each direction
- 2 lanes in each direction
- 1 lane in each direction



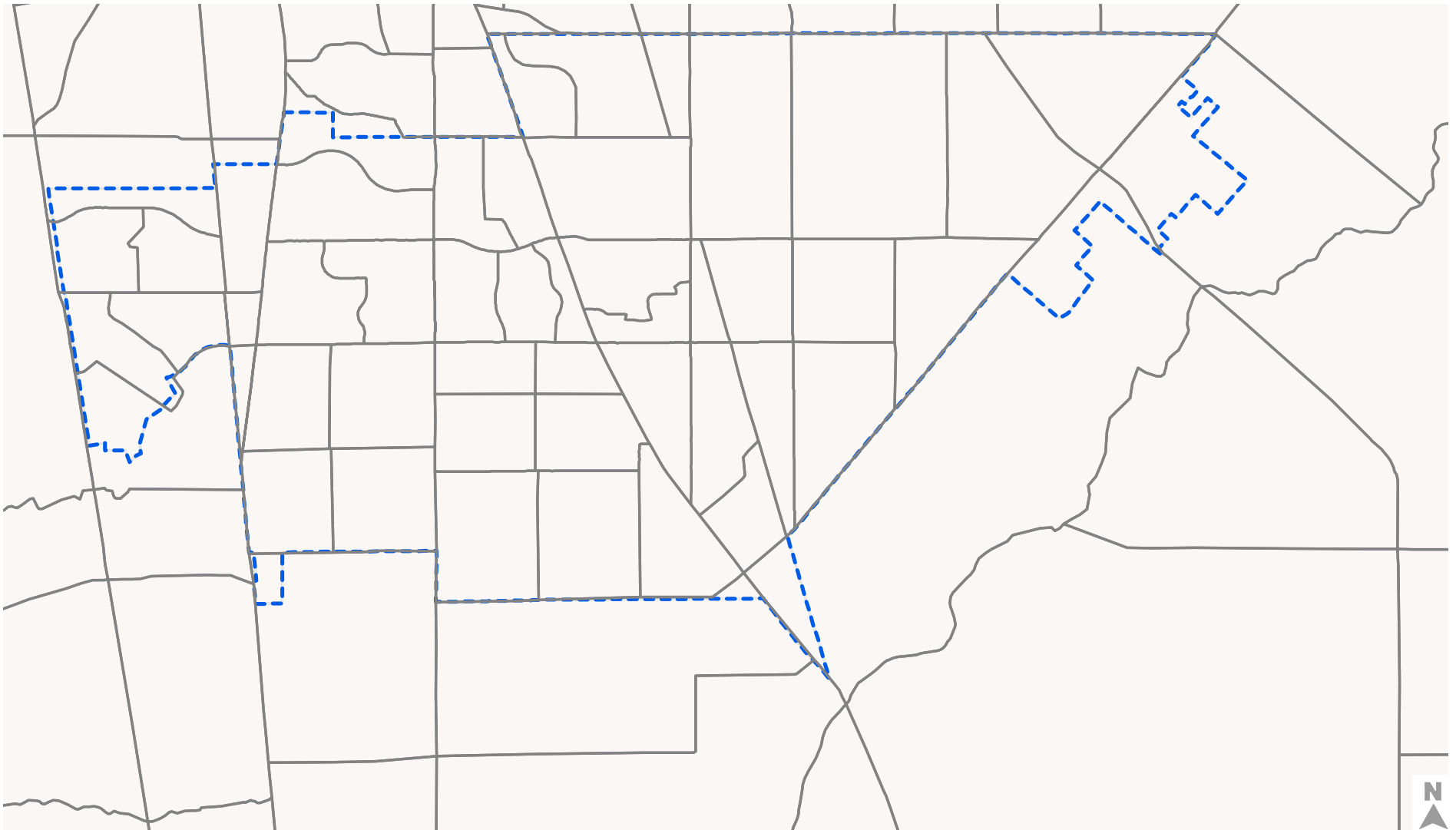
Figure 2
EGSIM20 - Updated Base
Year Roadway Network

2.2 Traffic Analysis Zones (TAZ)

In travel demand models, the model area is split into many smaller spatial units or zones. These are called traffic analysis zones (TAZ). Depending on how a travel model is structured, TAZs have several uses, including: storing information about the people and places in each zone, serving as origins and destinations of trips, and calculating travel times between (and within) destinations.

In activity-based models, the activity generation operates on individual people and trips instead of zones, yet TAZs are still very important especially for vehicle trip assignments. Since SACSIM19 uses a multi-step static assignment at a TAZ level, it is important to have TAZs that adequately represent the analysis area. Therefore, the SACSIM 19 TAZ geography were split to add more detail within and around the City. This ensures more realistic assignment of trips onto the model network, which improves the model's estimate of VMT. See more details in Chapter 3 (Model Calibration).

Figure 3 shows the off-the-shelf SACSIM19 model TAZ structure in the City of Elk Grove. **Figure 4** shows the final updated TAZ structure for EGSIM20. The modification resulted in the addition of 684 TAZs to the model.





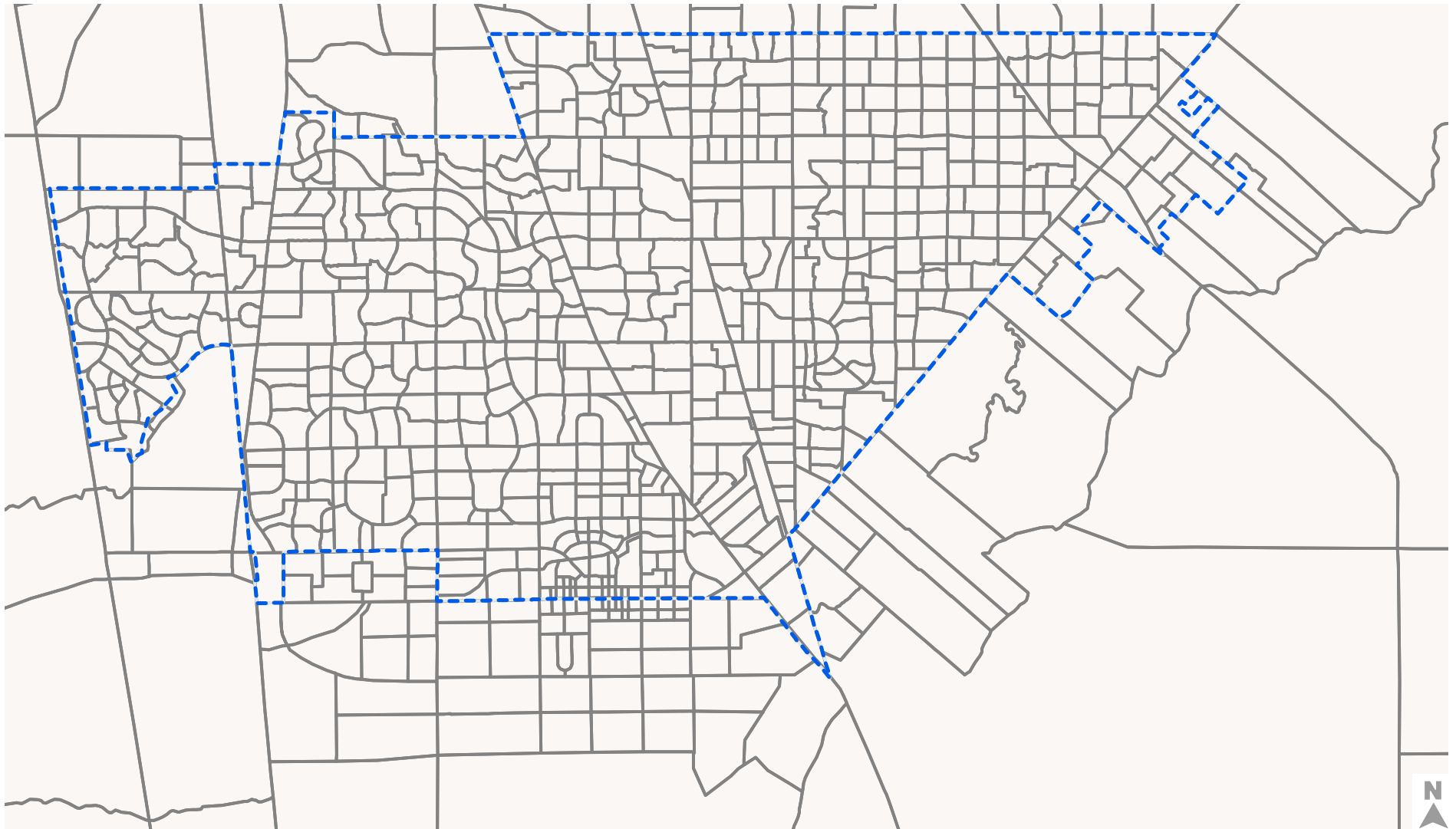
-  VMT_2016_TAZ
-  City of Elk Grove



Figure 3

SACSIM19 TAZ Structure in Elk Grove





-  City of Elk Grove
-  Updated TAZ



Figure 4
Updated TAZ - EGSIM20

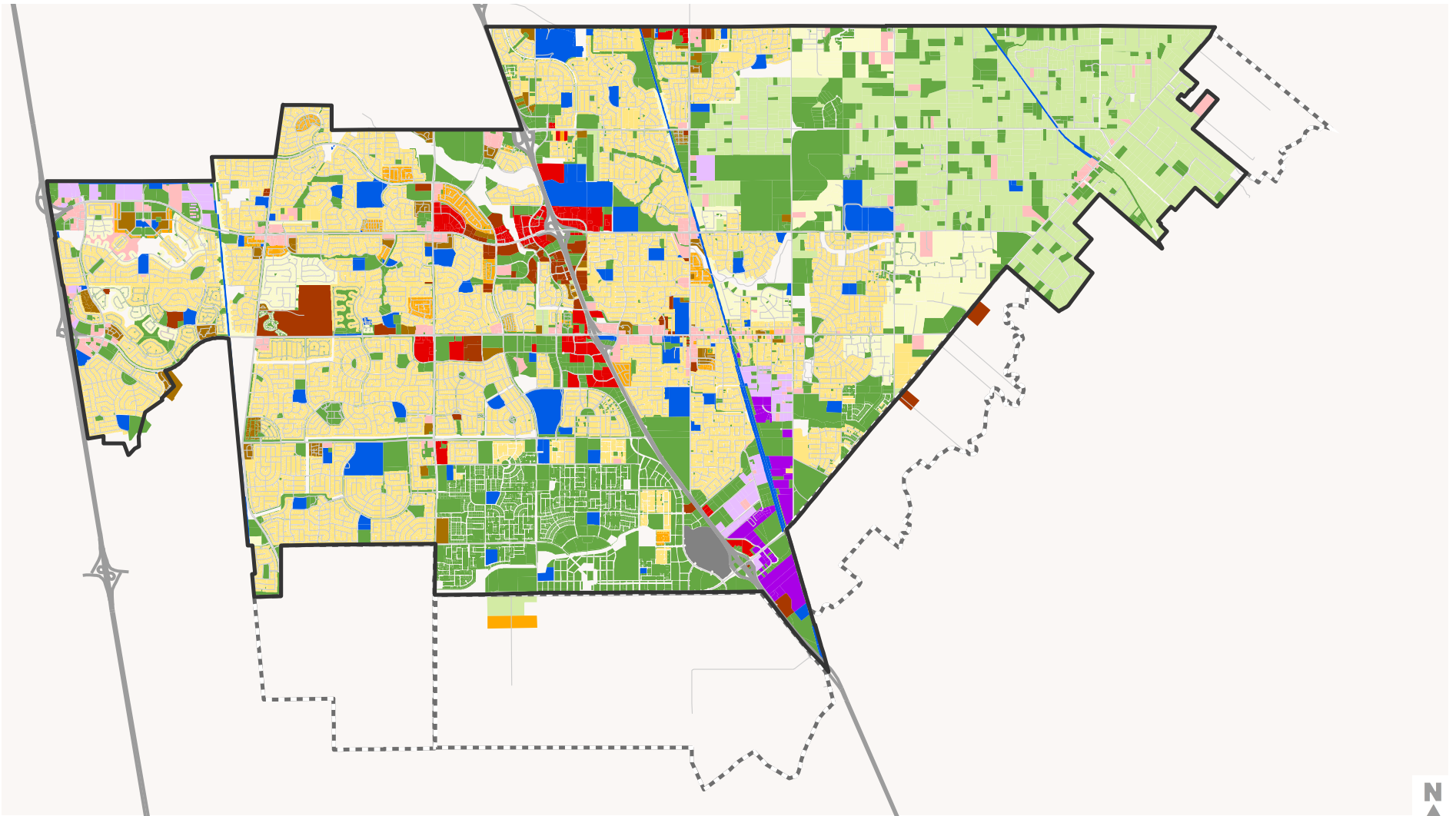
2.3 Land Use Development

The approach for developing pre-pandemic (2020) land uses within the City of Elk Grove was to collect a variety of available data, and then add this data to existing (2016) parcels. The following sources were used to estimate the residential dwelling units and occupied non-residential space within the City limits.

- SACSIM19 Data – SACSIM19 includes land use data by parcel for the year 2016. This was used as the base parcel land use information.
- Occupied Parcel Data – Occupied parcel data was provided by the City for the timeframe April 2018-June 2019. Projected occupied parcel data was also provided for the pre-pandemic base year timeframe. These were used to update the land use parcel data.
- Other Sources – Aerial imagery from Google Earth was reviewed and field investigations were performed to confirm built / occupied buildings in various parts of the City. Additionally, investigations were conducted to determine the proper designation for several developed land use parcels and were classified as a different land use designation (Example- more office employees vs more industrial employees).

Using these sources, we updated the number of dwelling units, number of employees, number of students, and the land use designations. SACSIM 19 uses nine different employment categories, which are different than the City's General Plan land use designations. Therefore, a land use crosswalk developed by SACOG (Attached in **Appendix A**) was used to generate model employee inputs based on the City's General Plan land designation. **Figure 5** shows the modified parcel by land use designations. The City of Elk Grove has 54,791 total dwelling units and 45,840 total jobs and an overall job-housing ratio of 0.83. This new validated new model has 2,074 more dwelling units and 10,287 more jobs compared to the SACSIM19 model.

Table 1 displays the base year (2020) land use totals within the current City of Elk Grove boundaries by General Plan land use designation.



City of Elk Grove

Study Areas

Base Year Land Use Designations

Commercial/Employment Land Use

- Community Commercial
- Regional Commercial
- Employment Center
- Light Industrial
- Heavy Industrial

Residential Land Use

- Rural Residential
- Estate Residential
- Low Density Residential
- Medium Density Residential
- High Density Residential

Other

- Public Services
- Tribal Trust Lands
- Parks and Open Space



Figure 5
Updated Base Year Parcel by
Land Use Category – EGSIM20

Table 1: Base Year (2020) Land Use by Designation Type

Land Use Type		Land use Totals within City of Elk Grove Plus Study Area ⁽¹⁾		
		Households	Students	Employees
Residential	Estate Residential	2,557	0	0
	Rural Residential	1,226	0	0
	Low Density Residential	43,371	0	0
	Medium Density Residential	2,443	0	0
	High Density Residential	5,194	0	0
Commercial/ Employment	Community Commercial	0	0	11,641
	Employment Center	0	0	9,853
	Heavy Industrial	0	0	1,831
	Light Industrial	0	0	8,525
	Regional Commercial	0	0	9,633
Public Services		0	38,948	4,057
Tribal Trust Lands		0	0	300
Total		54,791	38,948	45,840

Notes:

⁽¹⁾ Land use totals include 15 households and 58 employees outside the current city boundary.

Source: Fehr & Peers 2023

3 Model Calibration

3.1 Network Modification

The following modifications were made to the model network (2016_base.net) to calibrate it to the existing conditions.

1. Added missing collectors and residential streets.
2. Added missing or newly constructed links. Examples include –
 - a. Extended Bilby Road east of Bruceville Road to connect to Big Horn Boulevard
 - b. Extended Big Horn Boulevard south of Whitelock Parkway to connect to Bilby Road
3. Updated number of lanes to match existing lanes. Examples include –
 - a. Elk Grove Boulevard eastbound (EB) link updated from 2 to 3 lanes between SR 99 southbound (SB) ramps and SR 99 northbound (NB) on ramp.
 - b. Emerald Vista Drive link updated from 2 to 4 lanes between Elk Grove Boulevard and E Stockton Boulevard
4. Reviewed interchange configurations.
5. Added NB-off ramp at SR 99/Sheldon Road Interchange
6. Updated interchange configuration to accurately model permitted turning movements at the following interchanges:
 - a. SR 99 & Elk Grove Boulevard
 - b. SR 99 & Sheldon Road
 - c. SR 99 & Bond Road
7. Updated speed at locations when appropriate using the following sources:
 - a. Posted speed limits from Google street view and field review.
 - b. Wejo travel speed data that uses data from connected cars to create speed database over the course of the day for specific roadway segments.
8. Updated capacity class or roadway classification using the General Plan Circulation element diagram when appropriate.

3.2 TAZ Structure and Centroid Connections

As described in Section 2.2, TAZ structure was modified so that the vehicle loading onto the collector and arterial streets replicate land use access. The following model files were updated to incorporate the new TAZ structure.

- *2016_taz.dbf*
- *tazrad07.txt*
- *sacog_taz_indexes.dat*
- *2016_ixxi.dbf*

- *2016_station_links.csv*
- *worker_ixxifractions.dat*
- *2016_PNR.dbf*

Centroid connectors that connected directly to intersections were also moved to more appropriate locations.

3.3 Model File Updates

EGSIM20 requires detailed parcel, household, and population data inputs to run DAYSIM² at a parcel zone level. Preparing these files is not part of the model itself, but a necessary step to create and format the inputs needed to model a scenario. These three files are interdependent; they require specific relationship identification fields to link between data such as parcel point locations, household, and person characteristics.

3.3.1 Parcel File

As discussed earlier, as this is an activity-based model, the land use inputs are added at a parcel level. Using the sources discussed in Section 2.3, the following parcel level attributes (i.e., *pptype16* and *Res_Code*) were updated in the parcel table:

1. Number of households
2. Number of students enrolled in schools (k-8, high school, and university)
3. Number of employees in non-residential parcels (education, food, retail, office, service, government, industrial, other, and total employees)

The output for this step is a database (*sacog_parcel_2016.dbf*) file with parcel level data used in the buffering step.

3.3.2 Buffering

The Buffering process calculates the relative attractiveness between land uses to ensure that the relationship between land uses is accurately accounted for in the model's activity/tour generation and mode choice. The buffering process is equivalent to the "D Variables" in a four-step model that accounts for the built environment. EGSIM20 uses a "circuitry-based measure for each parcel" as an attractiveness input that is stored in the Parcel-Point DAYSIM file. The buffering process³ is conducted after the update in Step 3.3.1 and includes the following steps:

² Refer to SACOG's User Guide and Model Documentation for SACSIM19 for more information regarding DaySIM https://www.sacog.org/sites/main/files/file-attachments/000_all_test_draft_sacsim19_model_documentation_full.pdf?1601588553

³ Refer to SACOG's User Guide and Model Documentation for SACSIM19 for more information regarding Buffering process.

1. Prepare Inputs – Updated the following files in the Parcel-Point DAYSIM file.
 - Intersections (*sacog_intersections_2016.dbf*) - A list of intersections, with node ID, XY coordinates, and number of links terminating at the node.
 - Transit Stops (*sacog_transitstops_2016.dbf*) - A list of transit stops, with stop ID, XY coordinates, and the type of transit serving the stop.
 - Open Space (*sacog_openspace_2016.dbf*) - A list of parks, sports fields and other public recreational areas, with an ID and the size, in square feet
 - Circuity Factors (*sacog_parcel_2016_cir.dbf*) – A factor associated with each parcel. 24 radially distributed points (8 directions at 3 distinct distance bands 0.5-mile, 1 mile and 1.5 mile) represent the distances from a walkable streets network. For a parcel, a circuity factor or ratio is calculated based on the shortest path distance to destination parcels and straight-line distance for all 24 radial points to destination parcels.
2. Develop Control File (*sacogbuffering2016_cir_decay.ctl*) – Refers to the input and output file names and location for buffering run.
3. Execute Buffering – *DaySimParcelBufferingV3.exe* produces the buffering inputs.

The output for this step is a buffered parcel file (*2016_raw_parcel.txt*), which is the main land use input for the model.

3.3.3 Household and Population File

EGSIM20 requires a detailed household and population file with representation of key demographics, such as household size, income, ethnicity, and age of the population. PopGen⁴, software developed by the Mobility Analytics Research Group alongside multiple universities and Metropolitan Planning Organizations (MPO), was used to generate a representative synthetic population with person and household-level attributes. The model's existing household and population files were calibrated for the new land use added to the model. The following steps highlight this process:

1. Developed Marginal Totals – Used a spreadsheet-based tool (*Create Marginal Files.xlsx*) to create marginal totals for new land use areas, using the Sacramento County demographics distribution by land use type. Marginal totals are population and household distribution targets for specific geographic areas such as Census Tracts. Four files are updated in this step-
 - *HH Marginal.csv*
 - *Pop Marginal.csv*
 - *GQ Marginal.csv*
 - *Corrospondence.csv*
1. Execute PopGen – Run Popgen software to create the synthetic household and population data.
2. Expand Data – Use ArcGIS to expand synthetic household and population data.
3. Update Control File – Prepare parcels with new land use for allocation.

⁴ More information and PopGen software can be downloaded from the Mobility Analytics webpage <https://www.mobilityanalytics.org/popgen.html>

4. Allocate Land Use to Parcels – *Run parcelAllocationModel1.exe*
5. Update Household/Population File – Update the model household and population file (*2016_raw_household.txt* and *2016_raw_population.txt*) with new synthetic data.

3.3.4 Turn Penalties

Turn penalties are used to prohibit or add delay to certain turning movements. EGSIM20 prohibits traffic from making restricted turn movements. The *TurnProhibitions.csv* file specifies prohibited movements.

3.3.5 External Travel Update

Like SACSIM19, EGSIM20 uses an external sub module outside of DAYSIM to estimate Internal-External and External-Internal (I-X and X-I) travel to/from areas external the SACOG region. Highway network links used during the assignment are used to represent roadway connections outside the SACOG region. These roadway links are called "gateways." SR 99 and I-5 gateway weights were adjusted for SR 99 & I5 (south of Elk Grove), based on traffic flow data from Caltrans Performance Measurement System (PeMS).

4 Model Validation

This section discusses the results of the validation tests of the updated EGSIM20 base year (2020) travel demand model. The intent is for the model to be validated so that it accurately predicts conditions observed from the data collection.

Model validation is the term used to describe model performance in terms of how closely the model's output matches existing travel data in the base year. The extent that the model outputs match existing travel data validates the assumptions of the inputs.

Traditionally, most model validation guidelines have focused on the performance of the trip assignment function in accurately assigning trips to the roadway network. This metric is called static validation, and it remains the most common means of measuring model accuracy.

A more rigorous type of validation is Dynamic Validation which focuses on model's response to changing inputs.

4.1 Static Validation

The *2010 Regional Transportation Plan (RTP) Guidelines* specify that travel demand models to be used in the preparation of RTPs should undergo a series of diagnostic tests to determine their ability to accurately estimate traffic volumes and other travel parameters. Fehr & Peers interprets this guidance to also extend to travel demand models being developed for other purposes such as fee programs, CIPs, policy development, infrastructure studies, etc. In accordance with this guidance, the model's performance was evaluated using criteria described in the *Caltrans Travel Forecasting Guidelines, 1992*, *Travel Model Improvement Program (TMIP) Model Validation and Reasonableness Checking Manual, 1997*, and Fehr & Peers' internal standards. In particular, the following validation measures were evaluated:

- Volume-to-Count Ratio – Divides the model volume by the actual traffic count for individual roadways throughout the model.
- Percent of Links Within Caltrans Deviation Allowance – Calculated as the difference between the model and actual traffic count divided by the actual traffic count. The result is then evaluated against prescribed deviation thresholds.
- Correlation Coefficient – estimates the correlation (strength and direction of the linear relationship) between the actual traffic counts and the estimated volumes from the model.
- Percent Root Mean Square Error (% RMSE) – is the square root of the model volume minus the actual count squared divided by the number of counts. It is a measure like standard deviation in that it assesses the accuracy of the entire model.

The model validation tests are performed for Daily conditions for a typical weekday. Fehr & Peers identified **70** roadway segments within the City of Elk Grove and nine highway segments for use in the validation

tests. The segments within the city consist primarily of arterial roadways, which are situated at the City entry/exit points, across geographic boundaries (e.g., railroad or freeway overpasses), or on otherwise critical travel corridors throughout the City (e.g., overcrossings).

Appendix B displays the existing weekday Daily, AM peak hour and PM peak hour volume on each segment along with the predicted traffic volume from the base year traffic model. It also includes detailed validation tests and results. **Table 2** summarizes the results of the validation tests including the applicable validation targets. As shown, the EGSIM20 (2020) base year travel demand model passes all four validation tests that have measurable acceptance criteria. Validation was performed on 70 roadway segments in the City of Elk Grove and 18 directional freeway segments on SR 99 and I-5. As shown in **Table 2**, the model satisfies the validation tests specified in *Travel Forecasting Guidelines*, Caltrans, 1992.

Table 2: Base Year (2020) Travel Demand Model Validation Tests

Validation Test	Validation Targets	Validation Periods		
		Daily	AM	PM
Volume-to-Count Ratio	+/-10% ¹	0.99	1.01	0.94
Percent of Links Within Allowable Deviation	≥ 75%	88%	86%	89%
Percent Root Mean Squared Error (%RMSE)	≤ 40%	14%	26%	22%
Correlation Coefficient	≥ 0.88	0.97	0.94	0.95

Source: Travel Forecasting Guidelines, Caltrans, 1992.

2017 Regional Transportation Plan Guidelines for Regional Transportation Planning Agencies, Caltrans, 2017

Fehr & Peers, 2023

Notes: ⁽¹⁾ The guidelines don't specify a criterion for acceptance for Volume-to-Count Ratio. +/-10% is a general travel demand modeling guideline.

4.2 Dynamic Validation

Static validation provides information on a model's ability to reproduce a static condition. Dynamic validation tests, recommended in the 2017 California Regional Transportation Plan Guidelines, evaluate a model's response to changing inputs. Dynamic Validation was not exclusively performed for EGSIM20 given the extensive dynamic validation that has been conducted for SACSIM19, the parent model. The dynamic validation or elasticity of SACSIM has been tested by SACOG and through project application of the model, meaning that the model performs as expected in the correct direction and magnitude based on dynamic validation with changes to network or land use input⁵.

⁵ Refer to SACOG's Sensitivity tests for SACSIM19 to learn more about model elasticity and validation

https://www.sacog.org/sites/main/files/file-attachments/11_model_calibration_and_validation.pdf?1593568047

5 General Plan Buildout Model

The General Plan Buildout Model represents conditions beyond 2040. As discussed in Section 1, the future year EGSIM20 model will be used to analyze several planned developments including the Kammerer Urban Design Strategy. The Buildout model includes the following four study areas that are shown on **Figure 6** in relation to the City limits.:

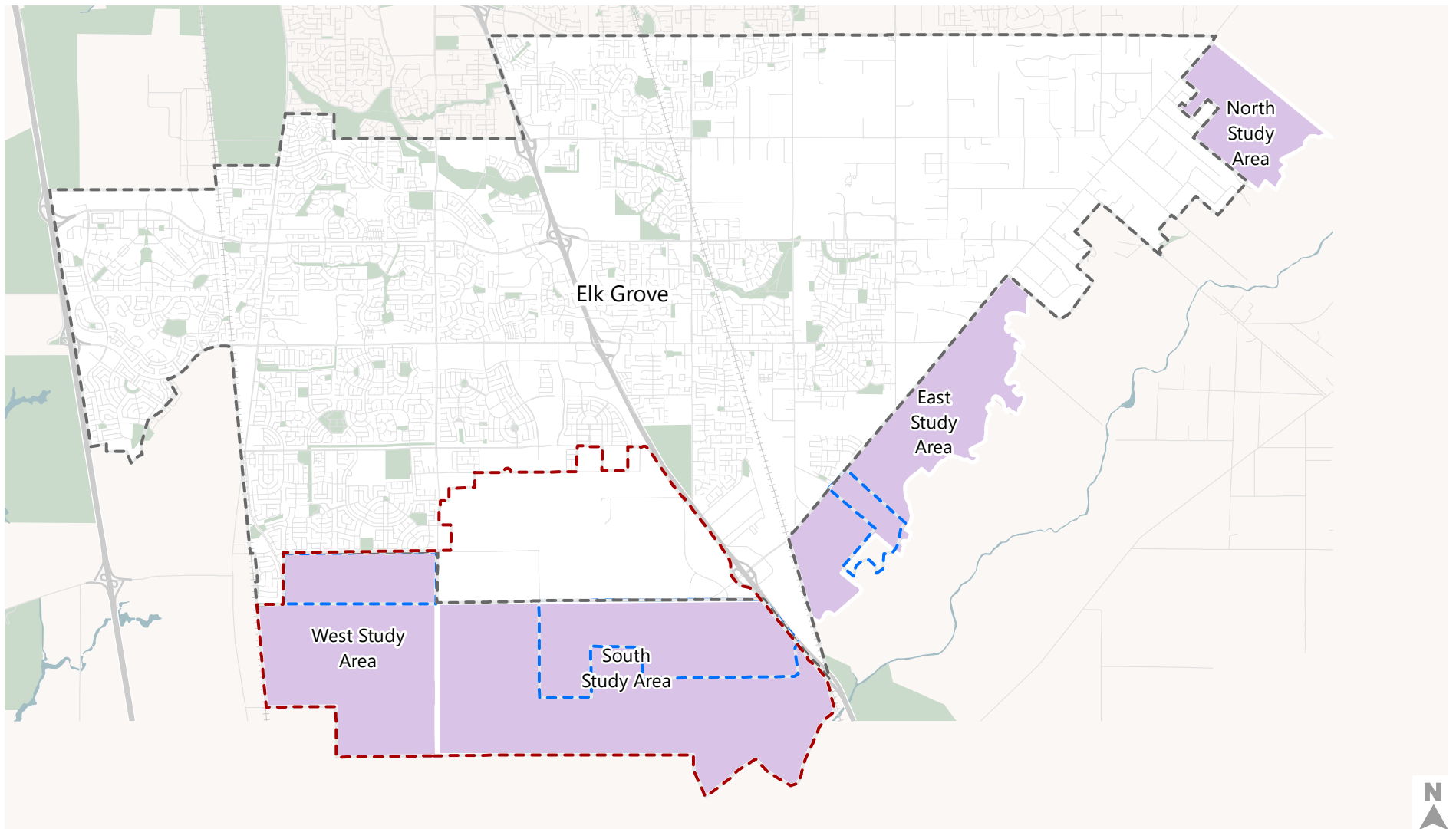
1. East Study Area
2. North Study Area
3. South Study Area
4. West Study Area

5.1 Transportation Network

The transportation network for the buildout model is consistent with the general plan circulation element, the latest information available for the study areas, and the Kammerer Road Urban Design Strategy. Where roadway layouts were not available in the study areas, a general roadway network was developed that follows a generalized network grid like existing and planned facilities in the City limits, in terms of number of lanes, capacity, travel speed, and spacing. **Figure 7** shows the SACSIM19 cumulative network and **Figure 8** shows the new network for the EGSIM20 buildout model. Model input files - *pa40_base.net* and *pa40_tranline.txt* were modified as part of this step. The transit network for the model consists of local and regional buses and light rails. The transit network was mostly kept the same as the network assumed in the SACOG MTP/SCS except for the inclusion of the planned extension of Regional Transit Light Rail to Elk Grove. This extension of blue line extends beyond its current end point at Cosumnes River Boulevard and Bruceville Road to Kammerer Road and Lotz Parkway through the KUDS study area,

5.2 Traffic Analysis Zones (TAZ)

The TAZ structure for the buildout model is the same as base year model in the City limits, for consistency. The TAZ for new study areas were created using the most up-to-date land use and circulation plans available. The changes made for the base year model were carried over to the buildout network. The files listed in Section 3.2 were also updated for the buildout model.

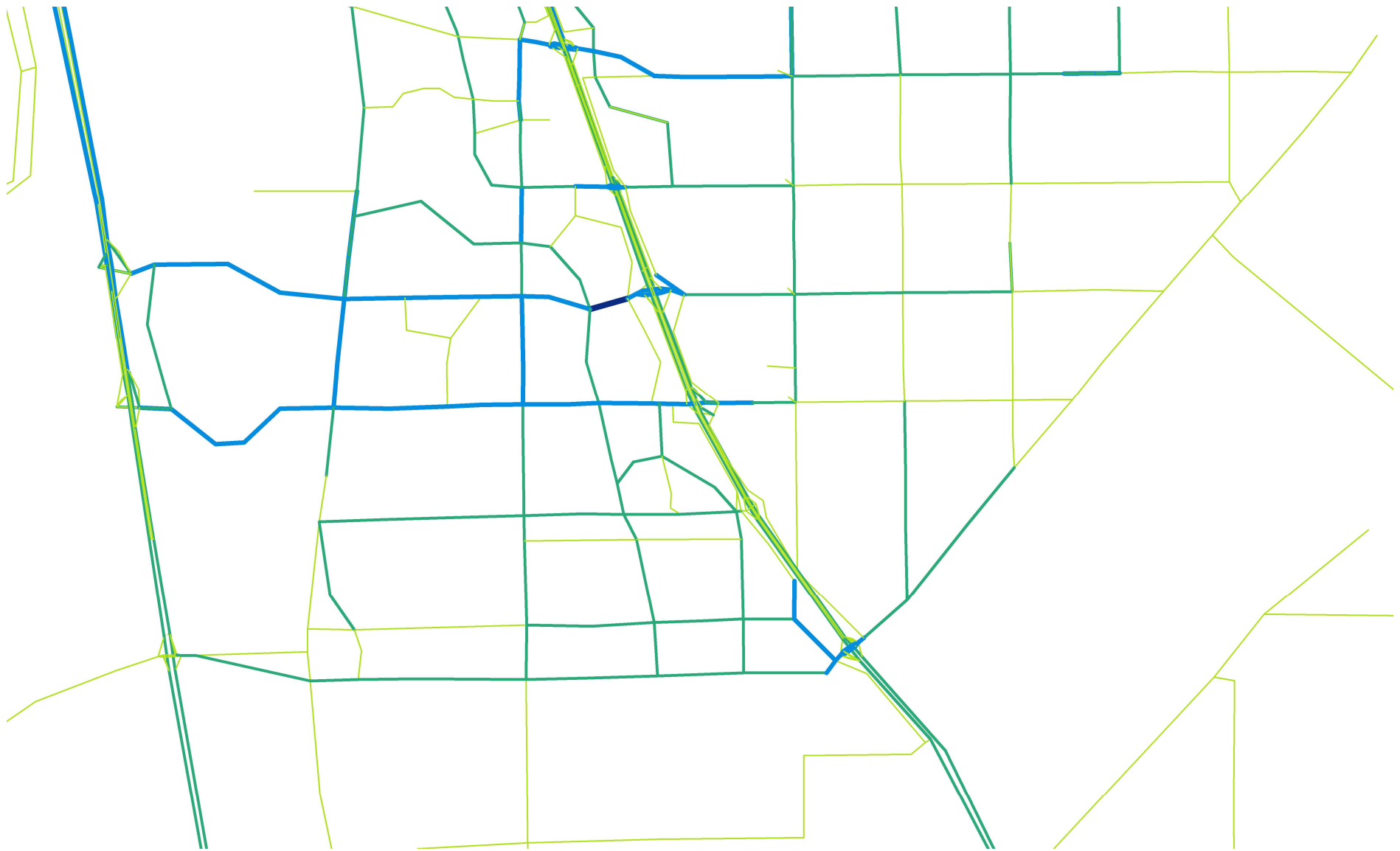


- City of Elk Grove
- Sphere of Influence (SOI)
- Kammerer Urban Design Study
- Study Areas
- Railroad
- Water Area
- Parks

Figure 6

City Boundary and Study Areas
General Plan Buildout

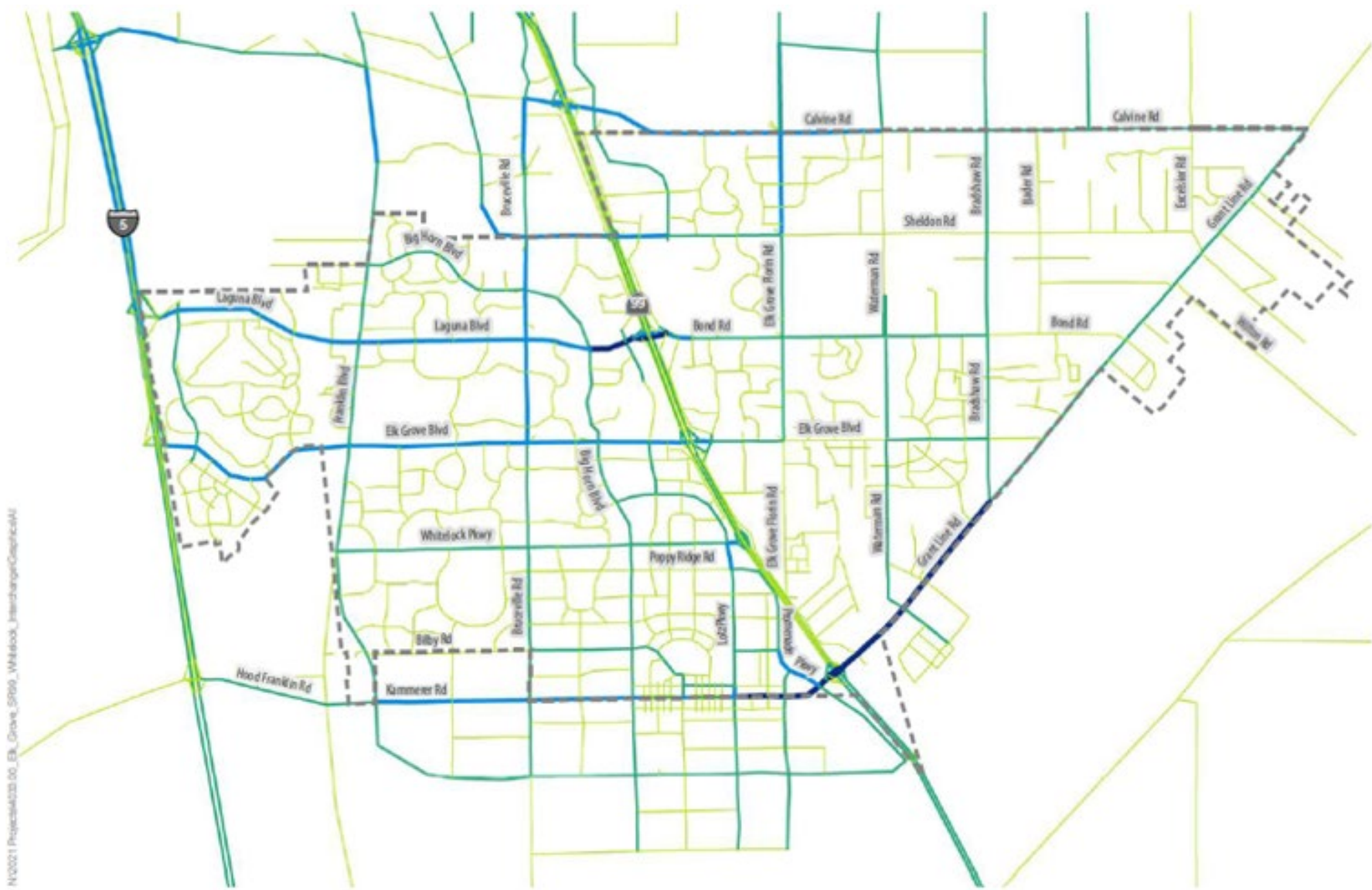




- 4 lanes in each direction or more
- 3 lanes in each direction
- 2 lanes in each direction
- 1 lane in each direction



Figure 7
SACSIM19 - Cumulative Year
Roadway Network



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- 4 lanes or more in each direction
- 3 lanes in each direction
- 2 lanes in each direction
- 1 lane in each direction
- City of Elk Grove City Limits



Figure 8
EGSIM20 - General Plan Buildout Roadway Network

5.3 Land Use Assumptions

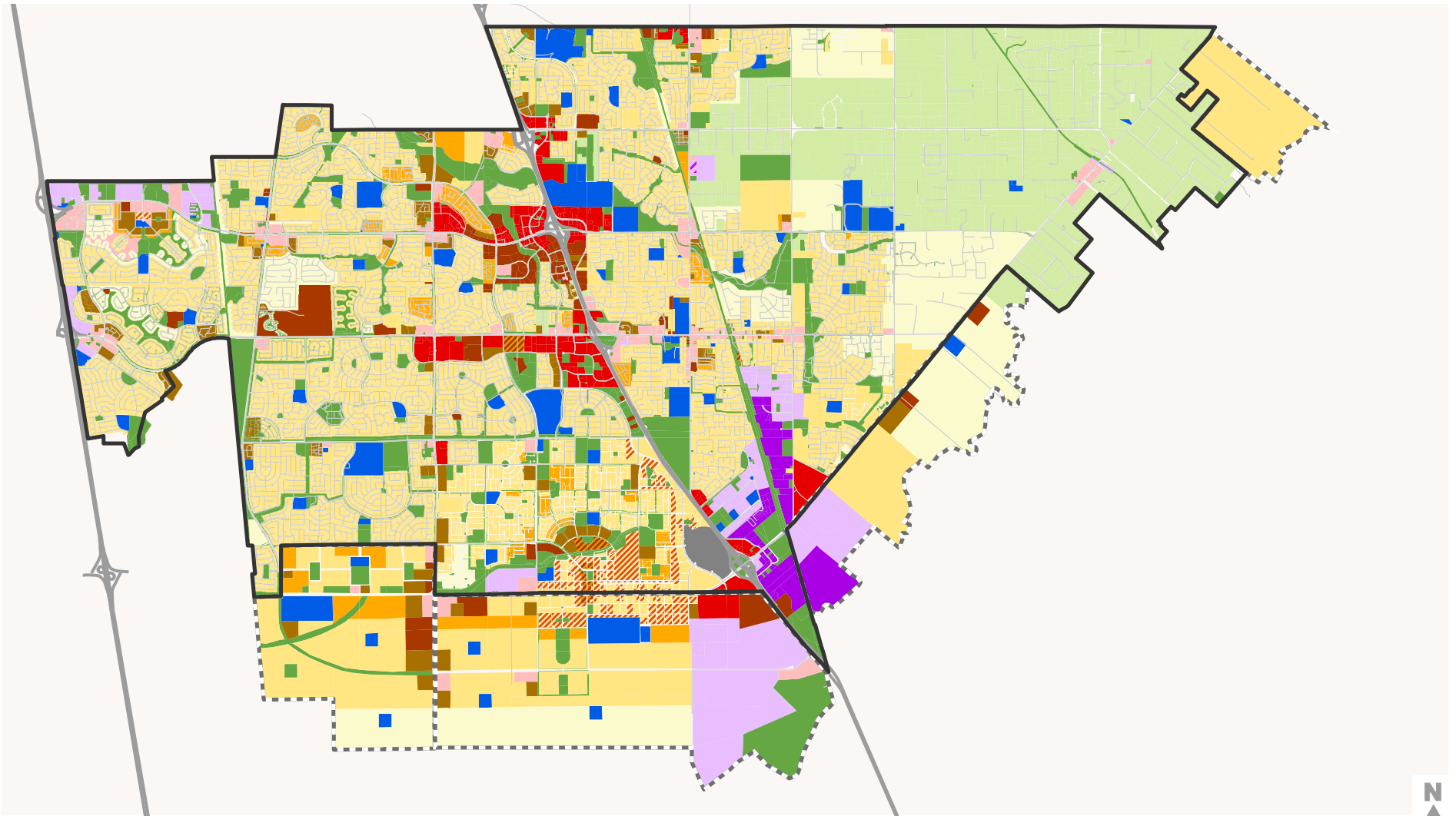
Land use for the buildout model was updated using the following sources:

- Elk Grove Fee Program Model – A modified version of the 2018 City of Elk Grove General Plan model developed for the update of the City of Elk Grove Fee Program. This model included an update to the base year model, representative of late 2019/early 2020 pre-pandemic conditions.
- Kammerer Urban Design Study (KUDS) Land Use – includes the land use assumptions for the Kammerer Urban Design Study.
- Study Area Land Use Updates – Updated land use for portions of the South, East, and West Study Areas.

Using the methodology discussed in Section 3.3, the following model files were updated:

- *Pa40_raw_parcel.txt*
- *Pa40_raw_household.txt*
- *Pa40_raw_population.txt*

Figure 9 shows the buildout parcels by land use type. **Table 3** shows the land use totals and growth by study area. **Table 4** displays the land use totals within the City for the primary trip-generating land use types under General Plan Buildout.



City of Elk Grove

Study Areas

General Plan Buildout Land Use Designations

Commercial/Employment Land Use

- Community Commercial
- Regional Commercial
- Employment Center
- Light Industrial
- Heavy Industrial

Residential Land Use

- Rural Residential
- Estate Residential
- Low Density Residential
- Medium Density Residential
- High Density Residential

Other

- Public Services
- Tribal Trust Lands
- Parks and Open Space



Figure 9

General Plan Buildout Parcel by Land Use Category – EGSIM20



Table 3: Buildout Model Land Use by Study Area

Plan Area	Base Year Model			Buildout Model			Growth		
	Households	Students	Employees	Households	Students	Employees	Households	Students	Employees
East Study Area	0	0	58	4,806	0	9,183	4,806	0	9,125
North Study Area	0	0	0	323	0	0	323	0	0
South Study Area	15	0	0	12,325	7,200	36,332	12,310	7,200	36,332
West Study Area	0	0	0	10,361	5,540	5,620	10,361	5,540	5,620
City Limit (Excluding East Study Area)	54,776	38,948	45,782	76,697	53,483	75,032	21,921	14,535	29,250
Total	54,791	38,948	45,840	104,512	66,223	126,167	49,721	27,275	80,327

Source: Fehr & Peers, 2023

Table 4: Buildout Year Land Use Designation

Land Use Type	Base Year Land Use			Buildout Land Use			Growth		
	Households	Students	Employees	Households	Students	Employees	Households	Students	Employees
Residential									
Estate Residential	2,557	-	-	10,686	-	739	8,129	-	739
Rural Residential	1,226	-	-	1,933	-	835	707	-	835
Low Density Residential	43,371	-	-	61,155	-	6,525	17,784	-	6,525
Medium Density Residential	2,443	-	-	7,689	-	206	5,246	-	206
High Density Residential	5,194	-	-	16,235	-	700	11,041	-	700
Commercial/ Employment									
Community Commercial	-	-	11,641	-	-	15,939	-	-	4,298
Employment Center	-	-	9,853	-	-	26,121	-	-	16,268
Heavy Industrial	-	-	1,831	-	-	4,650	-	-	2,819
Light Industrial	-	-	8,525	-	-	28,874	-	-	20,349
Light Industrial/Flex	-	-	-	-	-	188	-	-	188
Regional Commercial	-	-	9,633	-	-	16,218	-	-	6,585
Mixed Use									
Residential Mixed Use	-	-	-	382	-	143	382	-	143
Village Center Mixed Use	-	-	-	48	-	1,256	48	-	1,256
Transect-3	-	-	-	2,460	-	3,404	2,460	-	3,404
Transect-3R	-	-	-	1,881	-	1,302	1,881	-	1,302
Transect-4	-	-	-	1,059	-	3,422	1,059	-	3,422
Transect-5	-	-	-	759	-	7,327	759	-	7,327
Other									
Public Services	-	38,948	4,057	-	66,223	6,567	-	27,275	2,510
Tribal Trust Lands	-	-	300	-	-	1,750	-	-	1,450
Total	54,791	38,948	45,840	104,287	66,223	126,167	49,496	27,275	80,327

Source: Fehr & Peers, 2023

6 Vehicle Miles of Travel (VMT)

Vehicle miles traveled (VMT) is defined as miles driven by a vehicle (regardless of the number of occupants). SB 743, passed in 2013, required the California Governor’s Office of Planning and Research (OPR) to develop new CEQA guidelines that address traffic metrics under CEQA. In December 2018, OPR published Technical Advisory on Evaluating Transportation Impacts in CEQA (“Technical Advisory”), which provided guidance for implementing SB 743. On December 28, 2018, the Resources Agency adopted CEQA Guidelines Section 15064.3. Under this guideline, VMT is the primary metric used to identify transportation impacts. On July 1, 2020, the provisions of Section 15064.3 became effective statewide.

6.1 Origin-Destination VMT

Origin-Destination VMT (total VMT) refers to VMT based on all trips that have one end in a specific location. This is calculated multiplying model origin- destination trip matrix with congested distance matrix for each location. This accounts for the entire trip length within SACOG region for II, IX and XI trips. Buildout year VMT for the city and the study areas are listed in table.

Table 5: VMT Limit by Study Area

City Limit and Study Areas	VMT Limit (Buildout)
City	8,039,802
North Study Area	27,132
East Study Area	574,028
South Study Area	1,769,671
West Study Area	751,049

Source:

Fehr & Peers, 2023

6.2 VMT Performance Metrics

The EGSIM20 Travel Demand Model is a tool for implementing the General Plan (i.e., like General Plan policy and actions). Consistent with CEQA Guidelines, § 15064.7, the City selected VMT per service population as the preferred performance metric, for implementing its VMT policy. Of the performance metrics considered, VMT per service population was the most intuitive to the decision makers and supported implementation of the General Plan by incentivizing development in the City’s core and not in sensitive resource areas that the community values. A key emphasis of the General Plan was to plan and develop a better job-to-housing balance so residents can work where they live, and to support more mixed-use development to reduce the

need to travel by car for goods and services. The VMT per service population metric is useful since it captures these trip reduction benefits and accounts for travel from the full range of users and not just residents or just workers. In addition, unique to the City of Elk Grove is the use of VMT performance targets by General Plan land use category, which is an additional step to ensure consistency with the General Plan.

6.3 VMT Efficiency Components - Definitions

6.3.1 Trips

Trip is defined as a travel between two points using a certain mode of travel. In an activity-based model, individuals make multiple trips per day. The model tracks each trip, including their characteristics (e.g., trip length, purpose, time, location etc.). The model includes four major types of trips that are included in various VMT calculations:

- Trips by SACOG residents to destinations within the SACOG region. These are known as internal-internal, or II trips. These trips are modeled by the DAYSIM submodel.
- Trips by SACOG residents to destinations outside the SACOG region, known as internal-external, or IX trips. These trips are modeled by the IX-XI submodel.
- Trips by non-SACOG residents to destinations in the SACOG region, known as external-internal, or XI trips. These trips are modeled by the IX-XI submodel.
- Trips that do not stop within the SACOG region are known as external-external (XX) or through trips. These are generally not included in VMT efficiency calculations but are typically included in VMT estimates used for emissions analysis. They offer the full picture of VMT within a certain region.

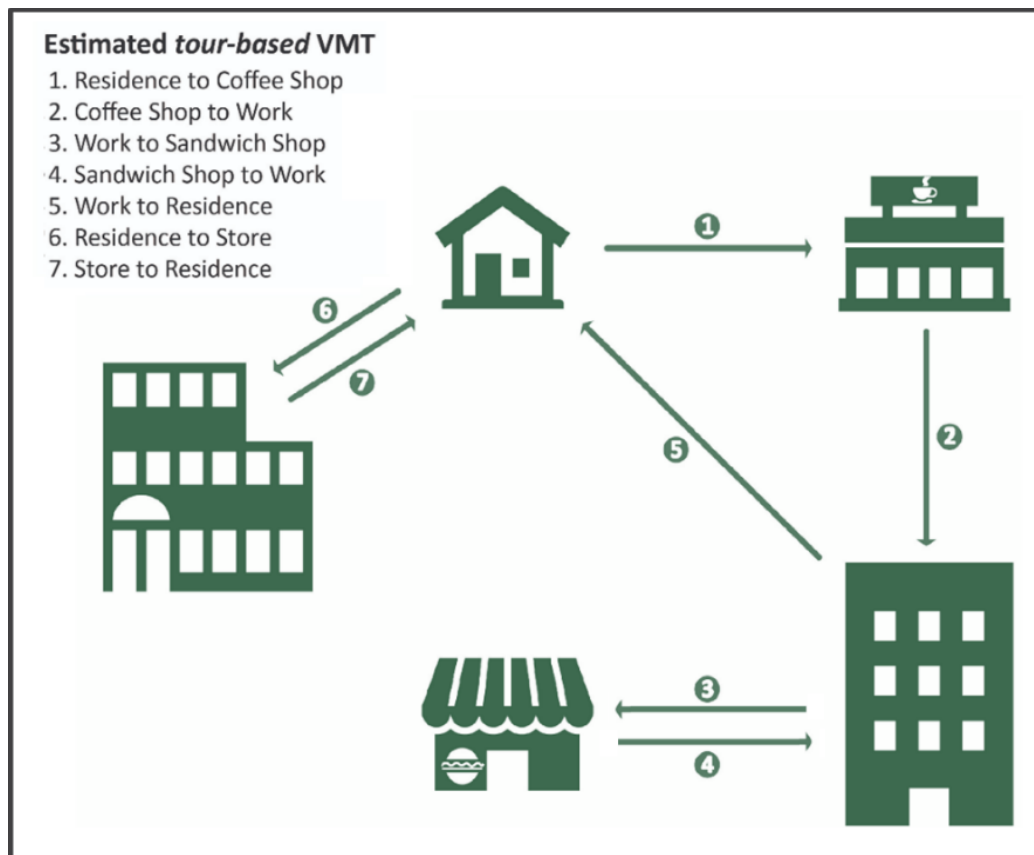
6.3.2 Tours

A tour is defined as a chain of trips that, typically occurring in sequence, which start and end at a specific location. By definition, tours in activity-based models refer to chain of trips that begin and end at a home location. Any trip-chaining that doesn't begin or end at home location are called subtours.

6.3.3 Travel Diary

As mentioned earlier, activity-based models create a travel diary for each individual in the model area. **Figure 10** shows a travel diary of a typical day for a household member within the SACOG region. Each leg of the arrow indicates an individual trip. This example includes 7 trips and 2 tours between home, coffee shop, work, and store location. Work location can be Office/Industrial/Retail/Public facilities etc. Trips 1-2-5 is a home-based tour. Trip 3-4 is a work-based subtour.

Figure 10: Example Travel Diary – EGSIM20



6.3.4 Full Accounting

Full Accounting of VMT accounts for vehicle travel that occurs outside of the model area. This is done in the EGSIM20 by using IX-XI trips and average trip distance outside SACOG region. The average trip length outside of the SACOG region was calculated using Replica (Spring 2019) mobility data.

6.3.5 Household Generated VMT

Household Generated VMT applies to all residential land uses. This includes All VMT from vehicle tours (both work/commute vehicle tours and non-work vehicle tours) that start and end at residential units. Tours **1-2-5** and **6-7** in **Figure 10** are examples of such tours. Trips made by a household resident that do not begin or end at home (e.g., midday travel from a worksite for lunch or personal business) are also included in the household generated VMT estimates. Subtour **3-4** from **Figure 10** is an example of non-home-based tour.

6.3.6 Employment Center Generated Work Tour VMT

Employment Center Generated Work Tour VMT applies to office/business professional and industrial employment land uses. This VMT includes all work/commute vehicle tours that start and end at the worksite (including intermediate stops). Tour **1-2-5** in **Figure 10** is an example of commute tour. Work-based sub-tours tours that start and end at employment locations are also included. Tour **3-4** in **Figure 10** is an example of work based sub-tour.

6.3.7 Retail/Public facilities Generated VMT

Retail/Public facilities Generated VMT applies to retail or public facilities projects. This VMT includes all work/commute vehicle tours that start and end at the retail/public facility site (including intermediate stops). Tour **1-2-5** in **Figure 10** is an example of commute tour. Work based sub-tours tours that start and end at employment location are also included. Tour **3-4** in **Figure 10** is an example of work based sub-tour. VMT associated with retail/public facility uses that are not commute tours are also included. Tour **6-7** in **Figure 10** is an example of "Other" tours. Other tours are only included for the following trip purposes only:

- Shopping
- Meal
- Personal Business/ Medical

6.3.8 VMT Efficiency by Land Use Category

VMT Efficiency by Land Use Category is the ratio of total VMT for each parcel containing a specific land use designation and total service population for that parcel. For example, sum all the VMT from parcels designated as "Low density household" within City of Elk Grove and divide it by the total service population within the City for the same parcels to get VMT per service population for the Low-Density Household category.

6.4 VMT Efficiency Metric Calculation Methodology

Internal-Internal (II) VMT for EGSIM20 is calculated by using the trip and tour diaries created through the activity generation portion of the model (DaySIM) and added to IX-XI VMT, calculated using additional processes outside of DaySIM. The main steps in calculating the VMT efficiency metrics are discussed below.

6.4.1 Run Scripts

When the EGSIM20 run completes, it produces the *_trips.tsv* file, which is a table of all internal-internal trips. However, because the trip distance in the original table is estimated based on the congested speed prior to the last global iteration, the user must run a Cube Voyage script⁶, to estimate the distance based on the

⁶ SACOG, VMT Computation Procedures – DRAFT, https://www.sacog.org/sites/main/files/file-attachments/draft_sacsim_vmt_calculation_procedures_0.pdf?1601488966

final iteration network congestion. The output of this supplementary Cube script is a CSV file, "_trip_1_1.csv," which has the same table as _trips.tsv but with the following attributes added to each trip:

- timeau – Updated travel time by auto
- distau – Updated trip distance by auto
- distcong – Congested distance

After running the first script, another Cube Voyager script⁶ is run to compute VMT and other variables for both IX-XI and commercial trips. The following files are the output of the second script:

- *ixxi_taz.dbf* – This includes trips and VMT on Gateways for each TAZ.
- *cveh_taz.dbf* – This includes commercial vehicle trips for each TAZ

6.4.2 Internal-Internal VMT

Using the trips_1_1.csv file, each vehicle trip's VMT is calculated using the following formulas. Factors are applied to the trip distance based on trip MODE.

- If MODE = 3 (DA), $VMT = distau$
- If MODE = 4 (HOV2), $VMT = distau * 0.5$
- If MODE = 5 (HOV3+), $VMT = distau * 0.3$

Where,

distau = updated trip distance by auto

DA = Drive Alone

HOV2 = High Occupancy Vehicle or Shared Drive 2

HOV3+ = High Occupancy Vehicle or Shared Drive 3 or more

6.4.3 IX-XI VMT by TAZ

SACOG methodology for calculating VMT outside the region⁷ were followed for this process. The file Outside_sacog_vmt_estimation_steps_0_new_method.xlsx excel tool created by SACOG⁸ was modified to incorporate new TAZ, land use, and external worker data. The output of this tool includes the following:

- Total IX-XI VMT by TAZ for external household generated VMT. This is completed by multiplying all external trips for each TAZ with the average estimated trip distance outside the region, which was estimated using Replica (Spring 2019) mobility data.
- Household generated IX-XI VMT or External Travel by residents for each TAZ is calculated using the following formula:

⁷ SACOG, SACOG Outside the Region VMT Estimation, https://www.sacog.org/sites/main/files/file-attachments/draft_vmt_ixxi_documentation_0.pdf?1622243676

⁸ https://www.sacog.org/sites/main/files/file-attachments/outside_sacog_vmt_estimation_steps_0_0.xlsx?1626798833

$$IXXI_{VMT_{RES}} = (IX_{VMT_I} + XI_{VMT_I}) * \left(\frac{HH}{(1 + HH + 1.1 * (EMPTOT - FOOD - RET - 0.25 * SVC))} \right)$$

Where:

IXXI_{VMT_RES} = internal-external VMT made by SACOG residents

IX_{VMT_I} = VMT originating at zone I

XI_{VMT_I} = VMT ending at zone I

HH = Households in zone I

EMPTOT = Jobs in zone I

FOOD = Jobs in Food sector in zone I

RET = Retail jobs in zone I

SVC = Service Jobs in zone I

- Work tour IX-XI VMT by TAZ for external employment/retail VMT. This is completed by multiplying the vehicle trips by external worker for each TAZ with the average estimated trip distance outside the region using Replica (Spring 2019) mobility data. Vehicle trips by external worker is calculated using the following formula:

$$\text{Vehicle Trips by External Worker} = \text{External Worker} * 1.7 * (0.89 + 0.11/2.34)$$

Where:

1.7 – Person to Vehicle Trip Factor

0.89 – drive alone trip mode share

0.11 – shared ride trip mode share

2.34 – shared ride vehicle occupancy factor

6.4.4 Household Generated VMT by parcel

- All household generated II VMT are summed for each parcel as described in Section 6.3.5
- All household generated IX-XI VMT or external travel by residents for each TAZ (as described in section 6.4.3) is divided by total population of each TAZ to calculate Household generated IX-XI VMT per person per TAZ.
- Household generated IX-XI VMT for each parcel is then calculated multiplying household size for the parcel and Household generated IX-XI VMT rate for the TAZ that the parcel belongs to.
- Finally, the II and IX-XI VMT for each parcel is summed to get total household generated VMT.

6.4.5 Employment Center Generated Work Tour

- VMT from II work tours as described in Section 6.3.6 are summed for each employment parcel.
- Work tour IX-XI or VMT by external workers (as described in Step 6.4.3) for each TAZ is divided by external employees for respective TAZ. This results in the rate of IX-XI VMT by external workers for each TAZ.

- Employment center generated IX-XI work VMT for each parcel is then calculated multiplying the number of employees and rate of IX-XI VMT by external workers for the respective TAZ that the parcel belongs to.
- Finally, the II and IX-XI VMT for each employment center parcel is summed to get total employment center generated VMT.

6.4.6 Retail/Public facilities Generated VMT

- VMT from II tours as described in Section 6.3.7 are summed for each retail or public facilities parcel.
- Work tour IX-XI or VMT by external workers (as described in Step 6.4.3) for each TAZ is divided by external employees for respective TAZ. This results in the rate of IX-XI VMT by external workers for each TAZ.
- Retail/public facilities generated IX-XI work VMT for each parcel is then calculated multiplying number of employees and rate of IX-XI VMT by external workers for respective TAZ that the parcel belongs to.
- Finally, the II and IX-XI VMT for each retail/public facility parcel is summed to get total retail/public facilities generated VMT.

Appendix C includes python scripts used for these metrics.

Table 6 compares the three major types of VMT metrics calculated using EGSIM20. **Appendix D** shows VMT methodology comparison between SACOG, Sacramento County, and City of Elk Grove.

Table 6: VMT Methodology Comparison by Project Type

VMT Analysis		Residential Projects	Office/ Industrial Projects	Retail/ Public Facilities Projects
Analysis Methodology		Household generated VMT per service population	Work Tour VMT per service population ⁽¹⁾	Retail/Public facilities Generated VMT per service population
HBW ⁽²⁾	1-2-5	Y	Y	Y
HBO ⁽³⁾	6-7	Y	N	Y ⁽⁸⁾
NHB ⁽⁴⁾	3-4	Y	Y	Y
IX-XI ⁽⁵⁾	External travel by residents	Y	N	N
	Travel by external workers	N	Y	Y
XX ⁽⁶⁾		N	N	N
Commercial Vehicle ⁽⁷⁾		N	N	N

Notes

⁽¹⁾ Service Population = Residents + Employees + Students

⁽²⁾ HBW = Home-based work tour, includes intermediate stops

⁽³⁾ HBO = Home-based other tour (shopping, personal business, medical, school, recreational etc.), includes intermediate stops

⁽⁴⁾ NHB = Non-Home-based tour (tour that begin and end at a non-home location i.e., subtours), includes intermediate stops

⁽⁵⁾ IX-XI = Internal-External / External-Internal,

External work travel by residents who reside within SACOG but work outside the region.

Travel by workers that reside outside SACOG region but work within the region.

⁽⁶⁾ XX = External-External Travel, Trips that don't have any stops within SACOG region

⁽⁷⁾ Commercial Vehicle = Trips by commercial vehicles (small-large trucks)

⁽⁸⁾ Only includes Customer/Visitor Tour (Tours at employment location by people who don't work there). The following trip purposes are included:

- Personal Business/ Medical
- Shop
- Meal

6.4.7 VMT Per Service Population by Land Use types

All the VMT generated by the three types of projects are summed to get total VMT by each parcel. Then the total VMT is divided by service population to get VMT per service population or each parcel. The data is then summarized by land use type to get the VMT per service population by LU type. Error! Not a valid bookmark self-reference. shows the VMT limits by LU type.

Table 7: VMT Per Service Population by Land Use Designation

Land Use Designation	Base Year			Buildout Land Use			VMT Limit ¹	Percent Change (Buildout to VMT Limit)
	Service Pop	Total VMT	VMT per Service Pop	Service Pop	Total VMT	VMT per Service Pop		
Commercial and Employment Land Use Designations								
Community Commercial	10,373	325,768	31.4	15,939	463,466	29.4	26.7	10.1%
Regional Commercial	9,639	305,755	31.7	16,218	480,513	29.4	27.0	8.9%
Employment Center	8,590	204,220	23.8	27,321	530,222	19.3	20.2	-4.0%
Light Industrial/Flex ²	-	-	-	188	3,442	24.2	-	-
Light Industrial	8,525	225,168	26.4	28,874	701,975	24.2	22.5	7.6%
Heavy Industrial	1,831	57,138	31.2	4,650	107,870	23.4	26.5	-11.7%
Mixed Use Land Use Designations²								
Village Center Mixed Use	-	-	-	1,381	25,750	19.3	19.3	-
Residential Mixed Use	-	-	-	1,144	22,572	19.4	19.4	-
Transect-3	-	-	-	10,648	225,191	21.4	21.4	-
Transect-3R	-	-	-	6,794	135,587	20.1	20.1	-
Transect-4	-	-	-	6,342	133,730	20.9	20.9	-
Transect-5	-	-	-	9,443	160,441	16.6	16.6	-
Public/Quasi Public and Open Space Land Use Designations								
Parks and Open Space	-	-	-	-	-	-	-	-
Resource Management and Conservations	-	-	-	-	-	-	-	-
Public Services	-	-	-	-	-	-	-	-
Residential Land Use Designations								
Rural Residential	4,995	147,890	29.6	6,992	174,752	24.9	25.2	-1.2%
Estate Residential	8,573	207,440	24.2	35,847	797,248	22.3	20.6	8.2%
Low Density Residential	142,284	3,230,237	22.7	200,337	4,045,908	20.2	19.3	4.7%
Medium Density Residential	7,208	151,469	21.0	22,633	443,033	19.7	17.9	10.0%
High Density Residential	15,168	316,033	20.8	46,180	860,116	18.6	17.7	5.3%
Other Land Use Designations								
Agriculture	-	-	-	-	-	-	-	-

Notes:

¹ VMT limit is – 85% of average base year VMT per service population for parcels with land use designation

² VMT limit is - average buildout VMT per service population for parcels with mixed land use designation

Appendix A

SACOG Employment Crosswalk

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Land use crosswalk developed by SACOG

Land Use Designation	Type	Max Units/Acre	Max Jobs/Acre	EMPEDU	EMPFOOD	EMPGOV	EMPIND	EMPMED	EMPOFC	EMPRET	EMPSER
Rural Residential	Residential	1	0								
Very Low Density Detached Residential		4	0								
Low Density Detached Residential		8	0								
Medium Density Residential		12	0								
Medium-High Density Residential		24	0								
High Density Attached Residential		42	0								
Very High Density Attached Residential		81	0								
Urban Attached Residential	Mixed Use	120	6	0.0%	17.5%	0.0%	0.0%	0.0%	53.2%	29.3%	0.0%
Mixed Use Center/Corridor		20	12	0.0%	20.0%	0.0%	0.0%	0.0%	33.0%	21.0%	26.0%
Sac CBD Mixed Use		103	603	0.0%	0.0%	55.5%	0.0%	0.0%	44.5%	0.0%	0.0%
Sac High Density Mixed Use		100	103	0.0%	10.0%	20.0%	0.0%	0.0%	60.0%	0.0%	10.0%
Residential/Retail Mixed Use High		57	41	0.0%	7.1%	0.0%	0.0%	0.0%	43.1%	23.7%	26.1%
Residential/Retail Mixed Use Low		25	74	0.0%	7.1%	0.0%	0.0%	0.0%	43.1%	23.7%	26.1%
Employment Focus Mixed Use Center/Corridor		9	92	0.0%	17.5%	0.0%	0.0%	0.0%	53.2%	29.3%	0.0%
K-12 School	Institution	0	18	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
College/University		0	95	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Heavy Industrial	Employment	0	14	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%
Regional Retail		0	16	0.0%	32.1%	0.0%	0.0%	0.0%	0.0%	53.8%	14.1%
Civic/Institution		0	21	0.0%	0.0%	16.8%	0.0%	0.0%	0.0%	0.0%	83.2%
Public/Quasi-Public		0	21	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Community/Neighborhood Retail		0	22	0.0%	32.1%	0.0%	0.0%	0.0%	0.0%	53.8%	14.1%
Light Industrial		0	27	0.0%	3.6%	0.0%	60.0%	0.0%	22.1%	0.0%	14.3%
Community/Neighborhood Commercial		0	28	0.0%	14.9%	0.0%	0.0%	0.0%	45.3%	24.9%	14.9%
Community/Neighborhood Commercial/Office		0	37	0.0%	13.9%	0.0%	0.0%	0.0%	42.3%	23.3%	20.5%
Low-Intensity Office		0	39	0.0%	0.0%	0.0%	0.0%	0.0%	80.0%	0.0%	20.0%
Light Industrial/Office		0	46	0.0%	4.2%	0.0%	10.0%	0.0%	67.0%	0.0%	18.7%
Medical Office		0	123	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
Medical Facility		0	178	0.0%	0.0%	0.0%	0.0%	100.0%	0.0%	0.0%	0.0%
Moderate-Intensity Office		0	179	0.0%	0.9%	28.6%	0.0%	0.0%	60.2%	0.0%	10.3%

Appendix B

Static Validation – EGSIM 20

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Elk Grove Fee Program Update

Elk Grove Base Year Model

Daily

Static Model Validation - Two-Way Total

ID	Roadway	Segment	Model Volume	Count Volume	Model / Count	% Deviation	Max Allowable % Deviation	Within Deviation	Model - Count	Difference Squared
1	Laguna Boulevard	From Harbour Point Drive to Franklin Boulevard	31,660	32,228	0.98	2%	24%	Acceptable	-568	323,003
2	Laguna Boulevard	From Franklin Boulevard to Bruceville Road	33,230	34,048	0.98	2%	24%	Acceptable	-818	669,124
3	Laguna Boulevard	From Bruceville Road to Big Horn Boulevard	42,744	38,936	1.10	10%	22%	Acceptable	3,808	14,500,864
4	Laguna Boulevard	From Big Horn Boulevard to Laguna Springs Drive	64,849	53,155	1.22	22%	20%	High	11,694	136,749,636
5	Bond Road	From E. Stockton Boulevard to Emerald Crest Drive	45,857	35,751	1.28	28%	23%	High	10,106	102,131,236
6	Bond Road	From Elk Grove Florin Road to Waterman Road	31,614	25,454	1.24	24%	26%	Acceptable	6,160	37,941,493
7	Bond Road	From Waterman Road to Bradshaw Road	19,213	12,614	1.52	52%	33%	High	6,599	43,542,402
8	Bond Road	From Bradshaw Road to Grant Line Road	5,350	5,215	1.03	3%	48%	Acceptable	135	18,135
9	Elk Grove Boulevard	From Harbour Point Drive to Franklin Boulevard	30,338	33,498	0.91	9%	24%	Acceptable	-3,160	9,985,600
10	Elk Grove Boulevard	From Franklin Boulevard to Bruceville Road	27,356	35,168	0.78	22%	23%	Acceptable	-7,812	61,032,552
11	Elk Grove Boulevard	From Bruceville Road to Big Horn Boulevard	36,573	39,576	0.92	8%	22%	Acceptable	-3,003	9,020,011
12	Elk Grove Boulevard	From Laguna Springs Drive to SR 99	43,662	47,423	0.92	8%	21%	Acceptable	-3,761	14,142,614
13	Elk Grove Boulevard	From E. Stockton Boulevard to Elk Grove Florin Road	31,967	31,451	1.02	2%	24%	Acceptable	516	265,912
14	Elk Grove Boulevard	From Elk Grove Florin Road to Waterman Road	16,682	17,687	0.94	6%	29%	Acceptable	-1,005	1,009,355
15	Elk Grove Boulevard	From Bradshaw Road to Grant Line Road	2,986	3,385	0.88	12%	58%	Acceptable	-399	159,467
16	Bilby Road	From Willard Parkway to Bruceville Road	7,373	6,915	1.07	7%	44%	Acceptable	458	209,459
17	Kammerer Road	From Bruceville Road to Promenade Parkway	7,719	8,729	0.88	12%	41%	Acceptable	-1,010	1,019,427
18	Kammerer Road	From Promenade Parkway to SR 99	15,565	18,915	0.82	18%	28%	Acceptable	-3,350	11,222,500
19	Grant Line Road	From E. Stockton Boulevard to Waterman Road	28,375	28,692	0.99	1%	25%	Acceptable	-317	100,278
20	Sheldon Road	From Lewis Stein Road to SR 99	30,436	38,454	0.79	21%	22%	Acceptable	-8,018	64,293,669
21	Sheldon Road	From Elk Grove Florin Road to Waterman Road	8,331	14,786	0.56	44%	31%	Low	-6,455	41,662,722
22	Franklin Boulevard	From Big Horn Boulevard to Laguna Boulevard	28,109	24,893	1.13	13%	26%	Acceptable	3,216	10,340,512
23	Franklin Boulevard	From Laguna Boulevard to Elk Grove Boulevard	29,239	20,858	1.40	40%	28%	High	8,381	70,241,161
24	Franklin Boulevard	From Elk Grove Boulevard to Whitelock Parkway	22,189	22,114	1.00	0%	27%	Acceptable	75	5,575
25	Bruceville Road	From Big Horn Boulevard to Laguna Boulevard	29,517	31,345	0.94	6%	24%	Acceptable	-1,828	3,340,365
26	Bruceville Road	From Laguna Boulevard to Elk Grove Boulevard	23,662	27,065	0.87	13%	25%	Acceptable	-3,403	11,582,678
27	Bruceville Road	From Elk Grove Boulevard to Whitelock Parkway	25,708	26,639	0.97	3%	25%	Acceptable	-931	866,761
28	Bruceville Road	From Whitelock Parkway to Bilby Road	10,396	8,599	1.21	21%	41%	Acceptable	1,797	3,230,407
29	Big Horn Boulevard	From Lewis Stein Road to Laguna Boulevard	15,366	15,950	0.96	4%	30%	Acceptable	-584	340,667
30	Big Horn Boulevard	From Laguna Boulevard to Longleaf Drive	27,588	22,745	1.21	21%	27%	Acceptable	4,843	23,454,649
31	Big Horn Boulevard	From Elk Grove Boulevard to Civic Center Drive	13,273	16,278	0.82	18%	29%	Acceptable	-3,005	9,028,022
32	Big Horn Boulevard	From Lotz Parkway to Whitelock Parkway	8,049	11,316	0.71	29%	34%	Acceptable	-3,267	10,675,467
33	Power Inn Road	From Auburly Drive to Sheldon Road	9,311	9,348	1.00	0%	38%	Acceptable	-37	1,394
34	Elk Grove Florin Road	From Calvine Road to Sheldon Road	34,014	29,835	1.14	14%	24%	Acceptable	4,179	17,461,255
35	Elk Grove Florin Road	From Sheldon Road to Bond Road	29,274	24,553	1.19	19%	26%	Acceptable	4,721	22,287,841
36	Elk Grove Florin Road	From Bond Road to Elk Grove Boulevard	19,091	18,363	1.04	4%	29%	Acceptable	728	529,984
37	Elk Grove Florin Road	From Valley Oak Lane to E. Stockton Boulevard	7,018	6,203	1.13	13%	48%	Acceptable	815	664,768
38	Waterman Road	From Sheldon Road to Bond Road	11,662	12,996	0.90	10%	33%	Acceptable	-1,334	1,780,445
39	Waterman Road	From Bond Road to Elk Grove Boulevard	11,858	12,843	0.92	8%	33%	Acceptable	-985	969,568
40	Waterman Road	From Mosher Road to Grant Line Road	6,450	7,690	0.84	16%	41%	Acceptable	-1,240	1,538,427

Elk Grove Fee Program Update

Elk Grove Base Year Model

Daily

Static Model Validation - Two-Way Total

ID	Roadway	Segment	Model Volume	Count Volume	Model / Count	% Deviation	Max Allowable % Deviation	Within Deviation	Model - Count	Difference Squared
41	Bradshaw Road	From Sheldon Road to Bond Road	21,326	16,466	1.30	30%	29%	High	4,860	23,619,600
42	Bradshaw Road	From Elk Grove Boulevard to Grant Line Road	11,094	8,417	1.32	32%	41%	Acceptable	2,677	7,166,329
43	Harbour Point Drive	From Laguna Boulevard to Babson Drive	11,617	13,347	0.87	13%	33%	Acceptable	-1,730	2,994,053
44	Willard Parkway	From Whitelock Parkway to Blossom Ridge Drive	6,335	8,139	0.78	22%	41%	Acceptable	-1,804	3,255,619
45	Willard Parkway	From Blossom Ridge Drive to Bilby Road	7,181	7,199	1.00	0%	44%	Acceptable	-18	312
46	Bilby Road	From Franklin Boulevard to Willard Parkway	7,373	7,336	1.01	1%	44%	Acceptable	37	1,394
47	Civic Center Drive	From Bruceville Road to Wymark Drive	3,948	5,431	0.73	27%	48%	Acceptable	-1,483	2,200,278
48	Civic Center Drive	From Wymark Drive to Big Horn Boulevard	3,694	6,218	0.59	41%	48%	Acceptable	-2,524	6,372,259
49	Civic Center Drive	From Big Horn Boulevard to Laguna Springs Drive	1,115	2,955	0.38	62%	58%	Low	-1,840	3,386,827
50	Lotz Parkway	From Big Horn Boulevard to Laguna Springs Drive	6,081	5,684	1.07	7%	48%	Acceptable	397	157,344
51	Lotz Parkway	From Laguna Springs Drive to Whitelock Parkway	4,334	4,491	0.96	4%	52%	Acceptable	-157	24,754
52	Whitelock Parkway	From Franklin Boulevard to Bruceville Road	14,247	14,970	0.95	5%	31%	Acceptable	-723	523,211
53	Whitelock Parkway	From Bruceville Road to Big Horn Boulevard	7,877	13,650	0.58	42%	33%	Low	-5,773	33,323,680
54	Whitelock Parkway	From Big Horn Boulevard to Lotz Parkway	4,290	6,138	0.70	30%	48%	Acceptable	-1,848	3,416,336
55	W. Stockton Bouelvard	From Lewis Stein Road to Michener Way	3,312	5,572	0.59	41%	48%	Acceptable	-2,260	5,107,600
56	W. Stockton Bouelvard	From Dunisch Road to Laguna Boulevard	3,178	5,587	0.57	43%	48%	Acceptable	-2,409	5,804,887
57	W. Stockton Bouelvard	From Whitelock Parkway to Kyler Road	9,513	8,447	1.13	13%	41%	Acceptable	1,066	1,135,645
58	Poppy Ridge Road	From Bruceville Road to Cosby Way	999	1,696	0.59	41%	63%	Acceptable	-697	486,274
59	Promenade Parkway	From Kyler Road to Kammerer Road	7,960	9,349	0.85	15%	38%	Acceptable	-1,389	1,930,247
60	Laguna Springs Boulevard	From Laguna Boulevard to Longleaf Drive	15,165	19,544	0.78	22%	28%	Acceptable	-4,379	19,175,641
61	Laguna Springs Boulevard	From Longleaf Drive to Elk Grove Boulevard	8,625	8,909	0.97	3%	38%	Acceptable	-284	80,656
62	Laguna Springs Boulevard	From Elk Grove Boulevard to Civic Center Drive	8,413	8,021	1.05	5%	41%	Acceptable	392	153,403
63	Auto Center Drive	From Elk Grove Boulevard to W. Stockton Bouelvard	15,501	13,900	1.12	12%	31%	Acceptable	1,601	2,563,201
64	Lewis Stein Road	From Sheldon Road to W. Stockton Bouelvard	17,110	15,045	1.14	14%	30%	Acceptable	2,065	4,264,225
65	E. Stockton Boulevard	From Marketplace 99 South to Bond Road	10,278	12,206	0.84	16%	34%	Acceptable	-1,928	3,718,469
66	E. Stockton Boulevard	From Bond Road to Banff Vista Drive	6,503	8,921	0.73	27%	38%	Acceptable	-2,418	5,846,724
67	E. Stockton Boulevard	From Elk Grove Boulevard to SR 99 NB Ramps	19,911	26,749	0.74	26%	25%	Low	-6,838	46,753,685
68	E. Stockton Boulevard	From Elk Grove Florin Road to Grant Line Road	9,447	7,748	1.22	22%	41%	Acceptable	1,699	2,886,601
69	Emerald Vist Drive	From E. Stockton Bouelvard to Elk Grove Boulevard	16,021	10,384	1.54	54%	36%	High	5,637	31,775,769
70	Mosher Road	From Waterman Road to Grant Line Road	1,824	1,674	1.09	9%	63%	Acceptable	150	22,600
101	SR99 NB	North of Sheldon Road	72,395	65,521	1.10	10%	17%	Acceptable	6,874	47,251,876
102	SR99 SB		76,782	75,184	1.02	2%	15%	Acceptable	1,598	2,553,604
103	SR99 NB	Between Sheldon Road and Bond Road	66,354	64,250	1.03	3%	18%	Acceptable	2,104	4,426,816
104	SR99 SB		74,015	72,106	1.03	3%	16%	Acceptable	1,909	3,644,281
105	SR99 NB	Between Bond Road and Elk Grove Boulevard	48,468	43,323	1.12	12%	21%	Acceptable	5,145	26,471,025
106	SR99 SB		51,372	57,675	0.89	11%	19%	Acceptable	-6,303	39,727,809
107	SR99 NB	Between Elk Grove Boulevard and Grant Line Road	40,942	42,617	0.96	4%	21%	Acceptable	-1,675	2,805,625
108	SR99 SB		39,937	41,808	0.96	4%	22%	Acceptable	-1,871	3,500,641
109	SR99 NB	South of Grant Line Road	38,547	36,475	1.06	6%	23%	Acceptable	2,072	4,293,184
110	SR99 SB		48,656	44,086	1.10	10%	21%	Acceptable	4,570	20,884,900

Elk Grove Fee Program Update

Elk Grove Base Year Model

Daily

Static Model Validation - Two-Way Total

ID	Roadway	Segment	Model Volume	Count Volume	Model / Count	% Deviation	Max Allowable % Deviation	Within Deviation	Model - Count	Difference Squared
111	SR99 NB	South of Boessow Road (Closest to Gateway)	33,950	39,080	0.87	13%	22%	Acceptable	-5,130	26,316,900
112	SR99 SB		34,977	39,343	0.89	11%	22%	Acceptable	-4,366	19,061,956
113	I5 NB	Between Consumnus River and Laguna Boulevard	47,643	53,436	0.89	11%	20%	Acceptable	-5,793	33,558,849
114	I5 SB		42,890	54,641	0.78	22%	20%	Low	-11,751	138,086,001
115	I5 NB	Between Laguna Boulevard and Elk Grove Boulevard	29,684	32,296	0.92	8%	24%	Acceptable	-2,612	6,822,544
116	I5 SB		29,939	32,093	0.93	7%	24%	Acceptable	-2,154	4,639,716
117	I5 NB	Between Elk Grove Boulevard and Hood Franklin Rd	32,352	34,240	0.94	6%	24%	Acceptable	-1,888	3,564,544
118	I5 SB		30,674	33,256	0.92	8%	24%	Acceptable	-2,582	6,666,724
Total			2,027,503	2,057,342						
EXCLUDING FREEWAYS										
					Model/Count Ratio	0.99				
					Percent Within Caltrans Maximum Deviation (>75%)	86%				
					Percent Root Mean Square Error (<40%)	22%				
					Correlation Coefficient (>0.88)	0.96				
Notes: 2017 Regional Transportation Plan Guidelines for Metropolitan Planning Organizations										
					Total Count	70				
					Links Within Deviation	60				
					Links Outside Deviation	10				
INCLUDING FREEWAYS										
					Model/Count Ratio	0.99				
					Percent Within Caltrans Maximum Deviation (>75%)	88%				
					Percent Root Mean Square Error (<40%)	14%				
					Correlation Coefficient (>0.88)	0.97				
Notes: 2017 Regional Transportation Plan Guidelines for Metropolitan Planning Organizations										
					Total Count	88				
					Links Within Deviation	77				
					Links Outside Deviation	11				

Data Sources:

- For arterials and collector Streets, counts were averaged over three mid-weekdays for either of the following date ranges:
 1. August 2, 2019 – August 22, 2019
 2. August 27, 2019 – August 29, 2019
 3. September 10, 2019 – September 12, 2019
- For freeways, counts were collected from PeMS data source and averaged for the month of August - October, 2019. Only the data points with good quality (% observed > 95%) were selected.

Elk Grove Fee Program Update

Elk Grove Base Year Model

AM Peak Hour

Static Model Validation - Two-Way Total

ID	Roadway	Segment	Model Volume	Count Volume	Model / Count	% Deviation	Max Allowable % Deviation	Within Deviation	Model - Count	Difference Squared
1	Laguna Boulevard	From Harbour Point Drive to Franklin Boulevard	2,713	1,869	1.45	45%	29%	High	844	712,395
2	Laguna Boulevard	From Franklin Boulevard to Bruceville Road	2,520	2,328	1.08	8%	27%	Acceptable	192	36,899
3	Laguna Boulevard	From Bruceville Road to Big Horn Boulevard	2,997	2,329	1.29	29%	27%	High	668	446,256
4	Laguna Boulevard	From Big Horn Boulevard to Laguna Springs Drive	4,233	2,880	1.47	47%	24%	High	1,353	1,829,823
5	Bond Road	From E. Stockton Boulevard to Emerald Crest Drive	3,199	2,359	1.36	36%	27%	High	840	705,372
6	Bond Road	From Elk Grove Florin Road to Waterman Road	2,389	2,091	1.14	14%	28%	Acceptable	298	89,081
7	Bond Road	From Waterman Road to Bradshaw Road	1,500	1,136	1.32	32%	34%	Acceptable	364	132,143
8	Bond Road	From Bradshaw Road to Grant Line Road	302	454	0.67	33%	52%	Acceptable	-152	23,105
9	Elk Grove Boulevard	From Harbour Point Drive to Franklin Boulevard	2,555	2,558	1.00	0%	26%	Acceptable	-3	8
10	Elk Grove Boulevard	From Franklin Boulevard to Bruceville Road	2,103	2,658	0.79	21%	25%	Acceptable	-555	308,368
11	Elk Grove Boulevard	From Bruceville Road to Big Horn Boulevard	2,497	2,695	0.93	7%	25%	Acceptable	-198	39,107
12	Elk Grove Boulevard	From Laguna Springs Drive to SR 99	3,060	2,822	1.08	8%	25%	Acceptable	238	56,551
13	Elk Grove Boulevard	From E. Stockton Boulevard to Elk Grove Florin Road	2,337	2,048	1.14	14%	28%	Acceptable	289	83,697
14	Elk Grove Boulevard	From Elk Grove Florin Road to Waterman Road	1,273	1,282	0.99	1%	33%	Acceptable	-9	84
15	Elk Grove Boulevard	From Bradshaw Road to Grant Line Road	219	255	0.86	14%	58%	Acceptable	-36	1,264
16	Bilby Road	From Willard Parkway to Bruceville Road	596	598	1.00	0%	48%	Acceptable	-2	4
17	Kammerer Road	From Bruceville Road to Promenade Parkway	653	792	0.82	18%	41%	Acceptable	-139	19,217
18	Kammerer Road	From Promenade Parkway to SR 99	1,257	1,520	0.83	17%	30%	Acceptable	-263	69,015
19	Grant Line Road	From E. Stockton Boulevard to Waterman Road	2,027	2,385	0.85	15%	26%	Acceptable	-358	128,405
20	Sheldon Road	From Lewis Stein Road to SR 99	2,582	2,615	0.99	1%	26%	Acceptable	-33	1,058
21	Sheldon Road	From Elk Grove Florin Road to Waterman Road	933	1,452	0.64	36%	31%	Low	-519	269,108
22	Franklin Boulevard	From Big Horn Boulevard to Laguna Boulevard	2,287	1,749	1.31	31%	29%	High	538	289,916
23	Franklin Boulevard	From Laguna Boulevard to Elk Grove Boulevard	2,301	1,510	1.52	52%	30%	High	791	625,844
24	Franklin Boulevard	From Elk Grove Boulevard to Whitelock Parkway	1,876	1,772	1.06	6%	29%	Acceptable	104	10,768
25	Bruceville Road	From Big Horn Boulevard to Laguna Boulevard	2,525	2,132	1.18	18%	27%	Acceptable	393	154,475
26	Bruceville Road	From Laguna Boulevard to Elk Grove Boulevard	1,916	1,784	1.07	7%	29%	Acceptable	132	17,313
27	Bruceville Road	From Elk Grove Boulevard to Whitelock Parkway	1,781	1,720	1.04	4%	29%	Acceptable	61	3,661
28	Bruceville Road	From Whitelock Parkway to Bilby Road	711	636	1.12	12%	44%	Acceptable	75	5,664
29	Big Horn Boulevard	From Lewis Stein Road to Laguna Boulevard	1,309	1,209	1.08	8%	34%	Acceptable	100	9,957
30	Big Horn Boulevard	From Laguna Boulevard to Longleaf Drive	1,873	1,881	1.00	0%	28%	Acceptable	-8	71
31	Big Horn Boulevard	From Elk Grove Boulevard to Civic Center Drive	1,104	1,466	0.75	25%	31%	Acceptable	-362	131,209
32	Big Horn Boulevard	From Lotz Parkway to Whitelock Parkway	670	948	0.71	29%	38%	Acceptable	-278	77,077
33	Power Inn Road	From Auburly Drive to Sheldon Road	1,027	1,106	0.93	7%	36%	Acceptable	-79	6,287
34	Elk Grove Florin Road	From Calvine Road to Sheldon Road	2,653	2,447	1.08	8%	26%	Acceptable	206	42,571
35	Elk Grove Florin Road	From Sheldon Road to Bond Road	2,302	2,059	1.12	12%	28%	Acceptable	243	59,104
36	Elk Grove Florin Road	From Bond Road to Elk Grove Boulevard	1,574	1,554	1.01	1%	30%	Acceptable	20	385
37	Elk Grove Florin Road	From Valley Oak Lane to E. Stockton Boulevard	555	748	0.74	26%	44%	Acceptable	-193	37,225
38	Waterman Road	From Sheldon Road to Bond Road	1,107	1,336	0.83	17%	33%	Acceptable	-229	52,585
39	Waterman Road	From Bond Road to Elk Grove Boulevard	929	1,135	0.82	18%	34%	Acceptable	-206	42,240

Elk Grove Fee Program Update

Elk Grove Base Year Model

AM Peak Hour

Static Model Validation - Two-Way Total

ID	Roadway	Segment	Model Volume	Count Volume	Model / Count	% Deviation	Max Allowable % Deviation	Within Deviation	Model - Count	Difference Squared	
40	Waterman Road	From Mosher Road to Grant Line Road	577	619	0.93	7%	48%	Acceptable	-42	1,767	
41	Bradshaw Road	From Sheldon Road to Bond Road	1,359	1,593	0.85	15%	30%	Acceptable	-234	54,762	
42	Bradshaw Road	From Elk Grove Boulevard to Grant Line Road	644	805	0.80	20%	41%	Acceptable	-161	25,976	
43	Harbour Point Drive	From Laguna Boulevard to Babson Drive	954	894	1.07	7%	38%	Acceptable	60	3,572	
44	Willard Parkway	From Whitelock Parkway to Blossom Ridge Drive	533	734	0.73	27%	44%	Acceptable	-201	40,502	
45	Willard Parkway	From Blossom Ridge Drive to Bilby Road	588	698	0.84	16%	44%	Acceptable	-110	12,094	
46	Bilby Road	From Franklin Boulevard to Willard Parkway	596	862	0.69	31%	41%	Acceptable	-266	70,790	
47	Civic Center Drive	From Bruceville Road to Wymark Drive	353	386	0.91	9%	52%	Acceptable	-33	1,121	
48	Civic Center Drive	From Wymark Drive to Big Horn Boulevard	316	497	0.64	36%	52%	Acceptable	-181	32,799	
49	Civic Center Drive	From Big Horn Boulevard to Laguna Springs Drive	73	258	0.28	72%	58%	Low	-185	34,241	
50	Lotz Parkway	From Big Horn Boulevard to Laguna Springs Drive	487	742	0.66	34%	44%	Acceptable	-255	64,891	
51	Lotz Parkway	From Laguna Springs Drive to Whitelock Parkway	350	465	0.75	25%	52%	Acceptable	-115	13,184	
52	Whitelock Parkway	From Franklin Boulevard to Bruceville Road	1,244	1,186	1.05	5%	34%	Acceptable	58	3,363	
53	Whitelock Parkway	From Bruceville Road to Big Horn Boulevard	692	1,111	0.62	38%	36%	Low	-419	175,420	
54	Whitelock Parkway	From Big Horn Boulevard to Lotz Parkway	300	551	0.54	46%	48%	Acceptable	-251	62,952	
55	W. Stockton Boulevard	From Lewis Stein Road to Michener Way	303	397	0.76	24%	52%	Acceptable	-94	8,789	
56	W. Stockton Boulevard	From Dunisch Road to Laguna Boulevard	268	350	0.77	23%	58%	Acceptable	-82	6,743	
57	W. Stockton Boulevard	From Whitelock Parkway to Kyler Road	728	755	0.96	4%	41%	Acceptable	-27	716	
58	Poppy Ridge Road	From Bruceville Road to Cosby Way	50	91	0.55	45%	68%	Acceptable	-41	1,647	
59	Promenade Parkway	From Kyler Road to Kammerer Road	616	805	0.77	23%	41%	Acceptable	-189	35,751	
60	Laguna Springs Boulevard	From Laguna Boulevard to Longleaf Drive	1,170	1,304	0.90	10%	33%	Acceptable	-134	17,857	
61	Laguna Springs Boulevard	From Longleaf Drive to Elk Grove Boulevard	635	629	1.01	1%	44%	Acceptable	6	33	
62	Laguna Springs Boulevard	From Elk Grove Boulevard to Civic Center Drive	758	654	1.16	16%	44%	Acceptable	104	10,776	
63	Auto Center Drive	From Elk Grove Boulevard to W. Stockton Boulevard	1,055	981	1.08	8%	38%	Acceptable	74	5,417	
64	Lewis Stein Road	From Sheldon Road to W. Stockton Boulevard	1,575	1,101	1.43	43%	36%	High	474	224,561	
65	E. Stockton Boulevard	From Marketplace 99 South to Bond Road	829	836	0.99	1%	41%	Acceptable	-7	52	
66	E. Stockton Boulevard	From Bond Road to Banff Vista Drive	537	785	0.68	32%	41%	Acceptable	-248	61,650	
67	E. Stockton Boulevard	From Elk Grove Boulevard to SR 99 NB Ramps	1,333	1,754	0.76	24%	29%	Acceptable	-421	177,207	
68	E. Stockton Boulevard	From Elk Grove Florin Road to Grant Line Road	690	674	1.02	2%	44%	Acceptable	16	249	
69	Emerald Vist Drive	From E. Stockton Boulevard to Elk Grove Boulevard	1,174	992	1.18	18%	38%	Acceptable	182	33,116	
70	Mosher Road	From Waterman Road to Grant Line Road	146	201	0.73	27%	63%	Acceptable	-55	3,014	
Total			91,377	90,028							
					Model/Count Ratio	1.01					
					Percent Within Caltrans Maximum Deviation (>75%)	86%					
					Percent Root Mean Square Error (<40%)	26%					
					Correlation Coefficient (>0.88)	0.94					
Notes: 2017 Regional Transportation Plan Guidelines for Metropolitan Planning Organizations											
					Total Count	70					
					Links Within Deviation	60					

Elk Grove Fee Program Update

AM Peak Hour

Elk Grove Base Year Model

Static Model Validation - Two-Way Total

ID	Roadway	Segment	Model Volume	Count Volume	Model / Count	% Deviation	Max Allowable % Deviation	Within Deviation	Model - Count	Difference Squared
Links Outside Deviation										10

Data Sources:

- For arterials and collector Streets counts were averaged over three mid-weekdays for either of the following date ranges:
 1. August 2, 2019 – August 22, 2019
 2. August 27, 2019 – August 29, 2019
 3. September 10, 2019 – September 12, 2019
- For freeways, counts were collected from PeMS data source and averaged for the month of August - October, 2019. Only the data points with detector health > 95% were selected.

Elk Grove Fee Program Update

Elk Grove Base Year Model

PM Peak Hour

Static Model Validation - Two-Way Total

ID	Roadway	Segment	Model Volume	Count Volume	Model / Count	% Deviation	Max Allowable % Deviation	Within Deviation	Model - Count	Difference Squared
1	Laguna Boulevard	From Harbour Point Drive to Franklin Boulevard	1,939	2,571	0.75	25%	26%	Acceptable	-632	399,210
2	Laguna Boulevard	From Franklin Boulevard to Bruceville Road	2,658	2,713	0.98	2%	25%	Acceptable	-55	3,018
3	Laguna Boulevard	From Bruceville Road to Big Horn Boulevard	3,252	2,962	1.10	10%	24%	Acceptable	290	84,344
4	Laguna Boulevard	From Big Horn Boulevard to Laguna Springs Drive	4,799	3,647	1.32	32%	23%	High	1,152	1,326,041
5	Bond Road	From E. Stockton Boulevard to Emerald Crest Drive	3,297	2,705	1.22	22%	25%	Acceptable	592	350,613
6	Bond Road	From Elk Grove Florin Road to Waterman Road	2,358	2,072	1.14	14%	28%	Acceptable	286	82,057
7	Bond Road	From Waterman Road to Bradshaw Road	1,448	1,220	1.19	19%	34%	Acceptable	228	52,121
8	Bond Road	From Bradshaw Road to Grant Line Road	328	486	0.68	32%	52%	Acceptable	-158	24,845
9	Elk Grove Boulevard	From Harbour Point Drive to Franklin Boulevard	2,672	2,878	0.93	7%	24%	Acceptable	-206	42,278
10	Elk Grove Boulevard	From Franklin Boulevard to Bruceville Road	2,276	3,024	0.75	25%	24%	Low	-748	559,159
11	Elk Grove Boulevard	From Bruceville Road to Big Horn Boulevard	2,779	3,023	0.92	8%	24%	Acceptable	-244	59,681
12	Elk Grove Boulevard	From Laguna Springs Drive to SR 99	3,619	3,444	1.05	5%	24%	Acceptable	175	30,714
13	Elk Grove Boulevard	From E. Stockton Boulevard to Elk Grove Florin Road	2,467	2,422	1.02	2%	26%	Acceptable	45	2,012
14	Elk Grove Boulevard	From Elk Grove Florin Road to Waterman Road	1,331	1,390	0.96	4%	31%	Acceptable	-59	3,482
15	Elk Grove Boulevard	From Bradshaw Road to Grant Line Road	247	298	0.83	17%	58%	Acceptable	-51	2,632
16	Bilby Road	From Willard Parkway to Bruceville Road	625	633	0.99	1%	44%	Acceptable	-8	60
17	Kammerer Road	From Bruceville Road to Promenade Parkway	657	845	0.78	22%	41%	Acceptable	-188	35,270
18	Kammerer Road	From Promenade Parkway to SR 99	1,347	1,716	0.79	21%	29%	Acceptable	-369	136,083
19	Grant Line Road	From E. Stockton Boulevard to Waterman Road	2,267	2,436	0.93	7%	26%	Acceptable	-169	28,507
20	Sheldon Road	From Lewis Stein Road to SR 99	2,370	3,097	0.77	23%	24%	Acceptable	-727	528,774
21	Sheldon Road	From Elk Grove Florin Road to Waterman Road	843	1,397	0.60	40%	31%	Low	-554	306,698
22	Franklin Boulevard	From Big Horn Boulevard to Laguna Boulevard	2,266	1,987	1.14	14%	28%	Acceptable	279	77,647
23	Franklin Boulevard	From Laguna Boulevard to Elk Grove Boulevard	2,378	1,780	1.34	34%	29%	High	598	357,809
24	Franklin Boulevard	From Elk Grove Boulevard to Whitelock Parkway	1,777	1,951	0.91	9%	28%	Acceptable	-174	30,420
25	Bruceville Road	From Big Horn Boulevard to Laguna Boulevard	2,597	2,540	1.02	2%	26%	Acceptable	57	3,196
26	Bruceville Road	From Laguna Boulevard to Elk Grove Boulevard	1,960	2,259	0.87	13%	27%	Acceptable	-299	89,394
27	Bruceville Road	From Elk Grove Boulevard to Whitelock Parkway	1,817	2,163	0.84	16%	27%	Acceptable	-346	119,816
28	Bruceville Road	From Whitelock Parkway to Bilby Road	858	718	1.20	20%	44%	Acceptable	140	19,647
29	Big Horn Boulevard	From Lewis Stein Road to Laguna Boulevard	1,232	1,419	0.87	13%	31%	Acceptable	-187	34,795
30	Big Horn Boulevard	From Laguna Boulevard to Longleaf Drive	1,944	2,051	0.95	5%	28%	Acceptable	-107	11,545
31	Big Horn Boulevard	From Elk Grove Boulevard to Civic Center Drive	1,048	1,445	0.73	27%	31%	Acceptable	-397	157,715
32	Big Horn Boulevard	From Lotz Parkway to Whitelock Parkway	641	1,118	0.57	43%	36%	Low	-477	227,367
33	Power Inn Road	From Auburly Drive to Sheldon Road	918	888	1.03	3%	38%	Acceptable	30	870
34	Elk Grove Florin Road	From Calvine Road to Sheldon Road	2,579	2,410	1.07	7%	26%	Acceptable	169	28,706
35	Elk Grove Florin Road	From Sheldon Road to Bond Road	2,244	1,924	1.17	17%	28%	Acceptable	320	102,438
36	Elk Grove Florin Road	From Bond Road to Elk Grove Boulevard	1,562	1,545	1.01	1%	30%	Acceptable	17	279
37	Elk Grove Florin Road	From Valley Oak Lane to E. Stockton Boulevard	594	591	1.01	1%	48%	Acceptable	3	10
38	Waterman Road	From Sheldon Road to Bond Road	1,051	1,193	0.88	12%	34%	Acceptable	-142	20,202
39	Waterman Road	From Bond Road to Elk Grove Boulevard	952	1,071	0.89	11%	36%	Acceptable	-119	14,170

Elk Grove Fee Program Update

Elk Grove Base Year Model

PM Peak Hour

Static Model Validation - Two-Way Total

ID	Roadway	Segment	Model Volume	Count Volume	Model / Count	% Deviation	Max Allowable % Deviation	Within Deviation	Model - Count	Difference Squared
40	Waterman Road	From Mosher Road to Grant Line Road	636	685	0.93	7%	44%	Acceptable	-49	2,354
41	Bradshaw Road	From Sheldon Road to Bond Road	1,418	1,683	0.84	16%	29%	Acceptable	-265	70,211
42	Bradshaw Road	From Elk Grove Boulevard to Grant Line Road	756	771	0.98	2%	41%	Acceptable	-15	219
43	Harbour Point Drive	From Laguna Boulevard to Babson Drive	1,002	1,126	0.89	11%	34%	Acceptable	-124	15,360
44	Willard Parkway	From Whitelock Parkway to Blossom Ridge Drive	521	687	0.76	24%	44%	Acceptable	-166	27,437
45	Willard Parkway	From Blossom Ridge Drive to Bilby Road	603	611	0.99	1%	48%	Acceptable	-8	69
46	Bilby Road	From Franklin Boulevard to Willard Parkway	625	609	1.03	3%	48%	Acceptable	16	265
47	Civic Center Drive	From Bruceville Road to Wymark Drive	425	524	0.81	19%	48%	Acceptable	-99	9,896
48	Civic Center Drive	From Wymark Drive to Big Horn Boulevard	345	624	0.55	45%	48%	Acceptable	-279	78,042
49	Civic Center Drive	From Big Horn Boulevard to Laguna Springs Drive	85	337	0.25	75%	58%	Low	-252	63,513
50	Lotz Parkway	From Big Horn Boulevard to Laguna Springs Drive	632	696	0.91	9%	44%	Acceptable	-64	4,120
51	Lotz Parkway	From Laguna Springs Drive to Whitelock Parkway	363	491	0.74	26%	52%	Acceptable	-128	16,429
52	Whitelock Parkway	From Franklin Boulevard to Bruceville Road	1,143	1,421	0.80	20%	31%	Acceptable	-278	77,025
53	Whitelock Parkway	From Bruceville Road to Big Horn Boulevard	722	1,323	0.55	45%	33%	Low	-601	360,808
54	Whitelock Parkway	From Big Horn Boulevard to Lotz Parkway	375	561	0.67	33%	48%	Acceptable	-186	34,416
55	W. Stockton Bouelvard	From Lewis Stein Road to Michener Way	347	468	0.74	26%	52%	Acceptable	-121	14,754
56	W. Stockton Bouelvard	From Dunisch Road to Laguna Boulevard	331	466	0.71	29%	52%	Acceptable	-135	18,290
57	W. Stockton Bouelvard	From Whitelock Parkway to Kyler Road	845	765	1.10	10%	41%	Acceptable	80	6,397
58	Poppy Ridge Road	From Bruceville Road to Cosby Way	86	117	0.73	27%	68%	Acceptable	-31	971
59	Promenade Parkway	From Kyler Road to Kammerer Road	704	854	0.82	18%	41%	Acceptable	-150	22,642
60	Laguna Springs Boulevard	From Laguna Boulevard to Longleaf Drive	1,125	1,791	0.63	37%	29%	Low	-666	443,647
61	Laguna Springs Boulevard	From Longleaf Drive to Elk Grove Boulevard	661	812	0.81	19%	41%	Acceptable	-151	22,661
62	Laguna Springs Boulevard	From Elk Grove Boulevard to Civic Center Drive	750	759	0.99	1%	41%	Acceptable	-9	87
63	Auto Center Drive	From Elk Grove Boulevard to W. Stockton Bouelvard	1,211	1,175	1.03	3%	34%	Acceptable	36	1,297
64	Lewis Stein Road	From Sheldon Road to W. Stockton Bouelvard	1,409	1,276	1.10	10%	33%	Acceptable	133	17,820
65	E. Stockton Boulevard	From Marketplace 99 South to Bond Road	870	999	0.87	13%	38%	Acceptable	-129	16,607
66	E. Stockton Boulevard	From Bond Road to Banff Vista Drive	642	782	0.82	18%	41%	Acceptable	-140	19,735
67	E. Stockton Boulevard	From Elk Grove Boulevard to SR 99 NB Ramps	1,578	1,920	0.82	18%	28%	Acceptable	-342	117,248
68	E. Stockton Boulevard	From Elk Grove Florin Road to Grant Line Road	784	720	1.09	9%	44%	Acceptable	64	4,119
69	Emerld Vist Drive	From E. Stockton Bouelvard to Elk Grove Boulevard	1,357	996	1.36	36%	38%	Acceptable	361	130,241
70	Mosher Road	From Waterman Road to Grant Line Road	170	127	1.34	34%	63%	Acceptable	43	1,885
Total			94,519	100,208						
					Model/Count Ratio	0.94				
					Percent Within Caltrans Maximum Deviation (>75%)	89%				
					Percent Root Mean Square Error (<40%)	22%				
					Correlation Coefficient (>0.88)	0.95				
Notes: 2017 Regional Transportation Plan Guidelines for Metropolitan Planning Organizations										
					Total Count	70				
					Links Within Deviation	62				

Elk Grove Fee Program Update

PM Peak Hour

Elk Grove Base Year Model

Static Model Validation - Two-Way Total

ID	Roadway	Segment	Model Volume	Count Volume	Model / Count	% Deviation	Max Allowable % Deviation	Within Deviation	Model - Count	Difference Squared
Links Outside Deviation 8										

Data Sources:

- For arterials and collector Streets counts were averaged over three mid-weekdays for either of the following date ranges:
 1. August 2, 2019 – August 22, 2019
 2. August 27, 2019 – August 29, 2019
 3. September 10, 2019 – September 12, 2019
- For freeways, counts were collected from PeMS data source and averaged for the month of August - October, 2019. Only the data points with detector health > 95% were selected.

Appendix C

VMT Scripts

FEHR  PEERS

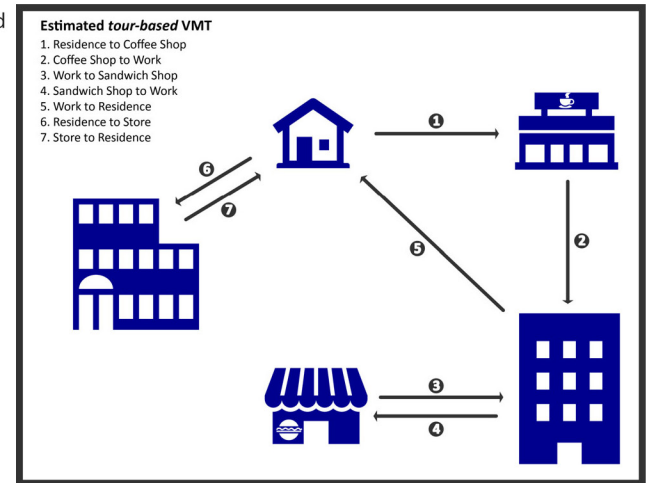
Household VMT Calculation

VMT per Capita is used to evaluate residential projects. It includes all vehicle "tours" (both work/commute vehicle tours and non-work vehicle tours) that start and end at residential units. VMT from these tours are summed to the home location. VMT for each home is then summed by TAZ and divided by the total population in that TAZ to arrive at VMT per Capita.

Process.docx file includes the full documentation.

Input files required :

1. _trips_1_1.csv
2. _houehold.tsv
3. 2016_raw_parcel.dbf
4. ixxi_taz.dbf
5. Outside_sacog_vmt_estimation_steps_0.xlsx



Input Files

```
In [ ]: import pandas as pd
        from dbfread import DBF
        import numpy as np
```

```
In [ ]: pd.set_option('display.max_rows', 5)
        pd.set_option('display.max_columns', 50)
        import warnings
        warnings.filterwarnings ('ignore')
```

```
In [ ]: TAZ_Jurisdiction = pd.read_csv("parcel_taz_juris.csv")
```

```
In [ ]: trips_input = pd.read_csv("_trip_1_1.csv")
        household_input = pd.read_csv("_household.tsv", delimiter = "\t")
        taz_rad_input = pd.read_csv("tazrad07.txt", delimiter = "\s+", header = None)
        parcel_id = DBF("pa40_raw_parcel.dbf")
        parcel_id = pd.DataFrame(parcel_id)
        ixxi_input = DBF("ixxi_taz.dbf")
        ixxi_input = pd.DataFrame(ixxi_input)
        IXXI_VMT_by_TAZ_input = pd.read_excel('Outside_sacog_vmt_estimation_steps_0_new_method.xlsx', sheet_name='IXXI_VMT_by_TAZ', index_col=None)
```

```
In [ ]: def vmt_gen(row):
        if row["mode"] == 5:
            return row["distau"] * 0.3
        elif row["mode"] == 4:
            return row["distau"] * 0.5
        else:
```

```
return row["distau"] * 1
```

```
veh_trips = trips_input[(trips_input["mode"] == 3) | (trips_input["mode"] == 4) | (trips_input["mode"] == 5)]  
veh_trips["VMT"] = veh_trips.apply(vmt_gen, axis =1)
```

Summarize II VMT by Parcel

```
In [ ]: trip_hh_merge = pd.merge(veh_trips, household_input, how = "left", on = "hhno")  
trip_hh_merge_vmt = trip_hh_merge.groupby("hhparcel")["VMT"].sum().reset_index()  
trip_hh_merge_vmt = trip_hh_merge_vmt.rename(columns={"hhparcel": "HHPARCEL", "VMT": "VMT_II"})
```

```
In [ ]: trip_hh_merge["hhsz"].sum(), len(trip_hh_merge), trip_hh_merge_vmt["VMT_II"].sum()
```

Summarize II VMT by TAZ

```
In [ ]: ## Summarize II VMT by Parcel  
ii_vmt_all_parcel = pd.merge(parcel_id, trip_hh_merge_vmt, how='left', left_on = "PARCELID", right_on = "HHPARCEL")  
ii_vmt_all_parcel = ii_vmt_all_parcel.sort_values("PARCELID")  
ii_vmt_all_parcel = ii_vmt_all_parcel.fillna(0)  
ii_vmt_parcel = ii_vmt_all_parcel[["PARCELID", "TAZ", "HH_P", "VMT_II"]]
```

```
In [ ]: ii_vmt_taz = ii_vmt_parcel.groupby("TAZ")["VMT_II"].sum().reset_index()  
ii_vmt_taz = ii_vmt_taz.rename(columns={"VMT_II": "VMT_II_TAZ"})
```

```
In [ ]: ii_vmt_taz["VMT_II_TAZ"].sum(), veh_trips["VMT"].sum(), trip_hh_merge_vmt["VMT_II"].sum()
```

```
In [ ]: taz_pops = household_input.groupby("hhtaz")["hhsz"].sum().reset_index()  
taz_pops = taz_pops.rename(columns={"hhtaz": "TAZ", "hhsz": "POP"})
```

IXXI VMT by TAZ

```
In [ ]: ixxi_taz_input_LU = ixxi_input[["I", "HHS", "EMPTY", "FOOD", "RET", "SVC"]]  
ixxi_taz_VMT_w_LU = pd.merge(IXXI_VMT_by_TAZ_input, ixxi_taz_input_LU, how = "left", on = "I")  
ixxi_taz_VMT_w_LU["IX_VMT_RES"] = (ixxi_taz_VMT_w_LU["IX_VMT_I"] + ixxi_taz_VMT_w_LU["IX_VMT_J"]) * ((ixxi_taz_VMT_w_LU["HHS"]) / (1 + ixxi_taz_VMT_w_LU["HHS"] + 1.1*(i
```

```
In [ ]: ixxi_VMT_taz = ixxi_taz_VMT_w_LU[["I", "IX_VMT_RES"]]  
ixxi_VMT_taz = ixxi_VMT_taz.rename(columns={"I": "TAZ", "IX_VMT_RES": "VMT_ixxi"})
```

```
In [ ]: len(ixxi_VMT_taz)
```

```
In [ ]: ixxi_vmt_taz_2 = pd.merge(ixxi_VMT_taz, taz_pops, how='left', on = "TAZ")  
ixxi_vmt_taz_2["VMT_ixxi_per_cap_taz"] = np.where(ixxi_vmt_taz_2["POP"]>0, ixxi_vmt_taz_2["VMT_ixxi"] / ixxi_vmt_taz_2["POP"], 0)
```

```
In [ ]: ixxi_vmt_taz_2['POP']=ixxi_vmt_taz_2['POP'].fillna(0)
```

```
In [ ]: len(ixxi_vmt_taz_final)
```

```
In [ ]: TAZ_RAD = TAZ_Jurisdiction[['TAZ', 'RAD']]
```

```
In [ ]: TAZ_RAD = TAZ_RAD.drop_duplicates()
```

```
In [ ]: ixxi_vmt_taz_final = pd.merge(ixxi_vmt_taz_2, TAZ_RAD, on = "TAZ", how='left')
```

```
In [ ]: ixxi_vmt_taz_final['RAD']=ixxi_vmt_taz_final['RAD'].fillna(0)
```

IXXI VMT by RAD

```
In [ ]: ixxi_vmt_taz_rad = ixxi_vmt_taz_final[ixxi_vmt_taz_final['RAD']>0]
```

```
In [ ]: ixxi_vmt_rad = ixxi_vmt_taz_rad.groupby(['RAD']).agg({'VMT_ixxi':'sum','POP':'sum'}).reset_index()
```

```
In [ ]: ixxi_vmt_rad['VMT_ixxi_per_cap_rad'] = np.where(ixxi_vmt_rad["POP"]>0, ixxi_vmt_rad["VMT_ixxi"] / ixxi_vmt_rad["POP"], 0)
```

```
In [ ]: ixxi_vmt_rad = ixxi_vmt_rad.drop(columns={'VMT_ixxi','POP'})
```

Parcel Level Calculation

```
In [ ]: household_pop = household_input.groupby('hhparcel')['hhsize'].sum().reset_index()
```

```
In [ ]: hh_VMT_II = pd.merge(ii_vmt_parcel, TAZ_Jurisdiction, on = 'PARCELID', how="left")
```

```
In [ ]: hh_VMT_II_pop = pd.merge(hh_VMT_II, household_pop, left_on='PARCELID', right_on = 'hhparcel', how="left")
```

```
In [ ]: hh_VMT_II_pop['POP'] = hh_VMT_II_pop['hhsize']
```

```
In [ ]: hh_VMT_II_pop = hh_VMT_II_pop.drop(columns=['TAZ_y'])  
hh_VMT_II_pop = hh_VMT_II_pop.rename(columns={"TAZ_x": "TAZ"})
```

```
In [ ]: hh_VMT_II_pop = hh_VMT_II_pop[['PARCELID', 'TAZ', 'JURIS', 'RAD', 'VMT_II', 'HH_P', 'POP']]
```

```
In [ ]: HH_VMT_by_parcel_rad = pd.merge(hh_VMT_II_pop, ixxi_vmt_rad, on = "RAD", how = "left")
HH_VMT_by_parcel_rad = HH_VMT_by_parcel_rad.fillna(0)
```

```
In [ ]: HH_VMT_by_parcel_rad ['VMT_IXXI'] = HH_VMT_by_parcel_rad['VMT_ixxi_per_cap_rad']*HH_VMT_by_parcel_rad['POP']
HH_VMT_by_parcel_rad ['VMT_TOT'] = HH_VMT_by_parcel_rad ['VMT_II'] + HH_VMT_by_parcel_rad ['VMT_IXXI']
HH_VMT_by_parcel_rad ['VMT_TOT_PER_CAP'] = np.where(HH_VMT_by_parcel_rad["POP"]>0, HH_VMT_by_parcel_rad["VMT_TOT"] / HH_VMT_by_parcel_rad["POP"], 0)
```

```
In [ ]: Household_VMT_by_parcel_rad = HH_VMT_by_parcel_rad[['PARCELID', 'TAZ', 'RAD', 'HH_P', 'POP', 'VMT_II', 'VMT_IXXI', 'VMT_TOT', 'VMT_TOT_PER_CAP']]
```

```
In [ ]: Household_VMT_by_parcel_rad.to_csv("Household_VMT_by_parcel.csv", index=False)
```

Work Tour VMT by parcel Calculation

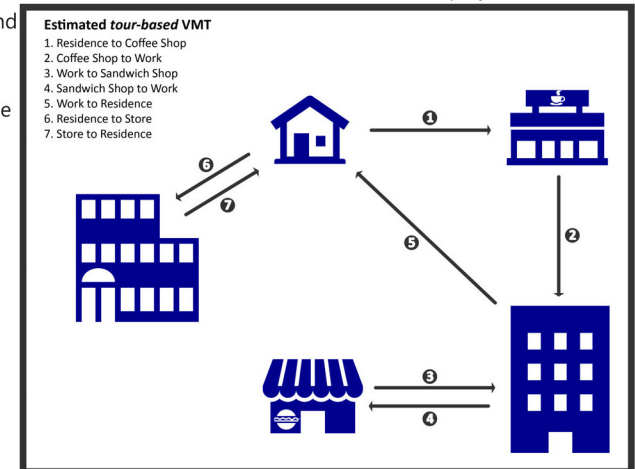
VMT per Employee is used to evaluate commercial and industrial employment projects. VMT per Employee includes all work/commute vehicle tours that start and end at employment location. VMT from these tours are summed to the employment parcels. VMT for each employment parcel is then summed by TAZ and divided by the total employment of that TAZ to arrive at VMT per Employee per TAZ.

The work/commute vehicle tours estimated by SACSIM19 include intermediate stops. VMT from these tours must include the full mileage of the entire round-trip work/commute tour including all stops based on the SACSIM19 model. \ From SACOG guidelines, Work-tour VMT includes trips #1, 2, 5, 3, and 4 from the image.

Process.docx file includes the full documentation.

Input files required :

1. _trips_1_1.csv
2. _houehold.tsv
3. _tour.tsv
4. pa40_raw_parcel.dbf
5. tazhsums.txt
6. worker_ixxfractions.dat
7. Outside_sacog_vmt_estimation_steps_0.xlsx



Import packages

```
In [1]: import pandas as pd
from dbfread import DBF
import numpy as np
```

```
In [2]: pd.set_option('display.max_rows', 5)
pd.set_option('display.max_columns', None)
import warnings
warnings.filterwarnings('ignore')
```

Input Files

```
In [3]: tour_input = pd.read_csv("_tour.tsv", delimiter = "\t")
trips_input = pd.read_csv("_trip_1_1.csv")
household_input = pd.read_csv("_household.tsv", delimiter = "\t")
parcel_input = DBF("pa40_raw_parcel.dbf")
parcel_input = pd.DataFrame(parcel_input)
worker_ixxi_fractions = pd.read_csv("worker_ixxfractions.dat", sep = "\s+", header = None)
```

```
In [4]: work_tour_ixxi = pd.read_excel('Outside_sacog_vmt_estimation_steps_0_new_method.xlsx', sheet_name='work_tour_ixxi', index_col=None)
```

```
In [5]:
```

```
TAZ_Jurisdiction = pd.read_csv("parcel_taz_juris.CSV")
```

```
In [6]:
trips_input_c = trips_input
def vmt_gen(row):
    if row["mode"] == 5:
        return row["distau"] * 0.3
    elif row["mode"] == 4:
        return row["distau"] * 0.5
    else:
        return row["distau"] * 1

trips_input_c = trips_input_c[(trips_input_c["mode"] == 3) | (trips_input_c["mode"] == 4) | (trips_input_c["mode"] == 5)]
trips_input_c["VMT"] = trips_input_c.apply(vmt_gen, axis = 1)
```

Filter Work Trips ii VMT by parcel

- Merge trips and tour files
- Filter by pdpurp = 1 (Destination purpose = work)
- Summarize (groupby) data by destination parcels (tdpcl) to get VMT for each trip

```
In [7]:
trip_tour_merge = pd.merge(trips_input_c, tour_input, how = "left", left_on = "tour_id", right_on = "id")
trip_tour_merge = trip_tour_merge[['opcl', "pdpurp", "parent", "tdpcl", "topcl", "VMT" ]]
work_trip_tour = trip_tour_merge[trip_tour_merge["pdpurp"] == 1]
work_trips_dest = work_trip_tour.groupby("tdpcl")["VMT"].sum().reset_index()
```

Add Work Subtours by parcel

- Filter data by parent>0 (subtour)
- Summarize VMT data by origin parcel (topcl). Origin parcel of a work based subtour will be the work location.
- Add this to the work tours calculated in the previous step
- This will be total II work VMT

```
In [8]:
work_subtour = trip_tour_merge[trip_tour_merge["parent"]>0]
work_subtour_origin_parcel = work_subtour.groupby("topcl")["VMT"].sum().reset_index()

ii_work_vmt = pd.merge(work_trips_dest, work_subtour_origin_parcel, left_on = "tdpcl", right_on = "topcl", how = "outer" )
ii_work_vmt["VMT_x"] = ii_work_vmt["VMT_x"].fillna(0)
ii_work_vmt["VMT_y"] = ii_work_vmt["VMT_y"].fillna(0)
ii_work_vmt["VMT_II"] = ii_work_vmt["VMT_x"] + ii_work_vmt["VMT_y"]
```

Separate Internal-External Worker By Parcel

```
In [9]:
worker_ixci_fractions.columns = ["taz", "residents_ix", "workers_xi"]
parcel_jobs = parcel_input[["PARCELID", "TAZ", "EMPTOT_P"]].copy()
parcel_workers = pd.merge(parcel_jobs, worker_ixci_fractions, left_on = "TAZ", right_on = "taz", how = "left")
parcel_workers["External_Workers"] = parcel_workers["EMPTOT_P"] * parcel_workers["workers_xi"]
parcel_workers["Internal_Workers"] = parcel_workers["EMPTOT_P"] - parcel_workers["External_Workers"]
```



```
In [10]: parcel_work_vmt = pd.merge(parcel_workers, ii_work_vmt, how = "left", left_on = "PARCELID", right_on = "tdpcl" )
```

```
In [11]: parcel_work_vmt = pd.merge(parcel_workers, ii_work_vmt, how = "left", left_on = "PARCELID", right_on = "tdpcl" )
parcel_work_vmt["VMT_II"] = parcel_work_vmt["VMT_II"].fillna(0)
parcel_work_vmt["VMT_II_Per_Worker"] = parcel_work_vmt["VMT_II"] / parcel_work_vmt["Internal_Workers"]
parcel_work_vmt["VMT_II_Per_Worker"] = parcel_work_vmt["VMT_II_Per_Worker"].fillna(0)
```

```
In [12]: parcel_work_vmt = parcel_work_vmt[['PARCELID', 'TAZ', 'EMPTOT_P', 'External_Workers', 'Internal_Workers', 'VMT_II', 'VMT_II_Per_Worker']]
```

Summarize II VMT and workers by TAZ

```
In [13]: taz_work_vmt_ii = parcel_work_vmt.groupby("TAZ")[["VMT_II", 'EMPTOT_P', 'Internal_Workers']].sum().reset_index()
```

```
In [14]: taz_work_vmt_ii['VMT_II_Per_Emp'] = taz_work_vmt_ii["VMT_II"] / taz_work_vmt_ii["Internal_Workers"]
```

Add IXXI VMT by TAZ

```
In [15]: ## Add IXXI VMT by TAZ# This step is tricky - have not fully figures out yet, but we need another input here

VMT_work_tour_ixxi = work_tour_ixxi[["I", "F_exW_VMT(XI)", "F_exW_VMT(IX)", 'external_workers']]
VMT_work_tour_ixxi = VMT_work_tour_ixxi[VMT_work_tour_ixxi['I']>30]
VMT_work_tour_ixxi["VMT_IXXI"] = VMT_work_tour_ixxi["F_exW_VMT(XI)"] + VMT_work_tour_ixxi["F_exW_VMT(IX)"]
VMT_work_tour_ixxi['VMT_IXXI_per_Emp'] = np.where(VMT_work_tour_ixxi['external_workers']>0, VMT_work_tour_ixxi['VMT_IXXI'] / VMT_work_tour_ixxi['external_workers'], 0)
```

TAZ Level Calculation

```
In [16]: VMT_work_tour = pd.merge(VMT_work_tour_ixxi, taz_work_vmt_ii, how = "left", left_on = "I", right_on = "TAZ")
VMT_work_tour["VMT_II"] = VMT_work_tour["VMT_II"].fillna(0)
```

```
In [17]: VMT_work_tour["VMT_Total"] = VMT_work_tour["VMT_II"] + VMT_work_tour["VMT_IXXI"]
```

```
In [18]: VMT_work_tour['VMT_Per_Emp'] = np.where(VMT_work_tour['EMPTOT_P']>0, (VMT_work_tour["VMT_Total"] / VMT_work_tour["EMPTOT_P"]), 0)
```

```
In [19]: VMT_work_tour = VMT_work_tour.drop(columns=['TAZ'])
VMT_work_tour = VMT_work_tour.rename(columns={"I": "TAZ"})
```

```
In [20]: VMT_work_tour2 = pd.merge(VMT_work_tour, TAZ_Jurisdiction, how = "left", on = "TAZ")
```

```
In [21]: VMT_work_tour3 = VMT_work_tour2[['TAZ', 'RAD', 'EMPTOT_P', 'external_workers', 'VMT_II', 'VMT_IXXI', 'VMT_Total', 'VMT_Per_Emp', 'JURIS']]
```

```
In [22]: #VMT_work_tour3.to_csv('Work_Tour_VMT_by_taz.csv', index=False)
```

IX-XI VMT by RAD

```
In [23]: rad_VMT_IXXI = VMT_work_tour2.groupby('RAD')[['VMT_IXXI', 'external_workers']].sum().reset_index()
```

```
In [24]: rad_VMT_IXXI["VMT_IXXI_per_worker_rad"] = rad_VMT_IXXI["VMT_IXXI"] / rad_VMT_IXXI["external_workers"]
```

```
In [25]: rad_VMT_IXXI = rad_VMT_IXXI.drop(columns=['external_workers', 'VMT_IXXI'])
```

Parcel level Calculation

```
In [26]: VMT_Parcel_rad = pd.merge(parcel_work_vmt, TAZ_Jurisdiction, left_on = "PARCELID", right_on = "PARCELID", how = "left" )
```

```
In [27]: Work_Tour_VMT_parcel_rad = pd.merge(VMT_Parcel_rad, rad_VMT_IXXI, left_on = 'RAD', right_on = 'RAD', how="left")
```

```
In [28]: Work_Tour_VMT_parcel_rad['VMT_IXXI_per_worker_rad'] = Work_Tour_VMT_parcel_rad['VMT_IXXI_per_worker_rad'].fillna(0)
```

```
In [29]: Work_Tour_VMT_parcel_rad['VMT_IXXI'] = Work_Tour_VMT_parcel_rad['VMT_IXXI_per_worker_rad']*Work_Tour_VMT_parcel_rad['External_Workers']
```

```
In [30]: Work_Tour_VMT_parcel_rad['VMT_TOT'] = Work_Tour_VMT_parcel_rad['VMT_II']+Work_Tour_VMT_parcel_rad['VMT_IXXI']
```

```
In [31]: Work_Tour_VMT_parcel_rad['VMT_TOT_per_emp'] = np.where(Work_Tour_VMT_parcel_rad['EMPTOT_P']>0, Work_Tour_VMT_parcel_rad['VMT_TOT'] / Work_Tour_VMT_parcel_rad['EMPTOT_P
```

```
In [32]: Work_Tour_VMT_parcel_rad = Work_Tour_VMT_parcel_rad.drop(columns=['TAZ_y'])  
Work_Tour_VMT_parcel_rad = Work_Tour_VMT_parcel_rad.rename(columns={"TAZ_x": "TAZ"})
```

```
In [33]: Work_Tour_VMT_parcel_rad = Work_Tour_VMT_parcel_rad[['PARCELID', 'TAZ', 'JURIS', 'RAD', 'EMPTOT_P', 'External_Workers', 'Internal_Workers', 'VMT_II', 'VMT_IXXI', 'VMT_TOT', 'VMT
```

```
In [34]: Work_Tour_VMT_parcel_rad.to_csv('Work_Tour_VMT_by_parcel.csv', index=False)
```

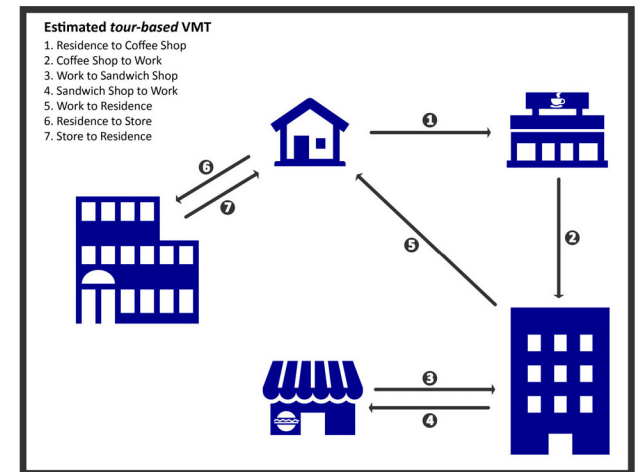

Other VMT by parcel Calculation

Other-tour VMT includes trip #6-7 from the image.

Process.docx file includes the full documentation.

Input files required :

1. _trips_1_1.csv
2. _houehold.tsv
3. _tour.tsv
4. pa40_raw_parcel.dbf
5. tazhsums.txt
6. worker_ixifractions.dat
7. Outside_sacog_vmt_estimation_steps_0.xlsx



Import packages

```
In [1]: import pandas as pd
        from dbfread import DBF
        import numpy as np
```

```
In [2]: pd.set_option('display.max_rows', 5)
        pd.set_option('display.max_columns', None)
        import warnings
        warnings.filterwarnings('ignore')
```

Input Files

```
In [3]: tour_input = pd.read_csv("_tour.tsv", delimiter = "\t")
        trips_input = pd.read_csv("_trip_1_1.csv")
```

```
In [4]: parcel_input = DBF("pa40_raw_parcel.dbf")
        parcel_input = pd.DataFrame(parcel_input)
```

```
In [5]: TAZ_Jurisdiction = pd.read_csv("parcel_taz_juris.csv")
```

```
In [6]: trips_input_c = trips_input
        def vmt_gen(row):
            if row["mode"] == 5:
                return row["distau"] * 0.3
            elif row["mode"] == 4:
```

```

    return row["distau"] * 0.5
else:
    return row["distau"] * 1

```

```

trips_input_c = trips_input_c[(trips_input_c["mode"] == 3) | (trips_input_c["mode"] == 4) | (trips_input_c["mode"] == 5)]
trips_input_c["VMT"] = trips_input_c.apply(vmt_gen, axis =1)

```

Filter Other Tours and VMT - II VMT by Parcel

- Merge trips and tour files
- Filter by pdpurp:
 - 4 - personal bussiness/medical
 - 5 - shop
 - 6 - meal
- Summazire (groupby) data by destination parcels (tdpcl) to get VMT for each trip

```

In [7]: trip_tour_merge = pd.merge(trips_input_c, tour_input, how = "left", left_on = "tour_id", right_on = "id")
trip_tour_merge = trip_tour_merge[['opcl', "pdpurp", "parent", "tdpcl", "topcl", "VMT" ]]
Other_trip_tour = trip_tour_merge[(trip_tour_merge["pdpurp"] == 4)|(trip_tour_merge["pdpurp"] == 5)|(trip_tour_merge["pdpurp"] == 6)]
Other_trips_dest = Other_trip_tour.groupby("tdpcl")["VMT"].sum().reset_index()

```

```

In [8]: parcel_Other_vmt = pd.merge(parcel_input, Other_trips_dest, how = "left", left_on = "PARCELID", right_on = "tdpcl")

```

```

In [9]: parcel_Other_vmt = parcel_Other_vmt[['PARCELID', 'TAZ', 'EMPTOT_P', 'VMT']]

```

Parcel Level Calculation

```

In [11]: VMT_Parcel = pd.merge(parcel_Other_vmt, TAZ_Jurisdiction, on = "PARCELID", how = "left" )
VMT_Parcel = VMT_Parcel.fillna(0)

```

```

In [12]: VMT_Parcel.to_csv('Other_VMT_by_parcel.csv', index=False)

```

VMT by Service Population

Import Files

```
In [1]: import pandas as pd
        from dbfread import DBF
        import numpy as np
        import warnings
        warnings.filterwarnings ('ignore')
```

```
In [2]: parcel = pd.read_csv('pa40_raw_parcel.txt')
        parcel_jurisdiction = pd.read_csv("parcel_taz_juris.csv")
```

```
In [3]: hh_VMT = pd.read_csv('Household_VMT_by_parcel.csv')
        work_VMT = pd.read_csv('Work_Tour_VMT_by_parcel.csv')
        retail_VMT = pd.read_csv('Other_VMT_by_parcel.csv')
```

Total VMT and VMT per Service population - By Parcel

```
In [4]: parcel2 = pd.merge(parcel_jurisdiction, parcel, how='left', left_on= 'PARCELID',right_on='parcelid')
        parcel2['STUDENT'] = parcel2['stugrd_p']+parcel2['stuhgh_p']+parcel2['stuuni_p']
        student = parcel2[['PARCELID', 'STUDENT', 'TAZ', 'JURIS', 'LUTYPE']].fillna(0)
```

```
In [5]: hh_VMT = hh_VMT[['PARCELID', 'POP', 'HH_P', 'VMT_TOT']]
        work_VMT = work_VMT[['PARCELID', 'EMPTOT_P', 'VMT_TOT']]
        retail_VMT = retail_VMT[['PARCELID', 'VMT']]
```

```
In [6]: all_parcel_hh_work_VMT = pd.merge(hh_VMT,work_VMT,how='left', on= 'PARCELID')
        all_parcel_all_VMT = pd.merge(all_parcel_hh_work_VMT,retail_VMT,how='left', on= 'PARCELID')

        all_parcel_service_pop_VMT = pd.merge(all_parcel_all_VMT,student,how='left', left_on='PARCELID', right_on='PARCELID')
        all_parcel_service_pop_VMT = all_parcel_service_pop_VMT.fillna(0)
```

```
In [7]: all_parcel_service_pop_VMT = all_parcel_service_pop_VMT.rename(columns={'VMT_TOT_x': 'RES_VMT', 'VMT_TOT_y': 'WORK_VMT', 'VMT': 'OTHER_VMT', 'EMPTOT_P': 'EMPLOYEE', 'JURIS': 'Jurisdiction'})
```

```
In [8]: all_parcel_service_pop_VMT = all_parcel_service_pop_VMT.round(2)
```

```
In [9]: all_parcel_service_pop_VMT['TOTAL_VMT'] = all_parcel_service_pop_VMT['RES_VMT']+all_parcel_service_pop_VMT['WORK_VMT']+all_parcel_service_pop_VMT['OTHER_VMT']
        all_parcel_service_pop_VMT['SERVICE_POP'] = all_parcel_service_pop_VMT['POP']+all_parcel_service_pop_VMT['EMPLOYEE']+all_parcel_service_pop_VMT['STUDENT']
        all_parcel_service_pop_VMT['VMT_SERVICE_POP'] = np.where(all_parcel_service_pop_VMT["SERVICE_POP"]>0, all_parcel_service_pop_VMT["TOTAL_VMT"]/all_parcel_service_pop_VMT["SERVICE_POP"], 0)
```

```
In [10]: all_parcel_service_pop_VMT = all_parcel_service_pop_VMT[['PARCELID', 'TAZ', 'Jurisdiction', 'LUTYPE', 'HH_P', 'POP', 'EMPLOYEE', 'STUDENT', 'RES_VMT', 'WORK_VMT', 'OTHER_VMT', 'TOTAL_VMT', 'VMT_SERVICE_POP']]
```

Total VMT & VMT per Service Population by Land Use Type

```
In [11]: LUTYPE_service_pop_VMT = all_parcel_service_pop_VMT.groupby('LUTYPE')[['POP', 'EMPLOYEE', 'STUDENT', 'RES_VMT', 'WORK_VMT', 'OTHER_VMT', 'TOTAL_VMT', 'SERVICE_POP']].sum().res
```

```
In [12]: LUTYPE_service_pop_VMT['VMT_SERVICE_POP'] = np.where(LUTYPE_service_pop_VMT["SERVICE_POP"]>0, LUTYPE_service_pop_VMT["TOTAL_VMT"]/LUTYPE_service_pop_VMT["SERVICE_POP"]
```

Output

```
In [17]: writer = pd.ExcelWriter('VMT_by_Service_Pop.xlsx', engine='xlsxwriter')

all_parcel_service_pop_VMT.to_excel(writer, sheet_name='VMT_by_parcel', index=False)
TAZ_service_pop_VMT.to_excel(writer, sheet_name='VMT_by_TAZ')
Jurisdiction_service_pop_VMT.to_excel(writer, sheet_name='VMT_by_Jurisdiction')
LUTYPE_service_pop_VMT.to_excel(writer, sheet_name='VMT_by_LandUse')

writer.save()
```

Appendix D

VMT Methodology Comparison for Jurisdictions

FEHR  PEERS

Types of Project	VMT Analysis		SACOG	Sacramento County	City of Elk Grove
Residential Projects	Analysis Methodology		Household generated VMT	Homebased tour VMT	Household generated VMT
	SB 743 Threshold		Household generated VMT per resident for new projects – 15% below regional Average	Homebased tour VMT per resident for new projects– 15% below regional Average	Total VMT ⁽¹⁾ per service population ⁽²⁾ for new projects – 15% below Citywide Average
	HBW ⁽³⁾ Tour	1-2-5	Y	Y	Y
	HBO ⁽⁴⁾ Tour	6-7	Y	Y	Y
	NHB ⁽⁵⁾ (Work Based Subtour)	3-4	Y	N	Y
	IX-XI ⁽⁶⁾ (External work travel by residents)		Y	Y	Y
	IX-XI ⁽⁷⁾ (Work travel by external workers)		N	N	N
	XX ⁽⁸⁾		N	N	N
Commercial Vehicle ⁽⁹⁾		N	N	N	
Office/ Industrial Projects	Analysis Methodology		Work Tour VMT	Work Tour VMT	Work Tour VMT
	SB 743 Threshold		Work Tour VMT per employee for new projects – 15% below regional Average	Work Tour VMT per employee for new projects – 15% below regional Average	Total VMT ⁽¹⁾ per service population ⁽²⁾ for new projects – 15% below Citywide Average
	HBW ⁽³⁾ Tour	1-2-5	Y	Y	Y
	NHB ⁽⁵⁾ (Work Based Subtour)	3-4	Y	N	Y
	IX-XI ⁽⁶⁾ (External work travel by residents)		N	N	N
	IX-XI ⁽⁷⁾ (Work travel by external workers)		Y	Y	Y
	XX ⁽⁸⁾		N	N	N
	Commercial Vehicle ⁽⁹⁾		N	N	N
Retail/ Public Facilities Projects	Analysis Methodology		Regional Change in VMT	Regional Change in VMT	Total VMT
	SB 743 Threshold		Total regional VMT with the project should not exceed baseline total VMT	Total regional VMT with the project should not exceed baseline total VMT	Total VMT ⁽¹⁾ per service population ⁽²⁾ for new projects – 15% below Citywide Average
	HBW ⁽³⁾ Tour	1-2-5	Y	Y	Y
	HBO ⁽⁴⁾ Tour	6-7	Y	Y	Y ⁽¹⁰⁾
	NHB ⁽⁵⁾ (Work Based Subtour)	3-4	Y	Y	Y
	IX-XI ⁽⁶⁾ (External work travel by residents)		Y	Y	N
	IX-XI ⁽⁷⁾ (Work travel by external workers)		Y	Y	Y
	XX ⁽⁸⁾		N	N	N
Commercial Vehicle ⁽⁹⁾		Y	Y	N	

⁽¹⁾ Total VMT = calculated by adding household generated VMT and employment generated VMT for each parcel

⁽²⁾ Service Population = Residents + Employees + Students

⁽³⁾ HBW = Home-based work tour, includes intermediate stops

⁽⁴⁾ HBO = Home-based other tour (shopping, personal business, medical, school, recreational etc.), includes intermediate stops

⁽⁵⁾ NHB = Non Home-based tour (tour that begin and end at a non-home location i.e., subtours), includes intermediate stops

⁽⁶⁾ IX-XI = Internal-External / External-Internal, External work travel by residents who reside within SACOG but work outside the region

⁽⁷⁾ IX-XI = Internal-External / External-Internal, Travel by workers that reside outside SACOG region but work within the region

⁽⁸⁾ XX = External-External Travel, Trips that don't have any stops within SACOG region

⁽⁹⁾ Commercial Vehicle = Trips by commercial vehicles (small-large trucks)

* ⁽¹⁰⁾ Only includes Customer/Visitor Tour (Tours at employment location by people who don't work there). Trip purposes included in for this are the following:

-- Personal Business/ Medical

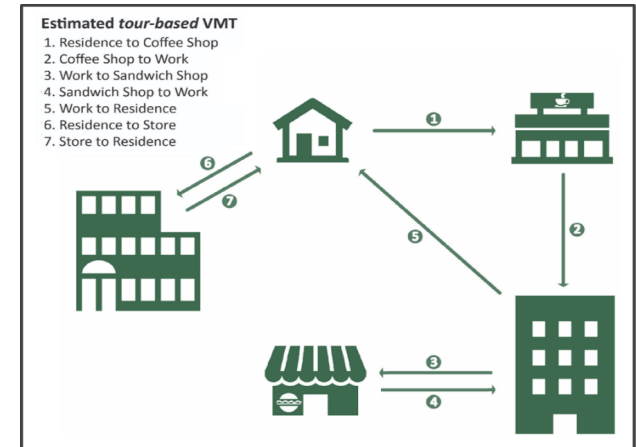
-- Shop

-- Meal

All trips/tours are from the SACSIM19 Activity based model travel diary (DaySim travel diary)

IX-XI VMT accounts for vehicle travel that occurs outside of the SACSIM model area by using SACSIM IX-XI trips and average trip distance outside SACOG region, calculated using Replica (Spring 2019) mobility data.

The figure below shows a travel diary of a typical day for a household member within the SACOG region. Each leg of the arrow indicates an individual trip. This example includes 7 trips and 2 tours. Tours are defined as a chain of trips that begin and end at the household location (trips 1-2-5 is a home-based work tour). Tours that begin and end at a location other than home are called sub-tours (trip 3-4 is a work-based subtour).



Work location can be Office/Industrial/Retail/Public facilities etc.

Appendix D

Air Quality, Energy, and
Greenhouse Gas Modeling Data

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Elk Grove LEA Community Plan Construction + Operation Emissions

Sacramento County, Annual

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	925.00	Dwelling Unit	287.00	925,000.00	2470
City Park	115.00	Acre	115.00	5,009,400.00	0
General Office Building	7,514.00	1000sqft	172.50	7,514,000.00	0
Single Family Housing	287.00	Dwelling Unit	575.00	516,600.00	766

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	3.5	Precipitation Freq (Days)	58
Climate Zone	2			Operational Year	2040
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MWhr)	74	CH4 Intensity (lb/MWhr)	0.013	N2O Intensity (lb/MWhr)	0.002

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Emissions estimates for Elk Grove LEA Community Update. Forecasted EFs for SMUD for 2040 override

Land Use - 1,150 acres parcel of single family home, multi family homes, commercial, and open space

Construction Phase - Construction to occur from 2024-2040. CalEEMod default ratios utilized.

Off-road Equipment - CalEEMod Defaults Used

Trips and VMT - No project specific information available

Demolition - No project specific information available

Grading - No project specific information available

Architectural Coating - Consistent with SMAQMD's Rule 422

Vehicle Trips - Values adjusted to adhere to VMT Study

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Energy Use - Adjusted to reflect consistency with 2019 California Energy Code

Water And Wastewater - Defaults used

Solid Waste - Defaults Used

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	50.00
tblConstructionPhase	NumDays	6,000.00	127.00
tblConstructionPhase	NumDays	15,500.00	328.00
tblConstructionPhase	NumDays	155,000.00	3,282.00
tblConstructionPhase	NumDays	11,000.00	233.00
tblConstructionPhase	NumDays	11,000.00	233.00
tblConstructionPhase	PhaseEndDate	12/28/2046	6/25/2024
tblConstructionPhase	PhaseEndDate	5/28/2106	9/25/2025
tblConstructionPhase	PhaseEndDate	7/13/2700	4/26/2038
tblConstructionPhase	PhaseEndDate	9/11/2742	3/17/2039
tblConstructionPhase	PhaseEndDate	11/9/2784	2/6/2041
tblConstructionPhase	PhaseStartDate	12/29/2046	6/25/2024
tblConstructionPhase	PhaseStartDate	5/29/2106	9/26/2025
tblConstructionPhase	PhaseStartDate	7/14/2700	4/27/2038
tblConstructionPhase	PhaseStartDate	9/12/2742	3/18/2040
tblGrading	AcresOfGrading	984.00	46,500.00
tblGrading	AcresOfGrading	190.50	9,000.00
tblLandUse	LotAcreage	24.34	287.00
tblLandUse	LotAcreage	93.18	575.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0.013

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblProjectCharacteristics	CO2IntensityFactor	357.98	74
tblProjectCharacteristics	N2OIntensityFactor	0.004	0.002
tblVehicleTrips	ST_TR	1.96	0.60
tblVehicleTrips	ST_TR	2.21	0.20
tblVehicleTrips	ST_TR	4.91	2.10
tblVehicleTrips	ST_TR	9.54	4.20

2.0 Emissions Summary

2.1 Overall Construction

Unmitigated Construction

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.3945	3.9313	3.1035	6.7900e-003	31.0040	0.1690	31.1729	4.0382	0.1555	4.1937			597.2742	0.1890	3.9000e-004	602.1169
2025	0.8789	6.8967	7.8402	0.0316	27.0268	0.1522	27.1790	3.4669	0.1411	3.6080			2,946.0219	0.2491	0.2246	3,019.1903
2026	2.1419	15.5679	19.0371	0.0941	6.7251	0.1617	6.8868	1.8271	0.1528	1.9798			8,904.0498	0.2889	0.8292	9,158.3758
2027	2.0395	15.2429	18.2565	0.0919	6.7249	0.1588	6.8837	1.8270	0.1500	1.9770			8,688.7676	0.2777	0.8099	8,937.0668
2028	1.9385	14.9157	17.5390	0.0894	6.6990	0.1554	6.8544	1.8200	0.1468	1.9668			8,458.2930	0.2675	0.7892	8,700.1481
2029	1.8554	14.7272	17.0421	0.0878	6.7246	0.1533	6.8779	1.8269	0.1448	1.9718			8,309.1981	0.2603	0.7759	8,546.9222
2030	1.7616	13.9137	16.5767	0.0866	6.7245	0.1012	6.8257	1.8269	0.0970	1.9239			8,185.0210	0.1957	0.7612	8,416.7534
2031	1.6795	13.7231	16.1683	0.0850	6.7244	0.0988	6.8232	1.8269	0.0947	1.9216			8,038.3451	0.1890	0.7482	8,266.0467
2032	1.6107	13.6131	15.8833	0.0840	6.7501	0.0971	6.8471	1.8338	0.0931	1.9269			7,939.3257	0.1839	0.7398	8,164.3928
2033	1.5340	13.3745	15.4705	0.0821	6.6985	0.0945	6.7930	1.8198	0.0907	1.9105			7,765.0886	0.1775	0.7245	7,985.4110
2034	1.4752	13.2479	15.2123	0.0811	6.6984	0.0927	6.7911	1.8198	0.0890	1.9088			7,663.1708	0.1728	0.7157	7,880.7585
2035	1.4149	13.0879	15.0432	0.0804	6.7241	0.0840	6.8081	1.8267	0.0804	1.9071			7,602.5949	0.1685	0.7107	7,818.5930
2036	1.4203	13.1380	15.1008	0.0807	6.7499	0.0843	6.8342	1.8337	0.0807	1.9144			7,631.7236	0.1692	0.7134	7,848.5493
2037	1.4149	13.0879	15.0432	0.0804	6.7241	0.0840	6.8081	1.8267	0.0804	1.9071			7,602.5949	0.1685	0.7107	7,818.5930
2038	0.5485	4.5493	6.1603	0.0278	2.1224	0.0432	2.1656	0.5765	0.0420	0.6186			2,610.0514	0.0613	0.2234	2,678.1644
2039	0.0314	0.1320	0.4326	7.8000e-004	2.9700e-003	5.0700e-003	8.0400e-003	7.9000e-004	5.0700e-003	5.8600e-003			66.8202	2.5300e-003	4.0000e-005	66.8961
2040	19.5205	0.1475	1.5452	5.2100e-003	0.7988	2.3900e-003	0.8012	0.2125	2.2600e-003	0.2147			475.5828	7.3500e-003	0.0108	478.9959
2041	2.5585	0.0193	0.2025	6.8000e-004	0.1047	3.1000e-004	0.1050	0.0279	3.0000e-004	0.0281			62.3337	9.6000e-004	1.4200e-003	62.7810
Maximum	19.5205	15.5679	19.0371	0.0941	31.0040	0.1690	31.1729	4.0382	0.1555	4.1937			8,904.0498	0.2889	0.8292	9,158.3758

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction

Mitigated Construction

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	tons/yr										MT/yr					
2024	0.3945	3.9313	3.1035	6.7900e-003	31.0040	0.1690	31.1729	4.0382	0.1555	4.1937			597.2735	0.1890	3.9000e-004	602.1162
2025	0.8789	6.8967	7.8402	0.0316	27.0268	0.1522	27.1790	3.4669	0.1411	3.6080			2,946.0212	0.2491	0.2246	3,019.1896
2026	2.1419	15.5679	19.0371	0.0941	6.7251	0.1617	6.8868	1.8271	0.1528	1.9798			8,904.0494	0.2889	0.8292	9,158.3754
2027	2.0395	15.2429	18.2565	0.0919	6.7249	0.1588	6.8837	1.8270	0.1500	1.9770			8,688.7672	0.2777	0.8099	8,937.0665
2028	1.9385	14.9157	17.5390	0.0894	6.6990	0.1554	6.8544	1.8200	0.1468	1.9668			8,458.2926	0.2675	0.7892	8,700.1477
2029	1.8554	14.7272	17.0421	0.0878	6.7246	0.1533	6.8779	1.8269	0.1448	1.9718			8,309.1978	0.2603	0.7759	8,546.9218
2030	1.7616	13.9137	16.5767	0.0866	6.7245	0.1012	6.8257	1.8269	0.0970	1.9239			8,185.0206	0.1957	0.7612	8,416.7530
2031	1.6795	13.7231	16.1683	0.0850	6.7244	0.0988	6.8232	1.8269	0.0947	1.9216			8,038.3447	0.1890	0.7482	8,266.0463
2032	1.6107	13.6131	15.8833	0.0840	6.7501	0.0971	6.8471	1.8338	0.0931	1.9269			7,939.3253	0.1839	0.7398	8,164.3924
2033	1.5340	13.3745	15.4705	0.0821	6.6985	0.0945	6.7930	1.8198	0.0907	1.9105			7,765.0882	0.1775	0.7245	7,985.4106
2034	1.4752	13.2479	15.2123	0.0811	6.6984	0.0927	6.7911	1.8198	0.0890	1.9088			7,663.1703	0.1728	0.7157	7,880.7581
2035	1.4149	13.0879	15.0432	0.0804	6.7241	0.0840	6.8081	1.8267	0.0804	1.9071			7,602.5945	0.1685	0.7107	7,818.5926
2036	1.4203	13.1380	15.1008	0.0807	6.7499	0.0843	6.8342	1.8337	0.0807	1.9144			7,631.7232	0.1692	0.7134	7,848.5489
2037	1.4149	13.0879	15.0432	0.0804	6.7241	0.0840	6.8081	1.8267	0.0804	1.9071			7,602.5945	0.1685	0.7107	7,818.5926
2038	0.5485	4.5493	6.1603	0.0278	2.1224	0.0432	2.1656	0.5765	0.0420	0.6186			2,610.0510	0.0613	0.2234	2,678.1640
2039	0.0314	0.1320	0.4326	7.8000e-004	2.9700e-003	5.0700e-003	8.0400e-003	7.9000e-004	5.0700e-003	5.8600e-003			66.8201	2.5300e-003	4.0000e-005	66.8960
2040	19.5205	0.1475	1.5452	5.2100e-003	0.7988	2.3900e-003	0.8012	0.2125	2.2600e-003	0.2147			475.5828	7.3500e-003	0.0108	478.9958
2041	2.5585	0.0193	0.2025	6.8000e-004	0.1047	3.1000e-004	0.1050	0.0279	3.0000e-004	0.0281			62.3337	9.6000e-004	1.4200e-003	62.7810
Maximum	19.5205	15.5679	19.0371	0.0941	31.0040	0.1690	31.1729	4.0382	0.1555	4.1937			8,904.0494	0.2889	0.8292	9,158.3754

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Quarter	Start Date	End Date	Maximum Unmitigated ROG + NOX (tons/quarter)	Maximum Mitigated ROG + NOX (tons/quarter)
1	1-1-2024	3-31-2024	0.9724	0.9724
2	4-1-2024	6-30-2024	0.9954	0.9954
3	7-1-2024	9-30-2024	1.1726	1.1726
4	10-1-2024	12-31-2024	1.1725	1.1725
5	1-1-2025	3-31-2025	0.9941	0.9941
6	4-1-2025	6-30-2025	1.0052	1.0052
7	7-1-2025	9-30-2025	1.2037	1.2037
8	10-1-2025	12-31-2025	4.6972	4.6972
9	1-1-2026	3-31-2026	4.4745	4.4745
10	4-1-2026	6-30-2026	4.3007	4.3007
11	7-1-2026	9-30-2026	4.3480	4.3480
12	10-1-2026	12-31-2026	4.5739	4.5739
13	1-1-2027	3-31-2027	4.3658	4.3658
14	4-1-2027	6-30-2027	4.1949	4.1949
15	7-1-2027	9-30-2027	4.2410	4.2410
16	10-1-2027	12-31-2027	4.4628	4.4628
17	1-1-2028	3-31-2028	4.3207	4.3207
18	4-1-2028	6-30-2028	4.1046	4.1046
19	7-1-2028	9-30-2028	4.1497	4.1497
20	10-1-2028	12-31-2028	4.3682	4.3682
21	1-1-2029	3-31-2029	4.1877	4.1877
22	4-1-2029	6-30-2029	4.0207	4.0207
23	7-1-2029	9-30-2029	4.0649	4.0649

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

24	10-1-2029	12-31-2029	4.2808	4.2808
25	1-1-2030	3-31-2030	3.9619	3.9619
26	4-1-2030	6-30-2030	3.7942	3.7942
27	7-1-2030	9-30-2030	3.8359	3.8359
28	10-1-2030	12-31-2030	4.0499	4.0499
29	1-1-2031	3-31-2031	3.8927	3.8927
30	4-1-2031	6-30-2031	3.7255	3.7255
31	7-1-2031	9-30-2031	3.7664	3.7664
32	10-1-2031	12-31-2031	3.9792	3.9792
33	1-1-2032	3-31-2032	3.8753	3.8753
34	4-1-2032	6-30-2032	3.6653	3.6653
35	7-1-2032	9-30-2032	3.7056	3.7056
36	10-1-2032	12-31-2032	3.9179	3.9179
37	1-1-2033	3-31-2033	3.7822	3.7822
38	4-1-2033	6-30-2033	3.6144	3.6144
39	7-1-2033	9-30-2033	3.6541	3.6541
40	10-1-2033	12-31-2033	3.8662	3.8662
41	1-1-2034	3-31-2034	3.7353	3.7353
42	4-1-2034	6-30-2034	3.5667	3.5667
43	7-1-2034	9-30-2034	3.6059	3.6059
44	10-1-2034	12-31-2034	3.8183	3.8183
45	1-1-2035	3-31-2035	3.6663	3.6663
46	4-1-2035	6-30-2035	3.4964	3.4964
47	7-1-2035	9-30-2035	3.5348	3.5348
48	10-1-2035	12-31-2035	3.7478	3.7478
49	1-1-2036	3-31-2036	3.7070	3.7070
50	4-1-2036	6-30-2036	3.4964	3.4964
51	7-1-2036	9-30-2036	3.5348	3.5348
52	10-1-2036	12-31-2036	3.7478	3.7478

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

53	1-1-2037	3-31-2037	3.6663	3.6663
54	4-1-2037	6-30-2037	3.4964	3.4964
55	7-1-2037	9-30-2037	3.5348	3.5348
56	10-1-2037	12-31-2037	3.7478	3.7478
57	1-1-2038	3-31-2038	3.6663	3.6663
58	4-1-2038	6-30-2038	1.1395	1.1395
59	7-1-2038	9-30-2038	0.1988	0.1988
60	10-1-2038	12-31-2038	0.1988	0.1988
61	1-1-2039	3-31-2039	0.1643	0.1643
65	1-1-2040	3-31-2040	0.9556	0.9556
66	4-1-2040	6-30-2040	6.2096	6.2096
67	7-1-2040	9-30-2040	6.2778	6.2778
68	10-1-2040	12-31-2040	6.2795	6.2795
69	1-1-2041	3-31-2041	2.5254	2.5254
		Highest	6.2795	6.2795

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	39.7890	0.1445	12.5408	6.7000e-004		0.0697	0.0697		0.0697	0.0697			20.6061	0.0199	0.0000	21.1042
Energy	0.7440	6.7181	5.3471	0.0406		0.5140	0.5140		0.5140	0.5140			9,996.5001	0.6038	0.2062	10,073.0308
Mobile	16.3527	18.7518	160.5573	0.3343	47.2607	0.1734	47.4341	12.6194	0.1620	12.7814			31,019.9253	2.2095	1.6093	31,554.7343
Waste						0.0000	0.0000		0.0000	0.0000			1,562.8619	92.3625	0.0000	3,871.9243
Water						0.0000	0.0000		0.0000	0.0000			855.1054	1.7848	1.0979	1,226.8907
Total	56.8857	25.6144	178.4452	0.3756	47.2607	0.7571	48.0178	12.6194	0.7457	13.3651			43,454.9989	96.9804	2.9133	46,747.6843

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Area	39.7890	0.1445	12.5408	6.7000e-004		0.0697	0.0697		0.0697	0.0697			20.6061	0.0199	0.0000	21.1042
Energy	0.7440	6.7181	5.3471	0.0406		0.5140	0.5140		0.5140	0.5140			9,996.5001	0.6038	0.2062	10,073.0308
Mobile	16.3527	18.7518	160.5573	0.3343	47.2607	0.1734	47.4341	12.6194	0.1620	12.7814			31,019.9253	2.2095	1.6093	31,554.7343
Waste						0.0000	0.0000		0.0000	0.0000			1,562.8619	92.3625	0.0000	3,871.9243
Water						0.0000	0.0000		0.0000	0.0000			855.1054	1.7848	1.0979	1,226.8907
Total	56.8857	25.6144	178.4452	0.3756	47.2607	0.7571	48.0178	12.6194	0.7457	13.3651			43,454.9989	96.9804	2.9133	46,747.6843

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2024	6/25/2024	5	127	
2	Grading	Grading	6/25/2024	9/25/2025	5	328	
3	Building Construction	Building Construction	9/26/2025	4/26/2038	5	3282	

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4	Paving	Paving	4/27/2038	3/17/2039	5	233
5	Architectural Coating	Architectural Coating	3/18/2040	2/6/2041	5	233

Acres of Grading (Site Preparation Phase): 9000

Acres of Grading (Grading Phase): 46500

Acres of Paving: 0

Residential Indoor: 2,919,240; Residential Outdoor: 973,080; Non-Residential Indoor: 11,271,000; Non-Residential Outdoor: 3,757,000; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48
Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	5,278.00	2,182.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1,056.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

3.2 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.9195	0.0000	5.9195	1.1459	0.0000	1.1459			0.0000	0.0000	0.0000	0.0000
Off-Road	0.1690	1.7257	1.1643	2.4200e-003		0.0781	0.0781		0.0718	0.0718			212.4524	0.0687	0.0000	214.1701
Total	0.1690	1.7257	1.1643	2.4200e-003	5.9195	0.0781	5.9975	1.1459	0.0718	1.2177			212.4524	0.0687	0.0000	214.1701

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	3.0600e-003	1.8000e-003	0.0247	7.0000e-005	8.3900e-003	4.0000e-005	8.4400e-003	2.2300e-003	4.0000e-005	2.2700e-003			6.4338	1.9000e-004	1.8000e-004	6.4920
Total	3.0600e-003	1.8000e-003	0.0247	7.0000e-005	8.3900e-003	4.0000e-005	8.4400e-003	2.2300e-003	4.0000e-005	2.2700e-003			6.4338	1.9000e-004	1.8000e-004	6.4920

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					5.9195	0.0000	5.9195	1.1459	0.0000	1.1459			0.0000	0.0000	0.0000	0.0000
Off-Road	0.1690	1.7257	1.1643	2.4200e-003		0.0781	0.0781		0.0718	0.0718			212.4521	0.0687	0.0000	214.1699
Total	0.1690	1.7257	1.1643	2.4200e-003	5.9195	0.0781	5.9975	1.1459	0.0718	1.2177			212.4521	0.0687	0.0000	214.1699

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	3.0600e-003	1.8000e-003	0.0247	7.0000e-005	8.3900e-003	4.0000e-005	8.4400e-003	2.2300e-003	4.0000e-005	2.2700e-003			6.4338	1.9000e-004	1.8000e-004	6.4920
Total	3.0600e-003	1.8000e-003	0.0247	7.0000e-005	8.3900e-003	4.0000e-005	8.4400e-003	2.2300e-003	4.0000e-005	2.2700e-003			6.4338	1.9000e-004	1.8000e-004	6.4920

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					25.0661	0.0000	25.0661	2.8874	0.0000	2.8874			0.0000	0.0000	0.0000	0.0000
Off-Road	0.2188	2.2016	1.8852	4.2200e-003		0.0908	0.0908		0.0835	0.0835			370.7328	0.1199	0.0000	373.7303
Total	0.2188	2.2016	1.8852	4.2200e-003	25.0661	0.0908	25.1570	2.8874	0.0835	2.9710			370.7328	0.1199	0.0000	373.7303

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	3.6400e-003	2.1500e-003	0.0294	8.0000e-005	9.9900e-003	5.0000e-005	0.0100	2.6600e-003	5.0000e-005	2.7000e-003			7.6553	2.3000e-004	2.1000e-004	7.7245
Total	3.6400e-003	2.1500e-003	0.0294	8.0000e-005	9.9900e-003	5.0000e-005	0.0100	2.6600e-003	5.0000e-005	2.7000e-003			7.6553	2.3000e-004	2.1000e-004	7.7245

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					25.0661	0.0000	25.0661	2.8874	0.0000	2.8874			0.0000	0.0000	0.0000	0.0000
Off-Road	0.2188	2.2016	1.8852	4.2200e-003		0.0908	0.0908		0.0835	0.0835			370.7323	0.1199	0.0000	373.7299
Total	0.2188	2.2016	1.8852	4.2200e-003	25.0661	0.0908	25.1570	2.8874	0.0835	2.9710			370.7323	0.1199	0.0000	373.7299

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	3.6400e-003	2.1500e-003	0.0294	8.0000e-005	9.9900e-003	5.0000e-005	0.0100	2.6600e-003	5.0000e-005	2.7000e-003			7.6553	2.3000e-004	2.1000e-004	7.7245
Total	3.6400e-003	2.1500e-003	0.0294	8.0000e-005	9.9900e-003	5.0000e-005	0.0100	2.6600e-003	5.0000e-005	2.7000e-003			7.6553	2.3000e-004	2.1000e-004	7.7245

3.3 Grading - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					25.2348	0.0000	25.2348	2.9801	0.0000	2.9801			0.0000	0.0000	0.0000	0.0000
Off-Road	0.2785	2.6825	2.5278	5.9600e-003		0.1086	0.1086		0.0999	0.0999			523.2596	0.1692	0.0000	527.4905
Total	0.2785	2.6825	2.5278	5.9600e-003	25.2348	0.1086	25.3433	2.9801	0.0999	3.0800			523.2596	0.1692	0.0000	527.4905

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	4.8300e-003	2.7200e-003	0.0387	1.1000e-004	0.0141	7.0000e-005	0.0142	3.7500e-003	6.0000e-005	3.8100e-003			10.4423	2.9000e-004	2.8000e-004	10.5334
Total	4.8300e-003	2.7200e-003	0.0387	1.1000e-004	0.0141	7.0000e-005	0.0142	3.7500e-003	6.0000e-005	3.8100e-003			10.4423	2.9000e-004	2.8000e-004	10.5334

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Fugitive Dust					25.2348	0.0000	25.2348	2.9801	0.0000	2.9801			0.0000	0.0000	0.0000	0.0000
Off-Road	0.2785	2.6825	2.5278	5.9600e-003		0.1086	0.1086		0.0999	0.0999			523.2590	0.1692	0.0000	527.4898
Total	0.2785	2.6825	2.5278	5.9600e-003	25.2348	0.1086	25.3433	2.9801	0.0999	3.0800			523.2590	0.1692	0.0000	527.4898

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	4.8300e-003	2.7200e-003	0.0387	1.1000e-004	0.0141	7.0000e-005	0.0142	3.7500e-003	6.0000e-005	3.8100e-003			10.4423	2.9000e-004	2.8000e-004	10.5334
Total	4.8300e-003	2.7200e-003	0.0387	1.1000e-004	0.0141	7.0000e-005	0.0142	3.7500e-003	6.0000e-005	3.8100e-003			10.4423	2.9000e-004	2.8000e-004	10.5334

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0472	0.4302	0.5549	9.3000e-004		0.0182	0.0182		0.0171	0.0171			80.0122	0.0188	0.0000	80.4824
Total	0.0472	0.4302	0.5549	9.3000e-004		0.0182	0.0182		0.0171	0.0171			80.0122	0.0188	0.0000	80.4824

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2025

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0905	3.5237	1.0468	0.0138	0.4406	0.0189	0.4595	0.1274	0.0181	0.1454			1,341.9676	0.0328	0.1977	1,401.7025
Worker	0.4579	0.2576	3.6720	0.0108	1.3374	6.4500e-003	1.3438	0.3557	5.9400e-003	0.3616			990.3401	0.0280	0.0267	998.9815
Total	0.5484	3.7813	4.7188	0.0246	1.7779	0.0253	1.8033	0.4830	0.0240	0.5070			2,332.3077	0.0607	0.2244	2,400.6840

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0472	0.4302	0.5549	9.3000e-004		0.0182	0.0182		0.0171	0.0171			80.0121	0.0188	0.0000	80.4823
Total	0.0472	0.4302	0.5549	9.3000e-004		0.0182	0.0182		0.0171	0.0171			80.0121	0.0188	0.0000	80.4823

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2025

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0905	3.5237	1.0468	0.0138	0.4406	0.0189	0.4595	0.1274	0.0181	0.1454			1,341.9676	0.0328	0.1977	1,401.7025
Worker	0.4579	0.2576	3.6720	0.0108	1.3374	6.4500e-003	1.3438	0.3557	5.9400e-003	0.3616			990.3401	0.0280	0.0267	998.9815
Total	0.5484	3.7813	4.7188	0.0246	1.7779	0.0253	1.8033	0.4830	0.0240	0.5070			2,332.3077	0.0607	0.2244	2,400.6840

3.4 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648			302.6549	0.0711	0.0000	304.4335
Total	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648			302.6549	0.0711	0.0000	304.4335

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2026

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.3302	13.0580	3.8808	0.0511	1.6664	0.0696	1.7360	0.4817	0.0666	0.5482			4,973.9990	0.1212	0.7342	5,195.8285
Worker	1.6332	0.8826	13.0572	0.0396	5.0587	0.0232	5.0819	1.3454	0.0214	1.3668			3,627.3959	0.0965	0.0950	3,658.1138
Total	1.9634	13.9406	16.9380	0.0906	6.7251	0.0929	6.8179	1.8271	0.0880	1.9151			8,601.3949	0.2177	0.8292	8,853.9423

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648			302.6545	0.0711	0.0000	304.4331
Total	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648			302.6545	0.0711	0.0000	304.4331

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2026

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.3302	13.0580	3.8808	0.0511	1.6664	0.0696	1.7360	0.4817	0.0666	0.5482			4,973.9990	0.1212	0.7342	5,195.8285
Worker	1.6332	0.8826	13.0572	0.0396	5.0587	0.0232	5.0819	1.3454	0.0214	1.3668			3,627.3959	0.0965	0.0950	3,658.1138
Total	1.9634	13.9406	16.9380	0.0906	6.7251	0.0929	6.8179	1.8271	0.0880	1.9151			8,601.3949	0.2177	0.8292	8,853.9423

3.4 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648			302.6549	0.0711	0.0000	304.4335
Total	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648			302.6549	0.0711	0.0000	304.4335

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2027

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.3195	12.8097	3.8136	0.0500	1.6662	0.0680	1.7342	0.4816	0.0651	0.5466			4,867.3617	0.1181	0.7198	5,084.8224
Worker	1.5416	0.8059	12.3439	0.0384	5.0587	0.0219	5.0806	1.3454	0.0202	1.3656			3,518.7510	0.0885	0.0901	3,547.8110
Total	1.8611	13.6156	16.1574	0.0883	6.7249	0.0899	6.8148	1.8270	0.0852	1.9123			8,386.1127	0.2066	0.8099	8,632.6333

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648			302.6545	0.0711	0.0000	304.4331
Total	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648			302.6545	0.0711	0.0000	304.4331

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2027

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.3195	12.8097	3.8136	0.0500	1.6662	0.0680	1.7342	0.4816	0.0651	0.5466			4,867.3617	0.1181	0.7198	5,084.8224
Worker	1.5416	0.8059	12.3439	0.0384	5.0587	0.0219	5.0806	1.3454	0.0202	1.3656			3,518.7510	0.0885	0.0901	3,547.8110
Total	1.8611	13.6156	16.1574	0.0883	6.7249	0.0899	6.8148	1.8270	0.0852	1.9123			8,386.1127	0.2066	0.8099	8,632.6333

3.4 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645			301.4953	0.0709	0.0000	303.2671
Total	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645			301.4953	0.0709	0.0000	303.2671

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2028

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.3089	12.5549	3.7452	0.0487	1.6597	0.0663	1.7260	0.4797	0.0634	0.5431			4,749.1483	0.1153	0.7035	4,961.6602
Worker	1.4519	0.7397	11.7029	0.0372	5.0393	0.0205	5.0598	1.3403	0.0189	1.3592			3,407.6493	0.0813	0.0857	3,435.2208
Total	1.7608	13.2946	15.4480	0.0859	6.6990	0.0868	6.7858	1.8200	0.0823	1.9023			8,156.7977	0.1966	0.7892	8,396.8810

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645			301.4949	0.0709	0.0000	303.2667
Total	0.1778	1.6211	2.0910	3.5000e-003		0.0686	0.0686		0.0645	0.0645			301.4949	0.0709	0.0000	303.2667

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2028

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.3089	12.5549	3.7452	0.0487	1.6597	0.0663	1.7260	0.4797	0.0634	0.5431			4,749.1483	0.1153	0.7035	4,961.6602
Worker	1.4519	0.7397	11.7029	0.0372	5.0393	0.0205	5.0598	1.3403	0.0189	1.3592			3,407.6493	0.0813	0.0857	3,435.2208
Total	1.7608	13.2946	15.4480	0.0859	6.6990	0.0868	6.7858	1.8200	0.0823	1.9023			8,156.7977	0.1966	0.7892	8,396.8810

3.4 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648			302.6549	0.0711	0.0000	304.4335
Total	0.1785	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648			302.6549	0.0711	0.0000	304.4335

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2029

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.3013	12.4110	3.7126	0.0480	1.6660	0.0652	1.7311	0.4815	0.0624	0.5439			4,673.8767	0.1137	0.6933	4,883.3146
Worker	1.3757	0.6890	11.2305	0.0363	5.0587	0.0193	5.0779	1.3454	0.0177	1.3632			3,332.6665	0.0755	0.0826	3,359.1741
Total	1.6770	13.0999	14.9431	0.0843	6.7246	0.0845	6.8091	1.8269	0.0801	1.9070			8,006.5432	0.1891	0.7759	8,242.4887

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648			302.6545	0.0711	0.0000	304.4331
Total	0.1784	1.6273	2.0991	3.5200e-003		0.0689	0.0689		0.0648	0.0648			302.6545	0.0711	0.0000	304.4331

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2029

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.3013	12.4110	3.7126	0.0480	1.6660	0.0652	1.7311	0.4815	0.0624	0.5439			4,673.8767	0.1137	0.6933	4,883.3146
Worker	1.3757	0.6890	11.2305	0.0363	5.0587	0.0193	5.0779	1.3454	0.0177	1.3632			3,332.6665	0.0755	0.0826	3,359.1741
Total	1.6770	13.0999	14.9431	0.0843	6.7246	0.0845	6.8091	1.8269	0.0801	1.9070			8,006.5432	0.1891	0.7759	8,242.4887

3.4 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193			343.0336	0.0138	0.0000	343.3777
Total	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193			343.0336	0.0138	0.0000	343.3777

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2030

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.2933	12.2344	3.6753	0.0471	1.6658	0.0638	1.7297	0.4815	0.0611	0.5425			4,587.9535	0.1119	0.6814	4,793.8177
Worker	1.2974	0.6438	10.7930	0.0355	5.0587	0.0180	5.0767	1.3454	0.0166	1.3620			3,254.0338	0.0700	0.0798	3,279.5580
Total	1.5908	12.8782	14.4683	0.0826	6.7245	0.0818	6.8063	1.8269	0.0776	1.9045			7,841.9874	0.1819	0.7612	8,073.3757

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193			343.0332	0.0138	0.0000	343.3773
Total	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193			343.0332	0.0138	0.0000	343.3773

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2030

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.2933	12.2344	3.6753	0.0471	1.6658	0.0638	1.7297	0.4815	0.0611	0.5425			4,587.9535	0.1119	0.6814	4,793.8177
Worker	1.2974	0.6438	10.7930	0.0355	5.0587	0.0180	5.0767	1.3454	0.0166	1.3620			3,254.0338	0.0700	0.0798	3,279.5580
Total	1.5908	12.8782	14.4683	0.0826	6.7245	0.0818	6.8063	1.8269	0.0776	1.9045			7,841.9874	0.1819	0.7612	8,073.3757

3.4 Building Construction - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193			343.0336	0.0138	0.0000	343.3777
Total	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193			343.0336	0.0138	0.0000	343.3777

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2031

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.2866	12.0825	3.6492	0.0463	1.6657	0.0626	1.7284	0.4814	0.0599	0.5413			4,511.1824	0.1101	0.6709	4,713.8514
Worker	1.2221	0.6051	10.4106	0.0347	5.0587	0.0168	5.0755	1.3454	0.0155	1.3609			3,184.1291	0.0652	0.0774	3,208.8177
Total	1.5087	12.6876	14.0599	0.0810	6.7244	0.0795	6.8039	1.8269	0.0754	1.9023			7,695.3115	0.1753	0.7482	7,922.6690

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193			343.0332	0.0138	0.0000	343.3773
Total	0.1708	1.0355	2.1085	4.0400e-003		0.0193	0.0193		0.0193	0.0193			343.0332	0.0138	0.0000	343.3773

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2031

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.2866	12.0825	3.6492	0.0463	1.6657	0.0626	1.7284	0.4814	0.0599	0.5413			4,511.1824	0.1101	0.6709	4,713.8514
Worker	1.2221	0.6051	10.4106	0.0347	5.0587	0.0168	5.0755	1.3454	0.0155	1.3609			3,184.1291	0.0652	0.0774	3,208.8177
Total	1.5087	12.6876	14.0599	0.0810	6.7244	0.0795	6.8039	1.8269	0.0754	1.9023			7,695.3115	0.1753	0.7482	7,922.6690

3.4 Building Construction - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1715	1.0394	2.1166	4.0600e-003		0.0194	0.0194		0.0194	0.0194			344.3479	0.0138	0.0000	344.6933
Total	0.1715	1.0394	2.1166	4.0600e-003		0.0194	0.0194		0.0194	0.0194			344.3479	0.0138	0.0000	344.6933

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2032

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.2819	11.9983	3.6463	0.0458	1.6720	0.0618	1.7339	0.4832	0.0592	0.5424			4,460.7049	0.1089	0.6641	4,661.3375
Worker	1.1572	0.5754	10.1205	0.0342	5.0780	0.0158	5.0939	1.3506	0.0146	1.3652			3,134.2728	0.0612	0.0757	3,158.3620
Total	1.4392	12.5737	13.7668	0.0799	6.7501	0.0777	6.8277	1.8338	0.0737	1.9075			7,594.9777	0.1701	0.7398	7,819.6995

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1715	1.0394	2.1166	4.0600e-003		0.0194	0.0194		0.0194	0.0194			344.3475	0.0138	0.0000	344.6929
Total	0.1715	1.0394	2.1166	4.0600e-003		0.0194	0.0194		0.0194	0.0194			344.3475	0.0138	0.0000	344.6929

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2032

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.2819	11.9983	3.6463	0.0458	1.6720	0.0618	1.7339	0.4832	0.0592	0.5424			4,460.7049	0.1089	0.6641	4,661.3375
Worker	1.1572	0.5754	10.1205	0.0342	5.0780	0.0158	5.0939	1.3506	0.0146	1.3652			3,134.2728	0.0612	0.0757	3,158.3620
Total	1.4392	12.5737	13.7668	0.0799	6.7501	0.0777	6.8277	1.8338	0.0737	1.9075			7,594.9777	0.1701	0.7398	7,819.6995

3.4 Building Construction - 2033

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193			341.7193	0.0137	0.0000	342.0621
Total	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193			341.7193	0.0137	0.0000	342.0621

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2033

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.2750	11.7974	3.6072	0.0448	1.6592	0.0605	1.7197	0.4795	0.0579	0.5374			4,367.1787	0.1067	0.6509	4,563.8148
Worker	1.0888	0.5455	9.7629	0.0333	5.0393	0.0147	5.0540	1.3403	0.0136	1.3538			3,056.1906	0.0570	0.0736	3,079.5341
Total	1.3638	12.3430	13.3701	0.0781	6.6985	0.0752	6.7737	1.8198	0.0714	1.8912			7,423.3693	0.1638	0.7245	7,643.3489

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193			341.7189	0.0137	0.0000	342.0617
Total	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193			341.7189	0.0137	0.0000	342.0617

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2033

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.2750	11.7974	3.6072	0.0448	1.6592	0.0605	1.7197	0.4795	0.0579	0.5374			4,367.1787	0.1067	0.6509	4,563.8148
Worker	1.0888	0.5455	9.7629	0.0333	5.0393	0.0147	5.0540	1.3403	0.0136	1.3538			3,056.1906	0.0570	0.0736	3,079.5341
Total	1.3638	12.3430	13.3701	0.0781	6.6985	0.0752	6.7737	1.8198	0.0714	1.8912			7,423.3693	0.1638	0.7245	7,643.3489

3.4 Building Construction - 2034

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193			341.7193	0.0137	0.0000	342.0621
Total	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193			341.7193	0.0137	0.0000	342.0621

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2034

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.2707	11.6920	3.5982	0.0442	1.6591	0.0596	1.7188	0.4795	0.0571	0.5365			4,312.760 1	0.1054	0.6434	4,507.131 4
Worker	1.0343	0.5244	9.5137	0.0328	5.0393	0.0138	5.0531	1.3403	0.0127	1.3530			3,008.691 3	0.0537	0.0723	3,031.565 0
Total	1.3050	12.2164	13.1119	0.0770	6.6984	0.0735	6.7719	1.8198	0.0698	1.8895			7,321.451 4	0.1591	0.7157	7,538.696 4

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193			341.7189	0.0137	0.0000	342.0617
Total	0.1702	1.0315	2.1004	4.0200e-003		0.0193	0.0193		0.0193	0.0193			341.7189	0.0137	0.0000	342.0617

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2034

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.2707	11.6920	3.5982	0.0442	1.6591	0.0596	1.7188	0.4795	0.0571	0.5365			4,312.760 1	0.1054	0.6434	4,507.131 4
Worker	1.0343	0.5244	9.5137	0.0328	5.0393	0.0138	5.0531	1.3403	0.0127	1.3530			3,008.691 3	0.0537	0.0723	3,031.565 0
Total	1.3050	12.2164	13.1119	0.0770	6.6984	0.0735	6.7719	1.8198	0.0698	1.8895			7,321.451 4	0.1591	0.7157	7,538.696 4

3.4 Building Construction - 2035

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118			343.0336	0.0128	0.0000	343.3530
Total	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118			343.0336	0.0128	0.0000	343.3530

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2035

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.2677	11.6438	3.6047	0.0439	1.6654	0.0591	1.7245	0.4813	0.0565	0.5378			4,280.763 4	0.1048	0.6392	4,473.860 6
Worker	0.9884	0.5096	9.3351	0.0325	5.0587	0.0131	5.0717	1.3454	0.0120	1.3575			2,978.797 9	0.0510	0.0715	3,001.379 4
Total	1.2561	12.1533	12.9398	0.0764	6.7241	0.0722	6.7963	1.8267	0.0686	1.8953			7,259.561 3	0.1557	0.7107	7,475.240 0

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118			343.0332	0.0128	0.0000	343.3526
Total	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118			343.0332	0.0128	0.0000	343.3526

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2035

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.2677	11.6438	3.6047	0.0439	1.6654	0.0591	1.7245	0.4813	0.0565	0.5378			4,280.7634	0.1048	0.6392	4,473.8606
Worker	0.9884	0.5096	9.3351	0.0325	5.0587	0.0131	5.0717	1.3454	0.0120	1.3575			2,978.7979	0.0510	0.0715	3,001.3794
Total	1.2561	12.1533	12.9398	0.0764	6.7241	0.0722	6.7963	1.8267	0.0686	1.8953			7,259.5613	0.1557	0.7107	7,475.2400

3.4 Building Construction - 2036

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1594	0.9381	2.1114	4.0600e-003		0.0118	0.0118		0.0118	0.0118			344.3479	0.0128	0.0000	344.6686
Total	0.1594	0.9381	2.1114	4.0600e-003		0.0118	0.0118		0.0118	0.0118			344.3479	0.0128	0.0000	344.6686

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2036

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.2688	11.6884	3.6185	0.0441	1.6718	0.0593	1.7311	0.4832	0.0567	0.5399			4,297.1648	0.1052	0.6416	4,491.0018
Worker	0.9922	0.5115	9.3709	0.0326	5.0780	0.0131	5.0912	1.3506	0.0121	1.3627			2,990.2109	0.0512	0.0718	3,012.8789
Total	1.2609	12.1999	12.9894	0.0767	6.7499	0.0725	6.8223	1.8337	0.0688	1.9026			7,287.3757	0.1563	0.7134	7,503.8807

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1594	0.9381	2.1114	4.0600e-003		0.0118	0.0118		0.0118	0.0118			344.3475	0.0128	0.0000	344.6682
Total	0.1594	0.9381	2.1114	4.0600e-003		0.0118	0.0118		0.0118	0.0118			344.3475	0.0128	0.0000	344.6682

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2036

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.2688	11.6884	3.6185	0.0441	1.6718	0.0593	1.7311	0.4832	0.0567	0.5399			4,297.1648	0.1052	0.6416	4,491.0018
Worker	0.9922	0.5115	9.3709	0.0326	5.0780	0.0131	5.0912	1.3506	0.0121	1.3627			2,990.2109	0.0512	0.0718	3,012.8789
Total	1.2609	12.1999	12.9894	0.0767	6.7499	0.0725	6.8223	1.8337	0.0688	1.9026			7,287.3757	0.1563	0.7134	7,503.8807

3.4 Building Construction - 2037

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118			343.0336	0.0128	0.0000	343.3530
Total	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118			343.0336	0.0128	0.0000	343.3530

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2037

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.2677	11.6438	3.6047	0.0439	1.6654	0.0591	1.7245	0.4813	0.0565	0.5378			4,280.763 4	0.1048	0.6392	4,473.860 6
Worker	0.9884	0.5096	9.3351	0.0325	5.0587	0.0131	5.0717	1.3454	0.0120	1.3575			2,978.797 9	0.0510	0.0715	3,001.379 4
Total	1.2561	12.1533	12.9398	0.0764	6.7241	0.0722	6.7963	1.8267	0.0686	1.8953			7,259.561 3	0.1557	0.7107	7,475.240 0

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118			343.0332	0.0128	0.0000	343.3526
Total	0.1588	0.9346	2.1034	4.0400e-003		0.0118	0.0118		0.0118	0.0118			343.0332	0.0128	0.0000	343.3526

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2037

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.2677	11.6438	3.6047	0.0439	1.6654	0.0591	1.7245	0.4813	0.0565	0.5378			4,280.7634	0.1048	0.6392	4,473.8606
Worker	0.9884	0.5096	9.3351	0.0325	5.0587	0.0131	5.0717	1.3454	0.0120	1.3575			2,978.7979	0.0510	0.0715	3,001.3794
Total	1.2561	12.1533	12.9398	0.0764	6.7241	0.0722	6.7963	1.8267	0.0686	1.8953			7,259.5613	0.1557	0.7107	7,475.2400

3.4 Building Construction - 2038

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0499	0.2936	0.6608	1.2700e-003		3.7100e-003	3.7100e-003		3.7100e-003	3.7100e-003			107.7730	4.0100e-003	0.0000	107.8734
Total	0.0499	0.2936	0.6608	1.2700e-003		3.7100e-003	3.7100e-003		3.7100e-003	3.7100e-003			107.7730	4.0100e-003	0.0000	107.8734

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2038

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0841	3.6582	1.1325	0.0138	0.5232	0.0186	0.5418	0.1512	0.0178	0.1690			1,344.914 2	0.0329	0.2008	1,405.580 7
Worker	0.3105	0.1601	2.9329	0.0102	1.5893	4.1100e-003	1.5934	0.4227	3.7800e-003	0.4265			935.8675	0.0160	0.0225	942.9621
Total	0.3946	3.8183	4.0654	0.0240	2.1126	0.0227	2.1352	0.5739	0.0215	0.5955			2,280.781 7	0.0489	0.2233	2,348.542 8

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0499	0.2936	0.6608	1.2700e-003		3.7100e-003	3.7100e-003		3.7100e-003	3.7100e-003			107.7729	4.0100e-003	0.0000	107.8732
Total	0.0499	0.2936	0.6608	1.2700e-003		3.7100e-003	3.7100e-003		3.7100e-003	3.7100e-003			107.7729	4.0100e-003	0.0000	107.8732

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2038

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0841	3.6582	1.1325	0.0138	0.5232	0.0186	0.5418	0.1512	0.0178	0.1690			1,344.914 2	0.0329	0.2008	1,405.580 7
Worker	0.3105	0.1601	2.9329	0.0102	1.5893	4.1100e-003	1.5934	0.4227	3.7800e-003	0.4265			935.8675	0.0160	0.0225	942.9621
Total	0.3946	3.8183	4.0654	0.0240	2.1126	0.0227	2.1352	0.5739	0.0215	0.5955			2,280.781 7	0.0489	0.2233	2,348.542 8

3.5 Paving - 2038

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1021	0.4364	1.4159	2.5100e-003		0.0168	0.0168		0.0168	0.0168			215.6907	8.3000e-003	0.0000	215.8982
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total	0.1021	0.4364	1.4159	2.5100e-003		0.0168	0.0168		0.0168	0.0168			215.6907	8.3000e-003	0.0000	215.8982

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2038

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	1.9300e-003	9.9000e-004	0.0182	6.0000e-005	9.8600e-003	3.0000e-005	9.8900e-003	2.6200e-003	2.0000e-005	2.6500e-003			5.8060	1.0000e-004	1.4000e-004	5.8500
Total	1.9300e-003	9.9000e-004	0.0182	6.0000e-005	9.8600e-003	3.0000e-005	9.8900e-003	2.6200e-003	2.0000e-005	2.6500e-003			5.8060	1.0000e-004	1.4000e-004	5.8500

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.1021	0.4364	1.4159	2.5100e-003		0.0168	0.0168		0.0168	0.0168			215.6904	8.3000e-003	0.0000	215.8979
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total	0.1021	0.4364	1.4159	2.5100e-003		0.0168	0.0168		0.0168	0.0168			215.6904	8.3000e-003	0.0000	215.8979

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2038

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	1.9300e-003	9.9000e-004	0.0182	6.0000e-005	9.8600e-003	3.0000e-005	9.8900e-003	2.6200e-003	2.0000e-005	2.6500e-003			5.8060	1.0000e-004	1.4000e-004	5.8500
Total	1.9300e-003	9.9000e-004	0.0182	6.0000e-005	9.8600e-003	3.0000e-005	9.8900e-003	2.6200e-003	2.0000e-005	2.6500e-003			5.8060	1.0000e-004	1.4000e-004	5.8500

3.5 Paving - 2039

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0308	0.1317	0.4272	7.6000e-004		5.0600e-003	5.0600e-003		5.0600e-003	5.0600e-003			65.0687	2.5000e-003	0.0000	65.1313
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total	0.0308	0.1317	0.4272	7.6000e-004		5.0600e-003	5.0600e-003		5.0600e-003	5.0600e-003			65.0687	2.5000e-003	0.0000	65.1313

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2039

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	5.8000e-004	3.0000e-004	5.4900e-003	2.0000e-005	2.9700e-003	1.0000e-005	2.9800e-003	7.9000e-004	1.0000e-005	8.0000e-004			1.7515	3.0000e-005	4.0000e-005	1.7648
Total	5.8000e-004	3.0000e-004	5.4900e-003	2.0000e-005	2.9700e-003	1.0000e-005	2.9800e-003	7.9000e-004	1.0000e-005	8.0000e-004			1.7515	3.0000e-005	4.0000e-005	1.7648

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Off-Road	0.0308	0.1317	0.4272	7.6000e-004		5.0600e-003	5.0600e-003		5.0600e-003	5.0600e-003			65.0686	2.5000e-003	0.0000	65.1312
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Total	0.0308	0.1317	0.4272	7.6000e-004		5.0600e-003	5.0600e-003		5.0600e-003	5.0600e-003			65.0686	2.5000e-003	0.0000	65.1312

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2039

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	5.8000e-004	3.0000e-004	5.4900e-003	2.0000e-005	2.9700e-003	1.0000e-005	2.9800e-003	7.9000e-004	1.0000e-005	8.0000e-004			1.7515	3.0000e-005	4.0000e-005	1.7648
Total	5.8000e-004	3.0000e-004	5.4900e-003	2.0000e-005	2.9700e-003	1.0000e-005	2.9800e-003	7.9000e-004	1.0000e-005	8.0000e-004			1.7515	3.0000e-005	4.0000e-005	1.7648

3.6 Architectural Coating - 2040

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	19.3834					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Off-Road	0.0118	0.0749	0.1846	3.1000e-004		7.7000e-004	7.7000e-004		7.7000e-004	7.7000e-004			26.2985	9.3000e-004	0.0000	26.3217
Total	19.3952	0.0749	0.1846	3.1000e-004		7.7000e-004	7.7000e-004		7.7000e-004	7.7000e-004			26.2985	9.3000e-004	0.0000	26.3217

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2040

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	0.1253	0.0726	1.3606	4.9000e-003	0.7988	1.6200e-003	0.8005	0.2125	1.4900e-003	0.2140			449.2843	6.4300e-003	0.0108	452.6742
Total	0.1253	0.0726	1.3606	4.9000e-003	0.7988	1.6200e-003	0.8005	0.2125	1.4900e-003	0.2140			449.2843	6.4300e-003	0.0108	452.6742

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	19.3834					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Off-Road	0.0118	0.0749	0.1846	3.1000e-004		7.7000e-004	7.7000e-004		7.7000e-004	7.7000e-004			26.2985	9.3000e-004	0.0000	26.3216
Total	19.3952	0.0749	0.1846	3.1000e-004		7.7000e-004	7.7000e-004		7.7000e-004	7.7000e-004			26.2985	9.3000e-004	0.0000	26.3216

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2040

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	0.1253	0.0726	1.3606	4.9000e-003	0.7988	1.6200e-003	0.8005	0.2125	1.4900e-003	0.2140			449.2843	6.4300e-003	0.0108	452.6742
Total	0.1253	0.0726	1.3606	4.9000e-003	0.7988	1.6200e-003	0.8005	0.2125	1.4900e-003	0.2140			449.2843	6.4300e-003	0.0108	452.6742

3.6 Architectural Coating - 2041

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.5405					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Off-Road	1.5500e-003	9.8100e-003	0.0242	4.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004			3.4469	1.2000e-004	0.0000	3.4499
Total	2.5421	9.8100e-003	0.0242	4.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004			3.4469	1.2000e-004	0.0000	3.4499

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EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2041

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	0.0164	9.5200e-003	0.1783	6.4000e-004	0.1047	2.1000e-004	0.1049	0.0279	2.0000e-004	0.0280			58.8868	8.4000e-004	1.4200e-003	59.3311
Total	0.0164	9.5200e-003	0.1783	6.4000e-004	0.1047	2.1000e-004	0.1049	0.0279	2.0000e-004	0.0280			58.8868	8.4000e-004	1.4200e-003	59.3311

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Archit. Coating	2.5405					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Off-Road	1.5500e-003	9.8100e-003	0.0242	4.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004			3.4469	1.2000e-004	0.0000	3.4499
Total	2.5421	9.8100e-003	0.0242	4.0000e-005		1.0000e-004	1.0000e-004		1.0000e-004	1.0000e-004			3.4469	1.2000e-004	0.0000	3.4499

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2041

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	0.0164	9.5200e-003	0.1783	6.4000e-004	0.1047	2.1000e-004	0.1049	0.0279	2.0000e-004	0.0280			58.8868	8.4000e-004	1.4200e-003	59.3311
Total	0.0164	9.5200e-003	0.1783	6.4000e-004	0.1047	2.1000e-004	0.1049	0.0279	2.0000e-004	0.0280			58.8868	8.4000e-004	1.4200e-003	59.3311

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	16.3527	18.7518	160.5573	0.3343	47.2607	0.1734	47.4341	12.6194	0.1620	12.7814			31,019.9253	2.2095	1.6093	31,554.7343
Unmitigated	16.3527	18.7518	160.5573	0.3343	47.2607	0.1734	47.4341	12.6194	0.1620	12.7814			31,019.9253	2.2095	1.6093	31,554.7343

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	89.70	69.00	251.85	202,773	202,773
General Office Building	73,186.36	1,502.80	5259.80	109,950,383	109,950,383
Apartments Mid Rise	5,032.00	1,942.50	3783.25	11,322,314	11,322,314
Single Family Housing	2,709.28	1,205.40	2453.85	6,307,368	6,307,368
Total	81,017.34	4,719.70	11,748.75	127,782,838	127,782,838

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	10.00	5.00	6.50	33.00	48.00	19.00	66	28	6
General Office Building	10.00	5.00	6.50	33.00	48.00	19.00	77	19	4
Apartments Mid Rise	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3
Single Family Housing	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3

4.4 Fleet Mix

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.572323	0.055898	0.181183	0.117504	0.017913	0.005011	0.012759	0.009244	0.000656	0.000766	0.023903	0.000662	0.002180
General Office Building	0.572323	0.055898	0.181183	0.117504	0.017913	0.005011	0.012759	0.009244	0.000656	0.000766	0.023903	0.000662	0.002180
Apartments Mid Rise	0.572323	0.055898	0.181183	0.117504	0.017913	0.005011	0.012759	0.009244	0.000656	0.000766	0.023903	0.000662	0.002180
Single Family Housing	0.572323	0.055898	0.181183	0.117504	0.017913	0.005011	0.012759	0.009244	0.000656	0.000766	0.023903	0.000662	0.002180

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Electricity Mitigated						0.0000	0.0000		0.0000	0.0000			2,633.4530	0.4626	0.0712	2,666.2288
Electricity Unmitigated						0.0000	0.0000		0.0000	0.0000			2,633.4530	0.4626	0.0712	2,666.2288
NaturalGas Mitigated	0.7440	6.7181	5.3471	0.0406		0.5140	0.5140		0.5140	0.5140			7,363.0471	0.1411	0.1350	7,406.8020
NaturalGas Unmitigated	0.7440	6.7181	5.3471	0.0406		0.5140	0.5140		0.5140	0.5140			7,363.0471	0.1411	0.1350	7,406.8020

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	8.71001e+006	0.0470	0.4013	0.1708	2.5600e-003		0.0325	0.0325		0.0325	0.0325			464.7995	8.9100e-003	8.5200e-003	467.5615
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
General Office Building	1.22478e+008	0.6604	6.0038	5.0432	0.0360		0.4563	0.4563		0.4563	0.4563			6,535.9032	0.1253	0.1198	6,574.7428
Single Family Housing	6.79008e+006	0.0366	0.3129	0.1331	2.0000e-003		0.0253	0.0253		0.0253	0.0253			362.3445	6.9400e-003	6.6400e-003	364.4977
Total		0.7440	6.7181	5.3471	0.0406		0.5140	0.5140		0.5140	0.5140			7,363.0471	0.1411	0.1350	7,406.8020

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	tons/yr										MT/yr					
Apartments Mid Rise	8.71001e+006	0.0470	0.4013	0.1708	2.5600e-003		0.0325	0.0325		0.0325	0.0325			464.7995	8.9100e-003	8.5200e-003	467.5615
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
General Office Building	1.22478e+008	0.6604	6.0038	5.0432	0.0360		0.4563	0.4563		0.4563	0.4563			6,535.9032	0.1253	0.1198	6,574.7428
Single Family Housing	6.79008e+006	0.0366	0.3129	0.1331	2.0000e-003		0.0253	0.0253		0.0253	0.0253			362.3445	6.9400e-003	6.6400e-003	364.4977
Total		0.7440	6.7181	5.3471	0.0406		0.5140	0.5140		0.5140	0.5140			7,363.0471	0.1411	0.1350	7,406.8020

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Unmitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	3.60169e+006	120.8938	0.0212	3.2700e-003	122.3984
City Park	0	0.0000	0.0000	0.0000	0.0000
General Office Building	7.25852e+007	2,436.3842	0.4280	0.0659	2,466.7073
Single Family Housing	2.26942e+006	76.1750	0.0134	2.0600e-003	77.1231
Total		2,633.4530	0.4626	0.0712	2,666.2288

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.3 Energy by Land Use - Electricity

Mitigated

	Electricity Use	Total CO2	CH4	N2O	CO2e
Land Use	kWh/yr	MT/yr			
Apartments Mid Rise	3.60169e+006	120.8938	0.0212	3.2700e-003	122.3984
City Park	0	0.0000	0.0000	0.0000	0.0000
General Office Building	7.25852e+007	2,436.3842	0.4280	0.0659	2,466.7073
Single Family Housing	2.26942e+006	76.1750	0.0134	2.0600e-003	77.1231
Total		2,633.4530	0.4626	0.0712	2,666.2288

6.0 Area Detail

6.1 Mitigation Measures Area

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	tons/yr										MT/yr					
Mitigated	39.7890	0.1445	12.5408	6.7000e-004		0.0697	0.0697		0.0697	0.0697			20.6061	0.0199	0.0000	21.1042
Unmitigated	39.7890	0.1445	12.5408	6.7000e-004		0.0697	0.0697		0.0697	0.0697			20.6061	0.0199	0.0000	21.1042

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.3848					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Consumer Products	35.0232					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Landscaping	0.3810	0.1445	12.5408	6.7000e-004		0.0697	0.0697		0.0697	0.0697			20.6061	0.0199	0.0000	21.1042
Total	39.7890	0.1445	12.5408	6.7000e-004		0.0697	0.0697		0.0697	0.0697			20.6061	0.0199	0.0000	21.1042

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	tons/yr										MT/yr					
Architectural Coating	4.3848					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Consumer Products	35.0232					0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Landscaping	0.3810	0.1445	12.5408	6.7000e-004		0.0697	0.0697		0.0697	0.0697			20.6061	0.0199	0.0000	21.1042
Total	39.7890	0.1445	12.5408	6.7000e-004		0.0697	0.0697		0.0697	0.0697			20.6061	0.0199	0.0000	21.1042

7.0 Water Detail

7.1 Mitigation Measures Water

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	Total CO2	CH4	N2O	CO2e
Category	MT/yr			
Mitigated	855.1054	1.7848	1.0979	1,226.8907
Unmitigated	855.1054	1.7848	1.0979	1,226.8907

7.2 Water by Land Use

Unmitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	60.2675 / 37.9947	35.8658	0.0760	0.0468	51.6998
City Park	0 / 137.02	16.0972	2.8300e-003	4.4000e-004	16.2976
General Office Building	1335.49 / 818.527	792.0143	1.6824	1.0362	1,142.8524
Single Family Housing	18.6992 / 11.7886	11.1281	0.0236	0.0145	16.0409
Total		855.1054	1.7848	1.0979	1,226.8907

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

7.2 Water by Land Use

Mitigated

	Indoor/Outdoor Use	Total CO2	CH4	N2O	CO2e
Land Use	Mgal	MT/yr			
Apartments Mid Rise	60.2675 / 37.9947	35.8658	0.0760	0.0468	51.6998
City Park	0 / 137.02	16.0972	2.8300e-003	4.4000e-004	16.2976
General Office Building	1335.49 / 818.527	792.0143	1.6824	1.0362	1,142.8524
Single Family Housing	18.6992 / 11.7886	11.1281	0.0236	0.0145	16.0409
Total		855.1054	1.7848	1.0979	1,226.8907

8.0 Waste Detail

8.1 Mitigation Measures Waste

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Category/Year

	Total CO2	CH4	N2O	CO2e
	MT/yr			
Mitigated	1,562.861 9	92.3625	0.0000	3,871.924 3
Unmitigated	1,562.861 9	92.3625	0.0000	3,871.924 3

8.2 Waste by Land Use

Unmitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	425.5	86.3727	5.1045	0.0000	213.9846
City Park	9.89	2.0076	0.1186	0.0000	4.9737
General Office Building	6988.02	1,418.504 9	83.8312	0.0000	3,514.285 9
Single Family Housing	275.76	55.9768	3.3081	0.0000	138.6801
Total		1,562.861 9	92.3625	0.0000	3,871.924 3

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.2 Waste by Land Use

Mitigated

	Waste Disposed	Total CO2	CH4	N2O	CO2e
Land Use	tons	MT/yr			
Apartments Mid Rise	425.5	86.3727	5.1045	0.0000	213.9846
City Park	9.89	2.0076	0.1186	0.0000	4.9737
General Office Building	6988.02	1,418.5049	83.8312	0.0000	3,514.2859
Single Family Housing	275.76	55.9768	3.3081	0.0000	138.6801
Total		1,562.8619	92.3625	0.0000	3,871.9243

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Annual

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Equipment Type	Number
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11.0 Vegetation

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Elk Grove LEA Community Plan Construction + Operation Emissions

Sacramento County, Summer

1.0 Project Characteristics

1.1 Land Usage

Land Uses	Size	Metric	Lot Acreage	Floor Surface Area	Population
Apartments Mid Rise	925.00	Dwelling Unit	287.00	925,000.00	2470
City Park	115.00	Acre	115.00	5,009,400.00	0
General Office Building	7,514.00	1000sqft	172.50	7,514,000.00	0
Single Family Housing	287.00	Dwelling Unit	575.00	516,600.00	766

1.2 Other Project Characteristics

Urbanization	Urban	Wind Speed (m/s)	3.5	Precipitation Freq (Days)	58
Climate Zone	2			Operational Year	2040
Utility Company	Sacramento Municipal Utility District				
CO2 Intensity (lb/MW hr)	74	CH4 Intensity (lb/MW hr)	0.013	N2O Intensity (lb/MW hr)	0.002

1.3 User Entered Comments & Non-Default Data

Project Characteristics - Emissions estimates for Elk Grove LEA Community Update. Forecasted EFs for SMUD for 2040 override

Land Use - 1,150 acres parcel of single family home, multi family homes, commercial, and open space

Construction Phase - Construction to occur from 2024-2040. CalEEMod default ratios utilized.

Off-road Equipment - CalEEMod Defaults Used

Trips and VMT - No project specific information available

Demolition - No project specific information available

Grading - No project specific information available

Architectural Coating - Consistent with SMAQMD's Rule 422

Vehicle Trips - Values adjusted to adhere to VMT Study

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Energy Use - Adjusted to reflect consistency with 2019 California Energy Code

Water And Wastewater - Defaults used

Solid Waste - Defaults Used

Table Name	Column Name	Default Value	New Value
tblArchitecturalCoating	EF_Nonresidential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Nonresidential_Interior	100.00	50.00
tblArchitecturalCoating	EF_Parking	100.00	50.00
tblArchitecturalCoating	EF_Residential_Exterior	100.00	50.00
tblArchitecturalCoating	EF_Residential_Interior	100.00	50.00
tblConstructionPhase	NumDays	6,000.00	127.00
tblConstructionPhase	NumDays	15,500.00	328.00
tblConstructionPhase	NumDays	155,000.00	3,282.00
tblConstructionPhase	NumDays	11,000.00	233.00
tblConstructionPhase	NumDays	11,000.00	233.00
tblConstructionPhase	PhaseEndDate	12/28/2046	6/25/2024
tblConstructionPhase	PhaseEndDate	5/28/2106	9/25/2025
tblConstructionPhase	PhaseEndDate	7/13/2700	4/26/2038
tblConstructionPhase	PhaseEndDate	9/11/2742	3/17/2039
tblConstructionPhase	PhaseEndDate	11/9/2784	2/6/2041
tblConstructionPhase	PhaseStartDate	12/29/2046	6/25/2024
tblConstructionPhase	PhaseStartDate	5/29/2106	9/26/2025
tblConstructionPhase	PhaseStartDate	7/14/2700	4/27/2038
tblConstructionPhase	PhaseStartDate	9/12/2742	3/18/2040
tblGrading	AcresOfGrading	984.00	46,500.00
tblGrading	AcresOfGrading	190.50	9,000.00
tblLandUse	LotAcreage	24.34	287.00
tblLandUse	LotAcreage	93.18	575.00
tblProjectCharacteristics	CH4IntensityFactor	0.033	0.013

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

tblProjectCharacteristics	CO2IntensityFactor	357.98	74
tblProjectCharacteristics	N2OIntensityFactor	0.004	0.002
tblVehicleTrips	ST_TR	1.96	0.60
tblVehicleTrips	ST_TR	2.21	0.20
tblVehicleTrips	ST_TR	4.91	2.10
tblVehicleTrips	ST_TR	9.54	4.20

2.0 Emissions Summary

2.1 Overall Construction (Maximum Daily Emission)

Unmitigated Construction

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	5.9985	59.6077	47.0156	0.1027	249.8763	2.5662	252.4425	37.6662	2.3609	40.0271			9,956.0648	3.1432	6.1800e-003	10,036.4849
2025	19.6307	116.3047	169.6785	0.7691	156.5196	1.2595	157.6512	19.5844	1.1897	20.6254			80,073.8707	2.4930	7.1118	82,255.5030
2026	18.6379	113.6915	161.4933	0.7500	53.2915	1.2371	54.5286	14.4323	1.1686	15.6009			78,105.4604	2.3941	6.9509	80,236.6832
2027	17.7258	111.3477	154.5204	0.7315	53.2902	1.2150	54.5052	14.4319	1.1477	15.5796			76,194.0623	2.3023	6.7908	78,275.2697
2028	16.8971	109.3993	148.7336	0.7146	53.2891	1.1937	54.4828	14.4315	1.1278	15.5592			74,439.4587	2.2265	6.6433	76,474.8348
2029	16.0916	107.6231	143.7377	0.6991	53.2881	1.1732	54.4613	14.4311	1.1085	15.5396			72,832.1095	2.1592	6.5076	74,825.3622
2030	15.2599	101.4846	139.6073	0.6891	53.2872	0.7740	54.0612	14.4308	0.7418	15.1726			71,718.6134	1.6161	6.3851	73,661.7799
2031	14.5250	100.1049	135.9976	0.6766	53.2864	0.7560	54.0424	14.4305	0.7249	15.1554			70,422.9182	1.5618	6.2769	72,332.4778
2032	13.8470	98.9310	132.9453	0.6656	53.2858	0.7400	54.0257	14.4303	0.7099	15.1401			69,280.7861	1.5143	6.1831	71,161.1959
2033	13.2630	97.9493	130.3661	0.6560	53.2852	0.7259	54.0110	14.4300	0.6967	15.1267			68,273.7513	1.4734	6.1013	70,128.7856
2034	12.7191	97.0261	128.0838	0.6473	53.2846	0.7124	53.9970	14.4298	0.6840	15.1139			67,371.4529	1.4353	6.0275	69,203.5374
2035	12.1286	95.4530	126.0915	0.6397	53.2841	0.6426	53.9268	14.4297	0.6150	15.0447			66,577.7514	1.3952	5.9628	68,389.5289
2036	12.1286	95.4530	126.0915	0.6397	53.2841	0.6426	53.9268	14.4297	0.6150	15.0447			66,577.7514	1.3952	5.9628	68,389.5289
2037	12.1286	95.4530	126.0915	0.6397	53.2841	0.6426	53.9268	14.4297	0.6150	15.0447			66,577.7514	1.3952	5.9628	68,389.5289
2038	12.1286	95.4530	126.0915	0.6397	53.2841	0.6426	53.9268	14.4297	0.6150	15.0447			66,577.7514	1.3952	5.9628	68,389.5289
2039	1.1655	4.8863	16.0557	0.0288	0.1141	0.1877	0.3018	0.0303	0.1877	0.2179			2,734.8071	0.1034	1.6200e-003	2,737.8743
2040	189.6894	1.3744	17.0972	0.0551	8.0330	0.0232	8.0562	2.1308	0.0219	2.1527			5,546.2619	0.0737	0.1095	5,580.7391
2041	189.6894	1.3744	17.0972	0.0551	8.0330	0.0232	8.0562	2.1308	0.0219	2.1527			5,546.2619	0.0737	0.1095	5,580.7391
Maximum	189.6894	116.3047	169.6785	0.7691	249.8763	2.5662	252.4425	37.6662	2.3609	40.0271			80,073.8707	3.1432	7.1118	82,255.5030

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.1 Overall Construction (Maximum Daily Emission)

Mitigated Construction

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Year	lb/day										lb/day					
2024	5.9985	59.6077	47.0156	0.1027	249.8763	2.5662	252.4425	37.6662	2.3609	40.0271			9,956.0648	3.1432	6.1800e-003	10,036.4849
2025	19.6307	116.3047	169.6785	0.7691	156.5196	1.2595	157.6512	19.5844	1.1897	20.6254			80,073.8707	2.4930	7.1118	82,255.5030
2026	18.6379	113.6915	161.4933	0.7500	53.2915	1.2371	54.5286	14.4323	1.1686	15.6009			78,105.4604	2.3941	6.9509	80,236.6832
2027	17.7258	111.3477	154.5204	0.7315	53.2902	1.2150	54.5052	14.4319	1.1477	15.5796			76,194.0623	2.3023	6.7908	78,275.2697
2028	16.8971	109.3993	148.7336	0.7146	53.2891	1.1937	54.4828	14.4315	1.1278	15.5592			74,439.4587	2.2265	6.6433	76,474.8348
2029	16.0916	107.6231	143.7377	0.6991	53.2881	1.1732	54.4613	14.4311	1.1085	15.5396			72,832.1095	2.1592	6.5076	74,825.3622
2030	15.2599	101.4846	139.6073	0.6891	53.2872	0.7740	54.0612	14.4308	0.7418	15.1726			71,718.6134	1.6161	6.3851	73,661.7799
2031	14.5250	100.1049	135.9976	0.6766	53.2864	0.7560	54.0424	14.4305	0.7249	15.1554			70,422.9182	1.5618	6.2769	72,332.4778
2032	13.8470	98.9310	132.9453	0.6656	53.2858	0.7400	54.0257	14.4303	0.7099	15.1401			69,280.7861	1.5143	6.1831	71,161.1959
2033	13.2630	97.9493	130.3661	0.6560	53.2852	0.7259	54.0110	14.4300	0.6967	15.1267			68,273.7513	1.4734	6.1013	70,128.7856
2034	12.7191	97.0261	128.0838	0.6473	53.2846	0.7124	53.9970	14.4298	0.6840	15.1139			67,371.4529	1.4353	6.0275	69,203.5374
2035	12.1286	95.4530	126.0915	0.6397	53.2841	0.6426	53.9268	14.4297	0.6150	15.0447			66,577.7514	1.3952	5.9628	68,389.5289
2036	12.1286	95.4530	126.0915	0.6397	53.2841	0.6426	53.9268	14.4297	0.6150	15.0447			66,577.7514	1.3952	5.9628	68,389.5289
2037	12.1286	95.4530	126.0915	0.6397	53.2841	0.6426	53.9268	14.4297	0.6150	15.0447			66,577.7514	1.3952	5.9628	68,389.5289
2038	12.1286	95.4530	126.0915	0.6397	53.2841	0.6426	53.9268	14.4297	0.6150	15.0447			66,577.7514	1.3952	5.9628	68,389.5289
2039	1.1655	4.8863	16.0557	0.0288	0.1141	0.1877	0.3018	0.0303	0.1877	0.2179			2,734.8071	0.1034	1.6200e-003	2,737.8743
2040	189.6894	1.3744	17.0972	0.0551	8.0330	0.0232	8.0562	2.1308	0.0219	2.1527			5,546.2619	0.0737	0.1095	5,580.7391
2041	189.6894	1.3744	17.0972	0.0551	8.0330	0.0232	8.0562	2.1308	0.0219	2.1527			5,546.2619	0.0737	0.1095	5,580.7391
Maximum	189.6894	116.3047	169.6785	0.7691	249.8763	2.5662	252.4425	37.6662	2.3609	40.0271			80,073.8707	3.1432	7.1118	82,255.5030

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

2.2 Overall Operational

Unmitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	218.9825	1.1561	100.3262	5.3400e-003		0.5573	0.5573		0.5573	0.5573			181.7150	0.1757	0.0000	186.1069
Energy	4.0767	36.8113	29.2994	0.2224		2.8166	2.8166		2.8166	2.8166			44,473.2607	0.8524	0.8153	44,737.5430
Mobile	151.9934	127.3990	1,253.8957	2.6502	360.8178	1.2802	362.0980	96.0774	1.1963	97.2737			270,858.5825	17.2992	12.5826	275,040.6699
Total	375.0526	165.3663	1,383.5213	2.8779	360.8178	4.6541	365.4718	96.0774	4.5702	100.6476			315,513.5582	18.3273	13.3979	319,964.3198

Mitigated Operational

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Area	218.9825	1.1561	100.3262	5.3400e-003		0.5573	0.5573		0.5573	0.5573			181.7150	0.1757	0.0000	186.1069
Energy	4.0767	36.8113	29.2994	0.2224		2.8166	2.8166		2.8166	2.8166			44,473.2607	0.8524	0.8153	44,737.5430
Mobile	151.9934	127.3990	1,253.8957	2.6502	360.8178	1.2802	362.0980	96.0774	1.1963	97.2737			270,858.5825	17.2992	12.5826	275,040.6699
Total	375.0526	165.3663	1,383.5213	2.8779	360.8178	4.6541	365.4718	96.0774	4.5702	100.6476			315,513.5582	18.3273	13.3979	319,964.3198

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio-CO2	Total CO2	CH4	N2O	CO2e
Percent Reduction	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

3.0 Construction Detail

Construction Phase

Phase Number	Phase Name	Phase Type	Start Date	End Date	Num Days Week	Num Days	Phase Description
1	Site Preparation	Site Preparation	1/1/2024	6/25/2024	5	127	
2	Grading	Grading	6/25/2024	9/25/2025	5	328	
3	Building Construction	Building Construction	9/26/2025	4/26/2038	5	3282	
4	Paving	Paving	4/27/2038	3/17/2039	5	233	
5	Architectural Coating	Architectural Coating	3/18/2040	2/6/2041	5	233	

Acres of Grading (Site Preparation Phase): 9000

Acres of Grading (Grading Phase): 46500

Acres of Paving: 0

Residential Indoor: 2,919,240; Residential Outdoor: 973,080; Non-Residential Indoor: 11,271,000; Non-Residential Outdoor: 3,757,000; Striped Parking Area: 0 (Architectural Coating – sqft)

OffRoad Equipment

Phase Name	Offroad Equipment Type	Amount	Usage Hours	Horse Power	Load Factor
Site Preparation	Rubber Tired Dozers	3	8.00	247	0.40
Site Preparation	Tractors/Loaders/Backhoes	4	8.00	97	0.37
Grading	Excavators	2	8.00	158	0.38
Grading	Graders	1	8.00	187	0.41
Grading	Rubber Tired Dozers	1	8.00	247	0.40
Grading	Scrapers	2	8.00	367	0.48

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Grading	Tractors/Loaders/Backhoes	2	8.00	97	0.37
Building Construction	Cranes	1	7.00	231	0.29
Building Construction	Forklifts	3	8.00	89	0.20
Building Construction	Generator Sets	1	8.00	84	0.74
Building Construction	Tractors/Loaders/Backhoes	3	7.00	97	0.37
Building Construction	Welders	1	8.00	46	0.45
Paving	Pavers	2	8.00	130	0.42
Paving	Paving Equipment	2	8.00	132	0.36
Paving	Rollers	2	8.00	80	0.38
Architectural Coating	Air Compressors	1	6.00	78	0.48

Trips and VMT

Phase Name	Offroad Equipment Count	Worker Trip Number	Vendor Trip Number	Hauling Trip Number	Worker Trip Length	Vendor Trip Length	Hauling Trip Length	Worker Vehicle Class	Vendor Vehicle Class	Hauling Vehicle Class
Site Preparation	7	18.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Grading	8	20.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Building Construction	9	5,278.00	2,182.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Paving	6	15.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT
Architectural Coating	1	1,056.00	0.00	0.00	10.00	6.50	20.00	LD_Mix	HDT_Mix	HHDT

3.1 Mitigation Measures Construction

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					93.2198	0.0000	93.2198	18.0455	0.0000	18.0455			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294		1.1310	1.1310			3,688.0100	1.1928		3,717.8294
Total	2.6609	27.1760	18.3356	0.0381	93.2198	1.2294	94.4492	18.0455	1.1310	19.1765			3,688.0100	1.1928		3,717.8294

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	0.0566	0.0259	0.4534	1.2100e-003	0.1369	6.7000e-004	0.1376	0.0363	6.2000e-004	0.0369			122.3556	3.1800e-003	2.9300e-003	123.3071
Total	0.0566	0.0259	0.4534	1.2100e-003	0.1369	6.7000e-004	0.1376	0.0363	6.2000e-004	0.0369			122.3556	3.1800e-003	2.9300e-003	123.3071

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.2 Site Preparation - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					93.2198	0.0000	93.2198	18.0455	0.0000	18.0455			0.0000			0.0000
Off-Road	2.6609	27.1760	18.3356	0.0381		1.2294	1.2294		1.1310	1.1310			3,688.0100	1.1928		3,717.8294
Total	2.6609	27.1760	18.3356	0.0381	93.2198	1.2294	94.4492	18.0455	1.1310	19.1765			3,688.0100	1.1928		3,717.8294

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	0.0566	0.0259	0.4534	1.2100e-003	0.1369	6.7000e-004	0.1376	0.0363	6.2000e-004	0.0369			122.3556	3.1800e-003	2.9300e-003	123.3071
Total	0.0566	0.0259	0.4534	1.2100e-003	0.1369	6.7000e-004	0.1376	0.0363	6.2000e-004	0.0369			122.3556	3.1800e-003	2.9300e-003	123.3071

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					156.3674	0.0000	156.3674	19.5440	0.0000	19.5440			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286			6,009.7487	1.9437		6,058.3405
Total	3.2181	32.3770	27.7228	0.0621	156.3674	1.3354	157.7028	19.5440	1.2286	20.7726			6,009.7487	1.9437		6,058.3405

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	0.0629	0.0288	0.5038	1.3500e-003	0.1521	7.4000e-004	0.1529	0.0404	6.8000e-004	0.0410			135.9506	3.5300e-003	3.2500e-003	137.0079
Total	0.0629	0.0288	0.5038	1.3500e-003	0.1521	7.4000e-004	0.1529	0.0404	6.8000e-004	0.0410			135.9506	3.5300e-003	3.2500e-003	137.0079

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2024

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					156.3674	0.0000	156.3674	19.5440	0.0000	19.5440			0.0000			0.0000
Off-Road	3.2181	32.3770	27.7228	0.0621		1.3354	1.3354		1.2286	1.2286			6,009.7487	1.9437		6,058.3405
Total	3.2181	32.3770	27.7228	0.0621	156.3674	1.3354	157.7028	19.5440	1.2286	20.7726			6,009.7487	1.9437		6,058.3405

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	0.0629	0.0288	0.5038	1.3500e-003	0.1521	7.4000e-004	0.1529	0.0404	6.8000e-004	0.0410			135.9506	3.5300e-003	3.2500e-003	137.0079
Total	0.0629	0.0288	0.5038	1.3500e-003	0.1521	7.4000e-004	0.1529	0.0404	6.8000e-004	0.0410			135.9506	3.5300e-003	3.2500e-003	137.0079

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					156.3674	0.0000	156.3674	19.5440	0.0000	19.5440			0.0000			0.0000
Off-Road	2.9012	27.9429	26.3311	0.0621		1.1309	1.1309		1.0404	1.0404			6,008.2814	1.9432		6,056.8614
Total	2.9012	27.9429	26.3311	0.0621	156.3674	1.1309	157.4983	19.5440	1.0404	20.5844			6,008.2814	1.9432		6,056.8614

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	0.0590	0.0259	0.4693	1.3000e-003	0.1521	7.1000e-004	0.1529	0.0404	6.5000e-004	0.0410			131.3270	3.1900e-003	3.0400e-003	132.3130
Total	0.0590	0.0259	0.4693	1.3000e-003	0.1521	7.1000e-004	0.1529	0.0404	6.5000e-004	0.0410			131.3270	3.1900e-003	3.0400e-003	132.3130

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.3 Grading - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Fugitive Dust					156.3674	0.0000	156.3674	19.5440	0.0000	19.5440			0.0000			0.0000
Off-Road	2.9012	27.9429	26.3311	0.0621		1.1309	1.1309		1.0404	1.0404			6,008.2814	1.9432		6,056.8614
Total	2.9012	27.9429	26.3311	0.0621	156.3674	1.1309	157.4983	19.5440	1.0404	20.5844			6,008.2814	1.9432		6,056.8614

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	0.0590	0.0259	0.4693	1.3000e-003	0.1521	7.1000e-004	0.1529	0.0404	6.5000e-004	0.0410			131.3270	3.1900e-003	3.0400e-003	132.3130
Total	0.0590	0.0259	0.4693	1.3000e-003	0.1521	7.1000e-004	0.1529	0.0404	6.5000e-004	0.0410			131.3270	3.1900e-003	3.0400e-003	132.3130

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2025

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.4744	0.6010		2,571.4981
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.4744	0.6010		2,571.4981

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	2.6925	97.0132	29.7517	0.3993	13.1430	0.5449	13.6879	3.7827	0.5212	4.3039			42,860.2120	1.0490	6.3093	44,766.5976
Worker	15.5708	6.8218	123.8421	0.3429	40.1497	0.1871	40.3368	10.6501	0.1722	10.8223			34,657.1844	0.8430	0.8025	34,917.4073
Total	18.2633	103.8350	153.5938	0.7421	53.2927	0.7319	54.0247	14.4328	0.6934	15.1262			77,517.3964	1.8920	7.1118	79,684.0049

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2025

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	2.6925	97.0132	29.7517	0.3993	13.1430	0.5449	13.6879	3.7827	0.5212	4.3039			42,860.21 20	1.0490	6.3093	44,766.59 76
Worker	15.5708	6.8218	123.8421	0.3429	40.1497	0.1871	40.3368	10.6501	0.1722	10.8223			34,657.18 44	0.8430	0.8025	34,917.40 73
Total	18.2633	103.8350	153.5938	0.7421	53.2927	0.7319	54.0247	14.4328	0.6934	15.1262			77,517.39 64	1.8920	7.1118	79,684.00 49

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2026

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	2.5987	95.0390	29.1650	0.3911	13.1417	0.5315	13.6732	3.7822	0.5084	4.2906			41,995.90 77	1.0259	6.1946	43,867.54 14
Worker	14.6718	6.1828	116.2436	0.3320	40.1497	0.1781	40.3278	10.6501	0.1639	10.8140			33,553.07 84	0.7673	0.7563	33,797.64 38
Total	17.2705	101.2218	145.4086	0.7230	53.2915	0.7096	54.0010	14.4323	0.6723	15.1046			75,548.98 60	1.7931	6.9509	77,665.18 52

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2026

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	2.5987	95.0390	29.1650	0.3911	13.1417	0.5315	13.6732	3.7822	0.5084	4.2906			41,995.90 77	1.0259	6.1946	43,867.54 14
Worker	14.6718	6.1828	116.2436	0.3320	40.1497	0.1781	40.3278	10.6501	0.1639	10.8140			33,553.07 84	0.7673	0.7563	33,797.64 38
Total	17.2705	101.2218	145.4086	0.7230	53.2915	0.7096	54.0010	14.4323	0.6723	15.1046			75,548.98 60	1.7931	6.9509	77,665.18 52

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2027

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	2.5153	93.2298	28.6658	0.3826	13.1405	0.5193	13.6598	3.7818	0.4967	4.2785			41,093.85 71	0.9996	6.0732	42,928.65 68
Worker	13.8431	5.6482	109.7699	0.3220	40.1497	0.1681	40.3178	10.6501	0.1548	10.8048			32,543.73 08	0.7017	0.7176	32,775.11 49
Total	16.3584	98.8780	138.4357	0.7046	53.2902	0.6874	53.9776	14.4319	0.6515	15.0834			73,637.58 79	1.7014	6.7908	75,703.77 16

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2027

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	2.5153	93.2298	28.6658	0.3826	13.1405	0.5193	13.6598	3.7818	0.4967	4.2785			41,093.85 71	0.9996	6.0732	42,928.65 68
Worker	13.8431	5.6482	109.7699	0.3220	40.1497	0.1681	40.3178	10.6501	0.1548	10.8048			32,543.73 08	0.7017	0.7176	32,775.11 49
Total	16.3584	98.8780	138.4357	0.7046	53.2902	0.6874	53.9776	14.4319	0.6515	15.0834			73,637.58 79	1.7014	6.7908	75,703.77 16

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2028

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	2.4419	91.7226	28.2673	0.3747	13.1394	0.5085	13.6479	3.7814	0.4864	4.2678			40,248.54 65	0.9801	5.9579	42,048.50 24
Worker	13.0878	5.2070	104.3817	0.3130	40.1497	0.1577	40.3074	10.6501	0.1451	10.7952			31,634.43 78	0.6455	0.6854	31,854.83 43
Total	15.5297	96.9296	132.6489	0.6876	53.2891	0.6661	53.9553	14.4315	0.6315	15.0630			71,882.98 43	1.6256	6.6433	73,903.33 67

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2028

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	2.4419	91.7226	28.2673	0.3747	13.1394	0.5085	13.6479	3.7814	0.4864	4.2678			40,248.54 65	0.9801	5.9579	42,048.50 24
Worker	13.0878	5.2070	104.3817	0.3130	40.1497	0.1577	40.3074	10.6501	0.1451	10.7952			31,634.43 78	0.6455	0.6854	31,854.83 43
Total	15.5297	96.9296	132.6489	0.6876	53.2891	0.6661	53.9553	14.4315	0.6315	15.0630			71,882.98 43	1.6256	6.6433	73,903.33 67

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2029

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	2.3738	90.3199	27.9221	0.3672	13.1384	0.4981	13.6365	3.7810	0.4765	4.2575			39,457.49 33	0.9622	5.8492	41,224.62 03
Worker	12.3503	4.8335	99.7309	0.3049	40.1497	0.1476	40.2973	10.6501	0.1358	10.7859			30,818.14 19	0.5960	0.6584	31,029.24 38
Total	14.7242	95.1534	127.6531	0.6721	53.2881	0.6457	53.9338	14.4311	0.6123	15.0434			70,275.63 52	1.5582	6.5076	72,253.86 41

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2029

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1
Total	1.3674	12.4697	16.0847	0.0270		0.5276	0.5276		0.4963	0.4963			2,556.474 4	0.6010		2,571.498 1

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	2.3738	90.3199	27.9221	0.3672	13.1384	0.4981	13.6365	3.7810	0.4765	4.2575			39,457.49 33	0.9622	5.8492	41,224.62 03
Worker	12.3503	4.8335	99.7309	0.3049	40.1497	0.1476	40.2973	10.6501	0.1358	10.7859			30,818.14 19	0.5960	0.6584	31,029.24 38
Total	14.7242	95.1534	127.6531	0.6721	53.2881	0.6457	53.9338	14.4311	0.6123	15.0434			70,275.63 52	1.5582	6.5076	72,253.86 41

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2030

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481			2,897.5468	0.1162		2,900.4529
Total	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481			2,897.5468	0.1162		2,900.4529

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	2.3124	89.0308	27.6503	0.3604	13.1375	0.4878	13.6253	3.7807	0.4667	4.2473			38,730.7837	0.9474	5.7493	40,467.7513
Worker	11.6384	4.5192	95.8000	0.2977	40.1497	0.1380	40.2877	10.6501	0.1270	10.7771			30,090.2829	0.5524	0.6359	30,293.5758
Total	13.9508	93.5500	123.4503	0.6581	53.2872	0.6259	53.9130	14.4308	0.5937	15.0244			68,821.0666	1.4998	6.3851	70,761.3271

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2030

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481			2,897.5468	0.1162		2,900.4529
Total	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481			2,897.5468	0.1162		2,900.4529

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	2.3124	89.0308	27.6503	0.3604	13.1375	0.4878	13.6253	3.7807	0.4667	4.2473			38,730.7837	0.9474	5.7493	40,467.7513
Worker	11.6384	4.5192	95.8000	0.2977	40.1497	0.1380	40.2877	10.6501	0.1270	10.7771			30,090.2829	0.5524	0.6359	30,293.5758
Total	13.9508	93.5500	123.4503	0.6581	53.2872	0.6259	53.9130	14.4308	0.5937	15.0244			68,821.0666	1.4998	6.3851	70,761.3271

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2031

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481			2,897.5468	0.1162		2,900.4529
Total	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481			2,897.5468	0.1162		2,900.4529

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	2.2603	87.9208	27.4630	0.3543	13.1367	0.4788	13.6154	3.7804	0.4580	4.2384			38,081.4554	0.9320	5.6601	39,791.4496
Worker	10.9556	4.2495	92.3775	0.2913	40.1497	0.1291	40.2788	10.6501	0.1188	10.7689			29,443.9161	0.5136	0.6168	29,640.5753
Total	13.2159	92.1702	119.8406	0.6456	53.2864	0.6078	53.8942	14.4305	0.5768	15.0072			67,525.3715	1.4456	6.2769	69,432.0249

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2031

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481			2,897.5468	0.1162		2,900.4529
Total	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481			2,897.5468	0.1162		2,900.4529

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	2.2603	87.9208	27.4630	0.3543	13.1367	0.4788	13.6154	3.7804	0.4580	4.2384			38,081.4554	0.9320	5.6601	39,791.4496
Worker	10.9556	4.2495	92.3775	0.2913	40.1497	0.1291	40.2788	10.6501	0.1188	10.7689			29,443.9161	0.5136	0.6168	29,640.5753
Total	13.2159	92.1702	119.8406	0.6456	53.2864	0.6078	53.8942	14.4305	0.5768	15.0072			67,525.3715	1.4456	6.2769	69,432.0249

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2032

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481			2,897.5468	0.1162		2,900.4529
Total	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481			2,897.5468	0.1162		2,900.4529

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	2.2162	86.9688	27.3440	0.3490	13.1360	0.4710	13.6071	3.7802	0.4506	4.2307			37,510.4980	0.9186	5.5818	39,196.8297
Worker	10.3217	4.0275	89.4443	0.2856	40.1497	0.1208	40.2705	10.6501	0.1112	10.7613			28,872.7413	0.4795	0.6013	29,063.9133
Total	12.5379	90.9963	116.7883	0.6347	53.2858	0.5918	53.8776	14.4303	0.5617	14.9920			66,383.2393	1.3981	6.1831	68,260.7430

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2032

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481			2,897.5468	0.1162		2,900.4529
Total	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481			2,897.5468	0.1162		2,900.4529

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	2.2162	86.9688	27.3440	0.3490	13.1360	0.4710	13.6071	3.7802	0.4506	4.2307			37,510.4980	0.9186	5.5818	39,196.8297
Worker	10.3217	4.0275	89.4443	0.2856	40.1497	0.1208	40.2705	10.6501	0.1112	10.7613			28,872.7413	0.4795	0.6013	29,063.9133
Total	12.5379	90.9963	116.7883	0.6347	53.2858	0.5918	53.8776	14.4303	0.5617	14.9920			66,383.2393	1.3981	6.1831	68,260.7430

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2033

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481			2,897.5468	0.1162		2,900.4529
Total	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481			2,897.5468	0.1162		2,900.4529

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	2.1794	86.1654	27.2655	0.3443	13.1355	0.4644	13.5999	3.7800	0.4443	4.2242			37,005.4988	0.9073	5.5126	38,670.9344
Worker	9.7745	3.8493	86.9437	0.2807	40.1497	0.1133	40.2630	10.6501	0.1043	10.7544			28,370.7058	0.4498	0.5888	28,557.3983
Total	11.9539	90.0147	114.2091	0.6250	53.2852	0.5777	53.8629	14.4300	0.5485	14.9786			65,376.2046	1.3571	6.1013	67,228.3327

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2033

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481			2,897.5468	0.1162		2,900.4529
Total	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481			2,897.5468	0.1162		2,900.4529

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	2.1794	86.1654	27.2655	0.3443	13.1355	0.4644	13.5999	3.7800	0.4443	4.2242			37,005.4988	0.9073	5.5126	38,670.9344
Worker	9.7745	3.8493	86.9437	0.2807	40.1497	0.1133	40.2630	10.6501	0.1043	10.7544			28,370.7058	0.4498	0.5888	28,557.3983
Total	11.9539	90.0147	114.2091	0.6250	53.2852	0.5777	53.8629	14.4300	0.5485	14.9786			65,376.2046	1.3571	6.1013	67,228.3327

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2034

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481			2,897.5468	0.1162		2,900.4529
Total	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481			2,897.5468	0.1162		2,900.4529

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	2.1457	85.3906	27.2039	0.3400	13.1349	0.4578	13.5927	3.7798	0.4380	4.2177			36,543.4079	0.8959	5.4491	38,189.6386
Worker	9.2643	3.7009	84.7229	0.2763	40.1497	0.1064	40.2561	10.6501	0.0979	10.7480			27,930.4982	0.4231	0.5784	28,113.4460
Total	11.4100	89.0915	111.9268	0.6164	53.2846	0.5643	53.8489	14.4298	0.5359	14.9657			64,473.9061	1.3190	6.0275	66,303.0845

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2034

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481			2,897.5468	0.1162		2,900.4529
Total	1.3091	7.9346	16.1570	0.0310		0.1481	0.1481		0.1481	0.1481			2,897.5468	0.1162		2,900.4529

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	2.1457	85.3906	27.2039	0.3400	13.1349	0.4578	13.5927	3.7798	0.4380	4.2177			36,543.4079	0.8959	5.4491	38,189.6386
Worker	9.2643	3.7009	84.7229	0.2763	40.1497	0.1064	40.2561	10.6501	0.0979	10.7480			27,930.4982	0.4231	0.5784	28,113.4460
Total	11.4100	89.0915	111.9268	0.6164	53.2846	0.5643	53.8489	14.4298	0.5359	14.9657			64,473.9061	1.3190	6.0275	66,303.0845

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2035

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904			2,897.5468	0.1079		2,900.2448
Total	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904			2,897.5468	0.1079		2,900.2448

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	2.1153	84.7080	27.1548	0.3362	13.1344	0.4520	13.5864	3.7796	0.4324	4.2119			36,132.4482	0.8875	5.3925	37,761.5996
Worker	8.7965	3.5837	82.8189	0.2725	40.1497	0.1002	40.2499	10.6501	0.0922	10.7423			27,547.7564	0.3998	0.5703	27,727.6845
Total	10.9118	88.2916	109.9737	0.6087	53.2841	0.5522	53.8363	14.4297	0.5246	14.9543			63,680.2046	1.2873	5.9628	65,489.2841

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2035

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904			2,897.5468	0.1079		2,900.2448
Total	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904			2,897.5468	0.1079		2,900.2448

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	2.1153	84.7080	27.1548	0.3362	13.1344	0.4520	13.5864	3.7796	0.4324	4.2119			36,132.4482	0.8875	5.3925	37,761.5996
Worker	8.7965	3.5837	82.8189	0.2725	40.1497	0.1002	40.2499	10.6501	0.0922	10.7423			27,547.7564	0.3998	0.5703	27,727.6845
Total	10.9118	88.2916	109.9737	0.6087	53.2841	0.5522	53.8363	14.4297	0.5246	14.9543			63,680.2046	1.2873	5.9628	65,489.2841

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2036

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904			2,897.5468	0.1079		2,900.2448
Total	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904			2,897.5468	0.1079		2,900.2448

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	2.1153	84.7080	27.1548	0.3362	13.1344	0.4520	13.5864	3.7796	0.4324	4.2119			36,132.4482	0.8875	5.3925	37,761.5996
Worker	8.7965	3.5837	82.8189	0.2725	40.1497	0.1002	40.2499	10.6501	0.0922	10.7423			27,547.7564	0.3998	0.5703	27,727.6845
Total	10.9118	88.2916	109.9737	0.6087	53.2841	0.5522	53.8363	14.4297	0.5246	14.9543			63,680.2046	1.2873	5.9628	65,489.2841

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2036

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904			2,897.5468	0.1079		2,900.2448
Total	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904			2,897.5468	0.1079		2,900.2448

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	2.1153	84.7080	27.1548	0.3362	13.1344	0.4520	13.5864	3.7796	0.4324	4.2119			36,132.4482	0.8875	5.3925	37,761.5996
Worker	8.7965	3.5837	82.8189	0.2725	40.1497	0.1002	40.2499	10.6501	0.0922	10.7423			27,547.7564	0.3998	0.5703	27,727.6845
Total	10.9118	88.2916	109.9737	0.6087	53.2841	0.5522	53.8363	14.4297	0.5246	14.9543			63,680.2046	1.2873	5.9628	65,489.2841

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2037

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904			2,897.5468	0.1079		2,900.2448
Total	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904			2,897.5468	0.1079		2,900.2448

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	2.1153	84.7080	27.1548	0.3362	13.1344	0.4520	13.5864	3.7796	0.4324	4.2119			36,132.4482	0.8875	5.3925	37,761.5996
Worker	8.7965	3.5837	82.8189	0.2725	40.1497	0.1002	40.2499	10.6501	0.0922	10.7423			27,547.7564	0.3998	0.5703	27,727.6845
Total	10.9118	88.2916	109.9737	0.6087	53.2841	0.5522	53.8363	14.4297	0.5246	14.9543			63,680.2046	1.2873	5.9628	65,489.2841

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2037

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904			2,897.5468	0.1079		2,900.2448
Total	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904			2,897.5468	0.1079		2,900.2448

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	2.1153	84.7080	27.1548	0.3362	13.1344	0.4520	13.5864	3.7796	0.4324	4.2119			36,132.4482	0.8875	5.3925	37,761.5996
Worker	8.7965	3.5837	82.8189	0.2725	40.1497	0.1002	40.2499	10.6501	0.0922	10.7423			27,547.7564	0.3998	0.5703	27,727.6845
Total	10.9118	88.2916	109.9737	0.6087	53.2841	0.5522	53.8363	14.4297	0.5246	14.9543			63,680.2046	1.2873	5.9628	65,489.2841

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2038

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904			2,897.5468	0.1079		2,900.2448
Total	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904			2,897.5468	0.1079		2,900.2448

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	2.1153	84.7080	27.1548	0.3362	13.1344	0.4520	13.5864	3.7796	0.4324	4.2119			36,132.4482	0.8875	5.3925	37,761.5996
Worker	8.7965	3.5837	82.8189	0.2725	40.1497	0.1002	40.2499	10.6501	0.0922	10.7423			27,547.7564	0.3998	0.5703	27,727.6845
Total	10.9118	88.2916	109.9737	0.6087	53.2841	0.5522	53.8363	14.4297	0.5246	14.9543			63,680.2046	1.2873	5.9628	65,489.2841

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.4 Building Construction - 2038

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904			2,897.5468	0.1079		2,900.2448
Total	1.2168	7.1613	16.1178	0.0310		0.0904	0.0904		0.0904	0.0904			2,897.5468	0.1079		2,900.2448

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	2.1153	84.7080	27.1548	0.3362	13.1344	0.4520	13.5864	3.7796	0.4324	4.2119			36,132.4482	0.8875	5.3925	37,761.5996
Worker	8.7965	3.5837	82.8189	0.2725	40.1497	0.1002	40.2499	10.6501	0.0922	10.7423			27,547.7564	0.3998	0.5703	27,727.6845
Total	10.9118	88.2916	109.9737	0.6087	53.2841	0.5522	53.8363	14.4297	0.5246	14.9543			63,680.2046	1.2873	5.9628	65,489.2841

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2038

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1405	4.8761	15.8203	0.0281		0.1874	0.1874		0.1874	0.1874			2,656.5168	0.1022		2,659.0727
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1405	4.8761	15.8203	0.0281		0.1874	0.1874		0.1874	0.1874			2,656.5168	0.1022		2,659.0727

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	0.0250	0.0102	0.2354	7.7000e-004	0.1141	2.8000e-004	0.1144	0.0303	2.6000e-004	0.0305			78.2903	1.1400e-003	1.6200e-003	78.8017
Total	0.0250	0.0102	0.2354	7.7000e-004	0.1141	2.8000e-004	0.1144	0.0303	2.6000e-004	0.0305			78.2903	1.1400e-003	1.6200e-003	78.8017

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2038

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1405	4.8761	15.8203	0.0281		0.1874	0.1874		0.1874	0.1874			2,656.5168	0.1022		2,659.0726
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1405	4.8761	15.8203	0.0281		0.1874	0.1874		0.1874	0.1874			2,656.5168	0.1022		2,659.0726

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	0.0250	0.0102	0.2354	7.7000e-004	0.1141	2.8000e-004	0.1144	0.0303	2.6000e-004	0.0305			78.2903	1.1400e-003	1.6200e-003	78.8017
Total	0.0250	0.0102	0.2354	7.7000e-004	0.1141	2.8000e-004	0.1144	0.0303	2.6000e-004	0.0305			78.2903	1.1400e-003	1.6200e-003	78.8017

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2039

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1405	4.8761	15.8203	0.0281		0.1874	0.1874		0.1874	0.1874			2,656.5168	0.1022		2,659.0727
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1405	4.8761	15.8203	0.0281		0.1874	0.1874		0.1874	0.1874			2,656.5168	0.1022		2,659.0727

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	0.0250	0.0102	0.2354	7.7000e-004	0.1141	2.8000e-004	0.1144	0.0303	2.6000e-004	0.0305			78.2903	1.1400e-003	1.6200e-003	78.8017
Total	0.0250	0.0102	0.2354	7.7000e-004	0.1141	2.8000e-004	0.1144	0.0303	2.6000e-004	0.0305			78.2903	1.1400e-003	1.6200e-003	78.8017

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.5 Paving - 2039

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Off-Road	1.1405	4.8761	15.8203	0.0281		0.1874	0.1874		0.1874	0.1874			2,656.5168	0.1022		2,659.0726
Paving	0.0000					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Total	1.1405	4.8761	15.8203	0.0281		0.1874	0.1874		0.1874	0.1874			2,656.5168	0.1022		2,659.0726

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	0.0250	0.0102	0.2354	7.7000e-004	0.1141	2.8000e-004	0.1144	0.0303	2.6000e-004	0.0305			78.2903	1.1400e-003	1.6200e-003	78.8017
Total	0.0250	0.0102	0.2354	7.7000e-004	0.1141	2.8000e-004	0.1144	0.0303	2.6000e-004	0.0305			78.2903	1.1400e-003	1.6200e-003	78.8017

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2040

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	188.1882					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1149	0.7270	1.7923	2.9700e-003		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003			281.4481	9.9000e-003		281.6957
Total	188.3031	0.7270	1.7923	2.9700e-003		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003			281.4481	9.9000e-003		281.6957

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	1.3863	0.6474	15.3049	0.0521	8.0330	0.0157	8.0487	2.1308	0.0145	2.1453			5,264.8139	0.0638	0.1095	5,299.0434
Total	1.3863	0.6474	15.3049	0.0521	8.0330	0.0157	8.0487	2.1308	0.0145	2.1453			5,264.8139	0.0638	0.1095	5,299.0434

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2040

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	188.1882					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1149	0.7270	1.7923	2.9700e-003		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003			281.4481	9.9000e-003		281.6957
Total	188.3031	0.7270	1.7923	2.9700e-003		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003			281.4481	9.9000e-003		281.6957

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	1.3863	0.6474	15.3049	0.0521	8.0330	0.0157	8.0487	2.1308	0.0145	2.1453			5,264.8139	0.0638	0.1095	5,299.0434
Total	1.3863	0.6474	15.3049	0.0521	8.0330	0.0157	8.0487	2.1308	0.0145	2.1453			5,264.8139	0.0638	0.1095	5,299.0434

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2041

Unmitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	188.1882					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1149	0.7270	1.7923	2.9700e-003		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003			281.4481	9.9000e-003		281.6957
Total	188.3031	0.7270	1.7923	2.9700e-003		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003			281.4481	9.9000e-003		281.6957

Unmitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	1.3863	0.6474	15.3049	0.0521	8.0330	0.0157	8.0487	2.1308	0.0145	2.1453			5,264.8139	0.0638	0.1095	5,299.0434
Total	1.3863	0.6474	15.3049	0.0521	8.0330	0.0157	8.0487	2.1308	0.0145	2.1453			5,264.8139	0.0638	0.1095	5,299.0434

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

3.6 Architectural Coating - 2041

Mitigated Construction On-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Archit. Coating	188.1882					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Off-Road	0.1149	0.7270	1.7923	2.9700e-003		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003			281.4481	9.9000e-003		281.6957
Total	188.3031	0.7270	1.7923	2.9700e-003		7.4300e-003	7.4300e-003		7.4300e-003	7.4300e-003			281.4481	9.9000e-003		281.6957

Mitigated Construction Off-Site

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Hauling	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Vendor	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Worker	1.3863	0.6474	15.3049	0.0521	8.0330	0.0157	8.0487	2.1308	0.0145	2.1453			5,264.8139	0.0638	0.1095	5,299.0434
Total	1.3863	0.6474	15.3049	0.0521	8.0330	0.0157	8.0487	2.1308	0.0145	2.1453			5,264.8139	0.0638	0.1095	5,299.0434

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

4.0 Operational Detail - Mobile

4.1 Mitigation Measures Mobile

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	151.9934	127.3990	1,253.8957	2.6502	360.8178	1.2802	362.0980	96.0774	1.1963	97.2737			270,858.5825	17.2992	12.5826	275,040.6699
Unmitigated	151.9934	127.3990	1,253.8957	2.6502	360.8178	1.2802	362.0980	96.0774	1.1963	97.2737			270,858.5825	17.2992	12.5826	275,040.6699

4.2 Trip Summary Information

Land Use	Average Daily Trip Rate			Unmitigated	Mitigated
	Weekday	Saturday	Sunday	Annual VMT	Annual VMT
City Park	89.70	69.00	251.85	202,773	202,773
General Office Building	73,186.36	1,502.80	5259.80	109,950,383	109,950,383
Apartments Mid Rise	5,032.00	1,942.50	3783.25	11,322,314	11,322,314
Single Family Housing	2,709.28	1,205.40	2453.85	6,307,368	6,307,368
Total	81,017.34	4,719.70	11,748.75	127,782,838	127,782,838

4.3 Trip Type Information

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
City Park	10.00	5.00	6.50	33.00	48.00	19.00	66	28	6
General Office Building	10.00	5.00	6.50	33.00	48.00	19.00	77	19	4
Apartments Mid Rise	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

Land Use	Miles			Trip %			Trip Purpose %		
	H-W or C-W	H-S or C-C	H-O or C-NW	H-W or C-W	H-S or C-C	H-O or C-NW	Primary	Diverted	Pass-by
Single Family Housing	10.00	5.00	6.50	46.50	12.50	41.00	86	11	3

4.4 Fleet Mix

Land Use	LDA	LDT1	LDT2	MDV	LHD1	LHD2	MHD	HHD	OBUS	UBUS	MCY	SBUS	MH
City Park	0.572323	0.055898	0.181183	0.117504	0.017913	0.005011	0.012759	0.009244	0.000656	0.000766	0.023903	0.000662	0.002180
General Office Building	0.572323	0.055898	0.181183	0.117504	0.017913	0.005011	0.012759	0.009244	0.000656	0.000766	0.023903	0.000662	0.002180
Apartments Mid Rise	0.572323	0.055898	0.181183	0.117504	0.017913	0.005011	0.012759	0.009244	0.000656	0.000766	0.023903	0.000662	0.002180
Single Family Housing	0.572323	0.055898	0.181183	0.117504	0.017913	0.005011	0.012759	0.009244	0.000656	0.000766	0.023903	0.000662	0.002180

5.0 Energy Detail

Historical Energy Use: N

5.1 Mitigation Measures Energy

Category	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
	lb/day										lb/day					
NaturalGas Mitigated	4.0767	36.8113	29.2994	0.2224		2.8166	2.8166		2.8166	2.8166			44,473.2607	0.8524	0.8153	44,737.5430
NaturalGas Unmitigated	4.0767	36.8113	29.2994	0.2224		2.8166	2.8166		2.8166	2.8166			44,473.2607	0.8524	0.8153	44,737.5430

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Unmitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	23863	0.2574	2.1991	0.9358	0.0140		0.1778	0.1778		0.1778	0.1778			2,807.4175	0.0538	0.0515	2,824.1006
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
General Office Building	335557	3.6188	32.8977	27.6341	0.1974		2.5002	2.5002		2.5002	2.5002			39,477.2603	0.7567	0.7238	39,711.8539
Single Family Housing	18603	0.2006	1.7144	0.7295	0.0109		0.1386	0.1386		0.1386	0.1386			2,188.5829	0.0420	0.0401	2,201.5886
Total		4.0767	36.8113	29.2994	0.2224		2.8166	2.8166		2.8166	2.8166			44,473.2607	0.8524	0.8153	44,737.5430

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

5.2 Energy by Land Use - NaturalGas

Mitigated

	NaturalGas Use	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Land Use	kBTU/yr	lb/day										lb/day					
Apartments Mid Rise	23.863	0.2574	2.1991	0.9358	0.0140		0.1778	0.1778		0.1778	0.1778			2,807.4175	0.0538	0.0515	2,824.1006
City Park	0	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
General Office Building	335.557	3.6188	32.8977	27.6341	0.1974		2.5002	2.5002		2.5002	2.5002			39,477.2603	0.7567	0.7238	39,711.8539
Single Family Housing	18.603	0.2006	1.7144	0.7295	0.0109		0.1386	0.1386		0.1386	0.1386			2,188.5829	0.0420	0.0401	2,201.5886
Total		4.0767	36.8113	29.2994	0.2224		2.8166	2.8166		2.8166	2.8166			44,473.2607	0.8524	0.8153	44,737.5430

6.0 Area Detail

6.1 Mitigation Measures Area

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
Category	lb/day										lb/day					
Mitigated	218.9825	1.1561	100.3262	5.3400e-003		0.5573	0.5573		0.5573	0.5573			181.7150	0.1757	0.0000	186.1069
Unmitigated	218.9825	1.1561	100.3262	5.3400e-003		0.5573	0.5573		0.5573	0.5573			181.7150	0.1757	0.0000	186.1069

6.2 Area by SubCategory

Unmitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	24.0262					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	191.9079					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Landscaping	3.0484	1.1561	100.3262	5.3400e-003		0.5573	0.5573		0.5573	0.5573			181.7150	0.1757		186.1069
Total	218.9825	1.1561	100.3262	5.3400e-003		0.5573	0.5573		0.5573	0.5573			181.7150	0.1757	0.0000	186.1069

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

6.2 Area by SubCategory

Mitigated

	ROG	NOx	CO	SO2	Fugitive PM10	Exhaust PM10	PM10 Total	Fugitive PM2.5	Exhaust PM2.5	PM2.5 Total	Bio- CO2	NBio- CO2	Total CO2	CH4	N2O	CO2e
SubCategory	lb/day										lb/day					
Architectural Coating	24.0262					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Consumer Products	191.9079					0.0000	0.0000		0.0000	0.0000			0.0000			0.0000
Hearth	0.0000	0.0000	0.0000	0.0000		0.0000	0.0000		0.0000	0.0000			0.0000	0.0000	0.0000	0.0000
Landscaping	3.0484	1.1561	100.3262	5.3400e-003		0.5573	0.5573		0.5573	0.5573			181.7150	0.1757		186.1069
Total	218.9825	1.1561	100.3262	5.3400e-003		0.5573	0.5573		0.5573	0.5573			181.7150	0.1757	0.0000	186.1069

7.0 Water Detail

7.1 Mitigation Measures Water

Elk Grove LEA Community Plan Construction + Operation Emissions - Sacramento County, Summer

EMFAC Off-Model Adjustment Factors for Gasoline Light Duty Vehicle to Account for the SAFE Vehicle Rule Not Applied

8.0 Waste Detail

8.1 Mitigation Measures Waste

9.0 Operational Offroad

Equipment Type	Number	Hours/Day	Days/Year	Horse Power	Load Factor	Fuel Type
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10.0 Stationary Equipment

Fire Pumps and Emergency Generators

Equipment Type	Number	Hours/Day	Hours/Year	Horse Power	Load Factor	Fuel Type
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Boilers

Equipment Type	Number	Heat Input/Day	Heat Input/Year	Boiler Rating	Fuel Type
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User Defined Equipment

Equipment Type	Number
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11.0 Vegetation

Appendix E

Cultural Resources Recorded Sites

Table 1 Previously Recorded Archaeological Sites

Resource Number	Resource Type
P-34-000007-H	isolate - rusty nail
P-34-000054/CA-SAC-000027	unknown
P-34-000095/CA-SAC-000068	habitation debris - mound
P-34-000127/CA-SAC-000100	unknown
P-34-000128/CA-SAC-000101	unknown
P-34-000145/CA-SAC-000118	habitation debris - midden
P-34-000146/CA-SAC-000119	habitation debris - mound
P-34-000147/CA-SAC-000120	burials - surface indications; habitation debris - mound
P-34-000148/CA-SAC-000121	burials - surface indications; habitation debris - mound
P-34-000162/CA-SAC-000135	lithic scatter - chert & obsidian; habitation debris - mound; other - clam shell; steatite pendant
P-34-000192/CA-SAC-000165	burials; habitation debris - midden
P-34-000238/CA-SAC-000211	burials
P-34-000647/CA-SAC-000523H	railroad grade
P-34-000696/CA-SAC-000541H	privies/dumps/trash scatters; water conveyance system; bedrock milling feature
P-34-000698/CA-SAC-000543H	railroad grade
P-34-000699/CA-SAC-000544H	road
P-34-000700/CA-SAC-000545H	road
P-34-000751/CA-SAC-000576H	foundations
P-34-000755/CA-SAC-000580H	foundations
P-34-000756/CA-SAC-000581H	foundations; habitation debris
P-34-000758	foundations
P-34-000759	bricks
P-34-000760/CA-SAC-000583H	foundations
P-34-000824/CA-SAC-000631H	foundations; privies/dumps/trash scatters
P-34-001095/CA-SAC-000750H	foundations
P-34-001103	pestle
P-34-001104	pestle
P-34-001105/CA-SAC-000754H	foundations
P-34-001191	amethyst bottle fragment
P-34-001192	glass insulator
P-34-001193	aqua glass fragment
P-34-001248/CA-SAC-000799H	foundations; privies/dumps/trash scatters; wells; cisterns; machinery
P-34-001249	foundations
P-34-001353	privies/dumps/trash scatters
P-34-001425/CA-SAC-000859H	trash scatter
P-34-001426/CA-SAC-000860H	privies/dumps/trash scatters
P-34-001968	foundations
P-34-002144/CA-SAC-001089H	well

Source: City of Elk Grove 2016.

Table 2 **Previously Recorded Historic-period Features**

Resource Name	Resource Location	Resource Type
Machado Dairy	6725 Bilby Rd.	Farm/ranch
P-34-000536	Elk Grove Blvd., Elk Grove	Water conveyance features
P-34-000538	9776 West Stockton Blvd., Elk Grove	Farm/ranch
P-34-000539	9698 Highway 99, Elk Grove	Farm/ranch
P-34-000540	9933 Highway 99, Elk Grove	Farm/ranch
P-34-000541	8533 Poppy Ridge Rd., Elk Grove	Single-family property
P-34-000542	8551 Poppy Ridge Rd., Elk Grove	Single-family property
P-34-000543	7710 Poppy Ridge Rd., Elk Grove	Farm/ranch
P-34-000544	8000 Poppy Ridge Rd., Elk Grove	Single-family property
P-34-000545	10321 Bruceville Rd., Elk Grove	Single-family property
P-34-000546	9225 Bruceville Rd., Elk Grove	Farm/ranch
Nunes Dairy/Johnson Ranch/P-34-000561/CA-SAC-000633H	9854 Bruceville Rd., Elk Grove	Farm/ranch
Nunes Dairy/P-34-000579/CA-SAC-000634H	9854 Bruceville Rd., Elk Grove	Farm/ranch
P-34-000631	9901 Bruceville Rd., Elk Grove	Ancillary building
George Werre Ranch/P-34-000680	9105 Bruceville Rd., Elk Grove	Farm/ranch
Park Meadows 1/P-34-000694/CA-SAC-000540H	W. Stockton Blvd., Elk Grove	Water conveyance features
Mello Dairy/P-34-000697/CA-SAC-000542H	Calvine Rd., Elk Grove	Farm/ranch
P-34-000701	8601 Bow Street, Elk Grove	Farm/ranch
Albert Leavitt House/P-34-000702	8555 East Stockton Rd., Elk Grove	Single-family property
P-34-000703	8610 Bow Street, Elk Grove	Farm/ranch
P-34-000710	7862 Elk Grove-Florin Rd., Elk Grove	Single-family property
Elliot Ranch/P-34-000761	Franklin Rd., Elk Grove	Farm/ranch
Nicholas Ranch Annex/P-34-000766/CA-SAC-000588H	3501 Dwight Rd., Elk Grove	Farm/ranch
Rushmore Residence/P-34-000825/CA-SAC-000632H	5021 Bilby Rd., Franklin	Single-family property
Knopfel Dairy/P-34-000826/CA-SAC-000635H	4831 Bilby Rd., Elk Grove	Farm/ranch
Stoecker House/P-34-000827/CA-SAC-000636H	5107 Bilby Rd., Elk Grove	Single-family property
P-34-000829/CA-SAC-000638H	9853 Franklin Blvd., Elk Grove	Single-family property
P-34-000830/CA-SAC-000639H	Franklin Blvd., Elk Grove	Single-family property
P-34-000831/CA-SAC-000640H	5700 Elk Grove Blvd., Elk Grove	Single-family property
Cow Palace Auction Yard/P-34-001089/CA-SAC-000749H	9720 Webb St., Elk Grove	Farm/ranch
Cow Palace Auction Pavilion/Theater/P-34-001090	9720 Webb St., Elk Grove	Farm/ranch
Cow Palace Covered Corral/P-34-001091	9720 Webb St., Elk Grove	Farm/ranch
Cow Palace Equipment Shed/P-34-001092	9720 Webb St., Elk Grove	Farm/ranch
P-34-001093	9517 Elk Grove Blvd., Elk Grove	Single-family property
P-34-001094	9431 Elk Grove Blvd., Elk Grove	Farm/ranch
P-34-001096	9400 Elk Grove Blvd., Elk Grove	Single-family property
P-34-001097	9727 Waterman Rd., Elk Grove	Single-family property
Hurley-Tracy Transmission Line/P-34-001102	Waterman Rd. and Sheldon Rd.	Transmission line
P-34-001113	10529 Sheldon Rd., Elk Grove	Single-family property
P-34-001175	3779 Poppy Ridge Rd., Elk Grove	Single-family property

Resource Name	Resource Location	Resource Type
P-34-001176/CA-SAC-000789H	8355 Poppy Ridge Rd., Elk Grove	Farm/ranch
P-34-001250	8890 White House Rd., Elk Grove	Commercial building
P-34-001251	8693 Sheldon Rd., Elk Grove	Single-family property
P-34-001252	8651 Sheldon Rd., Elk Grove	Single-family property
P-34-001253	8604 Sheldon Rd., Elk Grove	Single-family property
P-34-001254	8476 Sheldon Rd., Elk Grove	Single-family property

Source: City of Elk Grove 2016.

Table 3 Previously Evaluated Historic-period Features

Resource Name and Type	Resource Location	Historical Resource?
Western Pacific Railroad/P-34-000491/CA-SAC-000464H		No
P-34-000537/Single-family property	9769 Bruceville Rd., Elk Grove	No
Central California Traction Railroad/P-34-000606/CA-SAC-000506H		No
Guttridge Ranch/P-34-000692/CA-SAC-000538H	10653 East Stockton Blvd., Elk Grove	No
Olen Ranch/P-34-000707/CA-SAC-000549H	8860 Bruceville Rd., Elk Grove	No
Upton Ranch/Hrepich Dairy/P-34-000752/CA-SAC-000577H	9646 Stockton Blvd., Elk Grove	No
P-34-001409/Single-family property	8310 Sheldon Rd., Elk Grove	No
P-34-001411/Single-family property	8685 East Stockton Blvd., Elk Grove	No
P-34-001412/Single-family property	8691 East Stockton Blvd., Elk Grove	No
P-34-001414/Single-family property	8711 East Stockton Blvd., Elk Grove	No
P-34-001415/Single-family property	8627 Bow St., Elk Grove	No
P-34-001418/Single-family property	8717 E Stockton Blvd., Elk Grove	No
P-34-001688/Commercial building	9241-9251 Elk Grove Blvd., Elk Grove	No
EC-05-12	N/A	No
Concrete foundation	Bradshaw Rd., Sacramento	No
PA-99-44	Elk Grove Blvd., Elk Grove	No
Bridge No. 24-0155	Grant Line Rd., Elk Grove	No
Bloom House/Single-family property	Hood-Franklin Rd., Elk Grove	No
8159 Sheldon Rd./Single-family property	8159 Sheldon Rd., Elk Grove	No
8165 Sheldon Rd./Single-family property	8165 Sheldon Rd., Elk Grove	No
8169 Sheldon Rd./Single-family property	8169 Sheldon Rd., Elk Grove	No
8686 W Stockton Blvd./Single-family property	8686 W Stockton Blvd., Elk Grove	No
8706 W Stockton Blvd./Single-family property	8706 W Stockton Blvd., Elk Grove	No
8940 Eva Ave./Single-family property	8940 Eva Ave., Elk Grove	No
8992 Elk Grove Blvd./Single-family property	8992 Elk Grove Blvd., Elk Grove	No
9020 Elk Grove Blvd./Single-family property	9020 Elk Grove Blvd., Elk Grove	No
9036 Elk Grove Blvd./Commercial building	9036 Elk Grove Blvd., Elk Grove	No
9065 Elk Grove Blvd.	9065 Elk Grove Blvd., Elk Grove	No
9081 Elk Grove Blvd./Commercial building	9081 Elk Grove Blvd., Elk Grove	No
9089 Elk Grove Blvd./Commercial building	9089 Elk Grove Blvd., Elk Grove	No
9093 Grove St./Single-family property	9093 Grove St., Elk Grove	No

Resource Name and Type	Resource Location	Historical Resource?
9096 Locust St./Single-family property	9096 Locust St., Elk Grove	No
Foulks Park	9433 Trenholm Dr., Elk Grove	No
Elk Grove Water Works Tower/P-34-004319	9592 School Rd., Elk Grove	No
Frank and Henry Luttig Park	97110 Toscano Dr., Elk Grove	No
9756 Gerber Rd./Single-family property	9756 Gerber Rd., Elk Grove	No
9760 Gerber Rd./Single-family property	9760 Gerber Rd., Elk Grove	No
9800 Gerber Rd./Single-family property	9800 Gerber Rd., Sacramento	No
9820 Gerber Rd./Single-family property	9820 Gerber Rd., Sacramento	No
Laguna Creek Bridge	8195 Bradshaw Rd., Elk Grove	No
Structure 13	8195 Bradshaw Rd., Elk Grove	No
8840 E. Stockton Blvd./Religious building	8840 E. Stockton Blvd., Elk Grove	No
9062 Elk Grove Blvd.	9062 Elk Grove Blvd., Elk Grove	No
Batey Chevrolet Showroom site	9101 Elk Grove Blvd., Elk Grove	No
Site of Latta/Evans Residence	9108 Elk Grove Blvd., Elk Grove	No
Spitzer Residence/Single-family property	9704 Kent St., Elk Grove	No
Water Works Pump House/P-34-000649/CA-SAC-000525H	9080 Locust St. (alley), Elk Grove	No
Site of Everson Residence/Commercial building	9044 Elk Grove Blvd., Elk Grove	No
9091 Elk Grove Blvd./Commercial, residential building	9091 Elk Grove Blvd., Elk Grove	No
Lenard Residence	9541 2nd Ave., Elk Grove	Yes
Agnes Baker Residence	9551 2nd Ave, Elk Grove.	Yes
Mr. Stevens Duplex	9558 & 9562 2nd Ave., Elk Grove	Yes
Cables Residence	9563 2nd Ave., Elk Grove	Yes
Stevens Residence	9569 2nd Ave., Elk Grove	Yes
Backer family Residence	9673 2nd Ave., Elk Grove	Yes
Fred Vogt Residence	9578 2nd Ave, Elk Grove	Yes
Wilson Lilloco Residence	9583 2nd Ave, Elk Grove	Yes
Elk Grove Library	9590 2nd Ave, Elk Grove	Yes
Kunsting Residence	4625 Bilby Rd., Elk Grove	Yes
Elliot Ranch Foreman Residence	4629 Bilby Rd., Elk Grove	Yes
Bader Family Residence	9870 Bond Rd., Elk Grove	Yes
P-34-001413/Single-family property	8701 E. Stockton Blvd., Elk Grove	Yes
Elk Grove House (reconstructed)/Educational building	9941 E. Stockton Blvd., Elk Grove	Yes
Rhoads School	9941 E. Stockton Blvd., Elk Grove	Yes
Reese School	9941 E. Stockton Blvd., Elk Grove	Yes
San Joaquin Court & Jail	9941 E. Stockton Blvd., Elk Grove	Yes
Stohlgren/Olson Ranch	9040 Elk Grove-Florin Rd., Elk Grove	Yes
Markofer Residence	10005 Elk Grove-Florin Rd., Elk Grove	Yes
Elk Grove Grammar School	8820 Elk Grove Blvd., Elk Grove	Yes
John Keema Residence	8933 Elk Grove Blvd., Elk Grove	Yes
Clem Residence	8937 Elk Grove Blvd., Elk Grove	Yes
Bartholomew House	8941 Elk Grove Blvd., Elk Grove	Yes

Resource Name and Type	Resource Location	Historical Resource?
Texaco Service Station/P-34-001682	8950 Elk Grove Blvd., Elk Grove	Yes
Sacramento County Municipal Court/P-34-001683	8970-8978 Elk Grove Blvd., Elk Grove	Yes
Earl Tribble Residence	9141 Elk Grove Blvd., Elk Grove	Yes
Site of Dr. Bradford's Office	9148-52 Elk Grove Blvd., Elk Grove	Yes
9148 Elk Grove Blvd./Single-family property	9148 Elk Grove Blvd., Elk Grove	Yes
9152 Elk Grove Blvd./Single-family property	9152 Elk Grove Blvd., Elk Grove	Yes
Foulks/Ronk Residence/P-34-001685	9156 Elk Grove Blvd., Elk Grove	Yes
Percy Webb Residence/P-34-001686	9206 Elk Grove Blvd., Elk Grove	Yes
Blacksmith Shop/P-34-001686	9208 Elk Grove Blvd., Elk Grove	Yes
Gage Residence/P-34-001687	9239 Elk Grove Blvd., Elk Grove	Yes
Reginald Rolfe Residence	9248 Elk Grove Blvd., Elk Grove	Yes
Hunt family residence	9815 Emerald Park Dr., Elk Grove	Yes
Pia Residence	9000 Grove St., Elk Grove	Yes
9097 Grove St./Single-family property	9097 Grove St., Elk Grove	Yes
Elam Residence	9117 Grove St., Elk Grove	Yes
Hoffnungfeld Kongregational Church	9151 Grove St., Elk Grove	Yes
Eisenbiesz Residence	9184 Grove St., Elk Grove	Yes
Glen Womack Residence	9188 Grove St., Elk Grove	Yes
McKinney Residence	9612 Kent St., Elk Grove	Yes
Roden Residence	9625 Kent St., Elk Grove	Yes
Homer Derr Residence	9640 Kent St., Elk Grove	Yes
Everson / Heart Residence	9643 Kent St., Elk Grove	Yes
Alturcher Residence	9651 Kent St., Elk Grove	Yes
Derr Residence	9654 Kent St., Elk Grove	Yes
Elsie Latta Residence	9665 Kent St., Elk Grove	Yes
Crump Residence	9674 Kent St., Elk Grove	Yes
Martin & Lucinda Derr	9688 Kent St., Elk Grove	Yes
Tessen Residence	9692 Kent St., Elk Grove	Yes
Hironymous Residence	9695 Kent St., Elk Grove	Yes
Clyde Colton Residence	9176 Lark St., Elk Grove	Yes
Christensen Residence	9191 Lark St., Elk Grove	Yes
Vernon Coons Residence	9194 Lark St., Elk Grove	Yes
Derr lumber buildings	9055 Locust St., Elk Grove	Yes
First Baptist Church	9131 Locust St., Elk Grove	Yes
William Ehrhardt House/Jungkeit Dairy/P-34-000828/CA-SAC-000637H	4800 Percheron Dr., Elk Grove	Yes
Ehrhardt Shed	Dartmoor Way, Elk Grove	Yes
Ehrhardt Garage	Dartmoor Way, Elk Grove	Yes
Geobel Residence	9545 School St., Elk Grove	Yes
Owen Residence	9548 School St., Elk Grove	Yes
Westlake House	9585 School St., Elk Grove	Yes
Aldritch House	9589 School St., Elk Grove	Yes

Resource Name and Type	Resource Location	Historical Resource?
Williamson Ranch Packaging Shed	8830 Sharkey Ave., Elk Grove	Yes
P-34-001410/Single-family property	8386 Sheldon Rd., Elk Grove	Yes
Coon's Residence	8936 Sierra St., Elk Grove	Yes
Buchanan Residence	8966 Sierra St., Elk Grove	Yes
Gage Ranch Residence	5623 Tegan Rd., Elk Grove	Yes
Lent Ranch/P-34-000523/CA-SAC-000688	10551 W. Stockton Blvd., Elk Grove	Yes
Wackman Ranch/P-34-000693/CA-SAC-000539H	10686 W. Stockton Blvd., Elk Grove	Yes
Elk Grove Grammar School	9392 W. Stockton Blvd., Elk Grove	Yes
Waterman Residence	10130 Waterman Rd., Elk Grove	Yes
Elk Grove Cemetery	8540 Elk Grove Blvd., Elk Grove	Yes
Kirby Ranch/Capital Nursery	8423 Elk Grove Blvd., Elk Grove	Yes
Dunbar Residence	9031 Elk Grove Blvd., Elk Grove	Yes
Ehrhardt / Rhoades Garage	9033 Elk Grove Blvd., Elk Grove	Yes
Fire Shed	9040 Elk Grove Blvd. (alley), Elk Grove	Yes
Warehouse (IOOF Hall)	9045 Elk Grove Blvd., Elk Grove	Yes
Elk Grove Park	9950 Elk Grove-Florin Rd., Elk Grove	Yes
Gage Mansion	9665 Gage St., Elk Grove	Yes
Elk Grove Winery Storage	9678 Railroad Ave., Elk Grove	Yes
EGVA Winery buildings	9723 Railroad Ave., Elk Grove	Yes
Benjamin Hoover Warehouse	9699 Railroad Ave., Elk Grove	Yes
Winemaker Historic District	9676, 9699, 9723 Railroad Ave., Elk Grove	Yes
Southern Pacific Railroad/P-34-000507/CA-SAC-000480H		Yes
Grave of Alexander Hamilton Willard/P-34-002401	Hood Franklin Rd., Elk Grove	No
Joseph Hampton Kerr Homesite	Elk Grove Blvd., Elk Grove	No
Elk Grove Unified School District; Elk Grove Grammar School	Elk Grove Blvd., Elk Grove	No
Elitha Cumi Donner Wilder Grave/P-34-003896	Elk Grove Blvd., Elk Grove	No
N/A	Elk Grove Blvd., Elk Grove	No
Murphy's Corral Marker/ Murphy's Ranch/P-34-003892	Grant Line Rd., Elk Grove	No
Elk Grove Historic District		Yes
Elk Grove Community Methodist Church	8986 Elk Grove Blvd., Elk Grove	Yes
Hogaboom Residence	8995 Grove St., Elk Grove	Yes
Taverner Residence	8998 Elk Grove Blvd., Elk Grove	Yes
Dr. Hugh Beattie Residence	9008 Elk Grove Blvd., Elk Grove	Yes
Wakeman Residence	9024 Elk Grove Blvd., Elk Grove	Yes
Ehrhardt/Rhoades Building	9027 Elk Grove Blvd., Elk Grove	Yes
Hayes Residence	9030 Elk Grove Blvd., Elk Grove	Yes
Hayes Meat Market	9032 Elk Grove Blvd., Elk Grove	Yes
Elk Grove Hotel	9039 Elk Grove Blvd., Elk Grove	Yes
Judge Everson Residence	9040 Elk Grove Blvd., Elk Grove	Yes
Elk Grove IOOF Hall/ Odd Fellows Building	9045 Elk Grove Blvd., Elk Grove	Yes
Toronto Hotel Site; Foulks/Graham Building	9048 Elk Grove Blvd., Elk Grove	Yes

Resource Name and Type	Resource Location	Historical Resource?
9051 Grove St./Single-family property	9051 Grove St., Elk Grove	Yes
Haynes Residence	9060 Grove St., Elk Grove	Yes
Elk Grove Telephone Building	9070 Elk Grove Blvd., Elk Grove	Yes
Elk Grove Bank	9070 Elk Grove Blvd., Elk Grove	Yes
Old Post Office	9072 Elk Grove Blvd., Elk Grove	Yes
Drugstore	9074 Elk Grove Blvd., Elk Grove	Yes
Masonic Lodge Building	9075 Elk Grove Blvd., Elk Grove	Yes
Poston Building Group	9080 Elk Grove Blvd., Elk Grove	Yes
Pierce / Allen Residence	9081 Grove St., Elk Grove	Yes
General Store / Hasman Building	9085 Elk Grove Blvd., Elk Grove	Yes
Markofer Residence	9087 Grove St., Elk Grove	Yes
Warren Shoes	9090 Elk Grove Blvd., Elk Grove	Yes
The Elm/ Commercial building	9093 Elk Grove Blvd., Elk Grove	Yes
Stewart Residence	9094 Elk Grove Blvd., Elk Grove	Yes
Batey Garage	9095 Elk Grove Blvd., Elk Grove	Yes
H.L. Stich Residence	9096 Elk Grove Blvd., Elk Grove	Yes
Batey Chevrolet Showroom	9097 Elk Grove Blvd., Elk Grove	Yes
9101 Grove St./Single-family property	9101 Grove St., Elk Grove	Yes
9109 Grove St./Single-family property	9109 Grove St., Elk Grove	Yes
Brainard/Markofer Residence	9112 Elk Grove Blvd., Elk Grove	Yes
Brainard/Markofer Coach House	9112 Elk Grove Blvd., Elk Grove	Yes
George Markofer Residence	9116 Elk Grove Blvd., Elk Grove	Yes
Elk Grove Methodist Church Parsonage	9120 Elk Grove Blvd., Elk Grove	Yes
First California County Free Library Branch Site	9125 Elk Grove Blvd., Elk Grove	Yes
Owen Residence	9548 School St., Elk Grove	Yes
Wildanger/Frame Residence	9557 School St., Elk Grove	Yes
Upton Residence	9560 School St., Elk Grove	Yes
Poston Residence	9572 School St., Elk Grove	Yes
Ira Jones Residence	9588 School St., Elk Grove	Yes
Stevens/Polhemius Residence	9616 Walnut St., Elk Grove	Yes
McDonald Residence	9620 Gage St., Elk Grove	Yes
Springstead Residence	9621 Walnut St., Elk Grove	Yes
Welch/Coon Residence	9624 Walnut St., Elk Grove	Yes
Lilico Residence	9625 Gage St., Elk Grove	Yes

Source: City of Elk Grove 2016.

Appendix F

Noise Modeling Data



Day Cable Crossing Equipment (no helicopter)

Location	Distance to Nearest Receptor in feet	Combined Predicted Noise Level (L _{eq} dBA)	Equipment	Reference Emission	
				Noise Levels (L _{max}) at 50 feet ¹	Usage Factor ¹
Threshold	967	55.0	Excavator	85	0.4
Residence 1	600	58.7	Dozer	85	0.4
Residence 2	50	87.2	Dump Truck	84	0.4
			Front End Loader	80	0.4
			Grader	85	0.4

Ground Type	soft
Source Height	8
Receiver Height	5
Ground Factor ²	0.63

Predicted Noise Level ³	L _{eq} dBA at 50 feet ³
Excavator	81.0
Dozer	81.0
Dump Truck	80.0
Front End Loader	76.0
Grader	81.0

Combined Predicted Noise Level (L _{eq} dBA at 50 feet)
87.2

Sources:

¹ Obtained from the FHWA Roadway Construction Noise Model, January 2006. Table 1.

² Based on Figure 6-5 from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 6-23).

³ Based on the following from the Federal Transit Noise and Vibration Impact Assessment, 2006 (pg 12-3).

$$L_{eq}(\text{equip}) = E.L. + 10 \cdot \log(\text{U.F.}) - 20 \cdot \log(D/50) - 10 \cdot G \cdot \log(D/50)$$

Where: E.L. = Emission Level;

U.F. = Usage Factor;

G = Constant that accounts for topography and ground effects (FTA 2006: pg 6-23); and

D = Distance from source to receiver.

Traffic Noise Spreadsheet Calculator



Project:			Input									Output					
Noise Level Descriptor: Ldn Site Conditions: Hard Traffic Input: ADT Traffic K-Factor:			Distance to Directional Centerline, (feet) ₄		Traffic Distribution Characteristics						Ldn, (dBA) _{5,6,7}		Distance to Contour, (feet) ₃				
Number	Name	Segment Description and Location From To	ADT	Speed (mph)	Near	Far	% Auto	% Medium	% Heavy	% Day	% Eve	% Night	75 dBA	70 dBA	65 dBA	60 dBA	
Existing Conditions																	
1	Laguna Boulevard	From Harbour Point Drive to Franklin Boulevard	32,200	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	72.0	25	78	248	783
2	Laguna Boulevard	From Franklin Boulevard to Bruceville Road	34,000	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	72.2	26	83	262	827
3	Laguna Boulevard	From Bruceville Road to Big Horn Boulevard	38,900	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	72.8	30	95	299	946
4	Laguna Boulevard	From Big Horn Boulevard to Laguna Springs Drive	53,200	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	74.1	41	129	409	1294
5	Bond Road	From E. Stockton Boulevard to Emerald Crest Drive	35,800	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	72.4	28	87	275	871
6	Bond Road	From Elk Grove Florin Road to Waterman Road	25,500	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	70.9	20	62	196	620
7	Bond Road	From Waterman Road to Bradshaw Road	12,600	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.9	10	31	97	307
8	Bond Road	From Bradshaw Road to Grant Line Road	5,200	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	64.0	4	13	40	127
9	Elk Grove Boulevard	From Harbour Point Drive to Franklin Boulevard	33,500	50	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	73.5	35	111	351	1110
10	Elk Grove Boulevard	From Franklin Boulevard to Bruceville Road	35,200	50	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	73.7	37	117	369	1167
11	Elk Grove Boulevard	From Bruceville Road to Big Horn Boulevard	39,600	50	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	74.2	42	131	415	1312
12	Elk Grove Boulevard	From Laguna Springs Drive to SR 99	47,400	50	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	75.0	50	157	497	1571
13	Elk Grove Boulevard	From E. Stockton Boulevard to Elk Grove Florin Road	31,500	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	68.8	12	38	120	381
14	Elk Grove Boulevard	From Elk Grove Florin Road to Waterman Road	17,700	25	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	63.0	3	10	32	100
15	Elk Grove Boulevard	From Bradshaw Road to Grant Line Road	3,400	40	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	60.7	2	6	19	59
16	Bilby Road	From Willard Parkway to Bruceville Road	6,900	55	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.8	10	30	96	304
17	Kammerer Road	From Bruceville Road to Promenade Parkway	8,700	55	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	68.8	12	38	121	383
18	Kammerer Road	From Promenade Parkway to SR 99	18,900	55	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	72.2	26	83	263	832
19	Grant Line Road	From E. Stockton Boulevard to Waterman Road	28,700	55	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	74.0	40	126	400	1264
20	Sheldon Road	From Lewis Stein Road to SR 99	38,500	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	72.7	30	94	296	937
21	Sheldon Road	From Elk Grove Florin Road to Waterman Road	14,800	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	68.6	11	36	114	360
22	Franklin Boulevard	From Big Horn Boulevard to Laguna Boulevard	24,900	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	70.8	19	61	192	606
23	Franklin Boulevard	From Laguna Boulevard to Elk Grove Boulevard	20,900	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	70.1	16	51	161	508
24	Franklin Boulevard	From Elk Grove Boulevard to Whitelock Parkway	22,100	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	70.3	17	54	170	538
25	Bruceville Road	From Big Horn Boulevard to Laguna Boulevard	31,300	40	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	70.4	17	54	172	544
26	Bruceville Road	From Laguna Boulevard to Elk Grove Boulevard	27,100	40	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	69.7	15	47	149	471
27	Bruceville Road	From Elk Grove Boulevard to Whitelock Parkway	26,600	40	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	69.7	15	46	146	462
28	Bruceville Road	From Whitelock Parkway to Bilby Road	8,600	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	66.2	7	21	66	209
29	Big Horn Boulevard	From Lewis Stein Road to Laguna Boulevard	15,900	40	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.4	9	28	87	276
30	Big Horn Boulevard	From Laguna Boulevard to Longleaf Drive	22,700	40	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	69.0	12	39	125	395
31	Big Horn Boulevard	From Elk Grove Boulevard to Civic Center Drive	16,300	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	69.0	13	40	125	397
32	Big Horn Boulevard	From Lotz Parkway to Whitelock Parkway	11,300	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.4	9	27	87	275
33	Power Inn Road	From Auburly Drive to Sheldon Road	9,300	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	63.5	4	11	36	112
34	Elk Grove Florin Road	From Calvine Road to Sheldon Road	29,800	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	71.6	23	73	229	725
35	Elk Grove Florin Road	From Sheldon Road to Bond Road	24,600	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	70.8	19	60	189	599
36	Elk Grove Florin Road	From Bond Road to Elk Grove Boulevard	18,400	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	66.5	7	22	70	222
37	Elk Grove Florin Road	From Valley Oak Lane to E. Stockton Boulevard	6,200	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	61.8	2	7	24	75
38	Waterman Road	From Sheldon Road to Bond Road	13,000	55	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	70.6	18	57	181	572
39	Waterman Road	From Bond Road to Elk Grove Boulevard	12,800	55	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	70.5	18	56	178	564
40	Waterman Road	From Mosher Road to Grant Line Road	7,700	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	65.7	6	19	59	187
41	Bradshaw Road	From Sheldon Road to Bond Road	16,500	55	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	71.6	23	73	230	727
42	Bradshaw Road	From Elk Grove Boulevard to Grant Line Road	8,400	55	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	68.7	12	37	117	370
43	Harbour Point Drive	From Laguna Boulevard to Babson Drive	13,300	40	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	66.6	7	23	73	231
44	Willard Parkway	From Whitelock Parkway to Blossom Ridge Drive	8,100	50	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.3	8	27	85	268
45	Willard Parkway	From Blossom Ridge Drive to Bilby Road	7,200	50	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	66.8	8	24	75	239

46	Bilby Road	From Franklin Boulevard to Willard Parkway	7,300	30	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	60.8	2	6	19	60
47	Civic Center Drive	From Bruceville Road to Wymark Drive	5,400	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	61.2	2	7	21	65
48	Civic Center Drive	From Wymark Drive to Big Horn Boulevard	6,200	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	61.8	2	7	24	75
49	Civic Center Drive	From Big Horn Boulevard to Laguna Springs Drive	3,000	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	58.6	1	4	11	36
50	Lotz Parkway	From Big Horn Boulevard to Laguna Springs Drive	5,700	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	61.4	2	7	22	69
51	Lotz Parkway	From Laguna Springs Drive to Whitelock Parkway	4,500	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	60.4	2	5	17	54
52	Whitelock Parkway	From Franklin Boulevard to Bruceville Road	15,000	40	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.2	8	26	82	261
53	Whitelock Parkway	From Bruceville Road to Big Horn Boulevard	13,600	40	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	66.7	7	24	75	236
54	Whitelock Parkway	From Big Horn Boulevard to Lotz Parkway	6,100	40	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	63.3	3	11	34	106
55	W. Stockton Bouelvard	From Lewis Stein Road to Michener Way	5,600	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	61.3	2	7	21	68
56	W. Stockton Bouelvard	From Dunisch Road to Laguna Boulevard	5,600	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	61.3	2	7	21	68
57	W. Stockton Bouelvard	From Whitelock Parkway to Kyler Road	8,400	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	63.1	3	10	32	102
58	Poppy Ridge Road	From Bruceville Road to Cosby Way	1,700	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	56.1	1	2	6	21
59	Promenade Parkway	From Kyler Road to Kammerer Road	9,300	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	66.6	7	23	72	226
60	Laguna Springs Boulevard	From Laguna Boulevard to Longleaf Drive	19,500	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	66.7	7	24	75	236
61	Laguna Springs Boulevard	From Longleaf Drive to Elk Grove Boulevard	8,900	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	63.3	3	11	34	108
62	Laguna Springs Boulevard	From Elk Grove Boulevard to Civic Center Drive	8,000	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	62.9	3	10	31	97
63	Auto Center Drive	From Elk Grove Boulevard to W. Stockton Bouelvard	13,900	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	65.3	5	17	53	168
64	Lewis Stein Road	From Sheldon Road to W. Stockton Bouelvard	15,000	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	65.6	6	18	57	181
65	E. Stockton Boulevard	From Marketplace 99 South to Bond Road	12,200	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	64.7	5	15	47	147
66	E. Stockton Boulevard	From Bond Road to Banff Vista Drive	8,900	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	63.3	3	11	34	108
67	E. Stockton Boulevard	From Elk Grove Boulevard to SR 99 NB Ramps	26,700	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	68.1	10	32	102	323
68	E. Stockton Boulevard	From Elk Grove Florin Road to Grant Line Road	7,700	40	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	64.3	4	13	42	134
69	Emerald Vist Drive	From E. Stockton Bouelvard to Elk Grove Boulevard	10,400	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	64.0	4	13	40	126
70	Mosher Road	From Waterman Road to Grant Line Road	1,700	50	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	60.5	2	6	18	56
71	Krammerer Road Extension	From Willard Parkway to Bruceville Road	-		50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%					

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

Traffic Noise Spreadsheet Calculator



Project:			Input										Output				
Noise Level Descriptor: Ldn Site Conditions: Hard Traffic Input: ADT Traffic K-Factor:			Distance to Directional Centerline, (feet) ₄		Traffic Distribution Characteristics						Ldn, (dBA) _{5,6,7}		Distance to Contour, (feet) ₃				
Number	Name	Segment Description and Location From To	ADT	Speed (mph)	Near	Far	% Auto	% Medium	% Heavy	% Day	% Eve	% Night	75 dBA	70 dBA	65 dBA	60 dBA	
Existing Conditions																	
1	Laguna Boulevard	From Harbour Point Drive to Franklin Boulevard	40,200	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	72.9	31	98	309	978
2	Laguna Boulevard	From Franklin Boulevard to Bruceville Road	37,600	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	72.6	29	91	289	915
3	Laguna Boulevard	From Bruceville Road to Big Horn Boulevard	43,100	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	73.2	33	105	332	1049
4	Laguna Boulevard	From Big Horn Boulevard to Laguna Springs Drive	56,200	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	74.4	43	137	432	1367
5	Bond Road	From E. Stockton Boulevard to Emerald Crest Drive	40,700	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	73.0	31	99	313	990
6	Bond Road	From Elk Grove Florin Road to Waterman Road	30,000	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	71.6	23	73	231	730
7	Bond Road	From Waterman Road to Bradshaw Road	17,000	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	69.2	13	41	131	414
8	Bond Road	From Bradshaw Road to Grant Line Road	9,000	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	66.4	7	22	69	219
9	Elk Grove Boulevard	From Harbour Point Drive to Franklin Boulevard	40,500	50	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	74.3	42	134	424	1342
10	Elk Grove Boulevard	From Franklin Boulevard to Bruceville Road	40,000	50	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	74.2	42	133	419	1326
11	Elk Grove Boulevard	From Bruceville Road to Big Horn Boulevard	42,800	50	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	74.5	45	142	449	1418
12	Elk Grove Boulevard	From Laguna Springs Drive to SR 99	53,800	50	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	75.5	56	178	564	1783
13	Elk Grove Boulevard	From E. Stockton Boulevard to Elk Grove Florin Road	38,300	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	69.7	15	46	146	463
14	Elk Grove Boulevard	From Elk Grove Florin Road to Waterman Road	21,300	25	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	63.8	4	12	38	120
15	Elk Grove Boulevard	From Bradshaw Road to Grant Line Road	15,200	40	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.2	8	26	84	264
16	Bilby Road	From Willard Parkway to Bruceville Road	2,100	55	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	62.7	3	9	29	92
17	Kammerer Road	From Bruceville Road to Promenade Parkway	54,500	55	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	76.8	76	240	759	2400
18	Kammerer Road	From Promenade Parkway to SR 99	88,100	55	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	78.9	123	388	1227	3880
19	Grant Line Road	From E. Stockton Boulevard to Waterman Road	89,300	55	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	79.0	124	393	1244	3933
20	Sheldon Road	From Lewis Stein Road to SR 99	48,400	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	73.7	37	118	372	1178
21	Sheldon Road	From Elk Grove Florin Road to Waterman Road	16,400	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	69.0	13	40	126	399
22	Franklin Boulevard	From Big Horn Boulevard to Laguna Boulevard	29,300	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	71.5	23	71	225	713
23	Franklin Boulevard	From Laguna Boulevard to Elk Grove Boulevard	25,800	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	71.0	20	63	199	628
24	Franklin Boulevard	From Elk Grove Boulevard to Whitelock Parkway	31,500	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	71.9	24	77	242	766
25	Bruceville Road	From Big Horn Boulevard to Laguna Boulevard	50,000	40	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	72.4	27	87	275	869
26	Bruceville Road	From Laguna Boulevard to Elk Grove Boulevard	45,600	40	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	72.0	25	79	251	793
27	Bruceville Road	From Elk Grove Boulevard to Whitelock Parkway	39,800	40	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	71.4	22	69	219	692
28	Bruceville Road	From Whitelock Parkway to Bilby Road	29,300	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	71.5	23	71	225	713
29	Big Horn Boulevard	From Lewis Stein Road to Laguna Boulevard	25,100	40	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	69.4	14	44	138	436
30	Big Horn Boulevard	From Laguna Boulevard to Longleaf Drive	33,100	40	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	70.6	18	58	182	575
31	Big Horn Boulevard	From Elk Grove Boulevard to Civic Center Drive	33,700	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	72.1	26	82	259	820
32	Big Horn Boulevard	From Lotz Parkway to Whitelock Parkway	27,000	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	71.2	21	66	208	657
33	Power Inn Road	From Auburly Drive to Sheldon Road	11,600	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	64.5	4	14	44	140
34	Elk Grove Florin Road	From Calvine Road to Sheldon Road	47,400	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	73.6	36	115	365	1153
35	Elk Grove Florin Road	From Sheldon Road to Bond Road	36,200	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	72.5	28	88	279	881
36	Elk Grove Florin Road	From Bond Road to Elk Grove Boulevard	25,600	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.9	10	31	98	309
37	Elk Grove Florin Road	From Valley Oak Lane to E. Stockton Boulevard	10,700	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	64.1	4	13	41	129
38	Waterman Road	From Sheldon Road to Bond Road	18,300	55	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	72.1	25	81	255	806
39	Waterman Road	From Bond Road to Elk Grove Boulevard	20,900	55	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	72.7	29	92	291	920
40	Waterman Road	From Mosher Road to Grant Line Road	19,900	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	69.9	15	48	153	484
41	Bradshaw Road	From Sheldon Road to Bond Road	28,400	55	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	74.0	40	125	396	1251
42	Bradshaw Road	From Elk Grove Boulevard to Grant Line Road	23,700	55	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	73.2	33	104	330	1044
43	Harbour Point Drive	From Laguna Boulevard to Babson Drive	15,300	40	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.3	8	27	84	266
44	Willard Parkway	From Whitelock Parkway to Blossom Ridge Drive	19,400	50	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	71.1	20	64	203	643
46	Willard Parkway	From Blossom Ridge Drive to Bilby Road	16,000	50	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	70.3	17	53	168	530

47	Bilby Road	From Franklin Boulevard to Willard Parkway	2,500	30	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	56.1	1	2	7	21
48	Civic Center Drive	From Bruceville Road to Wymark Drive	7,500	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	62.6	3	9	29	91
49	Civic Center Drive	From Wymark Drive to Big Horn Boulevard	9,300	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	63.5	4	11	36	112
50	Civic Center Drive	From Big Horn Boulevard to Laguna Springs Drive	6,000	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	61.6	2	7	23	73
51	Lotz Parkway	From Big Horn Boulevard to Laguna Springs Drive	7,900	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	62.8	3	10	30	95
52	Lotz Parkway	From Laguna Springs Drive to Whitelock Parkway	13,600	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	65.2	5	16	52	164
53	Whitelock Parkway	From Franklin Boulevard to Bruceville Road	16,900	40	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.7	9	29	93	294
54	Whitelock Parkway	From Bruceville Road to Big Horn Boulevard	22,000	40	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	68.8	12	38	121	382
55	Whitelock Parkway	From Big Horn Boulevard to Lotz Parkway	27,400	40	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	69.8	15	48	151	476
56	W. Stockton Boulevard	From Lewis Stein Road to Michener Way	6,100	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	61.7	2	7	23	74
57	W. Stockton Boulevard	From Dunisch Road to Laguna Boulevard	6,600	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	62.0	3	8	25	80
58	W. Stockton Boulevard	From Whitelock Parkway to Kyler Road	15,400	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	65.7	6	19	59	186
59	Poppy Ridge Road	From Bruceville Road to Cosby Way	3,700	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	59.5	1	4	14	45
60	Promenade Parkway	From Kyler Road to Kammerer Road	16,300	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	69.0	13	40	125	397
61	Laguna Springs Boulevard	From Laguna Boulevard to Longleaf Drive	23,900	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.6	9	29	91	289
62	Laguna Springs Boulevard	From Longleaf Drive to Elk Grove Boulevard	12,800	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	64.9	5	15	49	155
63	Laguna Springs Boulevard	From Elk Grove Boulevard to Civic Center Drive	23,300	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.5	9	28	89	282
64	Auto Center Drive	From Elk Grove Boulevard to W. Stockton Boulevard	14,600	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	65.5	6	18	56	176
65	Lewis Stein Road	From Sheldon Road to W. Stockton Boulevard	15,000	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	65.6	6	18	57	181
66	E. Stockton Boulevard	From Marketplace 99 South to Bond Road	14,700	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	65.5	6	18	56	178
67	E. Stockton Boulevard	From Bond Road to Banff Vista Drive	13,300	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	65.1	5	16	51	161
68	E. Stockton Boulevard	From Elk Grove Boulevard to SR 99 NB Ramps	31,200	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	68.8	12	38	119	377
69	E. Stockton Boulevard	From Elk Grove Florin Road to Grant Line Road	15,200	40	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	67.2	8	26	84	264
70	Emerald Vist Drive	From E. Stockton Boulevard to Elk Grove Boulevard	16,800	35	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	66.1	6	20	64	203
71	Mosher Road	From Waterman Road to Grant Line Road	4,000	50	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	64.2	4	13	42	133
72	Krammerer Road Extension	From Willard Parkway to Bruceville Road	32,800	45	50	50	97.0%	2.0%	1.0%	80.0%	15.0%	5.0%	72.0	25	80	252	798

*All modeling assumes average pavement, level roadways (less than 1.5% grade), constant traffic flow and does not account for shielding of any type or finite roadway adjustments. All levels are reported as A-weighted noise levels.

#	Road	Segment	In GP? (1=yes)	Existing 2019
1	Auto Center Drive	From Elk Grove Boulevard to W. Stockton Boulevard		65.3
2	Big Horn Boulevard	From Lewis Stein Road to Laguna Boulevard		67.4
3	Big Horn Boulevard	From Laguna Boulevard to Longleaf Drive		69.0
4	Big Horn Boulevard	From Elk Grove Boulevard to Civic Center Drive		69.0
5	Big Horn Boulevard	From Lotz Parkway to Whitelock Parkway*	1	67.4
6	Bilby Road	From Willard Parkway to Bruceville Road*	1	67.8
7	Bilby Road	From Franklin Boulevard to Willard Parkway*	1	60.8
8	Bond Road	From E. Stockton Boulevard to Emerald Crest Drive		72.4
9	Bond Road	From Elk Grove Florin Road to Waterman Road*	1	70.9
10	Bond Road	From Waterman Road to Bradshaw Road*	1	67.9
11	Bond Road	From Bradshaw Road to Grant Line Road		64.0
12	Bradshaw Road	From Sheldon Road to Bond Road*	1	71.6
13	Bradshaw Road	From Elk Grove Boulevard to Grant Line Road*	1	68.7
14	Bruceville Road	From Big Horn Boulevard to Laguna Boulevard*	1	70.4
15	Bruceville Road	From Laguna Boulevard to Elk Grove Boulevard*	1	69.7
16	Bruceville Road	From Elk Grove Boulevard to Whitelock Parkway*	1	69.7
17	Bruceville Road	From Whitelock Parkway to Bilby Road*	1	66.2
18	Civic Center Drive	From Bruceville Road to Wymark Drive		61.2
19	Civic Center Drive	From Wymark Drive to Big Horn Boulevard		61.8
20	Civic Center Drive	From Big Horn Boulevard to Laguna Springs Drive		58.6
21	E. Stockton Boulevard	From Marketplace 99 South to Bond Road		64.7
22	E. Stockton Boulevard	From Bond Road to Banff Vista Drive		63.3
23	E. Stockton Boulevard	From Elk Grove Boulevard to SR 99 NB Ramps		68.1
24	E. Stockton Boulevard	From Elk Grove Florin Road to Grant Line Road*	1	64.3
25	Elk Grove Boulevard	From Harbour Point Drive to Franklin Boulevard		73.5
26	Elk Grove Boulevard	From Franklin Boulevard to Bruceville Road*	1	73.7
27	Elk Grove Boulevard	From Bruceville Road to Big Horn Boulevard*	1	74.2
28	Elk Grove Boulevard	From Laguna Springs Drive to SR 99		75.0
29	Elk Grove Boulevard	From E. Stockton Boulevard to Elk Grove Florin Road*	1	68.8
30	Elk Grove Boulevard	From Elk Grove Florin Road to Waterman Road*	1	63.0
31	Elk Grove Boulevard	From Bradshaw Road to Grant Line Road*	1	60.7
32	Elk Grove Florin Road	From Calvine Road to Sheldon Road*	1	71.6
33	Elk Grove Florin Road	From Sheldon Road to Bond Road*	1	70.8
34	Elk Grove Florin Road	From Bond Road to Elk Grove Boulevard*	1	66.5

35	Elk Grove Florin Road	From Valley Oak Lane to E. Stockton Boulevard		61.8
36	Emerald Vist Drive	From E. Stockton Boulevard to Elk Grove Boulevard		64.0
37	Franklin Boulevard	From Big Horn Boulevard to Laguna Boulevard*	1	70.8
38	Franklin Boulevard	From Laguna Boulevard to Elk Grove Boulevard*	1	70.1
39	Franklin Boulevard	From Elk Grove Boulevard to Whitelock Parkway*	1	70.3
40	Grant Line Road	From E. Stockton Boulevard to Waterman Road*	1	74.0
41	Harbour Point Drive	From Laguna Boulevard to Babson Drive		66.6
42	Kammerer Road	From Bruceville Road to Promenade Parkway		68.8
43	Kammerer Road	From Promenade Parkway to SR 99*	1	72.2
44	Kammerer Road Extension	From Willard Parkway to Bruceville Road*	1	
45	Laguna Boulevard	From Harbour Point Drive to Franklin Boulevard		72.0
46	Laguna Boulevard	From Franklin Boulevard to Bruceville Road*	1	72.2
47	Laguna Boulevard	From Bruceville Road to Big Horn Boulevard*	1	72.8
48	Laguna Boulevard	From Big Horn Boulevard to Laguna Springs Drive*	1	74.1
49	Laguna Springs Boulevard	From Laguna Boulevard to Longleaf Drive		66.7
50	Laguna Springs Boulevard	From Longleaf Drive to Elk Grove Boulevard		63.3
51	Laguna Springs Boulevard	From Elk Grove Boulevard to Civic Center Drive		62.9
52	Lewis Stein Road	From Sheldon Road to W. Stockton Boulevard		65.6
53	Lotz Parkway	From Big Horn Boulevard to Laguna Springs Drive*	1	61.4
54	Lotz Parkway	From Laguna Springs Drive to Whitelock Parkway*	1	60.4
55	Mosher Road	From Waterman Road to Grant Line Road*	1	60.5
56	Poppy Ridge Road	From Bruceville Road to Cosby Way		56.1
57	Power Inn Road	From Auburly Drive to Sheldon Road		63.5
58	Promenade Parkway	From Kyler Road to Kammerer Road		66.6
59	Sheldon Road	From Lewis Stein Road to SR 99*	1	72.7
60	Sheldon Road	From Elk Grove Florin Road to Waterman Road*	1	68.6
61	W. Stockton Boulevard	From Lewis Stein Road to Michener Way		61.3
62	W. Stockton Boulevard	From Dunisch Road to Laguna Boulevard		61.3
63	W. Stockton Boulevard	From Whitelock Parkway to Kyler Road		63.1
64	Waterman Road	From Sheldon Road to Bond Road*	1	70.6
65	Waterman Road	From Bond Road to Elk Grove Boulevard*	1	70.5
66	Waterman Road	From Mosher Road to Grant Line Road		65.7
67	Whitelock Parkway	From Franklin Boulevard to Bruceville Road*	1	67.2
68	Whitelock Parkway	From Bruceville Road to Big Horn Boulevard*	1	66.7
69	Whitelock Parkway	From Big Horn Boulevard to Lotz Parkway*	1	63.3

70 Willard Parkway
71 Willard Parkway

From Whitelock Parkway to Blossom Ridge Drive
From Blossom Ridge Drive to Bilby Road

67.3
66.8

GP Build Out	Plus Project	Difference btwn Plus Project and GP Build Out
	65.5	
	69.4	
	70.6	
	72.1	
72.1	71.2	-0.9
71.9	62.7	-9.2
64.5	56.1	-8.4
74.1	73.0	
74.1	71.6	-2.5
72.9	69.2	-3.7
	66.4	
76.3	74.0	-2.3
76	73.2	-2.8
70.8	72.4	1.6
71	72.0	1.0
71.3	71.4	0.1
71.2	71.5	0.3
74.6	62.6	
71.3	63.5	
65.2	61.6	
62.4	65.5	
74.3	65.1	
72.1	68.8	
69.7	67.2	-2.5
	74.3	
73	74.2	1.2
74.6	74.5	-0.1
77.5	75.5	
71.3	69.7	-1.6
65.2	63.8	-1.4
62.4	67.2	4.8
74.3	73.6	-0.7
72.1	72.5	0.4
70.8	67.9	-2.9

67.2	64.1	
67.8	66.1	
71.4	71.5	0.1
70.9	71.0	0.1
68.8	71.9	3.1
77.5	79.0	1.5
64.9	67.3	
63.9	76.8	
77.4	78.9	1.5
74.8	72.0	-2.8
	72.9	
71	72.6	1.6
70.4	73.2	2.8
73.2	74.4	1.2
	67.6	
	64.9	
	67.5	
	65.6	
65.7	62.8	-2.9
67.2	65.2	-2.0
67.8	64.2	-3.6
	59.5	
	64.5	
	69.0	
72.6	73.7	1.1
68.8	69.0	0.2
	61.7	
	62.0	
	65.7	
69.4	72.1	2.7
73.8	72.7	-1.1
	69.9	
64.9	67.7	2.8
63.9	68.8	4.9
67	69.8	2.8

71.1

70.3

Road	Segment
1 Auto Center Drive	From Elk Grove Boulevard to W. Stockton Boulevard
2 Big Horn Boulevard	From Lewis Stein Road to Laguna Boulevard
3 Big Horn Boulevard	From Laguna Boulevard to Longleaf Drive
4 Big Horn Boulevard	From Elk Grove Boulevard to Civic Center Drive
5 Big Horn Boulevard	From Lotz Parkway to Whitelock Parkway
6 Bilby Road	From Willard Parkway to Bruceville Road
7 Bilby Road	From Franklin Boulevard to Willard Parkway
8 Bond Road	From E. Stockton Boulevard to Emerald Crest Drive
9 Bond Road	From Elk Grove Florin Road to Waterman Road
10 Bond Road	From Waterman Road to Bradshaw Road
11 Bond Road	From Bradshaw Road to Grant Line Road
12 Bradshaw Road	From Sheldon Road to Bond Road
13 Bradshaw Road	From Elk Grove Boulevard to Grant Line Road
14 Bruceville Road	From Big Horn Boulevard to Laguna Boulevard
15 Bruceville Road	From Laguna Boulevard to Elk Grove Boulevard
16 Bruceville Road	From Elk Grove Boulevard to Whitelock Parkway
17 Bruceville Road	From Whitelock Parkway to Bilby Road
18 Civic Center Drive	From Bruceville Road to Wymark Drive
19 Civic Center Drive	From Wymark Drive to Big Horn Boulevard
20 Civic Center Drive	From Big Horn Boulevard to Laguna Springs Drive
21 E. Stockton Boulevard	From Marketplace 99 South to Bond Road
22 E. Stockton Boulevard	From Bond Road to Banff Vista Drive
23 E. Stockton Boulevard	From Elk Grove Boulevard to SR 99 NB Ramps
24 E. Stockton Boulevard	From Elk Grove Florin Road to Grant Line Road
25 Elk Grove Boulevard	From Harbour Point Drive to Franklin Boulevard
26 Elk Grove Boulevard	From Franklin Boulevard to Bruceville Road
27 Elk Grove Boulevard	From Bruceville Road to Big Horn Boulevard
28 Elk Grove Boulevard	From Laguna Springs Drive to SR 99
29 Elk Grove Boulevard	From E. Stockton Boulevard to Elk Grove Florin Road
30 Elk Grove Boulevard	From Elk Grove Florin Road to Waterman Road
31 Elk Grove Boulevard	From Bradshaw Road to Grant Line Road
32 Elk Grove Florin Road	From Calvine Road to Sheldon Road
33 Elk Grove Florin Road	From Sheldon Road to Bond Road
34 Elk Grove Florin Road	From Bond Road to Elk Grove Boulevard
35 Elk Grove Florin Road	From Valley Oak Lane to E. Stockton Boulevard
36 Emerald Vista Drive	From E. Stockton Boulevard to Elk Grove Boulevard
37 Franklin Boulevard	From Big Horn Boulevard to Laguna Boulevard
38 Franklin Boulevard	From Laguna Boulevard to Elk Grove Boulevard
39 Franklin Boulevard	From Elk Grove Boulevard to Whitelock Parkway
40 Grant Line Road	From E. Stockton Boulevard to Waterman Road
41 Harbour Point Drive	From Laguna Boulevard to Babson Drive
42 Kammerer Road	From Bruceville Road to Promenade Parkway
43 Kammerer Road	From Promenade Parkway to SR 99
44 Kammerer Road Extension	From Willard Parkway to Bruceville Road
45 Laguna Boulevard	From Harbour Point Drive to Franklin Boulevard
46 Laguna Boulevard	From Franklin Boulevard to Bruceville Road

47 Laguna Boulevard	From Bruceville Road to Big Horn Boulevard
48 Laguna Boulevard	From Big Horn Boulevard to Laguna Springs Drive
49 Laguna Springs Boulevard	From Laguna Boulevard to Longleaf Drive
50 Laguna Springs Boulevard	From Longleaf Drive to Elk Grove Boulevard
51 Laguna Springs Boulevard	From Elk Grove Boulevard to Civic Center Drive
52 Lewis Stein Road	From Sheldon Road to W. Stockton Bouelvard
53 Lotz Parkway	From Big Horn Boulevard to Laguna Springs Drive
54 Lotz Parkway	From Laguna Springs Drive to Whitelock Parkway
55 Mosher Road	From Waterman Road to Grant Line Road
56 Poppy Ridge Road	From Bruceville Road to Cosby Way
57 Power Inn Road	From Auburry Drive to Sheldon Road
58 Promenade Parkway	From Kyler Road to Kammerer Road
59 Sheldon Road	From Lewis Stein Road to SR 99
60 Sheldon Road	From Elk Grove Florin Road to Waterman Road
61 W. Stockton Bouelvard	From Lewis Stein Road to Michener Way
62 W. Stockton Bouelvard	From Dunisch Road to Laguna Boulevard
63 W. Stockton Bouelvard	From Whitelock Parkway to Kyler Road
64 Waterman Road	From Sheldon Road to Bond Road
65 Waterman Road	From Bond Road to Elk Grove Boulevard
66 Waterman Road	From Mosher Road to Grant Line Road
67 Whitelock Parkway	From Franklin Boulevard to Bruceville Road
68 Whitelock Parkway	From Bruceville Road to Big Horn Boulevard
69 Whitelock Parkway	From Big Horn Boulevard to Lotz Parkway
70 Willard Parkway	From Whitelock Parkway to Blossom Ridge Drive
71 Willard Parkway	From Blossom Ridge Drive to Bilby Road

Existing 2019	Plus Project
65.3	65.5
67.4	69.4
69.0	70.6
69.0	72.1
67.4	71.2
67.8	62.7
60.8	56.1
72.4	73.0
70.9	71.6
67.9	69.2
64.0	66.4
71.6	74.0
68.7	73.2
70.4	72.4
69.7	72.0
69.7	71.4
66.2	71.5
61.2	62.6
61.8	63.5
58.6	61.6
64.7	65.5
63.3	65.1
68.1	68.8
64.3	67.2
73.5	74.3
73.7	74.2
74.2	74.5
75.0	75.5
68.8	69.7
63.0	63.8
60.7	67.2
71.6	73.6
70.8	72.5
66.5	67.9
61.8	64.1
64.0	66.1
70.8	71.5
70.1	71.0
70.3	71.9
74.0	79.0
66.6	67.3
68.8	76.8
72.2	78.9
	72.0
72.0	72.9
72.2	72.6

72.8	73.2
74.1	74.4
66.7	67.6
63.3	64.9
62.9	67.5
65.6	65.6
61.4	62.8
60.4	65.2
60.5	64.2
56.1	59.5
63.5	64.5
66.6	69.0
72.7	73.7
68.6	69.0
61.3	61.7
61.3	62.0
63.1	65.7
70.6	72.1
70.5	72.7
65.7	69.9
67.2	67.7
66.7	68.8
63.3	69.8
67.3	71.1
66.8	70.3

63	Auto Cente From Elk G	62.3	62.47	0	
29	Big Horn Bc From Lewis	64.4	66.40	2	
30	Big Horn Bc From Lagu	66.0	67.6	1.6	1
31	Big Horn Bc From Elk G	66.0	69.1	3.2	1
32	Big Horn Bc From Lotz	64.4	68.2	3.8	1
16	Bilby Road From Willa	64.8	59.66	-5	
46	Bilby Road From Frank	57.8	53.13	-5	
5	Bond Road From E. Stc	69.4	69.96	0.56	
6	Bond Road From Elk G	67.9	68.63	0.71	
7	Bond Road From Wate	64.9	66.17	1	
8	Bond Road From Brads	61.0	63.40	2	
35	Bradshaw F From Sheld	68.6	71.0	2.4	1
42	Bradshaw F From Elk G	65.7	70.2	4.5	1
22	Bruceville F From Big H	67.4	69.4	2.0	1
23	Bruceville F From Lagu	66.7	69.0	2.3	1
24	Bruceville F From Elk G	66.6	68.4	1.8	1
28	Bruceville F From Whit	63.2	68.5	5.3	1
47	Civic Cente From Bruce	58.1	59.57	1	
48	Civic Cente From Wym	58.7	60.5	1.8	1
4	Civic Cente From Big H	55.6	58.60	3.0	
65	E. Stockton From Mark	61.7	62.50	1	
66	E. Stockton From Bond	60.3	62.1	1.7	1
67	E. Stockton From Elk G	65.1	65.76	0.68	
68	E. Stockton From Elk G	61.3	64.2	3.0	1
1	Elk Grove E From Harb	70.5	71.28	0.82	
2	Elk Grove E From Frank	70.7	71.22	0.56	
3	Elk Grove E From Bruce	71.2	71.52	0.34	
12	Elk Grove E From Lagu	72.0	72.51	0.55	
13	Elk Grove E From E. Stc	65.8	66.65	0.85	
6	Elk Grove E From Elk G	60.0	60.8	0.8	1
8	Elk Grove E From Brads	57.7	64.2	6.5	1
34	Elk Grove F From Calvi	68.6	70.6	2.0	1
35	Elk Grove F From Sheld	67.8	69.4	1.7	1
36	Elk Grove F From Bond	63.5	64.90	1	
37	Elk Grove F From Valle	58.7	61.1	2.4	1
69	Emarld Vist From E. Stc	61.0	63.08	2	
22	Franklin Bo From Big H	67.8	68.53	0.71	
23	Franklin Bo From Lagu	67.1	67.98	0.91	
24	Franklin Bo From Elk G	67.3	68.84	1.54	
19	Grant Line From E. Stc	71.0	75.9	4.9	1
	Harbour Pc From Lagu	63.6	64.25	1	
	Kammerer From Bruce	65.8	73.8	8.0	1
	Kammerer From Prom	69.2	75.9	6.7	1
	Krammerer From Willa			#VALUE!	1
	Laguna Bot From Harb	76.1	77.06	0.96	
	Laguna Bot From Frank	69.2	69.61	0.44	

Laguna Bot From Bruce	69.8	70.21	0.45	
Laguna Bot From Big H	71.1	71.36	0.24	
Laguna Spr From Lagu	63.7	64.61	1	
Laguna Spr From Long	60.3	61.89	2	
Laguna Spr From Elk G	59.9	64.5	4.6	1
Lewis Stein From Sheld	62.6	62.58	0	
Lotz Parkw From Big H	58.4	59.80	1	
Lotz Parkw From Lagu	57.4	62.2	4.8	1
Mosher Ro From Wate	57.5	61.2	3.7	1
Poppy Ridg From Bruce	53.1	56.5	3.4	1
Power Inn From Aubu	60.5	61.47	1	
Promenade From Kyles	63.5	65.98	2	
Sheldon Rc From Lewis	69.7	70.71	0.99	
Sheldon Rc From Elk G	65.6	66.01	0.45	
W. Stockto From Lewis	58.3	58.7	0.4	1
W. Stockto From Dunis	58.3	59.02	1	
W. Stockto From Whit	60.1	62.70	2.6	
Waterman From Sheld	67.6	69.06	1.49	
Waterman From Bond	67.5	69.6	2.1	1
Waterman From Mosh	62.7	66.8	4.1	1
Whitelock From Frank	64.2	64.68	1	
Whitelock From Bruce	63.7	65.83	2	
Whitelock From Big H	60.3	66.8	6.5	1
Willard Par From Whit	64.3	68.1	3.8	1
Willard Par From Bloss	63.8	67.2	3.5	1

Citation # Citations

- | | | |
|----|--|--|
| 1 | Caltrans Technical Noise Supplement. 2009 (November). Table (5-11), Pg 5-60. | Caltrans Technical Noise Supplement. 2013 (September). Table (4-2), Pg 4-17. |
| 2 | Caltrans Technical Noise Supplement. 2009 (November). Equation (5-26), Pg 5-60. | Caltrans Technical Noise Supplement. 2013 (September). Equation (4-5), Pg 4-17. |
| 3 | Caltrans Technical Noise Supplement. 2009 (November). Equation (2-16), Pg 2-32. | FHWA 2004 TNM Version 2.5 |
| 4 | Caltrans Technical Noise Supplement. 2009 (November). Equation (5-11), Pg 5-47, 48. | FHWA 2004 TNM Version 2.5 |
| 5 | Caltrans Technical Noise Supplement. 2009 (November). Equation (2-26), Pg 2-55, 56. | Caltrans Technical Noise Supplement. 2013 (September). Equation (2-23), Pg 2-55. |
| 6 | Caltrans Technical Noise Supplement. 2009 (November). Equation (2-27), Pg 2-57. | Caltrans Technical Noise Supplement. 2013 (September). Equation (2-24), Pg 2-57. |
| 7 | Caltrans Technical Noise Supplement. 2009 (November). Pg 2-53. | Caltrans Technical Noise Supplement. 2013 (September). Pg 2-57. |
| 8 | Caltrans Technical Noise Supplement. 2009 (November). Equation (5-7), Pg 5-45. | FHWA 2004 TNM Version 2.5 |
| 9 | Caltrans Technical Noise Supplement. 2009 (November). Equation (5-8), Pg 5-45. | FHWA 2004 TNM Version 2.5 |
| 10 | Caltrans Technical Noise Supplement. 2009 (November). Equation (5-9), Pg 5-45. | FHWA 2004 TNM Version 2.5 |
| 11 | Caltrans Technical Noise Supplement. 2009 (November). Equation (5-13), Pg 5-49. | FHWA 2004 TNM Version 2.5 |
| 12 | Caltrans Technical Noise Supplement. 2009 (November). Equation (5-14), Pg 5-49. | FHWA 2004 TNM Version 2.5 |
| 13 | Federal Highway Administration Traffic Noise Model Technical Manual. Report No. FHWA-PD-96-010. 1998 (January). Equation (16), Pg 67 | |
| 14 | Federal Highway Administration Traffic Noise Model Technical Manual. Report No. FHWA-PD-96-010. 1998 (January). Equation (20), Pg 69 | |
| 15 | Federal Highway Administration Traffic Noise Model Technical Manual. Report No. FHWA-PD-96-010. 1998 (January). Equation (18), Pg 69 | |

References

California Department of Transportation (Caltrans). 2009 (November). Technical Noise Supplement. Available: http://www.dot.ca.gov/hq/env/noise/pub/tens_complete.pdf. Accessed / 2017.

Road	Segment	GP Build Out
Big Horn Boulevard	From Lotz Parkway to Whitelock Parkway	72.1
Bilby Road	From Willard Parkway to Bruceville Road	71.9
Bilby Road	From Franklin Boulevard to Willard Parkway	64.5
Bond Road	From Elk Grove Florin Road to Waterman Road	74.1
Bond Road	From Waterman Road to Bradshaw Road	72.9
Bradshaw Road	From Sheldon Road to Bond Road	76.3
Bradshaw Road	From Elk Grove Boulevard to Grant Line Road	76
Bruceville Road	From Big Horn Boulevard to Laguna Boulevard	70.8
Bruceville Road	From Laguna Boulevard to Elk Grove Boulevard	71
Bruceville Road	From Elk Grove Boulevard to Whitelock Parkway	71.3
Bruceville Road	From Whitelock Parkway to Bilby Road	71.2
E. Stockton Boulevard	From Elk Grove Florin Road to Grant Line Road	69.7
Elk Grove Boulevard	From Franklin Boulevard to Bruceville Road	73
Elk Grove Boulevard	From Bruceville Road to Big Horn Boulevard	74.6
Elk Grove Boulevard	From E. Stockton Boulevard to Elk Grove Florin Road	71.3
Elk Grove Boulevard	From Elk Grove Florin Road to Waterman Road	65.2
Elk Grove Boulevard	From Bradshaw Road to Grant Line Road	62.4
Elk Grove Florin Road	From Calvine Road to Sheldon Road	74.3
Elk Grove Florin Road	From Sheldon Road to Bond Road	72.1
Elk Grove Florin Road	From Bond Road to Elk Grove Boulevard	70.8
Franklin Boulevard	From Big Horn Boulevard to Laguna Boulevard	71.4
Franklin Boulevard	From Laguna Boulevard to Elk Grove Boulevard	70.9
Franklin Boulevard	From Elk Grove Boulevard to Whitelock Parkway	68.8
Grant Line Road	From E. Stockton Boulevard to Waterman Road	77.5
Kammerer Road	From Promenade Parkway to SR 99	77.4
Krammerer Road Extension	From Willard Parkway to Bruceville Road	74.8
Laguna Boulevard	From Franklin Boulevard to Bruceville Road	71
Laguna Boulevard	From Bruceville Road to Big Horn Boulevard	70.4
Laguna Boulevard	From Big Horn Boulevard to Laguna Springs Drive	73.2
Lotz Parkway	From Big Horn Boulevard to Laguna Springs Drive	65.7
Lotz Parkway	From Laguna Springs Drive to Whitelock Parkway	67.2
Mosher Road	From Waterman Road to Grant Line Road	67.8
Sheldon Road	From Lewis Stein Road to SR 99	72.6
Sheldon Road	From Elk Grove Florin Road to Waterman Road	68.8
Waterman Road	From Sheldon Road to Bond Road	69.4
Waterman Road	From Bond Road to Elk Grove Boulevard	73.8
Whitelock Parkway	From Franklin Boulevard to Bruceville Road	64.9
Whitelock Parkway	From Bruceville Road to Big Horn Boulevard	63.9
Whitelock Parkway	From Big Horn Boulevard to Lotz Parkway	67

Plus Project	Difference GP Plus Project
68.2	-3.9
59.66	-12.2
53.13	-11.4
68.63	-5.5
66.17	-6.7
71.0	-5.3
70.2	-5.8
69.4	-1.4
69.0	-2.0
68.4	-2.9
68.5	-2.7
64.2	-5.5
71.22	-1.8
71.52	-3.1
66.65	-4.6
60.8	-4.4
64.2	1.8
70.6	-3.7
69.4	-2.7
64.90	-5.9
68.53	-2.9
67.98	-2.9
68.84	0.0
75.9	-1.6
75.9	-1.5
	#VALUE!
69.61	-1.4
70.21	-0.2
71.36	-1.8
59.80	-5.9
62.2	-5.0
61.2	-6.6
70.71	-1.9
66.01	-2.8
69.06	-0.3
69.6	-4.2
64.68	-0.2
65.83	1.9
66.8	-0.2

Road	Segment	Existing 2019
Big Horn Boulevard	From Elk Grove Boulevard to Civic Center Drive	66.0
Big Horn Boulevard	From Lotz Parkway to Whitelock Parkway	64.4
Bilby Road	From Willard Parkway to Bruceville Road	64.8
Bilby Road	From Franklin Boulevard to Willard Parkway	57.8
Bond Road	From Elk Grove Florin Road to Waterman Road	67.9
Bond Road	From Waterman Road to Bradshaw Road	64.9
Bond Road	From Bradshaw Road to Grant Line Road	61.0
Bradshaw Road	From Sheldon Road to Bond Road	68.6
Bradshaw Road	From Elk Grove Boulevard to Grant Line Road	65.7
Bruceville Road	From Big Horn Boulevard to Laguna Boulevard	67.4
Bruceville Road	From Laguna Boulevard to Elk Grove Boulevard	66.7
Bruceville Road	From Elk Grove Boulevard to Whitelock Parkway	66.6
Bruceville Road	From Whitelock Parkway to Bilby Road	63.2
E. Stockton Boulevard	From Elk Grove Florin Road to Grant Line Road	61.3
Elk Grove Boulevard	From Harbour Point Drive to Franklin Boulevard	70.5
Elk Grove Boulevard	From Franklin Boulevard to Bruceville Road	70.7
Elk Grove Boulevard	From Bruceville Road to Big Horn Boulevard	71.2
Elk Grove Boulevard	From Laguna Springs Drive to SR 99	72.0
Elk Grove Boulevard	From E. Stockton Boulevard to Elk Grove Florin Road	65.8
Elk Grove Boulevard	From Elk Grove Florin Road to Waterman Road	60.0
Elk Grove Boulevard	From Bradshaw Road to Grant Line Road	57.7
Elk Grove Florin Road	From Calvine Road to Sheldon Road	68.6
Elk Grove Florin Road	From Sheldon Road to Bond Road	67.8
Elk Grove Florin Road	From Bond Road to Elk Grove Boulevard	63.5
Franklin Boulevard	From Big Horn Boulevard to Laguna Boulevard	67.8
Franklin Boulevard	From Laguna Boulevard to Elk Grove Boulevard	67.1
Franklin Boulevard	From Elk Grove Boulevard to Whitelock Parkway	67.3
Grant Line Road	From E. Stockton Boulevard to Waterman Road	71.0
Kammerer Road	From Promenade Parkway to SR 99	69.2
Krammerer Road Extension	From Willard Parkway to Bruceville Road	
Laguna Boulevard	From Franklin Boulevard to Bruceville Road	69.2
Laguna Boulevard	From Bruceville Road to Big Horn Boulevard	69.8
Laguna Boulevard	From Big Horn Boulevard to Laguna Springs Drive	71.1
Lotz Parkway	From Big Horn Boulevard to Laguna Springs Drive	58.4
Lotz Parkway	From Laguna Springs Drive to Whitelock Parkway	57.4
Mosher Road	From Waterman Road to Grant Line Road	57.5
Sheldon Road	From Lewis Stein Road to SR 99	69.7
Sheldon Road	From Elk Grove Florin Road to Waterman Road	65.6
Waterman Road	From Sheldon Road to Bond Road	67.6
Waterman Road	From Bond Road to Elk Grove Boulevard	67.5
Whitelock Parkway	From Franklin Boulevard to Bruceville Road	64.2
Whitelock Parkway	From Bruceville Road to Big Horn Boulevard	63.7
Whitelock Parkway	From Big Horn Boulevard to Lotz Parkway	60.3
Willard Parkway	From Whitelock Parkway to Blossom Ridge Drive	64.3

GP Build Out



Appendix G

Comprehensive Mitigation Measures
from Community Plans

APPENDIX G - COMPREHENSIVE MITIGATION MEASURES

There are several existing community plan areas that overlap with parcels within the Livable Employment Area (LEA) Community Plan Area. Parcels within the LEA Community Plan Area are also within existing community plans include the Southeast Policy Area Strategic Plan, Laguna Ridge Specific Plan, SouthPoint Policy Area/Sterling Meadows, and Lent Ranch Marketplace Specific Plan Area (SPA) (see Figure 3.11-1 in Section 3.11). These community plan areas have been analyzed under the California Environmental Quality Act (CEQA) and mitigation measures addressing potentially significant impacts have been adopted by the City. Therefore, future development in the LEA Community Plan Area would be subject to mitigation measures contained within previous environmental review documents prepared for these community plan areas as well as mitigation contained in the General Plan Environmental Impact Report (EIR).

This appendix contains a comprehensive list of mitigation measures from the General Plan EIR (State Clearinghouse 2017062058), Southeast Policy Area Strategic Plan EIR (State Clearinghouse 2013042054), Lent Ranch Specific Plan Final Conditions of Approval (State Clearinghouse 2000082139), SouthPoint Policy Area/Sterling Meadows Tentative Subdivision Map (State Clearinghouse 1999122067), and Laguna Ridge Specific Plan EIR (State Clearinghouse 1997122002). Future development in the LEA Community Plan Area would be required to adhere to adopted mitigation measures from each of the community plan CEQA documents, as applicable. This appendix contains mitigation measures listed by environmental resources area and the mitigation measures required under each community plan. It should be noted that several properties have already completed some of the mitigation measures required by previous environmental review. Figures 3.11-2 and 3.11-3 (Section 3.11) show parcels that have already completed specific mitigation measures. These properties have satisfied their mitigation requirements and additional mitigation would not be required. Additionally, the Lent Ranch Special Planning Area expires in October 2025, after which properties within the Lent Ranch Area would not be subject to the conditions of approval.

1 AESTHETICS

Laguna Ridge Specific Plan:

MM 4.11.2a

A lighting plan shall be developed and provided with improvement plans for each subsequent non-residential project to ensure that parking lot pole lights and streetlights shall be fully hooded and back shielded to reduce the light “spillage” and glare, prohibit the illumination from breaking the horizontal plane, and ensure that lighting not exceed the standard illumination of two-foot candles along the property lines of adjoining land uses. The two-foot candle lighting standard shall also apply to all park and school facilities where stadium lighting may be installed and used.

Timing/Implementation: Prior to approval of improvement plans for all subsequent public and private projects.

Enforcement/Monitoring: City of Elk Grove Development Services, Elk Grove Community Services District and Elk Grove Unified School District.

MM 4.11.2b

Non-glare glass shall be used in all non-residential buildings to minimize and reduce impacts from glare. Office and commercial buildings, which are allowed to use semi-reflective glass, must be oriented so that the reflection of sunlight is minimized. This requirement shall be incorporated into the Specific Plan and reflected in subsequent development applications.

Timing/Implementation: Types of non-glare glass shall be specified on final development plans for subsequent commercial and office projects, and installed prior to building occupancy.

Enforcement/Monitoring: City of Elk Grove Development Services.

Southeast Policy Area Strategic Plan:

MM 5.1.3a

Each subsequent residential and nonresidential project shall develop a lighting plan that demonstrates consistency with the requirements of Chapter 23.56 of the City Municipal Code along the property lines of adjoining land uses.

MM 5.1.3b

Nonglare glass shall be used in all nonresidential buildings to minimize and reduce impacts from glare. Buildings that are allowed to use semi-reflective glass must be oriented so that the reflection of sunlight is minimized. This requirement shall be included in subsequent development applications.

Lent Ranch Marketplace SPA:

MM25

All lighting along the perimeter of the site shall be downcast luminaries and shall be shielded and oriented in a manner that will prevent spillage or glare into the surrounding area. This condition of approval implements Mitigation Measure #MM4.8-7 from the Lent Ranch Marketplace Final EIR.

MM27

Taller growing trees and/or shrubs shall be planted along the borders of the project site where the project will interface with planned development in the Southpointe project and existing agricultural uses. The use of this material will screen the project from these uses and minimize the potential for light and glare impacts. This condition of approval implements Mitigation Measure #MM4.11-(a) from the Lent Ranch Marketplace Final EIR.

MM28

All parking lot pole lights and streetlights shall be fully hooded and back shielded to reduce the light “spillage” and glare. To the extent feasible, lighting shall not exceed an illumination of a one foot-candle standard. This condition of approval implements Mitigation Measure #MM4.11-(b) from the Lent Ranch Marketplace Final EIR.

MM29

Non-glare glass shall be used in all commercial buildings to minimize and reduce impacts from glare. Office buildings, shall be oriented so that the reflection of sunlight is minimized. This condition of approval implements Mitigation Measure #MM4.11-(c) from the Lent Ranch Marketplace Final EIR.

Sterling Meadows Tentative Subdivision Map:

MM 4.13.2a

Street light fixtures shall use low-pressure sodium lamps or other similar lighting fixture and shall be installed and shielded in such a manner that no light rays are emitted from the fixture at angles above the horizontal plane. High-intensity discharge lamps shall be prohibited. Offsite illumination shall not exceed two-foot candles. Street lighting plans shall be submitted with project improvement plans for City review and approval.

MM 4.13.2b

Exterior building materials on nonresidential structures shall be composed of at least 50 percent low-reflectance non-polished surfaces. All bare metallic surfaces shall be painted with flat finishes to reduce reflected glare.

City of Elk Grove General Plan:

No additional feasible mitigation available beyond compliance with the City’s Design Guidelines, supplemental guidelines, and proposed General Plan policies.

2 AGRICULTURAL RESOURCES

Laguna Ridge Specific Plan:

MM 4.1.1

The applicant of subsequent projects shall protect one acre of existing farmland land of equal or higher quality for each acre of Prime Farmland, Unique Farmland or Farmland of Statewide Importance that would be developed as a result of the project. Areas of Prime Farmland and Farmland of Statewide Importance within the project site are depicted in Figure 4.1-1 of the Revised Draft EIR. This protection may consist of the establishment of farmland conservation easement, farmland deed restriction or other appropriate farmland conservation mechanism that ensures the preservation of that land from conversion in perpetuity, but may also be utilized for compatible wildlife habitat conservation efforts (e.g., Swainson's hawk foraging habitat mitigation). The farmland/wildlife habitat land to be preserved shall be located within Sacramento County, outside the City of Elk Grove city limits, bounded by Hood-Franklin Road, Kammerer Road, Grant Line Road and the Jackson Highway, by Dillard Road and Clay Station Road, by the Sacramento County line, and by the Sacramento River, and must have adequate water supply to support agricultural use. In deciding whether to approve the land proposed for preservation by the Project applicant, the City shall consider the benefits of preserving farmlands in proximity to other protected lands. The preservation of off-site farmland may be done at one time, prior to the City's approval of the project's first grading permit, or may be done in increments with the build-out of the project, with preservation occurring prior to each grading permit approval. Grading plans shall include the farmland information contained in Figure 4.1-1 of the Revised Draft EIR and the acreage and type of farmland impacted. In addition, the City shall impose the following minimum conservation easement content standards:

- a) All owners of the agricultural/wildlife habitat mitigation land shall execute the document encumbering the land.
- b) The document shall be recordable and contain an accurate legal description of the agricultural/wildlife habitat mitigation land.
- c) The document shall prohibit any activity which substantially impairs or diminishes the agricultural productivity of the land. If the conservation easement is also proposed for wildlife habitat mitigation purposes, the document shall also prohibit any activity which substantially impairs or diminishes the wildlife habitat suitability of the land.
- d) The document shall protect any existing water rights necessary to maintain agricultural uses on the land covered by the document, and retain such water rights for ongoing use on the agricultural/wildlife habitat mitigation land.
- e) Interests in agricultural/habitat mitigation land shall be held in trust by an entity acceptable to the City and/or the City in perpetuity. The entity shall not sell, lease, or convey any interest in agricultural/wildlife habitat mitigation land which it shall acquire without the prior written approval of the City.
- f) The applicant shall pay to the City an agricultural/wildlife habitat mitigation monitoring fee to cover the costs of administering, monitoring and enforcing the document in an amount determined by the

receiving entity, not to exceed 10% of the easement price paid by the applicant, or a different amount approved by the City Council, not to exceed 15% of the easement price paid by the applicant.

g) The City shall be named a beneficiary under any document conveying the interest in the agricultural/wildlife habitat mitigation land to an entity acceptable to the City.

h) If any qualifying entity owning an interest in agricultural/wildlife habitat mitigation land ceases to exist, the duty to hold, administer, monitor and enforce the interest shall be transferred to another entity acceptable to the City or to the City.

Before committing to the preservation of any particular farmland pursuant to this measure, the Project proponent shall obtain the City's approval of the farmland proposed for preservation.

Timing/Implementation: Prior to the issuance of grading permits

Enforcement/Monitoring: City of Elk Grove Development Services

MM 4.1.2a

All of the landscape corridors directly adjacent to the project area that are located between existing agricultural operations or agriculturally zoned properties and the project area shall be fully improved and functional prior to the occupancy of any residence that adjoins the subject corridor.

Timing/Implementation: Prior to issuance of occupancy permits

Enforcement/Monitoring: City of Elk Grove Development Services

MM 4.1.2b

The project proponent shall ensure that a disclosure statement shall be recorded against the property and be provided to all prospective buyers of properties within the proposed plan area notifying such persons of the presence of existing and future noise-producing agricultural-related activities in the immediate Specific Plan area. The disclosure statement shall be reviewed and approved by City of Elk Grove Development Services.

Timing/Implementation: Prior to the sale to prospective buyers

Enforcement/Monitoring: City of Elk Grove Development Services

Southeast Policy Area Strategic Plan:

MM 5.2.1

Future projects shall protect 1 acre of existing farmland or land of equal or higher quality for each acre of Farmland of Statewide Importance or Unique Farmland that would be developed as a result of the Project. The protected acreage must be located within Sacramento County. This protection may consist of the establishment of a farmland conservation easement, farmland deed restriction, or other appropriate farmland conservation mechanism that ensures the preservation of that land from conversion in perpetuity, but may also be utilized for compatible wildlife habitat conservation efforts (e.g., Swainson's hawk foraging habitat mitigation). In deciding whether to approve the land proposed for preservation by the Project applicant, the City shall consider the benefits of preserving farmlands in proximity to other protected lands. The preservation of off-site farmland may be done at one time, prior

to the City's approval of the Project's first grading permit, or may be done in increments with the buildout of the Project, with preservation occurring prior to the approval of each grading permit. Grading plans shall include the acreage and type of farmland impacted. In addition, the City shall impose the following minimum conservation easement content standards:

- a) All owners of the agricultural/wildlife habitat mitigation land shall execute the document encumbering the land.
- b) The document shall be recordable and contain an accurate legal description of the agricultural/wildlife habitat mitigation land.
- c) The document shall prohibit any activity that substantially impairs or diminishes the agricultural productivity of the land. If the conservation easement is also proposed for wildlife habitat mitigation purposes, the document shall also prohibit any activity that substantially impairs or diminishes the wildlife habitat suitability of the land.
- d) The document shall protect any existing water rights necessary to maintain agricultural uses on the land covered by the document and retain such water rights for ongoing use on the agricultural/wildlife habitat mitigation land.
- e) Interests in agricultural/habitat mitigation land shall be held in trust, in perpetuity, by the City and/or an entity acceptable to the City. Without the prior written approval of the City, the entity shall not sell, lease, or convey any interest in agricultural/wildlife habitat mitigation land.
- f) The applicant shall pay to the City an agricultural/wildlife habitat mitigation monitoring fee to cover the costs of administering, monitoring, and enforcing the document in an amount determined by the receiving entity, not to exceed 10 percent of the easement price paid by the applicant, or a different amount approved by the City Council, not to exceed 15 percent of the easement price paid by the applicant.
- g) The City shall be named a beneficiary under any document conveying the interest in the agricultural/wildlife habitat mitigation land to an entity acceptable to the City.
- h) If any qualifying entity owning an interest in agricultural/wildlife habitat mitigation land ceases to exist, the duty to hold, administer, monitor, and enforce the interest shall be transferred to another entity acceptable to the City.
- i) Before committing to the preservation of any particular farmland pursuant to this measure, the Project applicant shall obtain the City's approval of the farmland proposed for preservation.

Lent Ranch Marketplace SPA:

MM1

Disclose to all prospective buyers of property within 500 feet of any active farming operations through notification in the title report, that they could experience inconvenience or discomfort resulting from accepted farming activities pursuant to the provisions of the City Right-to-Farm Ordinance. This condition of approval implements Mitigation Measure #MM4.1-2 from the Lent Ranch Marketplace Final EIR.

Sterling Meadows Tentative Subdivision Map:

MM 4.2.1

The applicant shall protect one acre of existing farmland or land of equal or higher quality for each acre of Prime Farmland, Unique Farmland or Farmland of Statewide Importance that would be developed as a result of the project. This protection may consist of the establishment of a farm land conservation easement, farmland deed restriction or other appropriate farm land conservation mechanism that

ensures the preservation of that land from conversion in perpetuity, but may also be utilized for compatible wildlife habitat conservation efforts (e.g., Swainson's hawk foraging habitat mitigation). The farmland/wildlife habitat land to be preserved shall be located within Sacramento County, outside the City of Elk Grove city limits, bounded by Hood-Franklin Road, Kammerer Road, Grant Line Road and the Jackson Highway, by Dillard Road and Clay Station Road, by the Sacramento County line, and by the Sacramento River, and must have adequate water supply to support agricultural use. In deciding whether to approve the land proposed for preservation by the Project applicant, the City shall consider the benefits of preserving farmlands in proximity to other protected lands. The preservation of off-site farmland may be done at one time, prior to the City's approval of the project's first grading permit, or may be done in increments with the build-out of the project, with preservation occurring prior to each grading permit approval. Grading plans shall include the acreage and type of farmland impacted. In addition, the City shall impose the following minimum conservation easement content standards:

- a) All owners of the agricultural/wildlife habitat mitigation land shall execute the document encumbering the land.
- b) The document shall be recordable and contain an accurate legal description of the agricultural/wildlife habitat mitigation land.
- c) The document shall prohibit any activity which substantially impairs or diminishes the agricultural productivity of the land. If the conservation easement is also proposed for wildlife habitat mitigation purposes, the document shall also prohibit any activity which substantially impairs or diminishes the wildlife habitat suitability of the land.
- d) The document shall protect any existing water rights necessary to maintain agricultural uses on the land covered by the document, and retain such water rights for ongoing use on the agricultural/wildlife habitat mitigation land.
- e) Interests in agricultural/habitat mitigation land shall be held in trust by an entity acceptable to the City and/or the City in perpetuity. The entity shall not sell, lease, or convey any interest in agricultural/wildlife habitat mitigation land which it shall acquire without the prior written approval of the City.
- f) The applicant shall pay to the City an agricultural/wildlife habitat mitigation monitoring fee to cover the costs of administering, monitoring and enforcing the document in an amount determined by the receiving entity, not to exceed 10% of the easement price paid by the applicant, or a different amount approved by the City Council, not to exceed 15% of the easement price paid by the applicant.
- g) The City shall be named a beneficiary under any document conveying the interest in the agricultural/wildlife habitat mitigation land to an entity acceptable to the City.
- h) If any qualifying entity owning an interest in agricultural/wildlife habitat mitigation land ceases to exist, the duty to hold, administer, monitor and enforce the interest shall be transferred to another entity acceptable to the City.
- i) Before committing to the preservation of any particular farmland pursuant to this measure, the Project proponent shall obtain the City's approval of the farmland proposed for preservation.

MM 4.2.2a

All of the landscape corridors directly located between existing agricultural operations or agriculturally zoned properties and the project area shall be fully improved and functional prior to the occupancy of any residence that adjoins the subject corridor.

MM 4.2.2b

The project proponent shall ensure that a disclosure statement shall be recorded against the property regarding nearby agricultural activities, including notice of the Right to Farm Ordinance, against the property. This disclosure statement and notice shall be provided to all prospective buyers of properties within the Sterling Meadows project notifying such persons that the property may be affected by nearby agricultural uses, including agricultural chemical usage, agricultural odors and agriculture-related noise resulting from existing and future agricultural-related activities. The disclosure statement shall be reviewed and approved by the City of Elk Grove Community Development Department prior to recordation.

City of Elk Grove General Plan:

No additional mitigation required beyond compliance with proposed General Plan policies and applicable Municipal Code sections.

3 AIR QUALITY

Laguna Ridge Specific Plan:

MM 4.3.1a

The project applicant shall require that the contractors water all exposed surfaces, graded areas, storage piles and haul roads at least twice daily during construction. This requirement shall be included as a note in all project construction plans.

Timing/Implementation: During all grading and construction phases of the project.
Enforcement/Monitoring: City of Elk Grove Development Services and SMAQMD.

MM 4.3.1b

The project applicant shall require that the contractor minimize the amount of material actively worked, the amount of disturbed area, and the amount of material stockpiled. This requirement shall be included as a note in all project construction plans.

Timing/Implementation: During all grading and construction phases of the project.
Enforcement/Monitoring: City of Elk Grove Development Services and SMAQMD.

MM 4.3.1c

The project applicant shall require that the contractor limit vehicle speed for onsite construction vehicles to 15 mph. This requirement shall be included as a note in all project construction plans.

Timing/Implementation: During all grading and construction phases of the project.
Enforcement/Monitoring: City of Elk Grove Development Services and SMAQMD.

MM 4.3.1d

The project applicant shall require paved streets adjacent to construction sites to be washed or swept daily to remove accumulated dust. This requirement shall be included as a note in all project construction plans.

Timing/Implementation: During all grading and construction phases of the project.
Enforcement/Monitoring: City of Elk Grove Development Services and SMAQMD.

MM 4.3.1e

The project applicant shall require that, when transporting soil or other materials by truck during construction, two feet of freeboard shall be maintained by the contractor, and that the materials be covered. This requirement shall be included as a note in all project construction plans.

Timing/Implementation: During all grading and construction phases of the project.
Enforcement/Monitoring: City of Elk Grove Development Services and SMAQMD.

MM 4.3.1f

This mitigation measure shall be implemented by all subsequent projects within the Laguna Ridge Specific Plan. An individual project **may be** exempt from the following mitigation if it is less than 20 acres in size and will generate less than 400 pounds per day of NO_x, as determined by SMAQMD and the City. All other projects (not meeting the two exemption criteria) will be required to implement the following measures.

(a) **Category 1:** Reducing NO_x emissions from off-road diesel powered equipment.

The prime contractor shall provide a plan for approval by the City of Elk Grove and SMAQMD demonstrating that the heavy-duty (>50 horsepower) off-road vehicles to be used in the construction project, and operated by either the prime contractor or any subcontractor, will achieve a fleet - averaged 20 percent NO_x reduction and a 45 percent particulate reduction compared to the most recent CARB fleet average. The prime contractor shall submit to the City of Elk Grove and SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during the construction project. The inventory shall include the horsepower rating, engine production year, and hours of use or fuel throughput for each piece of equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs; and,

(b) **Category 2:** Controlling visible emissions from off-road diesel powered equipment.

The prime contractor shall ensure that emissions from all off-road diesel powered equipment used on the Specific Plan area do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity shall be repaired immediately, and the City of Elk Grove and SMAQMD shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a month summary of the visual results shall be submitted to the City and SMAQMD throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this section shall supersede other SMAQMD or state rules or regulation. In the event construction equipment meeting the requirements set forth above is determined not to be available, the project applicant shall notify the City and SMAQMD. Upon verification that required low-emission construction equipment is not available, the City may waive this measure. This requirement shall be included as a note in all project construction plans.

Timing/Implementation: Prior to and during construction activities.

Enforcement/Monitoring: City of Elk Grove Development Services and SMAQMD.

MM 4.3.1g

The project applicant shall require contractors to implement ridesharing programs for construction employees traveling to and from the site. This requirement shall be included as a note in all project construction plans.

Timing/Implementation: During all grading and construction phases of the project.
Enforcement/Monitoring: City of Elk Grove Development Services and SMAQMD.

MM 4.3.2

The project applicant shall implement all measures proposed in the AQ-15 Plan provided in Appendix 4.3 of the Draft EIR for each subsequent project to reduce the emissions from both mobile and stationary sources. Each subsequent development project shall be checked for compliance with the AQ-15 Plan.

Timing/Implementation: During all grading and construction phases of the project.
Enforcement/Monitoring: City of Elk Grove Development Services and SMAQMD.

Southeast Policy Area Strategic Plan:

MM 5.3.1a

In order to comply with SMAQMD Rule 403, all construction contractors shall be required to water all exposed surfaces, graded areas, storage piles, and haul roads at least twice daily during construction. This requirement shall be included as a note in all future construction plans.

MM 5.3.1b

In order to comply with SMAQMD Rule 403, all construction contractors shall limit vehicle speed for on-site construction vehicles to 15 mph. This requirement shall be included as a note on the improvement plan submittal of future development.

MM 5.3.1c

In order to comply with SMAQMD Rule 403, all construction contractors shall wash dirt off construction vehicles and equipment within the staging area prior to leaving the construction site. Wet power vacuum street sweepers shall be used to remove any visible trackout mud or dirt on adjacent public roads at least once a day. Use of dry power sweeping is prohibited. This requirement shall be noted in improvement plans of future development.

MM 5.3.1d

In order to comply with SMAQMD Rule 403 when transporting soil or other materials by truck during construction activities, all contractors shall maintain 2 feet of freeboard, and the materials shall be covered. This requirement shall be noted in all future improvement plans.

MM 5.3.1e

1. The Project applicant shall submit to the City and the SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project. This information shall be submitted at least four business days prior to the use of the subject heavy-duty off-road equipment.
 - The inventory shall include the horsepower rating, engine model year, and projected hours of use for each piece of equipment.

- The Project applicant shall provide the anticipated construction timeline including start date, and the name and phone number of the project manager and on-site foreman.
 - The district's Equipment List Form can be used to submit this information.
 - The inventory shall be updated and submitted monthly throughout the duration of the Project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs.
2. The Project Applicant shall provide a plan for approval by the City and the SMAQMD demonstrating that the heavy-duty off-road vehicles (50 horsepower or more) to be used in construction, including owned, leased, and subcontractor vehicles, will achieve a project-wide fleet average 20 percent NOX reduction and 45 percent particulate reduction compared to the most recent CARB fleet average.
 - This plan shall be submitted in conjunction with the equipment inventory.

Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available.

MM 5.3.1f

In order to reduce NOx emissions, signage shall be posted during all construction activities stating the State-mandated prohibition of all onsite trucks idling in excess of 5 minutes under the Heavy-Duty Vehicle Idling Emission Reduction Program.

MM 5.3.1g

In order to reduce NOx emissions, all construction contractors shall maintain all construction equipment in proper working condition according to manufacturers' specifications. The equipment must be checked by a certified mechanic and determined to be running in proper condition before it is operated.

MM 5.3.2

The City shall prepare an Air Quality Management Plan that demonstrates a 15 percent reduction in NOx equivalents for the Southeast Policy Area Project, compared to an unmitigated project. The Air Quality Management Plan shall be submitted to the Sacramento Metropolitan Air Quality Management District for review and endorsement.

MM 5.3.4a

Subsequent development projects within the Project area shall provide a plan for approval by the SMAQMD demonstrating that the heavy-duty (50 horsepower [hp] or more) off-road vehicles to be used in the construction of the Project, including owned, leased, and subcontractor vehicles, will achieve a project-wide fleet-average 20 percent NOx reduction and 45 percent particulate reduction compared to the most recent CARB fleet average. Acceptable options for reducing emissions may include use of late model engines, low-emission diesel products, alternative fuels, engine retrofit technology, after-treatment products, and/or other options as they become available.

MM 5.3.4b

Subsequent development projects within the Project area shall ensure that emissions from all off-road diesel powered equipment used do not exceed 40 percent opacity for more than 3 minutes in any one hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately. Noncompliant equipment shall be documented and a summary provided to the City Planning Department and the SMAQMD monthly. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of the visual survey results shall be submitted throughout the duration of construction, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed and the dates of each survey. The SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this measure shall supersede other SMAQMD or State rules or regulations.

Lent Ranch Marketplace SPA:

MM6

The project developer shall submit with each District Development Plan a plan to ensure that all applicable measures proposed by the applicant's Draft AQ-15 and TSM Plan for the project to reduce peak hour vehicle trips by project employees and reduce the emissions from both mobile and stationary sources are implemented. Measures in the AQ-15 Plan and TSM Plan may be implemented by persons or entities other than the project developer. This condition of approval implements Mitigation Measure #MM4.3-2 from the Lent Ranch Marketplace Final EIR.

Sterling Meadows Tentative Subdivision Map:

MM 4.7.1a

The project applicant shall require that the contractor limit vehicle speed for onsite construction vehicles to 15 mph when wind exceed 20 miles per hour. This requirement shall be included as a note on the improvement plan submittal.

MM 4.7.1b

The project applicant shall require that the contractors water all haul roads at least twice daily during construction activities. This requirement shall be included as a note on the improvement plans.

MM 4.7.1c

Wash dirt off construction vehicles and equipment within the staging area prior to leaving the construction site. This requirement shall be noted in project improvement plans.

MM 4.7.1d

The project applicant shall require that, when transporting materials by truck during construction activities, two feet of freeboard shall be maintained by the contractor, and that the materials are covered. This requirement shall be noted in project improvement plans.

MM 4.7.1e

Pave, apply water three times daily, or apply (non-stick) soil stabilizers on all unpaved access roads, parking areas and staging areas. This requirement shall be noted in project improvement plans.

MM 4.7.1f

The project shall provide a plan for approval by SMAQMD demonstrating that the heavyduty (> 50 horsepower) off-road vehicles to be used in the construction project, including owned, leased and subcontractor vehicles, will achieve a project wide fleet-average 20 percent NOx reduction and 45 percent particulate reduction compared to the most recent CARB fleet average at time of construction;

And,

The project applicant shall submit to SMAQMD a comprehensive inventory of all off-road construction equipment, equal to or greater than 50 horsepower, that will be used an aggregate of 40 or more hours during any portion of the construction project. The inventory shall include the horsepower rating, engine production year, and projected hours of use or fuel throughput for each piece of equipment. The inventory shall be updated and submitted monthly throughout the duration of the project, except that an inventory shall not be required for any 30-day period in which no construction activity occurs. At least 48 hours prior to the use of subject heavy-duty off-road equipment, the project representative shall provide SMAQMD with the anticipated construction timeline including start date, and name and phone number of the project manager and on-site foreman.

MM 4.7.1g

The project applicant shall ensure that emissions from all off-road diesel powered equipment used on the project site do not exceed 40 percent opacity for more than three minutes in any one hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) shall be repaired immediately, and SMAQMD shall be notified within 48 hours of identification of non-compliant equipment. A visual survey of all in-operation equipment shall be made at least weekly, and a monthly summary of the visual survey results shall be submitted throughout the duration of the project, except that the monthly summary shall not be required for any 30-day period in which no construction activity occurs. The monthly summary shall include the quantity and type of vehicles surveyed as well as the dates of each survey. The SMAQMD and/or other officials may conduct periodic site inspections to determine compliance. Nothing in this section shall supercede other SMAQMD or state rules or regulations.

MM 4.7.1h

The project applicant shall require paved streets adjacent to construction sites to be washed or swept daily to remove accumulated dust. This requirement shall be included as a note on the improvement plans.

MM 4.7.2a

The project applicant shall implement Emission Reduction Measures, such as those identified in its AQ-15 Plan, and ensure the project's compliance with the General Plan policy CAQ-30. The Emission Reduction Measures shall be evaluated and approved by the SMAQMD.

MM 4.7.2b

The project applicant shall pay off-site in-lieu fees, as determined by SMAQMD, for operational air quality emissions in excess of the SMAQMD thresholds.

City of Elk Grove General Plan:

No additional feasible mitigation available beyond compliance with existing regulations and proposed General Plan policies.

4 BIOLOGICAL RESOURCES

Laguna Ridge Specific Plan:

MM 4.8.1a

A tree survey shall be conducted by an arborist certified by the International Society of Arboriculture (ISA) to enumerate and evaluate all trees on the site that meet the standards in the City Tree Ordinance (as amended).

All tree locations shall be mapped onto all subsequent improvement and construction plans, tentative subdivision maps, and maps associated with development projects and rezones. Direct loss of protected trees shall be clearly identified on all subsequent maps and plans.

Timing/Implementation: As part of the subsequent development application submittals and prior to construction activities.

Enforcement/Monitoring: City of Elk Grove Development Services

MM 4.8.1b

Unless identified for removal as described in MM 4.8.1, all trees that meet the following criteria shall be avoided by construction and protected during all construction activity:

- Native and Non-Native Oak Trees with a trunk at least six inches (6") in diameter at a height of 4.5 feet. The removal of trees with a trunk diameter of twelve inches (12") or more is discouraged.
- All other trees with a trunk diameter of twelve inches (12") at a height of 4.5 feet. The removal of trees with a trunk diameter of twenty-four inches (24") or more is discouraged.

Trees to be retained shall be protected by implementation of the following measures:

1. Before initiating any construction activity near protected trees, install chain link fencing or a similar protective barrier at least one foot outside the dripline of each tree or as far as possible from the tree trunk where the existing road is within the tree dripline. The barrier fencing will remain in place for the duration of construction activity.
2. Any required pruning of oak trees shall be conducted before construction activity begins. Oak trees that require pruning of branches larger than two inches in diameter shall be pruned by a certified arborist. No pruning of the six-foot-diameter tree will be permitted.
3. No signs, ropes, cables (except cable that may be installed by a certified arborist or other professional tree expert), or other items shall be attached to the oak trees.
4. No vehicles, construction equipment, mobile home/office, supplies, materials, or facilities shall be driven, parked, stockpiled, or located within the driplines of oak trees.
5. No grading shall be allowed within the driplines of oak trees except where paved roadway already exists and where it can be demonstrated that the health of the tree will not be significantly impacted. Removal of pavement and grading within the driplines of oak trees shall be conducted in the presence of a certified arborist to ensure that damage and stress to any oak tree is minimized.

6. Any work necessary within the driplines shall be conducted by hand.

7. Paving within the driplines of oak trees shall be stringently minimized. When paving is absolutely necessary, porous material shall be used or a piped aeration system shall be installed under the supervision of a certified arborist.

8. Landscaping beneath oak trees may include non-plant material such as boulders, cobbles, and wood chips. The only plant species that shall be planted within the driplines of oak trees are those that are tolerant of the natural semi-arid environs of the trees. Limited drip irrigation approximately twice per summer is recommended for understory plants.

9. No sprinkler system shall be installed in such a manner that it irrigates within the driplines of oak trees.

Trees that are subject to protection and which cannot be protected shall be replaced with in-kind species in accordance with established tree planting specifications, the combined diameter of which shall equal the combined diameter of the trees removed.

If trees cannot be preserved or replaced onsite, off-site mitigation or the payment of an in-lieu fee shall be provided in accordance with the provisions of the City Tree Preservation Ordinance (as amended).

The above requirements shall be implemented prior to and during construction activities for all subsequent public and private projects. Improvement and construction plans shall specifically note this measure.

Timing/Implementation: As part of the subsequent development application submittals and prior to and during construction activities.

Enforcement/Monitoring: City of Elk Grove Development Services

MM 4.8.1c

For trees that are planned to be removed and which meet the criteria contained in the City's Tree Preservation Ordinance (as amended) and the City of Elk Grove Draft General Plan Conservation and Air Quality Element, a tree mitigation plan shall be submitted to the City of Elk Grove in accordance with City requirements. Protected trees shall be replaced on a no-net-loss basis.

Tree mapping required under mitigation measure MM 4.8.1a will delineate all protected trees planned to be removed. Mitigation areas, if needed, shall be within the plan area limits in landscape corridors and designated open space areas, if feasible. However, if the applicant demonstrates that onsite mitigation is not feasible, offsite mitigation within the city limits will be acceptable. Should the applicant contract with an organization for offsite tree mitigation, the City of Elk Grove shall review and may approve the contract if it meets the no-net-loss requirement and is otherwise deemed appropriate. The mitigation plan shall include the following components:

1. Number, location, size, and species of the replacement trees to be planted;
2. Methods of irrigation for planted trees;
3. Planting and maintenance schedule; and

4. Plan for care of planted trees for a three-year establishment period and replacement of any planted trees that do not survive.

Timing/Implementation: Prior to issuance of grading permit

Enforcement/Monitoring: City of Elk Grove Development Services

MM 4.8.2a

Prior to approval of site plans and/or tentative subdivision maps for each parcel proposed for development within 50 feet of the perennial marsh shown in **Figure 4.8-1** of the Draft EIR, a focused plant survey for Sanford's arrowhead is required to determine the presence/absence of this species. The surveys shall be conducted by a qualified botanist retained by the City and funded by the project applicant during the blooming period (May-August) for this species.

Timing/Implementation: Prior to approval of site plans and/or tentative subdivision map for parcels proposed for development within 50 feet of the perennial marsh.

Enforcement/Monitoring: City of Elk Grove Development Services

MM 4.8.2b

If this species is not found onsite, no further measures are required. However, if Sanford's arrowhead is found, each population shall be mapped and technical assistance from CNPS and the U.S. Fish and Wildlife Service shall be requested. To the maximum extent feasible, plant populations shall be preserved within open space non-disturbance areas. However, if these areas cannot be avoided, land-supporting populations of the impacted species shall be purchased and shall be permanently protected. Under the direction of CNPS and the U.S. Fish and Wildlife Service, preservation strategies shall be implemented, which may include seed and soil collection or plant transplant. At a minimum, mitigation shall occur at a 1:1 ratio (one plant preserved for every plant impacted). A detailed mitigation plan that includes species, habitat, preserve management, and monitoring strategies shall be developed in consultation with the U.S. Fish and Wildlife Service.

Timing/Implementation: Prior to approval of site plans and/or tentative subdivision map for parcels proposed for development within 50 feet of the perennial marsh.

Enforcement/Monitoring: City of Elk Grove Development Services and U.S. Fish and Wildlife Service

MM 4.8.3

As part of each subsequent project application submittal to the City, the project applicant shall identify all potential wetland resources that occur onsite for City review (such as those identified in Figure 4.8-1 of the Draft EIR. If wetland resources are proposed to be impacted, the project applicant shall do the following:

1. The applicant shall delineate the extent of jurisdictional waters of the U.S. to be impacted by the proposed project and, if required, apply for a Section 404 permit from the U.S. Army Corps of Engineers (Corps). Wetland areas that would be lost or disturbed shall be replaced or rehabilitated on a "no-net-loss" basis. Onsite creation of wetland habitat is preferred to offsite mitigation. Habitat restoration, rehabilitation, and/or replacement shall be at a location and by methods agreeable to the Corps and City.

2. The applicant shall obtain a Section 401 water quality waiver of certification from the RWQCB.

3. A mitigation plan shall be implemented that includes one of the following:

(a) Completion of an onsite Mitigation and Monitoring Plan that includes onsite creation/preservation of the wetlands.

(b) Credits may be obtained at an approved mitigation bank.

The project applicant shall provide written evidence to the City from the Corps and the RWQCB that this measure has been complied with prior to recordation of final maps.

Timing/Implementation: A part of subsequent tentative map applications and completed prior to final map recordation.

Enforcement/Monitoring: City of Elk Grove Development Services, Corps, and RWQCB.

MM 4.8.4a

Within 30 days prior to commencement of construction activities, a pre-construction survey of land within 200 feet of all wetlands, channels, ponds, and other such waterways within the plan area shall be conducted by a qualified biologist retained by the City and funded by the project applicant who is approved by the Service's Sacramento Fish and Wildlife Office. In order to protect snakes, de-watering of areas within the site shall not occur prior to completion of the pre-construction surveys. The biologist will provide the Service with a field report form documenting the monitoring efforts within 24-hours of commencement of construction activities. The monitoring biologist shall be retained by the City and funded by the project applicant to routinely monitor construction activities. If a snake is encountered during construction activities, the monitoring biologist shall contact the City Development Services and will have the authority to stop construction activities until appropriate corrective measures have been completed or it is determined that the snake will not be harmed.

Giant garter snakes encountered during construction activities should be allowed to move away from construction activities on their own. Capture and relocation of trapped or injured individuals can only be attempted by personnel or individuals with current Service recovery permits pursuant to Section 10(a) 1(A) of the Act. The biologist shall be required to report any incidental take to the Service immediately by telephone at (916) 979-2725 and by written letter addressed to the Chief, Endangered Species Division, within one working day. The project area shall be re-inspected whenever a lapse in construction activity of two weeks or greater has occurred. This mitigation measure does not apply to land areas where surveys within the active period of the snake have been conducted and no snakes were found.

Timing/Implementation: 30 days prior to grading and commencement of construction activities

Enforcement/Monitoring: USFWS and City of Elk Grove Development Services

MM 4.8.4b

If a giant garter snake is identified within the plan area either during pre-construction surveys or during construction, the following shall occur:

1. The City of Elk Grove shall be notified;

2. The City shall suspend all construction activities on the site of the sighting and along any water feature within the plan area that is hydrologically connected to the site of the sighting;
3. Protocol surveys shall be conducted by qualified biologists retained by the City and funded by the project applicant who are approved by the Service's Sacramento Fish and Wildlife Office;
4. The project applicant shall consult with the USFWS and CDFG to determine appropriate mitigation for the species and habitat loss, possibly including Section 10 consultation with the USFWS and Section 2081 consultation with the CDFG; and,
5. The project applicant shall provide the City with proof of the consultation and compliance with USFWS and CDFG mitigation requirements before construction activities may resume.

This mitigation measure does not apply to land areas where surveys within the active period of the snake have been conducted and no snakes were found.

Timing/Implementation: Prior to and during construction activities

Enforcement/Monitoring: City of Elk Grove Development Services, CDFG and USFWS.

MM 4.8.4c

No grading or other construction activities shall be conducted from October 1 to April 30, which is the inactive period of the giant garter snake. More danger is posed to snakes during their inactive period, because they are occupying underground burrows or crevices and are more susceptible to direct effects, especially during excavation. A "no grading" period from October 1 to April 30 will apply to portions of the plan area located within 1,000 feet of ditches, canals, ponds, wetlands or other such areas. This mitigation measure does not apply to land areas where surveys within the active period of the snake have been conducted and no snakes have been found.

Timing/Implementation: Prior to project grading and during construction activity

Enforcement/Monitoring: City of Elk Grove Development Services

MM 4.8.4d

Dewatering of ponds, ditches, canals and other such areas may begin any time after November 1, but no later than April 1 of the following year, once the absence of the species is determined or implementation of Mitigation Measure 4.8.4b has been completed. All water must be removed by April 15, or as soon thereafter as weather permits, and the habitat must remain dry without any standing water for 15 consecutive days after April 15 and prior to excavating or filling the dewatered habitat.

This mitigation measure does not apply to land areas where surveys within the active period of the snake have been conducted and no snakes were found.

Timing/Implementation: Prior to and during construction activity

Enforcement/Monitoring: City of Elk Grove Development Services and CDFG

MM 4.8.4e

Construction personnel shall participate in a Service-approved worker environmental awareness program. Under this program, workers shall be informed about the presence of giant garter snakes and

habitat associated with the species and that unlawful take of the animal or destruction of its habitat is a violation of the Act. Prior to construction activities, a qualified biologist approved by the Service shall instruct all construction personnel about: (1) the life history of the giant garter snake; (2) the importance of irrigation canals, marshes/wetlands, and seasonally flooded areas, such as rice fields, to the giant garter snake; and (3) the terms and conditions of the biological opinion. Proof of this instruction shall be submitted to the City and the Sacramento U.S. Fish and Wildlife Office.

This mitigation measure does not apply to land areas where surveys within the active period of the snake have been conducted and no snakes were found.

Timing/Implementation: Prior to project grading and construction

Enforcement/Monitoring: U.S. Fish and Wildlife Service and City of Elk Grove Development Services

MM 4.8.5

The project applicant shall design the subsequent public and private projects within the plan area to avoid impacts to potential habitat for VELB (elderberry shrubs; see Figure 4.8-1 of the Draft EIR), if feasible. If project development is required in areas that may impact elderberry shrubs containing stems measuring 1.0 inch or greater in diameter at ground level (development within 100 feet of shrub dripline), the project applicant shall perform one of the following measures:

1. Fence and flag all areas to be avoided during construction activities. In areas where encroachment on the 100-foot buffer has been approved by the USFWS, provide a minimum setback of at least 20 feet from the dripline of each elderberry plant.
2. Brief contractors on the need to avoid damaging the elderberry plants and the possible penalties for not complying with these requirements.
3. Erect signs every 50 feet along the edge of the avoidance area with the following information: "This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines and imprisonment." The signs should be clearly readable from a distance of 20 feet and must be maintained for the duration of construction.
4. Instruct work crews about the status of the beetle and the need to protect its elderberry host plant.

Restoration and Maintenance

1. Restore any damage done to the buffer area (area within 100 feet of elderberry plants) during construction. Provide erosion control and re-vegetate with appropriate native plants.
2. Buffer areas must continue to be protected after construction from adverse effects of the project. Measures such as fencing, signs, weeding and trash removal are usually appropriate.
3. No insecticides, herbicides, fertilizers or other chemicals that might harm the beetle or its host plant should be used in the buffer areas, or within 100 feet of any elderberry plant with one or more stems measuring 1.0 inch or greater in diameter at ground level.
4. The applicant must provide a written description of how the buffer areas are to be restored, protected and maintained after construction is completed.

5. Mowing of grasses/ground cover may occur from July through April to reduce fire hazard. No mowing should occur within five feet of elderberry plant stems. Mowing must be done in a manner that avoids damaging plants (e.g., stripping away bark through careless use of mowing/trimming equipment).

If the shrub cannot be avoided, then a mitigation plan shall be developed and implemented in consultation with USFWS consistent with the conservation guidelines for the valley elderberry longhorn beetle, which likely includes one or more of the following:

- Obtain credits at an approved mitigation bank; or
- Implement an onsite mitigation and monitoring plan that includes transplanted of the shrub and planting of elderberry seedlings.

The mitigation plan shall be approved by the USFWS prior to acceptance by the City. Any required onsite mitigation shall be incorporated into subsequent improvement and construction plans.

Timing/Implementation: Prior to approval of subsequent development and prior to and during construction activities

Enforcement/Monitoring: U.S. Fish and Wildlife Service and City of Elk Grove Development Services

MM 4.8.6

The project applicant shall design the subsequent public and private projects within the plan area to avoid impacts to potential habitat for vernal pool invertebrates by providing an appropriate setback from the edge of each pool, as determined by the City in consultation with the U.S. Fish and Wildlife Service, if feasible. If pools impacted cannot be avoided, the project proponent shall implement the following measures:

1. Completion of an onsite mitigation and monitoring plan that includes onsite creation/preservation of the pools. Mitigation shall be to the satisfaction of the U.S. Fish and Wildlife Service, the U.S. Army Corps of Engineers (as part of Section 404 permitting), and the City, or
2. Credits may be obtained at an approved mitigation bank.

Timing/Implementation: Prior to the approval of subsequent development and prior to construction activities

Enforcement/Monitoring: U.S. Fish and Wildlife Service, U.S. Army Corps of Engineers, and City of Elk Grove Development Services

MM 4.8.7a

As a condition of approval of subsequent development (i.e., approval of improvement and construction plans), including offsite improvements, under the Plan, the project applicant shall mitigate the loss of Swainson's hawk foraging and/or nesting habitat by one of the following methods:

- Preserve 1.0 acre of similar habitat for each acre lost due to project implementation. This land shall be protected through a fee title or conservation easement acceptable to the CDFG and the City of Elk Grove.
- Prepare and implement a Swainson's hawk mitigation plan to the satisfaction of the CDFG that includes the preservation of Swainson's hawk foraging habitat.

- Mitigate impacts in compliance with Chapter 16.130 of the City of Elk Grove Code as such may be amended from time to time and to the extent that said chapter remains in effect.

Compliance with this mitigation measure may be fulfilled in combination with the implementation of Mitigation Measure MM 4.1.1 if the CDFG determines that farmland preserved under MM 4.1.1 also qualifies as suitable Swainson's hawk foraging habitat.

Timing/Implementation: Prior to approval of improvement and construction plans
Enforcement/Monitoring: City of Elk Grove Development Services and CDFG

MM 4.8.7b

Prior to any and all subsequent construction activities in the plan area, a Swainson's hawk nest survey shall be conducted. The nest survey shall be conducted during the Swainson's hawk breeding season (March 15 – August 31) and within 30 days of construction activities for a 1/2-mile radius of the project site. In addition, a survey of the project site and areas within 500 feet of the project site shall be conducted once in April and once in May. If active Swainson's hawks nests are found within ½ mile of a construction site, the applicant shall consult with the Department of Fish and Game and a qualified biologist shall be retained by the City and funded by the project applicant and clearing and construction shall be postponed or halted until additional nesting attempts no longer occur. If a nest tree is found on the subsequent project site prior to construction and is proposed for removal, then appropriate permits from CDFG shall be obtained and mitigation implemented pursuant to CDFG guidelines.

Timing/Implementation: Prior to construction activities and throughout project construction
Enforcement/Monitoring: City of Elk Grove Development Services and CDFG

MM 4.8.8a

If construction is proposed during the raptor-breeding season (February– August), a focused survey for raptors (including burrowing owls), migratory bird nests, and bat roosts shall be conducted within 30 days prior to the beginning of construction activities by a qualified biologist in order to identify active nests onsite. If active nests are found, no construction activities shall take place within 500 feet of the nest until the young have fledged. This 500- foot construction prohibition zone may be reduced based on consultation and approval by the California Department of Fish and Game. Trees containing nests, or burrows that must be removed as a result of project implementation shall be removed during the non-breeding season (late September to March). If no active nests are found during the focused survey, no further mitigation will be required. This mitigation measure does not apply to a Swainson's hawk nest. Because the Swainson's hawk is Federally protected and a State threatened species, the removal of any tree containing an occupied hawk nest could severely affect nesting raptors, fledgling and/or eggs. Therefore, if an occupied Swainson's hawk nest tree is found on the subsequent project site prior to construction and is proposed for removal, then appropriate permits from CDFG shall be obtained pursuant to CDFG guidelines.

Timing/Implementation: Prior to construction activities
Enforcement/Monitoring: City of Elk Grove Development Services and CDFG

MM 4.8.8b

Within 30 days prior to the onset of construction activities outside of the breeding season (September–January), a qualified biologist shall conduct a burrow survey to determine if burrowing owls are present in the plan area. If burrowing owls are observed on the site, measures shall be implemented to ensure that no owls or active burrows are inadvertently buried during construction. Such measures include: flagging the burrow and avoiding disturbance; securing and preserving suitable habitat offsite; passive relocation and/or active relocation to move owls from the site. All measures shall be determined by a qualified biologist and approved by the CDFG.

All burrowing owl surveys shall be conducted according to CDFG protocol. The protocol requires, at a minimum, four field surveys of the entire site and areas within 500 feet of the site by walking transects close enough that the entire site is visible. The survey shall be at least three hours in length, either from one hour before sunrise to two hours after or two hours before sunset to one hour after. Surveys shall not be conducted during inclement weather, when burrowing owls are typically less active and visible.

Timing/Implementation: Prior to construction activities

Enforcement/Monitoring: City of Elk Grove Development Services and CDFG

MM 4.8.8c

Pursuant to the Migratory Bird Treaty Act and the California Fish and Game Code, if active songbird nests or active owl burrows are found within the survey area, clearing and construction within a minimum of 250 feet for owls and 100 feet for songbirds, or as determined by a qualified biologist to ensure disturbance to the nest will be minimized, shall be postponed or halted. Construction will not resume within the buffer until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. The perimeter of the protected area shall be indicated by bright orange temporary fencing. No construction activities or personnel shall enter the protected area, except with approval of the biologist.

Timing/Implementation: Thirty days prior to construction activities occurring between September 1 through January 31

Enforcement/Monitoring: City of Elk Grove Development Services and CDFG

Southeast Policy Area Strategic Plan:

MM 5.4.1

Applicants for any subsequent projects shall retain qualified biologists to conduct a preliminary evaluation of the specific project site to determine whether wet meadow, freshwater emergent wetland, or irrigation/drainage ditch vegetative communities occur within the specific project site. If any of these habitats are identified within the specific project site, surveys in and adjacent to (within 100 feet, where appropriate) the proposed impact area, including new construction access routes, shall be conducted to determine the presence/absence of the following special-status plant species.

Table 5.4-2

**Special-Status Plant Species (and Associated Habitat)
With the Potential to Occur in the Project Area**

Vegetative Community	Special-Status Plant Species Survey Requirements
----------------------	--

Wet Meadow		dwarf downingia Boggs Lake hedge-hyssop legenere Heckard's pepper-grass saline clover
Freshwater Wetland	Emergent	bristly sedge Peruvian dodder Boggs Lake hedge-hyssop woolly rose-mallow Sanford's arrowhead saline clover
Irrigation/Drainage Ditch		bristly sedge Peruvian dodder woolly rose-mallow Northern California black walnut Sanford's arrowhead

Surveys shall be conducted in accordance with CDFW Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities (2009). These guidelines require that rare plant surveys be conducted at the proper time of year when rare or endangered species are both evident and identifiable. Field surveys shall be scheduled to coincide with known flowering periods and/or during appropriate developmental periods that are necessary to identify the plant species of concern. Survey results shall be submitted to the City for review and approval.

If none of the species identified in **Table 5.4-2** are found in or adjacent to (within 100 feet) proposed impact areas, no further mitigation is required.

If any of the species identified in **Table 5.4-2** are found in or adjacent to (within 100 feet) proposed impact areas during the surveys, these plant species shall be avoided to the greatest extent feasible. Any specialstatus plant species that are identified adjacent to the Project area, but not proposed to be disturbed by the project, shall be protected by barrier fencing to ensure that construction activities and material stockpiles do not impact any special-status plant species. These avoidance areas shall be identified on site plans and/or, tentative subdivision maps.

If Project-related impacts will result in the loss of greater than 10 percent of occupied habitat for a special-status plant species, mitigation shall be required for all impacts that exceed the 10 percent threshold. For example, if 18 percent of occupied habitat will be impacted, mitigation shall only be required for the 8 percent that exceeds the 10 percent threshold. Mitigation for permanent impacts to special-status plant species shall include the preservation of occupied habitat at a 1:1 ratio (i.e., 1 acre preserved for each acre impacted). Temporarily disturbed special-status plant species sites shall be restored to original function and value.

Preservation areas may include undisturbed areas of the site that will be preserved and managed in perpetuity, off-site mitigation lands, or a combination of both. The preserved habitat shall be of equal or greater habitat quality to the areas impacted in terms of soil features, extent of disturbance, and vegetation structure, and contain extant populations of the same or greater size as the area impacted.

Plans for avoidance, minimization, and mitigation (if appropriate) shall be prepared and submitted to the City of Elk Grove Planning Department at the time of application for the City's review and approval. Surveys shall occur no more than two years prior to ground breaking of the subsequent project.

Alternatively if the SSHCP is implemented, future projects may participate in the SSHCP in lieu of this mitigation measure if the SSHCP meets the intent of mitigation measure **MM 5.4.1**.

MM 5.4.2

Applicants shall retain qualified biologists to conduct a preliminary evaluation of the specific project site to determine whether vernal pool fairy shrimp and/or vernal pool tadpole shrimp habitat occurs on or within 250 feet of the project area. If habitat is not present, project applicants shall submit a letter of their findings to the City and the USFWS for concurrence. If the USFWS concurs with the negative survey findings, project applicants shall submit proof of concurrence to the City with their application, and no further mitigation is required. If the USFWS does not concur, applicants shall undertake surveys or assume presence based on the USFWS's direction.

If it is determined that listed vernal pool branchiopods are present, the following mitigation is required.

For every acre of vernal pool habitat directly affected, project applicants shall replace the affected acreage at a 1:1 ratio (1 acre creation for each acre of impact) through the dedication of vernal pool creation credit(s) within a USFWS-approved mitigation bank or through creation/restoration of vernal pool habitat as part of a USFWS-approved mitigation plan. Vernal pool creation shall not occur within 250 feet of extant vernal pools unless specifically approved by the USFWS.

For every acre of vernal pool habitat directly and indirectly affected, the project applicant shall replace the affected acreage at a 2:1 ratio (2 acres of preservation for every 1 acre of impact) through the dedication of vernal pool preservation credit(s) within a USFWS-approved mitigation bank or preserved on- or off-site as part of a USFWS-approved mitigation plan. Other conservation measures may be required by the USFWS.

Alternatively if the SSHCP is implemented, future projects may participate in the SSHCP in lieu of this mitigation measure if the SSHCP meets the intent of mitigation measure **MM 5.4.2**.

MM 5.4.3

Applicants shall retain a qualified biologist to survey for the presence of elderberry shrubs with stems measuring greater than 1-inch diameter at ground level. Surveys shall be conducted in accordance with the USFWS 1999 Conservation Guidelines for the Valley Elderberry Longhorn Beetle. If no elderberry shrubs with one or more stems measuring 1 inch or greater in diameter at ground level are documented, no further mitigation is required. Survey results shall be submitted to the City for review and approval. If an elderberry shrub(s) with one or more stems measuring 1 inch or greater in diameter at ground level is documented, and a 100-foot avoidance buffer can be maintained around the shrub, the following protective measures shall be implemented:

- 1) Fence and flag all areas to be avoided during construction activities. In areas where encroachment into the 100-foot buffer has been approved by the USFWS, provide a minimum setback of at least 20 feet from the dripline of each elderberry plant.

2) Brief contractors on the need to avoid damaging the elderberry plants and the possible penalties for not complying with these requirements.

3) Erect signs every 50 feet along the edge of the avoidance area with the following information: "This area is habitat of the valley elderberry longhorn beetle, a threatened species, and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines, and imprisonment." The signs should be clearly readable from a distance of 20 feet and must be maintained for the duration of construction.

4) Instruct work crews about the status of the beetle and the need to protect its elderberry host plant.

5) Restore any damage done to the buffer area (area within 100 feet of elderberry plants) during construction. Provide erosion control and revegetate with appropriate native plants.

6) Continue to protect buffer areas after construction from adverse effects of the Project. Measures such as fencing, signs, weeding, and trash removal are usually appropriate.

7) Do not use insecticides, herbicides, fertilizers, or other chemicals that might harm the beetle or its host plant in the buffer areas or within 100 feet of any elderberry plant with one or more stems measuring 1 inch or more in diameter at ground level.

8) Project applicants shall provide a written description of how the buffer areas are to be restored, protected, and maintained after construction is completed to the USFWS and the City of Elk Grove Planning Department.

9) Mowing of grasses/ground cover shall only occur from July through April to reduce fire hazard. No mowing shall occur within 5 feet of elderberry plant stems. Mowing shall be done in a manner that avoids damaging plants (e.g., stripping away bark through careless use of mowing/trimming equipment).

If elderberry plants cannot be avoided, they must be transplanted to a conservation area in accordance with the 1999 USFWS guidelines, with USFWS approval. A plant that is unlikely to survive transplantation because of poor condition or location, or a plant that would be extremely difficult to move because of access problems, may be exempted from transplantation through consultation with the USFWS. In addition to transplanting all elderberry shrubs, additional elderberry seedlings or cuttings shall be planted at a 1:1 ratio (new plantings to affected stems). Native plants shall also be planted at a 1:1 ratio (native tree/plant species to each elderberry seedling or cutting). Stock of saplings, cuttings, and seedlings shall be obtained from local sources. If the parent stock is obtained from a distance greater than 1 mile from the conservation area, the USFWS must approve the plant donor sites prior to initiation of revegetation work. Planting or seeding the conservation area with native herbaceous species is encouraged.

Alternatively if the SSHCP is implemented, future projects may participate in the SSHCP in lieu of this mitigation measure if the SSHCP meets the intent of mitigation measure **MM 5.4.3**.

MM 5.4.4a

Protective silt fencing shall be installed between the aquatic habitats and the construction area limits to prevent accidental disturbance and to protect water quality within aquatic habitat during construction.

MM 5.4.4b

Standard best management practices shall be implemented during and after construction to protect water quality in sensitive habitat areas during construction.

MM 5.4.4c

Prior to implementation of construction activities, the project applicants with specific project sites within 100 feet of aquatic features identified on Figure 5.4-4 shall retain qualified biologists to conduct a survey for western pond turtle no more than 3 days prior to initiation of construction activities. If this species is documented near any proposed construction areas, the individual(s) shall be moved at least 500 feet downstream to suitable habitat. If individuals are observed during construction activities, all construction activities shall be halted, a qualified biologist shall be notified, and the qualified biologist shall relocate the individual prior to continuing construction activities.

If active nest sites are identified during the survey, the project applicant shall impose a construction setback of 100 feet for all active nest sites prior to commencement of any construction activities to avoid construction or access-related disturbances to western pond turtles until the eggs hatch or the nest is moved to an appropriate location as authorized by the CDFW.

Alternatively if the SSHCP is implemented, future projects may participate in the SSHCP in lieu of this mitigation measure if the SSHCP meets the intent of mitigation measures **MM 5.4.4a-c**.

MM 5.4.5a

All projects within the SEPA affecting potential GGS habitat shall implement the avoidance and minimization measures outlined in *Appendix C Standard Avoidance and Minimization Measures During Construction Activities in Giant Garter Snake (Thamnophis gigas) Habitat* (USFWS 1997).

MM 5.4.5b

The Shed C Channel restoration project shall implement the guidelines for outlined in *Appendix A Guidelines for Restoration and/or Replacement of Giant Garter Snake Habitat* (USFWS 1997).

MM 5.4.5c

If USFWS determines that replacement of GGS habitat is not fulfilled in association with the Shed C Channel restoration effort shall be implemented in accordance with Table 1 – Summary of Giant Garter Snake Conservation Measures found in *Appendix C Standard Avoidance and Minimization Measures During Construction Activities in Giant Garter Snake (Thamnophis gigas) Habitat* (USFWS 1997).

Alternatively, if the SSHCP is implemented, future projects may participate in the SSHCP in lieu of this mitigation measure if the SSHCP meets the intent of mitigation measure **MM 5.4.5a-c**.

MM 5.4.6

Applicants shall retain a qualified biologist to determine whether suitable nesting habitat occurs within 500 feet of the specific project site. If suitable habitat exists, focused surveys must be performed by a qualified biologist in accordance with the CDFW's *Staff Report on Burrowing Owl Mitigation*, published March 7, 2012. Surveys shall be repeated if project activities are suspended or delayed more than 15 days during nesting season.

If no burrowing owls are detected, no further mitigation is required. If active burrowing owl nest sites are detected, the project applicant shall implement the avoidance, minimization, and mitigation methodologies outlined in the CDFW's *Staff Report on Burrowing Owl Mitigation* prior to initiating project-related activities that may impact burrowing owls. Burrowing owl surveys are valid for one year from the date of the survey.

Alternatively if the SSHCP is implemented, future projects may participate in the SSHCP in lieu of this mitigation measure if the SSHCP meets the intent of mitigation measure **MM 5.4.6**.

MM 5.4.7a

If clearing and/or construction activities would occur during the raptor nesting season (January 15–August 15), preconstruction surveys to identify active raptor nests shall be conducted by a qualified biologist within 14 days of construction initiation in specific project sites. Focused surveys must be performed by a qualified biologist for the purposes of determining presence/absence of active nest sites within the proposed impact area, including construction access routes and a 1,000-foot buffer. If no active nests are found, no further mitigation is required. Surveys shall be repeated if construction activities are delayed or postponed for more than 30 days.

MM 5.4.7b

If active white-tailed kite or other raptor (excluding Swainson's hawk) nest sites are identified within 1,000 feet of Project activities, the applicant shall impose a 500-foot setback of all active nest sites prior to commencement of any Project construction activities to avoid construction or access-related disturbances to nesting raptors. Project-related activities (i.e., vegetation removal, earth moving, and construction) will not occur within the setback until the nest is deemed inactive. Activities permitted within setbacks and the size of setbacks may be adjusted through consultation with the CDFW and/or the City.

If active Swainson's hawk nest sites are identified within 1,000 feet of project activities, the applicant shall impose a 1,000-foot setback of all active nest sites prior to commencement of any construction activities to avoid construction or access-related disturbances to nesting raptors. Project-related activities (i.e., vegetation removal, earth moving, and construction) will not occur within the setback until the nest is deemed inactive. Activities permitted within setbacks and the size of setbacks may be adjusted through consultation with the CDFW and/or the City.

MM 5.4.7c

Trees containing white-tailed kite or other raptor (excluding Swainson's hawk) nests that must be removed as a result of Project implementation shall be removed during the non-breeding season (September 1–January 1). Swainson's hawks are State listed as a threatened species; therefore, impacts to Swainson's hawk nest trees require regulatory authorization from the CDFW prior to removal.

MM 5.4.7d

Project applicants shall mitigate for the loss of Swainson's hawk foraging habitat at a 1:1 ratio consistent with Elk Grove Municipal Code (EGMC) Chapter 16.130, *Swainson's hawk Impact Mitigation Fees*. Alternatively if the SSHCP is implemented, future projects may participate in the SSHCP in lieu of this mitigation measure if the SSHCP meets the intent of the Code Chapter 16.130.

MM 5.4.8

If clearing and/or construction activities would occur during the migratory bird nesting season (March 15–August 15), preconstruction surveys to identify active bird nests shall be conducted by a qualified biologist within 14 days of construction initiation on specific project sites. Focused surveys must be performed by a qualified biologist for the purpose of determining the presence/absence of active nest sites within the proposed impact area and a 200-foot buffer (if accessible). Surveys shall be repeated if construction activities are delayed or postponed for more than 30 days.

If active nest sites are identified within 200 feet of project activities, project applicants shall impose a 100-foot setback for all active nest sites prior to commencement of any project construction activities to avoid construction or access-related disturbances to bird nesting activities. Project-related activities (i.e., vegetation removal, earth moving, and construction) will not occur within setbacks until the nest is deemed inactive. Activities permitted within and the size (i.e., 100 feet) of setbacks may be adjusted through consultation with the CDFW and/or the City.

Sterling Meadows Tentative Subdivision Map:

MM 4.10.3

In order to mitigate for the loss of Swainson's hawk foraging habitat to a less than significant level, the project applicant shall acquire conservation easements or other instruments to preserve suitable foraging habitat for Swainson's hawk, as determined by the CDFG. The location of mitigation parcels as well as the conservation instruments protecting them shall be acceptable to the City and to the CDFG. The amount of land preserved shall be governed by a 1:1 mitigation ratio for each acre developed at the project site. In deciding whether to approve the land proposed for preservation by the project applicant, the City shall consider the benefits of preserving lands in proximity to other protected lands. The preservation of land shall be done prior to any site disturbance, such as clearing or grubbing, or the issuance of any permits for grading, building, or other site improvements, whichever occurs first. In addition, the City shall impose the following minimum conservation easement content standards:

- A) The land to be preserved shall be deemed suitable Swainson's hawk foraging habitat by the CDFG.
- B) All owners of the mitigation land shall execute the document encumbering the land.
- C) The document shall be recordable and contain an accurate legal description of the mitigation land.
- D) The document shall prohibit any activity, which substantially impairs or diminishes the land's capacity as suitable Swainson's hawk foraging habitat.
- E) If the land's suitability as foraging habitat is related to existing agricultural uses on the land, the document shall protect any existing water rights necessary to maintain such agricultural uses on the land covered by the document, and retain such water rights for ongoing use on the mitigation land.
- F) The applicant shall pay to the City a mitigation monitoring fee to cover the costs of administering, monitoring and enforcing the document in an amount determined by the receiving entity, not to exceed 10% of the easement price paid by the applicant, or a different amount approved by the City Council, not to exceed 15% of the easement price paid by the applicant.

G) Interests in mitigation land shall be held in trust by an entity acceptable to the City and/or the City in perpetuity. The entity shall not sell, lease, or convey any interest in mitigation land, which it shall acquire without the prior written approval of the City.

H) The City shall be named a beneficiary under any document conveying the interest in the mitigation land to an entity acceptable to the City.

I) If any qualifying entity owning an interest in mitigation land ceases to exist, the duty to hold, administer, monitor and enforce the interest shall be transferred to another entity acceptable to the City or to the City. Before committing to the preservation of any particular land pursuant to this measure, the project proponent shall obtain the City's approval of the land proposed for preservation. This mitigation measure may be fulfilled in combination with a mitigation measure imposed on the project requiring the preservation of agricultural land as long as the agricultural land is determined by the Department of Fish and Game to be suitable Swainson's hawk habitat.

MM 4.10.4a

If construction is proposed during the raptor breeding season (February–August), a focused survey for ground nesting raptors (including burrowing owls), migratory bird nests, and bat roosts shall be conducted within 30 days prior to the beginning of construction activities by a qualified biologist in order to identify active nests onsite. If active nests are found, no construction activities shall take place within 500 feet of the nest until the young have fledged. This 500-foot construction prohibition zone may be reduced based on consultation and approval by the CDFG. If no active nests are found during the focused survey, no further mitigation will be required.

MM 4.10.4b

Within 30 days prior to the onset of construction activities outside of the breeding season (September–January), a qualified biologist shall conduct a burrow survey to determine if burrowing owls are present on the project site. If burrowing owls are observed on the site, measures shall be implemented to ensure that no owls or active burrows are inadvertently buried during construction. Such measures include: flagging the burrow and avoiding disturbance; securing and preserving suitable habitat offsite; passive relocation and/or active relocation to move owls from the site. All measures shall be determined by a qualified biologist and approved by the CDFG.

All burrowing owl surveys shall be conducted according to CDFG protocol. The protocol requires, at a minimum, four field surveys of the entire site and areas within 500 feet of the site by walking transects close enough that the entire site is visible. The survey shall be at least three hours in length, either from one hour before sunrise to two hours after or two hours before sunset to one hour after. Surveys shall not be conducted during inclement weather, when burrowing owls are typically less active and visible.

MM 4.10.4c

Pursuant to the MBTA and the California Fish and Game Code, if active songbird nests or active owl burrows are found within the survey area, clearing and construction shall be postponed or halted within a minimum of 250 feet for owls and 100 feet for songbirds, or as determined by a qualified biologist to ensure disturbance to the nest will be minimized. Construction will not resume within the buffer until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence

of a second attempt at nesting. The perimeter of the protected area shall be indicated by orange mesh temporary fencing. No construction activities or personnel shall enter the protected area, except with approval of the biologist.

MM 4.10.5

The applicant can forego surveys required under A) and assume presence of listed vernal pool invertebrates in the appropriate water features on the site. Mitigation responsibilities would then commence with B).

The applicant shall evaluate wetland features on the project site to determine their suitability to support listed vernal pool invertebrates.

- A) Protocol level surveys (using methodologies approved by the United States Fish and Wildlife Service) shall be employed to determine if the wetland features on site support listed vernal pool invertebrates. If it is determined that these features do not support listed vernal pool invertebrates, no additional mitigation for this impact is necessary.
- B) If it is determined that listed vernal pool invertebrates are present, the applicant shall receive authorization from the United States Fish and Wildlife Service to impact these features. Mitigation for impacts shall include creation, restoration and/or preservation of listed vernal pool invertebrate habitat at no less than 3 acres of habitat created, restored and/or preserved for each acre impacted. Mitigation can be completed through purchase of credits in a United States Fish and Wildlife Service approved mitigation bank.

MM 4.10.6a

Within 30 days prior to commencement of construction activities, a pre-construction survey of land within 200 feet of all wetlands, channels, ponds, and other such waterways within the project site shall be conducted by a qualified biologist retained by the City and funded by the project applicant who is approved by the USFWS's Sacramento Fish and Wildlife Office. In order to protect snakes, de-watering of areas within the site shall not occur prior to completion of the preconstruction surveys. The biologist will provide the Service with a field report form documenting the monitoring efforts within 24- hours of commencement of construction activities. The monitoring biologist shall be retained by the City and funded by the project applicant to routinely monitor construction activities. If a snake is encountered during construction activities, the monitoring biologist shall contact the City Community Development Department, Planning Division and will have the authority to stop construction activities until appropriate corrective measures have been completed or it is determined that the snake will not be harmed.

GGs encountered during construction activities should be allowed to move away from construction activities on their own. Capture and relocation of trapped or injured individuals can only be attempted by personnel or individuals with current Service recovery permits pursuant to Section 10(a) 1(A) of the Act. The biologist shall be required to report any incidental take to the Service immediately by telephone at (916) 979-2725 and by written letter addressed to the Chief, Endangered Species Division, within one working day. The project area shall be re-inspected whenever a lapse in construction activity of two weeks or greater has occurred.

MM 4.10.6b

If a GGS is identified within the project site either during pre-construction surveys or during construction, the following shall occur:

- 1) The City of Elk Grove shall be notified;
- 2) The City shall suspend all construction activities on the site of the sighting and along any water feature within the plan area that is hydrologically connected to the site of the sighting;
- 3) Protocol surveys shall be conducted by qualified biologists retained by the City and funded by the project applicant who are approved by the Service's Sacramento Fish and Wildlife Office;
- 4) The project applicant shall consult with the USFWS and CDFG to determine appropriate mitigation for the species and habitat loss, possibly including Section 10 consultation with the USFWS and Section 2081 consultation with the CDFG; and,
- 5) The project applicant shall provide the City with proof of the consultation and compliance with USFWS and CDFG mitigation requirements before construction activities may resume.

MM 4.10.6c

No grading or other construction activities shall be conducted from October 1 to April 30, which is the inactive period of the GGS. More danger is posed to snakes during their inactive period, because they are occupying underground burrows or crevices and are more susceptible to direct effects, especially during excavation. A "no grading" period from October 1 to April 30 will apply to portions of the project site located within 1,000 feet of ditches, canals, ponds, wetlands or other such areas and shall be identified on improvement plans. This mitigation measure does not apply to land areas where surveys within the active period of the snake have been conducted and which failed to identify snakes.

MM 4.10.6d

Dewatering of ponds, ditches, canals and other such areas may begin any time after November 1, but no later than April 1 of the following year once the absence of the species is determined. All water must be removed by April 15, or as soon thereafter as weather permits, and the habitat must remain dry without any standing water for 15 consecutive days after April 15 and prior to excavating or filling the dewatered habitat.

MM 4.10.6e

Construction personnel shall participate in a USFWS-approved worker environmental awareness program. Under this program, workers shall be informed about the presence of GGSs and habitat associated with the species and that unlawful take of the animal or destruction of its habitat is a violation of the Act. Prior to construction activities, a qualified biologist approved by the USFWS shall instruct all construction personnel about: (1) the life history of the GGS; (2) the importance of irrigation canals, marshes/wetlands, and seasonally flooded areas, such as rice fields, to the GGS; and (3) the terms and conditions of the biological opinion. Proof of this instruction shall be submitted to the City and the Sacramento U.S. Fish and Wildlife Office.

MM 4.10.7

The project applicant shall revise the site plan of the Sterling Meadows project to avoid impacts to potential habitat for VELB, if feasible, prior to approval of the final map. If project development is required in areas that may impact elderberry shrubs containing stems measuring 1.0 inch or greater in diameter at ground level (development within 100 feet of shrub dripline), the project applicant shall perform one of the following measures prior to issuance of grading permits or approval of improvement plans, whichever occurs first:

- 1) Fence and flag all areas to be avoided during construction activities. In areas where encroachment on the 100-foot buffer has been approved by the USFWS, provide a minimum setback of at least 20 feet from the dripline of each elderberry plant.
- 2) Brief contractors on the need to avoid damaging the elderberry plants and the possible penalties for not complying with these requirements.
- 3) Erect signs every 50 feet along the edge of the avoidance area with the following information: "This area is habitat of the valley elderberry longhorn beetle, a threatened species and must not be disturbed. This species is protected by the Endangered Species Act of 1973, as amended. Violators are subject to prosecution, fines and imprisonment." The signs should be clearly readable from a distance of 20 feet and must be maintained for the duration of construction.
- 4) Instruct work crews about the status of the beetle and the need to protect its elderberry host plant.

Restoration and Maintenance

- 1) Restore any damage done to the buffer area (area within 100 feet of elderberry plants) during construction. Provide erosion control and revegetate with appropriate native plants.
- 2) Buffer areas must continue to be protected after construction from adverse effects of the project. Measures such as fencing, signs, weeding and trash removal are usually appropriate.
- 3) No insecticides, herbicides, fertilizers or other chemicals that might harm the beetle or its host plant should be used in the buffer areas, or within 100 feet of any elderberry plant with one or more stems measuring 1.0 inch or greater in diameter at ground level.
- 4) The applicant must provide a written description of how the buffer areas are to be restored, protected and maintained after construction is completed.
- 5) Mowing of grasses/ground cover may occur from July through April to reduce fire hazard. No mowing should occur within five feet of elderberry plant stems. Mowing must be done in a manner that avoids damaging plants (e.g., striping away bark through careless use of mowing/trimming equipment).

If the shrub cannot be avoided, then a mitigation plan shall be developed in consultation with USFWS consistent with the conservation guidelines for the valley elderberry longhorn beetle (which likely includes one or more of the following), shall be implemented:

- Obtain credits at an approved mitigation bank; or
- Implement an onsite mitigation and monitoring plan that includes transplantation of the shrub and planting of elderberry seedlings.

The mitigation plan shall be approved by the USFWS prior to acceptance by the City. Any required onsite mitigation shall be incorporated into subsequent improvement and construction plans.

MM 4.10.8

The applicant shall conduct a wetland delineation of the project site. The wetland delineation shall be submitted to the Army Corps of Engineers for verification. If the Army Corps of Engineers determines that the water features on the site are not jurisdictional, no additional mitigation is required. If the Army Corps of Engineers determines that there are jurisdictional waters on the project site, the applicant shall ensure that the project will result in no-net-loss of waters of the US by providing mitigation through impact avoidance, impact minimization and compensatory mitigation for the remaining impact. Compensatory mitigation shall require purchase of credits in an Army Corps of Engineers approved mitigation bank at a ratio no less than one acre purchased for each are impacted.

Lent Ranch Marketplace SPA:

MM18

Prior to improvement plan approval or building permit issuance, whichever comes first, implement one of the following alternatives to mitigate for the loss of 293 acres of Swainson's hawk foraging habitat:

- a) Preserve 293 acres (1 acre for each lost) of similar habitat within a 10-mile radius of the project site to be protected through fee title or conservation easement acceptable to the California Department of Fish and Game
- b) Prepare and implement a Swainson's Hawk Mitigation Plan to the satisfaction of the California Department of Fish and Game that includes preservation of Swainson's hawk foraging habitat.
- c) Submit a payment of a Swainson's hawk impact mitigation fee per acre impacted to the Department of Planning and Community Development in the amount as set forth in Chapter 16.130 of the City of Elk Grove Code as such may be amended from time to time and to the extent said Chapter remains in effect.

This condition of approval implements Mitigation Measures #MM4.8-1(a) from the Lent Ranch Marketplace Final EIR.

MM19

If active Swainson's hawk nests are found within 1/2 mile of the construction site, clearing and construction shall be postponed or halted, at the discretion of the biological monitor, until the nest is vacated and juveniles have fledged, as determined by the biologist, and there is no evidence of a second attempt at nesting. If a nest tree is found on the project site prior to construction and will be removed, then appropriate permits from CDFG shall be obtained pursuant to CDFG guidelines. This condition of approval implements Mitigation Measures #MM4.8-1(b) from the Lent Ranch Marketplace Final EIR.

MM20

No earlier than 45 days and no later than 20 days prior to the commencement of any construction that would occur during the nesting/breeding season (February 1 through September 1), a field survey shall be conducted by a qualified biologist to determine if active nests of special-status birds such as white-

tailed kite, California horned lark, burrowing owl, Swainson's hawk, or common bird species protected by the Migratory Bird Treaty Act and/or the California Fish and Game Code occur on the site. These surveys shall include all areas in or within 250 feet of the construction zone, including the extent of the directly affected portion of the drainage ditch. In addition, nesting surveys for Swainson's hawks shall include all areas in or within 1 mile of the construction site in order to ascertain the specific long-term mitigation replacement ratios for loss of foraging habitat. This condition of approval implements Mitigation Measure #MM4.8-2 (a) from the Lent Ranch Marketplace Final EIR.

MM21

Within 30 days prior to any construction activities outside of the breeding season (September 1 through January 31), a qualified biologist shall conduct a burrow survey to determine if burrowing owls are residing on the site, in order to ensure no owls are inadvertently buried during construction. If owls are observed on the site prior to ground-disturbance activities, measures such as flagging the burrow and avoiding disturbance, passive relocation, or active relocation to move owls from the site, as determined by a qualified biologist and as approved by the CDFG, shall be implemented. In addition, a qualified biologist shall monitor initial grading to ensure that no owls are harmed during the process.

All surveys for burrowing owls shall be conducted according to CDFG protocol. This protocol requires, at a minimum, four field surveys of the entire site and areas within 500 feet of the site by walking transects close enough that the entire site is visible. The surveys should be at least three hours long, either from one hour before sunrise to two hours after or two hours before sunset to one hour after. Surveys shall not be conducted during inclement weather, when owls are typically less active and visible. This condition of approval implements Mitigation Measure #MM4.8-2 (b) from the Lent Ranch Marketplace Final EIR.

MM22

If the existing stand of elderberry must be removed, prior to approval of grading permits, the project applicant shall undertake consultation with the USFWS pursuant to Section 10(a) of the Federal Endangered Species Act for an incidental take permit for removing the existing elderberry stand. Under this permit, the USFWS may allow transplantation of all elderberry plants with a stem diameter of one inch or greater while monitored by a qualified biologist and using USFWS-approved timing and procedures to reduce loss of plants or beetles. Prior to transplantation, a site shall be selected in consultation with the USFWS for protection in perpetuity and based on connectivity to other suitable beetle habitat areas.

Additional elderberry plants shall be planted in the mitigation area at ratios of 2:1 to 5:1, depending on the quality of the beetle habitat being removed. For plants with stem diameters one inch or greater with no emergence holes, the ratio is 2:1. If beetles are present as evidenced by emergence holes in 50 percent or less of the shrubs one inch or more in diameter, the ratio is 3:1. If emergence holes are present in over 50 percent of the shrubs one inch or more in diameter, then the ratio of replacement shrubs is 5:1. Because the number of the shrubs to be planted is dependent on the presence or absence of beetle exit holes, the stems larger than 1 inch in diameter would need to be reexamined prior to removal. This condition of approval implements Mitigation Measure #MM4.8-3 from the Lent Ranch Marketplace Final EIR.

MM23

To protect the Giant garter snake, the following measures shall be taken at the appropriate point in the development process:

a) Prior to grading or other site preparation activities, the applicant shall install temporary fabric fencing, a minimum of 3 feet in height, along the western edge of the property to prevent giant garter snakes from entering construction areas. The fencing will need to be regularly inspected and maintained. Exclusion fencing must remain in place and be maintained for the duration of the construction activities in order to prevent snakes from entering construction areas.

b) Construction activities, particularly within the western portion of the site, should be conducted as much as is feasible within the active period of the snake (generally from May 1 to October 1). Direct impacts are lessened during this time because snakes are actively moving and avoiding danger. More danger is posed to snakes during their inactive period, because they are occupying underground burrows or crevices and are more susceptible to direct effects, especially during excavation.

c) Any dewatered habitat must remain dry for at least 15 consecutive days after April 15 and prior to excavating or filling of the dewatered habitat.

d) Construction personnel shall participate in a the U.S. Fish and Wildlife Service (USFWS)-approved worker environmental awareness program. Under this program, workers shall be informed about the presence of giant garter snakes and habitat associated with the species and that unlawful take of the animal or destruction of its habitat is a violation of the Act. Prior to construction activities, a qualified biologist approved by the Service shall instruct all construction personnel about: (1) the life history of the giant garter snake; (2) the importance of irrigation canals, marshes/wetlands, and seasonally flooded areas, such as rice fields, to the giant garter snake; and (3) the terms and conditions of the biological opinion. Proof of this instruction shall be submitted to the Sacramento U.S. Fish and Wildlife Office.

e) Within 24-hours prior to commencement of construction activities, the site shall be inspected by a qualified biologist who is approved by the USFWS Sacramento Fish and Wildlife Office. The biologist will provide the Service with a field report form documenting the monitoring efforts within 24-hours of commencement of construction activities. The monitoring biologist needs to be available thereafter; if a snake is encountered during construction activities, the monitoring biologist shall have the authority to stop construction activities until appropriate corrective measures have been completed or it is determined that the snake will not be harmed. Giant garter snakes encountered during construction activities should be allowed to move away from construction activities on their own. Capture and relocation of trapped or injured individuals can only be attempted by personnel or individuals with current Service recovery permits pursuant to Section 10(a) 1(A) of the Act. The biologist shall be required to report any incidental take to the Service immediately by telephone at (916) 979-2725 and by written letter addressed to the Chief, Endangered Species Division, within one working day. The project area shall be re-inspected whenever a lapse in construction activity of two weeks or greater has occurred.

f) Prior to approval of grading permits, the project applicant shall undertake consultation with the USFWS and CDFG to determine the need for federal and state incidental take permits for giant garter snakes on the project site.

This condition of approval implements Mitigation Measures #MM4.8-4(a - f) from the Lent Ranch Marketplace Final EIR.

MM24

Valley oaks that meet the criteria contained in the City's Tree Preservation Ordinance will be avoided by construction and protected during all construction activity, if feasible. To protect oak trees, the following measures will be implemented:

a) Before initiating any construction activity near the protected oak trees, install chain-link fencing or a similar protective barrier at least one foot outside the dripline of each tree or as far as possible from the tree trunk where the existing road is within the tree dripline. The barrier fencing will remain in place for the duration of construction activity.

b) Any required pruning of oak trees shall be conducted before construction activity begins. Oak trees that require pruning of branches larger than two inches in diameter shall be pruned by a certified arborist. No pruning of the six-foot-diameter tree will be permitted.

c) No signs, ropes, cables (except cables that may be installed by a certified arborist or other professional tree expert), or other items shall be attached to the oak trees.

d) No vehicles, construction equipment, mobile home/office, supplies, materials, or facilities shall be driven, parked, stockpiled, or located within the driplines of oak trees.

e) No grading shall be allowed within the driplines of oak trees, except where paved roadway already exists. Removal of pavement within the driplines of oak trees shall be conducted in the presence of a certified arborist to ensure that damage and stress to any oak tree is minimized.

f) Conduct any work necessary within the dripline by hand.

g) Paving within the driplines of oak trees shall be stringently minimized. When paving is absolutely necessary, porous material shall be used or a piped aeration system shall be installed under the supervision of a certified arborist.

h) Landscaping beneath oak trees may include non-plant materials such as boulders, cobbles, and wood chips. The only plant species that shall be planted within the driplines of oak trees are those that are tolerant of the natural semi-arid environs of the trees. Limited drip irrigation approximately twice per summer is recommended for the understory plants.

i) No sprinkler system shall be installed in such a manner that it irrigates within the driplines of oak trees.

This condition of approval implements Mitigation Measures #MM4.8-6(a) from the Lent Ranch Marketplace Final EIR.

City of Elk Grove General Plan:

No additional feasible mitigation available beyond compliance with existing regulations and proposed General Plan policies and standards.

5 CULTURAL RESOURCES

Laguna Ridge Specific Plan:

MM 4.10.1a

Prior to subsequent approvals on non-participating properties, a detailed cultural resources field survey of the subject property shall be conducted by the City and funded by the project applicant. The cultural resources field survey shall identify any cultural resource finds and will set out measures to mitigate any impacts to any significant resources as defined by CEQA, California Register of Historic Resources and/or National Historic Preservation Act. Mitigation methods to be employed include, but are not limited to, the following:

- Redesign of the subsequent development project to avoid the resource. The resource site shall be deeded to a non-profit agency to be approved by the City for maintenance of the site.
- If avoidance is determined infeasible by the City, then the resource shall be mapped, stabilized, and capped pursuant to appropriate standards.
- If the City determines capping infeasible, then the resource shall be excavated and recorded to appropriate standards.

Timing/Implementation: Prior to subsequent approvals on non-participating properties

Enforcement/Monitoring: City of Elk Grove Development Services

MM 4.10.1b

In the event that any historic surface or subsurface archaeological features or deposits, including locally darkened soil indicative of an archaeological midden that could conceal cultural deposits, animal bone, shell, obsidian, mortars, or human remains, are uncovered during on-site or off-site construction, all work within 100 feet of the find shall cease and Development Services shall be notified. An archaeologist who meets the Secretary of the Interior's Professional Qualifications Standards shall be contacted to determine if the resource is significant and to determine appropriate mitigation. Any artifacts uncovered shall be recorded and removed to a location to be determined by the archaeologist. The discovery of human remains shall also be reported to the County Coroner in accordance with Section 7050.5 the California Health and Safety Code, and the Native American Commission for further investigation. If the remains are determined to be Native American, the Native American Commission shall inform the most likely descendent and will determine the appropriate disposition of the remains and grave goods.

Timing/Implementation: During construction activities

Enforcement/Monitoring: City of Elk Grove Development Services

MM 4.10.2

Prior to subsequent approvals on non-participating properties that include the buildings at 8533 and 8551 Poppy Ridge Road, a detailed evaluation of the historical significance of the structures at the two sites listed above shall be conducted by the City and funded by the project applicant. If the evaluation is negative (i.e., not historically significant), no further mitigation is required.

If the evaluation determines that the two sites are historically significant, the subsequent development project shall be redesigned to avoid the building site(s). The building site(s) will be deeded to a non-profit agency to be approved by the City for the maintenance of the site(s). If avoidance is determined to be infeasible by the City, all required documentation (in addition to the items above) shall be conducted in accordance with appropriate standards:

- The development of a site-specific history and appropriate contextual information regarding the particular resource; in addition to archival research and comparative studies, this task could involve limited oral history collection;
- Accurate mapping of the noted resources, scaled to indicate size and proportion of the structures;
- Architectural description of affected structures;
- Photo documentation of the designated resources, both in still and video format;
- Recordation of measured architectural drawings, in the case of specifically designated buildings of higher architectural merit; and
- Any historical significant artifacts within buildings and the surrounding area shall be recorded and deposited with the appropriate museum.

These buildings shall be preserved and relocated off-site.

Timing/Implementation: Prior to subsequent approvals on non-participating properties associated with 8533 and 8551 Poppy Ridge Road

Enforcement/Monitoring: City of Elk Grove Development Services

Southeast Policy Area Strategic Plan:

MM 5.5.1a

If cultural resources (i.e., prehistoric sites, historic sites, and isolated artifacts) are discovered during grading or construction activities within the Project area, work shall be halted immediately within 50 feet of the discovery, the City Planning Department shall be notified, and a professional archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards in archaeology and/or history shall be retained to determine the significance of the discovery.

The City shall consider mitigation recommendations presented by a professional archaeologist that meets the Secretary of the Interior's Professional Qualifications Standards in archaeology and/or history for any unanticipated discoveries. The City and the Project applicant of the site where the discovery is made shall consult and agree on implementation of a measure or measures that the City deems feasible. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. The Project proponent shall be required to implement any mitigation necessary for the protection of cultural resources.

MM 5.5.1b

If human remains are discovered during any ground-disturbing activities within the Project area, all work shall be halted immediately within 50 feet of the discovery, the City Planning Department shall be notified, and the County Coroner must be notified according to Section 5097.98 of the California Public Resources Code and Section 7050.5 of the California Health and Safety Code. If the remains are

determined to be Native American, the coroner will notify the Native American Heritage Commission, and the procedures outlined in CEQA Section 15064.5(d) and (e) shall be followed.

MM 5.5.1c

Prior to the approval of subsequent development projects within the Project area that have not already been evaluated for the presence of cultural resources, a detailed cultural resources field survey of the subject property shall be conducted by the City and funded by the applicant. If the site is deemed to have a high probability of Native American cultural resources, the site will require preconstruction coordination with the local Native American tribe. The applicant shall provide proof of this coordination to the City. The cultural resources field survey shall identify any cultural resource finds and will set out measures to mitigate any impacts to any significant resources as defined by CEQA, the California Register of Historic Resources, and/or the National Historic Preservation Act. Mitigation methods to be employed include, but are not limited to, the following:

- a. Redesign of the subsequent development project to avoid the resource. The resource site shall be deeded to a nonprofit agency to be approved by the City for maintenance of the site.
- b. If avoidance is determined to be infeasible by the City, the resource shall be mapped, stabilized, and capped pursuant to appropriate standards.
- c. If capping is determined infeasible by the City, the resource shall be excavated and recorded to appropriate standards.

MM 5.5.1d

Prior to the approval of subsequent development projects that include the residences at 7809 Kammerer Road and 8011 Kammerer Road, a detailed evaluation of the historical significance of the structures at the two sites listed above shall be conducted by the City and funded by the applicant. If the evaluation is negative (i.e., not historically significant), no further mitigation is required. If the evaluation determines that one or both of the two sites are historically significant, the subsequent development project(s) will be redesigned to avoid the historical site(s). The historical site(s) will be deeded to a nonprofit agency to be approved by the City for the maintenance of the site(s). If avoidance is determined to be infeasible by the City, the applicant will prepare a treatment plan to minimize adverse effects, relocate resources, if appropriate, and conduct all required documentation (in addition to the items above) in accordance with appropriate standards:

- a. The development of a site-specific history and appropriate contextual information regarding the particular resource; in addition to archival research and comparative studies, this task could involve limited oral history collection.
- b. Accurate mapping of the noted resource(s), scaled to indicate size and proportion of the structure(s).
- c. Architectural description of affected structures.
- d. Photo documentation of the designated resources, both in still and video format.
- e. Recordation of measured architectural drawings, in the case of specifically designated buildings of higher architectural merit. Any historical significant artifacts within buildings and the surrounding area shall be recorded and deposited with the appropriate museum.

MM 5.5.2

If any paleontological resources (fossils) are discovered during grading or construction activities within the Project area, work shall be halted immediately within 50 feet of the discovery, and the City Planning Department shall be immediately notified. At that time, the City will coordinate any necessary investigation of the discovery with a qualified paleontologist.

The City shall consider the mitigation recommendations of the qualified paleontologist for any unanticipated discoveries of paleontological resources. The City and the appropriate project applicant shall consult and agree on implementation of a measure or measures that the City deems feasible and appropriate. Such measures may include avoidance, preservation in place, excavation, documentation, curation, data recovery, or other appropriate measures. The project proponent shall be required to implement any mitigation necessary for the protection of paleontological resources.

Sterling Meadows Tentative Subdivision Map:

MM 4.11.2a

If any prehistoric or historic artifacts or other indications of archaeological or paleontological resources are found once the project construction is underway, all work in the immediate vicinity must stop and the City shall be immediately notified. An archaeologist meeting the Secretary of the Interior's Professional Qualifications Standards in prehistoric or historical archaeology, as appropriate, shall be retained to evaluate the finds and recommend appropriate mitigation measures.

MM 4.11.2b

If human remains are discovered, all work must stop in the immediate vicinity of the find and the County Coroner must be notified, according to Section 7050.5 of California's Health and Safety Code. If the remains are Native American, the coroner shall notify the Native American Heritage Commission, which in turn shall inform a most likely descendant. The descendant shall then recommend to the landowner appropriate disposition of the remains and any grave goods.

Lent Ranch Marketplace SPA:

MM26

In the event artifacts or unusual amounts of stone, bone, or shell are uncovered during excavation and grading operations, all construction activity shall cease until a qualified archeologist can be consulted to determine the extent and importance of the find and recommend appropriate mitigation. Any artifacts uncovered shall be recorded and removed for storage at a location to be determined by the archeologist.

If human remains are discovered, all work must stop in the immediate vicinity of the find, and the County Coroner must be notified, according to Section 7050.5 of the California Health and Safety Code. If the remains are Native American, the coroner will notify the Native American Heritage Commission, which in turn will inform a most likely descendent. The descendent will then recommend to the landowner appropriate disposition of the remains and any grave goods. This condition of approval implements Mitigation Measure #MM4.10-1(a and b) from the Lent Ranch Marketplace Final EIR.

6 ENERGY

Laguna Ridge Specific Plan:

None Required.

Southeast Policy Area Strategic Plan:

None Required.

Lent Ranch Marketplace SPA:

None Required.

Sterling Meadows Tentative Subdivision Map:

None Required.

City of Elk Grove General Plan:

None Required.

7 GEOLOGY AND SOILS

Laguna Ridge Specific Plan:

MM 4.9.1

Prior to issuance of a grading permit for each subsequent project, the project applicant shall submit to the City an erosion control plan, which will utilize best construction practices to limit the erosion effects of the proposed project. Measures shall include, but are not limited to, the following:

- Hydro-seeding
- Placement of loose straw and/or straw bales within drainage ways and ahead of drop inlets;
- The temporary lining (during construction activities) of drop inlets with “filter fabric” (a specific type of geotextile fabric);
- The placement of straw wattles along slope contours;
- Directing subcontractors to a single designation “wash-out” location (as opposed to allowing them to washout wherever they feel like); and
- The use of siltation fences.

Timing/Implementation: Prior to the issue of grading permit and during construction.

Enforcement/Monitoring: City of Elk Grove Development Services, Public Works.

Southeast Policy Area Strategic Plan:

None Required.

Lent Ranch Marketplace SPA:

MM2

The construction contract shall require that the contractor water all exposed soil surfaces as required by the requirements of the grading permit. Areas being actively graded shall be kept sufficiently moist to prevent the generation of windborne dust. This condition of approval implements Mitigation Measure #MM4.3-1(a) from the Lent Ranch Marketplace Final EIR.

MM3

The construction contract shall require that the contractor water all dirt roads three times per day to prevent dust generation and that the contractor will limit travel speeds on any unpaved roads to 15 mph or less. This condition of approval implements Mitigation Measure #MM4.3-1(b) from the Lent Ranch Marketplace Final EIR.

MM4

The construction contract shall require that all trucks hauling soil, sand, or other loose material are covered and at least two feet of freeboard (i.e., minimum vertical distance between top of load and top of trailer) is maintained. This condition of approval implements Mitigation Measure #MM4.3-1(c) from the Lent Ranch Marketplace Final EIR.

Sterling Meadows Tentative Subdivision Map:

None Required.

City of Elk Grove General Plan:

MM 5.6.5

Before the start of any earthmoving activities, the project owner shall retain a qualified scientist (e.g., geologist, biologist, paleontologist) to train all construction personnel involved with earthmoving activities, including the site superintendent, regarding the possibility of encountering fossils, the appearance and types of fossils likely to be seen during construction, and proper notification procedures should fossils be encountered. Training on paleontological resources shall also be provided to all other construction workers but may use videotape of the initial training and/or written materials rather than in-person training.

If any paleontological resources (fossils) are discovered during grading or construction activities within the project area, work shall be halted immediately within 50 feet of the discovery, and the City Planning Division shall be immediately notified. The project owner will retain a qualified paleontologist to evaluate the resource and prepare a recovery plan in accordance with Society of Vertebrate Paleontology guidelines (SVP 2010). The recovery plan may include but is not limited to a field survey, construction monitoring, sampling and data recovery procedures, museum storage coordination for any specimen recovered, and a report of findings. Recommendations in the recovery plan that are determined by the City to be necessary and feasible will be implemented by the applicant before construction activities resume in the area where the paleontological resources were discovered.

8 GREENHOUSE GAS AND CLIMATE CHANGE

Laguna Ridge Specific Plan:

None Required.

Southeast Policy Area Strategic Plan:

MM 5.7.1

Prior to building permit approval, the City of Elk Grove Planning Department shall require that project applicants implement the following measures to reduce emissions of GHGs associated with the proposed Project, based on the referenced measures from the City's CAP and the City of Elk Grove Municipal Code:

- a. All buildings constructed shall achieve Tier 1 of Title 24, Part 1 green building standards to exceed minimum Title 24 energy efficiency standards by 15 percent, consistent with CAP Measure BE-6.
- b. Individual projects shall provide prewiring or conduit for solar photovoltaic (PV) in each future building, consistent with CAP Measure BE-10. The intent of prewiring for solar PV systems is to reduce barriers to later installation of on-site solar PVs. Future development under the proposed Project may also satisfy the intent of this mitigation by installing on-site solar PV systems.
- c. Future nonresidential land uses under the Project shall provide interior and exterior storage areas for recyclables and green waste and adequate recycling containers located in public areas, consistent with CAP Measure RC-1. Composting of a limited amount of food waste that may be generated as a byproduct of on-site food preparation shall be completed by agreement with a waste hauler. Cooking oils shall be directed off-site for reuse.
- d. All parking lots for future shopping centers or office developments constructed as part of the proposed Project shall include designated carpool parking spaces near store entries, implementing CAP Measure TACM-3.
- e. Future development under the Project shall provide bicycle parking at a ratio of 1 bicycle parking space per 20 vehicle parking spaces, consistent with CAP Measure TACM-5. Provision of additional bicycle support facilities such as lockers and shower facilities, consistent with voluntary CAP Measure TACM-5, may qualify the applicant for eligibility to request a reduction in the minimum number of parking spaces required, pursuant to Elk Grove Municipal Code Sections 23.58.060 and 23.16.037.
- f. During the design review process, future development applicants shall demonstrate compliance with CAP Measure TACM-5 by showing an analysis of office and mixed-use building connections and orientation to pedestrian paths, bicycle paths, and existing transit stops within a half mile of the Project site. As feasible, all such Project components shall orient development toward an existing transit, bicycle, or pedestrian corridor with minimum setbacks, or support equivalent pedestrian, bicycle, or alternative transportation through other methods.
- g. Future development under the proposed Project shall minimize setbacks from the street, provide pedestrian pathways, and use design features for entrances and parking lots to encourage pedestrian access and safety between transit facilities, consistent with CAP Measure TACM-5.

h. Indoor water conservation measures shall be incorporated, such as use of low-flow toilets, urinals, and faucets.

Future development under the Project shall ensure that low-water-use landscaping (i.e., drought-tolerant plants and drip irrigation) is installed. At least 75 percent of all landscaping plants shall be drought-tolerant as determined by a licensed landscape architect or contractor and in conformance with Chapters 14.10 and 23.54 of the Elk Grove Municipal Code.

Lent Ranch Marketplace SPA:

MM5

The construction contract shall require contractors to implement ridesharing programs for construction employees traveling to and from the site. This condition of approval implements Mitigation Measure #MM4.3-1(d) from the Lent Ranch Marketplace Final EIR.

Sterling Meadows Tentative Subdivision Map:

None Required.

City of Elk Grove General Plan:

None Required.

9 HAZARDS AND HAZARDOUS MATERIALS

Laguna Ridge Specific Plan:

MM 4.5.1

Soil sampling shall be conducted within the areas of potential herbicide/pesticide contamination as identified in **Figure 4.5-3** of the Draft EIR. The soil samples shall be taken to assess the potential for persistent pesticide or herbicide residuals. If substances are detected at concentrations that could pose a health hazard and/or violate local, State, or Federal health standards, remediation of the affected areas shall be undertaken in accordance with the requirements of the City of Elk Grove and the Sacramento County Environmental Management Department. Development of the site shall not commence until the site is deemed remediated and clear for development by the City in consultation with the Sacramento County Environmental Management Department.

Timing/Implementation: Prior to approval of improvement plans and/or grading plans for areas shown on Figure 4.5-4 of the Draft EIR.

Enforcement/Monitoring: City of Elk Grove Development Services and Sacramento Environmental Management Department.

MM 4.5.2

Prior to the issuance of demolition permits for existing onsite structures, asbestos material sampling shall be conducted to determine if materials are present. Any identified asbestos containing building materials present in each of the structures to be dismantled shall be removed under acceptable engineering methods and work practices by a licensed asbestos abatement contractor prior to removal. These practices include, but are not limited to: containment of the area by plastic, negative air filtration, wet removal techniques and personal respiratory protection and decontamination. The process shall be designed and monitored by a California Certified Asbestos Consultant. The abatement and monitoring plan shall be developed and submitted for review and approval by the appropriate regulatory agency (the Sacramento Metropolitan Air Pollution Management District).

Timing/Implementation: Prior to the issuance of demolition permits

Enforcement/Monitoring: Sacramento Metropolitan APMD, City of Elk Grove Development Services

MM 4.5.3a

As part of subsequent applications for rezone request on non-participating properties, the project applicant shall provide the City with a Phase I Site Assessment to determine whether ash or a former burn site is present on the subject property.

Timing/Implementation: Prior to acceptance of an application for subsequent development on non-participating properties as complete

Enforcement/Monitoring: City of Elk Grove Development Services

MM 4.5.3b

Prior to approval of improvement plans and/or a grading permit, a detailed surface investigation shall be conducted to determine if former burn dumps, chemical dumps or ash are present within each subsequent project site. If any ash or burn sites are identified, surface and subsurface soil sampling shall be conducted to determine if contamination exists. If substances are detected at concentrations that could pose a health hazard and/or violate local, State, or Federal health standards, remediation of the affected areas shall be undertaken in accordance with the requirements of the City of Elk Grove and the Sacramento County Environmental Management Department. Development of the site shall not commence until the site is deemed remediated and clear for development by the City in consultation with the Sacramento County Environmental Management Department.

Timing/Implementation: Prior to approval of improvement plans and/or grading plans.

Enforcement/Monitoring: City of Elk Grove Development Services and Sacramento County Environmental Management Department.

MM 4.5.4a

Prior to the issuance of demolition permits for existing onsite structures, all loose and peeling paint shall be removed and disposed of by a licensed and certified lead paint removal contractor, in accordance with local, state, and federal regulations.

Timing/Implementation: Prior to issuance of demolition permits

Enforcement/Monitoring: City of Elk Grove Development Services

MM 4.5.4b

The demolition contractor shall be informed that all paint on the buildings shall be considered as containing lead. The contractor shall take appropriate precautions to protect his/her workers, the surrounding community, and to dispose of construction waste containing lead paint in accordance with local, state, and federal regulations.

Timing/Implementation: Prior to issuance of demolition permits and included in construction contracts

Enforcement/Monitoring: City of Elk Grove Development Services

Southeast Policy Area Strategic Plan:

MM 5.8.3a

Prior to approval of improvement plans and/or a grading permit for properties within the Project area that have not already been evaluated for the potential for the presence of hazardous materials and hazardous conditions, Phase I ESAs shall be prepared by a qualified professional. Each subsequent Phase I ESA shall assess the potential for hazards and recommend measures for cleaning up hazards, if present. Future project applicants shall implement all measures as recommended in the Phase I ESA to the satisfaction of the City Development Services Department and the Sacramento County Environmental Management Department.

MM 5.8.3b

With each improvement plan and/or grading plan application, the Project applicant shall include a detailed assessment of soil contamination associated with previous herbicide/pesticide use on the site.

Soil sampling shall be conducted within the areas of potential herbicide/pesticide contamination. If substances are detected at concentrations that could pose a health hazard and/or violate local, State, or federal health standards, remediation of the affected areas shall be undertaken in accordance with the requirements of the City of Elk Grove and the Sacramento County Environmental Management Department. Development of the site shall not commence until the site is deemed remediated and clear for development by the City in consultation with the Sacramento County Environmental Management Department.

MM 5.8.3c

Prior to the issuance of demolition permits for existing onsite structures constructed prior to 1979, asbestos material sampling shall be conducted to determine if asbestos containing building materials are present. Any identified asbestos containing building materials present in each of the structures to be dismantled shall be removed under acceptable engineering methods and work practices by a licensed asbestos abatement contractor prior to removal. These practices include, but are not limited to: containment of the area by plastic, negative air filtration, wet removal techniques, and personal respiratory protection and decontamination. The process shall be designed and monitored by a California Certified Asbestos Consultant. The abatement and monitoring plan shall be developed and submitted for review and approval by the Sacramento Metropolitan Air Quality Management District

MM 5.8.3d

Prior to the issuance of demolition permits for existing onsite structures that were constructed prior to 1970, all loose and peeling paint shall be removed and disposed of by a licensed and certified lead paint removal contractor, in accordance with local, State, and federal regulations. The demolition contractor shall be informed that all paint on the buildings shall be considered as containing lead. The contractor shall take precautions in accordance with local, state, and federal regulations to protect his/her workers, the surrounding community, and to dispose of construction waste containing lead paint.

MM 5.8.3e

Prior to approval of improvement plans and/or a grading permit for development of properties that formerly contained, or currently contain, dairy operations or debris piles, the Project applicant shall retain a qualified environmental consultant to prepare a Phase 2 environmental site assessment (ESA). The Phase 2 ESA shall incorporate soil testing to determine if past dairy operations or the presence of debris piles resulted in soil and/or groundwater contamination. If the Phase 2 ESA determines that the property does not contain soil and/or groundwater contamination, cleanup of the dairy operations and debris piles may proceed in accordance with the requirements of the Sacramento County Environmental Management Department. Hazardous materials and wastes shall be disposed of at appropriate hazardous waste acceptance facilities.

In the event that the Phase 2 ESA determines that past dairy operations and/or debris piles have resulted in soil and/or groundwater contamination, the environmental consultant preparing the Phase 2 ESA shall provide a detailed work plan for clean up and remediation. All remediation work shall be done to the cleanup standards for the particular land use being proposed on the subject property. Remediation shall be completed to the satisfaction of the Sacramento County Environmental Management Department.

MM 5.8.3f

Prior to approval of improvement plans and/or a grading permit for development of properties that contain transformers, the City Planning Department shall consult with SMUD, which owns and operates the transformers, to determine whether onsite transformers are to be abandoned, moved, upgraded, etc. Together, the City Planning Department and SMUD shall develop a plan for dealing with all of the transformers located within the Project area. Future actions associated with the transformers may be implemented as individual development Projects are proposed.

Lent Ranch Marketplace SPA:

MM13

Prior to the issuance of demolition permits for existing onsite structures, asbestos material sampling shall be conducted to determine if materials are present. Any identified asbestos-containing materials present in each of the structures to be dismantled shall be removed under acceptable engineering methods and work practices by a licensed asbestos abatement contractor prior to removal. These practices include, but are not limited to: containment of the area by plastic, negative air filtration, wet removal techniques and personal respiratory protection and decontamination. The process shall be designed and monitored by a California Certified Asbestos Consultant. The abatement and monitoring plan shall be developed and submitted for review and approval by the appropriate regulatory agency (the Sacramento Metropolitan Air Pollution Control District) and shall include all on-site structures with ACBM.

Prior to the issuance of demolition permits for existing onsite structures, all loose and peeling paint shall be removed and disposed of by a licensed and certified lead paint removal contractor, in accordance with local, state, and federal regulations.

The demolition contractor shall be informed that all paint on the buildings shall be considered as containing lead. The contractor shall take appropriate precautions to protect his/her workers, the surrounding community, and to dispose of construction waste containing lead paint in accordance with local, state, and federal regulations.

This condition of approval implements Mitigation Measure #MM4.5-1 and MM4.5- 2(a and b) from the Lent Ranch Marketplace Final EIR.

Sterling Meadows Tentative Subdivision Map:

None Required.

City of Elk Grove General Plan:

MM 5.8.2

Prior to approval of improvement plans, grading permits, and or demolition permits for properties in the Planning Area that have not already been evaluated for the potential for the presence of hazardous materials and hazardous conditions, Phase I ESAs shall be prepared by a qualified professional. Each Phase I ESA shall assess the potential for hazards and provide recommendations whether additional investigation (Phase II ESA) should be completed. If determined necessary, a Phase II ESA shall be conducted to determine the lateral and vertical extent of soil, groundwater, and/or soil vapor

contamination, as recommended by the Phase I ESA. The City shall not issue a grading or building permit for a site where contamination has been identified until remediation or effective site management controls appropriate for the site use have been completed consistent with applicable regulations and to the satisfaction of the Sacramento County Environmental Management Department, the California Department of Substances Control, and/or Central Valley Regional Water Quality Control Board, as appropriate. If the Phase I ESA determines there are no recognized environmental conditions, no further action is required. However, the City shall ensure any grading or improvement plan or building permit includes a statement that if hazardous materials contamination is discovered or suspected during construction activities, all work in the vicinity of the contamination shall stop immediately until a qualified professional has evaluated the site and determined an appropriate course of action.

10 HYDROLOGY AND WATER QUALITY

Laguna Ridge Specific Plan:

MM 4.7.1

The project applicant shall submit to the City of Elk Grove proof that a Storm Water Pollution Prevention Plan (SWPPP) has been submitted to the California Regional Water Quality Control Board, Central Valley Region. The SWPPP shall be administered throughout all phases of grading and project construction. The SWPPP shall be included with all subsequent project improvement and grading plans and shall incorporate Best Management Practices (BMPs) to ensure that potential water quality impacts during construction phases are minimized. Examples of BMPs that may be implemented during site grading and construction could include inlet filters, filter barriers, silt fences, and sedimentation basins. The SWPPP shall be consistent with the City's NPDES permit (NPDES No. CAS082597).

Timing/Implementation: Prior to the approval of subsequent improvement plans and grading plans and noted on plans

Enforcement/Monitoring: City of Elk Grove Public Works, and RWQCB

MM 4.7.2

Prior to the approval of each subsequent tentative subdivision map, the project applicant shall be required to demonstrate that drainage facilities, consistent with the Storm Drainage Master Plan for Laguna Ridge Specific Plan (Wood-Rogers, 2002), will adequately serve the subsequent project, consistent with City standards and off-site flooding impacts would not result, and that such facilities are either available or will be available upon site development. This demonstration may take the form of plans and/or reports, which shall be reviewed and approved by the City consistent with the Specific Plan infrastructure phasing provisions.

Timing/Implementation: Prior to the approval of each subsequent tentative parcel and/or subdivision map

Enforcement/Monitoring: City of Elk Grove Public Works

MM 4.7.3a

Biofilter swales and vegetated strips shall be placed in the bottom of channel areas and be designed to provide biofiltration of pollutants in project runoff. The project engineer shall consult with the City when designing these areas, and the developer shall submit designs of the areas to the City for review and approval prior to approval of the improvement plans. Water quality control features shall be consistent with the City's NPDES permit (NPDES No. CAS082597).

Timing/Implementation: Prior to approval of improvement plans for each water quality facility

Enforcement/Monitoring: City of Elk Grove Public Works, and CVRWQCB

MM 4.7.3b

Subsequent non-residential projects shall be required to locate all storage areas away from any drainage features and provide water quality control measures in storm drainage facilities such as grease and

sediment traps, vegetative filters, and containment structures for hazardous materials. This requirement shall be reflected on site plans and improvement plans. Water quality control features shall be consistent with the City's NPDES permit (NPDES No. CAS082597).

Timing/Implementation: As a condition of approval of subsequent non-residential projects

Enforcement/Monitoring: City of Elk Grove Public Works and Development Services

MM 4.7.3c

All plan area storm drains shall provide a permanent storm drain message "No Dumping – Flows to Creek" or other approved message at each storm drain inlet. This may be accomplished with a stamped concrete impression (for curbs) or manufactured colored tiles, which are epoxied in place, adjacent to the inlet (for parking lots and areas without curbs).

Timing/Implementation: Prior to improvement plan approval for drainage facilities

Enforcement/Monitoring: City of Elk Grove Public Works

Southeast Policy Area Strategic Plan:

MM 5.4.9a

Applicants shall retain a qualified wetland consultant to determine if potentially jurisdictional waters are present. If potentially jurisdictional features are identified, the project applicant shall submit a preliminary jurisdictional determination to the USACE for verification. The verified delineation will be submitted to the City for its records.

MM 5.4.9b

Applicants shall ensure there is no net loss of riparian vegetation. Mitigation as required in regulatory permits issued through the CDFW, the USACE, or the RWQCB may be applied to satisfy this measure. Evidence of compliance with this mitigation measure shall be provided to the City prior to construction and grading activities for the proposed Project.

MM 5.4.9c

Project applicants shall ensure that their specific projects would result in no net loss of federally protected waters through impact avoidance, impact minimization, and/or compensatory mitigation, as determined in CWA Section 404 and 401 permits and/or a 1602 Streambed Alteration Agreement. Evidence of compliance with this mitigation measure shall be provided prior to construction and grading activities for each proposed project.

MM 5.9.2a

New development applications within the Project area shall be accompanied by site-specific drainage reports consistent with the Southeast Policy Area Drainage Study. The project drainage reports shall be reviewed and approved by the Public Works Department prior to improvement plan approval for new development. The project drainage report shall include, at a minimum, written text addressing existing conditions, the effects of project improvements, all appropriate calculations, a watershed map, potential increases in downstream flows and volumes, proposed on-site improvements, and drainage easements, if necessary, to accommodate flows from the site. The sites pecific drainage plans shall

ensure that peak flows from developed areas do not exceed pre-development conditions. Temporary or interim improvements may be allowed provided the Public Works Department has determined such temporary or interim improvements do not impede development of the drainage master plan contained in the Southeast Policy Area Drainage Study.

MM 5.9.2b

Grading plans for individual development projects in the Project area shall be designed in such a way to direct all overland flow into proposed on-site detention basins. If this is not feasible, separate stormwater quality treatment facilities shall be constructed and a detailed drainage study shall be completed which demonstrates that the overall flood control and hydromodification goals for the watershed, contained in the City's SDMP, are still met.

Lent Ranch Marketplace SPA:

MM16

The project applicant shall prepare and submit to the City of Elk Grove, a Storm Water Pollution Prevention Plan (SWPPP) to be administered throughout all phases of grading and project construction. The SWPPP will incorporate Best Management Practices (BMPs) to ensure that potential water quality impacts during construction phases are minimized. Examples of BMPs that may be implemented during site grading and construction could include straw hay bales, straw bale inlet filters, filter barriers, and silt fences. This condition of approval implements Mitigation Measures #MM4.7-1 from the Lent Ranch Marketplace Final EIR.

MM17

Any biofilter swales and vegetated strips shall be placed in the bottom of channel areas and be designed to provide biofiltration of pollutants in project runoff. The project engineer shall consult with the City when designing these areas, and the developer shall submit designs of the areas to these agencies for review and approval prior to approval of the Final Map. The developer shall retain a qualified specialist to assist in designing the features, to maximize their effectiveness in removing pollutants. This condition of approval implements Mitigation Measures #MM4.7-2(b) from the Lent Ranch Marketplace Final EIR.

Sterling Meadows Tentative Subdivision Map:

MM 4.8.1

Prior to the issuance of grading permits, the project applicant shall prepare a Storm Water Pollution and Prevention Plan (SWPPP) to be administered through all phases of grading and project construction. The SWPPP shall incorporate Best Management Practices (BMPs) which describe the site, erosion and sediment controls, means of waste disposal, control of post-construction sediment and erosion control measures and maintenance responsibilities, water quality monitoring and reporting during storm events (which will be responsibility of the project applicant), corrective actions for identified water quality problems and non-storm water management controls. The SWPPP shall address spill prevention and include a countermeasure plan describing measures to ensure proper collection and disposal of all pollutants handled or produced on the site during construction, including sanitary wastes, cement, and petroleum products. The measures included in the SWPPP shall ensure compliance with applicable regional, state and federal water quality standards. These measures shall be consistent with the City's

Drainage Manual and Land Grading and Erosion Control Ordinance which may include (1) restricting grading to the dry season; (2) protecting all finished graded slopes from erosion using such techniques as erosion control matting and hydroseeding; (3) protecting downstream storm drainage facilities from sedimentation; (4) use of silt fencing and hay bales to retain sediment on the project site; (5) use of temporary water conveyance and water diversion structures to eliminate runoff; and (6) any other suitable measures. The SWPPP shall be submitted to the City for review. The applicant shall require all construction contractors to retain a copy of the approved SWPPP on each construction site.

MM 4.8.2a

The project applicant shall implement BMPs to ensure that long-term water quality is protected. The BMPs shall be designed, constructed and maintained to meet a performance standard established by the City and shall conform to the provisions of the City's NPDES permit. The City or project applicant shall retain a qualified specialist to monitor the effectiveness of the BMPs selected. Monitoring activities, along with funding for monitoring, shall be established and shall include, but not be limited to, initial setup, annual maintenance, and annual monitoring. The project shall implement actions and procedures established to reduce the pollutant loadings in storm drain systems. The two main categories of these BMPs are "source control" and "treatment control." Source control BMPs are usually the most effective and economical in preventing pollutants from entering storm and non-storm runoff. Source control BMPs relevant to the proposed project that shall be implemented include:

- 1) Public Education/Participation activities. Information shall be provided to new project residents regarding pollution prevention;
- 2) Illegal Dumping controls. The Covenants, Conditions, and Restrictions (C, C, & R's) for the project shall include a prohibition on the dumping of waste products (solid waste/liquid waste and yard trash) into storm drain systems, open space areas, and creeks;
- 3) Stormwater pollution source controls shall be conditioned to provide a permanent storm drain message "No Dumping – Flows to Creek" or other approved message at each storm drain inlet. This may be accomplished with a stamped concrete impression (for curbs) or manufactured colored tiles, which are epoxied in place adjacent to the inlet (for parking lots and areas without curbs).
- 4) Street and storm drain maintenance activities. These activities control the movement of pollutants and remove them from pavements through catch basin cleaning, storm drain flushing, street sweeping, and by regularly removing illegally dumped material from storm channels and creeks. (The City of Elk Grove would be responsible for regular storm drain maintenance within the public right of way; grease traps and other stormwater quality control devices on private property shall be maintained by the project.)

MM 4.8.2b

Biofilter swales and vegetated strips shall be placed in the bottom of channel areas and be designed to provide biofiltration of pollutants in project runoff. The project engineer shall consult with the City when designing these areas, and the developer shall submit designs of the areas to the City for review and approval prior to approval of the improvement plans. Water quality control features shall be consistent with the City's NPDES permit (NPDES No. CAS082597).

MM 4.8.2c

Non-residential development shall be required to locate all storage areas away from any drainage features and provide water quality control measures in storm drainage facilities such as grease and sediment traps, vegetative filters, and containment structures for hazardous materials. This requirement shall be reflected on site plans and improvement plans. Water quality control features shall be consistent with the City's NPDES permit (NPDES No. CAS082597).

MM 4.8.2d

The project applicant shall consult with the City when designing the proposed detention basin. The developer shall submit detention basin designs and proposed plantings for in and around the detention basin for review and approval by the City. Development of the detention basin shall be subject to BMPs identified in mitigation measure MM 4.8.1.

MM 4.8.4

Prior to the approval of improvement plans, the project applicant shall be required to demonstrate that permanent drainage facilities will adequately serve the project, or phase of the project, consistent with City standards. The project applicant shall demonstrate that increases in off-site flooding impacts will not result, and that the planned drainage facilities are either available or will be available upon site development. This demonstration may take the form of final plans and/or reports, which shall be reviewed and approved by the City. Interim storm drainage facilities shall be considered on a case-by-case basis to meet this mitigation measure.

City of Elk Grove General Plan:

MM 5.9.4

Implement mitigation measure MM 5.12.1.1 (Plan for Services).

11 LAND USE AND PLANNING

Laguna Ridge Specific Plan:

None Required.

Southeast Policy Area Strategic Plan:

None Required.

Lent Ranch Marketplace SPA:

None Required.

Sterling Meadows Tentative Subdivision Map:

None Required.

City of Elk Grove General Plan:

None Required.

12 MINERAL RESOURCES

Laguna Ridge Specific Plan:

None Required.

Southeast Policy Area Strategic Plan:

None Required.

Lent Ranch Marketplace SPA:

None Required.

Sterling Meadows Tentative Subdivision Map:

None Required.

City of Elk Grove General Plan:

None Required.

13 NOISE

Laguna Ridge Specific Plan:

MM 4.4.1a

Site preparation and construction activities shall be limited to between the hours of 6:00 A.M. to 8:00 P.M., Monday through Friday, and 7:00 A.M. to 8:00 P.M. on Saturday and Sunday (City of Elk Grove Noise Control Ordinance, Section #6.68.090 (e)). Furthermore, construction equipment maintenance shall be limited to the same hours. This requirement shall be included as a note in all project construction plans.

Timing/Implementation: During all grading and construction phases of the project.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.4.1b

All construction equipment shall be equipped with appropriate mufflers in good working condition. This requirement shall be included as a note in all project construction plans.

Timing/Implementation: During all grading and construction phases of the project.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.4.1c

Construction staging areas shall be located as far from noise-sensitive uses as is feasible. This requirement shall be included as a note in all project construction plans.

Timing/Implementation: During all grading and construction phases of the project.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.4.1d

Stationary construction equipment shall be located as far from noise sensitive uses as feasible, and temporary or portable acoustic barriers shall be installed around the equipment/work area when within 100 feet or less of residential properties or other sensitive uses. This requirement shall be included as a note in all project construction plans.

Timing/Implementation: During all grading and construction phases of the project.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.4.1e

Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted on a sign no larger than 4 foot by 8 foot at all construction entrances to allow for surrounding and onsite property owners to contact the job superintendent. If the City or the job superintendent receives a complaint, the superintendent shall investigate, take appropriate corrective action, and report the action taken to the reporting party. This requirement shall be included as a note in all project construction plans.

Timing/Implementation: During all grading and construction phases of the project.
Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.4.2

Prior to the commencement of pile driver operations in proximity to residential areas, an assessment of vibrations induced by pile driving at the site shall be completed. During indicator pile driving, vibrations should be measured at regular intervals to determine the levels of vibration at various distances from pile driving equipment. The indicator piles shall be driven at locations at least 400 feet from any existing residents. After monitoring, methods of reducing the peak ground velocities to less than 0.4 inches/second shall be determined and implemented during production pile driving. Methods to reduce vibrations, if needed, could include cut-off trenches, and the use of smaller hammers. The vibration reduction techniques to be used should be described in a note attached to the construction plans for the project to be reviewed and approved by the appropriate City regulatory agency prior to issuance of building permits. This requirement shall be included as a note in all project construction plans.

Timing/Implementation: Prior to any pile driving activities.
Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.4.3a

When residential tentative subdivision maps include and/or are located adjacent to school and park sites, the residential subdivisions shall be designed to meet City noise standards set forth in Table 4.4-6 of the Draft EIR. If the noise levels from the school and park facilities is expected to exceed the applicable standard, the project applicant shall implement appropriate mitigation measures. Appropriate mitigation measures include walls, berms, and buffers that would ensure compliance with applicable standards, as determined through the adopted Design Review procedures. Evidence of compliance shall be provided to the City.

Timing/Implementation: Prior to approval of residential tentative subdivision maps.
Enforcement/Monitoring: City of Elk Grove Development Services, Elk Grove Unified School District, and Elk Grove Community Services District.

MM 4.4.3b

Prior to approval of a non-residential use that will abut a residential use and has the potential to generate noise, the project applicant shall demonstrate compliance with City noise standards set forth in Table 4.4-6 of the Draft EIR. If the noise levels from the facility exceed the applicable standard, the project applicant shall implement appropriate mitigation measures. Appropriate mitigation measures include walls, berms, and buffers that would ensure compliance with applicable standards, as determined through the adopted Design Review procedures.

Timing/Implementation: Prior to approval of permits and/or plans for non-residential uses and adjacent to existing or planned residential uses.
Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.4.4

The project proponent shall ensure that a disclosure statement shall be recorded against the property and be provided to all prospective buyers of properties within the proposed plan area notifying such persons of the presence of existing and future noise-producing agricultural-related activities in the immediate Specific Plan area. The disclosure statement shall be reviewed and approved by City of Elk Grove Development Services.

Timing/Implementation: Prior to each final subdivision map approval.
Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.4.5

Prior to development of any noise-sensitive uses (as defined by the City of Elk Grove Noise Element) along Elk Grove Boulevard, Big Horn Road and Poppy Ridge Road, the project applicant shall identify specific noise mitigation measures for areas that would be located within the 60 dB Ldn traffic noise contours shown in **Table 4.4-12** of the Draft EIR that would attenuate noise levels in compliance with City noise standards for traffic noise as shown in **Table 4.4-9** of the Draft EIR. Potential design features for noise attenuation are listed below.

- A) Setbacks (i.e., open space, frontage roads, recreational areas, and storage yards) typically reduce noise attenuation by 4 to 6 dB per doubling of distance from the source.
- B) b. Barriers (i.e., walls, berms, or structures) to achieve a noise reduction ranging from 5 to 15 dB. Earth berms provide approximately 3 dB more attenuation than a wall.
- C) Site design (i.e., building location) to reduce noise levels.
- D) Building design (i.e., location of noise-sensitive uses within a building) to reduce the impact of noises on inhabitants.
- E) Building façades (i.e., utilizing all features of the building façade including the closed windows) to reduce noise.
- F) Vegetation (i.e., trees and other vegetation) 100 feet of dense foliage can achieve a 5 dB attenuation of traffic noise.
- G) Noise-reducing paving materials (i.e., rubberized asphalt) reduce traffic noise by approximately 4 dB.

Timing/Implementation: Prior to approval of tentative subdivision maps and development projects along Elk Grove Boulevard, Big Horn Road and Poppy Ridge Road.
Enforcement/Monitoring: City of Elk Grove Development Services.

Southeast Policy Area Strategic Plan:

MM 5.10.1

The following mitigation measures shall be implemented and specified on all project implementation plans:

- a. Construction activities (excluding emergency work and activities that would result in a safety concern to the public or construction workers) shall be limited to between the hours of 7:00 a.m. and 7:00 p.m. Construction activities shall be prohibited on Sundays and federal holidays.

- b. Construction equipment shall be properly maintained and equipped with noise-reduction intake and exhaust mufflers and shrouds, in accordance with manufacturers' recommendations.
- c. Construction equipment staging areas shall be centrally located on the Project site or located at the farthest distance possible from nearby residential land uses.
- d. All motorized construction equipment and vehicles shall be turned off when not in use.
- e. To the extent practical, alternative construction processes that generate lower noise levels should be selected. Examples include the use of drilled piles as opposed to impact piles, and the use of electrified equipment as opposed to combustion engines.

MM 5.10.3

The City shall require acoustical assessments to be prepared as part of the environmental review process for future land use development projects. The acoustical assessments shall evaluate potential environmental noise impacts attributable to the proposed Project, as well as the compatibility of proposed land uses in comparison to applicable City noise standards. Where the acoustical analysis determines that noise levels would exceed applicable City noise standards, noise reduction measures shall be identified and included in the Project. Such measures may include, but are not limited to, the incorporation of setbacks, sound barriers, berms, hourly limitations, or equipment enclosures. The emphasis of such measures shall be placed on site planning and Project design. The acoustical analysis shall be prepared in accordance with City requirements, as noted in the City's General Plan, Table NO-B, Requirements for Acoustical Analysis.

MM 5.10.4

A vibration impact assessment shall be prepared for construction projects that would involve the use of major vibration-generating equipment (e.g., pile drivers, vibratory rollers) that could generate groundborne vibration levels in excess of 0.2 in/sec ppv at nearby structures (refer to **Table 5.10-12** for distances to the projected 0.2 in/sec ppv contours). Measures to reduce ground vibration levels shall be identified for potentially significant impacts. Such measures may include, but are not limited to, changes in site design and/or use of alternative construction techniques (e.g., sonic or drilled piles). A vibration impact assessment shall be prepared for the development of on-site transit facilities, as well as planned land uses that could be exposed to high levels of transit-generated ground vibration levels (refer to **Table 5.10-13** for distances to potentially significant transit-related vibration contours). Vibration-reduction measures shall be identified for groundborne vibration levels in excess of 0.2 in/sec ppv at nearby structures. Such measures may include, but are not limited to, incorporation of building setbacks, and improvements to LRT track, including the use of track ballast mats, high-resilience fasteners, welded track, and/or a floating slab trackbed.

Lent Ranch Marketplace SPA:

MM7

All construction activity within the Lent Ranch SPA area shall comply with the following requirements:

- (a) Site preparation and construction activities shall be limited to between the hours of 6 A.M. to 8 P.M., Monday through Friday, and 7:00 A.M. to 8:00 P.M. on Saturday and Sunday (City of Elk Grove Noise

Control Ordinance, Section #6.68.090). Furthermore, construction equipment maintenance shall be limited to the same hours.

(b) All construction equipment shall be equipped with appropriate mufflers in good working condition.

(c) Construction staging areas shall be located as far from noise-sensitive uses as is feasible.

(d) Stationary construction equipment shall be located as far from noise sensitive uses as feasible, and temporary or portable acoustic barriers shall be installed around the equipment/work area when within 100 feet or less of residential properties or other sensitive uses.

(e) Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted on a sign no larger than 4 foot by 8 foot at all construction entrances to allow for surrounding and on-site property owners to contact the job superintendent. If the City or the job superintendent receives a complaint, the superintendent shall investigate, take appropriate corrective action, and report the action taken to the reporting party.

(f) If construction noise results in noise levels that exceed the 65 dB (A) Ldn/CNEL to onsite or adjacent residential land uses, the project applicant shall relocate the occupants on a temporary basis.

(g) If construction vibration results in peak ground velocities of more than 0.1 inches/second to onsite or adjacent residential land uses, the project applicant shall relocate the occupants on a temporary basis.

(h) Prior to the commencement of pile driver operation in proximity to residential areas, an assessment of vibrations induced by pile driving at the site shall be evaluated. During indicator pile driving, vibrations should be measured at regular intervals to determine the levels of vibration at various distances from pile driving equipment. The indicator piles shall be driven at location at least 400 feet from any existing residents. After monitoring, methods of reducing the peak ground velocities to less than 0.4 inches/second shall be determined and implemented during production pile driving. Methods to reduce vibrations, if needed, could include cut-off trenches, and the use of smaller hammers. The vibration reduction techniques to be used should be described in a note attached to the construction plans for the project to be reviewed and approved by the appropriate City regulatory agency prior to issuance of building permits.

This condition of approval implements Mitigation Measure #MM4.1(a-f) and #MM4.4-4(a and b) from the Lent Ranch Marketplace Final EIR.

MM8

The project developer shall implement noise attenuation measures, as necessary to reduce exterior and interior noise levels below the thresholds shown in the General Plan Noise Element. Based on the Land Use Compatibility Guidelines in the Noise Element (as well as Policy NO-1), the exterior thresholds are 60 dB(A) Ldn/CNEL for residential uses and 65 dB(A) for commercial uses. Based on Policy NO-7, the interior threshold is 45 dB(A) Ldn/CNEL for residential uses. Based on Table II-3 of the Noise Element, the acceptable interior noise levels in conference rooms and small offices are 40 to 45 dB(A), in large offices, banks and stores, 45 to 50 dB(A), and in restaurants, 45 to 55 dB(A). The measures required shall be identified during the planning and design of individual projects within the project site, on the basis of a detailed acoustical analysis. The analysis shall consider traffic generated by the proposed project and

anticipated cumulative development, based on the Sacramento County Traffic Model. This condition of approval implements Mitigation Measure #MM4.4-5(a) from the Lent Ranch Marketplace Final EIR.

MM9

A noise barrier of sufficient size to break the line of sight between exterior usable areas within the multi-family residential uses and traffic noise sources along SR99/West Stockton Boulevard and parking lot noise shall be developed along the District F boundary. The noise wall will be designed in accordance with design guidelines, as adopted in the District Development Plan for District F (MultiFamily). This condition of approval implements Mitigation Measure #MM4.4-5(b) from the Lent Ranch Marketplace Final EIR.

MM10

Where sweepers are operated within 75 feet of residential uses, sweeper operations shall be restricted to the hours of 7:00 A.M. to 10:00 P.M. This condition of approval implements Mitigation Measure #MM4.4-7 from the Lent Ranch Marketplace Final EIR.

MM11

Loading docks constructed on the project site shall be designed to have either a depressed (i.e., below grade) loading dock area; an internal bay; or wall to break the line of sight between residential land uses and loading operations. Acoustical analysis shall be performed to demonstrate that the loading docks do not result in noise levels that exceed City standards at nearby residential property lines. These components shall be incorporated into the plans to be submitted by the applicant to the City of Elk Grove for review and approval prior to the issuance of building permits. This condition of approval implements Mitigation Measure #MM4.4-8 from the Lent Ranch Marketplace Final EIR.

MM12

The applicant shall minimize noise impacts from electrical and mechanical equipment, such as ventilation and air conditioning units, by locating equipment away from receptor areas, proper selection and sizing of equipment, installation of equipment with proper acoustical shielding and incorporating the use of parapets into building design. This condition of approval implements Mitigation Measure #MM4.4-9 from the Lent Ranch Marketplace Final EIR.

Sterling Meadows Tentative Subdivision Map:

MM 4.6.1a

Site preparation and construction activities shall be limited to between the hours of 7:00 A.M. to 7:00 P.M. whenever such activity is adjacent to residential uses (Elk Grove General Plan Policy NO-3-Action 1). Construction equipment maintenance shall be limited to the same hours.

MM 4.6.1b

The project applicant shall prepare construction specifications that require the contractor to perform the following tasks:

- Equip all construction equipment with appropriate mufflers in good working condition.

- Locate stationary construction equipment and construction staging areas as far from noise sensitive uses as feasible.
- Install temporary or portable acoustic barriers around the equipment and staging area when within 100 feet or less of residential properties or other sensitive uses.

MM 4.6.1c

Construction hours, allowable workdays, and the phone number of the job superintendent shall be clearly posted on a sign no larger than 4 foot by 8 foot at all construction entrances to allow for surrounding and onsite property owners to contact the job superintendent. If the City or the job superintendent receives a complaint, the superintendent shall investigate, take appropriate corrective action, and report the action taken to the reporting party.

MM 4.6.1d

Prior to the commencement of any pile driver operation in proximity to residential areas, an assessment of vibrations induced by pile driving at the site shall be completed. During indicator pile driving, vibrations should be measured at regular intervals to determine the levels of vibration at various distances from pile driving equipment. The indicator piles shall be driven at locations at least 400 feet from any existing residents. After monitoring, methods of reducing the peak ground velocities to less than 0.4 inches/second shall be determined and implemented during production pile driving. Methods to reduce vibrations, if needed, could include cut-off trenches, and the use of smaller hammers. The vibration reduction techniques to be used should be described in a note attached to the construction plans for the project to be reviewed and approved by the appropriate City regulatory agency prior to issuance of building permits. This requirement shall be included as a note in all project construction plans.

MM 4.6.2a

A six-foot high solid wall shall be constructed between any park uses located adjacent to residential uses. The location of these walls shall be shown on improvement plans.

MM 4.6.2b

A six-foot high solid wall shall be constructed between multi-family uses and any adjacent single-family uses. The location of these walls shall be shown on improvement plans.

MM 4.6.2c

An eight-foot high solid wall shall be constructed between commercial uses and any adjacent residential uses. The location of these walls shall be shown on improvement plans.

MM 4.6.4

The project applicant shall construct an eight (8) foot high wall of solid masonry material to provide a noise buffer between the residential and adjacent agricultural uses. The wall shall be constructed where residential uses border adjacent agricultural land uses to the west and north.

In lieu of constructing the solid masonry wall, the project developer may provide a 100-foot buffer between the residential and agricultural land use areas. Roadways between the residential uses and

agricultural areas are considered part of the 100-foot buffer. Phasing the project and developing the residential areas 100 feet or more from the agricultural uses would provide this buffer. The solid masonry wall or buffer would not be required at the time that the adjacent property is no longer zoned for agricultural use.

MM 4.6.5

To mitigate exposure to noise from surrounding roadways and internal uses, the project applicant shall construct a 6-foot high solid masonry wall along B Drive, a 7-foot high solid masonry wall along Lotz Parkway and an 8-foot high solid masonry wall along Kammerer Road. The location of these walls shall be shown on improvement plans.

City of Elk Grove General Plan:

No additional mitigation required beyond compliance with existing standards and proposed General Plan policies.

14 POPULATION AND HOUSING

Laguna Ridge Specific Plan:

None Required.

Southeast Policy Area Strategic Plan:

None Required.

Lent Ranch Marketplace SPA:

None Required.

Sterling Meadows Tentative Subdivision Map:

None Required.

City of Elk Grove General Plan:

None Required.

15 Public Services and Recreation

Laguna Ridge Specific Plan:

MM 4.6.1.1a

Prior to each tentative subdivision and/or parcel map approval, the project applicant shall submit to the City, information documenting adequate availability of water supplies and associated infrastructure facilities for the proposed development consistent with facilities and phasing set forth in the Laguna Ridge Specific Plan water study (Wood-Rogers, 2000). Subsequent project applications shall not be approved by the City until proof has been provided that water supplies are available and approval from SCWA has been received.

Timing/Implementation: Prior to tentative subdivision and/or parcel map approval

Enforcement/Monitoring: City of Elk Grove Development Services and Sacramento County Water Agency

MM 4.6.1.1b

As a condition of subsequent development applications, uses constructed on the property shall incorporate into the building plans water conservation measures including drought tolerant landscaping with low fuel potential, low-flow toilets, urinals, shower heads, lavatory faucets, and sink faucets, as well as insulation to reduce water uses before hot water reaches equipment or fixtures.

Timing/Implementation: Prior to issuance of each building permit

Enforcement/Monitoring: City of Elk Grove Development Services

MM 4.6.2.1

Prior to each tentative subdivision or parcel map, the project applicant shall be required to demonstrate that the permanent sewer system, consistent with the Preliminary Sewer Master Plan for the Laguna Ridge Specific Plan (WoodRodgers, 2002) adequately serves the subsequent project. This demonstration may take the form of plans and/or reports, which shall be reviewed and approved by the City consistent with the Specific Plan infrastructure phasing provisions. The project applicant shall also pay the required sewer connection and capacity fees that are used to fund expansion of trunk and interceptor facilities.

Timing/Implementation: Prior to the approval of each tentative subdivision or parcel map

Enforcement/Monitoring: City of Elk Grove Development Service, Sacramento Regional County Sanitation District and County Sanitation District

MM 4.6.2.2

Prior to approval of each tentative subdivision or parcel map that would utilize the interim sewer facilities, the project applicant shall be required to demonstrate that there is adequate sewer capacity to support the proposed project. This will include confirmation from Sacramento Regional County Sanitation District and County Sanitation District-1 on the availability of sewer capacity.

Timing/Implementation: Prior to approval of each tentative subdivision and parcel map

Enforcement/Monitoring: City of Elk Grove Development Services, Sacramento Regional County Sanitation District, and County Sanitation District-1

MM 4.6.1.1

As a condition of subsequent development entitlements, uses constructed in the Plan area shall meet the minimum necessary fire flow and other standard fire protection and life safety requirements identified in the Uniform Fire Code, Uniform Building Code, and other applicable state regulations. Construction sites shall ensure adequate on-site water supply and all-weather access for fire-fighting equipment and emergency vehicles before framing can occur. The applicant shall also pay the Fire Protection Development Fee in effect at the time of building permit issuance. These requirements shall be noted on all construction plans.

Timing/Implementation: During construction activities and prior to improvement plan approval
Enforcement/Monitoring: EGCSDFD and City of Elk Grove Development Services

MM 4.6.4.2a

The project applicant shall provide a permanent fire station within the plan area and sufficient funds to purchase associated facilities including an aerial truck, and urban interface engine. These improvements and facilities, included in the Laguna South Public Facilities Fee Program, shall be provided to the satisfaction of the Elk Grove Community Services District Fire Department (EGCSDFD).

Fair-share funding for the above fire facilities and services improvements shall be determined by the modification of the Laguna South Public Facilities Fee Program by the annexation of the Laguna Ridge Specific Plan into the Fee Program. Project public facility financing plans and/or programs shall establish the timing of these improvements to ensure they are in place to the satisfaction of the EGCSDFD. Establishment of the financing plans and/or programs shall occur prior to the approval of any subsequent development project. Development may occur prior to approval of the project's financing plans and/or programs if the project applicant constructs the EGCSDFD required improvement and purchases associated facilities concurrent with the development of their specific project.

Timing/Implementation: Prior to approval of the Project Financing Program and/or Plan
Enforcement/Monitoring: EGCSDFD and City of Elk Grove Development Services

MM 4.6.4.2b

All signalized intersections installed by the project developer shall be equipped with traffic pre-emption devices at the time of installation.

Timing/Implementation: Prior to improvement plan approval
Enforcement/Monitoring: EGCSDFD and City of Elk Grove Development Services

MM 4.6.4.2c

Prior to approval of individual subdivision improvement plans, the water supply system plans for the subdivisions shall be reviewed by the City and Sacramento County Water Agency (SCWA) to ensure adequate fire flows for the project as specified by the EGCSDFD Fire Department.

Timing/Implementation: Prior to improvement plan approval
Enforcement/Monitoring: EGCSO and City of Elk Grove Development Services & Sacramento County Water Agency (SCWA)

MM 4.6.4.2d

All dead-end streets in excess of 150 feet in the Laguna Ridge Specific Plan area shall have emergency vehicle turn-arounds approved by the Elk Grove Community Services District Fire Department.

Timing/Implementation: Prior to improvement plan approval
Enforcement/Monitoring: EGCSO and City of Elk Grove Development Services

MM 4.6.4.2e

Prior to approval of individual subdivision improvement plans, the project applicant shall demonstrate that all required roadways, water mains, fire hydrants, and fire flow necessary to serve the subdivision shall be provided prior to the existence of any combustible construction of storage and that the installation of on-site or off-site fire protection equipment, including fire hydrants and water mains, meets the standards of the EGCSDFD and the Sacramento County Water Agency. The roadways shall be constructed to a 20-foot minimum width with an impervious surface to the satisfaction of the Elk Grove CSD and shall have good drainage.

Timing/Implementation: Prior to improvement plan approval
Enforcement/Monitoring: EGCSO, Sacramento County Water Agency and City of Elk Grove Development Services

MM 4.6.4.2f

Within the Specific Plan Area, the following requirements will be met:

1. Non-combustible fences shall be provided along all developed areas adjacent to wetlands/creeks/open spaces.
2. Access shall be provided to all wetland corridors at the end of cul-de-sacs via rolled curbs and gates to the satisfaction of the EGCSDFD. Bike lanes adjacent to creeks shall be a minimum of 10 feet wide with a turning radius of not less than 35 feet inside and 45 feet outside. All bike paths shall be paved with 2 inches of AC over 4 inches of AB compacts to 95 percent.
3. Any bridges over creeks or wetland areas shall be capable of supporting 65,000 GVW.
4. At least 10 feet of greenbelt or other defensible space between noncombustible fences and the creek/wetland areas shall be provided.

Timing/Implementation: Prior to improvement plan approval
Enforcement/Monitoring: EGCSO and City of Elk Grove Development Services

MM 4.6.5.1

The project's general financing program and/or plan shall demonstrate that there are sufficient sources of funding to provide adequate law enforcement facilities and equipment for new officers required to maintain the one officer per 1,000 residents ratio with the addition of the project.

Timing/Implementation: Prior to approval of the Project Financing Program and/or Plan
Enforcement/Monitoring: Elk Grove Police Department and City of Elk Grove Development Services

MM 4.6.7.1

The project applicant shall meet the parkland requirement to provide for 5.0 acres of parkland per 1,000 people through parkland dedications within the LRSP area and/or the payment of in-lieu fees.

Timing/Implementation: Prior to tentative map approval, and fees collected at building permit
Enforcement/Monitoring: City of Elk Grove Development Services, Elk Grove Community Services District

Southeast Policy Area Strategic Plan:

None Required.

Lent Ranch Marketplace SPA:

MM14

Uses constructed on the project site shall meet the minimum necessary fire flow and other standard fire protection and life safety requirements identified in the Uniform Fire Code. Construction sites shall ensure adequate on-site water supply and all-weather access for fire-fighting equipment and emergency vehicles before framing can occur. The applicant shall also pay the Fire Protection Development Fee in effect at the time of building permit issuance. This condition of approval implements Mitigation Measures #MM4.6.4-1 from the Lent Ranch Marketplace Final EIR.

MM15

Prior to issuance of building permits, the applicant and the EGCSO shall reach an agreement on funding to provide adequate staff to conduct site plan review and construction inspection services for the project. The agreement shall specify funding levels and timing of payment. This condition of approval implements Mitigation Measures #MM4.6.4-2 from the Lent Ranch Marketplace Final EIR.

Sterling Meadows Tentative Subdivision Map:

MM 4.12.1.1

As a condition of development entitlements, all development on the project site shall meet the minimum necessary fire flow and other standard fire protection and life safety requirements identified in the Uniform Fire Code, Uniform Building Code, and other applicable state regulations. Construction sites shall ensure adequate on-site water supply and all-weather access for fire-fighting equipment and emergency vehicles before framing can occur. The applicant shall also pay the Fire Protection Development Fee in effect at the time of building permit issuance. These requirements shall be noted on all construction plans.

MM 4.12.1.2a

Prior to approval of improvement plans, the project applicant shall demonstrate that all required water mains, fire hydrants, and fire flow requirements necessary to serve the project are provided prior to the existence or storage of any combustible construction material on the project site, and that the installation of on-site or off-site fire protection equipment, including fire hydrants and water mains, meets the standards of the EGCSO Fire Department and the water purveyor.

MM 4.12.1.2b

Prior to approval of improvement plans, the water supply system plans for the subdivisions shall be reviewed by the City to ensure adequate fire flows for the project as specified by the EGCSO Fire Department.

MM 4.12.1.4a

The project developer shall contribute their fair share for improvements and facilities, included in the Laguna South PFFP. The project's fair share of funding for fire services and facilities shall be provided to the satisfaction of the EGCSO Fire Department.

Fair-share funding for fire facilities and services improvements shall be determined concurrent with modification of the Laguna South PFFP. The PFFP will be updated to include the neighboring Laguna Ridge Specific Plan Area into the Fee Program. Project public facility financing plans and/or programs shall establish the timing of these improvements to ensure they are in place to the satisfaction of the EGCSO Fire Department. Establishment of the fire facilities and services improvements financing plans and/or programs shall occur prior to recordation of the Final Map. Construction activities may occur prior to approval of the project's financing plans and/or programs only if the project applicant constructs the EGCSO Fire Department's required improvements and purchases associated facilities concurrent with the development of their specific project.

MM 4.12.1.4b

All signalized intersections installed by the project developer shall be equipped with traffic pre-emption devices at the time of installation.

MM 4.12.2.2

Prior to recordation of the Final Map and improvement plans for the site, the project developer shall either lengthen I Drive between A Drive and J Drive; or extend L Way through to A Drive. The revised plans shall be submitted to the City for review and approval.

MM 4.12.2a

SCWA shall review and approve the water system alternative to be implemented and the two well sites prior to improvement plan or final map approval by the City of Elk Grove.

MM 4.12.2b

Project proponents, future successors or interests shall reserve a minimum 2 Acre net water treatment plant and on site well located on lot numbers 779, 780, 814, 815, 816, 817, 818, & 819 and necessary easements to the satisfaction of the SCWA. Acceptance and approval of the site shall be subject to meeting Department of Health Services (DHS) setback requirements and obtaining acceptable results

from hydrogeologic evaluations (exploratory drilling). If these conditions cannot be satisfied, then an alternative site on the Sterling Meadows Subdivision shall be selected and similarly evaluated. Prior to Final Map approval, the project proponent shall grant right-of-entry to SCWA to conduct hydrogeologic evaluations. In addition, prior to Final Map recordation, the property owner shall enter into an agreement with SCWA consistent with Chapter 22.50 of the Sacramento County Code (City of Elk Grove Code) and Government Code Title 7, Division 2, Article 4.

MM 4.12.2c

Project proponents, future successors or interests shall reserve a minimum 100ft x 100ft water well site located at lot numbers 843 & 844 and a minimum 100ft x 100ft water well site located at lot numbers 865 & 866 and necessary easements to the satisfaction of the SCWA. Acceptance and approval of the site shall be subject to meeting DHS setback requirements and obtaining acceptable results from hydrogeologic evaluations (exploratory drilling). If these conditions cannot be satisfied, then an alternate site on the Sterling Meadows Subdivision shall be selected and similarly evaluated. Prior to Final Map approval, the project proponent shall grant right-of-way entry to SCWA to conduct hydrogeologic evaluations. In addition, prior to final map recordation, the property owner shall enter into an agreement with SCWA consistent with Chapter 22.50 of the Sacramento County Code (City of Elk Grove Code) and Government Code Title 7, Division 2, Article 4.

MM 4.12.2d

Require water intensive commercial and industrial building permit applicants to conduct a water use efficiency review and submit the findings in required environmental documentation for the project.

MM 4.12.2e

Require efficient cooling systems, recirculation pumps for fountains and ponds, and water recycling systems for vehicle washing as a condition of service.

MM 4.12.7.2

Prior to approval of grading or improvement plans, the applicant shall resubmit plans, which incorporate a trail system consistent with Elk Grove General Plan policies and to the satisfaction of the City of Elk Grove.

MM 4.12.8.1

No building permits shall be issued for more than 100 single family homes or any mixture of uses demanding 500 KW or more, as determined by SMUD, until the Lent Ranch Substation has been constructed, or other system improvements are made, as determined by SMUD, to accommodate the proposed project.

City of Elk Grove General Plan:

No additional mitigation required beyond compliance with existing regulations and proposed General Plan policies.

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Laguna Ridge Specific Plan:

MM 4.2.1a

Elk Grove Boulevard shall be widened between Bruceville Road and Auto Center Drive to three lanes in each direction. Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's infrastructure phasing provisions.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.1b

Elk Grove Boulevard between East Stockton Boulevard and Elk Grove-Florin Road shall be widened from two to three lanes in each direction.

If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right -of-way into the future City's Traffic Impact Fund.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.1c

Grant Line Road between SR 99 and Waterman Road shall be widened from one to two lanes in each direction.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.1d

Poppy Ridge Road between Bruceville Road and West Stockton Boulevard shall be reconstructed to provide 12-foot travel lanes and minimum 6-foot paved shoulder.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee

program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's infrastructure phasing provisions.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.1e

West Stockton Boulevard between Kammerer Road and Poppy Ridge Road shall be reconstructed to provide 12-foot travel lanes and minimum 6-foot paved shoulder.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's infrastructure phasing provisions.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.1f

West Stockton Boulevard between Poppy Ridge Road and the Auto Mall Access to provide 12-foot travel lanes and minimum 6-foot paved shoulder.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's infrastructure phasing provisions.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.2a

The following lane configurations shall be provided at the Elk Grove Boulevard/Bruceville Road intersection.

- One shared through/right-turn lane, one through lane, and one left-turn lane on the northbound approach.
- One right-turn lane, two through lanes, and two left-turn lanes on the southbound approach.
- One right-turn lane, two through lanes, and one left-turn lane on the westbound approach.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's infrastructure phasing provisions.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.2b

The following lane configurations shall be provided at the Elk Grove Boulevard/Big Horn Boulevard intersection.

- One right-turn lane, two through lanes, and one left-turn lane on the northbound approach.
- One right-turn lane, two through lanes, and two left-turn lanes on the southbound approach.
- One shared through/right-turn lane, two through lanes, and two left-turn lanes on the eastbound approach.
- One shared through/right-turn lane, two through lanes, and two left-turn lanes on the westbound approach.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's infrastructure phasing provisions.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.2c

The following lane configurations shall be provided at the Elk Grove Boulevard/West Laguna Springs Drive intersection.

- Two right-turn lanes, two through lanes, and one left-turn lane on the northbound approach.
- One right-turn lane, one through lanes, and two left-turn lanes on the southbound approach.
- One right-turn lane, three through lanes, and two left-turn lanes on the eastbound approach.
- One right-turn lane, three through lanes, and two left-turn lanes on the westbound approach.
- Right-turn overlap phasing for the northbound right-turn lane at the Elk Grove Boulevard/West Laguna Springs Drive intersection.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's infrastructure phasing provisions.

Timing/Implementation: Prior to approval of subsequent development projects.
Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.2d

Right-turn overlap phasing for the northbound right-turn movement shall be provided at the Elk Grove Boulevard/Auto Center Drive intersection. This improvement would require modification of the existing signal equipment and signal phasing.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

Timing/Implementation: Prior to approval of subsequent development projects.
Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.2e

The following lane configurations shall be provided at the Elk Grove Boulevard/SR 99 Southbound Ramps intersection.

- Two right-turn lanes, a shared through/left-turn lane, and an exclusive left-turn lane on the southbound approach.
- One right-turn lane and three through lanes on the eastbound approach.
- Three through lanes on the westbound approach.
- In addition, construct a loop on-ramp in the northwest quadrant of the interchange to replace the westbound left-turn movement.

These improvements will require coordination and approval of Caltrans as well as incorporation into the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities. If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right -of-way into the City's future Traffic Impact Fund.

Timing/Implementation: Prior to approval of subsequent development projects.
Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.2f

Install traffic signal and provide the following lane configurations at the Elk Grove Boulevard/Waterman Road intersection.

- A shared through/right-turn lane and an exclusive left-turn lane on all approaches.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee

program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.2g

Install a traffic signal and provide the following lane configurations at the Poppy Ridge Road/Bruceville Road intersection.

- A shared through/right-turn lane and an exclusive left-turn lane on the northbound, southbound, and eastbound approaches.
- One right-turn lane, one through lane, and one left-turn lane on the westbound approach.

Fair-share funding for the above roadway improvement shall be determined by the modification of Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's infrastructure phasing provisions.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.2h

The applicant shall participate in the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program which includes reconstruction of the SR 99/Grant Line Road interchange. Fair-share funding for the SR 99/Grant Line Road improvement project shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.2i

Right-turn overlap phasing for the southbound right-turn movement shall be provided at the Laguna Boulevard/Franklin Boulevard intersection.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

Timing/Implementation: Prior to approval of subsequent development projects.
Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.2j

Right-turn overlap phasing shall be provided for the northbound right-turn movement at the intersection of Laguna Boulevard with Big Horn Boulevard. Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

Timing/Implementation: Prior to approval of subsequent development projects.
Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.2k

The following lane configurations shall be provided at the Elk Grove Boulevard/Elk Grove-Florin Road intersection.

- A shared through/right-turn lane, one through lane, and two left-turn lanes on the northbound approach.
- In addition, provide protected left-turn phasing on the northbound and southbound approaches.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations. If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay their fair-share of the estimated cost of the improvement and cost of the right -of-way into the City's future Traffic Impact Fund.

Timing/Implementation: Prior to approval of subsequent development projects.
Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.3a

The section of Laguna Boulevard between Bruceville Road and SR 99 shall be widened from three to four lanes in each direction.

If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay its fair share as identified in the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program, as well as any established City of Elk Grove development impact fees for roadway facilities.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.3b

The section of Elk Grove Boulevard between Bruceville Road and Auto Center Drive shall be widened from three to four lanes in each direction.

If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay its fair share as identified in the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program, as well as any established City of Elk Grove development impact fees for roadway facilities.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.3c

Widen the section of Elk Grove Boulevard between East Stockton Boulevard and Elk Grove-Florin Road from two to three lanes in each direction.

If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay its fair share as identified in the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program, as well as any established City of Elk Grove development impact fees for roadway facilities.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.3d

Bruceville Road between Elk Grove Boulevard and Laguna Boulevard shall be widened from two to three lanes in each direction.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.3e

Laguna Boulevard between Franklin Boulevard and Bruceville Road shall be widened from three to four lanes in each direction.

If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay its fair share as identified in the Interim Roadway Fee Program (Elk Grove Municipal Code

Chapter 16.89) or its successor roadway fee program, as well as any established City of Elk Grove development impact fees for roadway facilities.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.3f

Widen the section of Bruceville Road between Laguna Boulevard and Big Horn Boulevard from two to three lanes in each direction.

If the additional right-of-way necessary for the improvement cannot be obtained, the project applicant shall pay its fair share as identified in the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program, as well as any established City of Elk Grove development impact fees for roadway facilities.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.4a

All internal intersections shall be designed to meet City Level of Service Standards (LOS D or better). This requirement shall be incorporated into the specific plan.

Timing/Implementation: As part of the final approval of the Specific Plan.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.5a

Right-turn overlap phasing for the southbound right-turn movement at the Laguna Boulevard/Franklin Boulevard intersection.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.5b

The following lane configurations shall be provided at the Elk Grove Boulevard/Big Horn Boulevard intersection.

- One right-turn lane, two through lanes, and two left-turn lanes on the northbound approach.
- One right-turn lane, two through lanes, and two left-turn lanes on the southbound approach.
- One right-turn lane, three through lanes, and two left-turn lanes on the eastbound approach.
One right-turn lane, three through lanes, and two left-turn lanes on the westbound approach.

- Right-turn overlap phasing on all approaches to the intersection, which would require modification of the existing signal equipment and signal phasing.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's infrastructure phasing provisions.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.5c

The following lane configurations shall be provided at the Elk Grove Boulevard/West Laguna Springs Drive intersection.

- One right-turn lane, two through lanes, and one left-turn lane on the southbound approach.
- Two right-turn lanes, two through lanes and one left-turn lane on the northbound approach.
- One right-turn lane, three through lanes, and two left-turn lanes on the westbound approach.
- One right-turn lane, three through lanes, and one left-turn lane on the eastbound approach.
- Protected left-turn phasing for the north and southbound left-turn movements.
- Provide right-turn overlap phasing on the northbound and southbound approaches, which would require modification of the existing signal equipment and signal phasing.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations and consistent with the Specific Plan's infrastructure phasing provisions.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.5d

The following lane configurations shall be provided at the Elk Grove Boulevard/Auto Center Drive intersection.

- Two right-turn lanes, one through lane, and one left-turn lane on the northbound approach.
- Provide protected left-turn phasing on the northbound and southbound approaches.
- Provide right-turn overlap phasing on the northbound approach. Right-turn overlap phasing would require modification of the existing signal equipment and signal phasing.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee

program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.5e

The following lane configurations shall be provided at the Elk Grove Boulevard/SR 99 Southbound Ramps intersection.

- One right-turn lane and three through lanes on the eastbound approach.
- Three through lanes on the westbound approach.
- Construct a loop on-ramp in the northwest quadrant of the interchange to replace the westbound left-turn movement.

This improvement will require coordination and approval from Caltrans. Fairshare funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.5f

The following lane configurations shall be provided at the Elk Grove Boulevard/East Stockton Boulevard intersection.

- One right-turn lane, one through lane, and one left-turn lanes on the southbound approach.
- A shared through/right-turn lane and two left-turn lanes on the northbound approach.
- Provide protected left-turn phasing on the northbound and southbound approaches.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.5g

The following lane configurations shall be provided at the Elk Grove Boulevard/Bruceville Road intersection.

- One right-turn lane on the westbound approach.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities. Project public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

Timing/Implementation: Prior to approval of subsequent development projects.
Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.5h

The following lane configurations shall be provided at the Elk Grove Boulevard/Elk Grove-Florin Road intersection.

- A shared through/right-turn lane, one through lane, and one left-turn lane on the northbound approach.
- In addition, provide protected left-turn phasing on the northbound and southbound approaches.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

Timing/Implementation: Prior to approval of subsequent development projects.
Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.5i

A traffic signal shall be installed and the following lane configurations shall be provided at the Elk Grove-Florin Road/East Stockton Boulevard intersection.

- One through lane and one left-turn lane on the southbound approach.
- One right-turn lane and two left-turn lanes on the westbound approach.
- One right-turn lane and one through lane on the northbound approach.
- This improvement would require 3-phase signal operation.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

Timing/Implementation: Prior to approval of subsequent development projects.
Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.5j

Install a traffic signal and coordinate it with the Hood-Franklin Road/I-5 Northbound Ramps intersection.

This improvement will require coordination and approval from Caltrans and Sacramento County. Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services, Sacramento County and Caltrans.

MM 4.2.5k

Install a traffic signal and coordinate it with the Hood-Franklin Road/I-5 Southbound Ramps intersection.

This improvement will require coordination and approval from Caltrans and Sacramento County. Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services, Sacramento County and Caltrans.

MM 4.2.5l

Right-turn overlap phasing shall be provided for the southbound right-turn movement at the intersection of Grant Line Road and Waterman Road.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.5m

Right-turn overlap phasing shall be provided for the northbound right-turn movement at the intersection of Laguna Boulevard with West Laguna Springs Drive.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.5n

Right-turn overlap phasing shall be provided for the southbound right-turn movement at the intersection of Elk Grove and Franklin Boulevards.

Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.5o

Right-turn overlap phasing shall be provided for the southbound right-turn movement at the Grant Line Road/Bradshaw Road intersection. Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities. Project and/or public facility financing plans and/or programs shall establish the timing of this improvement to ensure it is in place prior to LOS E operations.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services.

MM 4.2.6a

The project shall contribute to the following improvement to I-5:

- Construction of one lane northbound between Hood Franklin Road and Elk Grove Boulevard.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services and Caltrans.

MM 4.2.6b

The project shall contribute to the following improvement to I-5:

- Construction of one lane southbound between Hood Franklin Road and Elk Grove Boulevard.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program

(Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services and Caltrans.

MM 4.2.6c

The project shall contribute to the following improvement to I-5:

- Construction of one lane northbound between Laguna Boulevard and Pocket Road.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services and Caltrans.

MM 4.2.6d

The project shall contribute to the following improvement to I-5:

- Construction of one lane southbound between Laguna Boulevard and Pocket Road.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services and Caltrans.

MM 4.2.6e

The project shall contribute to the following improvement to I-5:

- Construction one lane northbound (approximately 0.25 miles) south of Hood Franklin Road.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services and Caltrans.

MM 4.2.6f

The project shall contribute to the following improvement to I-5:

- Construction one lane southbound (approximately 0.25 miles) south of Hood Franklin Road.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services and Caltrans.

MM 4.2.6g

The project shall contribute to the following improvement to I-5:

- Construction of one lane northbound between Elk Grove Boulevard and Laguna Boulevard.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services and Caltrans.

MM 4.2.6h

The project shall contribute to the following improvement to I-5:

- Construction of one lane southbound between Elk Grove Boulevard and Laguna Boulevard.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities.

Timing/Implementation: Prior to approval of subsequent development projects.

Enforcement/Monitoring: City of Elk Grove Development Services and Caltrans.

MM 4.2.7a

The project shall contribute to the following improvement to I-5:

- Construction of one lane southbound between Hood Franklin Road and Elk Grove Boulevard.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities.

Timing/Implementation: Prior to approval of subsequent development projects.
Enforcement/Monitoring: City of Elk Grove Development Services and Caltrans.

MM 4.2.7b

The project shall contribute to the following improvement to I-5:

- Construction of one lane southbound from the southbound off-ramp at Hood Franklin Road approximately 0.25 miles south of Hood Franklin Road.

This improvement will require coordination and approval from Caltrans. Fair-share funding for the above roadway improvement shall be determined by the modification of the Interim Roadway Fee Program (Elk Grove Municipal Code Chapter 16.89) or its successor roadway fee program. The project applicant shall pay its fair share as well as any established City of Elk Grove development impact fees for roadway facilities.

Timing/Implementation: Prior to approval of subsequent development projects.
Enforcement/Monitoring: City of Elk Grove Development Services and Caltrans.

MM 4.2.8

Prior to the approval of tentative subdivision, parcel maps and subsequent development associated with land areas along Big Horn Blvd and Bruceville Road right-of-way for future light rail stations and lines at locations along either Big Horn Boulevard or Bruceville Road shall be dedicated based on consultation with the City of Elk Grove and Sacramento Regional Transit.

Timing/Implementation: Prior to approval of tentative subdivision parcel maps and subsequent development.
Enforcement/Monitoring: City of Elk Grove Development Services and Sacramento Regional Transit.

Southeast Policy Area Strategic Plan:

MM 5.13.1a

The City shall establish an analysis and tracking mechanism to determine when the roadway improvements identified in this EIR are triggered.

MM 5.13.1b

The City shall require that the following roadway improvements are completed either (1) as the need for the improvement is triggered by subsequent development projects or (2) as City CIP projects funded on a fair share basis by subsequent development projects.

- A) Optimize and coordinate traffic signal timings along Elk Grove Boulevard and at the following intersections as described in the improvement section below:

- Elk Grove Boulevard/Laguna Springs Drive (Improvement 1)
- Elk Grove Boulevard/SR 99 Southbound Ramps (Improvement 1)
- Whitelock Parkway/West Stockton Boulevard (Improvement 2)
- Bruceville Road/Bilby Road (Improvement 3)
- Bilby Road/Franklin Boulevard (Improvement 4)
- Willard Parkway/Bilby Road (North) (Improvement 5)
- Kammerer Road/Bruceville Road (Improvement 6)

B) Construct improvements to the Bruceville Road/Bilby Road intersection to accommodate the typical City of Elk Grove expanded intersection for a four-lane arterial.

C) Install a traffic signal at the intersection of Bilby Road and Franklin Boulevard. Widen the northbound and southbound approaches to the intersection to provide the following lane configuration:

- A shared left-turn/through lane and a separate right-turn lane on the northbound approach
- A separate left-turn lane and shared through/right-turn lane on the southbound approach
- A shared left/through/right-turn lane on the eastbound and westbound approach.

OR

Implement the planned Kammerer Road widening and extension project.

D) Install a traffic signal and provide the following lane configurations at the Kammerer Road/Bruceville Road intersection:

- A shared through/right-turn lane on the northbound approach
- A shared left/through lane on the southbound approach
- A shared left/right-turn lane on westbound approach.

MM 5.13.5a

The City shall require that the following roadway improvements are completed either (1) as the need for the improvement is triggered by subsequent development projects or (2) as City CIP projects funded on a fair share basis by subsequent development projects.

A) SR 99/Elk Grove Boulevard interchange Northbound Loop OnRamp, as previously described.

B) SR 99/Whitelock Parkway interchange, as previously described.

C) Install a traffic signal at the Hood Franklin Road/Franklin Boulevard intersection and widen the southbound and eastbound approaches to the intersection to provide the following lane configuration:

- Separate left- and right-turn lanes on the northbound approach
- Separate through and right-turn lanes on the southbound approach
- Separate left- and right-turn lanes on the eastbound approach

D) Widen the Grant Line Road/East Stockton Boulevard intersection to provide the following improvements:

- Widen westbound Grant Line Road to provide four through lanes through the intersection that would transition to the SR 99 northbound slip on-ramp.
- Widen northbound Survey Road to provide two left-turn lanes and a shared through/right-turn lane.
- Restripe the southbound East Stockton Boulevard approach to provide a separate left-turn lane, a shared through/right-turn lane, and a separate right-turn lane.

Lent Ranch Marketplace SPA:

None Required.

Sterling Meadows Tentative Subdivision Map:

MM 4.5.2

Prior to approval of improvement plans for the Sterling Meadows project, the ultimate improvements to the Grant Line Road/SR 99 Interchange Reconstruction Project shall be constructed and operational.

MM 4.5.3

Prior to approval of improvement plans for the project, or for each phase of the project if it develops in phases, the project applicant shall submit an evaluation of the need for traffic signals at intersections within the project site to the City of Elk Grove Development Services for review and approval. The project applicant shall construct traffic signals at all intersections within or immediately adjacent the project site, such as the intersection of Lotz Parkway with Kammerer Road, where signalization is warranted and deemed necessary by the City

MM 4.5.4

Prior to approval of the tentative map, the project applicant shall dedicate rights-of-way and station sites for the desired light rail route through to the proposed project in consultation with the City of Elk Grove Development Services Department, Transportation Division and Sacramento .Regional Transit

MM 4.5.6a

The project applicant shall pay their fair-share for the following lane configuration improvements at the Elk Grove Boulevard/Big Horn Boulevard intersection.

- One right-turn lane, two through lanes, and two left-turn lanes on the northbound approach.
- One right-turn lane, two through lanes, and two left-turn lanes on the southbound approach.
- One right-turn lane, three through lanes, and two left-turn lanes on the eastbound approach.
- One right-turn lane, three through lanes, and two left-turn lanes on the westbound approach.
- Right-turn overlap phasing on all approaches to the intersection, which would require modification of the existing signal equipment and signal phasing.

MM 4.5.6b

The project applicant shall pay their fair-share for the following lane configuration improvements at the Elk Grove Boulevard/Bruceville Road intersection

- One right-turn lane on the westbound approach.

MM 4.5.6c

The project applicant shall pay their fair-share for the installation of a traffic signal and coordination of it with the Hood-Franklin Road/I-5 Northbound Ramps intersection.

MM 4.5.6d

The project applicant shall pay their fair-share for installation of a traffic signal and coordination of it with the Hood-Franklin Road/I-5 Southbound Ramps intersection.

City of Elk Grove General Plan:

No additional feasible mitigation available beyond compliance with proposed General Plan policies.

17 TRIBAL CULTURAL RESOURCES

Laguna Ridge Specific Plan:

None Required.

Southeast Policy Area Strategic Plan:

None Required.

Lent Ranch Marketplace SPA:

None Required.

Sterling Meadows Tentative Subdivision Map:

None Required.

City of Elk Grove General Plan:

None Required.

18 UTILITIES AND SERVICE SYSTEMS

Laguna Ridge Specific Plan:

None Required.

Southeast Policy Area Strategic Plan:

None Required.

Lent Ranch Marketplace SPA:

None Required.

Sterling Meadows Tentative Subdivision Map:

See Section 15, Public Services.

City of Elk Grove General Plan:

MM 5.12.1.1

Prior to LAFCo approval of annexation of any portion of the Planning Area into the City of Elk Grove for which the SCWA would be the retail provider for water service, the City must prepare the Plan for Services to allow LAFCo to determine that: (1) the requirement for timely water availability, as required by law, is met; (2) its water purveyor is a signatory to the Water Forum Successor Effort and that groundwater will be provided in a manner that ensures no overdraft will occur, (3) the amount of water provided will be consistent with the geographical extent of the annexation territory; and (4) existing water customers will not be adversely affected. The Plan for Services shall be sufficient for LAFCo to determine timely water availability to the affected territory pursuant to Government Code Section 56668, subdivision (l), or its successor.

The Plan for Services shall demonstrate that the SCWA water supplies are adequate to serve the amount of development identified in the annexation territory, in addition to existing and planned development under normal, single-dry, and multiple-dry years. The Plan for Services shall depict the locations and approximate sizes of all on-site water system facilities to accommodate the amount of development identified for the specific annexation territory; demonstrate that the SCWA has annexed the territory into its service area; and demonstrate that adequate SCWA off-site water facilities are available to accommodate the development identified in the annexation territory, or that fair-share funding will be provided for the construction of new or expanded treatment and/conveyance facilities and/or improvement of existing off-site water system facilities with no adverse fiscal impacts on existing ratepayers.

19 WILDFIRE

Laguna Ridge Specific Plan:

None Required.

Southeast Policy Area Strategic Plan:

None Required.

Lent Ranch Marketplace SPA:

None Required.

Sterling Meadows Tentative Subdivision Map:

None Required.

City of Elk Grove General Plan:

None Required.

Appendix H

Water Supply Assessment for Livable
Employment Area Community Plan

Sacramento County Water Agency

Water Supply Assessment for
Livable Employment Area Community Plan - City of Elk Grove General
Plan Amendment

Prepared by Sacramento County Water Agency
May 2023

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INTRODUCTION

BACKGROUND

The California Water Code (Water Code) requires coordination between land use lead agencies and public water purveyors. The purpose of this coordination is to ensure that prudent water supply planning has been conducted, and that planned water supplies are adequate to meet both existing demands and demands of planned development.

Water Code Sections 10910 – 10915 (inclusive) require land use lead agencies: 1) to identify the responsible public water purveyor for a proposed development project, and 2) to request a “Water Supply Assessment” (WSA) from the responsible purveyor. The objective of a WSA is to demonstrate the sufficiency of a purveyor's water supplies to satisfy the water demands of a proposed development project while still meeting the current and projected water demands of existing customers. Water Code Sections 10910 – 10915 delineate specific information that must be included in a WSA.

THE PROPOSED DEVELOPMENT PROJECT

The City of Elk Grove (City) has requested the preparation of a Water Supply Assessment (WSA) for the Livable Employment Area Community Plan (LEACP) which is proposed for addition to the City’s existing General Plan. The LEACP is proposed to replace portions of the City’s existing Southeast Policy Area Community Plan, a portion of the South Pointe Policy Area, and portions of the Lent Ranch Policy Area/Special Planning Area.

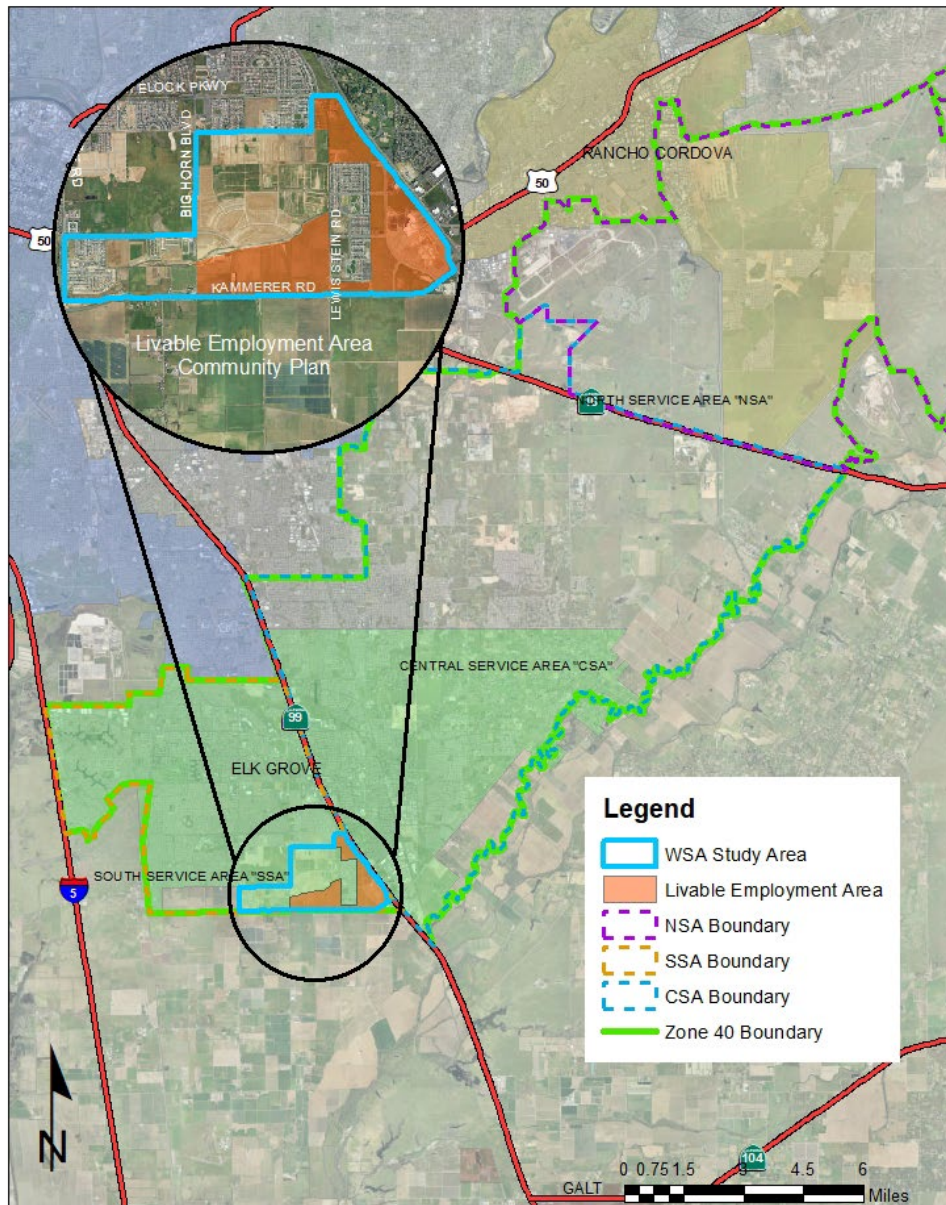
The City has requested that this WSA consider the extent of those areas whose portions have been replaced in addition to the proposed LEACP itself in order to capture the effect of the changes to the existing policy areas. This WSA will therefore cover the new LEACP, Southeast Policy Area (as revised), South Pointe Policy Area/Sterling Meadows Project, and portions of the former Lent Ranch SPA. These will be referred to as the “LEACP Study Area” in this WSA. **Figure 1** is a vicinity map showing the LEACP covered in this WSA. **Figure 2** shows the Study Area covered by this WSA.

The LEACP Study Area is located along the north side of Kammerer Road, South of Poppy Ridge Road, East of Bruceville Road, and West of Highway 99. This area falls within the SCWA benefit zones. The City intends to expand the LEACP South of Kammerer Road but since the areas south of Kammerer road are outside of SCWA benefit zones, the expansion would be assessed as a separate effort outside of this WSA.

The City of Elk Grove has identified the Sacramento County Water Agency (SCWA) as the responsible water purveyor for LEACP Study Area and has requested that SCWA prepare this WSA in accordance with Water Code Sections 10910 – 10915.

WATER SUPPLY ASSESSMENT OBJECTIVE

The objective of this WSA is to demonstrate that the planned water supplies for SCWA’s Zone 40 are sufficient to meet the demands of the LEACP Study Area in addition to the existing and projected water supply obligations over the next 20 years.



Livable Employment Area Community Plan/WSA Study Area

SACRAMENTO COUNTY WATER AGENCY
 DEPARTMENT OF WATER RESOURCES

Figure 1 LEACP Vicinity Map



Figure 2 LEACP Study Area Map

OVERVIEW OF THE LIVABLE EMPLOYMENT AREA COMMUNITY PLAN, CITY OF ELK GROVE GENERAL PLAN AMENDMENT WSA

The Study Area lies entirely within the boundaries of SCWA’s Zone 40/41 service area. The water demands associated with the Study Area have been included and addressed in the latest Urban Water Management Plan (UWMP) (SCWA, 2020) and in the development of the Zone 40 “conjunctive use” program as described in the Zone 40 Water Supply Master Plan (WSMP) (SCWA, February 2005).

In addition to the above referenced documents, the following documents may be used in whole or in part for the water assessment for Study Area:

- The Central Sacramento County Groundwater Management Plan (SCGA, February 2006);
- The South American Subbasin Groundwater Sustainability Plan (South American Subbasin Groundwater Sustainability Agencies, October 2021)
- The Final Environmental Impact Report (FEIR) for 2002 Zone 40 Water Supply Master Plan (EDAW, December 2004);
- The Water Forum Agreement (WFA), Sacramento City-County Office of Metropolitan Water Planning, January 2000.

Figure 3 shows the land use diagram of the LEACP Study Area provided by the City.

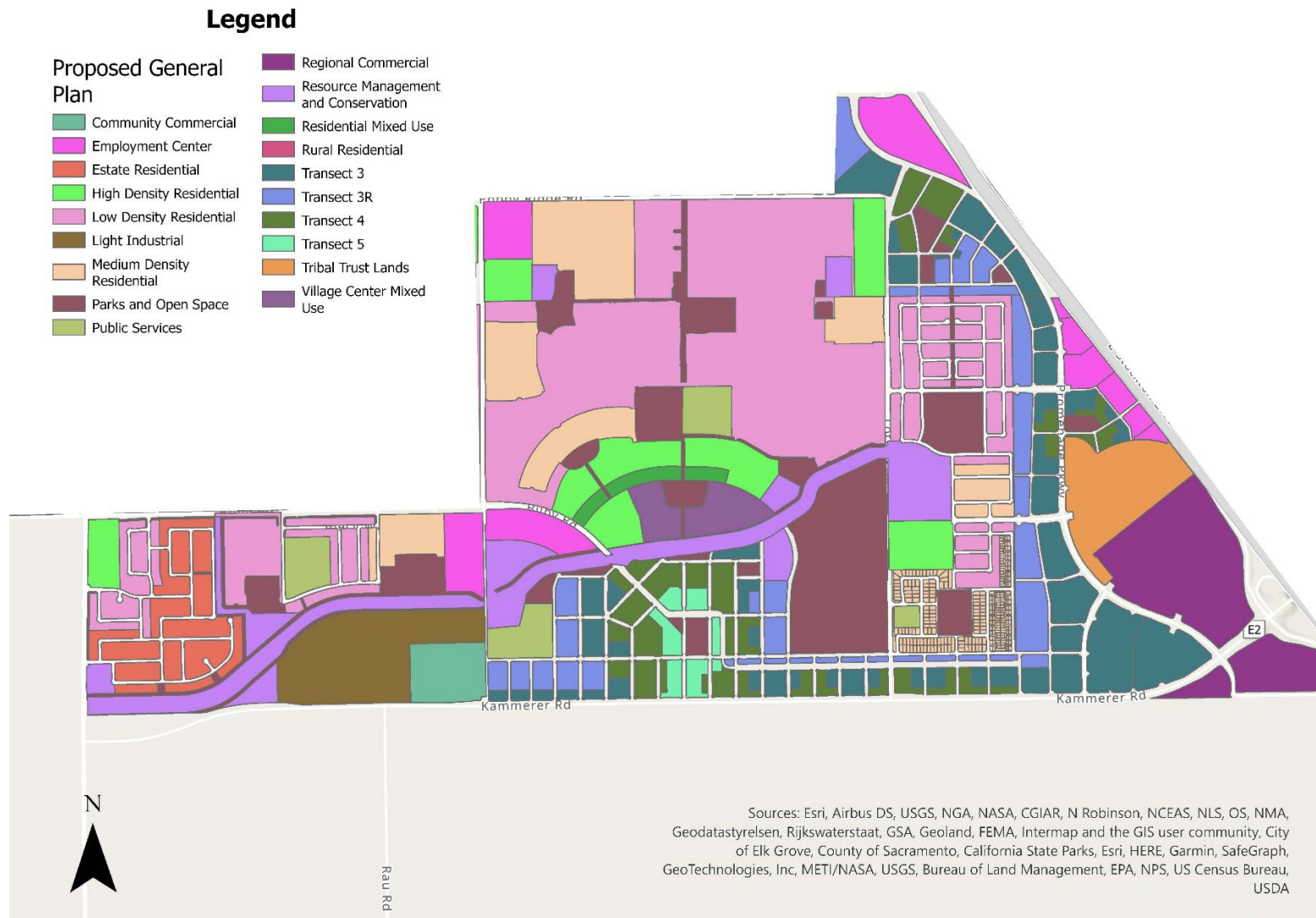


Figure 3 LEACP Study Area Land Use Diagram

WSA FOR THE LEACP/GPA

Water Code Sections 10910 – 10915 delineate the specific requirements of a WSA. The WSA for the LEACP Study Area is structured according to these requirements.

DETERMINE IF PROJECT IS SUBJECT TO CEQA [Section 10910 (a)]

The City has made the determination that LEACP is subject to CEQA.

IDENTIFY RESPONSIBLE PUBLIC WATER SYSTEM [Section 10910(b)]

The City has identified SCWA as the responsible public water provider for the LEACP Study Area.

DETERMINE IF UWMP INCLUDES WATER DEMANDS [Section 10910(c)]

The total area for the LEACP Study Area is estimated to be 1,481 acres. The projected annual water demand for the LEACP Study Area is 3,669 acre-feet per year (AF/year), including system losses. The proposed land use and projected water demand for the LEACP Study Area is provided in **Table 1**.

Table 1 Proposed Land Use and Water Demand Estimate for the LEACP Study Area

Land Uses	Corresponding Land Use Classification in WSMP	Unit Water Demand Factor (AF/Year/Acre)	Gross Acreage	Water Demand (AF/Year)
Residential Designations				
Multi-family Residential (low density)	Multi-family Residential	2.44	571.0	1,393.2
Multi-family Residential (medium density)	Multi-family Residential	2.89	184.2	532.3
Multi-family Residential (high density)	Multi-family Residential	3.33	93.6	311.7
Rural Estate	Single-family Residential	1.37	47.3	64.8
Subtotal - Residential			896.1	2,302.0
Light Industrial	Industrial	2.02	53.1	107.3
Commercial	Commercial	2.02	148.3	299.6
Public Recreation	Landscape Irrigation	2.80	113.7	318.4
Public	Government and Institutional	0.81	145.4	117.8
Mixed Land-use	Commercial	2.15	20.8	44.7
Tribal Trust Land*	Commercial	2.02	39.8	0.0
Zoo	n/a	n/a	63.7	223
Subtotal – Non-Residential		-	584.8	1,110.8
Total w/o System Loss				3,412.8
System Loss (7.5%)				256.0
GRAND TOTAL			1,480.9	3,668.8

Note: Information was provided by The City of Elk Grove in an email dated March 17, 2023.

*Tribal Trust Land water demand included with Commercial water demand.

The LEACP Study Area is included in the WSMP and the estimated demands are accounted for in the current 2020 UWMP, which describes SCWA’s existing and projected water demands through 2045. Therefore, the UWMP will serve as the base document for preparing the WSA for the LEACP Study Area. See Section 2.32 – current and Projected Land Use of the 2020 UWMP.

Table 2 Population Projection for SCWA Zone 40

SCWA Service Areas	2020	2025	2030	2035	2040	2045
Zone 40 - North Service Area, Central Service Area, South Service Area ¹	169,000	197,027	225,054	253,081	275,698	298,314

¹ Population developed in the 2020 UWMP – see Table 2-5: Zone 40 Population Forecast tied to UWMP connection Projections.

Table 3 Water Demands for SCWA Zone 40 – Normal Year (AF/Year)

SCWA Service Areas	2025	2030	2035	2040	2045
Zone 40 - North Service Area, Central Service Area, South Service Area ¹	46,235	54,494	62,006	68,143	74,388

¹ Water demands developed in the 2020 UWMP – see Table 4-10(a): Zone 40 Forecast Potable Water Use

The water demands for all other dry year scenarios can be found in the 2020 UWMP Chapter 4.

The water demands associated with the LEACP Study Area are substantially included in all tables above and in the UWMP. **Table 4** shows the estimated water demand growth for the LEACP Study Area.

Table 4 Projected Water Demand Growth in Five-Year Increments for the LEACP Study Area (AF/Year)

	2023	2025	2030	2035	2040	2045
Projected Water Demand	1,000	1,750	2,100	2,800	3,413	3,413

Note: Information was provided by The City of Elk Grove in an email dated March 23, 2023.

IDENTIFY EXISTING WATER SUPPLIES FOR THE PROJECT [Section 10910(d)]

SECTION 10910(d)(1)

Section 10910(d)(1) requires identification of existing water supply entitlements, water rights, or water service contracts relevant to the identified water supply for LEACP Study Area and a

description of the quantities of water obtained by SCWA pursuant to these water supply entitlements, water rights, or water service contracts in previous years.

Chapter 3 of the 2020 UWMP details all SCWA water supplies. Specifically, 3.1 details surface water rights and contracts and 3.2 details groundwater. LEACP Study Area water demands, as part of the Zone 40 water demand, will ultimately be met by conjunctive use of groundwater and surface water and a small portion of recycled water, as described in the WSMPA and 2020 UWMP.

SECTION 10910(d)(2)

Section 10910(d)(2) requires SCWA to demonstrate that water supplies required to serve LEACP Study Area exist. Section 10910(d)(2) defines what constitutes “proof.”

Section 10910(d)(2)(A)

This subsection requires written contracts or other proof of entitlement to the water supplies identified for LEACP Study Area. The contracts and agreements for the surface water supplies are available for review at the offices of the County of Sacramento, Department of Water Resources.

Initial water demands in LEACP Study Area could be met with groundwater. SCWA will exercise its right as a groundwater appropriator to extract groundwater from the basin for delivery to the LEACP Study Area; surface water will be from existing entitlements diverted from the Sacramento River and treated at the VSWTP. In the long-term, the water demands of the LEACP Study Area will be met in accordance with the conjunctive use program described in the Zone 40 WSMP.

Section 10910(d)(2)(B)

This subsection requires a copy of the capital outlay program for financing the delivery of the identified water supply to LEACP Study Area. The documents described below are available for review at the offices of the County of Sacramento, Department of Water Resources.

A financing plan for the construction of groundwater and surface water facilities needed to realize the conjunctive use program identified in the WSMP has been approved by SCWA’s Board of Directors (Board). The financing plan, as outlined in Chapter 7 of the WSMP, identifies the necessary water facility projects and estimated costs associated with implementation of said conjunctive use program (Capital Improvement Program or CIP).

In addition to the WSMP, the Feasibility Report for Sacramento County Water Financing Authority Series 2007 Revenue Bonds (Sacramento County Water Agency Freeport Project) (MWH, April 2007), and the Sacramento County Water Agency FY 2009/10 Water Rate Study Report (FCS Group) evaluated and updated the total cost and fee requirements of the Zone 40 conjunctive use program incorporating all future Zone 40 expenditures for major capital facilities (i.e., surface water treatment plants, groundwater treatment plants, major transmission mains, etc.) and annual operation and maintenance costs. Funding to meet SCWA’s capital and annual funding requirements was then implemented by the Board through the issuance of revenue bonds for certain projects and the adoption of user fee and development fee increases over time.

SCWA's capital outlay program includes the means for financing facilities to deliver the identified water supply to LEACP Study Area. Specifically, all facilities needed to serve LEACP Study Area are included in the CIP, that was financed through the above-described revenue bonds, user fee, and development fee. The development fee and user fee, as described in Titles 3 and 4 of the Sacramento County Water Agency Code, will continue to provide revenue to finance all aspects of the Zone 40 conjunctive use program, including repayment of debt financing. Both fee programs are evaluated annually and adjusted, if necessary, to accommodate changes in the service area, water demands, needed capital projects, and required debt financing. Based on the CIP, a 10-year CIP is annually updated by the Board of Directors.

Section 10910(d)(2)(C)

This subsection requires identification of any federal, state, and local permits required for construction of the facilities identified for delivering the water supply to LEACP Study Area.

Water deliveries to the LEACP Study Area will be made through connecting to the existing T-mains surrounding LEACP Study Area and additional infrastructure internal to LEACP Study Area detailed in the WSMP.

Section 10910(d)(2)(D)

This subsection requires identification of any regulatory approvals required for delivery of the water supply to LEACP Study Area.

Water production, treatment, and storage facilities will be added to SCWA's public water system permit issued by the California Department of Public Health (DPH) and the design of these facilities will require review and approval by DPH. No other regulatory approvals are anticipated.

New water service and discretionary approval of any project may be withheld until compliance with the Endangered Species Act (ESA) is demonstrated. Depending upon the source of water, compliance may be demonstrated by one of the following: participation in the South Sacramento Habitat Conservation Plan (SSHCP); a letter from the US Fish and Wildlife Service (USFWS) to the project proponent and/or federal agency indicating the Project is not likely to adversely affect or result in a take of listed species; incidental take coverage through a biological opinion for the project; or, incidental take coverage through an ESA section 10(a)(1)(B) permit for the project. This requirement may be a condition of approval for any discretionary action taken by the local land use authority.

IDENTIFY PARTIES DEPENDENT UPON PROPOSED SUPPLY [Section 10910(e)]

SECTION 10910(e)

Section 10910(e) states:

“If no water has been received in prior years by the public water system..., under the existing water supply entitlements, water rights, or water service contracts [identified to serve the proposed project], the public water system, ...shall also include in its water supply assessment pursuant to subdivision (c), an identification of the other public water systems or water service contract holders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts to the same source of water as the public water system, ..., has identified as a source of water supply within its water supply assessments.”

The intent of this section is to identify any potential conflicts that may arise from the exercise of a water supply entitlement, water right, or water service contract to serve a proposed project if such water supply entitlement, water right, or water service contract has not been previously exercised.

Use of Groundwater

The water demands of Zone 40 (including the LEACP Study Area) will be met with groundwater and surface water. SCWA has previously exercised its rights as a groundwater appropriator to meet the water demands of its customers and will continue to exercise those rights to provide treated groundwater supplies to LEACP Study Area.

Use of Surface Water

The surface water supplies associated with SCWA’s conjunctive use program fall into the following categories:

- 1) Purchased water supplies available through a current USBR CVP contract.
- 2) Purchased water available through the City of Sacramento for use within the American River Place of Use (POU).
- 3) Water supplies available through SWRCB Permit 21209.
- 4) SWRCB Appropriative Water Right License 1062
- 5) SWRCB Appropriative Water Right License 4060
- 6) Agreement Between Sacramento County, SCWA and Aerojet with respect to Transfer of GET Water
- 7) Contract Between State of California Department of Water Resources and North Delta Water Agency
- 8) 2002 Wholesale Agreement Between SRCSD and SCWA
- 9) 2004 Agreement with the City of Sacramento for Wholesaling and/or Wheeling Water Service for Sacramento International Airport and Metro Air Park
- 10) 2000 Agreement Between City of Sacramento and the Sacramento County Water Agency to Treat and Deliver (Wheel) Surface Water
- 11) 2000 Memorandum of Understanding Regarding the Operation of A Water System Interconnection at 2750 Mercantile Drive
- 12) Fruitridge Vista Water Company Contract now held by Cal American Water Company

For USBR CVP purchased water and SWRCB Permit 21209 surface water, the parties that could most directly be affected are other CVP contractors, State Water Project (SWP) contractors, water rights holders subject to Term 91 conditions, and riparian diverters downstream of SCWA's point of diversion. The point of diversion is at a site near the community of Freeport on the Sacramento River.

The source of POU water supply is wholesale water from the City of Sacramento to serve the area that lies within the POU. Delivery of this water to SCWA has been included in the City of Sacramento's long-range plan for perfecting their American River water rights. The diversion location, timing, and volume of delivery are currently under negotiation.

DOES SUPPLY FOR PROJECT INCLUDE GROUNDWATER? [Section 10190(f)]

SECTION 10910(f)

As stated earlier, the water supply for Zone 40 (including the LEACP Study Area) includes groundwater. Section 10910(f) requires additional information about groundwater to be presented in this WSA.

Section 10910(f)(1)

Section 10910(f)(1) requires a review of groundwater information contained in the UWMP relevant to the identified water supply for LEACP Study Area. Section 3.2 of the 2020 UWMP provides a description of the applicable groundwater basins, the status of groundwater management, overdraft conditions, historical groundwater pumping, and the remediated groundwater supply.

Section 10910(f)(2)

Section 10910(f)(2) requires a description of the groundwater basin and the efforts being taken to prevent long-term overdraft.

Section 3.2.2 of the 2020 UWMP describes groundwater management in the South American Subbasin. Below is information for historical context.

- **South American Subbasin (5-21.65)**

For the LEACP Study Area, SCWA would pump groundwater from the South American Subbasin as defined by the California Department of Water Resources (DWR) Bulletin 118. According to Bulletin 118, the South American Subbasin is defined as the area bounded on the west by Interstate 5 and the Sacramento River, on the north by the American River, on the south by the Cosumnes and Mokelumne rivers and on the east by the Sierra Nevada.

Groundwater in the South American Subbasin is generally classified as occurring in a shallow aquifer (Laguna or Modesto Formation) and in a deep aquifer (Mehrten Formation). The Laguna or Modesto Formation consists of older alluvial deposits of loosely to moderately compacted sand, silt, and gravel deposited in alluvial fans. These deposits are moderately permeable and have a thickness of about 100 to 650 feet. The deeper Mehrten Formation is a sequence of

fragmented volcanic rocks which crops out in a discontinuous band along the eastern margin of the basin. It is composed of black volcanic sands, stream gravels, silt, and clay inter-bedded with intervals of dense tuff breccia. The sand and gravel intervals are highly permeable, and the tuff breccia intervals act as confining layers. The thickness of the Mehrten Formation is between 200 and 1,200 feet. Groundwater is located from 20 to 100 feet below the ground surface depending on when and where the measurement is taken. The base of the potable water portion of the deep aquifer is located approximately 1,400 feet below the ground surface.

Intensive use of groundwater over the past 60 years has resulted in a general lowering of groundwater elevations. Over time, isolated groundwater depressions have grown and coalesced into a single cone of depression that is centered in the southwestern portion of the basin. Groundwater level trends through much of the basin have generally declined consistently from the 1950s and 1960s to about 1980 by 20 to 30 feet. From 1980 through 1983, water levels recovered by about 10 feet and remained stable until the beginning of the 1987-1992 drought; however, wells in the vicinity of Rancho Cordova appear to have recovered less than other wells in the basin since 1995 (generally less than 10 feet). From 1995 to 2003 most groundwater levels recovered to levels that were generally higher than levels prior to the 1987 through 1992 drought. Much of this recovery can be attributed to the increased use of surface water in the South American Subbasin, and the fallowing of previously irrigated agricultural lands transitioning into new urban development areas. In the central portion of the South American Subbasin groundwater level trends observed in California Department of Water Resources monitoring wells generally vary between 40 feet above to 40 feet below mean sea level over the period of the 1950's through the 2000's.

Recharge of the aquifer system occurs along active river and stream channels where extensive sand and gravel deposits exist, particularly along the American, Cosumnes, and Sacramento rivers. Additional recharge occurs along the eastern boundary of Sacramento County at the transition point from the consolidated rocks of the Sierra Nevada to the alluvial-deposited basin sediments. This recharge is classified as subsurface recharge along with underground flow into and out of the basin with adjacent groundwater basins. Other sources of recharge include deep percolation from applied surface water and precipitation.

The sustainable yield for the South American Subbasin was estimated as a part of the Groundwater Sustainability Plan development process, under the mandate of the 2014 Sustainable Groundwater Management Act (SGMA), using analysis of data and information from a number of groundwater modeling scenarios from the *Integrated Water Resources Model of the Cosumnes, South American, and North American* (CoSANA model) for historical, baseline and project conditions reflecting various hydrologic and operational conditions in the Subbasin. The scenarios used a 50-year hydrologic period, which represented reasonably long-term conditions in the Subbasin. The goal of the analysis was to establish a sustainable yield to avoid causing undesirable results as defined and established as part of the GSP Sustainable Management Criteria (SMC). The estimated long term annual sustainable yield of groundwater from the South American Subbasin is 235,000 AF/year. Supply and demand inputs into the CoSANA model for both current baseline conditions (water years 1970-2019) and projected baseline conditions (water year 2040) included SCWA Zone 40 operations and inclusive of those potentially associated with the LEACP Study Area. The full CoSANA model report may be

viewed as *Appendix 2 –B CoSANA Model Report* of the South American Subbasin Groundwater Sustainability Plan and may be accessed at <http://sasbgroundwater.org/resources.html>

- **Sustainable Groundwater Management Act (SGMA)**

The Sustainable Groundwater Management Act (SGMA), passed by the California legislature in 2014, requires local entities to jointly assess groundwater conditions in their local areas and to develop a Groundwater Sustainability Plan (GSP) by a specified deadline to ensure that sustainable conditions are achieved within 20 years of GSP adoption. An effective and efficient groundwater management plan is critical to the health and welfare of the people, the environment and all other uses and users of groundwater in a local area.

Six local entities responded to the mandate of SGMA and formed Groundwater Sustainability Agencies (GSAs) within the South American Subbasin (SASb). Sacramento Central Groundwater Authority (SCGA), Omochumne-Hartnell Water District (OHWD), Sloughhouse Resource Conservation District (SRCD), North Delta GSAs (NDGSA), Reclamation District 551 (RD 551), and Sacramento County, agreed to work together to develop and implement a GSP for the SASb. The South American Subbasin Groundwater Sustainability Plan (October 2021) was submitted to California Department of Water Resources by the mandated deadline of January 31, 2022, and is under review and pending approval. A copy of the GSP as submitted, may be viewed at <http://sasbgroundwater.org/>.

The local entities represented by the six GSAs in the SASb included the City of Sacramento, Sacramento County Water Agency, City of Elk Grove, City of Rancho Cordova, City of Folsom, Rancho Murieta, Sacramento Regional County Sanitation District, Elk Grove Water District, OHWD, SRCD and Reclamation Districts. A variety of local interests are also represented by these GSAs, including agricultural-residential water users, agricultural water users, public water systems, local land use planning agencies, environmental interests, surface water users, the federal government, tribal governments, disadvantaged communities, groundwater monitoring and reporting entities, holders of overlying groundwater rights, adjacent Subbasins, industrial users, commercial users, remediation pumpers, natural ecosystems, and the general public. Many of these local entities have a long history with groundwater and surface water management in the SASb and are well equipped to perform SGMA-required planning functions. The six GSAs in the SASb have undertaken a thorough and timely review of past, current and projected future water resources needs and groundwater conditions to meet SGMA requirements for GSP development. Throughout the development of the SASb GSP, regular communication and engagement activities were conducted to inform and receive input from local stakeholders and the general public. The SASb GSP includes a comprehensive groundwater subbasin description, which was used in the development of a regional surface and ground water model that quantifies current water budgets and projects future conditions associated with population growth, land use changes, water conservation, climate change, and consideration of beneficial projects that are planned to occur over the next five to ten years. The SASb GSP also includes a thorough assessment of the impacts of predicted future groundwater levels on beneficial users, including groundwater-dependent ecosystems, shallow wells, and interconnected surface water.

Importantly, these assessments are used to develop measurable sustainable management criteria that avoid significant and unreasonable impacts to these beneficial users, and that can be monitored and adjusted throughout plan implementation. The key finding of the SASb GSP, based on thorough analysis of the best available information, is that the basin will be sustainable over the next twenty years as long as planned recycled water, recharge and other projects are implemented. These projects will raise groundwater levels above current levels, maintain storage volumes, and protect ecosystems, interconnected surface water, and shallow well users. Although projected climate change conditions will increase groundwater use, these effects are not expected to cause the SASb to become unsustainable or to cause significant decreasing trends in groundwater conditions. A groundwater monitoring network comprised of more than 50 wells will be used to track groundwater levels and groundwater quality. Management criteria set at each well in the network will be implemented to assess these conditions over time and ensure that levels and quality remain within a range that avoids significant and unreasonable impacts to beneficial uses and users of groundwater. Once approved by the GSAs, the activities identified and developed through the SASb GSP development process will be implemented, including:

- Ongoing monitoring and annual reporting on conditions in the SASb;
- Ongoing public engagement and outreach;
- Coordination among the GSAs and with neighboring subbasins;
- Development and implementation of a shallow well protection and monitoring program;
- Coordination with regional entities to develop a regional water bank;
- Coordination with land use agencies and water supply agencies to promote consistency with the GSP;
- Coordination with regional agencies in the development of updated climate change projections; and,
- Preparation of a five-year update to the GSP to be submitted in 2027

- **SCWA Conjunctive Use Program**

Section 3.2 and Appendix E of the WSMP provide detailed descriptions of the Zone 40 conjunctive use program. SCWA's operational approach for preventing overdraft of the groundwater basin underlying Zone 40 and optimizing the use of both groundwater and surface water is discussed in detail in these sections. The FEIR for 2002 Zone 40 Water Supply Master Plan includes an extensive analysis of the effects of the Zone 40 conjunctive use program on the groundwater basin and on various recharge sources. A summary of the conjunctive use program is as follows:

SCWA's conjunctive use program is a coordinated approach to manage surface water and groundwater supplies to maximize the yield of available water resources. The conjunctive use program for SCWA includes the use of groundwater, surface water, remediated water, and recycled water supplies. The program also includes the construction of a surface water diversion structure, a surface-water treatment plant, and water conveyance pipelines, as well as groundwater extraction, treatment, and distribution facilities.

This conjunctive use program relies on an abundance of surface water in wet years when as much surface water as possible will be diverted, within entitlement limitations, minimizing the use of groundwater. During these years the groundwater aquifer will be allowed to naturally replenish. In dry years, when surface water availability is reduced, SCWA will pump more groundwater from the replenished aquifer. Using surface water and groundwater conjunctively makes it easier for SCWA to meet demands in a single dry year or in multiple dry years. The goal of the conjunctive use program is to meet all demands during wet and dry years.

SCWA has adopted policies to insure systematic, incremental implementation of its conjunctive use program. These policies are also consistent with the terms of the WFA, which is intended to maintain a long-term sustainable groundwater supply. The policies are included in the SCWA’s UWMP and WSMP, which include specific action items to assure implementation. Action items include development of additional surface water supply and treatment facilities to provide water during wet years, development of groundwater facilities to provide groundwater during dry years, in-lieu “banking” of groundwater during wet years, development and implementation of demand management and water conservation strategies, development of water reclamation facilities to meet non-potable demands, and development of a financing plan to implement these action items.

The conjunctive use program was included in the development of the SASb GSP’s water budget and sustainable yield.

Section 10910(f)(3)

Section 10910(f)(3) requires a description of the volume and geographic distribution of groundwater extractions from the basin for the last five years.

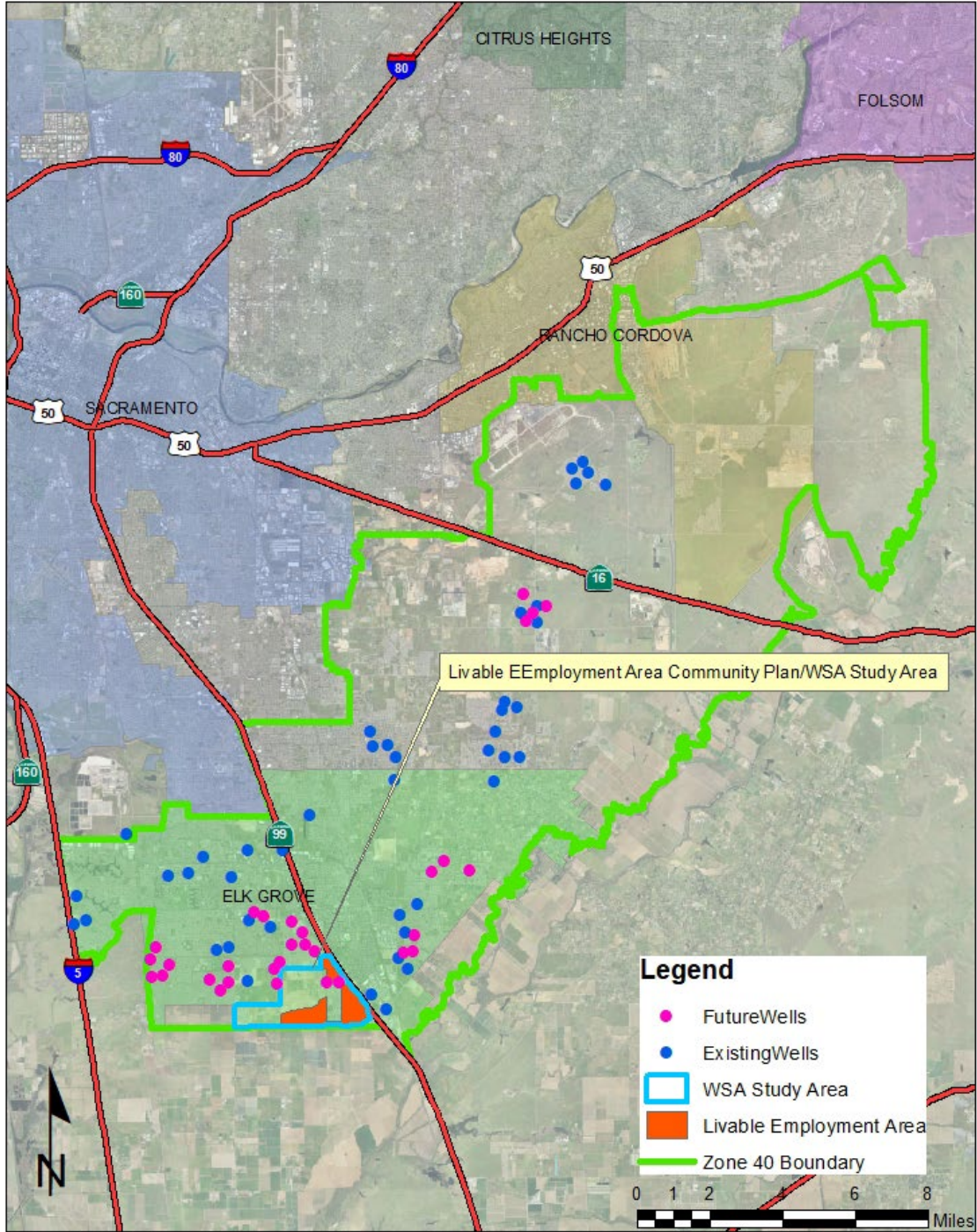
Table 5 identifies past volumes of groundwater extracted by SCWA in Zone 40 between 2000 – 2020. The 2020 UWMP contains 2016-2020 in Table 3-29.

Table 5 Historical Groundwater Pumping in Zone 40, 2000 – 2020

Year	(Acre-Feet)
2000	20,022
2001	22,306
2002	22,949
2003	22,745
2004	25,790
2005	29,184
2006	31,162
2007	31,249
2008	34,225
2009	34,249

2010	32,171
2011	29,809
2012	26,363
2013	23,274
2014	19,683
2015	20,675
2016	18,856
2017	17,157
2018	16,748
2019	14,654
2020	22,475

Through the water supply master planning process, SCWA identified a system of sixteen separate well fields throughout Zone 40. A distributed groundwater extraction strategy was selected because it would minimize drawdown effects of pumping by spreading extraction over a wide geographic area. The approximate locations of the SCWA's current and future well fields is shown in **Figure 4**.



Livable Employment Area Community Plan/WSA Study Area

SACRAMENTO COUNTY WATER AGENCY
 DEPARTMENT OF WATER RESOURCES

Figure 4 Existing and Future Well Fields in SCWA Zone 40

Section 10910(f)(4)

Section 10910(f)(4) requires a description of the projected volume and geographic distribution of groundwater extractions from the basin.

Groundwater use has declined since the VSWTP has come online, but it will increase over time as water demand continues to grow in Zone 40. In wet and normal years, groundwater pumping will be minimized because surface water becomes the major water supply source. In dry years, groundwater pumping will increase significantly as surface water availability is considerably reduced. Section 3.2.2 Zone 40 Groundwater in the 2020 UWMP describes the groundwater use through 2045.

Section 10910(f)(5)

Section 10910(f)(5) requires an analysis of the sufficiency of the groundwater basin to meet the demands associated with LEACP Study Area.

The Groundwater Sustainability Plan development process for the South American Subbasin estimated a long-term sustainable average annual yield of 235,000 AF/year and provided for SCWA's groundwater needs as identified in the WSMP. The WSMP describes a conjunctive use program that identifies and projects a long-term average use of groundwater to meet identified water demands, including the demand associated with LEACP Study Area.

SCWA's conjunctive use program has been extensively analyzed and documented in the WSMP, the FEIR for 2002 WSMP (certified in February 2006), the FEIR – WFA (certified in 1999), and the WFA.

DETERMINATION OF SUFFICIENCY

SCWA determines that it has identified sufficient water supplies to meet the water demands of LEACP Study Area over the next 20 years during normal, single dry, and multiple dry years.

SCWA makes this determination based on the information provided in this WSA and on the following specific facts:

- SCWA's conjunctive use program is a sustainable water supply program that provides a 100-percent reliable water supply while protecting environmental values and stabilizing the groundwater basin underlying Zone 40.
- SCWA's conjunctive use program has been extensively analyzed and documented in the WSMP, the FEIR for 2002 WSMP (certified in February 2006), the FEIR – WFA (certified in 1999), and the WFA. All referenced documents have been subjected to thorough technical peer review and public scrutiny.
- LEACP Study Area will be served by water supplies made available through SCWA's conjunctive use program.
- A financing plan for SCWA's conjunctive use program for constructing facilities required for delivering groundwater and surface water to LEACP Study Area has been approved by the Board through its adoption of the WSMP, Bond Feasibility Reports, and the Sacramento County Water Agency Code.

The 2020 UWMP demonstrates that SCWA's total projected water supplies during normal, single dry, and multiple dry water years meet the proposed water demands over the next 20 years including the proposed LEACP Study Area which being part of Zone 40 is contemplated in the UWMP.

CONCLUSION

This WSA documents all required information specifically delineated by Water Code Sections 10910 – 10915. It demonstrates that SCWA's water supplies are sufficient to satisfy the water demands of the currently proposed LEACP Study Area while still meeting the current and projected water demands of existing customers in the next 20 years. If there are significant changes to land uses for the proposed LEACP Study Area in the future, this WSA may need to be revisited and updated accordingly.

Appendix I

Biological Resources Database
Search Results

Special Status Species that do not Have Suitable Habitat in the LEA Community Plan Area

Species Common Name	Species Scientific Name
Plants	
watershield	<i>Brasenia schreberi</i>
bristly sedge	<i>Carex comosa</i>
fleshy owl's-clover	<i>Castilleja campestris ssp succulenta</i>
pappose tarplant	<i>Centromadia parryi ssp. parryi</i>
Parry's rough tarplant	<i>Centromadia parryi ssp rudis</i>
Bolanders water hemlock	<i>Cicuta maculata var. bolanderi</i>
Delta mudwort	<i>Limosella australis</i>
Peruvian dodder	<i>Cuscuta obtusiflora var. glandulosa</i>
dwarf downingia	<i>Downingia pusilla</i>
Boggs Lake hedge – hyssop	<i>Gratiola heterosepala</i>
woolly rose-mallow	<i>Hibiscus lasiocarpus var. occidentalis</i>
Ahart's dwarf rush	<i>Juncus leiospermus var. ahartii</i>
alkali-sink goldfields	<i>Lasthenia chrysantha</i>
Delta tule pea	<i>Lathyrus jepsonii var. jepsonii</i>
legenere	<i>Legenere limosa</i>
Heckard's pepper-grass	<i>Lepidium latipes var. heckardii</i>
Mason's lilaeopsis	<i>Lilaeopsis masonii</i>
pincushion Navarretia	<i>Navarretia myersii</i>
slender Orcutt grass	<i>Orcuttia tenuis</i>
Sacramento Orcutt grass	<i>Orcuttia viscida</i>
marsh skullcap	<i>Scutellaria galericulata</i>
side-flowering skullcap	<i>Scutellaria lateriflora</i>
Suisun marsh aster	<i>Symphotrichum lentum</i>
saline clover	<i>Trifolium hydrophilum</i>
Wildlife	
green sturgeon southern DPS	<i>Acipenser medirostris pop. 1</i>
California tiger salamander	<i>Ambystoma californiense pop. 1</i>
vernal pool fairy shrimp	<i>Branchinecta lynchi</i>
mid-Valley fairy shrimp	<i>Branchinecta mesovallensis</i>
Western yellow billed cuckoo	<i>Coccyzus americanus occidentalis</i>
monarch butterfly	<i>Danaus plexippus</i>
Ricksecker's Water Scavenger Beetle	<i>Hydrochara rickseckeri</i>
Delta smelt	<i>Hypomesus transpacificus</i>
vernal pool tadpole shrimp	<i>Lepidurus packardi</i>
steelhead trout	<i>Oncorhynchus mykiss irideus pop. 11</i>
Sacramento splittail	<i>Pogonichthys macrolepidotus</i>
foothill yellow-legged frog - south Sierra DPS	<i>Rana boylei pop. 5</i>
western spadefoot	<i>Spea hammondii</i>

longfin smelt	<i>Spirinchus thaleichthys</i>
riparian brush rabbit	<i>Sylvilagus bachmani riparius</i>
American Badger	<i>Taxidea taxus</i>
yellow-headed blackbird	<i>Xanthocephalus xanthocephalus</i>