Draft Environmental Impact Report

Level II Infill Correctional Facilities Project

Volume 4

Site-Specific Evaluation of Level II Infill Correctional Facilities at Folsom State Prison / California State Prison, Sacramento

---

CALIFORNIA DEPARTMENT OF CORRECTIONS AND REHABILITATION

STATE CLEARINGHOUSE NUMBER 2012122038

June 2013

Draft Environmental Impact Report

Level II Infill Correctional Facilities Project

Volume 4

Site-Specific Evaluation of Level II Infill Correctional Facilities at Folsom State Prison / California State Prison, Sacramento

---

STATE CLEARINGHOUSE NUMBER 2012122038

Prepared for:
California Department of Corrections and Rehabilitation
Facility Planning, Construction and Management
Project Management Branch
9838 Old Placerville Road, Suite B
Sacramento, California 95827

Contact:
Bob Sleppy
Project Management Branch
916.255.1141

Prepared by:
Ascent Environmental, Inc.
455 Capitol Mall, Suite 300
Sacramento, California 95814

June 2013

12010055.05

TABLE OF CONTENTS

Chapter/Section **Page**

APPENDICES

EXHIBITS

TABLES

ACRONYMS AND ABBREVIATIONS

$\mu g/m^3$	micrograms per cubic meter
AB	Assembly Bill
ADT	average daily traffic
ANSI	American National Standards Institute
APCO	Air Pollution Control Officer
AQMP	air quality management plan
ARB	California Air Resources Board
ATC	Authority to Construct
BAAQMD	Bay Area Air Quality Management District
Basin Plan	Water Quality Control Plan
BMPs	best management practices
CAA	Clean Air Act
CAAQS	California Ambient Air Quality Standards
Caltrans	California Department of Transportation
CARB	California Air Resources Board
CASQA	California Stormwater Quality Association's
CBC	California Building Code
CCAA	California Clean Air Act
CCR	California Code of Regulations
CDCR	California Department of Corrections and Rehabilitation
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CHCF	California Health Care Facility
City	City of Folsom
CMP	Coordinated Water Quality Monitoring Program
CNDDB	California Natural Diversity Database
CNEL	Community Noise Equivalent Level
CNPS	California Native Plant Society
CO	carbon monoxide
CRPR	California Rare Plant Rank
CSMP	Corridor System Management Plan
CSP-Sac	California State Prison–Sacramento
CVRWQCB	Central Valley Regional Water Quality Control Board

CWA	Clean Water Act
CWA	federal Clean Water Act
dB	decibel
dBA	A-weighted sound levels
DBH	diameter at breast height
DCG	Design Criteria Guidelines
DEIR	Draft Environmental Impact Report
Delta	Sacramento–San Joaquin Delta
DTSC	California Department of Toxic Substances Control
DWR	California Department of Water Resources
EDD	Employment Development Department
EIR/EIS	Environmental Impact Report/Environmental Impact Statement
EOP	Enhanced Outpatient
EPA	U.S. Environmental Protection Agency
ESA	Federal Endangered Species Act
FEIR	Final Environmental Impact Report
FEMA	Federal Emergency Management Agency
FHWA	Federal Highway Administration
FLSRA	Folsom Lake State Recreation Area
FMMP	Farmland Mapping and Monitoring Program
Folsom	Represa
FPD	Folsom Police Department
FPSHP	Folsom Power House State Historic Park
FSP	Folsom State Prison
FSP/SAC	California State Prison, Sacramento/Folsom State Prison
FSPFD	FSP Fire Department
FTA	Federal Transit Administration
FWF	Folsom Women's Facility
GHG	greenhouse gas
gpd	gallons per day
gpid	gallons per inmate per day
gsf	gross square feet
HAPs	hazardous air pollutants
HCM	Highway Capacity Manual
HCP	Habitat Conservation Plan

HRA	health risk assessment
Hz	hertz
IPCC	Intergovernmental Panel on Climate Change
IWL	inmate ward labor / Inmate Work Labor facility
kV	kilovolt
LEED	Leadership in Energy and Environmental Design
LEF	lethal electrified fence
lb/day	pounds per day
LDL	Larson Davis Laboratories
L_{dn}	Day-Night Average Noise Level
L_{eq}	Equivalent Noise Level
L_{max}	Maximum Noise Level
L_{min}	Minimum Noise Level
LOS	Level of Service
L_x	Statistical Descriptor
mbh	mega British thermal units per hour
MG	million gallon
mg/l	milligrams per liter
mgd	million gallons per day
mph	miles per hour
MOU	Memorandum of Understanding
MRZs	Mineral Resource Zones
MSL	mean sea level
MTP/SCS	Metropolitan Transportation Plan / Sustainable Community Strategy
MUTCD	Manual on Uniform Traffic Control Devices
MW	megawatts
NAAQS	National Ambient Air Quality Standards
NESHAP	national emissions standards for HAPs
NESHAPS	National Emission Standard for Hazardous Air Pollutants
NO_2	nitrogen dioxide
NOA	Notice of Availability
NOP	Notice of Preparation
NO_X	oxides of nitrogen
NPDES	National Pollution Discharge Elimination System
NRCS	Natural Resources Conservation Service

NSR	New Source Review
NWP	Nationwide Permit
OSC	Open Space and Conservation
PG&E	Pacific Gas and Electric
PHF	Peak Hour Factor
PIA	Prison Industry Authority
$PM_{2.5}$	fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less
PM_{10}	respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
PPV	peak particle velocity
PRC	California Public Resources Code
psi	pounds per square inch
PSU	Psychiatric Services Unit
PTO	Permit to Operate
RAQS	regional air quality strategy
RMS	root-mean-square
ROG	reactive organic gases
RT	Regional Transit
RWQCB	regional water quality control board
SAC	California State Prison, Sacramento
SACMET	Sacramento Metropolitan Travel Demand Model
SACOG	Sacramento Area Council of Governments
SEL	Sound Exposure Level
SGA	Sacramento Groundwater Authority
SLMs	sound level meters
SMAQMD	Sacramento Metropolitan Air Quality Management District
SMUD	Sacramento Municipal Utility District
SO_2	sulfur dioxide
SR	State Route
SRCSD	Sacramento Regional County Sanitation District
SRWTP	Sacramento Regional Wastewater Treatment Plant
SSHCP	South Sacramento Habitat Conservation Plan
SVAB	Sacramento Valley Air Basin
SWPPP	Stormwater Pollution Prevention Plan

SWRCB	State Water Resources Control Board
TAC	toxic air contaminant
T-BACT	best available control technology for TACs
TMDL	total maximum daily load
TMP	Traffic Management Plan
TNM	Highway Traffic Noise Model
UBC	Uniform Building Code
US 50	U.S. Highway 50
USACE	U.S. Army Corps of Engineers
USBR	U.S. Bureau of Reclamation
USEPA	U.S. Environmental Protection Agency
USFWS	U.S. Fish and Wildlife Service
VdB	vibration decibels
VOCs	volatile organic compounds
WDRs	Waste Discharge Requirements
WTP	water treatment plant

This page intentionally left blank.

1 INTRODUCTION

This volume (Volume 4) of the draft environmental impact report (DEIR) evaluates the potential physical environmental impacts associated with development of a single level II infill correctional facility at the Folsom State Prison (FSP)/California State Prison, Sacramento (SAC) Infill Site in Folsom. As noted in Volume 1 of this EIR, the FSP/SAC Infill Site is being considered by CDCR as a potential alternative site for a 792-bed (single) level II correctional facility. This chapter provides an overview of the purpose, focus, and use of this volume of the DEIR; a summary of the public review and participation process; and a description of the terminology used herein. A detailed description of the overall project is provided in Chapter 3, "Project Description," in Volume 1 of this DEIR, and is incorporated by reference herein; site-specific project information for the FSP/SAC Infill Site is provided in Chapter 3 of this volume.

1.1 PROJECT BACKGROUND

Opened in 1880, FSP is California's second oldest state prison and one of the nation's first maximum-security prisons. FSP now houses medium-security (Level I–III) inmates while providing access to a variety of vocational, academic, and industrial programs, as well as religious and self-help programs aimed at reducing recidivism rates.

SAC, established in 1986, houses maximum-security (Level IV) inmates serving long sentences or those who have proved to be management problems at other institutions. SAC also serves as a medical hub for Northern California with Psychiatric Services Unit, an Enhanced Outpatient (EOP) unit, and EOP Administrative Segregation levels of healthcare. SAC currently has an Outpatient Housing Unit and a Correctional Treatment Center that provides acute-care medical services, which was licensed in February 2003.

With respect to the onsite inmate population at FSP/SAC, and as noted in Chapter 2, "Introduction," of Volume 1 of this DEIR, the California Department of Corrections and Rehabilitation's (CDCR's) correctional facilities have historically been faced with severe inmate crowding conditions. California's adult prison institutions, including FSP/SAC, have operated for years above their operational capacity. By the early 2000s, the housing of the inmate population throughout California has exceeded the operational capacity (the inmate capacity of a particular facility, taking into account the capacity of supporting programs rather than focusing only on available bed space) of institutions and had affected the physical facilities and operations. Beginning in October 2011, when changes to the Penal Code for certain felonies took effect, the inmate population housed at CDCR correctional facilities has been gradually reduced. Table 1-1 identifies the prison population at FSP/SAC from 2004 to 2012. During that period, FSP/SAC's inmate population decreased by 2,428 inmates (33.3 percent). CDCR's long-term plan of operations, as detailed in the *Future of California Corrections* ("Blueprint"), calls for maintaining the populations at FSP/SAC at approximately the same numbers, with a long-term operational goal (staffed capacity) of 2,895 inmates at FSP and 2,362 inmates at SAC (CDCR 2012a). There are no plans to increase inmate levels at the existing FSP/SAC facilities above that goal.

In evaluating currently unused land outside of the existing secure perimeters of FSP and SAC, it was determined that the existing state-owned CDCR property could accommodate a single, 792-bed correctional facility. No additional land would be needed outside of the existing boundaries of the state-owned parcel that contains the FSP/SAC facilities. The proposed level II infill correctional facility, would meet all CDCR correctional facility design and security requirements, including the use of lethal electrified perimeter fencing, and would be operated by and under the authority of FSP/SAC. The level II facility would be configured as a stand-alone prison; the existing perimeters of FSP and SAC would not be modified to connect the existing and new facilities together.

Table 1-1 FSP/SAC Prison Population (2004-2012)[1]

Year	FSP Population	SAC Population	Combined Prison Population[2]	Percentage Change Compared to Previous Year
2004	3,999	3,294	7,293	--
2005	4,064	3,233	7,297	0.05%
2006	4,079	3,124	7,203	(1.3%)
2007	4,095	3,101	7,196	0.1%
2008	4,024	2,951	6,975	(3.1%)
2009	3,819	3,058	6,877	(1.4%)
2010	3,401	2,866	6,267	(8.9%)
2011	3,245	2,875	6,210	(0.9%)
2012	2,314	2,551	4,865	(21.7%)
Percent decrease in FSP/SAC population since 2004				(33.3%)
CDCR Blueprint target population[3]	2,895	2,362	5,257	7.4%

Notes:
[1] Prison population statistics for each year are derived from the December monthly report of population prepared for that calendar year.
[2] The combined prison population is equal to the prison population statistics from the December monthly report of population prepared for that calendar year for FSP and SAC.
[3] CDCR The Future of California Corrections, Appendix B, California State Prison – Sacramento and Folsom State Prison, Housing Plan (April 2012)
Source: CDCR 2005, 2006, 2007a, 2008, 2009, 2010, 2011, 2012, 2013.

1.2 PURPOSE AND INTENDED USE OF THE ENVIRONMENTAL IMPACT REPORT

For a detailed description of the purpose and intended use of this DEIR, refer to Chapter 2 in Volume 1. This volume addresses the project-level environmental impacts associated with development of a single, level II infill correctional facility at FSP/SAC. If CDCR selects the FSP/SAC Infill Site for the development of a single, level II facility, this volume would serve as the environmental review document under the California Environmental Quality Act (CEQA) required for that approval.

1.3 LEAD, RESPONSIBLE, AND TRUSTEE AGENCIES AND APPLICABLE PERMITS

CDCR is the lead agency with primary authority for approval of the Level II Infill Correctional Facilities Project. The agencies listed below with potential permit authority over the project, or elements thereof, will have the opportunity to review this document during the public and agency review period, and will use this information when considering the issuance of any permits required for the project.

Public agencies with discretionary authority, known permits, other approvals, or jurisdiction by law over resources related to the project at FSP/SAC include (but may not be limited to) the agencies listed below.

1.3.1 LEAD AGENCY

- CDCR (Overall project approval, including certification of the adequacy of this EIR).

1.3.2 FEDERAL AGENCIES (POTENTIAL PERMITTING AUTHORITY)

- U.S. Army Corps of Engineers (Consideration of jurisdictional wetlands and/or water quality certification or waiver under Clean Water Act Section 404 and/or 401).
- U.S. Fish and Wildlife Service (USFWS) (Sensitive species review/permitting under the federal Endangered Species Act).
- U.S. Bureau of Reclamation (Owns land in the vicinity of the project site).

1.3.3 STATE RESPONSIBLE AGENCIES

- California Department of Fish and Wildlife (formerly California Department of Fish and Game) (California Endangered Species Act review/permitting).
- California Department of Toxic Substances Control (Environmental site assessment).
- Central Valley Regional Water Quality Control Board (Clean Water Act, Section 401 Water Quality Certification, Wastewater Treatment Plant Operation, and National Pollutant Discharge Elimination System permit).

1.3.4 LOCAL RESPONSIBLE AGENCIES

- Sacramento Metropolitan Air Quality Management District (Authority to construct).
- City of Folsom (Coordination for potential offsite improvements such as roadway and/or infrastructure improvements, wastewater conveyance infrastructure).

1.4 SCOPE OF THE DRAFT ENVIRONMENTAL IMPACT REPORT

According to Section 15143 of the State CEQA Guidelines, a lead agency should limit a DEIR's discussion of environmental effects to specific issues where significant effects on the environment may occur. CDCR used a variety of information to determine which issue areas could result in significant impacts on the environment. This information included field surveys of the FSP/SAC Infill Site; review of published studies related to the FSP/SAC Infill Site; review of project design characteristics; review of comments submitted during agency consultation; and review of comments received on the Notice of Preparation (NOP) and during public scoping meetings.

An NOP was circulated to public agencies and members of the public on December 19, 2012, and the review period concluded on February 4, 2013. The NOP notified the public that a DEIR was to be prepared for the project and described briefly the basic elements of the project and the scope of the DEIR's environmental analysis. The NOP briefly requested that public agencies and members of the public provide their comments on the scope and content of the DEIR that was to be prepared. Twelve public scoping meetings were held between January 14, 2013 and January 31, 2013. Scoping meetings were held in the vicinity of each potential infill site, including FSP/SAC. The NOP and comments received on the NOP are included in Volume 1, Appendix 1A. Review of the NOP and public scoping comments and preliminary analysis indicated that a full-scope EIR is required for the Level II Infill Correctional Facilities Project. All issue areas outlined in Appendix G of the State CEQA Guidelines are addressed in this volume (Volume 4) of this DEIR for the potential construction of infill correctional facilities at FSP/SAC.

1.4.1 COMMUNITY/AGENCY ISSUES AND CONCERNS

The following issues are known and/or were raised by agencies or interested parties during the NOP public review period that are specific to development of a level II infill correctional facility at FSP/SAC:

- analysis of potential impacts to the State highway system and the adjacent road network, and
- wastewater infrastructure and capacity to support the project.

Refer to Section 2.4.1 in Chapter 2, Volume 1 of this DEIR for a discussion of economic and social impacts, and the need for additional level II correctional facilities. Regarding public noticing, all persons requesting so will receive notice of the availability of all CEQA documents. The other issues raised above are addressed in the analysis herein.

1.5 PUBLIC REVIEW AND PARTICIPATION PROCESS

Consistent with the requirements of CEQA, efforts have been made during the preparation of this DEIR to contact affected agencies, organizations, and individuals who may have an interest in the construction of a level II infill facility at FSP/SAC. As described above, these efforts included circulation of the NOP on December 19, 2012, including posting a scoping notice in the *Folsom Telegraph* newspaper. Two public scoping meetings were then held on January 14, 2013 (at 3:00 p.m. and 5:00 p.m.) at the Folsom Community Center, 52 Natoma Street, Folsom, adjacent to FSP/SAC.

CDCR has filed a Notice of Completion with the State Clearinghouse of the Governor's Office of Planning and Research, indicating that this DEIR has been completed and is available for review and comment by the public. The public review period will last 45 days, beginning on June 21, 2013, and ending on August 8, 2013**.**

1.5.1 DEIR PUBLIC MEETINGS

A total of 12 public meetings on the Level II Infill Correctional Facilities Project DEIR will be held during the public review period. In the vicinity of FSP/SAC, two meetings will be held on July 17, 2013, at 3:00 p.m. and 5:00 p.m. at the Folsom Community Center, 52 Natoma Street, Folsom, CA 95630.

A public Notice of Availability of the DEIR, which also includes the date, times, and specific location for the public meetings in the vicinity of FSP/SAC, has been published in the *Folsom Telegraph* newspaper.

1.5.2 WRITTEN COMMENTS

Comments on the DEIR, including this volume (Volume 4), may be made either in writing before the end of the comment period (5:00 p.m. on August 8, 2013) or orally at the aforementioned public hearings. Written comments should be mailed or e-mailed to the address provided below. After the close of the public comment period, responses to the comments received on the DEIR will be prepared and published. These responses, together with this DEIR, will constitute the Final EIR.

Please mail, e-mail, or fax comments on the DEIR by the deadline to:

California Department of Corrections and Rehabilitation
Facility Planning, Construction and Management
Environmental Planning Section
Attn: Robert Sleppy
9838 Old Placerville Road, Suite B
Sacramento, CA 95827
email: CDCR_infill@ascentenvironmental.com
fax: (916) 255-1141

Copies of the DEIR can be reviewed at:

Folsom Public Library
411 Stafford Street
Folsom, CA 95630
(916) 355-7374

Technical studies and the DEIR can also be reviewed at the following CDCR address or online at the website provided below.

California Department of Corrections and Rehabilitation
Facility Planning, Construction and Management
Construction Management Branch
Environmental Planning Section
9838 Old Placerville Road, Suite B
Sacramento, CA 95827

Available online at:
http://www.cdcr.ca.gov/Reports_Research/Environmental/index.html

1.6 ORGANIZATION OF THE DRAFT ENVIRONMENTAL IMPACT REPORT

As noted in Volume 1, the DEIR has been divided into five volumes, of which four (Volumes 2 through 6) include site-specific evaluations of level II infill correctional facilities at R. J. Donovan Correctional Facility (Volume 2); Mule Creek State Prison (Volume 3); FSP/SAC (Volume 4, this volume); and California Medical Facility/California State Prison, Solano (Volume 5). This volume of the DEIR, which presents the site-specific evaluation of FSP/SAC, is organized into chapters, as identified and described briefly below.

Chapter 1, "Introduction": Chapter 1 describes the purpose and organization of this volume, as well as known community/agency issues and concerns related to development of the FSP/SAC Infill Site.

Chapter 2, "Project Description": Chapter 2 describes the project location, background, project objectives, project design characteristics, and construction for the FSP/SAC Infill Site.

Chapter 3, "Environmental Setting, Thresholds of Significance, Environmental Impacts, and Mitigation Measures": In a separate section for each environmental issue (e.g., Section 3.2, "Biological Resources"), this chapter describes the existing environmental conditions, regulatory background, thresholds to determine significance of impacts, and discussion of the environmental impacts associated with project construction and operation. Mitigation measures are identified for significant impacts.

Chapter 4, "Cumulative Impacts": This chapter discusses cumulative impacts that would result from implementation of the project in combination with impacts from past, present, and reasonably foreseeable future projects in the project area.

Chapter 5, "Other CEQA Sections": The potential for the project to foster economic or population growth, or to remove obstacles to growth, is evaluated in Chapter 5. Project-level and cumulative impacts that cannot be mitigated to a less-than-significant level are also documented in this chapter.

Chapter 6, "References": This chapter sets forth a comprehensive listing of all sources of information used in the preparation of the DEIR.

Appendices: The appendices contain various technical reports, letters, and other documentation, summarized or otherwise used for preparation of this volume of the EIR. Volume 4 appendices are identified as Appendix 4A, 4B, 4C, and so on, and are provided in electronic format on a CD.

The evaluation of alternatives related to the proposed project and the equal-level alternatives, including the development of FSP/SAC with a single, level II infill correctional facility, is included as part of Chapter 5, "Alternatives," of Volume 1 of this EIR.

1.7 TERMINOLOGY USED IN THE DRAFT ENVIRONMENTAL IMPACT REPORT

This DEIR includes the following terminology to denote the significance of environmental impacts of the project:

Less-than-Significant Impact: A less-than-significant impact is one that would not result in a substantial and adverse change in the environment. This impact level does not require mitigation measures.

Significant Impact: Section 21068 of CEQA (Pub. Resources Code §21068) defines a significant impact as one that causes "a substantial, or potentially substantial, adverse change in the environment." Feasible mitigation measures or alternatives to the project must be considered to reduce the magnitude of significant impacts to less-than-significant levels.

Potentially Significant Impact: A potentially significant impact is one that, if it were to occur, would be considered a significant impact as described above, but for which the occurrence of the impact cannot be definitely determined. For CEQA purposes, a potentially significant impact is treated as a significant impact.

Significant and Unavoidable Impact: A significant and unavoidable impact is a substantial adverse effect on the environment that cannot be feasibly mitigated to a less-than-significant level. A project with significant unavoidable impacts can still be approved, but CDCR would be required to prepare a statement of overriding considerations, in accordance with State CEQA Guidelines Section 15093, explaining the social, economic, or other benefits of the project that outweigh the significant environmental impacts.

Thresholds of Significance: Significance thresholds are criteria that define at what level impacts would be considered significant. A criterion is defined based on examples found in CEQA or the State CEQA Guidelines, scientific and factual data, the policy/regulatory environment of affected jurisdictions, professional judgment, and other factors.

1.8 TECHNICAL AND OTHER STUDIES CONSIDERED IN THIS DRAFT ENVIRONMENTAL IMPACT REPORT

Several studies or reports have been prepared in support of the analysis presented in this DEIR and are included in the appendices (on CD). In addition, the studies and reports that were prepared in connection with or that are applicable to the project are available for review at CDCR, Facility Planning, Construction, and Management, Environmental Planning Section, 9838 Old Placerville Road, Suite B, Sacramento, CA 95827.

2 PROJECT DESCRIPTION

2.1 PROJECT OBJECTIVES

For a detailed description of the Level II Infill Correctional Facilities Project objectives, refer to Section 3.1 of Chapter 3, "Project Description," in Volume 1 of this draft environmental impact report (DEIR). Those project objectives apply to construction of a level II infill correctional facility at Folsom State Prison (FSP)/California State Prison, Sacramento (SAC).

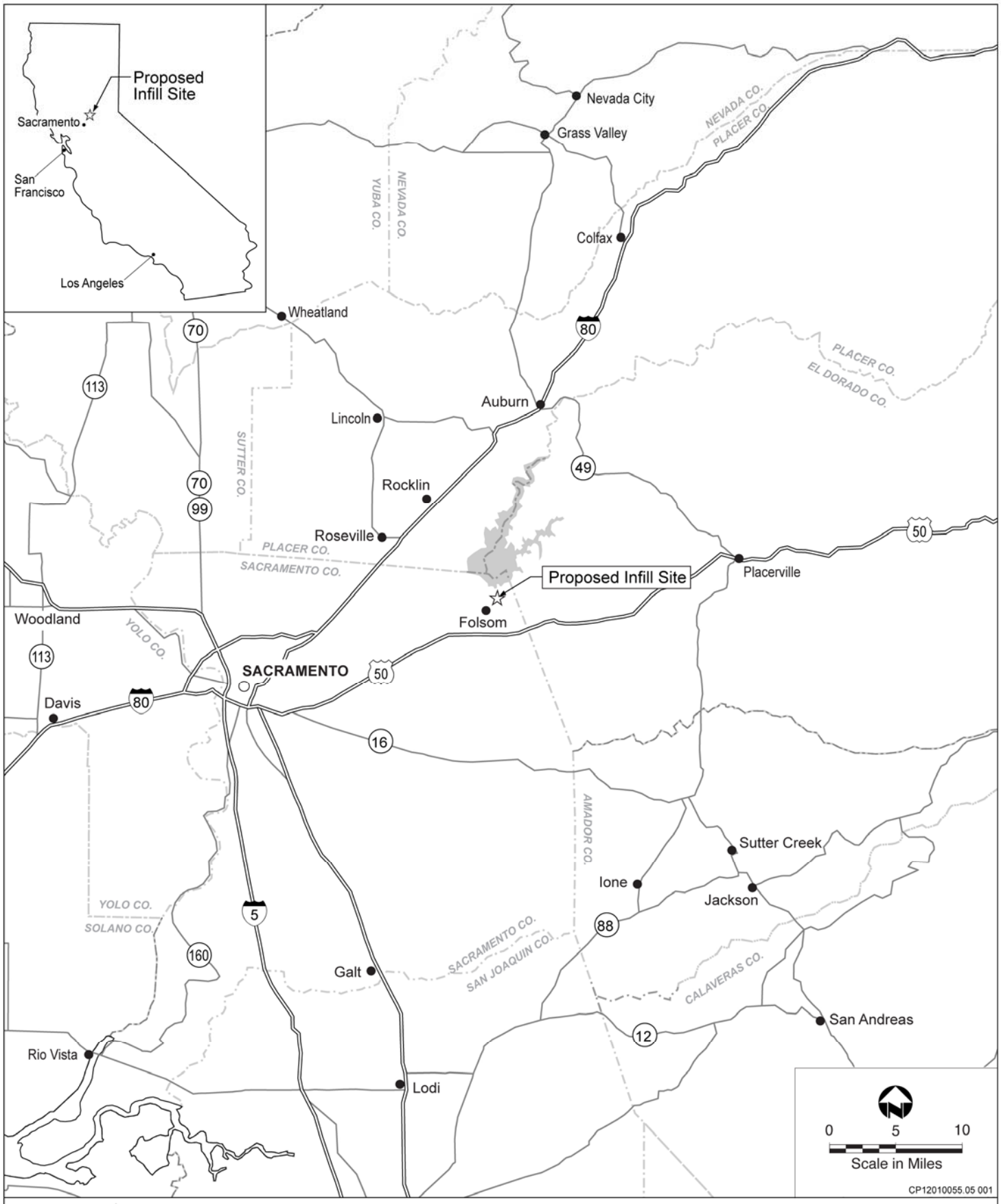
2.2 PROJECT LOCATION

The existing FSP/SAC facilities, located on Prison Road, Represa (Folsom), California, are located on approximately 1,240 acres owned by the State of California. In addition to FSP/SAC, in late January 2013, the Folsom Women's Facility (FWF) began operation onsite; FWF provides housing for up to 403 female inmates. FSP/SAC is located in the northern portion of the City of Folsom in Sacramento County, approximately 22 miles northeast of downtown Sacramento. FSP/SAC is bounded by East Natoma Street to the southeast, Folsom Lake Crossing to the northeast, and the American River to the west. Local access to FSP/SAC is provided by East Natoma Street. Regional access to FSP/SAC is provided via U.S. Route 50 (US 50). Exhibits 2-1 and 2-2 show FSP/SAC's regional location and project vicinity, including access roads.

Land uses surrounding FSP/SAC, which are identified on the aerial photograph in Exhibit 2-2, include Folsom Dam and Folsom Lake to the north/northeast; the Folsom Lake State Recreation Area to the east; the Folsom Water Treatment Plant and residential uses to the east/southeast; Folsom City Hall, Folsom City Park, Rodeo Park, St. Jude's Hospital, commercial uses, and residential uses to the south; the American River to the west; and the Folsom Dam industrial complex, commercial uses, and residential uses to the northwest. The American River Parkway is located approximately 0.5 mile due west of FSP/SAC and includes open space, a paved multi-use trail that connects to downtown Sacramento, and the confluence of the Sacramento and American Rivers with the Folsom Reservoir, although the trail is not continuous around the reservoir. Approximately 0.5 mile northwest of FSP/SAC is the Folsom Dam industrial complex. The complex houses U.S. Bureau of Reclamation staff, workshops, warehouses, and administrative buildings used to operate and maintain facilities and equipment in support of the dam's core functions, as well as California Department of Parks and Recreation staff and buildings supporting the Folsom State Recreation Area.

2.2.1 DESCRIPTION OF THE INFILL SITE

The FSP/SAC Infill Site is located on the northern side of the State-owned prison grounds, south of Folsom Lake Crossing, and between the existing FSP and SAC facilities. The boundaries of the infill site, including potential construction disturbance area, utility connections, and relocated facilities, would be approximately 60 acres, as shown in Exhibit 2-2. Upon completion of construction, approximately 35 acres would be permanently developed with the single, level II infill correctional facility, including parking and supporting structures, and an additional 10 acres would be developed with relocated prison facilities that would be displaced by the new level II infill correctional facility. The remainder of the disturbance area acreage (approximately 15 acres) would be returned to pre-construction conditions and/or revegetated. Existing land uses on the infill site include fire protection facilities for FSP/SAC, which include a station for the fire protection vehicles and fire protection staff quarters; an outdoor area for inmates; an inmate ward labor site, including five permanent structures and multiple temporary structures used for administrative purposes, storage, and maintenance; a recycling facility; two buildings used for storage and maintenance for a bike repair program; and two vacant structures. These facilities would need to be relocated to accommodate the level II infill correctional facility.



Source: Adapted by Ascent Environmental 2012

Exhibit 2-1 FSP/SAC Regional Location

Source: CDCR 2012 Adapted by Ascent Environmental 2012

Exhibit 2-2

Boundary of Potential Disturbance and Existing Land Uses

ASCENT ENVIRONMENTAL

2.3 DESCRIPTION OF THE PROPOSED PROJECT

As noted above and in Chapter 3 of Volume 1, the FSP/SAC Infill Site is being considered for a single, level II infill correctional facility. The single level II infill correctional facility would generally be pentagonal in shape would cover approximately 35 acres within the 60-acre area of disturbance described above (Exhibit 2-2), including three separate housing units with an operational capacity of 792 beds. Although the new level II infill correctional facility would be operated by, and under the authority of, SAC, the facility would be independent/self-contained, with all necessary related support buildings and inmate programming space (as described in Chapter 3 of Volume 1) to meet the needs of various inmates, including, but not limited to, those with disabilities, intermediate medical needs, or mental health treatment needs.

Section 3.3, "Description of Proposed Project," of Chapter 3 in Volume 1, provides a detailed description of single, level II infill correctional facilities, including the dormitory housing units, support facilities, staffing, parking, operations, lighting, security, and construction schedule. Refer to Section 3.3 of Volume 1 for a full description of these project elements, which are common to all of the potential level II infill sites.

The following project elements are specific to the construction and operation of a level II infill correctional facility at FSP/SAC.

2.3.1 FACILITY RELOCATIONS

Construction of the level II infill correctional facility at FSP/SAC would require the demolition and relocation of several existing structures: the Inmate Ward Labor (IWL) area; a recycling yard; and the firehouse, as shown in Exhibit 2-3. These current uses would be relocated to other areas within the infill site disturbance boundaries, as identified in Exhibit 2-2. The new IWL facilities would be constructed on approximately 5 acres northeast of the secure perimeter of SAC. The new recycling facilities would be constructed on approximately 2 acres adjacent to the northern edge of FSP's secure perimeter; they would remain similar in size to the existing facilities, but would incorporate a more efficient layout to accommodate additional sorting and storage space. A new firehouse would be constructed on approximately 3 acres adjacent to the eastern edge of SAC's secure perimeter. It is anticipated that the new station would be designed to accommodate an additional service vehicle bay, as well as an office and housing space for additional staff that may be needed to serve FSP/SAC and the new level II infill correctional facility.

2.3.2 PARKING AND SERVICE ROADS

As described in Chapter 3 of Volume 1, the number of parking spaces required for the level II infill correctional facility is based on a combined estimate of the staff totals for the second and third watches (Table 3-1 in Chapter 3 of Volume 1) plus 15 percent of the inmate population for weekend visitation, which is based on visitation patterns at other facilities operated by the California Department of Corrections and Rehabilitation (CDCR) across the state. Therefore, a single facility would include a total of 207 spaces.

The parking, circulation system, and service roads for the level II infill correctional facility are identified in Exhibit 2-3. The parking area would be located generally south/southwest of the new facility. Primary access to the FSP/SAC Infill Site would be provided from the north from Folsom Lake Crossing. A new security gate would be constructed on this northern access road, which would include a gatehouse in the middle of the road for a security guard and a widened concrete pad on either side of the roadway to allow vehicles to stop for security clearance and turn-around (Exhibit 2-3).

2.3.3 UTILITIES AND SERVICE SYSTEMS

POTABLE WATER

FSP/SAC receives water exclusively from a diversion from Folsom Lake under a Memorandum of Understanding between the State of California, the U.S. Army Corps of Engineers, and the U.S. Bureau of Reclamation. Under the MOU, the U.S. Bureau of Reclamation provides 4,000 acre-feet per year (afy) of raw water from Folsom Lake by piping water from Folsom Dam through an 84-inch pipeline. Based on the lake's water level, the raw water either goes through the U.S. Bureau of Reclamation Pumping Plant (if the lake water surface elevation is below 430 feet) or bypasses the pump station and feeds directly into the FSP/SAC system. After the water leaves or bypasses the pumping station, it is directed to either the City of Folsom's raw water line (referred to as the 60-inch Natoma Pipeline), which feeds the City of Folsom's water treatment plant, or the 18-inch FSP/SAC water line.

The 18-inch FSP/SAC raw water line connects to a diversion weir (a small overflow-type dam), where the raw water flows through the FSP/SAC meter house and into the pumping station, which pumps the water to a 3.5-million-gallon-per-day (mgd) water treatment plant located within the boundaries of FSP/SAC (City of Folsom 2008). After being treated, the water is pumped to two 1-million-gallon (MG) storage tanks on a hill north of SAC. These storage tanks are for the prison facility only and store water for use at night when the treatment plant is not operating. Because of the older, more water-intensive devices at FSP, this facility uses more water than SAC. FSP is at a lower elevation than the two tanks and has adequate pressure to meet its needs, but SAC is at a higher elevation, so two 50-horsepower booster pumps at the tanks run almost continuously to maintain the needed supply and pressure to SAC.

Currently, FSP/SAC uses an average of approximately 2,200 acre-feet per year (afy) (CDCR 2013) of potable water. It should be noted that FSP/SAC has replaced the previous high-flush (high water consumption) toilets with water-saving low-flush toilets.

Water for the level II infill facility would be provided by the same diversion from Folsom Lake as the existing FSP/SAC facilities. Onsite potable water pipelines would be extended to serve the new facility. No offsite infrastructure improvements would be required.

WASTEWATER

Wastewater from FSP/SAC is collected and treated through the City of Folsom and Sacramento Regional County Sanitation District (SRCSD) systems. Wastewater from FSP/SAC is conveyed through the City's sewer pipelines to the SRCSD pipelines and then treated at SRCSD's Sacramento Regional Wastewater Treatment Plant (SRWTP) in Elk Grove, Sacramento County.

Wastewater for FSP/SAC discharges into a single 20-inch conveyance line that runs parallel to the American River between FSP and the Rainbow Bridge in Folsom at Tower 8. From there, the wastewater flow discharges into the City's 27-inch sewage conveyance line and continues down Folsom Boulevard (north to south) to a collection point near Hazel Boulevard, where it enters the SRCSD transmission system and is treated at the SRWTP. The SRWTP treats, on average, 141 mgd of wastewater and has a capacity of up to 181 mgd (SRCSD 2012). The SRWTP operates under a National Pollution Discharge Elimination System (NPDES) permit issued by the Central Valley Regional Water Quality Control Board.

X12010055 05 001

Source: CDCR 2012 Adapted by Ascent Environmental 2012

Exhibit 2-3

Conceptual FSP/SAC Single Infill Correctional Facility Site Plan

CDCR maintains a Sewer Agreement with the City of Folsom that allows CDCR to discharge an average daily rate of 1.15 mgd of wastewater to the City's conveyance system, with a maximum daily flow rate not to exceed 2.5 mgd (City of Folsom 2007). In 2011, FSP/SAC released a peak winter flow of 942,095 gallons per day (gpd) (0.94 mgd), a peak summer flow of 835,242 gpd (0.84 mgd), and an average flow of 849,723 gpd (0.85 mgd) of wastewater from existing facilities (CDCR 2013). Based on these discharge rates, CDCR is below the permitted discharge allowance for FSP/SAC. As stated above, FSP/SAC has several programs in place to replace the existing high-flush toilets with water-saving low-flush toilets, which would further reduce wastewater flows.

A new sewer pipe would be constructed onsite to serve the new level II infill correctional facility. The line would extend from the infill site, connect to an existing 12-inch sewer line, and flow into the existing 20-inch conveyance line on the western edge of FSP/SAC, which would then flow into the City's 27-inch conveyance line and finally to the SRCSD system to the SRWTP.

ELECTRICITY

The Sacramento Municipal Utility District (SMUD) currently supplies electricity to FSP/SAC through a 69 kilovolt (kV) line that runs down East Natoma Street and a 230 kV transmission line that runs parallel to Folsom Dam Road. At the intersection of East Natoma Street and Hancock Drive, the current prison service is pulled from the 69 kV line at this intersection. The service then runs west in an existing 10-foot-wide SMUD easement into the prison property. The existing prison substation, which is owned by FSP, is capable of supplying 12.5 megavolt-amps. A 4 kV distribution system, also owned by FSP, is utilized to provide power to FSP/SAC facilities.

As described in Chapter 3 of Volume 1, the level II infill correctional facility would incorporate the appropriate onsite electrical equipment to connect to the SMUD service, such as substation switchgear, transformers, and backup power generators.

NATURAL GAS

Pacific Gas and Electric (PG&E) currently provides natural gas service to the prison. PG&E has an 8-inch gas main that runs along East Natoma Street, and FSP/SAC is served from this line. The line enters the prison property near the intersection of Prison Road and East Natoma Street. From there, there is a 20-foot-wide PG&E easement that runs north cross-country. There is also a gas line that runs up the road just north of the PIA, as well as a 3-inch gas main that runs north from the minimum security camp toward the inmate ward labor (IWL) area (Kimley-Horn 2008).

FSP/SAC is served by two existing meters: one is a 4-inch meter with a delivery pressure of 5 pounds per square inch (psi) and a connected load of approximately 8,000 mega British thermal units per hour (mbh), and the other is a 6-inch meter with a delivery pressure of 6–8 psi and a connected load of 20,000 mbh (RBF 2001).

A new onsite gas line would be installed to connect the level II infill correctional facility to the existing natural gas service and would most likely be installed within existing roads and adjacent to the sanitary sewer connection.

STORMWATER DRAINAGE

Implementation of a single, level II infill correctional facility at FSP/SAC would involve onsite drainage improvements. Storm gutters and drains would be constructed to direct and control runoff from the level II infill correctional facility. Stormwater from the infill facility would be conveyed to new onsite detention basins designed to handle a 100-year flood event, maintain offsite stormwater flows at pre-project levels, and allow sediment and other pollutants to settle and prevent them from reaching the

watershed. CDCR would ensure that onsite detention facilities adhere to the requirements of the existing NPDES permit for FSP, including the associated monitoring and reporting program. Although the final sizes and exact locations of the detention basins would be determined in final site plans and drainage plans, the area of site disturbance analyzed throughout this volume of the EIR accounts for the construction and operation of detention basins.

2.3.4 STAFFING

Development of level II infill facilities at FSP/SAC would result in an increase in onsite staffing, as described in Chapter 3 of Volume 1. The single, level II infill correctional facility would employ 193 new staff (as described in Table 3-1 of Volume 1).

2.4 CONSTRUCTION

As described in greater detail in Section 3.3.4 of Chapter 3 in Volume 1, construction of the level II infill correctional facility is anticipated to begin in spring 2014, with an estimated completion date of spring 2016. Construction would generally occur between 6 a.m. and 4 p.m., Monday through Friday. Noise-generating construction activities could occur between 7 a.m. and 7 p.m., Monday through Friday, but would likely end by 4 p.m., consistent with construction hours of operation. Security protocols, tool controls, and access requirements would be established and implemented to frame the operation of construction activities.

All construction staging would be provided on State-owned property, as identified in Exhibit 2-2. All construction-related traffic would access the infill site from Folsom Lake Crossing.

3 ENVIRONMENTAL SETTING, THRESHOLDS OF SIGNIFICANCE, ENVIRONMENTAL IMPACTS, AND MITIGATION MEASURES

Chapter 3 of this volume (Volume 4) of the Draft Environmental Impact Report (DEIR) evaluates the potential environmental impacts associated with development of a level II infill correctional facility at the Folsom State Prison/California State Prison, Sacramento (FSP/SAC) Infill Site located in the City of Folsom. As noted in Volume 1 of this EIR, the FSP/SAC Infill Site is being considered by CDCR as an alternative site for a 792-bed (single) level II infill correctional facility. It contains a discussion of existing conditions, thresholds above which an impact is considered significant, the significance of environmental impacts, measures to mitigate significant impacts to the degree feasible, and the level of significance after mitigation. Issues evaluated in these sections consist of the full range of potential environmental topics originally identified for review in the Notice of Preparation (NOP) of the DEIR. Appendix 1A of Volume 1 contains the NOP and comments received on the NOP. Each section in this chapter (Sections 3.1 through 3.13) of this DEIR is organized into the following major components:

Introduction: This subsection offers a brief introduction to the section and provides information regarding the scope and purpose of the environmental issue section.

Environmental Setting: According to Section 15125 of the State of California Environmental Quality Act (CEQA) Guidelines, an EIR must include a description of the existing physical environmental conditions in the vicinity of the project to provide the "baseline condition" against which project-related impacts are compared. The baseline condition is typically the physical condition that exists when the NOP is published. The NOP for the proposed project was published on December 19, 2012. For analytical purposes, impacts associated with implementation of the proposed project are generally derived from the existing baseline environmental setting, unless otherwise noted.

Regulatory Considerations: This section of each chapter provides the federal, State, and local regulatory framework, plans, and policies that would apply to the proposed project and that could reduce or eliminate potentially significant impacts. The impact analyses assume compliance with these regulations.

Impacts and Mitigation Measures: This section analyzes both project-specific and cumulative environmental impacts and proposed mitigation measures. Information included in this section is described in more detail below.

- Significance Criteria: The criteria used to define significant effects on the environment are expressed as thresholds, above which the project would have a significant effect. Thresholds may be quantitative or qualitative, and may be based on agency standards, or legislative or regulatory requirements as related to the impact analysis. For this analysis, impacts are based largely on the thresholds identified in Appendix G of the State CEQA Guidelines.
- Project Impacts and Mitigation Measures: The project impact and mitigation measure subsection analyzes the environmental impacts of the project. This subsection describes the potential environmental impacts of the proposed project and, based on the identified thresholds of significance, concludes whether each environmental impact would be considered significant, potentially significant, or less than significant. Each impact is summarized in an "impact statement," followed by a more detailed discussion of the potential impact and the significance of each impact before mitigation.

The impact number consists of the section of the EIR in which that impact is identified followed by the number of the impact in that section. For example, Impact 3.1-1 is the first impact identified in Section 3.1.

The analysis of environmental impacts considers both the construction and operational phases associated with implementation of the proposed project. As required by Section 15126.2(a) of the State CEQA Guidelines, direct and indirect significant effects, including short-term, long-term, onsite, and/or offsite impacts are addressed, as appropriate, for the environmental issue area being analyzed.

A "significant effect" is defined by Section 15382 of the State CEQA Guidelines as

> a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic significance. An economic or social change by itself shall not be considered a significant effect on the environment…[but] may be considered in determining whether the physical change is significant.

This DEIR uses the terminology described in Section 2.7 of Volume 1 to describe the level of significance of impacts identified during the course of the environmental analysis.

Mitigation measures are provided to reduce significant or potentially significant effects of the proposed project to the extent feasible. CEQA Guidelines Section 15370 defines mitigation as:

a. avoiding the impact altogether by not taking a certain action or parts of an action;

b. minimizing impacts by limiting the degree or magnitude of the action and its implementation;

c. rectifying the impact by repairing, rehabilitating, or restoring the affected environment;

d. reducing or eliminating the impact over time by preservation and maintenance operations during the life of the action; and/or

e. compensating for the impact by replacing or providing substitute resources or environments.

The mitigation measures are identified numerically, corresponding to the number of the impact being addressed. For example, Impact 3.1-1 would be mitigated with Mitigation Measure 3.1-1.

This subsection also describes the status of all significant impacts following application of mitigation measures. The impact may be reduced to a level below the significance threshold (mitigated to a less-than-significant level), or feasible mitigation may not be available or may be insufficient to reduce the impact to a less-than-significant level. In this case, the impact would be a "significant and unavoidable" effect on the environment.

3.1 AIR QUALITY

This section includes a description of existing air quality in the local area around the Folsom State Prison (FSP) and California State Prison, Sacramento (SAC) Infill Site; a summary of applicable regulations; and analyses of potential short-term and long-term air quality impacts of development of the level II infill correctional facility. The methods of analysis for short-term construction, long-term regional (operational), local mobile-source, odor, and toxic air contaminant (TAC) emissions are consistent with the recommendations of the Sacramento Metropolitan Air Quality Management District (SMAQMD). Mitigation measures are recommended as necessary to reduce significant air quality impacts. Impacts associated with greenhouse gas (GHG) emissions and climate change are discussed in Chapter 4, "Cumulative Impacts of the Proposed Project," in Volume 1 of this draft environmental impact report (DEIR).

3.1.1 ENVIRONMENTAL SETTING

The infill site is situated immediately north of FSP and SAC in the City of Folsom. The city is located in Sacramento County, California, which is within the Sacramento Valley Air Basin (SVAB). The SVAB also includes all of Butte, Colusa, Glenn, 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 pollutant emissions 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.

TOPOGRAPHY, METEOROLOGY, AND CLIMATE

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–San Joaquin River Delta (Delta) from the San Francisco Bay area.

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 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 metrological 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" of cooler air over the area and trapping air pollutants near the ground.

REGIONAL CLIMATE

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°F to more than 100°F. The inland location and surrounding mountains shelter the area from much of the ocean breeze that keeps temperatures in the coastal regions moderate. 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 of 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.

May–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 gases (ROG) and oxides of nitrogen (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 violations of the ambient-air quality standards.

LOCAL MICROCLIMATE

The local meteorology of the FSP/SAC Infill Site and surrounding area is represented by measurements recorded at the Folsom station. The mean annual precipitation is approximately 24 inches. January temperatures range from a minimum of 37°F to a maximum of 54°F. July temperatures range from a minimum of 60°F to a maximum of 97°F (WRCC 2012). The predominant wind direction and speed is from the south at 8 miles per hour (mph) (WRCC 2013a, 2013b).

EXISTING AIR QUALITY – CRITERIA AIR POLLUTANTS

Concentrations of the following air pollutants are used as indicators of ambient air quality conditions: ozone, carbon monoxide (CO), nitrogen dioxide (NO_2), sulfur dioxide (SO_2), respirable particulate matter with an aerodynamic resistance diameter of 10 micrometers or less (PM_{10}), fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less ($PM_{2.5}$), and lead. Because these are the most prevalent air pollutants known to be deleterious to human health, and because there is extensive documentation available on health effect criteria for these pollutants, they are commonly referred to as “criteria air pollutants.”

A brief description of each criteria air pollutant, including source types, health effects, and future trends, is provided below, along with current attainment area designations and monitoring data for the infill site and vicinity.

OZONE

Ozone is a photochemical oxidant, a substance whose oxygen combines chemically with another substance in the presence of sunlight. Ozone is the primary component of smog. Ozone is not directly emitted into the air, but is formed through complex chemical reactions between precursor emissions of ROG and NO_X in the presence of sunlight. ROG are volatile organic compounds that are photochemically reactive. ROG emissions result primarily from incomplete combustion and the evaporation of chemical solvents and fuels. NO_X are a group of gaseous compounds of nitrogen and oxygen that result from the combustion of fuels. A highly reactive molecule, ozone readily combines with many different components of the atmosphere. Consequently, high levels of ozone tend to exist only while ROG and NO_X levels are high to sustain the ozone formation process. Once the precursors have been depleted, ozone levels decline rapidly. Because these reactions occur on a regional (rather than site-specific or local) scale, ozone is a regional pollutant.

Ozone located in the upper atmosphere (stratosphere) acts in a beneficial manner by shielding the earth from harmful ultraviolet radiation that is emitted by the sun. However, ozone located in the lower atmosphere (troposphere) is a major health and environmental concern. Meteorology and terrain play a

major role in ozone formation. Generally, low wind speeds or stagnant air coupled with warm temperatures and clear skies provide the optimum conditions for ozone formation. As a result, summer is generally the peak ozone season. Because of the reaction time involved, peak ozone concentrations often occur far downwind of the precursor emissions. In general, ozone concentrations over or near urban and rural areas reflect an interplay of emissions of ozone precursors, transport, meteorology, and atmospheric chemistry (Godish 2004).

The adverse health effects associated with exposure to ozone pertain primarily to the respiratory system. Scientific evidence indicates that ambient levels of ozone affect not only sensitive receptors, such as people with asthma and children, but healthy adults as well. Exposure to ambient levels of ozone ranging from 0.10 to 0.40 part per million (ppm) for 1–2 hours has been found to substantially alter lung functions by increasing respiratory rates and pulmonary resistance, decreasing tidal volumes (the amount of air inhaled and exhaled), and impairing respiratory mechanics. Ambient levels of ozone above 0.12 ppm are linked to symptomatic responses that include such symptoms as throat dryness, chest tightness, headache, and nausea. In addition to these adverse health effects, evidence also exists that ozone exposure is related to an increase in permeability of respiratory epithelia; such increased permeability leads to an increased response of the respiratory system to challenges, and a decrease in the immune system's ability to defend against infection (Godish 2004).

Ozone precursor emissions of ROG and NO_X have decreased over the past several years because of more stringent motor vehicle standards and cleaner burning fuels. However, peak ozone values in the SVAB have not declined as quickly over the last several years as they have in other urban areas. Since 1990, the peak 8-hour level has decreased slightly, and the overall decline for 1988–2008 is almost 12 percent. The number of 8-hour exceedance days has declined by nearly 37 percent since 1988 (ARB 2009).

CARBON MONOXIDE

CO is a colorless, odorless gas that is formed when carbon in fuel is not burned completely. It is a component of motor vehicle exhaust, which contributes about 56 percent of all CO emissions nationwide. Other non-road engines and vehicles (such as construction equipment and boats) contribute about 22 percent of all CO emissions nationwide. Higher levels of CO generally occur in areas with heavy traffic congestion. In cities, 85–95 percent of all CO emissions may come from motor vehicle exhaust. Other sources of CO emissions include industrial processes (such as metals processing and chemical manufacturing), residential wood burning, and natural sources such as forest fires. Woodstoves, gas stoves, cigarette smoke, and unvented gas and kerosene space heaters are sources of CO indoors. The highest levels of CO in the outside air typically occur during the colder months of the year when inversion conditions are more frequent. The air pollution becomes trapped near the ground beneath a layer of warm air (EPA 2012).

CO enters the bloodstream through the lungs by combining with hemoglobin, which normally supplies oxygen to the cells. However, CO combines with hemoglobin much more readily than oxygen does, resulting in a drastic reduction in the amount of oxygen available to the cells. Adverse health effects associated with exposure to CO concentrations include such symptoms as dizziness, headaches, and fatigue. CO exposure is especially harmful to individuals who suffer from cardiovascular and respiratory diseases (EPA 2012).

The highest concentrations are generally associated with cold, stagnant weather conditions that occur during the winter. In contrast to problems caused by ozone, which tends to be a regional pollutant, CO problems tend to be localized.

NITROGEN DIOXIDE

NO_2 is a brownish, highly reactive gas that is present in all urban environments. The major human-made sources of NO_2 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 NO_2 (EPA 2012). The combined emissions of NO and NO_2 are referred to as NO_X and are reported as equivalent NO_2. Because NO_2 is formed and depleted by reactions associated with ozone, the NO_2 concentration in a particular geographical area may not be representative of the local NO_X emission sources.

Inhalation is the most common route of exposure to NO_2. Because NO_2 has relatively low solubility in water, the principal site of toxicity in the human body is in the lower respiratory tract. The severity of adverse health effects depends primarily on the concentration inhaled rather than the duration of exposure. An individual may experience a variety of acute symptoms, including coughing, difficulty with breathing, vomiting, headache, and eye irritation, during or shortly after exposure. After approximately 4–12 hours, an exposed individual may experience chemical pneumonitis or pulmonary edema with breathing abnormalities, cough, cyanosis, chest pain, and rapid heartbeat. Severe, symptomatic NO_2 intoxication after acute exposure has been linked on occasion to prolonged respiratory impairment with such symptoms as chronic bronchitis and decreased lung functions (EPA 2012).

SULFUR DIOXIDE

SO_2 is produced by such stationary sources as combustion of coal and oil, steel mills, refineries, and pulp and paper mills. The major adverse health effects associated with SO_2 exposure pertain to the upper respiratory tract. SO_2 is a respiratory irritant, and constriction of the bronchioles occurs with inhalation of SO_2 at 5 ppm or more. On contact with the moist mucous membranes, SO_2 produces sulfurous acid, which is a direct irritant. Concentration rather than duration of the exposure is an important determinant of respiratory effects. Exposure to high SO_2 concentrations may result in edema of the lungs or glottis and respiratory paralysis.

PARTICULATE MATTER

Respirable particulate matter, orPM_{10}, consists of particulate matter emitted directly into the air, such as 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 condensation and/or transformation of SO_2 and ROG (EPA 2012). Fine particulate matter ($PM_{2.5}$) is a subgroup of PM_{10} consisting of smaller particles (ARB 2009).

The adverse health effects associated with PM_{10} depend on the specific composition of the particulate matter. For example, health effects may be associated with metals, polycyclic aromatic hydrocarbons, and other toxic substances adsorbed onto fine particulate matter (referred to as the “piggybacking effect”), or with fine dust particles of silica or asbestos. Generally, adverse health effects associated with PM_{10} may result from both short-term and long-term exposure to elevated concentrations and may include breathing and respiratory symptoms, aggravation of existing respiratory and cardiovascular diseases, alterations to the immune system, carcinogenesis, and premature death (EPA 2012). $PM_{2.5}$ poses an increased health risk because the particles can be deposited deep in the lungs and may contain substances that are particularly harmful to human health.

Direct emissions of PM_{10} increased in the SVAB between 1975 and 2005 and are projected to continue increasing through 2020. Emissions are dominated by contributions from area-wide sources, primarily fugitive dust from paved and unpaved roads, dust from farming operations, fugitive dust from construction and demolition, and particulates from combustion of residential fuel (including wood). Emissions of directly emitted PM_{10} from mobile sources and stationary sources in the SVAB have

remained relatively steady. The annual average PM_{10} concentrations in the SVAB have shown a fairly steady decline from 1989 to 2007, with some variability over the last several years. The 3-year average of the annual average shows a decrease of 29 percent from 1991 to 2007. The 3-year average of calculated days over the state 24-hour standard decreased by 49 percent from 1991 to 2007. Because many of the sources that contribute to ozone also contribute to PM_{10}, future ozone emission controls are expected to concurrently improve levels of PM_{10} (ARB 2009).

Annual average $PM_{2.5}$ concentrations in the SVAB decreased from 1999 through 2007. The 98th percentile of 24-hour $PM_{2.5}$ concentrations also declined during this 10-year period. Similar to PM_{10}, year-to-year changes in meteorology can mask the impacts of emission control programs (ARB 2009).

LEAD

Lead is a metal found naturally in the environment as well as in manufactured products. The major sources of lead emissions have historically been mobile and industrial sources. As a result of the phase-out of leaded gasoline, as discussed in detail below, metal processing is currently the primary source of lead emissions. The highest levels of lead in air are generally found near lead smelters. Other stationary sources are waste incinerators, utilities, and lead-acid battery manufacturers.

Twenty years ago, mobile sources were the main contributor to ambient lead concentrations in the air. In the early 1970s, the U.S. Environmental Protection Agency (EPA) set national regulations to gradually reduce the lead content in gasoline. In 1975, unleaded gasoline was introduced for motor vehicles equipped with catalytic converters. EPA banned the use of leaded gasoline in highway vehicles in December 1995 (EPA 2012).

As a result of EPA's regulatory efforts to remove lead from gasoline, emissions of lead from the transportation sector have declined dramatically (95 percent between 1980 and 1999), and levels of lead in the air decreased by 94 percent between 1980 and 1999. Transportation sources, primarily airplanes, now contribute only 13 percent of lead emissions. A National Health and Nutrition Examination Survey reported a 78-percent decrease in the levels of lead in people's blood between 1976 and 1991. This dramatic decline can be attributed to the move from leaded to unleaded gasoline (EPA 2012).

The decrease in lead emissions and ambient lead concentrations over the past 25 years is California's most dramatic success story with regard to air quality management. The rapid decrease in lead concentrations can be attributed primarily to phasing out the lead in gasoline. Since the phase-out began during the 1970s, subsequent California Air Resources Board (ARB) regulations have virtually eliminated all lead from gasoline now sold in California. Only the South Coast Air Basin portion of Los Angeles County is currently designated as a nonattainment area for the federal and state lead standards. Although the ambient lead standards are no longer violated in the SVAB, lead emissions from stationary sources still pose "hot spot" problems in some areas. As a result, ARB identified lead as a TAC.

MONITORING STATION DATA AND ATTAINMENT AREA DESIGNATIONS

Criteria air pollutant concentrations are measured at several monitoring stations in the SVAB. The closest station to the infill site is the Folsom – Natoma Street station, approximately 0.5 mile southwest of the FSP/SAC Infill Site. Table 3.1-1 summarizes the air quality data from this station for the most recent 3 years, 2009–2011.

Table 3.1-1 Summary of Annual Ambient Air Quality Data (2009–2011)[a]

	2009	2010	2011
Ozone			
Maximum concentration (1-hour/8-hour, ppm)[b]	0.120/0.104	0.124/0.112	0.119/0.098
Number of days State standard exceeded (1-hour/8-hour)	24/47	12/26	16/46
Number of days national standard exceeded (1-hour/8-hour)	0/35	0/19	0/33
Nitrogen Dioxide (NO_2)			
Maximum concentration (1-hour, ppm)	0.038	0.028	0.041
Annual average (ppm)	0.006	0.004	0.005
Number of days state standard exceeded (1-hour)	0	0	0
Fine Particulate Matter ($PM_{2.5}$)			
Maximum concentration ($\mu g/m^3$)[b]	31.1	34.0	39.5
Number of days national standard exceeded (measured/estimated[c])	*	*	*
National/California annual average ($\mu g/m^3$)[b]	*	*	*

Notes: $\mu g/m^3$ = micrograms per cubic meter; ppm = parts per million; * = data not available

[a] Measurements were recorded at the Folsom – Natoma Street monitoring station.

[b] California and national statistics may differ for the following reasons: California statistics are based on California-approved samplers, whereas national statistics are based on samplers using national reference or equivalent methods. State and national statistics may therefore be based on different samplers. California statistics are based on local conditions and national statistics are based on standard conditions. California criteria for ensuring that data are sufficiently complete for calculating valid annual averages are more stringent than the national criteria.

[c] Measured days are those days on which an actual measurement exceeded the respective standard. Measurements are typically collected every 6 days. Estimated days are the mathematically derived number of days that a measurement would have been greater than the applicable standard had measurements been collected every day. The number of days above the standard is not necessarily the number of violations of the standard for the year.

Sources: ARB 2013a

Both ARB and EPA use this type of monitoring data to designate areas according to attainment status for criteria air pollutants established by the agencies. The purpose of these designations is to identify those areas with air quality problems and thereby initiate planning efforts for improvement. The three basic designation categories are nonattainment, attainment, and unclassified. The "unclassified" designation is used in areas that cannot be classified on the basis of available information as meeting or not meeting the standards. In addition, the California designations include a subcategory of the nonattainment designation called "nonattainment-transitional." This designation is given to nonattainment areas that are progressing and nearing attainment. The most current attainment designations for the SVAB are shown in Table 3.1-2 for each criteria air pollutant.

EXISTING EMISSIONS

With respect to the SVAB, mobile sources are the largest contributor to the estimated annual average air pollutant levels of ROG, CO, and NO_X. Mobile sources account for approximately 48 percent, 67 percent, and 81 percent, respectively, of the total emissions. Areawide sources account for approximately 88 percent and 74 percent of the SVAB's PM_{10} and $PM_{2.5}$ emissions, respectively (ARB 2013b).

EXISTING AIR QUALITY — TOXIC AIR CONTAMINANTS

Concentrations of TACs, or (in federal parlance), hazardous air pollutants (HAPs), are also used as indicators of ambient air quality conditions. A TAC is defined as an air pollutant that may cause or contribute to an increase in mortality or serious illness, or that may pose a hazard to human health. TACs are usually present in minute quantities in the ambient air; however, their high toxicity or health risk may pose a threat to public health even at low concentrations.

Table 3.1-2 Ambient Air Quality Standards and Designations for Sacramento Valley Air Basin

Pollutant	Averaging Time	California [a]		National Standards [b]		
		Standards [c]	Attainment Status [i]	Primary [c,d]	Secondary [c,e]	Attainment Status [j]
Ozone	1-hour	0.09 ppm (180 µg/m^3)	N (Serious)	–	Same as Primary Standard	N (Severe)
	8-hour	0.070 ppm (137 µg/m^3)		0.075 ppm (147 µg/m^3)		
Respirable Particulate Matter (PM_{10})	24-hour	50 µg/m^3	N	150 µg/m^3	Same as Primary Standard	N (Moderate)
	Annual Arithmetic Mean	20 µg/m^3		–		
Fine Particulate Matter ($PM_{2.5}$)	24-hour	–	N	35 µg/m^3	Same as Primary Standard	N
	Annual Arithmetic Mean	12 µg/m^3		12 µg/m^3		
Carbon Monoxide (CO)	8-hour	9 ppm (10 mg/m^3)	A	9 ppm (10 mg/m^3)	–	U/A
	1-hour	20 ppm (23 mg/m^3)		35 ppm (40 mg/m^3)		
	8-hour (Lake Tahoe)	6 ppm (7 mg/m^3)		–	–	
Nitrogen Dioxide (NO_2)	Annual Arithmetic Mean	0.030 ppm (57 µg/m^3)	A	0.053 ppm (100 µg/m^3)	Same as Primary Standard	U/A
	1-hour	0.18 ppm (339 µg/m^3)		0.100 ppm [f]	–	
Sulfur Dioxide (SO_2)	Annual Arithmetic Mean	–	A	0.030 ppm (for certain areas) [g]	–	U
	24-hour	0.04 ppm (105 µg/m^3)		0.14 ppm (for certain areas) [g]	–	
	3-hour	–		–	0.5 ppm (1300 µg/m^3) [g]	
	1-hour	0.25 ppm (655 µg/m^3)		0.075 ppm (196 µg/m^3) [g]	–	

Table 3.1-2 Ambient Air Quality Standards and Designations for Sacramento Valley Air Basin

Pollutant	Averaging Time	California [a]		National Standards [b]		
		Standards[c]	Attainment Status[i]	Primary[c,d]	Secondary[c,e]	Attainment Status[j]
Lead [h]	30-day Average	1.5 µg/m^3	A	–	–	–
	Calendar Quarter	–	–	1.5 µg/m^3	Same as Primary Standard	A
	Rolling 3-Month Average	–	–	0.15 µg/m^3		A
Visibility-Reducing Particulate Matter	8-hour	Extinction coefficient of 0.23 per kilometer — visibility of 10 miles or more	U	No National Standards		
Sulfates	24-hour	25 µg/m^3	A			
Hydrogen Sulfide	1-hour	0.03 ppm (42 µg/m^3)	U			
Vinyl Chloride [h]	24-hour	0.01 ppm (26 µg/m^3)	U/A			

Notes: µg/m^3 = micrograms per cubic meter; mg/m^3 = milligrams per cubic meter; ppm = parts per million

[a] California standards for ozone, CO (except Lake Tahoe), SO_2 (1- and 24-hour), NO_2, 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] 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 PM_{10} 24-hour standard is attained when 99 percent of the daily concentrations, averaged over 3 years, are equal to or less than the standard. 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.

[c] Concentration is expressed first in the units in which it was promulgated (i.e., parts per million [ppm] or micrograms per cubic meter [µg/m^3]). Equivalent units given in parentheses are based upon a reference temperature of 25 degrees Celsius (°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.

[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] To attain this standard, the 3-year average of the 98th percentile of the daily maximum 1-hour average at each monitor within an area must not exceed 0.100 ppm (effective January 22, 2010).

[g] On June 2, 2010, EPA established a new 1-hour SO_2 standard, effective August 23, 2010, which is based on the 3-year average of the annual 99th percentile of 1-hour daily maximum concentrations. EPA also revoked both the existing 24-hour SO_2 standard of 0.14 ppm and the annual primary SO_2 standard of 0.030 ppm effective August 23, 2010. The secondary SO_2 standard was not revised at that time; however, the secondary standard is undergoing a separate review by EPA. Note that the new standard is in units of parts per billion (ppb). California standards are in units of parts per million (ppm). To directly compare the new primary national standard to the California standard the units can be converted to ppm. In this case, the national standard of 75 ppb is equal to 0.075 ppm.

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

[i] California attainment status:
Unclassified (U): The data are incomplete and do not support a designation of attainment or nonattainment.
Attainment (A): The state standard for that pollutant was not violated at any site in the area during a 3-year period.
Nonattainment (N): There was a least one violation of a state standard for that pollutant in the area.

[j] Federal attainment status:
Nonattainment (N): Any area that does not meet (or that contributes to ambient air quality in a nearby area that does not meet) the national primary or secondary ambient air quality standard for the pollutant.
Attainment (A): Any area that meets the national primary or secondary ambient air quality standard for the pollutant.
Unclassifiable (U): Any area that cannot be classified on the basis of available information as meeting or not meeting the national primary or secondary ambient air quality standard for the pollutant.

Sources: ARB 2012a; ARB 2012b, SMAQMD 2010

According to the *California Almanac of Emissions and Air Quality* (ARB 2009), the majority of the estimated health risk from TACs can be attributed to relatively few compounds, with the most important of these being PM from diesel-fueled engines (diesel PM). 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 emission control system is present.

Unlike other TACs, no ambient monitoring data are available for diesel PM because no routine measurement method currently exists. However, ARB has made preliminary concentration estimates based on a PM exposure method. This method uses the ARB emissions inventory's PM_{10} database, ambient PM_{10} monitoring data, and the results from several studies to estimate concentrations of diesel PM. In addition to diesel PM, data are available for several other TACs that pose a high existing ambient risk in California: benzene, 1,3-butadiene, acetaldehyde, carbon tetrachloride, hexavalent chromium, *para*-dichlorobenzene, formaldehyde, methylene chloride, and perchloroethylene.

Diesel PM poses the greatest health risk among these 10 TACs. Based on receptor modeling techniques, ARB estimated the diesel PM health risk in the SVAB in 2000 to be 360 excess cancer cases per million people. Since 1990, the health risk of diesel PM in the SVAB has been reduced by 52 percent (ARB 2009).

According to ARB's Community Health Air Pollution Information System, no major existing stationary sources of TACs are located within 3 miles of the infill site (ARB 2013c). Vehicles on U.S. Highway 50, Folsom Lake Road, Folsom-Auburn Road, Natoma Street, Hancock Drive, and Folsom Prison Road are sources of diesel PM and other TACs associated with vehicle exhaust.

EXISTING AIR QUALITY — 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 have the ability to 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 also important to 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, after which recognition occurs only with an alteration in intensity.

Quality and intensity are two properties present in any odor. The quality of an odor indicates the nature of the smell experience. For instance, if a person describes an odor as "flowery" or "sweet," then the person is describing the quality of the odor. Intensity refers to the strength of the odor. For example, a person may use the word "strong" to describe the intensity of an odor. Odor intensity depends on the odorant concentration in the air. When an odorous sample is progressively diluted, the odorant concentration decreases. As this occurs, the odor intensity weakens and eventually becomes so low that the detection or recognition of the odor is quite difficult. At some point during dilution, the concentration of the odorant reaches a detection threshold. An odorant concentration below the detection threshold means that the concentration in the air is not detectable by the average human.

No existing concentrated sources of objectionable odors are located within 1 mile of the infill site. No major agriculture-related odor sources (e.g., livestock operations) are located within 2 miles.

3.1.2 REGULATORY CONSIDERATIONS

Air quality within the FSP/SAC Infill Site area is regulated by EPA, ARB, and SMAQMD. Each of these agencies develops rules, regulations, policies, and/or goals to comply with applicable legislation. Although EPA regulations may not be superseded, both state and local regulations may be more stringent. A list of the applicable federal, state, and local plans, policies, regulations, laws, and ordinances is provided below. Complete summaries of the federal and state regulations are provided in Volume 1, Appendix 1B.

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

CRITERIA AIR POLLUTANTS

- Clean Air Act – The Clean Air Act (CAA) required EPA to establish National Ambient Air Quality Standards (NAAQS) (Table 3.1-2) for the protection of public health and welfare.

TOXIC AIR CONTAMINANTS

- Federal Hazardous Air Pollutant Programs – Amendments to the CAA directed EPA to identify and regulate HAPs through the promulgation of national emissions standards for HAPs (NESHAP). Separate standards apply to stationary and mobile sources.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

CRITERIA AIR POLLUTANTS

- California Clean Air Act – The California Clean Air Act (CCAA) required ARB to establish California Ambient Air Quality Standards (CAAQS) (Table 3.1-2) for the protection of public health and welfare. These standards are generally more stringent than the NAAQS. The CCAA specifies that local air districts should focus particular attention on reducing the emissions from transportation and areawide emission sources, and provides air districts with the authority to regulate indirect sources.
- California Health and Safety Code: Chapters 3 (Emission Limitations) and 4 (Enforcement) include the provisions of the air emissions control and permit system established in the State. The following specific sections are relevant to the project:
  - Section 41700: A person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property.
  - Section 41701: No person shall discharge into the atmosphere from any source whatsoever any air contaminant, other than uncombined water vapor, for a period or periods aggregating more than three minutes in any one hour which is:
    (a) As dark or darker in shade as that designated as No. 2 on the Ringelmann Chart, as published by the United States Bureau of Mines, or
    (b) Of such opacity as to obscure an observer's view to a degree equal to or greater than does smoke described in subdivision (a).
  - Section 42301 establishes the requirements for the air quality permit system established pursuant to Section 42300 of the California Health and Safety Code. This section forms the basis for permit requirements for local air districts.

TOXIC AIR CONTAMINANTS

- Tanner Air Toxics Act – The Tanner Air Toxics Act sets forth a formal procedure for ARB to designate substances as TACs. Once a TAC is identified, ARB is then responsible for the adoption of an Airborne Toxics Control Measure for sources that emit that particular TAC.
- Air Toxics Hot Spots Information and Assessment Act of 1987 – This act requires that existing facilities that emit toxic substances above a specified level prepare a toxic-emission inventory, prepare a risk assessment if emissions are significant, notify the public of significant risk levels, and prepare and implement risk reduction measures.

LOCAL PLANS, POLICIES, AND ORDINANCES

As a state agency, the California Department of Corrections and Rehabilitation (CDCR) is not subject to land use plans, policies, and ordinances adopted by local agencies. Nevertheless, a discussion of relevant local plans and policies is provided because conflicts with them could indicate the potential occurrence of other physical environmental effects.

CRITERIA AIR POLLUTANTS

Sacramento Metropolitan Air Quality Management District

SMAQMD attains and maintains air quality conditions in Sacramento County through a comprehensive program of planning, regulation, enforcement, technical innovation, and promotion of the understanding of air quality issues. The clean air strategy of SMAQMD includes the preparation of plans and programs for the attainment of ambient-air quality standards, adoption and enforcement of rules and regulations, and issuance of permits for stationary sources. SMAQMD also inspects stationary sources, responds to citizen complaints, monitors ambient air quality and meteorological conditions, and implements other programs and regulations required by the CAA, CAAA, and CCAA.

SMAQMD released a revision to its previously adopted guidelines document in December 2009. SMAQMD made additional minor revisions and additions to the guidelines in 2011. This revised *Guide to Air Quality Assessment* (SMAQMD 2011a) is an advisory document that provides lead agencies, consultants, and project applicants with uniform procedures for addressing air quality in environmental documents. The handbook contains the following applicable components:

- criteria and thresholds for determining whether a project may have a significant adverse impact on air quality;
- specific procedures and modeling protocols for quantifying and analyzing impacts on air quality;
- methods available to mitigate impacts on air quality; and
- information for use in air quality assessments that will be updated more frequently, such as air quality data, regulatory setting, climate, and topography.

Air Quality Plans

SMAQMD, in coordination with the air quality management districts and air pollution control districts of El Dorado, Placer, Solano, Sutter, and Yolo Counties, prepared and submitted the *1991 Air Quality Attainment Plan* (AQAP). The plan complies with the requirements set forth in the CCAA, which specifically addressed the nonattainment status for ozone and, to a lesser extent, CO and PM_{10}. The CCAA also requires a triennial (every 3 years) assessment of the extent of air quality improvements and emission reductions achieved through the use of control measures. As part of the assessment, the attainment plan must be reviewed and, if necessary, revised to correct for deficiencies in progress and to incorporate new data or projections.

The requirement of the CCAA for a first triennial progress report and revision of the 1991 AQAP was fulfilled with the preparation and adoption of the *1994 Ozone Attainment Plan* (OAP). The OAP stresses attainment of ozone standards and focuses on strategies for reducing emissions of ozone precursors (ROG and NO_X). It promotes active public involvement, enforcement of compliance with SMAQMD rules and regulations, public education in the public and private sectors, development and promotion of transportation and land use programs designed to reduce VMT within the region, and implementation of stationary- and mobile-source control measures.

The OAP became part of the SIP in accordance with the requirements of the CAAA and amended the 1991 AQAP. However, at that time the region could not show that the national ozone (1-hour) standard would be met by 1999. In exchange for moving the deadline to 2005, the region accepted a designation of "severe nonattainment" coupled with additional emission requirements on stationary sources. Additional triennial reports were also prepared in 1997, 2000, 2003, and 2009 in compliance with the CCAA; these reports act as incremental updates.

In 2004, the Sacramento region was designated as a nonattainment area for the 1997 8-hour ozone NAAQS, and classified as a "serious" nonattainment area with an attainment deadline of June 15, 2013. Because the Sacramento region needs to rely on the longer term emission reduction strategies from state and federal mobile-source control programs, it was determined that the 2013 attainment date count not be met. Consequently, on February 14, 2008, ARB, on behalf of the air districts in the Sacramento region, submitted a letter to EPA requesting a voluntary reclassification (bump-up) of the Sacramento Federal Nonattainment Area from a "serious" to a "severe" 8-hour ozone nonattainment area with an extended attainment deadline of June 15, 2019, and additional mandatory requirements. On May 5, 2010, EPA approved the request effective June 4, 2010 (SMAQMD 2011b).

In March 2008, EPA strengthened its 8-hour ozone standard. This change lowered the standard for ambient ozone from 0.08 ppm averaged over 8 hours to 0.075 ppm averaged over 8 hours. On May 21, 2012, EPA published two rules: (1) the final implementation rule of the 2008 NAAQS for Ozone: Nonattainment Area Classifications Approach, Attainment Deadlines, and Revocation of the 1997 Ozone Standards for Transportation Conformity Purposes and (2) Air Quality Designations for the 2008 Ozone NAAQS. The implementation rule establishes classifications and associated attainment deadlines and revoked the 1997 ozone standards for transportation conformity purposes. The designation rule finalized the nonattainment area boundaries for areas that do not meet the 0.075 ppm standard. Sacramento ozone nonattainment area boundaries match the boundaries for the 1997 ozone standards and remains classified as a severe ozone nonattainment area with an attainment deadline of 2027 (SMAQMD 2012).

Rules and Regulations

All projects are subject to SMAQMD rules and regulations in effect at the time of construction. Specific rules applicable to the construction at the infill site 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, and lighting equipment) with an internal combustion engine greater than 50 horsepower must have a SMAQMD permit or ARB portable equipment registration.
- **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.
- **Rule 417**: Wood Burning Appliances. Installation of any new, permanently installed, indoor or outdoor, uncontrolled fireplaces in new or existing developments is prohibited.
- **Rule 442**: Architectural Coatings. The developer or contractor is required to use coatings that comply with the content limits for volatile organic compounds specified in the rule.
- **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, effective October 10, 2005, if modeled construction-generated emissions for a project are not reduced to SMAQMD's threshold of significance (85 pounds per day [lbs/day]) after the standard construction mitigation is applied, then an offsite construction mitigation fee is recommended. The fee must be paid before a grading permit can be issued. This fee is used by SMAQMD to purchase offsite emission 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.

TOXIC AIR CONTAMINANTS

At the local level, air pollution control or management districts may adopt and enforce ARB control measures. 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 the district. 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.

Sources that require a permit are analyzed by SMAQMD (e.g., HRA) on the basis of their potential to emit toxics. If it is determined that a project would emit toxics in excess of SMAQMD's threshold of significance for TACs, sources must implement the best available control technology for TACs (T-BACT) to reduce emissions. If a source cannot reduce the risk below the threshold of significance, even after T-BACT has been implemented, SMAQMD will deny the permit required by the source. This helps to prevent new problems and reduces emissions from existing sources by requiring them to apply new technology with respect to TACs when retrofitting. It is important to note that SMAQMD's air quality permitting process applies to stationary sources; properties that are exposed to elevated levels of non-stationary-type sources of TACs, and the non-stationary-type sources themselves (e.g., on-road vehicles), are not subject to air quality permits. Further, for reasons of feasibility and practicality, mobile sources (e.g., cars and trucks) are not required to implement T-BACT, even if they do have the potential to expose adjacent properties to elevated levels of TACs. Rather, emission controls on such sources (e.g., vehicles) are subject to regulations implemented at the federal and State levels.

ODORS

Although offensive odors rarely cause 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 odorous emissions.

Two situations can increase the potential for odor problems. The first occurs when a new odor source is located near existing sensitive receptors. The second occurs when new sensitive receptors are developed near existing sources of odor. Because of the subjective nature of odor issues, they are typically reviewed for each project on an individual basis, focusing on the existing and potential surrounding uses and the location of sensitive receptors.

3.1.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

In accordance with the State CEQA Guidelines (Appendix G) and SMAQMD (SMAQMD 2011a) the level II infill correctional facility at the FSP/SAC Infill Site would result in a significant air quality impact if it would do any of the following:

- cause construction-generated criteria air pollutant or precursor emissions to exceed the SMAQMD-recommended threshold of 85 lb./day for NO_X, or substantially contribute to emissions concentrations (e.g., PM_{10}) that exceed the NAAQS or CAAQS;
- cause long-term regional criteria air pollutant or precursor emissions to exceed the SMAQMD-recommended threshold of 65 lb./day for ROG and NO_X, or substantially contribute to emissions concentrations (e.g., PM_{10}) that exceed the NAAQS or CAAQS;
- cause local mobile-source emissions to exceed or substantially contribute to CO concentrations that violate the 1-hour ambient-air quality standard of 20 ppm or the 8-hour standard of 9 ppm;
- expose sensitive receptors to TAC emissions that exceed 10 in 1 million for the maximally exposed individual to contract cancer and/or a hazard index of 1 for the maximally exposed individual; or
- create objectionable odors affecting a substantial number of people as defined under SMAQMD Rule 402 (see “Local Plans, Policies, and Ordinances” above).

The State CEQA Guidelines (Section 15064.5) define a “substantial adverse change” as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

According to SMAQMD, short-term ROG emissions generated by construction should be modeled; however, SMAQMD has not established a threshold to determine the significance of such emissions. SMAQMD bases this approach on the fact that ROG emissions attributable to construction equipment exhaust are low and those from the application of architectural coatings are regulated by Rule 442 (SMAQMD 2011a).

SMAQMD recommends that PM_{10} emissions be addressed as a localized pollutant. Thus, SMAQMD considers PM_{10} emissions to be a significant impact at the project level if they would exceed SMAQMD’s concentration-based threshold of significance at an offsite receptor location. Because $PM_{2.5}$ is a subset of PM_{10}, SMAQMD assumes that construction projects that do not generate concentrations of PM_{10} that exceed SMAQMD’s concentration-based threshold of significance would also be considered less-than-significant for $PM_{2.5}$ impacts.

In addition, SMAQMD has developed screening levels to assist in the evaluation of construction-generated PM_{10} emissions (SMAQMD 2011a:3-12, 3-13). According to those levels, PM_{10} emissions from projects in which less than 15 acres would be actively disturbed on any given day during construction and that would implement SMAQMD’s basic construction emission control practices are considered less than significant.

Sensitive receptors near the infill site include the existing employees and inmates at FSP and SAC, including those undergoing treatment at the existing health care facilities. The nearest sensitive receptors outside FSP/SAC are residential uses to the south, east, and west of the infill site, with the

nearest ones being located approximately 0.2 mile from the SAC site. The infill site would be accessed using an existing driveway on Folsom Lake Crossing, located about 4,500 feet east of Folsom-Auburn Road; residences are located at the intersection of the two roads, approximately 3,000 feet east of the infill site.

PROJECT IMPACTS AND MITIGATION MEASURES

Impact 3.1-1: Short-Term Construction-Related Emissions of Criteria Air Pollutants and Precursors

Construction-related emissions are described as "short term" or temporary in duration but have the potential to represent a significant impact with respect to air quality. Construction-related activities would result in emissions of criteria air pollutants (e.g., PM_{10} and $PM_{2.5}$) and precursors (e.g., ROG and NO_X). Construction-related emissions anticipated from development of the level II infill correctional facility were modeled using the CalEEMod (Version 2011.1.1) computer program as recommended by SMAQMD. CalEEMod is designed to model construction emissions for land use development projects using emission factors developed and published by ARB, and allows for the input of development-specific information. In accordance with SMAQMD-recommended methodologies, short-term ROG emissions generated by construction are modeled and presented for informational purposes only. PM_{10} and $PM_{2.5}$ emissions were assessed with respect to SMAQMD's screening levels to determine compliance with the AAQS.

Construction of the level II infill correctional facility is expected to commence in spring 2014and take approximately 26 months to complete. Overall, construction of the level II infill correctional facility is estimated to be completed by spring 2016. Construction would be phased as follows:

- demolition and site preparation: approximately 2 months,
- grading: approximately 3 months (1 month would be concurrent with demolition and site preparation),
- utilities: approximately 8 months (1 month would be concurrent with grading), and
- building construction: approximately 23 months (6 months would be concurrent with utilities).

In addition, it was assumed that architectural coating and paving would occur during the last 6 months, concurrent with building construction. The estimated peak number of construction workers onsite at any given time would be 355. Anticipated monthly variation in construction workers present onsite during construction is reported in Table 3-3 in Chapter 3, "Project Description," in Volume 1 of the DEIR.

Earth-moving equipment, including graders, scrapers, backhoes, jackhammers, front-end loaders, generators, water trucks, and dump trucks, would be used during excavation for utilities and building foundations. Concrete trucks and pumpers would be onsite during concrete pours for foundations and slabs; forklifts would be used during erection of walls and delivery of materials from storage yards; and cranes would be operated for installation of precast panels, structural steel framing members, and metal decking. Fill required for site grading and construction of the building pads and berm for the observation post would be obtained onsite.

Emissions of NO_X would be primarily associated with off-road (e.g., gas and diesel) construction equipment exhaust; secondary sources would include on-road trucks for import and export of materials and worker vehicles for commuting. Worker commute trips in gasoline-fueled vehicles, off-gassing from asphalt application, and application of architectural coatings would be the principal sources of ROG, with additional ROG coming from off- and on-road construction equipment.

Emissions of fugitive PM or dust (PM_{10} and $PM_{2.5}$) are associated primarily with ground-disturbance activities during site preparation, demolition, and grading, and may vary as a function of such parameters as soil silt content, soil moisture, wind speed, acreage of disturbance area, and VMT onsite

and offsite. Exhaust emissions from diesel equipment and worker commute trips also contribute to short-term increases in PM_{10} and $PM_{2.5}$ emissions, but to a much lesser extent.

Table 3.1-3 summarizes the modeled construction-related emissions of criteria air pollutants and ozone precursors for the single, level II infill correctional facility. The significance of construction-related air quality impacts was determined by comparing these modeling results with applicable significance thresholds. Refer to Appendix 4A in this volume for detailed modeling input parameters and results.

Table 3.1-3 Summary of Modeled Daily Emissions of Criteria Air Pollutants and Precursors from Construction of the Single, Level II Infill Correctional Facility (Unmitigated)

Year	Emissions (lbs/day)			
	ROG[1]	NO_X[1]	PM_{10}	$PM_{2.5}$
Daily Unmitigated Emissions—2014	21.9	**147.9**	64.8	13.7
Daily Unmitigated Emissions—2015	15.4	76.6	17.2	4.4
Daily Unmitigated Emissions—2016	45.9	66.6	16.5	4.7
Threshold of Significance (lbs/day)	–	*85*	*AAQS*	*AAQS*

Notes: AAQS = Ambient Air Quality Standard; lbs/day = pounds per day; NO_X = oxides of nitrogen; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM_{10} = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; ROG = reactive organic gases
[1] ROG and NO_X are precursors to ozone.
Bold indicates a value that exceeds the significance threshold.
Refer to Appendix 4A in this volume for detailed assumptions and modeling output files.
Source: Data modeled by Ascent Environmental in 2013.

As shown in Table 3.1-3, unmitigated emissions of NO_X would exceed the SMAQMD threshold of significance in 2014. Thus, construction-related emissions of NO_X associated with the single, level II infill correctional facility could violate a standard or contribute substantially to an existing or projected air quality violation, and/or expose sensitive receptors to substantial pollutant concentrations, especially considering the nonattainment status of the SVAB.

As discussed above, SMAQMD has not established a threshold of significance for construction-generated ROG emissions because those emissions attributable to construction equipment exhaust are low and those resulting from the application of architectural coatings are regulated by Rule 442.

SMAQMD has developed screening levels to assist in the evaluation of construction-generated PM_{10} emissions (SMAQMD 2011a:3-12, 3-13). According to SMAQMD guidance, PM_{10} emissions from projects in which less than 15 acres would be actively disturbed on any given day during construction and that would implement SMAQMD's basic construction emission control practices are considered less than significant. The maximum daily disturbed acreage for the infill site was estimated at approximately 13.21 acres (i.e., 25 percent of the total 52.83-acre site disturbance acreage, consistent with SMAQMD's recommendation). However, SMAQMD's recommended basic construction emission control practices are not currently part of the contemplated development at the FSP/SAC Infill Site. Therefore, development-generated construction emissions of PM_{10}, and NO_X, as discussed above, could violate a standard or contribute substantially to an existing or projected air quality violation, and/or expose sensitive receptors to substantial pollutant concentrations, especially considering SVAB's nonattainment status for PM_{10}.

Emissions of NO_X in 2014 (i.e., 147.9 lbs/day) would exceed the daily significance threshold of 85 lbs/day. In addition, basic construction emission control practices recommended by SMAQMD are not currently part of the contemplated development at the FSP/SAC Infill Site. Thus, NO_X and PM_{10} emissions from construction of the infill facility could violate a standard or contribute substantially to an existing or projected air quality violation, and/or expose sensitive receptors to substantial pollutant concentrations, especially considering SVAB's nonattainment status for ozone and PM_{10}. As a result, this impact would be significant.

Mitigation Measures

Mitigation Measure 3.1-1a

The following control measures, which are consistent with measures recommended by SMAQMD, will be implemented by CDCR to reduce PM_{10} and NO_X emissions during construction:

- All exposed surfaces will be watered two times daily or a stabilizing agent will be applied to prevent generation of dust plumes. Exposed surfaces include, but are not limited to soil piles, graded areas, unpaved parking areas, staging areas, and access roads.

- Haul trucks transporting soil, sand, or other loose material on the site will be covered or at least 2 feet of freeboard space will be maintained. Any haul trucks that will be traveling along freeways or major roadways will be covered.

- Wet power vacuum street sweepers will be used to remove any visible trackout mud or dirt onto adjacent public roads at least once a day. Use of dry power sweeping is prohibited.

- Vehicle speeds on unpaved roads will be limited to 15 miles per hour (mph).

- All roadways, driveways, sidewalks, and parking lots to be paved will be completed as soon as possible. In addition, building pads will be laid as soon as possible after grading unless seeding or soil binders are used.

- Idling time will be minimized either by shutting equipment off when not in use or reducing the time of idling to 5 minutes [required by California Code of Regulations, Title 13, sections 2449(d)(3) and 2485]. Clear signage that posts this requirement will be provided for workers at the entrances to the site.

- All construction equipment will be maintained in proper working condition according to manufacturer's specifications. The equipment will be checked by a certified mechanic and determined to be running in proper condition before it is operated.

Mitigation Measure 3.1-1b

The following control measures will be implemented by CDCR to further reduce NO_X emissions during construction. For projects that generate maximum daily NO_X emissions that exceed SMAQMD's threshold of significance, even with implementation of the Basic Construction Emission Control Practices, SMAQMD recommends implementation of the Enhanced Exhaust Control Practices for off-road construction equipment.

- CDCR will provide a plan for approval by SMAQMD demonstrating that the heavy-duty (50 horsepower or more) off-road vehicles to be used during construction at the FSP/SAC Infill Site, including owned, leased, and subcontractor vehicles, will achieve a project-wide fleet-average 20 percent NO_X reduction and 45 percent particulate reduction compared to the most recent ARB 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.

- CDCR will ensure that emissions from all off-road diesel powered equipment used on the infill site do not exceed 40 percent opacity for more than 3 minutes in any 1 hour. Any equipment found to exceed 40 percent opacity (or Ringelmann 2.0) will be repaired immediately. Non-compliant equipment will be documented and a summary provided to SMAQMD monthly. A visual survey of all in-operation equipment will be made at least weekly, and a monthly

summary of the visual survey results will be submitted throughout the duration of construction, except that the monthly summary will not be required for any 30-day period in which no construction activity occurs. The monthly summary will include the quantity and type of vehicles surveyed, as well as the dates of each survey. SMAQMD staff and/or other officials may conduct periodic site inspections to determine compliance.

- If, at the time of construction, SMAQMD has adopted a regulation applicable to construction emissions, compliance with the regulation may completely or partially replace this mitigation. CDCR will consult with SMAQMD prior to construction to make this determination.

SMAQMD considers implementation of the Enhanced Exhaust Control Practices to achieve a 20 percent reduction for NO_X and a 45 percent reduction for PM_{10} from off-road construction equipment exhaust when compared to the state fleet average.

Mitigation Measure 3.1-1c

SMAQMD indicates that, if modeled construction-generated emissions of NO_X are not reduced to a level below SMAQMD's threshold of significance by the application of the Basic Construction Emission Control Practices and the Enhanced Exhaust Control Practices, then CDCR must pay a mitigation fee into the SMAQMD's offsite mitigation program. SMAQMD's offsite mitigation program uses these fees to purchase emission offsets, mainly through the Heavy Duty Incentive Program. By paying the appropriate offsite mitigation fee, construction-generated emissions of NO_X are reduced to a less-than-significant level, as further discussed below.

- Using SMAQMD's Construction Emission Mitigation Fee Calculator, it is estimated that CDCR will pay SMAQMD a mitigation fee of $6,497. The estimated fee amount is based on total emissions above the SMAQMD threshold, the current cost rate, and a 5 percent administrative fee levied by SMAQMD. The determination of the final mitigation fee will be conducted in coordination with SMAQMD before any demolition or ground disturbance occurs for any phase of infill correctional facility construction. All mitigation fees will be paid prior to issuance of a grading permit or approval of improvement plans, allowing SMAQMD to purchase emission offsets for the contemplated development.

It should be noted that total daily NO_X emissions would only exceed the SMAQMD threshold during the overlap between the demolition/site preparation and grading phases, which occurs over a month's duration. Daily emissions for all other phases would be below the daily threshold. Therefore, the mitigation fee was estimated based on the number of days during which the threshold would be exceeded, consistent with SMAQMD guidance. The fee calculator is included in Appendix 4A in this volume of the DEIR.

CDCR will have the opportunity to adjust the emission calculations and mitigation fees if changes are made to construction activities (e.g., equipment lists, usage, or schedules). CDCR may also employ additional onsite measures, such as use of construction equipment that meets EPA's Tier III emissions standards, to reduce the construction mitigation fee. If this is the case, CDCR will work with SMAQMD to ensure that emission calculations and fees are adjusted appropriately. The fee estimated for this measure represents the maximum amount due to SMAQMD if Mitigation Measures 3.1-1a and 3.1-1b are implemented as stated.

Significance after Mitigation

Implementation of Mitigation Measure 3.1-1a would lead to a reduction in PM_{10} emissions during the period of greatest earth-disturbing activity during construction year 2014. SMAQMD considers PM_{10} emissions from projects with less than 15 acres of daily disturbance and that incorporate the Basic Construction Emission Control Practices to be within acceptable levels.

Implementation of Mitigation Measure 3.1-1b, Enhanced Exhaust Control Practices, would reduce NO_X emissions from off-road vehicle use by 20 percent. Therefore, maximum daily NO_X emissions would be reduced to 121.2 lbs/day, which would still exceed the 85 lbs/day threshold.

SMAQMD indicates that, if modeled construction-generated emissions of NO_X are not reduced to a level below SMAQMD's threshold of significance by the application of the Basic Construction Emission Control Practices and the Enhanced Exhaust Control Practices, then CDCR must pay a mitigation fee into the SMAQMD's offsite mitigation program (Mitigation Measure 3.1-1c). The mitigation fee to be paid by CDCR has been estimated based on the overall reductions required to offset the exceedance of the SMAQMD threshold. Therefore, by paying the appropriate offsite mitigation fee, construction-generated emissions of NO_X would be reduced to a level below the threshold. Thus, development-generated construction emissions of PM_{10} and NO_X would be reduced to a **less-than-significant** level with mitigation incorporated.

Impact 3.1-2: Long-Term Operation-Related (Regional) Emissions of Criteria Air Pollutants and Precursors

Regional area- and mobile-source emissions of nonattainment pollutants and precursors (i.e., ROG, NO_X, PM_{10}, and $PM_{2.5}$) generated by development of the single, level II infill correctional facility were also modeled using CalEEMod. CalEEMod allows land use selections that include location specifics and trip generation rates. CalEEMod calculates area-source emissions from the usage of natural gas, landscape maintenance equipment, and consumer products and calculates mobile-source emissions associated with vehicle trip generation.

Regional area- and mobile-source emissions were modeled based on contemplated land use types and sizes as described in Chapter 3, "Project Description," in Volume 1 of the DEIR, trip generation data presented in the traffic analysis prepared for this project (Section 3.11 and Appendix 4D in this volume), and default CalEEMod settings to estimate reasonable maximum emission conditions. CalEEMod does not contain a land use type corresponding to an infill facility; therefore, a hospital was used as a close approximation of facility operational characteristics. CalEEMod input parameters were adjusted with project-specific information, where available.

The total estimated floor area for the single, level II infill correctional facility would be 257,916 gross square feet (gsf), of which an estimated 90,000 gsf would be program space. As reported in Section 3.11, "Transportation," the single, level II infill correctional facility is projected to generate a total of 396 daily trips. Refer to Appendix 4A in this volume for detailed modeling input parameters and results.

Table 3.1-4 summarizes the modeled operation-related emissions of criteria air pollutants and ozone precursors under buildout conditions in 2017, the earliest possible full year of operation of the single, level II infill correctional facility. As shown in Table 3.1-4, area- and mobile-source emissions resulting from operation of the single, level II infill correctional facility would be well below SMAQMD's significance threshold of 65 lbs/day for ROG or NO_X and would not be expected to contribute to concentrations that exceed the NAAQS or CAAQS. In addition, emission rates of vehicles in California are anticipated to improve each year as older vehicles are retired and newer, lower emission vehicles are added. For this reason, emission levels associated with operation of the single, level II infill correctional facility are expected to decrease over time.

Table 3.1-4 Summary of Modeled Daily Emissions of Criteria Air Pollutants and Precursors from Operation of the Single, Level II Infill Correctional Facility

	Emissions (lbs/day)			
	ROG	NO_X	PM_{10}	$PM_{2.5}$
Area Sources	7.2	4.7	0.4	0.4
Mobile Sources	2.6	4.8	5.2	0.4
Total Unmitigated Emissions	9.8	9.5	5.6	0.7
Threshold of Significance (lbs/day)	*65*	*65*	*AAQS*	*AAQS*

Notes: AAQS = Ambient Air Quality Standard; lbs/day = pounds per day; NO_X = oxides of nitrogen; $PM_{2.5}$ = fine particulate matter with an aerodynamic resistance diameter of 2.5 micrometers or less; PM_{10} = respirable particulate matter with an aerodynamic diameter of 10 micrometers or less; ROG = reactive organic gases
Numbers may not sum exactly to totals due to rounding.
Refer to Appendix 4A in this volume for detailed assumptions and modeling output files.
Source: Data modeled by Ascent Environmental in 2013.

It should be noted that operation of the single, level II infill correctional facility could also result in the generation of criteria air pollutant and precursor emissions from the long-term operation of onsite stationary sources (e.g., emergency generators). These types of sources would be subject to SMAQMD Rule 201, "General Permit Requirements," under which any construction, alteration, replacement, or operation of a source that will emit or may emit air pollutants must obtain an Authority to Construct (ATC) and/or a Permit to Operate (PTO). Emergency generators would be used only in the event of a power outage, although they would also be turned on occasionally to ensure their reliability.

More specifically, the use of any stationary source that may cause emissions is required by law to first obtain ATC from the Air Pollution Control Officer (APCO) Before the PTO any new source is granted, a written permit is also required from the APCO . No PTO will be granted by either the APCO or the Hearing Board for the operation of any source constructed or installed without these authorizations until the information required is presented to the APCO and conforms to the standards set forth in Rule 201.

According to Rule 201, the construction and operation of any source must comply with Rule 202, "New Source Review;" Rule 801, "New Source Performance Standards;" Regulation 9 – National Emission Standards for Hazardous Air Pollutants (NESHAPS), as well as obtaining the ATC and PTO. The APCO will deny any ATC or PTO if the construction and operation of the source is not shown to be designed, controlled, or equipped with such an air pollution control article, machine, equipment, or other contrivance, in a manner not to cause emissions in violation of Section 41700, 41701, or 42301 of the California Health and Safety Code,, and the other SMAQMD-applicable rules mentioned above (e.g., compliance with NSR standards).

According to SMAQMD, new permitted sources emitting more than 10 lbs/day of ROG, NO_X, PM_{10}, or SO_X must provide BACT, and all sources emitting more than the NSR thresholds must offset all emissions in excess of the thresholds. Emissions for these sources would not be allowed to exceed the numeric thresholds of significance for ozone precursors. Generally, stationary sources of air-pollutant emissions that comply with applicable regulations pertaining to BACT and offset requirements are not considered to have significant air quality impacts (SMAQMD 20011a).

Operation of the single, level II infill correctional facility at the FSP/SAC Infill Site would result in area- and mobile-source emissions that would exceed SMAQMD's applicable operational significance thresholds. Although development-generated stationary-source emissions would be additive, such emissions would be controlled and limited through SMAQMD's permit process. Thus, operation-related regional emissions of criteria air pollutants and precursors would not violate a standard or contribute substantially to an existing or projected air quality violation, and/or expose sensitive receptors to substantial pollutant concentrations. As a result, this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.1-3: Long-Term Operation-Related (Local) Mobile-Source Emissions of Carbon Monoxide

CO concentration is a direct function of meteorological conditions and motor vehicle activity (e.g., idling time and traffic flow conditions), particularly during peak commute hours. Under specific meteorological conditions (e.g., stable conditions that result in poor dispersion), CO concentrations may reach unhealthy levels with respect to local sensitive land uses such as residential areas, schools, and hospitals. As a result, it is recommended that CO be analyzed at the local level. The SVAB is designated as an attainment area for the CAAQS and NAAQS for CO. As of 2003, CO levels recorded in the SVAB have been more than 50 percent below the federal 8-hour standard (ARB 2004). The SVAB has not had any exceedances of CO standards in over 20 years.

Several air districts in California recently adopted screening criteria for analyzing local CO impacts, including SMAQMD. Criteria applicable to the development of a level II infill correctional facility are listed separately below. These screening criteria have been developed in a manner such that, if they are met, project-generated, long-term operation-related local mobile-source emissions of CO would not violate a standard or contribute substantially to an existing or projected air quality violation or expose sensitive receptors to substantial pollutant concentrations.

According to SMAQMD, a proposed project would result in a less-than-significant CO impact if the following criterion is met (SMAQMD 2011a):

- The project would not result in an affected intersection experiencing more than 31,600 vehicles per hour.

According to the traffic analysis (attached as Appendix 4D and discussed in Section 3.11, "Transportation," in Chapter 3 of this volume), none of the maximum peak-hour traffic volumes resulting from development of the single, level II infill correctional facility at the FSP/SAC Infill Site would exceed 31,600 vehicles per hour. As a result, project-generated, long-term operation-related local mobile-source emissions of CO would not violate a standard or contribute substantially to an existing or projected air quality violation or expose sensitive receptors to substantial pollutant concentrations. This impact would be less than significant.

Long-term operation-related local mobile-source emissions of CO generated by the single, level II infill correctional facility at the FSP/SAC Infill Site would not violate a standard or contribute substantially to an existing or projected air quality violation or expose sensitive receptors to substantial pollutant concentrations. As a result, this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.1-4: Exposure of Sensitive Receptors to Emissions of Toxic Air Contaminants

The exposure of sensitive receptors to emissions of TACs from onsite development-generated construction-related and operation-related sources for each facility type is discussed separately below.

Onsite Construction-Related Equipment Emissions

Construction of the single, level II infill correctional facility would result in short-term, project-generated emissions of diesel PM from the exhaust of off-road, heavy-duty diesel equipment used for site preparation (e.g., excavation, grading, and clearing); paving; application of architectural coatings; and

other miscellaneous activities. Diesel PM was identified as a TAC by ARB in 1998. The potential cancer risk from the inhalation of diesel PM, as discussed below, outweighs the potential non-cancer health impacts (ARB 2003). SMAQMD has not adopted a methodology for analyzing such impacts and does not recommend that health risk assessments be completed for construction-related emissions of TACs because construction activities typically take place in the short term, whereas health risk assessments are based on long-term (extending over several decades) exposure.

The dose to which receptors are exposed is the primary factor used to determine health risk (i.e., the potential exposure to TACs being compared to applicable standards). Dose is a function of the concentration of a substance 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 exposure level for the MEI. Thus, the risks estimated for the MEI are higher if a fixed exposure occurs over a longer period of time. According to the California Office of Environmental Health Hazard Assessment (OEHHA), health risk assessments, which determine the exposure of sensitive receptors to TAC emissions, should be based on a 70-year exposure period; however, such assessments should be limited to the period or duration of activities associated with the development. Consequently, it is important to consider that the use of off-road, heavy-duty diesel equipment would be limited to the construction period, which is approximately 26 months. Also, studies show that diesel PM is highly dispersive (i.e., concentration decreases 70 percent at 500 feet from source) (ARB 2005, Zhu and Hinds 2002).

The nearest sensitive receptors outside FSP/SAC are residential uses to the south, east, and west of the infill site, with the nearest approximately 0.2 mile from the SAC site. The infill site would be accessed using an existing driveway on Folsom Lake Crossing, about 4,500 feet east of Folsom-Auburn Road; residences are located at the intersection of the two roads. The residences are located approximately 3,000 feet east of the infill site. These distances represent distances from the reasonable center of construction activity at the infill site to common areas of the nearby receptors. Because the use of off-road, heavy-duty equipment would be temporary and the nearest sensitive receptor is more than 500 feet from the infill site (the distance associated with a 70-percent decrease in emissions), project-generated, construction-related emissions of TACs would not result in the exposure of sensitive receptors to substantial pollutant concentrations.

Onsite Operation-Related Stationary-Source Emissions

Development of the single, level II infill correctional facility would include stationary sources of TACs, such as diesel- or natural gas–fueled backup generators. These types of stationary sources, in addition to any other stationary sources that may emit TACs, would be subject to SMAQMD's rules and regulations, including Regulation 2 (Permits) and Regulation 9 (National Emission Standards for Hazardous Air Pollutants); Rules 201 (General Permit Requirements) and 904 (Air Toxics Control Measures); and maximum achievable control technology (MACT) and T-BACT requirements. Thus, as discussed above, SMAQMD would analyze such sources (e.g., prepare a health risk assessment, if deemed necessary) based on their potential to emit TACs. If it is determined that the sources would emit TACs in excess of SMAQMD's applicable significance threshold, MACT or T-BACT would be implemented to reduce emissions. If the implementation of MACT or T-BACT would not reduce the risk below the applicable threshold, SMAQMD would deny the required permit to operate.

More specifically, the siting of new stationary sources of TACs would be subject to SMAQMD rules and each new stationary source is evaluated to determine whether it has the potential to emit TACs. SMAQMD assesses the impact from TACs based on its own guidance, as well as guidance documents from OEHHA, ARB and the California Air Pollution Control Officers Association. SMAQMD requires TAC emission controls (T-MACT or T-BACT) as deemed necessary.

In addition to T-MACT and T-BACT requirements, permits for stationary equipment that may emit TACs may also contain conditions required by NESHAPs and ATCMs promulgated by EPA and ARB,

respectively. In short, a new stationary source of TACs would not receive the authority to construct or permit to operate if it would result in:

- an incremental increase in cancer risk greater than 10 in 1 million at any offsite receptor or
- an offsite, ground-level concentration of non-carcinogenic TACs generated from the project that would result in a Hazard Index greater than 1 (unless approved by OEHHA).

These permitting requirements reflect SMAQMD's thresholds of significance for TACs generated by stationary sources. Therefore, lead agencies can conclude that a new stationary source of TACs that attains the authority to construct and permit to operate from SMAQMD would not exceed the applicable TAC thresholds of significance.

With regard to onsite sensitive receptors (e.g., inmates onsite), ARB's Community Health Air Pollution Information System identifies no major stationary sources of TACs within 3 miles of the infill site. Thus, development of the single, level II infill correctional facility would not result in the placement of sensitive receptors within ARB-recommended separation distances considered for the information system. Consequently, development of the single, level II infill correctional facility would not result in the exposure of sensitive receptors (existing or contemplated) to substantial pollutant concentrations from stationary sources.

With regard to construction-related activities, the use of off-road heavy-duty equipment would be temporary and the nearest sensitive receptor is more than 500 feet from the FSP/SAC Infill Site (i.e., sufficient distance from emission sources that excessive concentrations of diesel PM would not occur at the receptor). For any contemplated stationary sources of TACs, CDCR would comply with applicable SMAQMD rules and regulations for permitted stationary sources, and development of the single, level II infill correctional facility would not locate any sensitive receptors within ARB-recommended separation distances from emission sources. As a result, development of the single, level II infill correctional facility at the FSP/SAC Infill Site would not result in the exposure of sensitive receptors (existing or contemplated) to substantial pollutant concentrations. This impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.1-5: Exposure of Sensitive Receptors to Odors

The occurrence and severity of odor impacts depend on numerous factors, including the nature, frequency, and intensity of the source; wind speed and direction; and the presence of sensitive receptors. Although offensive odors rarely cause physical harm, they may still be very unpleasant, leading to considerable distress and often generating citizen complaints to local governments and regulatory agencies.

No existing major sources of objectionable odors (e.g., landfill, wastewater treatment plant, food processing facility) are located within 1 mile of the infill site. No major agriculture-related odor sources (e.g., livestock operations) are located within 2 miles. Development of the single, level II infill correctional facility would not introduce new, permanent odor-generating facilities, nor would it place receptors substantially closer to existing sources of odors. Any onsite odor sources (e.g., fryers, charbroilers, solid waste disposal areas) would be controlled under SMAQMD nuisance regulations and California Department of Public Health emission reduction mandates that limit exhaust emissions from cooking sources. Thus, development of the single, level II infill correctional facility would not expose the nearby existing receptors to objectionable odors.

Construction of the single, level II infill correctional facility would result in odors from exhaust emissions from onsite diesel equipment, asphalt paving, and painting. Such emissions would be intermittent in nature and would dissipate rapidly with increasing distance from the source.

Development of the single, level II infill correctional facility at the FSP/SAC Infill Site would not involve the construction or operation of any major odor sources, and no existing sources of objectionable odors are located within 1 mile of the infill site. Thus, development of the single, level II infill correctional facility would not be anticipated to result in the exposure of sensitive receptors to objectionable odors. As a result, this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

3.2 BIOLOGICAL RESOURCES

This section describes the biological resources on and in the vicinity of the proposed Level II Infill Correctional Facilities Project at the Folsom State Prison/California State Prison, Sacramento (FSP/SAC) Infill Site; describes relevant regulations pertaining to biological resources; and addresses potential impacts on biological resources that could result from construction and operation of the infill project. The analysis includes a description of the existing environmental conditions, the methods used for assessment, the impacts associated with implementing the proposed project, and the mitigation measures necessary to address significant impacts.

Information in this section is based on data collected during reconnaissance-level field surveys in 2013, biological database searches, and review of other relevant documentation for the project area, including the following documents:

- U.S. Fish and Wildlife Service (USFWS) List of Federal Endangered and Threatened Species that Occur in or May Be Affected by Projects in the Folsom U.S. Geological Survey 7.5-Minute Quadrangle (USFWS 2013);
- California Natural Diversity Database (CNDDB) Search (CNDDB 2013);
- California Native Plant Society (CNPS) Inventory (CNPS 2013);
- *Preliminary Delineation of Wetlands and Other Water Bodies California Health Care Facility – Folsom* (ICF Jones & Stokes 2009) as verified by 2013 reconnaissance-level surveys; and
- City of Folsom General Plan Update (City of Folsom 1993: 24-6 and 24-7).

3.2.1 ENVIRONMENTAL SETTING

The infill site is located within the existing FSP/SAC property in the City of Folsom in the northeast corner of Sacramento County. The site is directly east of the American River on the southeast side of Folsom Dam. This area is within the transition zone between the Sacramento Valley and Sierra Nevada foothills. The site is characterized by rolling foothill topography with elevations ranging from approximately 350 to 425 feet. A large portion of the site is developed with existing service facilities, roads, and a fire station. Undeveloped portions of the infill site are characterized primarily by annual grassland with scattered trees and shrubs. Aquatic features on the infill site consist of four drainage ditches, a canal, two seasonal streams, and four seasonal wetlands. Exhibit 3.2-1 shows the vegetation and habitat types on the FSP/SAC Infill Site, including aquatic features and developed areas. FSP/SAC is surrounded by Folsom Lake to the north, the American River with associated riparian habitat and steep cliffs to the west, oak woodlands to the east and south, and urban development in the surrounding area of Folsom. The infill site is adjacent to the firing range, which is actively used for training by CDCR Correction Officers and other Peace Officers.

COMMON VEGETATION AND WILDLIFE

Annual grassland is the predominant vegetation community on the FSP/SAC Infill Site, comprising approximately 28 acres. This community is characterized by a diverse mixture of annual grasses and forbs and dominated by nonnative grasses including foxtail barley (*Hordeum murinum* ssp. *leporinum*), ripgut brome (*Bromus diandrus*), and soft chess (*Bromus hordeaceus*). Trees and shrubs scattered throughout the annual grassland include coyote brush (*Baccharis pilularis*), blue elderberry (*Sambucus nigra*), blue oak (*Quercus douglasii*), interior live oak (*Quercus wislizeni*), and walnut (*Juglans* sp.).

A stand of walnut trees and a stand of coyote brush scrub are present along the western boundary of the infill site. The walnut stand is clustered along an intermittent stream and the coyote brush stand is just south of the walnut stand. The infill site also contains patches of ruderal vegetation adjacent to developed areas. Ruderal vegetation consists of weedy species that are adapted to quickly colonize bare ground

and withstand regular disturbance, such as yellow starthistle (*Centaurea solstitialis*), prickly lettuce (*Lactuca serriola*), filaree (*Erodium* spp.), ripgut brome, and Bermuda grass (*Cynodon dactylon*).

Although oak woodland and grassland habitats generally provide high-value habitat for a wide variety of wildlife species, the habitat values on the infill site are somewhat lower due to existing development and associated disturbance and the prevalence of nonnative vegetation. Nonetheless, the site provides habitat for a number of wildlife species. The walnut stand is small (0.51 acre), but larger trees in this stand, as well as those scattered throughout the annual grassland habitat, provide nesting opportunities for raptors and other bird species. The coyote brush stand is also small (0.30 acre) and it does not represent valuable habitat for species commonly associated with shrub communities, but it does provide limited nesting opportunities for some songbird species. Annual grassland provides habitat for a wide variety of wildlife species, and most of the common wildlife species that use annual grassland habitat on the infill site would also use ruderal vegetation to some extent. Some of the common wildlife species observed or expected on the infill site are wild turkey (*Meleagris gallopavo*), American kestrel (*Falco sparverius*), red-tailed hawk (*Buteo jamaicensis*), western kingbird (*Tyrannus verticalis*), oak titmouse (*Baeolophus inornatus*), savannah sparrow (*Passerculus sandwichensis*), western meadowlark (*Sturnella neglecta*), western toad (*Bufo boreas*), gopher snake (*Pituophis catenifer*), western fence lizard (*Sceloporus occidentalis*), California vole (*Microtus californicus*), deer mouse (*Peromyscus maniculatus*), California ground squirrel (*Spermophilus beecheyi*), black-tailed jackrabbit (*Lepus californicus*), and mule deer (*Odocoileus hemionus*).

SENSITIVE BIOLOGICAL RESOURCES

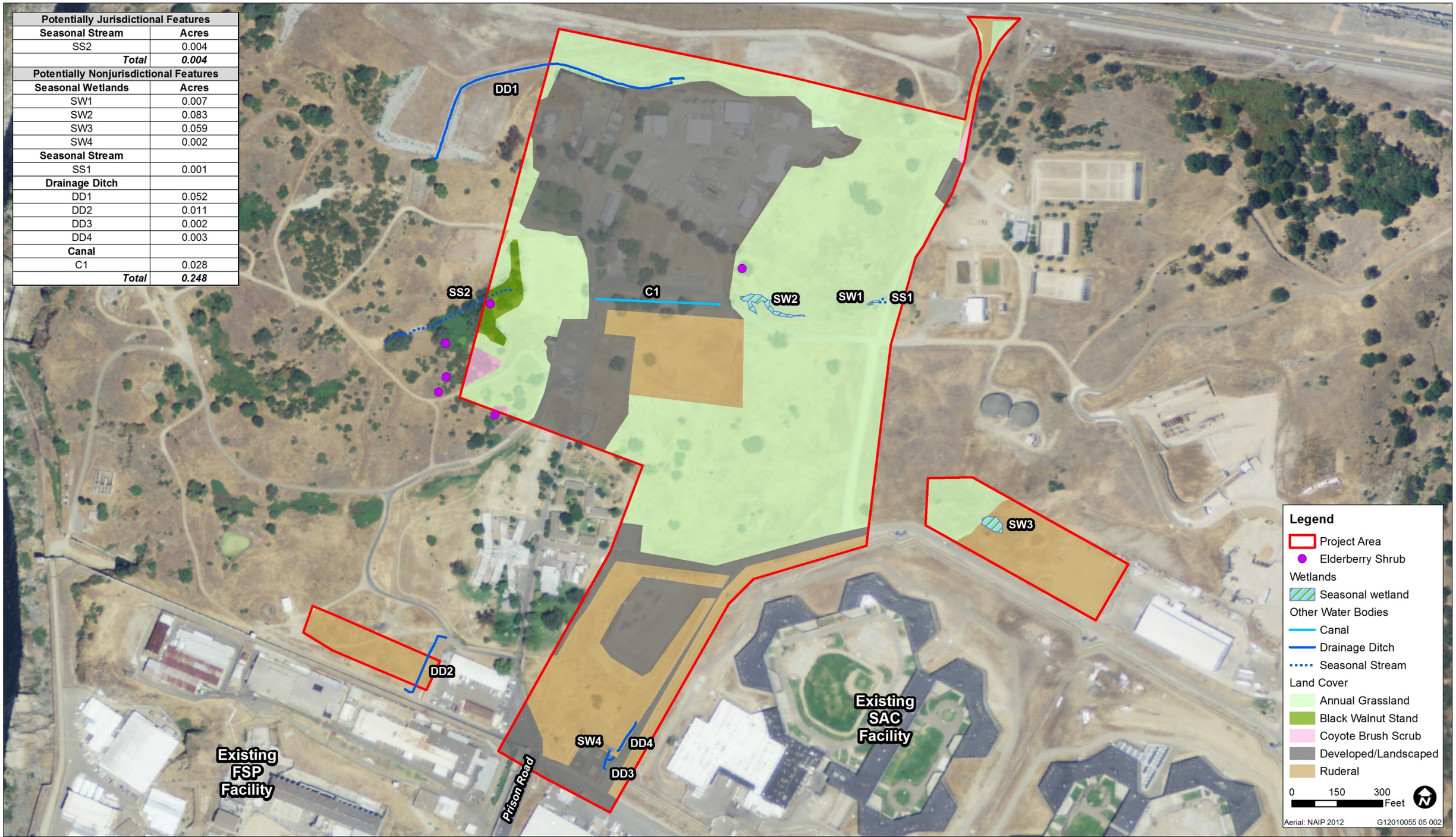
Sensitive biological resources addressed in this section include those that are afforded consideration or protection under the California Environmental Quality Act (CEQA), California Fish and Game Code, California Endangered Species Act (CESA), Federal Endangered Species Act (ESA), Clean Water Act (CWA), and the Porter-Cologne Water Quality Control Act (Porter-Cologne Act).

SPECIAL-STATUS SPECIES

Special-status species include plants and animals in the following categories:

- species officially listed by the State of California or the federal government as endangered, threatened, or rare;
- candidates for state or federal listing as endangered, threatened, or rare;
- taxa (i.e., taxonomic categories or groups) that meet the criteria for listing, even if not currently included on any list, as described in California Code of Regulations (CCR) Section 15380 of the State CEQA Guidelines;
- species identified by the California Department of Fish and Wildlife (CDFW) as species of special concern;
- species listed as Fully Protected under the California Fish and Game Code;
- species afforded protection under local or regional planning documents; and
- taxa considered by CDFW to be “rare, threatened, or endangered in California” and assigned a California Rare Plant Rank (CRPR). The CDFW system includes five rarity and endangerment ranks for categorizing plant species of concern, which are summarized as follows:
  - CRPR 1A - Plants presumed to be extinct in California;
  - CRPR 1B - Plants that are rare, threatened, or endangered in California and elsewhere;
  - CRPR 2 - Plants that are rare, threatened, or endangered in California but more common elsewhere;
  - CRPR 3 - Plants about which more information is needed (a review list); and
  - CRPR 4 - Plants of limited distribution (a watch list).

Potentially Jurisdictional Features	
Seasonal Stream	**Acres**
SS2	0.004
Total	***0.004***
Potentially Nonjurisdictional Features	
Seasonal Wetlands	**Acres**
SW1	0.007
SW2	0.083
SW3	0.059
SW4	0.002
Seasonal Stream	
SS1	0.001
Drainage Ditch	
DD1	0.052
DD2	0.011
DD3	0.002
DD4	0.003
Canal	
C1	0.028
Total	***0.248***



Source: Data Received from ICF Jones & Stokes (2009); Adapted by Ascent Environmental in 2013

Exhibit 3.2-1

Habitat Types at the FSP/SAC Infill Site

ASCENT ENVIRONMENTAL

All plants with a CRPR are considered "special plants" by CDFW. The term "special plants" is a broad term used by CDFW to refer to all of the plant taxa inventoried in CDFW's CNDDB, regardless of their legal or protection status. Plants ranked as CRPR 1A, 1B, and 2 may qualify as endangered, rare, or threatened species within the definition of State CEQA Guidelines Section 15380. CDFW recommends that CRPR 1A, 1B, and 2 species be addressed in CEQA projects. In general, CRPR 3 and 4 species do not meet the definition of endangered, rare, or threatened pursuant to State CEQA Guidelines Section 15380; however, these species may be evaluated by the lead agency on a case-by-case basis to determine significance criteria under CEQA.

The term "California species of special concern" is applied by CDFW to animals not listed under the federal ESA or CESA, but that are nonetheless declining at a rate that could result in listing, or historically occurred in low numbers and known threats to their persistence currently exist.

A list of special-status species that could potentially occur on the FSP/SAC Infill Site or immediate vicinity was developed primarily through review of California Natural Diversity Database (CNDDB 2013) and CNPS Inventory (CNPS 2013) records of previously documented occurrences of special-status species in the Folsom, Clarksburg, Citrus Heights, Carmichael, Buffalo Creek, Folsom SE, Roseville, Rocklin, and Pilot Hill U.S. Geological Survey 7.5-minute quadrangles.

Special-Status Plants

Twenty-five special-status plant species have been documented in the CNDDB and CNPS Inventory nine-quadrangle search area. The following eight of these species were immediately eliminated from further evaluation in this document because they are restricted to particular soil types (e.g., serpentinite, gabbroic, or Ione soils) that are not present on the FSP/SAC Infill Site:

- Stebbins' morning glory (*Calystegia stebbinsii*),
- Pine Hill Ceanothus (*Ceanothus roderickii*),
- Red Hills soaproot (*Chlorogalum grandiflorum*),
- Pine Hill flannelbush (*Fremontodendron decumbens*),
- El Dorado bedstraw (*Galium californicum* ssp. *sierrae*),
- Bisbee Peak rush-rose (*Helianthemum suffrutescens*),
- Layne's ragwort (*Packera layneae*), and
- El Dorado County mule ears (*Wyethia reticulata*).

The potential for the remaining 17 species to occur onsite was evaluated further based on habitat requirements, geographic distribution, and elevation range, as described in Table 3.2-1. None of these species are expected to occur on the infill site, either because no suitable habitat was found or because the species was not found during a protocol-level botanical survey of potentially suitable habitat conducted on April 1, 2009. The survey was conducted by ICF Jones & Stokes botanists and covered an area encompassing the proposed infill site and surrounding habitats. No special-status plants were found during the survey. Reconnaissance-level surveys of the FSP/SAC Infill Site were completed in 2013, which confirmed that, consistent with the conditions in 2009, suitable habitat is not present on the infill site for these species.

Table 3.2-1 Special-status Plant Species Known to Occur in the Project Area

Species	Status[1]			Habitat and Blooming Period	Rationale for Elimination
	ESA	CESA	CRPR		
Big scale balsamroot *Balsamorhiza macrolepis var. macrolepis*	–	–	1B.2	Chaparral, cismontane woodland, and valley and foothill grassland, often on serpentinite soils; 295 to 4,600 foot elevation; blooms March–June.	Marginally suitable habitat is present, but this species was not found during the protocol survey conducted during its blooming period. Although not restricted to serpentinite soils, this species is usually (65 to 74% of the time) found on serpentinite soils, which are not present on the infill site.
Hispid bird's beak *Chloropyron molle ssp. hispidum*	–	–	1B.1	Alkaline meadows, seeps, and playas; below 500 foot elevation; blooms June–September.	No suitable habitat is present.
Brandegee's clarkia *Clarkia biloba ssp. brandegeeae*	–	–	4.2	Chaparral and cismontane woodland, often in roadcuts; 240 to 3,000 foot elevation; blooms May–July.	No suitable habitat is present.
Streambank spring beauty *Claytonia parviflora ssp. grandiflora*	–	–	4.2	Rocky sites in cismontane woodland; 500 to 4,000 feet elevation; blooms February-April.	No suitable woodland habitat is present and the infill site is lower than the species' known elevation range.
Dwarf downingia *Downingia pusilla*	–	–	2.2	Vernal pools or other seasonal wetlands in annual grasslands; below 1,500 foot elevation; blooms March–May.	Marginally suitable habitat is present, but this species was not found during the protocol survey conducted during its blooming period.
Tuolumne button-celery *Eryngium pinnatisectum*	–	–	1B.2	Vernal pools or other seasonal wetlands in cismontane woodland and lower montane coniferous forest; 200 to 3,000 foot elevation; blooms June–August.	No suitable habitat is present.
Bogg's Lake hedge hyssop *Gratiola heterosepala*	–	E	1B.2	Lake margin marshes and swamps, vernal pools, and other seasonal wetlands, primarily in clay soils; 30 to 8,000 foot elevation; blooms April–August.	No suitable habitat is present.
Stinkbells *Fritillaria agrestis*	–	–	4.2	Clay, usually serpentine, soils in annual grassland, chaparral, or cismontane woodland; blooms March-June.	No suitable microhabitat (clay, serpentine soil) is present and species was not found during the protocol survey conducted during its blooming period.

Table 3.2-1 Special-status Plant Species Known to Occur in the Project Area

Species	Status[1]			Habitat and Blooming Period	Rationale for Elimination
	ESA	CESA	CRPR		
Ahart's dwarf rush *Juncus leiospermus var. ahartii*	–	–	1B.2	Vernal pools and swales in areas of low cover of competing vegetation; most often on gopher turnings along margins of pools (Witham 2006:38); 95 to 750 foot elevation; blooms March–May.	Marginally suitable habitat is present, but this species was not found during the protocol survey conducted during its blooming period.
Red Bluff dwarf rush *Juncus leiospermus var. leiospermus*	–	–	1B.1	Vernal pools, meadows and seeps, and other seasonally wet habitats; 115 to 3,500 foot elevation; blooms March–May.	Marginally suitable habitat is present, but the nearest record of this species is in Roseville, far outside the species reported range. The validity of this recordhas not been verifiedy (CNDDB 2013: 208). Reported range is inner north coast and Cascade ranges and northern Sacramento Valley in Butte, Shasta, and Tehama Counties. This species was not found during the protocol survey conducted during its blooming period.
Dubious pea *Lathyrus sulphureus var. argillaceus*	–	–	3	Cismontane woodland, montane coniferous forest; 500 to 1,000 feet elevation; blooms March-May.	No suitable woodland habitat is present and the infill site is lower than the species' known elevation range. Species was not found during the protocol survey conducted during its blooming period.
Greene's legenere *Legenere limosa*	–	–	1B.1	Relatively deep and wet vernal pools (Witham 2006:39); below 3,000 foot elevation; blooms April–June.	No suitable habitat is present.
Pincushion navarretia *Navarretia meyersii ssp. Meyersii*	–	–	1B.1	Vernal pools; 65 to 750 foot elevation; blooms in May.	No suitable habitat is present.
Adobe navarretia *Navarretia nigelliformis ssp. nigelliformis*	–	–	4.2	Vernally mesic clay depressions or clay bottom vernal pools; sometimes serpentinite soils; 300 to 3,300 feet elevation; blooms April-June.	No suitable habitat is present.
Slender Orcutt grass *Orcuttia tenuis*	T	E	1B.1	Vernal pools; 100 to 5,800 foot elevation; blooms May–October.	No suitable habitat is present.
Sacramento Orcutt grass *Orcuttia viscida*	E	E	1B.1	Vernal pools; 95 to 325 foot elevation; blooms April–July.	No suitable habitat is present.

Table 3.2-1 Special-status Plant Species Known to Occur in the Project Area

Species	Status[1]			Habitat and Blooming Period	Rationale for Elimination
	ESA	CESA	CRPR		
Sanford's arrowhead *Sagittaria sanfordii*	–	–	1B.2	Shallow freshwater marshes and swamps; below 2,200 foot elevation; blooms May–October.	No suitable habitat is present.

Notes: USFWS = U.S. Fish and Wildlife Service; CDFW = California Department of Fish and Wildlife; CRPR=California Rare Plant Rank; CNDDB = California Natural Diversity Database; ESA = Federal Endangered Species Act; CESA = California Endangered Species Act

[1] Legal Status Definitions

U.S. Fish and Wildlife Service:
E Endangered (legally protected)
T Threatened (legally protected)

California Department of Fish and Wildlife:
E Endangered (legally protected)

California Rare Plant Ranks:
1B Plant species considered rare or endangered in California and elsewhere (protected under CEQA, but not legally protected under ESA or CESA)
2 Plant species considered rare or endangered in California but more common elsewhere (protected under CEQA, but not legally protected under ESA or CESA)
3 Plants for which more information is needed – a review list
4 Plants of limited distribution – a watch list

CRPR Extensions:
.1 Seriously endangered in California (>80% of occurrences are threatened and/or high degree and immediacy of threat)
.2 Fairly endangered in California (20 to 80% of occurrences are threatened)

Sources: CNDDB 2013; CNPS 2013; ICF Jones & Stokes 2009; data compiled by Ascent in 2013

Special-Status Wildlife

Twenty-one special-status wildlife species have been documented in the CNDDB nine-quadrangle search area. The following 11 of these species were immediately eliminated from further evaluation in this document because they are restricted to particular habitat types (e.g., vernal pools, streams, ponds, riparian woodland) that are not present on the FSP/SAC Infill Site:

- vernal pool fairy shrimp *(Branchinecta lynchi)*
- vernal pool tadpole shrimp *(Lepidurus packardi)*
- giant garter snake (*Thamnophis gigas*)
- western pond turtle (*Actinemys marmorata*)
- California red-legged frog (*Rana aurora draytonii*)
- California tiger salamander (*Ambystoma californiense)*
- western spadefoot (*Spea hammondii*)
- California black rail (*Laterallis jamaicensis coturniculus*)
- purple martin (*Progne subis*)
- bank swallow (*Riparia riparia*)
- western yellow-billed cuckcoo (*Coccyzus americanus occidentalis*)

Based on habitat requirements, geographic distribution, and elevation range, 15 special status wildlife species have potential to be present and are evaluated in Table 3.2-2, including five species that have not been documented in the CNDDB nine-quadrangle search area but are known to occur in the region in similar habitats to those found on the infill site.

Table 3.2-2 Special-status Wildlife with Potential to Occur in the Project Area

Species	Listing Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
Invertebrates				
Valley elderberry longhorn beetle *Desmocerus californicus dimorphus*	T/PD	–	Elderberry shrubs below 3,000 feet in elevation, typically in riparian habitats.	Could occur; there are two elderberry clusters present on the infill site and four clusters within 100 feet of the site boundary. Exit holes were observed in a number of these shrubs. The nearest CNDDB occurrence is approximately 1 mile northwest of the infill site.
Amphibians and Reptiles				
Coast horned lizard *Phrynosoma blainvillii*	_	SC	Lowlands along sandy washes with scattered low bushes, open areas for sunning, patches of loose soil for burial, and abundant supply of ants and other insects.	Unlikely to occur. No suitable habitat in study area. The nearest CNDDB record is approximately 10 miles east.
Birds				
Tricolored blackbird *Agelaius tricolor* (nesting colony)	–	SC	Forages in agricultural lands and grasslands, especially in areas with high insect production; nests in marshes, riparian scrub, and other areas that support cattails or dense thickets of shrubs or herbs.	No suitable foraging or nesting habitat is present on the infill site, but species could nest in blackberry clumps within 500 feet of the site. The nearest CNDDB record is approximately 2 miles south of the infill site.
Grasshopper sparrow *Ammodramus savannarum* (nesting)	–	SC	Nests and forages in dense grasslands; favors a mix of native grasses, forbs, and scattered shrubs.	Could nest in annual grassland habitat on the infill site. There are no CNDDB records of this species within 10 miles of the infill site.
Golden eagle *Aquila chrysaetos* (nesting and wintering)	–	FP	Forages in large open areas of foothill shrub and grassland habitats and occasionally croplands. Nest primarily in cliff-walled canyons.	Unlikely to nest onsite; migrating and nonbreeding individuals could forage in the grasslands onsite. Nearest CNDDB record is winter foraging record from southwest of Mather Air Force Base.
Burrowing owl *Athene cunicularia* (burrow sites)	–	SC	Nests and forages in dry, open grasslands, agricultural lands, and desert and scrub habitats with low-growing vegetation and existing ground squirrel burrows or friable soils.	Could occur; suitable nesting and foraging habitat present with existing ground squirrel burrows. The nearest CNDDB record is approximately 4 miles southeast where US 50 crosses the Sacramento-El Dorado County line.
Swainson's hawk *Buteo swainsoni* (nesting)	–	T	Forages in grasslands and agricultural lands (alfalfa, row, or grain crops); nests in large trees in riparian areas, grasslands with scattered trees, or in tree lines or small groves near grasslands or croplands.	Could occur; suitable nesting and foraging habitat present; however, the site is at the edge of the species' range in the Central Valley. Nearest CNDDB record is approximately 8 miles southwest in Rancho Cordova.

Table 3.2-2 Special-status Wildlife with Potential to Occur in the Project Area

Species	Listing Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
Northern harrier *Circus cyaneus* (breeding)	–	SC	Nests and forages in grasslands, agricultural fields, and marshes.	Could nest and forage in the grassland on the infill site. There are no CNDDB records within the nine-quad search area.
White-tailed kite *Elanus leucurus* (nesting)	–	FP	Forages in grasslands and agricultural fields; nests in riparian zones, oak woodlands, and isolated trees.	Could occur; suitable grassland foraging habitat and suitable nest trees present. Nearest CNDDB record is from Lake Natoma. A pair of white-tailed kites was observed foraging on the infill site in December 2008.
Bald eagle *Haliaeetus leucocephalus* (nesting and wintering)	D	E	Forage primarily in large inland fish-bearing waters with adjacent large trees or snags; occasionally in uplands with abundant rabbits, other small mammals, or carrion. Often roosts communally in winter.	No suitable nesting habitat is present on the infill site. However, could be a rare and irregular foraging visitor. Known to nest at Folsom Lake on Anderson Island.
Loggerhead shrike *Lanius ludovicianus* (breeding)	–	SC	Forages and nests in grasslands, shrublands, and open woodlands.	Could nest on infill site. Potentially suitable breeding and foraging habitat in scattered shrubs, trees, and grasslands. There are no CNDDB records of this species within 10 miles of the infill site.
Mammals				
Pallid bat *Antrozous pallidus*	–	SC	Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats. Roosts in rock crevices, oak hollows, bridges, or buildings.	Could occur; potentially suitable roosting habitat in oak trees and abandoned or underused buildings. The nearest CNDDB occurrence is a 1941 record from approximately 2.5 miles southwest of the infill site.
Townsend's big-eared bat *Corynorhinus townsendii*	–	SC	Typically roosts in caves; however, colonies of <100 individuals occasionally nest in buildings or bridges and hollow trees. Forages in all habitats except alpine and subalpine, though most commonly in moist forests and woodlands.	Could occur; potentially suitable roosting habitat in oak trees and abandoned or underused buildings. There are no CNDDB records of this species within 10 miles of the infill site.
Western red bat *Lasiurus blossevill*		CSC	Roosts primarily in tree foliage, especially in cottonwood, sycamore, and other riparian trees or orchards. Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging, including grasslands, shrublands, and open woodlands.	Unlikely to occur. Infill site does not contain riparian habitat with suitable roost trees. There are no CNDDB records of this species within 10 miles of the infill site.

Table 3.2-2 Special-status Wildlife with Potential to Occur in the Project Area

Species	Listing Status[1]		Habitat	Potential for Occurrence[2]
	Federal	State		
American badger *Taxidea taxus*	–	SC	Drier open shrub, forest, and herbaceous habitats with friable soils.	Unlikely to occur; requires open areas of undisturbed grassland. Existing development surrounding the infill site precludes the presence of this species. There are no CNDDB records of this species within 10 miles of the infill site.

Note: CNDDB = California Natural Diversity Database; USFWS = U.S. Fish and Wildlife Service
[1] Legal Status Definitions

Federal:
PD Proposed for Delisting
D Delisted (no ESA protection)
E Endangered (legally protected)
T Threatened (legally protected)

State:
FP Fully protected (legally protected)
SC Species of special concern (no formal protection other than CEQA consideration)
E Endangered (legally protected)
T Threatened (legally protected)

Sources: CNDDB 2013; ICF J & S 2009, Shuford and Gardali 2008; USFWS 2008; data compiled by Ascent in 2013

SENSITIVE HABITATS AND SPECIAL-STATUS PLANT COMMUNITIES

Sensitive habitats include those that are of special concern to resource agencies or are afforded specific consideration through CEQA, Section 1602 of the California Fish and Game Code, Section 404 of the CWA, or the Porter-Cologne Act, as discussed under "Regulatory Background" below. Sensitive natural habitat may be of special concern to these agencies and conservation organizations for a variety of reasons, including their locally or regionally declining status, or because they provide important habitat to common and special-status species.

CDFW maintains a list of plant communities that are native to California. Within that list, CDFW identifies special-status plant communities (a.k.a. sensitive natural communities), which they define as communities that are of limited distribution statewide or within a county or region and often vulnerable to environmental effects of projects (CDFW 2013: ix). These communities may or may not contain special-status species or their habitat. Special-status plant communities are tracked in the CNDDB, a statewide inventory of the locations and conditions of the state's rarest plant and animal taxa and vegetation types. None of the plant communities present on the FSP/SAC Infill Site are included on CDFW's list of special-status plant communities. However, seasonal streams provide potential habitat for wildlife species and may be subject to regulation under Section 1602 of the California Fish and Game Code. The seasonal streams, seasonal wetlands, drainage ditch, and canal would all be considered waters of the state subject to regulation under the Porter-Cologne Act.

Wetlands and Other Waters of the United States

The FSP/SAC Infill Site contains four small seasonal wetlands (SW), two seasonal streams (SS), four drainage ditches (DD), and a canal (C) (Exhibit 3.2-1). Based on a wetland delineation performed by ICF Jones & Stokes in 2009 and reconnaissance-level survey of the infill site in 2013, the seasonal wetlands do not exhibit indicators of hydric soils or wetland hydrology and do not, therefore, meet the U.S. Army Corps of Engineers' (USACE's) definition of a wetland. Each of the aquatic features delineated on the infill site is described further below (excerpted from ICF Jones & Stokes 2009 where applicable).

SW-1 is a small (0.007-acre) wet depression dominated by pennyroyal (*Mentha pulegium*) and tall flatsedge (*Cyperus eragrostis*). This wetland receives water from leaky pumps and seasonal overflow from water treatment ponds located upslope. This feature is dominated by hydrophytic vegetation and exhibits indicators of hydric soils and wetland hydrology; however, it is not connected to other waters of the United States. Although this feature meets the USACE definition of a wetland, it is not connected or

adjacent to other waters of the United States and therefore would not be subject to regulation under the CWA.

SW-2 is a 0.083-acre swale dominated by Italian ryegrass (*Festuca perennis*). In addition to rainwater runoff from surrounding upland slopes, SW-2 seems to receive water from an unknown underground source such as a spring, leaky pipe, or storm drain. SW-2 drains into the onsite canal (C-1) via culvert. Though this feature is dominated by a facultative wetland plant species, it does not exhibit hydric soil indicators and does not, therefore, meet the USACE definition of a wetland.

SW-3 is a small (0.06-acre) wet depression dominated by hardstem bulrush (*Schoenoplectus acutus*). This feature appears to have been created in uplands and receives runoff from surrounding slopes and developed surfaces. Water from SS-3 drains into an underground storm drain. This feature was not identified in the ICF wetland delineation, but was discovered during Ascent's 2013 reconnaissance survey. It is unknown if this feature contains hydric soils. Although this feature may meet the three criteria (soils, hydrology, and vegetation) to qualify as a wetland according to the USACE definition, it is not connected or adjacent to other waters of the United States and therefore would not be subject to regulation under the CWA.

SW-4 is a small (0.002-acre), excavated depression dominated by narrow-leaved cattail (*Typha angustifolia*). This feature receives water from an unknown groundwater source, such as a leaky pipe or a spring and drains into an underground storm drain. This feature meets the three parameters to qualify as a wetland according to the USACE definition; however, it is not connected or adjacent to other waters of the United States and therefore would not be subject to regulation under the CWA.

SS-1 is a 0.001-acre seasonal stream fragment with a continuous bed and bank. This feature starts and ends within the infill site and its source of water is occasional overflow from the upslope water treatment plant during rain events. This stream terminates at SW-1 where evidence of stream bed and bank disappear. This drainage fragment is not connected to other waters of the United States and, therefore, does not meet the criteria to be claimed as a jurisdictional water of the United States.

SS-2 is 0.024-acre seasonal stream that begins on the infill site and extends outside the west boundary, ultimately draining to the American River. The water source for this drainage is a culvert connecting to the onsite canal (C-1), which drains SW-2. Because this feature is directly connected to the American River, a Traditional Navigable Water, it would be considered a jurisdictional water of the United States.

DD-1 is a 0.12-acre constructed drainage ditch that is lined with riprap. This feature lacked indicators of an ordinary high water mark and was dominated by upland vegetation. The source of water for this feature appears to be overland flow of rainwater. DD-1 terminates into upland habitat. Because this feature was constructed in uplands, does not have a natural bed and bank, and does not have a surface connection to other waters of the United States, it does not meet the criteria to be claimed as a jurisdictional water of the United States.

DD-2 is a 0.04-acre constructed drainage ditch with a natural substrate. The ditch contains wetland vegetation dominated by Italian ryegrass, rabbit's-foot grass (*Polypogon monspeliensis*), tall flatsedge, and watercress (*Nasturtium officinale*). This ditch receives runoff via culvert from adjacent developed and landscaped facilities and drains into an underground storm drain. Because this feature was constructed in uplands and does not have a surface connection to other waters of the United States, it does not meet the criteria to be claimed as a jurisdictional water of the United States.

C-1 is a 0.028-acre, stone-lined canal that connects to SS-2 via underground pipe. SW-2 appears to be the source of water to this canal. Because this feature was constructed in uplands, does not have a natural bed and bank, and does not have a surface connection to other waters of the United States, it does not meet the criteria to be claimed as a jurisdictional water of the United States.

Although some of these aquatic features do not meet the criteria to qualify as waters of the United States, they would all be considered waters of the state subject to regulation by the Central Valley Regional Water Quality Control Board (RWQCB) under the Porter-Cologne Act.

3.2.2 REGULATORY CONSIDERATIONS

A list of the applicable biological-resource-related federal and state plans, policies, regulations, laws, and ordinances is provided below. Complete summaries of these regulations are provided in Volume 1, Appendix 1B.

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

- Federal Endangered Species Act - Persons and parties subject to ESA are prohibited from "taking" endangered or threatened fish and wildlife species on private property, and from "taking" endangered or threatened plants in areas under federal jurisdiction or in violation of state law.
- Clean Water Act
  - Section 404 - Section 404 of the CWA requires a project applicant to obtain a permit before engaging in any activity that involves any discharge of dredged or fill material into waters of the U.S., including wetlands. Wetlands are defined as those areas that are inundated or saturated by surface water or groundwater sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions.
  - Section 401 - Under Section 401 of the CWA, an applicant for a Section 404 permit must obtain a certificate from the appropriate state agency stating that the intended dredging or filling activity is consistent with the state's water quality standards and criteria. In California, the authority to grant water quality certification is delegated by the State Water Resources Control Board to the nine RWQCBs.
- Migratory Bird Treaty Act - The Migratory Bird Treaty Act (MBTA) provides for protection of international migratory birds and authorizes the Secretary of the Interior to regulate the taking of migratory birds. The MBTA provides that it shall be unlawful, except as permitted by regulations, to pursue, take, or kill any migratory bird, or any part, nest, or egg of any such bird.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

- California Endangered Species Act - The California Endangered Species Act (CESA) directs state agencies not to approve projects that would jeopardize the continued existence of an endangered or threatened species or result in the destruction or adverse modification of habitat essential to the continued existence of a species.
- California Fish and Game Code
  - Lake and Streambed Alteration (Section 1602) - Under Section 1602, it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by CDFW, or use any material from the streambeds, without first notifying CDFW and obtaining a final agreement authorizing such activity.
  - Fully Protected Species (Sections 3511, 4700, 5050, and 5515) - Sections 3511, 4700, 5050, and 5515 of the California Fish and Game Code describe the take prohibitions for fully protected birds, mammals, reptiles and amphibians, and fish. Species listed under these statutes may not be taken or possessed at any time and no incidental take permits can be issued for these species except for scientific research purposes or for relocation to protect livestock.
  - Protection of Bird Nests and Raptors (Sections 3503 and 3503.5) - Section 3503.5 of the California Fish and Game Code states that it is unlawful to take, possess, or destroy any raptors. Typical violations include destruction of active raptor nests as a result of tree removal

and failure of nesting attempts, resulting in loss of eggs and/or young, because of disturbance of nesting pairs by nearby human activity.

- Porter Cologne Water Quality Control Act - Under the Porter-Cologne Act, California must adopt water quality policies, plans, and objectives to ensure that the state's beneficial uses for water are reasonably protected. Each RWQCB must prepare and update basin plans to set forth water quality standards for surface water and groundwater and actions to control nonpoint and point sources of pollution to achieve and maintain these standards.
- California State Senate Bill 1134, Oak Woodlands Conservation Act (CEQA Statutes Section 21083.4) - This statute requires that a county must determine whether or not a project will result in a significant impact on oak woodlands and, if it is determined that a project may result in a significant impact on oak woodlands, then the County shall require one or more of the following mitigation measures:
  - conserve oak woodlands through the use of conservation easements;
  - plant an appropriate number of trees, including maintenance of plantings and replacement of failed plantings;
  - contribute funds to the Oak Woodlands Conservation Fund for the purpose of purchasing oak woodlands conservation easements;
  - other mitigation measures developed by the county.

LOCAL PLANS, POLICIES, AND ORDINANCES

As a state agency, CDCR is not subject to local land use plans, policies, and ordinances adopted by local agencies. Nevertheless, a discussion of relevant local plans and policies is provided because conflicts with them could indicate the potential occurrence of other physical environmental effects.

CITY OF FOLSOM GENERAL PLAN

The following goals and policies of the City of Folsom General Plan (1993) are relevant to the Level II Infill Project.

Open Space and Conservation Element

GOAL 25: preserve, acquire, enhance, and maintain the biological resources identified below, wherever feasible, for the use and enjoyment of present and future generations:

- Sensitive habitats including riparian vegetation, vernal pools, remnant valley bunch grasslands (e.g., valley needlegrass grassland), oak savanna and woodlands, freshwater marshlands, and permanent and seasonal wetlands.
- Sensitive wildlife species including tricolored blackbird, Swainson's hawk, tiger salamander, and valley elderberry longhorn beetle.

FOLSOM MUNICIPAL CODE CHAPTER 12.16 – TREE PRESERVATION

City of Folsom Municipal Code Chapter 12.16 protects native oak trees (i.e., *Quercus lobata*, *Q. douglasii*, *Q. wislizenii*, and hybrids thereof) with a diameter at breast height (DBH) of 6 inches or greater for single trunk trees or an aggregate DBH of 20 inches or greater for multiple trunk trees; landmark trees, heritage trees, and street trees. Removal of protected trees, as well as disturbances that could result in eventual death, such as trenching, grading, soil compaction, placement of fill, impervious surfaces, irrigation, and landscaping within the drip lines of protected trees requires a tree permit be obtained from the City Planning Director. Because the infill site is on CDCR property, it is exempt from the City's municipal code. However, consistent with CEQA statutes, CDCR is providing an

analysis of impacts on oak woodlands because removal of oak woodlands can result in a significant impact on biological resources, including impacts to nesting raptors.

SACRAMENTO COUNTY SWAINSON'S HAWK IMPACT MITIGATION PROGRAM

In 2006, Sacramento County adopted an ordinance establishing a methodology for mitigating the loss of Swainson's hawk foraging habitat within unincorporated areas of the county. The methodology recognizes that Swainson's hawk foraging habitat value is greater in large expansive open spaces and agricultural areas than in areas which have been fragmented by agricultural-residential or urban development. The concept is that impacts to foraging habitat occurs as properties develop to increasingly more intensive uses on smaller minimum parcel sizes. Therefore, foraging habitat impacts are assessed when agricultural and agricultural-residential parcels are rezoned to smaller minimum parcel sizes. The level of impact is calculated in acres and is based on the starting habitat value and ending habitat value. The methodology evaluates foraging habitat and determines appropriate mitigation ratios based on general plan zoning and assigns greatest value to large-parcel agricultural zones. As a baseline, the County assumes that properties zoned AG-40 and larger have 100 percent habitat value, AG-20 properties have 75 percent, and AR-10 properties have 25 percent habitat value. Properties zoned AR-5 and smaller; such as AR-2, AR-1, the urban Residential Densities (RD-1 thru 40), and commercial and industrial zonings; retain no habitat value. For example, a 20-acre property being rezoned from AG-20 to AR-10 would be assessed an impact of 50 percent based on a starting value of 75 percent and ending value of 25 percent. This would result in a mitigation requirement of 10 acres. The ordinance identifies direct preservation in perpetuity of equally suitable foraging habitat on an acre-for-acre basis as the most effective means of mitigating the loss of suitable Swainson's hawk foraging habitat. Mitigation for loss of 40 or more acres of foraging habitat shall be through conservation easement or fee title. The ordinance establishes an impact mitigation fee for projects that impact less than 40 acres of foraging habitat. The mitigation fee is to fund acquisition of land with suitable foraging habitat values.

STATEWIDE ELECTRIFIED FENCE PROJECT HABITAT CONSERVATION PLAN

Development of level II infill correctional facilities at the infill site would include a lethal electrified fence (LEF) similar to those found at state prisons throughout California. Contact with the LEF can result in accidental wildlife electrocution and mortality. CDCR prepared a statewide EIR to assess impacts on wildlife resulting from operation of the LEFs at 25 existing state prisons and four future planned facilities and to identify feasible mitigation measures. CEQA documents prepared for the Statewide Electrified Fence Project include the *Draft Environmental Impact Report (DEIR), Statewide Electrified Fence Project* (CDCR 1996a); *Final Environmental Impact Report (FEIR), Statewide Electrified Fence Project* (CDCR 1997); and *FEIR Addendum, Statewide Electrified Fence Project* (CDCR 1999a). Annual monitoring reports have been prepared in compliance with the incidental take permits, which summarize the implementation and monitoring of compensatory mitigation and document the results of wildlife mortality monitoring (CDC 2003, 2004 and CDCR 2005-2012).

Impacts of the LEF on species covered by ESA and CESA, and migratory birds, were evaluated further in 1999 when CDCR prepared a Habitat Conservation Plan (HCP) for the Statewide Electrified Fence Program (CDC 1999b). USFWS and CDFW issued threatened and endangered species take permits covering 62 wildlife species to CDCR for the 27 prisons in the project on June 12, 2002. The permits expire in 2052. The Statewide Electrified Fence Program's HCP covers mortality of species protected by ESA, CESA, and the Migratory Bird Treaty Act (MBTA), caused by accidental electrocution on the LEF. The HCP does not cover prison construction of any kind and does not address habitat loss or degradation.

The approved HCP for the Statewide Electrified Fence Program includes numerous mitigation measures designed to minimize wildlife use in areas near the LEFs and to deter wildlife from making

contact with the LEFs. An extensive feasibility evaluation was conducted over several years by CDCR to determine which mitigation measures were biologically effective, cost effective, and viable based on weather, security, maintenance, and operational issues. Mitigation in the HCP was organized and implemented in three tiers. Tier 1 includes operational measures designed to modify or remove habitat or other attractants to wildlife from the secured perimeter area of each prison. Tier 2 involves installing exclusion and deterrent devices on LEFs and in the perimeters. Tier 3 includes a compensation package designed to offset the residual loss of wildlife resources at each prison as a result of electrocution risks that remain even after Tiers 1 and 2 have been implemented. The plan also includes a wildlife mortality monitoring program. In this program a qualified biologist visits each institution that has an operational LEF 3 times per year and identifies carcasses of animals collected from the perimeter of the LEF by CDCR staff and inspects compliance with Tier 1 and Tier 2 measures.

Operation of the LEFs has been monitored intensively and regularly, in coordination with USFWS and CDFW, since 1993. No endangered or threatened species have been electrocuted by any of CDCR's fences (per annual monitoring reports CDC 2003, 2004 and CDCR 2005-2012). Because of this record, and supporting biological analyses in the locations of these facilities, CDCR constructed LEFs around four additional facilities not covered by the HCP (after consultation with USFWS and CDFW). CDCR has implemented the same three-tier mitigation approach and the same intensive monitoring at these additional prisons as was implemented with the 27 facilities (26 operational fences) covered by the HCP. No take of endangered species has occurred at the facilities not covered by the HCP. Although the electrified fence associated with the contemplated development of level II infill correctional facilities at FSP/SAC would not be covered under the Statewide Electrified Fence HCP, the HCP provides a useful framework for assessing impacts and determining appropriate mitigation approaches for the development of the infill site.

3.2.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

In accordance with Appendix G and Section 15065 of the State CEQA Guidelines, the proposed Level II Infill Correctional Facilities Project would result in a significant impact related to biological resources if it would do any of the following:

- have a substantial adverse effect, either directly or through habitat modification, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS;
- have a substantial adverse effect on federally protected waters of the United States, including wetlands, as defined by Section 404 of the CWA through direct removal, filling, hydrological interruption, or other means;
- interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance;
- conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan; or
- substantially reduce the habitat of a fish or wildlife species; cause a fish or wildlife population to drop below self-sustaining levels; threaten to eliminate a plant or animal community; or substantially reduce the number or restrict the range of an endangered, rare, or threatened species.

The State CEQA Guidelines (Section 15064.5) define "substantial adverse change" as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

ISSUES NOT DISCUSSED FURTHER

Special-status plants: No special-status plants were found on the infill site during reconnaissance-level surveys in 2013 or during protocol-level surveys conducted in 2009 during the blooming period of species for which suitable habitat is present. Therefore, construction and operation of a new level II infill correctional facility would not have an impact on special-status plants. This issue is not discussed further.

Wildlife nurseries and migratory routes: There are no native wildlife nursery sites or established migratory routes through the infill site that are vital for the movement of any resident or migratory fish or wildlife species or population. Project implementation would not interfere substantially with the movement of native resident or migratory wildlife species because the site is surrounded by urban development and does not currently provide an important connection between any areas of natural habitat that would otherwise be isolated. Regionally common wildlife species such as coyote, fox, raccoon, skunk, and possum, are expected to continue to use the American River corridor and open areas of the prison property after project implementation. Therefore, construction and operation of a new level II infill correctional facility would not have an impact on wildlife movement or nursery sites. This issue is not discussed further.

Local Policies or Ordinances: As noted above, CDCR is not subject to local plans, policies, or ordinances, including the City of Folsom's tree preservation ordinance, Sacramento County's Swainson's Hawk Ordinance, and SB 1134 which directs counties to evaluate loss of oak woodlands. The effect of tree removal at the infill site is evaluated in terms of loss of wildlife habitat, specifically nesting habitat for raptors (hawks and owls). Potential conflicts with policies or ordinances intended to protect biological resources are not anticipated.

Habitat or natural community conservation plans: The South Sacramento Habitat Conservation Plan (SSHCP) is being prepared by the County of Sacramento. A draft of the HCP has been developed, but it is undergoing revisions. CEQA and NEPA compliance has not been completed. Because it is not adopted, it has no regulatory standing and project consistency with the SSHCP is not required. Furthermore, while the exact scope and content of the SSHCP are not known at this time, the proposed planning area for the SSHCP does not include the City of Folsom or the FSP/SAC property according to the notice of preparation issued on June 11, 2008 for the SSHCP EIR. Therefore, construction and operation of a new level II infill correctional facility has no potential to conflict with the provisions of an adopted habitat conservation plan. This issue is not discussed further.

Survival of species: The FSP/SAC Infill Site provides limited value to wildlife species and development of the infill site would not eliminate any habitat important to the long-term survival of any species or community and would not substantially reduce the number or restrict the range of any species. This issue is not discussed further.

PROJECT IMPACTS AND MITIGATION MEASURES

Impact 3.2-1: Impacts on Valley Elderberry Longhorn Beetle

Although valley elderberry longhorn beetle has been proposed for delisting by USFWS (2013), until a final rule is issued and goes into effect, it remains listed as threatened and is protected by the ESA. Two elderberry clusters with stems greater than 1.0 inch in diameter at ground level, which provide potential habitat for valley elderberry longhorn beetle (USFWS 1999), have been documented on the infill site and another four clusters have been documented within 100 feet of the FSP/SAC Infill Site boundary. Exit holes suggesting the possible presence of valley elderberry longhorn beetle were observed in approximately 20 percent of suitable elderberry stems during a survey conducted by ICF

Jones & Stokes in December 2008. Construction and operation of a level II infill correctional facility at FSP/SAC would result in direct removal of at least two elderberry clusters and could result in take of the federally listed beetle. Indirect impacts could also result if the health of elderberry shrubs containing valley elderberry longhorn beetle larvae is adversely affected. Indirect impacts could occur if herbicides or insecticides are used in habitats adjacent to elderberry shrubs, if earthmoving activities disturb elderberry shrub roots, or if the topography and/or hydrology of the surrounding area are altered to the extent that it reduces the soil moisture surrounding the elderberry shrub. Ground disturbance within 100 feet of elderberry shrubs could result in indirect impacts on valley elderberry longhorn beetle that could ultimately result in death.

Construction and operation of a single, level II infill correctional facility at the FSP/SAC Infill Site would result in the loss or disturbance of elderberry shrubs potentially supporting valley elderberry longhorn beetle. This would be a significant impact.

Mitigation Measures

Mitigation Measure 3.2-1

CDCR will implement the following measures to avoid, minimize, and mitigate impacts on valley elderberry longhorn beetle:

a. Prior to project initiation, a qualified biologist will conduct surveys for valley elderberry longhorn beetle according to the protocol outlined in USFWS' *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (1999). The biologist will identify and map all elderberry shrubs with stems measuring one inch or greater in diameter at ground level on and within 100 feet of the infill site. Surveys are considered valid for two years by USFWS. Therefore, previous surveys would need to be updated.

b. Impacts to valley elderberry longhorn beetle will be avoided and minimized by following the Conservation Guidelines for cases where elderberry shrubs can be retained and protected on the infill site.

c. Direct and indirect impacts to elderberry shrubs that are 100 feet or more from project activities will be avoided by establishing and maintaining a protective buffer during construction at least 100-feet from the drip line of each elderberry shrub with stems 1 inch or greater.

d. Project activities may occur up to 20 feet from the dripline of other elderberry shrubs if precautions are implemented to minimize the potential for indirect impacts. Specifically, these minimization measures include.

   〉 A minimum setback of at least 20 feet from the dripline of each elderberry plant with stems greater than one-inch diameter at ground level will be maintained to avoid direct impacts. The buffer area will be fenced with high visibility construction fencing prior to commencement of ground-disturbing activities and will be maintained for the duration of construction activities. Ground disturbing activities on the infill site will not alter the hydrology of the site or otherwise affect the likelihood of vigor or survival of elderberry shrubs.

   〉 Project activities, such as truck traffic or other use of machinery, will not create excessive dust on the infill site, such that the growth or vigor of elderberry shrubs is adversely affected.

- Areas that are disturbed temporarily will be restored to pre-disturbance conditions. Erosion control measures will be implemented to restore areas disturbed within 100 feet of elderberry shrubs.

- No insecticides, herbicides, fertilizers, or other chemicals will be used within 100 feet of elderberry shrubs. Herbaceous vegetation may be mowed or removed using hand tools within 100 feet, but not within 20 feet of the elderberry shrubs.

- If new permanent development is to occur within the 100-foot buffer (but outside the 20-foot buffer), the potential for indirect effects will be evaluated by a qualified biologist. If indirect effects are likely to occur, then CDCR will consult with USFWS to determine the appropriate conservation measures. If indirect effects are not likely to occur, then no additional minimization measures would be required.

e. For elderberry shrubs that cannot be avoided by at least 20 feet or impacts to the beetle minimized through the measures listed above, CDCR will consult with USFWS under Section 10 of the ESA to seek an incidental take permit to transplant the shrubs and provide compensation following the Conservation Guidelines (USFWS 1999).

f. No elderberry shrub will be removed or transplanted until authorization has been issued by USFWS and CDCR has abided by all pertinent conditions of the incidental take permit or biological opinion. Conservation and minimization measures are likely to include preparation of supporting documentation that describes methods for relocation of existing shrubs and maintaining existing shrubs and other vegetation in a conservation area.

g. Relocation of existing elderberry shrubs and planting of new elderberry seedlings and associated riparian species will be implemented according to the Conservation Guidelines (USFWS 1999). The Conservation Guidelines use stem count data, presence or absence of exit holes, and whether the affected elderberry shrubs are located in riparian habitat to determine the number of elderberry seedlings or cuttings and associated riparian vegetation that would need to be planted as compensatory mitigation for affected valley elderberry longhorn beetle habitat. Compensatory mitigation may include planting replacement elderberry seedlings or cuttings and associated native plants within suitable areas of the prison property, planting replacement elderberry seedlings or cuttings and associated native plants at a suitable offsite location, purchasing credits at an approved mitigation bank, or a combination thereof. Relocated and replacement shrubs and associated native plantings will be placed in conservation areas providing a minimum of 1,800 square feet per transplanted shrub. These conservation areas will be preserved in perpetuity as habitat for valley elderberry longhorn beetle. One elderberry shrub is expected to require removal and transplanting, but the feasibility of avoiding and minimizing impacts to other elderberry shrubs will be evaluated in the final site plans for the project. The final valley elderberry longhorn beetle mitigation plan, including transplanting procedures, long-term protection, management of the mitigation areas, and monitoring procedures shall be consistent with the *Conservation Guidelines for the Valley Elderberry Longhorn Beetle* (USFWS 1999).

Significance after Mitigation

Implementation of Mitigation Measure 3.2-1, which involves marking and fencing existing elderberry shrubs to avoid disturbing valley elderberry longhorn beetle habitat and compensating for the unavoidable loss of valley elderberry longhorn beetle habitat through USFWS-approved mitigation measures, would reduce significant impacts on valley elderberry longhorn beetle to a **less-than-significant** level.

Impact 3.2-2: Impacts on Raptors

Nearly all trees on the infill site provide potential nesting sites for Swainson's hawk, white-tailed kite, and common raptors, such as red-tailed hawk, red-shouldered hawk, western screech owl, and great horned owl, which are protected under Section 3503.5 of the California Fish and Game Code. The grassland onsite could also provide nesting habitat for northern harriers. A pair of white-tailed kites, a pair of red-shouldered hawks, and an unoccupied raptor nest were observed on the FSP/SAC Infill Site during a December 2008 survey. Ground squirrel burrows within the annual grassland provide suitable nesting habitat for burrowing owls.

If trees or burrows are to be removed during the raptor breeding season (February–August), and if an active nest were present, mortality of eggs and chicks could result. In addition, project construction could disturb active nests near the construction site or in trees not yet removed from the infill site, potentially resulting in nest abandonment by the adults and mortality of chicks and eggs. Burrowing owls need burrows at all times to survive and displacing individuals from their burrows can result in indirect impacts such as predation, increased energy demands, increased stress, and risks associated with having to find and compete for burrows, all of which can lead to take or reduced reproduction. The loss of an active raptor nest, take of individuals, or loss of active burrowing owl sites would be a significant impact.

Construction and operation of a level II infill correctional facility at FSP/SAC would also result in loss of approximately 25 trees that could be used for nesting. Some of these trees are located immediately adjacent to existing building. Loss of these trees would not substantially reduce nesting habitat for raptors in the area, nor would it constitute a significant loss of oak woodland habitat because they are isolated and surrounded by prison development and not part of an oak woodland natural community. Removal of approximately 25 native and landscaping trees is not considered a significant impact.

The project would also result in loss of approximately 60 acres of annual grassland and ruderal vegetation, which provide potential foraging habitat for Swainson's hawk and other raptors. However, the FSP/SAC Infill Site is located just outside the eastern edge of the Swainson's hawk range (CWHR 2011, CDFG 2007) and there is only one nesting record within 10 miles. The site is zoned Public or Quasi Public in the County General Plan (Sacramento County 2011), a zoning designation that does not provide foraging value to Swainson's hawk. Furthermore, the infill site consists of relatively small patches of grassland habitat dissected by roads and prison facilities and surrounded by urban development and does not provide large areas of contiguous habitat of the type generally required for good foraging opportunities. Therefore, the foraging value of the infill site for Swainson's hawk is low and loss of this habitat is not likely to affect nesting success, survival rates, or availability of prey for the local breeding population.

Construction of a single, level II infill correctional facility at the FSP/SAC Infill Site could result in direct destruction of active nests or burrows or disturb nesting raptors located on or near the infill site, which could result in nest abandonment by adult birds and abandonment of chicks and eggs, causing mortality. The potential loss of an active raptor nest and the loss of active burrowing owl habitat would be considered a significant impact.

Mitigation Measures

Mitigation Measure 3.2-2a

CDCR will implement the following measures to reduce impacts on Swainson's hawk and other tree-nesting raptors:

- Tree removal will be completed outside of the breeding season (between September 1 and February 15).

- For construction activities occurring between February 16 and August 31, CDCR will retain a qualified biologist to conduct preconstruction surveys for Swainson's hawk and other nesting raptors and to identify active nests on and within 0.25 mile of the infill site. The surveys will be conducted no more than 30 days before the beginning of construction activities that could remove trees or otherwise disturb nesting raptors. To the extent feasible, guidelines provided in *Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in the Central Valley* (Swainson's Hawk Technical Advisory Committee 2000) will be followed.

- If active nests are found, impacts will be avoided by establishing 0.25-mile buffers around Swainson's hawk nests and 500 feet around other raptor nests or adjusted to a distance that ensures project activites do not adversely affect nesting behavior to such an extent that it causes lower reproductive success . No project activity will commence within the buffer area until a qualified biologist confirms that any young have fledged and the nest is no longer active. For Swainson's hawk nests, CDFG guidelines (1994) recommend maintenance of 0.25-mile buffers around Swainson's hawk nests in developed areas; other raptors typically are not disturbed by activities 500 feet or more from the nest site, but the size of the buffer may be adjusted if a qualified biologist, in consultation with CDFW, determines that such an adjustment would not be likely to adversely affect the nest. Monitoring of the nest by a qualified biologist will be required if the activity has potential to adversely affect the nest.

Mitigation Measure 3.2-2b

CDCR will implement the following measures to reduce impacts on burrowing owl:

a. CDCR will retain a qualified biologist to conduct focused breeding and nonbreeding season surveys for burrowing owls in areas of suitable habitat on and within 1,500 feet of the infill site. Surveys will be conducted prior to the start of construction activities and in accordance with Appendix D of CDFW's *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) (2012 Staff Report).

b. If no occupied burrows are found, a letter report documenting the survey methods and results will be submitted to CDFW and no further mitigation will be required.

c. If an active burrow is found during the nonbreeding season (September 1 through January 31), CDCR will consult with CDFW regarding protection buffers to be established around the occupied burrow and maintained throughout construction. If occupied burrows are present that cannot be avoided or adequately protected with a no-disturbance buffer, a burrowing owl exclusion plan will be developed, as described in Appendix E of CDFG's 2012 Staff Report. No burrowing owls will be excluded from occupied burrows until the project's burrowing owl exclusion plan is approved by CDFW. The exclusion plan will include a plan for creation, maintenance, and monitoring of artificial burrows in suitable habitat proximate to the burrows to be destroyed, that provide substitute burrows for displaced owls.

d. If an active burrow is found during the breeding season (February 1 through August 31), occupied burrows will not be disturbed and will be provided with a 150- to 1,500-foot protective buffer unless a qualified biologist verifies through noninvasive means that either: (1) the birds have not begun egg laying, or (2) juveniles from the occupied burrows are foraging independently and are capable of independent survival. The size of the buffer will depend on the time of year and level disturbance as outlined in the CDFG Staff Report (2012, pg 9).The size of the buffer may be reduced if a broad-scale, long-term, monitoring program acceptable to CDFW is implemented to ensure burrowing owls are not detrimentally affected. Once the fledglings are capable of independent survival, the owls can be evicted and the burrow can be destroyed per the terms of a CDFW-approved

burrowing owl exclusion plan developed in accordance with Appendix E of CDFG's 2012 Staff Report.

e. If active burrowing owl nests are found on the infill site and are destroyed by project implementation, CDCR will mitigate the loss of occupied habitat in accordance with guidance provided in the CDFG 2012 Staff Report, which states that permanent impacts to nesting, occupied and satellite burrows, and burrowing owl habitat will be mitigated such that habitat acreage, number of burrows, and burrowing owls impacted are replaced through permanent conservation of comparable or better habitat with similar vegetation communities and burrowing mammals (e.g., ground squirrels) present to provide for nesting, foraging, wintering, and dispersal. CDCR will retain a qualified biologist to develop a burrowing owl mitigation and management plan that incorporates the following goals and standards:

   〉 Mitigation lands will be selected based on comparison of the habitat lost to the compensatory habitat, including type and structure of habitat, disturbance levels, potential for conflicts with humans, pets, and other wildlife, density of burrowing owls, and relative importance of the habitat to the species range wide.

   〉 If feasible, mitigation lands will be provided adjacent or proximate to the infill site so that displaced owls can relocate with lowered risk of take. Feasibility of providing mitigation adjacent or proximate to the infill site depends on availability of sufficient suitable habitat to support displaced owls that may be preserved in perpetuity.

   〉 If suitable habitat is not available for conservation adjacent or proximate to the infill site, mitigation lands will be focused on consolidating and enlarging conservation areas outside of urban and planned growth areas and within foraging distance of other conservation lands. Mitigation may be accomplished through purchase of mitigation credits at a CDFW-approved mitigation bank, if available. If mitigation credits are not available from an approved bank and mitigation lands are not available adjacent to other conservation lands, alternative mitigation sites and acreage will be determined in consultation with CDFW.

   〉 If mitigation is not available through an approved mitigation bank and will be completed through permittee-responsible conservation lands, the mitigation plan shall include mitigation objectives, site selection factors, site management roles and responsibilities, vegetation management goals, financial assurances and funding mechanisms, performance standards and success criteria, monitoring and reporting protocols, and adaptive management measures. Success will be based on the number of adult burrowing owls and pairs using the site and if the numbers are maintained over time. Measures of success, as suggested in the 2012 Staff Report, will include site tenacity, number of adult owls present and reproducing, colonization by burrowing owls from elsewhere, changes in distribution, and trends in stressors.

Significance after Mitigation

Implementation of Mitigation Measures 3.2-2a and 3.2-2b would reduce significant impacts on Swainson's hawk, burrowing owl, and other tree-nesting raptors to a **less-than-significant** level because it would ensure that these species are not disturbed during nesting so that project construction would not result in nest abandonment and loss of eggs or young and that Swainson's hawk foraging habitat burrowing owl habitat removed from the infill site would be replaced.

Impact 3.2-3: Impacts on Nesting Birds

Vegetation removal and ground disturbances associated with construction and operation of a new level II infill correctional facility could result in direct destruction of active nests of grasshopper sparrow, a ground-nesting species that is a California species of special concern, loggerhead shrike, a shrub and small-tree nesting species that is also a California species of special concern, or in the destruction of nests of other birds protected under the MBTA. Project construction could also result in disturbance of breeding birds causing nest abandonment by the adults and mortality of chicks and eggs. While loss of some nests of common migratory bird species (e.g., mourning dove, American robin, and scrub jay) would not be considered a significant impact because it would not result in a substantial effect on their populations locally or regionally, destruction of any migratory bird nest is a violation of the MBTA and Section 3503 of the California Fish and Game Code.

Implementation of a single, level II infill correctional facility at the FSP/SAC Infill Site could result in the loss of active special-status bird nests. This would be a significant impact.

Mitigation Measures

Mitigation Measure 3.2-3

CDCR will implement the following measures to avoid or minimize loss of grasshopper sparrow and loggerhead shrike nests:

a. To minimize the potential for loss of active grasshopper sparrow and loggerhead shrike nests, project activities will commence during the nonbreeding season (September 1-February 31), including removal of grassland and shrub vegetation. If all suitable nesting habitat is removed during the nonbreeding season, no further mitigation will be required.

b. If it is not feasible to remove vegetation prior to the breeding season (March 1-August 31), CDCR will retain a qualified biologist to conduct preconstruction surveys for grasshopper sparrow and loggerhead shrike on and within 50 feet of the infill site. The surveys will be conducted no more than 7 days before construction commences.

c. If active grasshopper sparrow or loggerhead shrike nests are found, a 50-foot no-disturbance buffer will be established around the nest site until the breeding season has ended or a qualified biologist determines the young have fledged.

Significance after Mitigation

Implementation of Mitigation Measure 3.2-3 would reduce significant impacts on grasshopper sparrow and loggerhead shrike to a **less-than-significant** level because it would require preconstruction surveys to identify active nests and measures to avoid or minimize disturbances of active nests so that project construction would not result in nest abandonment and loss of eggs or young.

Impact 3.2-4: Impacts on Special-Status Bat Species

Construction and operation of a level II infill correctional facility at FSP/SAC would result in removal or renovation of buildings or other man-made structures that could support pallid bat, a California species of special concern that is known to roost in abandoned or minimally-used buildings, and Townsend's big-eared bat, a California species of special concern that may roost in abandoned or minimally-used buildings and hollow oak trees. It is unknown if any man-made structures on the site provide suitable thermal or structural conditions for roosting bats. However, if any of the trees or structures on the infill site are used as a day roost, hibernation roost, or maternity colony roost, construction and operation of a level II infill correctional facility at FSP/SAC could result in mass displacement, injury, and mortality of

pallid bats or Townsend's big-eared bats from direct physical harm to individuals or from untimely roost abandonment (e.g., death of young that cannot care for themselves due to abandonment of a maternity roost or death of individuals forced from winter hibernacula when food is unavailable or when weather conditions are too harsh for survival). Day roosts are used throughout the spring and summer and maternity colony roosts can be active from approximately early April until mid-October. Hibernation roosts may be used from approximately November to early March.

Construction of a single, level II infill correctional facility at the FSP/SAC Infill Site could result in the mass displacement, injury, and mortality of individual bats. This would be a significant impact.

Mitigation Measures

Mitigation Measure 3.2-4

CDCR will implement the following measures to minimize the loss of special-status bats:

a. Retain a qualified biologist to conduct surveys for roosting bats within 45 days of project activities involving abandoned buildings. Surveys will consist of daytime pedestrian surveys to look for visual signs of bats (e.g., guano) and evening emergence surveys to note the presence or absence of bats. If evidence of bat use is observed, the number and species of bats using the roost will be determined. Bat detectors may be used to supplement survey efforts. If no evidence of bat roosts are found, then no further study shall be required.

b. If roosts of pallid bat or other special-status bats are determined to be present and must be removed, the bats will be excluded from the roosting site before the building is removed or renovated. A mitigation program addressing compensation, exclusion methods, and roost removal procedures will be developed by a qualified biologist in consultation with CDFW before implementation. Exclusion methods may include use of one-way doors at roost entrances (bats may leave but not reenter), or sealing roost entrances when the site can be confirmed by a bat expert to contain no bats. Exclusion efforts may be restricted during periods of sensitive activity (e.g., during hibernation or while females in maternity colonies are nursing young). The loss of each roost (if any) will be replaced and may include construction and installation of bat boxes suitable to the bat species and colony size excluded from the original roosting site. Roost replacement will be implemented before bats are excluded from the original roost sites. Once the replacement roosts are constructed and it is confirmed that bats are not present in the original roost site, the building may be removed or renovated.

Significance after Mitigation

Implementation of Mitigation Measure 3.2-4 would reduce significant impacts on pallid bats or other special-status bats to a **less-than-significant** level because it would ensure bats are absent from potential roost sites before they are demolished and that any roost sites lost as a result of the project are replaced.

Impact 3.2-5: Streambed Alteration

Approximately 0.02 acre of a seasonal stream and 0.33 acre of associated walnut trees growing on the stream banks would be removed or otherwise altered as a result of construction and operation of a level II infill correctional facility at FSP/SAC. This stream does not support fish and provides only low-quality habitat for common wildlife species. Therefore, loss of a portion of this stream would not be expected to substantially affect a fish or wildlife resource. Nonetheless, loss or alteration of the stream is subject to regulation under Section 1602 of the California Fish and Game Code.

Construction and operation of a single, level II infill correctional facility at the FSP/SAC Infill Site would result in loss or degradation of 0.02 acre of seasonal stream habitat regulated under Section 1602 of the Fish and Game Code. This would be a significant impact.

Mitigation Measures

Mitigation Measure 3.2-5

CDCR will implement the following measures to minimize the loss and degradation of seasonal stream habitat:

a. Prior to beginning construction that could affect the bed or bank of seasonal streams, CDCR will provide written notification to CDFW describing the proposed activity and including all required information as described under Section 1602 of the Fish and Game Code, and pay the applicable notification fees.

b. If CDFW determines, after reviewing the completed notification, that the activity may substantially adversely affect a fish or wildlife resource, CDCR will obtain a streambed alteration agreement from CDFW and conduct project construction activities in accordance with the agreement, including implementing reasonable measures to protect wildlife resources, such as preconstruction surveys for special-status species, flagging construction limits, establishing no-disturbance buffers for sensitive resources to be avoided, minimizing vegetation removal, and limiting in-channel work to periods when the channel is naturally dry.

Significance after Mitigation

Implementation of Mitigation Measure 3.2-5 would reduce significant impacts from alteration of seasonal streams to a **less-than-significant** level because it would require CDCR to consult with and obtain agreements from CDFW, and implement all reasonable measures contained in the agreement, necessary to protect fish and wildlife resources.

Impact 3.2-6: Impacts on Wetlands and Other Waters of the United States

Construction and operation of a level II infill correctional facility at FSP/SAC would result in fill of approximately 0.25 acre of wetlands and other waters consisting of: 0.151 acre of seasonal wetland, 0.004 acre of seasonal stream, 0.063 acre of drainage ditch, and 0.028 acre of canal. While the four seasonal wetlands on the site do not meet the parameters required to qualify as wetlands as defined by USACE, they would be considered waters of the state. The seasonal stream resulting from the leaky water pump (SS-1), the drainage ditches, and the canal do not appear to meet the criteria to qualify as waters of the United States and, therefore, may not be subject to regulation under the CWA; however, they would be considered waters of the state, whether or not they are disclaimed by USACE. One seasonal stream (SS-2) is directly connected to the American River and would be claimed as a jurisdictional water of the United States subject to regulation under the CWA. Construction and operation of a level II infill correctional facility at FSP/SAC would result in fill of 0.004 acre of this jurisdictional stream channel.

Construction of a single, level II infill correctional facility at the FSP/SAC Infill Site would result in the loss of approximately 0.25 acre of wetlands and other waters of the United States. This would be a significant impact.

Mitigation Measures

Mitigation Measure 3.2-6

CDCR will implement the following measures to minimize the loss of wetlands and other waters:

a. CDCR will submit a wetland delineation report to USACE and request a preliminary jurisdictional determination. Based on the jurisdictional determination, CDCR will determine the exact acreage of waters of the United States, if any, and waters of the state would be filled as a result of project implementation.

b. If any of the waters to be filled are determined by the USACE to be waters of the United States, CDCR shall obtain a USACE Section 404 Nationwide Permit (NWP) and RWQCB Section 401 certification before any groundbreaking activity within 50 feet of discharge of fill or dredge material into any water of the United States CDCR will implement all permit conditions. The applicable Section 404 permit for this project would be NWP 39 for commercial and institutional developments. The discharge would not cause the loss of greater than 0.5-acre of non-tidal waters of the United States, including the loss of no more than 300 linear feet of stream bed.

c. If all waters on the infill site are disclaimed by USACE, CDCR will file a report of waste discharge with the RWQCB prior to any groundbreaking activity within 50 feet of, or filling of, any wetland or other water, and comply with all waste discharge requirements prescribed by the RWQCB.

d. CDCR will commit to replace or restore on a “no net loss” basis (in accordance with USACE and/or RWQCB) the acreage and function of all wetlands and other waters that would be removed, lost, or degraded as a result of project implementation. Wetland habitat will be restored or replaced at an acreage and location and by methods agreeable to USACE and the Central Valley RWQCB, as appropriate, depending on agency jurisdiction, and as determined during the Section 401 and Section 404 permitting processes or the waste discharge requirements. If available, compensatory mitigation will be provided through the purchase of credits at a mitigation bank approved by USACE and RWQCB, as appropriate depending on agency jurisdiction.

e. If mitigation bank credits are not available and it is required by USACE, CDCR will hire a qualified biologist to prepare a mitigation plan detailing how the loss of aquatic functions will be replaced. The mitigation plan will describe compensation ratios for acres filled, mitigation sites, a monitoring protocol, annual performance standards and final success criteria for created or restored habitats, corrective measures to be applied if performance standards are not met.

f. At a minimum, wetlands and other waters lost through project implementation will be replaced at a 1:1 ratio. If mitigation bank credits are not available and permittee-responsible habitat mitigation is required, said compensatory habitat shall be monitored for a minimum of 5 years from completion of mitigation, or human intervention (including recontouring and grading), or until the success criteria identified in the approved mitigation plan have been met, whichever is longer. A combination of onsite and offsite permittee-responsible mitigation and mitigation banking may be used as necessary to achieve the no-net-loss standard within the American River watershed.

Significance after Mitigation

Implementation of Mitigation Measure 3.2-6 would reduce significant impacts on waters of the United States and waters of the state to a **less-than-significant** level because it would ensure no net loss of functions and acreage of wetlands, other waters of the United States, and waters of the state.

Impact 3.2-7: Mortality of Wildlife Species from the Lethal Electrified Fence

Development of the infill site with a single, level II infill correctional facility at the FSP/SAC Infill Site would include installation and operation of a LEF within the prison's security perimeter, which would likely result in the death of an undetermined number of animals. Lethal electrocution would result when an animal touches two wires simultaneously or touches one wire and an electrical ground. Based on monitoring data collected at the operational LEF at SAC, a number of native birds and mammals are likely to be killed. (FSP does not have a LEF). Birds are by far the most common wildlife group electrocuted, with mammals making up a relatively small percentage.

Based on 10 years of mortality monitoring data collected at SAC, approximately 125 individuals of native birds and mammals were killed per year. Most of these are species protected under the MBTA and California Fish and Game Code. Less than 1 percent of the species killed at SAC are considered "sensitive" species and none of the species killed are protected by the ESA or CESA. Sensitive species include those that meet the definition of special-status described above (i.e., wildlife species identified by CDFW as species of special concern), as well as common raptor species, and are covered by CDCR's Statewide Electrified Fence HCP. Mortality of sensitive species at SAC for 10 years between June 2002 and June 2012 included four American kestrel, four great-horned owls, and one sharp-shinned hawk.

The existing LEF at SAC is 8,950 feet in length. The proposed LEF around the infill site would be 3,566 feet in length, or less than 40 percent of the total length of the existing fence at SAC. Although expected wildlife mortality should not be strictly calculated on a per-linear foot basis due to considerations of surrounding land uses, adjacent habitat types, species behavior, and other ecological factors at a particular site, it is anticipated that mortality of native wildlife species from a proposed electrified fence would be less than 50 individuals per year on average. Of those, less than one individual is expected to be a sensitive species.

Based on comparison with mortality data from the operational LEF at SAC, sensitive species that could be killed by the proposed electrified fence at the infill site include American kestrel, great-horned owl, and sharp-shinned hawk. Common native species likely to be killed by the LEF for the proposed project include house finch, western bluebird, yellow-rumped warbler, lesser goldfinch, Brewer's blackbird, western kingbird, and brown-headed cowbird.

Implementation of a single, level II correctional facility at the FSP/SAC Infill Site could result in mortality of sensitive and common wildlife species due to electrocution by contacting the proposed lethal electrified fence. This could result in a substantial reduction of the local populations of the affected species over time. This would be a significant impact.

Mitigation Measures

Mitigation Measure 3.2-7

CDCR will consult with USFWS and CDFW regarding the proposed project and anticipated wildlife mortality and will take appropriate actions to minimize wildlife electrocutions to the extent feasible and compensate for impacts on native wildlife species. It is anticipated that this will be accomplished by following the mitigation approached in the Statewide Electrified Fence HCP although the proposed project would not be covered by the HCP. A monitoring program consistent with the monitoring program established in the Statewide Electrified Fence HCP would be

developed to document wildlife mortality and ensure compliance with Tier 1 and Tier 2 measures. The tiered mitigation approach used by the HCP to offset potential adverse effects on birds protected under MBTA and the California Fish and Game Code is outlined below.

Tier 1: These mitigation measures are designed to eliminate or reduce wildlife attractants near the prison perimeter by implementing specific maintenance and operation procedures. By making the perimeter less hospitable, wildlife will frequent this area less often, thus reducing their exposure to accidental electrocution. Tier 1 maintenance and operation procedures will include:

a. Minimization of vegetation in the vicinity of the electrified fence perimeter. This will include removal of vegetation growing between and adjacent to chain link fences that surround electrified fences and keeping the first 100 feet of vacant land outside the perimeter and patrol road free of vegetation. Landscaping vegetation near the electrified fence will be minimized and will be trimmed or mowed to reduce its attractiveness to wildlife. Facility landscaping will be designed to provide as little cover and as few foraging and nesting opportunities as possible. Detailed information, including recommended landscape plantings that are less attractive to wildlife, can be found in the *Handbook to Reduce Wildlife Use of Prison Perimeters* (CDCR1996b).

b. Minimization of standing water near the fence perimeter. Rainwater will not be allowed to stand in or near the perimeter for more than 24 hours after a storm. Localized recontouring, excavation of ditches, and placement of gravel will occur to prevent ponding. Weeds, grasses, or emergent vegetation will be removed from ditches regularly.

c. Timely correction of erosion gaps and spaces under fencing. Inner and outer chain link fences will be inspected weekly to ensure that no gaps or spaces have formed. All eroded areas will be filled with soil or gravel as soon as feasible to prevent animals from entering electrified-fence areas.

d. Proper storage of materials and waste. To the extent feasible, equipment, supplies, rubble, or pallets will not be stored (temporarily or permanently) within 200 feet of either side of the fence perimeter. Garbage cans and dumpsters will be covered at all times and emptied as often as required to prevent overflow. The area within 200 feet of the fence perimeter will be kept free of all trash, litter, and loose food waste.

Tier 2: These mitigation measures consist of both exclusion and deterrent devices. Tier 2 measures to be installed on the proposed electrified fence are listed below.

a. Vertical netting. Past analysis of the locations of carcasses has shown that wildlife kills were typically the result of animals contacting the lowest nine wires, because wires are vertically closer together, resulting in more opportunities for birds to contact two lethal wires or a wire and a ground. Install three-quarter-inch mesh vertical netting enveloping both sides of the lower section of the electrified fence, which will prevent most birds from contacting the fence.

b. Anti-perching wire. Several birds have been electrocuted as a result of contacting electrified wires while perching, or attempting to perch, on the grounding brackets and fence posts of the electrified fence. Anti-perching wires, which consist of 2- to 4- inch pieces of stiff wire connected to an aluminum base, will be strategically attached to the tops of perching sites in and near the perimeter. Once installed, this wire will reduce the ability of birds to perch near the electrified fence, thus reducing exposure to accidental electrocutions.

Tier 3: These mitigation measures compensate for residual wildlife mortality impacts. CDCR will contribute funds to an existing non-profit organization that creates and manages habitat enhancement areas that would improve opportunities for reproductive success of birds likely to be

adversely affected by the project. Birds likely to be adversely affected will be predicted based on the results of mortality monitoring at comparable CDCR facilities and based on birds expected to occur in the project vicinity based on surrounding habitat. Mechanisms for implementing the mitigation will be similar to those previously utilized by CDCR for the Statewide and Six Prison Electrified Fence Projects and may include additional funding for a project to which CDCR has already contributed as part of these existing projects. The Sacramento valley will be targeted, but mitigation could be implemented at federal, state, or private lands located anywhere in California if the lands support a large percentage of the species at risk of electrocution at the infill site. The amount of funding contributed would depend on the acreage of habitat that would benefit from the mitigation. The mitigation acreage required would be determined based on the anticipated annual mortality of native birds and the area required to support an equivalent number of individuals of the species at greatest risk of electrocution.

Significance after Mitigation

With the implementation of tiered mitigation measures as described in Mitigation Measure 3.2-7, impacts on wildlife would be reduced by minimizing the number of animals killed by the LEF and compensating for unavoidable mortalities by preserving breeding habitat that will increase the reproductive success of affected species. As a result, this impact would be reduced to a **less-than-significant** level.

This page intentionally left blank.

3.3 CULTURAL RESOURCES

This section discusses potential impacts on cultural resources that could result from development of a level II correctional facility at the Folsom State Prison/California State Prison, Sacramento (FSP/SAC) Infill Site. Cultural resources generally include buildings, sites, districts, structures, and objects significant in history, architecture, archaeology, culture, or science. Historic resources are generally defined as properties that are listed or have been determined eligible for listing on the National Register of Historic Places (NRHP), the California Register of Historical Resources (CRHR), or a local register or inventory of resources.

The analysis includes a description of the existing environmental conditions, research methods, impacts associated with development of a level II infill correctional facility at the FSP/SAC Infill Site, and recommended mitigation measures to address significant or potentially significant impacts. Information used to prepare the analysis included a review of the *Draft Historic Properties Inventory Report and California Register Evaluation for the California Health Care Facility, Folsom Prison, Sacramento County,* prepared by ICF Jones & Stokes in 2009, and a review of the *Archaeological Inventory Report for the California Department of Corrections Level II Infill Project, Amador, Sacramento, San Bernardino, and Solano Counties, California,* prepared by ICF International in 2013.

The impact analysis and mitigation measures are informed by the provisions and requirements of federal, State, and local laws and regulations that apply to cultural resources. Impacts related to unique paleontological or geologic features at the FSP/SAC Infill Site are addressed in Section 3.5, "Geology, Soils, Seismicity, Minerals, and Paleontological Resources," of this volume of the draft environmental impact report (DEIR).

3.3.1 ENVIRONMENTAL SETTING

REGIONAL PREHISTORY

Although the Sacramento Valley may have been inhabited by humans as early as 10,000 years ago, the evidence for early human use likely is buried by deep alluvial sediments that accumulated rapidly during the late Holocene epoch. Although rare, archaeological remains of this early period have been identified in and around the Central Valley. There is evidence for some use of the Mokelumne River area south of the project region, under what is now Camanche Reservoir, during the late Pleistocene epoch. Archaeologists working at Camanche Reservoir found a number of lithic cores and a flake that are associated with Pleistocene gravels. These archaeological remains have been grouped into what is called the Farmington Complex, which is characterized by core tools and large, reworked percussion flakes. The economy of this early period generally is thought to be based on exploitation of large game. Later periods are better understood because of more abundant representation in the archaeological record.

The taxonomic framework of the Sacramento Valley has been described in terms of archaeological patterns. A pattern is a general mode of life characterized archaeologically by technology, particular artifacts, economic systems, trade, burial practices, and other aspects of culture. There are three general patterns of resource use for the period between 4500 before present (B.P.) and 200 B.P.: the Windmiller, Berkeley, and Augustine Patterns.

WINDMILLER PATTERN (4500 B.P.–3000 B.P.)

The Windmiller Pattern shows evidence of a mixed economy of game procurement and use of wild plant foods. The archaeological record contains numerous projectile points with a wide range of faunal remains. Hunting was not limited to terrestrial animals, as is evidenced by fishing hooks and spears that

have been found in association with the remains of sturgeon, salmon, and other fish. Plants also were used, as indicated by ground stone artifacts and clay balls that were used for boiling acorn mush. Settlement strategies during the Windmiller period reflect seasonal adaptations: habitation sites in the valley were occupied during the winter months, but populations moved into the foothills during the summer.

BERKELEY PATTERN (3500 B.P.–2500 B.P.)

The Windmiller Pattern ultimately changed to a more specialized adaptation labeled the Berkeley Pattern. A reduction in the number of *manos* and *metates* and an increase in mortars and pestles indicate a greater dependence on acorns. Although gathered resources gained importance during this period, the continued presence of projectile points and atlatls (spear-throwers) in the archaeological record indicates that hunting was still an important activity.

AUGUSTINE PATTERN (1500 B.P.–200 B.P.)

The Berkeley Pattern was superseded by the Augustine Pattern. The Augustine Pattern reflects a change in subsistence and land use patterns to those of the ethnographically known people (Nisenan) of the historic era. This pattern exhibits a great elaboration of ceremonial and social organization, including the development of social stratification. Exchange became well developed, and an even more intensive emphasis was placed on the use of the acorn, as evidenced by the presence in the archaeological record of shaped mortars and pestles and numerous hopper mortars. Other notable elements of the artifact assemblage associated with the Augustine Pattern are flanged tubular smoking pipes, harpoons, clam shell disc beads, and an especially elaborate baked clay industry, which included figurines and pottery vessels (Cosumnes Brownware). The presence of small projectile point types, referred to as the Gunther Barbed series, suggests the use of the bow and arrow. Other traits associated with the Augustine Pattern include the introduction of pre-interment burning of offerings in a grave pit during mortuary rituals, increased village sedentism, population growth, and an incipient monetary economy in which beads were used as a standard of exchange.

ETHNOGRAPHY

The FSP/SAC Infill Site is in the territory of the Nisenan, or Southern Maidu. Nisenan territory comprised the drainages of the Yuba, Bear, and American Rivers and the lower drainages of the Feather River. The Nisenan, together with the Maidu and Konkow, their northern neighbors, form the Maiduan language family of the Penutian linguistic stock, of which there are three dialects: Northern Hill Nisenan, Southern Hill Nisenan, and Valley Nisenan. Others made finer distinctions.

Nisenan settlement locations depended primarily on elevation, exposure, and proximity to water and other resources. Permanent villages usually were located on low rises along major watercourses. Village size ranged from three houses to up to 40 or 50. Houses were domed structures covered with earth and tule or grass and measured 10 to 15 feet in diameter.

The Nisenan occupied permanent settlements from which specific task groups set out to harvest the seasonal bounty of flora and fauna that the rich valley environment provided. The Valley Nisenan economy involved riverine resources, in contrast to the Hill Nisenan, whose resource base consisted primarily of acorn and game procurement. The only domestic plant was native tobacco (*Nicotiana* sp.), but many wild species were closely husbanded. The acorn crop from the blue oaks (*Quercus douglasii*) and black oaks (*Q. kelloggii*) was managed so carefully that it served as the equivalent of agriculture and could be stored against winter shortfalls in resource abundance. Deer, rabbit, and salmon were the chief sources of animal protein in the aboriginal diet, but many other insect and animal species were taken when available.

The Nisenan had no extensive contact with Euroamericans until between 1828 and 1836, when intensive fur trapping by the Hudson's Bay Company occurred in the region. In 1833, an epidemic (possibly malaria) killed up to 75 percent of the Nisenan population. The establishment of Sutter's Fort in Nisenan territory in 1839 became the focal point of settlers' and miners' incursions into the entire territory (especially after the 1848 gold discovery). The population reduction resulting from the epidemic left the Nisenan unable to oppose the overwhelming number of miners and settlers. Many of the few survivors became wage laborers in mines and on ranches and their language and culture greatly diminished. Today the Nisenan community in the Sacramento area is very active in tribal and local issues.

REGIONAL HISTORY

SACRAMENTO VALLEY

Exploration and Early Settlement

Perhaps the first European to see the Central Valley was Pedro Fages, who led an expedition from Monterey in 1772. Significant Spanish exploration of the interior of central California did not begin until 1806, in an effort to locate new mission. A party led by Gabriel Moraga traveled north from Mission San Juan Bautista through the San Joaquin Valley, along the Kings and Kern Rivers, to the Sierra Nevada foothills. Moraga led another expedition from San Jose in 1808 that eventually reached the American River just below Auburn. One of the first Euroamericans to travel through the Sacramento Valley, Jedediah Strong Smith is believed to have reached the American River in 1827. The river was not named until 1837, when Spanish governor Juan Bautista Alvarado called it the Rio de los Americanos. During the 1820s, 1830s, and 1840s, trappers from the Hudson's Bay Company trapped along the courses of the Central Valley's rivers.

John Sutter, a native of Switzerland escaping debtor's prison, arrived in California in 1839. He received his Mexican citizenship and the title to a land grant at the confluence of the Sacramento and American Rivers in 1841. He called the land grant New Helvetia and by 1844 had completed the construction of a fort on the site. Sutter's Fort became a trading post and center for Euroamerican activities in the vicinity.

Sutter was not the first person to obtain a land grant in the area. In 1833, J. B. R. Cooper was granted a parcel on the American River east of what would become Sacramento. Cooper did not develop the property and renounced the grant in 1835. John Sinclair, a Scotsman, settled on the property immediately east of New Helvetia in 1841. That land, Rancho del Paso, was granted to Eliab Grimes in 1844. Rancho de los Americanos was granted to William A. Leidesdorff in 1844 and covered 35,500 acres on the south side of the American River, east of New Helvetia. Leidesdorff died 4 years later, and Captain Joseph L. Folsom purchased the rancho.

The Rancho de San Juan was located north of the American River, across from Rancho de los Americanos. It originally was granted to Joel P. Dedmond, an American carpenter in 1844. Dedmond failed to improve the property and transferred the grant to John Sinclair in August 1845. In 1849, Sinclair deeded the property to Hiram Grimes (nephew of Eliab), and the rancho remained unused, repeatedly being sold for overdue taxes. In 1873, the real estate firm of Cox and Clarke took over the property and later subdivided it.

Discovery of Gold

In 1847, John Sutter opened a sawmill in the foothills. The mill was to be operated by John Marshall. During the construction of the mill's tailrace in 1848, Marshall discovered gold. Despite efforts to keep the find quiet, word spread and the Gold Rush was on. The resulting influx of miners caused the nonnative population of California to grow exponentially. In 1848, 14,000 nonnatives inhabited California; by the end of 1849, the nonnative population was close to 100,000. By late 1852, that

number had more than doubled to 220,000. The town of Coloma was established on the site of Marshall's discovery.

Transportation

Jedediah Strong Smith made his first overland journey to California in 1826. In 1827, he opened the Sacramento Trail. The first trail into the Folsom area was the Coloma Road, laid out by John Sutter in 1847 and 1848 from Sutter's Fort to Coloma. In time, the Coloma Road branched to Mormon Island and Negro Hill. In 1849, the Coloma Road became the route of California's first stage line, established by James E. Birch. During its short existence in the area (April to July 1860), the Pony Express paralleled the Coloma Road. After 1860, mail was delivered as far as Folsom by railroad.

Ferries were established for river crossings and to improve access to the northern mines. Sinclair's Ferry (also known as the Upper Ferry) on the American River at Brighton and the Lower Ferry 2 miles downstream were established in 1849. Ferries along the American River at Condemned Bar, Beal's Bar, Rattlesnake Bar, Whiskey Bar, Oregon Bar, and Salmon Falls were established that same year. Turner's Ferry (at the Lower Ferry location), the Norris Ferry (at what is now 29th Street in Sacramento), and Muldrow's Ferry (0.5 mile downstream from Sinclair's Ferry) were added in 1850.

The Sacramento and American Rivers provided convenient arteries to move goods and people around central California. Transportation on the Sacramento River as far as the mouth of the American River was reliable until siltation related to mining debris caused problems in the Delta region. However, transportation along the American River was seasonal. In winter, steamers could reach as far as 12 miles upstream from the mouth of the river, depending on rainfall totals. During the dry summers, ships could navigate only to Brighton. Increases in debris from hydraulic mining made navigation progressively less feasible, and in 1860 the American River was no longer considered a navigable waterway. Sacramento became the supply center for mining and settlers in the foothills because it was the farthest point upstream that was accessible to ocean-going vessels.

Cityhood for Sacramento

As miners flooded into the Central Valley, Sutter's Fort became a major trading post, and Sutter began to lose control of and interest in his empire. Unable to adapt to the changing atmosphere, and to avoid creditors, Sutter transferred title of his land to his son and retired to Hock Farm.

Sometime before, the elder Sutter had laid out a road that led from the fort to a point on the Sacramento River below the mouth of the American River. It was here that ships had brought supplies. Sutter intended to use that area, the Embarcadero, as a port, and nothing more. As miners continued to flood the area, businesses catered to their needs by establishing stores and trading posts near the Embarcadero, the first point of arrival for many miners.

In 1848, John A. Sutter, Jr., hired Captain William H. Warner and Lieutenant William Tecumseh Sherman (later General Sherman of Civil War fame) to survey the Embarcadero and Sutter's other lands for a site for the City of Sacramento. By January 1849, two log cabins had been constructed. Frame buildings were constructed shortly thereafter, and by April 1849, 30 buildings stood in the settlement at the Embarcadero. By June, there were more than 100 buildings. Most of the development was localized in an area bounded by what is today Front, Third, H, and N Streets. This area remained the business center of Sacramento for decades. The city was named after the river on which it was located and became a hub for mining activities throughout the Gold Country. Sacramento was incorporated as a city in 1850, and it became California's capital city in 1854.

FOLSOM STATE PRISON

19th Century History and Construction

Prior to 1874, California's only state prison, San Quentin, was located in Marin County. Constructed in 1854, San Quentin quickly became insufficient for maintaining the increasing number of prisoners. In 1856, Governor J. Neeley Johnson proposed a second state prison. Two years later, State Senator James Anderson introduced a bill authorizing the board of state prison directors to consider eligible sites for the location of the new prison. That same year, the legislature and governor approved the proposed bill, which included Folsom as the proposed site for the new prison, ideal for its location adjacent to an abundance of natural resources, including native granite and the American River.

Initial construction of FSP began in 1874 when architect R.C. Ball and contractor Michael Miles won with a bid of $149,392 for ground leveling and construction of a road from the town of Folsom to the prison site. Political wrangling among legislators and special interest groups ensued shortly after construction began. The outcome of the brief hiatus resulted in the removal of Ball and Miles and brought onto the project A. A. Bennett, a prominent Sacramento architect. Bennett designed many of Sacramento's most distinguished buildings and worked collaboratively on notable buildings, including the state capitol.

Buildings constructed between 1878 and 1883, including Cell Block 5/Officer and Guard Building, the Custody building, and Watchtower 13, are associated with former State Architect A. A. Bennett. Bennett is noted for his work on buildings at San Quentin State Prison and the state capitol building in Sacramento. The first two cell blocks, A and B, were among the initial undertakings at FSP. The two rectangular-shaped longhouses sat parallel on a hillside overlooking the American River and consisted of 328 cells with walls of native granite, sheet iron, and mortar. Bennett and his crew constructed a granite enclosure and a single roof for the two structures shortly before completing construction in the spring of 1880. The building is known today as Cell Block 5. Additional nineteenth-century FSP buildings and structures were constructed in 1882 and included the Officer and Guard Building (originally the Administration Building), the Custody Building, and the original dam and powerhouse. With the powerhouse, FSP became the first prison in the nation to operate on electric power. Construction of the prison perimeter wall began in 1887.

FSP opened its gates in 1880 with a maximum occupancy capacity of 700 inmates. In July of that year, the new prison received its first prisoners as the state transferred 44 San Quentin State Prison inmates by boat and train to the new facility. FSP initiated construction of the first prison post office in 1895.

20th Century History and Construction

Development of the FSP complex continued in the twentieth century with construction of the Prison Chapel in 1903. In 1909, the East Gate was completed, and during the 1910s construction continued with the addition of Cell Block 1 (Building 1), Dining 1, the Visiting Room Building (originally the Education Building), and the Boiler Room. By 1914, FSP had extended its prison industry operations to include the Prison Ranch, located immediately north of the secured perimeter. The ranch originally operated as quarrying grounds, and expanded into a prison honor farm, on which the majority of operations consisted of row-crop cultivation of vineyards, alfalfa, berries, and several varieties of corn and vegetables produced for inmates and prison staff.

FSP experienced continued population growth between the late-nineteenth and early twentieth century as the inmate population rose from 296 during the middle of the first year to 1,183 in 1915. During the years between 1919 and 1924, post-World War I economic conditions, military forces demobilization, and Prohibition contributed to a forty-five percent rise in prison population. By the mid-1920s, the prison population reached over 2,000, and by the early 1940s it stood at near 3,000. Population increases and the resulting overcrowding prompted prison officials to authorize construction of several new buildings designed to house and support the inmate population. Buildings constructed during the years of inmate

population rise included the Officer and Guard Building (1882), the Power house (1891), the Custody building (1892), Dining 2 (1894), the Chapel (1903), Cell Block 1 (1908-1913) the Visiting Room Building (1913), the Education Building (1915) and twelve watch towers. These buildings were constructed using locally quarried granite, many in the Richardsonian Romanesque architectural style.

Construction at the prison complex was halted from 1917 through the early 1930s, partly due to war efforts, after which the complex underwent additional construction, including Cell Block 2 (1931), the Canteen (ca. 1935), a new Administration Building and Hospital (1931-1941), and the Boiler Room (ca. 1935). During the mid-twentieth century, the Second World War brought about another lull in construction at the prison complex. Construction resumed after 1945 with additions of the Maintenance Hanger, (1946) and Metal Fabrication buildings (1947-1950). All these buildings remain extant today.

By the early 1940s, crop cultivation in the area north of the Secure Perimeter had declined as prison officials discovered a more profitable industry in livestock operations of cattle and poultry. In addition to livestock, the prison maintained a cannery and blacksmith shop. By mid-twentieth century, as traditional ranching activities began to fade in favor of prison support services beyond food supplies, prison officials converted ranch buildings into the FSP fire station. Additional ranch buildings serve today as recycling and storage facilities. Today, the prison is managed by the California Department of Corrections and Rehabilitation, and maintains a total capacity of over 4,000 inmates within five housing units.

SITE INVESTIGATION

NCIC RECORDS SEARCH

On January 24, 2013, staff members of NCIC conducted a cultural resources records search for the FSP/SAC Infill Site. Records of previously conducted cultural resource investigations and previously recorded cultural resources were consulted for the infill site and a 0.25-mile radius around each location. The records search also included a review of the NRHP (1988 and computer listings 1966 through 2008), CRHR (2008 and up), California Inventory of Historic Resources (1976), *California Historical Landmarks* (1996), *California Points of Historical Interest* listing (1992), Caltrans Bridge Inventory (2009), and the Directory of Properties in the Historic Properties data file for Sacramento County (2012). Historic maps, including General Land Office survey plat map 1865, 1887–1888 Sacramento Sheet, and 1954 U.S. Geological Survey 7.5-minute Folsom Quadrangle, were also examined as part of the records search.

According to the records search, one cultural resources study included a small portion of the potential development area associated with the potential level II infill correctional facility. Four other studies were conducted within a 0.25-mile radius of the project area. The records search revealed that the FSP/SAC Infill Site is located within the Historic American River Placer Mining District (P-34-335). No elements of the district appear to be within the project area. Two cultural resources were recorded within 0.25 mile of the infill site. No prehistoric archaeological resources have been recorded at the infill site. Of the two previously recorded resources, one is prehistoric and one is historic in nature.

NATIVE AMERICAN CONSULTATION AND OTHER INTERESTED PARTIES

On January 16, 2013, a project description and maps were sent to the Native American Heritage Commission (NAHC) to request a search of the NAHC's sacred lands file and request a list of Native American contacts for the project area. NAHC responded with sacred lands search results and contacts for Sacramento County on January 24, 2013. The sacred lands file searches did not have record of Native American resources in the FSP/SAC Infill Site. NAHC also provided a list of 11 individuals to contact for additional information regarding cultural resources. As of February 25, 2013, no concerns or information regarding potential cultural resources have been received.

PEDESTRIAN SURVEYS

On January 31, 2013, qualified archaeologists conducted a pedestrian archaeological survey of the FSP/SAC Infill Site (ICF Jones & Stokes). Survey transects no wider than 15 meters were walked to ensure maximum coverage in a timely manner. Visibility was generally poor due to dense, low lying grasses. Areas with poor visibility were subjected to boot scrapes every 10 meters to more closely inspect the ground surface. All cut and eroded banks were closely inspected for cultural materials. No resources associated with the mining district were found to be located within the FSP/SAC Infill Site. No cultural resources were located as a result of the survey effort.

Over the course of 5 days between November 20, 2008, and January 6, 2009, architectural historians conducted an inventory of all buildings and structures 45 years or older on the FSP/SAC Infill Site. None of these buildings are located on the infill site. Full access to buildings and structures within the secure perimeter was limited for purposes of this survey. As a result, some built environment descriptions may lack detail, due to regulations enforced to maintain an orderly inmate population.

RESOURCES ON OR ADJACENT TO THE INFILL SITE

The 2008 investigation resulted in the identification of a total of 38 cultural resources, including 5 archaeological and 33 historic architectural resources within 0.25 mile of the FSP/SAC Infill Site. Three of the five archaeological resources are not in areas of ground disturbance and therefore were not evaluated for eligibility to be included on the NRHP. The remaining 35 cultural resources were evaluated for significance using the criteria established for the NRHP. No NRHP- or CRHR-eligible archaeological resources were identified as a result of the investigation. A total of 24 historic architectural resources were identified as comprising the Folsom Prison Secure Perimeter Historic District and one historic architectural resource outside of this area was identified as significant. These resources are summarized below and described in detail in Appendix 5B.

ARCHAEOLOGICAL RESOURCES

FP-01H

This site consists of historical-era foundations of the State Hospital for the Criminally Insane at Folsom, commonly known as the “Bug House.” Modern disturbances are visible throughout the site. One dirt road bisects a large foundation and another road cuts through the site east of the rubble pile. Several more modern items were observed such as a partial license plate from the 1960s, corrugated food cans, mesh bags filled with rocks and dirt, and modern bottle glass fragments. Adjacent to the site there is a large dumpster for food refuse. This site is outside the footprint for considered ground disturbance and will therefore not be affected by project related construction activities. For this reason, the resource was not evaluated for NRHP or CRHR significance.

FP-02

This site consists of a prehistoric bedrock mortar (BRM) complex situated in the northwest portion of the study area on a large granite outcrop with four cupules (circular hollows) at its center. No artifacts were found associated with the BRM in the surrounding areas. This site is outside the footprint for considered ground disturbance and will therefore not be affected by project related construction activities. For this reason, the resource was not evaluated for NRHP or CRHR significance.

FP-03

This site consists of a single BRM cupule on a flat, low-lying granite outcrop. This site is outside the footprint for considered ground disturbance and will therefore not be affected by project related construction activities. For this reason, the resource was not evaluated for NRHP or CRHR significance.

FP-04H

FP-04H consists of a low density scatter of historical artifacts along a north to south trending dirt road and adjacent areas. The site appears to be heavily disturbed due to road construction and maintenance as the bulk of artifacts are in the dirt berms along the sides of the road that result from grading activities. This site is within the footprint of contemplated ground disturbing activities and, therefore, subsurface test excavation was conducted in order to assess the resource for CRHR and NRHP eligibility. Excavation results indicate that the resource has been heavily disturbed by road construction. As a result, it does not appear to meet the criteria for CRHR or NRHP eligibility.

FP-05

FP-05 is a single, ephemeral BRM cupule on a flat, low-lying granite outcrop. The site is situated within the boundaries of FP-04H just east of the dirt road and west of the minimum security prison camp. No associated artifacts were found within the immediate surrounding area. This site is within the footprint of contemplated ground disturbing activities and, therefore, subsurface test excavation was conducted at this resource in order to evaluate it for CRHR and NRHP eligibility. The area appears to have been heavily disturbed historically, and no associated prehistoric subsurface deposit was noted. Because the resource appears to be an isolate with no potential to provide further data, it does not appear to meet the criteria for CRHR or NRHP eligibility.

HISTORIC ARCHITECTURAL RESOURCES

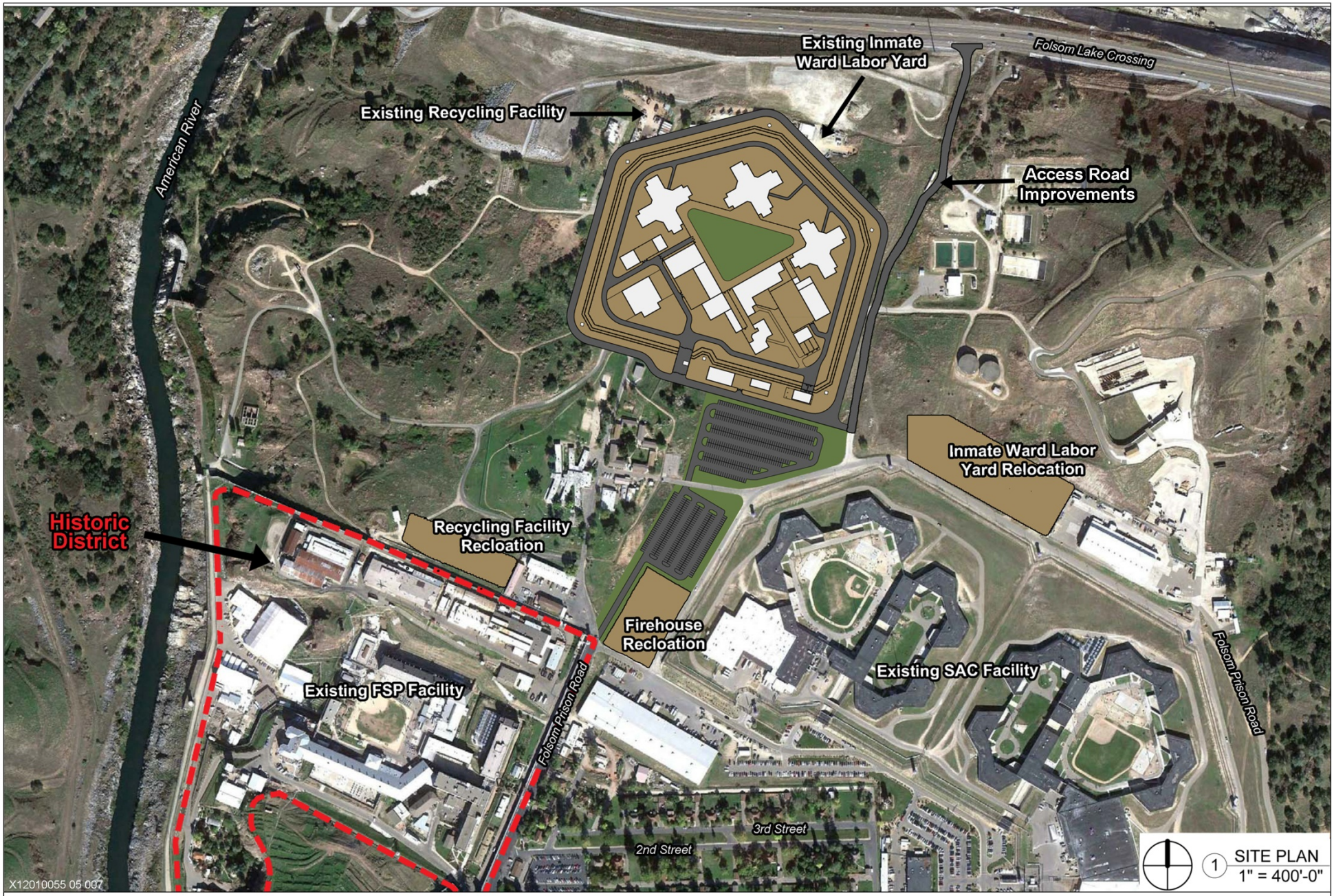
FP-06

FP-06 is the Folsom Prison Secure Perimeter Potential Historic District (Potential District) (Exhibit 3.3-1). The Potential District embodies a consistent association of 24 buildings and structures (listed in Table 3.3-1) that are vital to its character and role as a prominent example of prison development in California. Each building and structure is associated with a range of purpose and need consistent with the thematic development pattern of the prison. The development of these themes, as well as the overall setting, is consistent with that of the spatial arrangement of the varied provisions that are intrinsic to the incarceration and correctional facilities of modern society. Under Criteria A and 1 (events in history), the Potential District is one of the oldest remaining prison complexes in the CDCR system, dating to the mid-nineteenth century. Under Criteria C and 3 (distinguished works of architecture), a majority of the Potential District's 24 buildings and structures embody elements of the Richardsonian Romanesque architectural style (including solid granite elevations, period fenestration, entryways and ornamental eaves), conveying distinctive characteristics of a type, period, and method of construction. However, under NRHP Criterion B (CRHR 2), the Potential District does not appear to be associated with significant persons in our past.

The Potential District retains integrity to its period of significance in its location, design, setting, materials, workmanship, and historic feeling. Ten of the individual resources within the Potential District are individually eligible for both the NRHP and the CRHR, and the remaining 14 individual resources within the area are eligible for the NRHP and the CRHR as contributing elements (see Table 3.3-1). A detailed analysis supporting the findings in this section can be found in the cultural resources technical report, included as Appendix 5B in this volume.

FP-07 (Firehouse Bay)

A firehouse is located at the center of the prison ranch property. The structure does not appear to be significant for associations with the development of Folsom Prison, nor did any persons associated with the Firehouse Bay make significant contributions to history at the local, state, or national level, and its architectural style is not an important example of a master builder or designer. Therefore, the Firehouse Bay building does not appear to be eligible for listing in the NRHP or CRHR and is not considered to be historically significant for the purposes of the California Environmental Quality Act (CEQA).



Source: ICF 2013; Adapted by Ascent Environmental in 2013

Exhibit 3.3-1 Folsom Prison Secure Perimeter Potential Historic District

Table 3.3-1 Folsom Prison Secure Perimeter Potential Historic District Eligibility Determination

Resource Number	Name/Description	CRHR/NRHP Eligibility[1]
FP-06-1	East Gate	Eligible (individually)
FP-06-2	Perimeter Wall/Watchtowers 1, 2, 3, 4, 5, 6, 7, and 10	Eligible (individually)
FP-06-3	Cell Block 1	Eligible (individually)
FP-06-4	Cell Block 2/Administration/Medical/Dental	Eligible (individually)
FP-06-5	Cell Block 3	Eligible (individually)
FP-06-6	Cell Block 4	Eligible (individually)
FP-06-7	Cell Block 5/Officer and Guard Building/Dining 2	Eligible (individually)
FP-06-8	Prison Visiting Room	Eligible (individually)
FP-06-9	Boiler Room	Eligible (contributor)
FP-06-10	Education Building	Eligible (contributor)
FP-06-11	Library	Eligible (individually)
FP-06-12	Old Powerhouse	Eligible (contributor)
FP-06-13	Custody Building	Eligible (contributor)
FP-06-14	Prison Chapel	Eligible (individually)
FP-06-15	Food Services Building	Eligible (contributor)
FP-06-16	Maintenance Hangar	Eligible (contributor)
FP-06-17	Maintenance Hangar Quonset Huts	Eligible (contributor)
FP-06-18	Prison Industries Authority (PIA) Industrial Warehouse	Eligible (contributor)
FP-06-19	PIA License Plate Factory	Eligible (contributor)
FP-06-20	PIA Metal Fabrication Buildings 1–3	Eligible (contributor)
FP-06-21	Watchtower 13	Eligible (contributor)
FP-06-22	Watchtower 15	Eligible (contributor)
FP-06-23	Watchtower 20	Eligible (contributor)
FP-06-24	Watchtower 21	Eligible (contributor)

Notes:
[1] A building located in a historic district is considered individually eligible if it appears to be eligible for listing in the NRHP or CRHR, outside of the context of the historic district. A building is considered to be a contributor if it retains historic integrity, reflects the significance of the district, but would not be eligible for listing in the NRHP or CRHR outside the context of the historic district.

FP-08 (Irrigation Ditch)

A ditch is located south of the gymnasium that travels in a general east–west direction from Prison Road to Folsom Prison Road. The structure does not appear to be significant for associations with the development of Folsom Prison, nor did any persons associated with the Irrigation Ditch make significant contributions to history at the local, state, or national level, and its architectural style is not an important example of a master builder or designer. Therefore, the Irrigation Ditch does not appear to be eligible for listing in the NRHP or CRHR and is not considered to be historically significant for the purposes of CEQA.

FP-09 (Dairy Boiler Room)

A Dairy Boiler Room is located at the northeast end of the prison ranch, just east of the recycling yard. The structure does not appear to be significant for associations with the development of Folsom Prison, nor did any persons associated with the Boiler Room make significant contributions to history at the local, state, or national level, and its architectural style is not an important example of a master builder or designer. Therefore, the Dairy Boiler Room does not appear to be eligible for listing in the NRHP or CRHR and is not considered to be historically significant for the purposes of CEQA.

FP-10 (Cow/Calf Barn)

A cow and calf barn, is located northeast of the mattress storage building, and is currently being used as a bicycle storage building. The structure does not appear to be significant for associations with the

development of Folsom Prison, nor did any persons associated with the Cow/Calf Barn make significant contributions to history at the local, state, or national level, and its architectural style is not an important example of a master builder or designer. Therefore, the Cow/Calf Barn does not appear to be eligible for listing in the NRHP or CRHR and is not considered to be historically significant for the purposes of CEQA.

FP-11 (Pump House Shed)

A metal shed is located at the southeast end of the prison ranch, south of the mattress storage building. The structure does not appear to be significant for associations with the development of Folsom Prison, nor did any persons associated with the Pump House Shed make significant contributions to history at the local, state, or national level, and its architectural style is not an important example of a master builder or designer. Therefore, the Pump House Shed does not appear to be eligible for listing in the NRHP or CRHR and is not considered to be historically significant for the purposes of CEQA.

FP-12 (Shed Outbuilding)

A shed is located at the southeast end of the prison ranch. The structure does not appear to be significant for associations with the development of Folsom Prison, nor did any persons associated with the Shed Outbuilding make significant contributions to history at the local, state, or national level, and its architectural style is not an important example of a master builder or designer. Therefore, the Shed Outbuilding does not appear to be eligible for listing in the NRHP or CRHR and is not considered to be historically significant for the purposes of CEQA.

FP-13 (Old Water Filtration Plant)

A water filtration building is located at the southeast end of the prison ranch. The structure does not appear to be significant for associations with the development of Folsom Prison, nor did any persons associated with the Old Water Filtration Plant make significant contributions to history at the local, state, or national level, and its architectural style is not an important example of a master builder or designer. Therefore, the Old Water Filtration Plant does not appear to be eligible for listing in the NRHP or CRHR and is not considered to be historically significant for the purposes of CEQA.

FP-14 (Old Water Filtration Plant Residence)

An abandoned residence is located south of the water filtration plant. The structure does not appear to be significant for associations with the development of Old Water Filtration Plant Residence, nor did any persons associated with the Firehouse Bay make significant contributions to history at the local, state, or national level, and its architectural style is not an important example of a master builder or designer. Therefore, the Old Water Filtration Plant Residence does not appear to be eligible for listing in the NRHP or CRHR and is not considered to be historically significant for the purposes of CEQA.

FP-15 (Dynamite Shed)

A dynamite shed is located on a hill, east of the old Water Filtration Plant residence. Walls are granite blocks. A single-entry metal door is located on the west elevation. A sheet metal sign on a post is located just west of the building. The sign says “Danger Magazine Explosives.” Granite steps are located adjacent to the building. The building is surrounded by overgrown grass. The Dynamite Shed appears to be individually eligible for listing in the NRHP for its association with events that have made a significant contribution to the patterns of history and for its integrity of design and workmanship. Therefore, the Dynamite Shed is considered to be historically significant for the purposes of CEQA.

3.3.2 REGULATORY CONSIDERATIONS

A list of the applicable cultural resource-related federal and state plans, policies, regulations, and laws applicable to the FSP/SAC Infill Site is provided below. Complete summaries of these regulations are provided in Volume 1, Appendix 1B.

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

- National Historic Preservation Act - The NHPA of 1966 established the National Register of Historic Places which guarantees recognition in planning for federal or federally-assisted projects. Section 106 of the NHPA requires that federal agencies consider the effects of their actions on significant archaeological properties prior to implementing a project or "undertaking."

STATE PLANS, POLICIES, REGULATIONS AND LAWS

- California Environmental Quality Act - Under CEQA, public agencies must consider the effects of their actions on both "historical resources" and "unique archaeological resources." lead agencies have a responsibility to evaluate historical resources against the CRHR criteria prior to making a finding as to a proposed project's impacts to historical resources. Section 15064.5 (e) requires that excavation activities be stopped whenever human remains are uncovered and that the county coroner be called in to assess the remains.
- California Native American Historical, Cultural, and Sacred Sites Act - The Act requires that upon discovery of human remains, that construction or excavation activity cease and that the county coroner be notified. If the remains are of a Native American, the coroner must notify the NAHC.
- Public Resources Code Section 5020.1-Historic Districts - Under PRC Section 5020.1, a historic district means a definable, unified geographic entity that possesses a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development. Historic districts require nomination to be listed in the CRHR.
- Public Resources Code Section 5024-State-Owned Resources - Section 5024(f) requires state agencies to submit to SHPO documentation for any project having the potential to affect historical resources under its jurisdiction listed in or potentially eligible for inclusion in the NRHP, or are registered or eligible for registration as California Historical Landmarks.
- California Health and Safety Code - Section 7050.5 (b) of the California Health and Safety code specifies protocol when human remains are discovered.

LOCAL PLANS, POLICIES, AND ORDINANCES

As a state agency, CDCR is not subject to land use plans, policies, and ordinances adopted by local agencies. However, CDCR considers the plans, policies, and ordinances of surrounding local jurisdictions to reduce any environmental consequences to the extent most feasible. No local regulatory requirements for cultural resources would apply to the development of level II infill correctional facilities at the infill site.

3.3.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

In accordance with Appendix G and Section 15065 of the State CEQA Guidelines, the level II infill correctional facility at the FSP/SAC Infill Site would result in a significant impact related to cultural resources if it would do any of the following:

- cause a substantial adverse change in the significance of a historical resource or an archaeological resource as defined in Section 15064.5 of the State CEQA Guidelines; or
- disturb any human remains, including those interred outside of formal cemeteries.

CEQA Guidelines Section 15064.5 subdivision (b)(1) defines "substantial adverse change" as "physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings."

PROJECT IMPACTS AND MITIGATION MEASURES

Impact 3.3-1: Impacts on Historical Resources

In July 2009, ICF Jones & Stokes recorded and evaluated for NRHP eligibility several structures at FSP, as well as the residential structures located to the south of FSP (ICF Jones & Stokes 2009), and concluded the structures appear eligible for listing in the NRHP under Criterion A (CRHR 1), for their association with events that have made a significant contribution to the broad patterns of history and under NRHP Criterion C (CRHR 3) for distinguished works of architecture. It should be noted that none of these structures are located within the disturbance area identified in Exhibit 2-2 of Chapter 2, "Project Description" of this volume.

The structures located at FSP, as well as the residential structures to the south, retain their integrity to the established period of historical significance (1885-1957) in the form of location, design, setting, materials, workmanship, and historic feeling. The structures retain these elements of integrity because a lack of material alteration and continuity of location allow them to appear as they did when originally constructed. The potential resources remain largely intact and unobstructed in their environment. By retaining these elements, the resources appear to effectively convey its historical integrity. Although development of a level II infill correctional facility at the FSP/SAC Infill Site would introduce new elements adjacent to these structures, in particular the relocated recycling facility and relocated firehouse, these facilities would not visually obstruct or aesthetically impede upon the contextual setting of these structures and would not compromise its historical integrity of materials, location, design, and feeling.

The FSP/SAC Infill Site, would not impose a significant and adverse effect on the aforementioned structures for three reasons:

- The topography of the FSP/SAC property is such that its contributing elements (prison buildings and structures) are clustered within a distinct boundary that sits in a recessed topography, resulting in a completely obstructed north-south line of sight to and from the location of the FSP/SAC Infill Site.
- The structures located within FSP are thoroughly contained by solid granite prison walls to the immediate north, east, and south, thereby concealing it from potential visual obstructions.
- A recent built-environment element has already been introduced to the area with construction in 1986 of the California State Prison complex of three buildings 600 yards northeast of FSP.

Lines of sight from the potential resources are unlikely to intercept any portions of the infill site, and therefore, contributing elements are highly unlikely to be visible from lines of sight originating from the FSP/SAC Infill Site. This means the historical setting of these structures would not be compromised because the barriers (landscape topography and prison walls) between the infill site and the potential historic structures block lines of sight. As noted above, no other historic resources were identified on or in the vicinity of the FSP/SAC Infill Site.

Development of a single, level II infill correctional facility at the FSP/SAC Infill Site would not result in a substantial adverse change in the significance of a historical resource as defined by State CEQA Guidelines Section 15064.5 because nearby eligible historic resources would not be in the line of sight from the infill site such that the integrity of these resources would be adversely affected. Therefore, this would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.3-2: Impacts on Archaeological Resources

The cultural resources records search prepared for the FSP/SAC Infill Site revealed five archaeological resources (three prehistoric resources and two are historic-era resources) within 0.25 mile of the FSP/SAC Infill Site, but not within the boundaries of the infill site. No NRHP- or CRHR-eligible archaeological resources were identified as a result of the investigation. However, the potential exists to encounter previously undiscovered or unrecorded archaeological sites and materials during project-related preconstruction or construction-related ground disturbing activities. If such resources were to represent "unique archaeological resources" as defined by CEQA, construction-related activities could damage or destroy such resources.

No known archaeological resources would be altered by the infill project. However, development of a single, level II infill correctional facility at the FSP/SAC Infill Site could result in a substantial adverse change in the significance of a previously undiscovered archaeological resource as defined by State CEQA Guidelines Section 15064.5 and would therefore result in a significant impact.

Mitigation Measures

Mitigation Measure 3.3-2

In the event that any prehistoric or historic-era subsurface archaeological features or deposits, including locally darkened soil ("midden"), that could conceal cultural deposits, are discovered during construction-related earth-moving activities, all ground-disturbing activity within 100 feet of the resources will be halted and a qualified professional archaeologist will be retained to assess the significance of the find. If the find is determined to be significant by the qualified archaeologist (i.e., because the find is determined to constitute either an historical resource or a unique archaeological resource), the archaeologist will develop appropriate mitigation to protect the integrity of the resource and ensure that no additional resources are affected. Mitigation could include but would not necessarily be limited to preservation in place, archival research, subsurface testing, or contiguous block unit excavation and data recovery.

Significance after Mitigation

Implementation of a plan to address discovery of unanticipated buried cultural resources found during development of a single, level II infill correctional facility at the FSP/SAC Infill Site and to preserve and/or record those resources consistent with appropriate laws and requirements, as described in Mitigation Measure 3.3-2, would reduce impacts to a **less-than-significant** level.

Impact 3.3-3: Impacts on Human Remains

Based on documentary research, no evidence suggests that any prehistoric or historic-era marked or unmarked human interments are present within or in the immediate vicinity of the FSP/SAC Infill Site. The former Folsom Inmate Cemetery is located east of the infill site, beyond the existing firing range, and would not be disturbed during construction activities. However, it is possible that construction activities associated with the infill site could result in the discovery of unknown human remains. California law recognizes the need to protect historic-era and Native American human burials, skeletal remains, and grave-associated items from vandalism and inadvertent destruction. The procedures for the treatment of Native American human remains are contained in Sections 7050.5 and 7052 of the California Health and Safety Code and Section 5097 of the California Public Resources Code.

Development of a single, level II infill correctional facility at the FSP/SAC Infill Site could result in disturbance of previously unknown human remains, including those interred outside of formal cemeteries, which would result in a significant impact.

Mitigation Measures

Mitigation Measure 3.3-3

If human remains are discovered during any demolition/construction activities, all ground-disturbing activity within 50 feet of the remains will be halted immediately, and the Sacramento County coroner will be notified immediately, according to Section 5097.98 of the California Public Resources Code and Section 7050.5 of California's Health and Safety Code. If the remains are determined by the County coroner to be Native American, the NAHC will be notified within 24 hours, and the guidelines of the NAHC will be adhered to in the treatment and disposition of the remains. CDCR will also retain a professional archaeologist with Native American burial experience to conduct a field investigation of the specific site and consult with the Most Likely Descendant (MLD), if any, identified by the NAHC. Following the coroner's findings, the archaeologist, and the NAHC-designated MLD will determine the ultimate treatment and disposition of the remains and take appropriate steps to ensure that additional human interments are not disturbed. The responsibilities for acting upon notification of a discovery of Native American human remains are identified in California Public Resources Code Section 5097.94.

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 Sections 7050.5 and 7052 and California Public Resources Code Section 5097.

Significance after Mitigation

Implementation of the Mitigation Measure 3.3-3 would result in coordination between the MLD and CDCR with the assistance of an archaeologist. The steps outlined in the mitigation measure would minimize or eliminate adverse impacts on undiscovered human remains resulting from construction activities for a single, level II infill correctional facility at the FSP/SAC Infill Site. As a result, the project's impacts to previously undiscovered human remains would be reduced to a **less-than-significant** level**.**

This page intentionally left blank.

3.4 EMPLOYMENT, POPULATION, AND HOUSING

This section evaluates the potential employment, population, and housing impacts attributable to development of a single, level II infill correctional facility at Folsom State Prison/California State Prison, Sacramento (FSP/SAC), including effects on regional population and employment trends, regional housing supplies, and employment opportunities.

3.4.1 ENVIRONMENTAL SETTING

The FSP/SAC Infill Site is located in the northern area of the City of Folsom in Sacramento County, California (see Exhibit 2-1 in Chapter 2 of this volume). The study area for this analysis is based on the existing distribution of employees of the California Department of Corrections and Rehabilitation (CDCR) and their families. Based on current zip code data that identifies the residential communities where FSP/SAC employees reside, approximately 90 percent (2,445) of 2,709 FSP/SAC employees and their families reside in Sacramento, Placer, and El Dorado Counties.

Because the type of staff required for the level II infill correctional facility is similar to the employment mix at FSP/SAC, it is reasonable to assume that the staff for the level II infill correctional facility would also predominantly reside in the counties of Sacramento, Placer, and El Dorado. Therefore, these areas constitute the study area for the employment, population, and housing analysis provided below. Other locations are not considered in this analysis because the number of FSP/SAC employees who currently reside, and would be expected to reside, in other communities is low (10 percent) and would not have a measurable impact on employment, population, and housing characteristics in these communities.

EMPLOYMENT

Information about the employed civilian labor force, unemployment rates, and employment opportunities for Sacramento, Placer, and El Dorado Counties is summarized briefly below based on the most recent information collected by the U.S. Census Bureau and California Employment Development Department (EDD) statistics. Published in 2011, census data were based on the American Community Survey Three-year Estimates from data collected between January 2009 and December 2011. County and state employment statistics reflect conditions in December 2012 as published by EDD in 2013.

SACRAMENTO COUNTY

In December 2012, the employed civilian labor force in Sacramento County (including the cities of Sacramento and Folsom) was 607,200 people, and the unemployment rate was 9.9 percent, slightly higher than the state average of 9.7 percent (EDD 2013). According to the U.S. Census Bureau (2011a), civilian employment in Sacramento County was distributed among the following sectors:

- management, business, science, and arts occupations (37.4 percent);
- sales and office occupations (27.4 percent);
- service occupations (19.2 percent);
- production, transportation, and material moving occupations (8.3 percent); and
- natural resources, construction, and maintenance occupations (7.6 percent).

PLACER COUNTY

In December 2012, the employed civilian labor force in Placer County was 159,600 people, and the unemployment rate was 8.6 percent, slightly lower than the state average of 9.7 percent (EDD 2013). According to the U.S. Census Bureau (2011a), civilian employment in Placer County was distributed among the following sectors:

- management, business, science, and arts occupations (41.6 percent);
- sales and office occupations (27.9 percent);
- service occupations (15.9 percent);
- production, transportation, and material moving occupations (7.3 percent); and
- natural resources, construction, and maintenance occupations (7.3 percent).

EL DORADO COUNTY

In December 2012, the employed civilian labor force in El Dorado County was 82,000 people, and the unemployment rate was 9.4 percent, slightly lower than the state average of 9.7 percent (EDD 2013). According to the U.S. Census Bureau (2011a), civilian employment in El Dorado County was distributed among the following sectors:

- management, business, science, and arts occupations (38.6 percent);
- sales and office occupations (24.5 percent);
- service occupations (19.8 percent);
- natural resources, construction, and maintenance occupations (9.4 percent); and
- production, transportation, and material moving occupations (7.8 percent).

POPULATION

Most of the current employees at FSP/SAC reside in communities within Sacramento, Placer, and El Dorado Counties. Table 3.4-1 presents the geographic distribution of FSP/SAC employees and the regional population estimates for the major counties that support these employees.

Table 3.4-1 Geographic Distribution of Current FSP/SAC Employees

County	2000 Population	2010 Population	Projected 2025 Population	Number (Percent) of FSP/SAC Employees [1]
Sacramento County	1,223,499	1,418,788	1,643,263	1,731 (64%)
Placer County	248,399	348,432	424,134	368 (14%)
El Dorado County	156,299	181,058	218,379	346 (13%)
Other counties	N/A	N/A	N/A	264 (10%) [2]
Total				**2,709 (101% [3])**

Notes:
[1] Number is approximate; zip code survey data does not match number of employees due to various factors. Numbers were adjusted to match the employment count.
[2] Less than 10% of FSP/SAC employees reside in 36 other counties.
[3] Does not add up to100% due to rounding.
Sources: U.S. Census Bureau 2013a, 2013b, 2013c; California Department of Finance 2012; zip code data provided by CDCR in 2012 and 2013

SACRAMENTO COUNTY

The population of Sacramento County (including the cities of Sacramento and Folsom) was 1,418,788 people in 2010, which was a 13.8 percent increase from 2000 (U.S. Census Bureau 2013a). As

indicated in Table 3.4-1, approximately 64 percent of current FSP/SAC employees reside in Sacramento County.

By 2025, the California Department of Finance (2012) projects the population of Sacramento County to be 1,643,263 people, an increase of approximately 25.5 percent from 2000.

PLACER COUNTY

The population of Placer County was 348,432 people in 2010, which was a 28.7 percent increase from 2000 (U.S. Census Bureau 2013b). As indicated in Table 3.4-1, approximately 14 percent of current FSP/SAC employees reside in Placer County.

By 2025, the California Department of Finance (2012) projects the population of Placer County to be 424,134 people, an increase of approximately 41.4 percent from 2000.

EL DORADO COUNTY

The population of El Dorado County was 181,058 people in 2010, which was a 13.7 percent increase from 2000 (U.S. Census Bureau 2013c). As indicated in Table 3.4-1, approximately 13 percent of current FSP/SAC employees reside in El Dorado County.

By 2025, the California Department of Finance (2012) projects the population of El Dorado County to be 218,379 people, an increase of approximately 28.4 percent from 2000.

HOUSING

The California Department of Housing and Community Development defines a housing shortage as a vacancy rate of less than 5 percent. The vacancy rate is the percentage of total owner-occupied residential units that are for sale and unoccupied. Data on housing availability and vacancy rates (combined for total owner-occupied and renter-occupied housing units) for Sacramento, Placer, and El Dorado Counties in 2011 are provided in Table 3.4-2. As shown, there is a general availability of housing within these counties; Sacramento County has the lowest vacancy rate (7.9 percent) and El Dorado County has the highest (22.8 percent).

It should be noted that, because El Dorado County encompasses extensive areas of National Forest land and a portion of the Lake Tahoe region, El Dorado County has a long history of the use of housing units for seasonal, recreational, or occasional use. According to the U.S. Census, the unincorporated portion of the county had 6,225 such units in 2000. Because these units are included in the vacancy figure but are generally not available for long-term rental or purchase, the true number of vacant units available for rent or purchase in the county is substantially lower (El Dorado County 2009: 4-23).

Table 3.4-2 Vacant Units per County

County	Total Housing Units	Occupied Housing Units	Vacant Housing Units	Vacancy Rate
Sacramento County	556,067	511,894	44,173	7.9%
Placer County	152,980	131,488	21,492	14%
El Dorado County	88,272	68,164	20,108	22.8%
Total	**797,319**		**85,773**	

Notes: N/A = not applicable
Source: U.S. Census Bureau 2011b

3.4.2 REGULATORY CONSIDERATIONS

No federal, state, or local plans, policies, regulations, or laws related to employment, population, and housing are applicable to the development of level II infill correctional facilities at the FSP/SAC Infill Site.

3.4.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

Population and employment growth associated with implementation of the proposed Level II Infill Correctional Facilities Project would not, in and of itself, result in significant environmental impacts. However, project-related growth could result in significant impacts in communities where growth occurs, through the construction of housing and increased demand for community services. These secondary effects could result in significant environmental impacts and are appropriately addressed in other sections (e.g., air quality, noise, and transportation) of this draft environmental impact report (DEIR) (Volume 4).

The discussion of employment, population, and housing impacts focuses on where project-related employees and their families would reside; the removal of existing housing; and availability of housing supplies for new employees, their families, and other potential new residents in the area.

In accordance with Appendix G and Section 15065 of the State of California Environmental Quality Act (CEQA) Guidelines, the level II infill correctional facility at the FSP/SAC Infill Site would result in a significant impact related to employment, population, and housing if it would do any of the following:

- induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure);
- displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere; or
- displace substantial numbers of people, necessitating the construction of replacement housing elsewhere.

The State CEQA Guidelines (Section 15064.5) define a “substantial adverse change” as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

ISSUES NOT DISCUSSED FURTHER

Displacement of existing housing or people: Because the proposed level II infill correctional facility would be located on undeveloped land and land used for non-residential uses (i.e., inmate labor yard) on State-owned property, it would not displace existing housing or people. Therefore, this issue is not discussed further.

Impacts of increased inmate population: Although the proposed project would construct 792 new level II beds on the FSP/SAC Infill Site, the inmates would not participate in or have access to social or economic aspects of the surrounding communities. Therefore, the increased number of inmates would not directly affect population or housing in surrounding communities. Further, inmate population growth is not, in itself, a physical environmental effect, although it has implications related to increased demand for public utilities such as water and wastewater, which are addressed in Section 3.12, “Utilities,” of this volume (Volume 4). For these reasons, this issue is not discussed further.

PROJECT IMPACTS AND MITIGATION MEASURES

Impact 3.4-1: Substantial Population Growth

Development of a single, level II infill correctional facility at FSP/SAC would provide both short-term and permanent employment opportunities. The number of short-term jobs required during project construction would peak at 355. The proposed project would be constructed over a 26-month period. Of these 355 required jobs, 335 would last for a minimum of 15 months. More than 54,000 construction workers were living in Sacramento, Placer, and El Dorado Counties in 2011 (U.S. Census Bureau 2011a). Because the supply of general construction labor in the project vicinity is not constrained, it is expected that workers would be available from the region to meet the proposed project's construction needs. Therefore, implementation of a single, level II infill correctional facility at FSP/SAC would not generate employment opportunities that would require in-migration of construction personnel from outside the region.

Project operation would require 193 new correctional officers, medical/mental health personnel, vocational and educational staff, facility maintenance personnel, and administrative support staff (see Table 3-1 of Chapter 3, Volume 1). More than half of these positions would be correctional staff, and the remaining positions would be in support services. Sacramento, Placer, and El Dorado Counties have a combined labor force of approximately 849,000 people and high unemployment rates (9.9 percent, 8.6 percent, and 9.4 percent, respectively) (EDD 2013). While many of these new employment positions require a certain level of experience that may necessitate in-migration by some existing correctional staff from other facilities, it is unlikely that a large number of employees would need to relocate from outside of the region because of the general availability in the labor market.

To provide a conservative analysis of potential project-related population growth, this analysis assesses the population impact if all 193 new employees and their families were to migrate into the region from outlying areas even though some or most are likely to already reside within the region. Using a statewide average household size of 2.91 (U.S. Census Bureau 2013a), implementation of a single, level II infill correctional facility at FSP/SAC could result in a population increase of 562 people.

If this population increase occurs, it is anticipated that these 562 people would distribute themselves in a pattern similar to the existing regional FSP/SAC employee distribution patterns. That is to say, the overwhelming majority (90 percent) of employees would be anticipated to reside in Sacramento, Placer, and El Dorado Counties and the remainder (10 percent) would be anticipated to reside in other outlying counties. As indicated in Table 3.4-1, Sacramento County would be expected to receive the largest portion of any project-related population increase (approximately 360 [64 percent] of the 562 people). The remaining employees and their families would be distributed throughout other adjacent and outlying counties (including Placer and El Dorado Counties). The maximum project-generated population increase of 562 people would be indistinguishable from other projected growth in the region and is planned for in regional growth plans in each of these communities (e.g., general plans, community plans). For example, project-related population growth in Sacramento County of 360 people would represent 0.0002 percent of the County's projected 2025 population of 1,643,263 people (California Department of Finance 2012). This percentage of growth, by itself, would not stimulate any new development, the construction of which could result in significant environmental impacts.

Implementation of a single, level II infill correctional facility at the FSP/SAC Infill Site would result in both short-term and permanent employment opportunities in a region with a large labor pool. It is anticipated that these new employment opportunities would be largely met by the existing regional labor force without resulting in substantial in-migration from outside the region. Project-related population growth would not stimulate any new development, the construction of which could result in significant environmental impacts, and the population growth would be absorbed in growth projections of regional and local communities (Sacramento, Placer, and El Dorado Counties). Therefore, this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.4-2: Increased Demand for Housing

As discussed in Impact 3.4-1, a maximum in-migration of new employees and their families from areas outside the identified study area for operation of a single, level II infill correctional facility at FSP/SAC would increase population by approximately 562 people, which would in turn increase housing demand in the communities near FSP/SAC. For the purposes of this analysis, it is assumed that every new employee who relocates to the region would require one housing unit. The distribution of new housing needs would correspond to the distribution of existing employee residences as shown in Table 3.4-1. Because the project would increase the number of job opportunities at FSP/SAC by 193 positions, the project would result in a demand for 193 housing units as follows: approximately 124 (64 percent) housing units in Sacramento County, approximately 27 (14 percent) housing units in Placer County, approximately 25 (13 percent) housing units in Sacramento County, and approximately 19 (10 percent) housing units in other counties. Because no single county would receive a substantial number of new residents or corresponding demand for housing, and because the region offers a large housing base (Table 3.4-2), the project would not substantially decrease the available housing stock in the region and would not result, in and of itself, in the construction of new housing in the study area.

Further, this assumes that all employees would relocate to these communities and none would be hired from the local population, which is not realistic given the large labor pool (described in Impact 3.4-1).

Because no single county or city would receive a substantial number of new residents or corresponding demand for housing, and because the region offers a large housing base, construction and operation of a single, level II infill correctional facility at the FSP/SAC Infill Site would not substantially decrease the available housing stock in the region and would not result, in and of itself, in the construction of new housing in the study area. Therefore, this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

3.5 GEOLOGY, SOILS, SEISMICITY, MINERALS, AND PALEONTOLOGICAL RESOURCES

This section addresses existing geologic, soils, seismic conditions, minerals, and paleontological resources at the Folsom State Prison/California State Prison, Sacramento (FSP/SAC) Infill Site and analyzes the potential for the development of a single, level II infill correctional facility at FSP/SAC to affect those resources. Information presented in this section was drawn from the *Draft Geotechnical Feasibility Report for the Proposed Expansion at Folsom State Prison, Folsom, California* (Draft Geotechnical Report) (Fugro West 2008).

3.5.1 ENVIRONMENTAL SETTING

REGIONAL TOPOGRAPHY AND GEOLOGY

FSP/SAC is located within the Sierra Foothills between the Central Sierra Nevada and the Central Valley Geomorphic Provinces.

The Great Valley of California, also called the Central Valley, is a nearly flat alluvial plain extending from the Tehachapi Mountains in the south to the Klamath Mountains in the north and from the Sierra Nevada in the east to the Coast Ranges in the west. Elevations of the alluvial plain are generally just a few hundred feet above mean sea level (MSL), with extremes ranging from a few feet below MSL to about 1,000 feet above MSL (Hackel 1966).Geologically, the Great Valley geomorphic province is a large, elongated, northwest-trending asymmetric structural trough that has been filled with an extremely thick sequence of sediments ranging in age from Jurassic to Holocene. This asymmetric geosyncline has a stable eastern shelf supported by the subsurface continuation of the granitic Sierran slope and a short western flank expressed by the upturned edges of the basin sediments (Hackel 1966).

The Folsom region is underlain by metamorphic rocks of the pre-Carboniferous to Permian Calaveras Formation, the Middle-Upper Jurassic Amador group, and the Upper Jurassic Mariposa Formation. These metamorphic rocks were intruded by the magmas of the Sierra Nevada granitic batholith during the Upper Jurassic (approximately 161–146 million years ago) (Fugro West 2008).

INFILL SITE TOPOGRAPHY AND GEOLOGY

TOPOGRAPHY

The topography of the FSP/SAC Infill Site generally slopes to the west toward the American River. . The infill site consists of rolling topography covered with grasses, clusters of oak trees, and numerous granodiorite (a coarse-grained, plutonic rock, similar to granite in composition) outcrops as well as developed areas including the Inmate Ward Labor (IWL) facility, recycling facility, and the fire station. In addition, the site has numerous paved roads. The hill in the northeastern corner of the infill site has a north–south trending ridgeline and a maximum elevation of 423 feet above MSL. The hill in the southeastern portion of the infill site has a northeast–southwest trending ridgeline, with a maximum elevation of 426 feet above MSL. The ridgeline lies approximately 600 feet east from Prison Road. The maximum elevations difference between these hills and the surrounding ground ranges from 30 to 40 feet. The highest topographic feature in the central portion of the infill site is located by the recycling facility. The top of the hill is at an elevation of approximately 390 feet above MSL, representing an elevation difference of approximately 12 feet compared to the developed area to the east (Fugro West 2008).

GEOLOGY

According to regional geologic maps, the infill site is underlain by Mesozoic (from about 250 million years ago to about 65 million years ago) dioritic rocks and by the Mesozoic age (specifically Jurassic, from about 200–145 million years ago) Copper Hill Volcanics (Jennings 1977, Gutierrez 2011). In general, the Mesozoic dioritic rocks cover a majority of the infill site while the Copper Hill Volcanics cover a small portion of the southern portion of the infill site. The Copper Hill Volcanics are composed of metamorphosed mafic pyroclastic rocks and pillow lava with minor felsic porphyrite. The Mesozoic dioritic rocks are plutonic rocks composed of quartz diorite, diorite, and trondhjemite associated with the formation of the Rocklin Pluton (Wagner et al. 1981).The Rocklin Pluton intruded into the older metamorphic rocks as part of the Sierra Nevada granitic batholith and is present on both sides of Folsom Dam, extending to the upper reaches of Lake Natoma (Gutierrez 2011). Large, slightly weathered granodiorite corestones ranging in size from 10 to15 feet in diameter have been observed throughout the infill site, and are assumed to be located at various depths below the existing ground surface (Fugro West 2008).

SOILS

Surface Soils

According to the Natural Resources Conservation Service (NRCS) (formerly called the U.S. Soil Conservation Service) Soil Survey of Sacramento County (NRCS 2013), there are four soil map units that occupy the FSP/SAC Infill Site, as summarized in Table 3.5-1, below. These include the Andregg-Urban land complex, 2 to 8 percent slopes (which covers the western portion and the majority of the infill site); the Andregg coarse sandy loam, 2 to 8 percent slopes (which covers a piece of the eastern portion of the infill site); the Andregg coarse sandy loam, 8 to 15 percent slopes (which covers the eastern portion of the infill site); and Urban Land (which covers the southeastern portion of the site).

Table 3.5-1 Detailed Soil Characteristics of the FSP/SAC Infill Site

Soil Map Unit	Shrink-Swell Potential	Erosion Hazard	Runoff Rate
Andregg-Urban land complex, 2 to 8% slopes	Low	Slight to moderate	Slow to medium
Andregg coarse sandy loam, 2 to 8% slopes	Low	Slight to moderate	Slow to medium
Andregg coarse sandy loam, 8 to 15% slopes	Low	Moderate	Medium
Urban Land	NA	NA	Rapid

Source: NRCS 2013.

The soils of the Andregg-Urban land complex and Andregg coarse sandy loam are moderately deep and well drained. These soils formed in material weathered from granitic rocks. The main limitation of these soils is a shallow depth to bedrock. Visual classification of the site soils performed indicates that the soil expansion potential is low (Fugro West 2008).

Subsurface Soil Conditions

Subsurface information gathered during a previous geotechnical study in the area (Fugro West 2008) indicates that the infill site and surrounding area is underlain by very sandy silt and very silty sand. Below approximately one foot, the soil grades into slightly silty fine to coarse sand. Dense, variably weathered granodiorite is found at different depths throughout the infill site. Due to weathering of the underlying granodiorite, large corestones of slightly weathered granodiorite surrounded by highly decomposed material cause the depth to hard rock to be variable.

Soil Corrosion Potential

The results of the preliminary corrosion testing performed in the area of the infill site showed the soil to have a pH ranging from about 7.0 to 7.4 and a minimum resistivity of 3,750 ohms-centimeter (Fugro

West 2008). Both sulfate and chloride levels were low. Based on the results of the corrosion analyses, the site soils are not considered to be corrosive to reinforced concrete and metal pipe.

SEISMICITY AND FAULTS

Seismic hazards are earthquake fault ground (surface) rupture and ground shaking (primary hazards) and liquefaction and earthquake-induced slope failure (secondary hazards).

Surface Rupture and Faulting

The purpose of the Alquist-Priolo Earthquake Fault Zoning Act (Alquist-Priolo Act) is to regulate development in the immediate vicinity of active faults to mitigate the hazard of surface rupture. As defined under the Alquist-Priolo Act, an active fault is one that has had surface displacement within the Holocene epoch (the last 11,000 years); an early Quaternary fault is one that has had surface displacement during Quaternary time (the last 1.6 million years); and a pre-Quaternary fault is one that has had surface displacement before the Quaternary period.

The FSP/SAC Infill Site is not located in an Alquist-Priolo Fault Zone (Bryant and Hart 2007), and the Uniform Building Code (UBC) recognizes no seismic sources in the Sacramento region (International Conference of Building Officials 1997). There is no evidence of recent (i.e., Holocene) faulting within the infill site and no faults are mapped to cut at or near the infill site (Fugro West 2008; Bryant and Hart 2007; International Conference of Building Officials 1997; Jennings and Bryant 2010).

Table 3.5-2 provides a summary of seismic sources (faults) found within a 63-mile (100 kilometer) search radius, their approximate distance from the site, and the maximum earthquake magnitudes (moment magnitude) (Fugro West 2008).

Table 3.5-2 Regional Seismic Sources (Faults)

Fault Name	Approximate Distance, Miles	Maximum Earthquake Magnitude
Foothills fault system 1	3.0	6.5
Foothills fault system 2	14.1	6.5
Foothills fault system 3	22.1	6.5
Great Valley 3	45.6	6.9
Foothills fault system 4	46.0	6.5
Great Valley 4	46.6	6.6
Great Valley 5	48.5	6.5
Hunting Creek–Berryessa	58.6	7.1
Concord/Green Valley (GVN)	59.3	6.0
Concord/Green Valley (CON+GVS+GVN)	59.3	6.7
Concord/Green Valley (GVS+GVN)	59.3	6.5
Concord/Green Valley (Floating)	59.3	6.2
Western Nevada Zone 1	59.3	7.3
Concord/Green Valley (GVS)	61.5	6.2
Concord/Green Valley (CON+GVS)	61.5	6.6

Source: Fugro West 2008

A total of 15 faults were identified as potential seismic sources within a 63-mile (100-km) radius of the FSP/SAC Infill Site. Those expected to have the greatest impact because of their proximity to the infill site are faults associated with the Foothills fault system. The Foothills fault system is located along the

western flank of the Sierra Nevada (to the east of the infill site). The most recent event on the Foothills fault system was the 1975 Oroville earthquake (magnitude 5.6).

The closest Foothills system fault is the western branch of the Bear Mountain fault zone trending nearly north–south approximately 3–4 miles east of the FSP/SAC Infill Ssite (Wagner et al. 1981). The majority of the Bear Mountain fault zone is considered pre-Quaternary (i.e. inactive) because of the lack of evidence supporting Quaternary displacement. The closest potentially active portion of the Bear Mountain fault zone is approximately 10 miles to the northeast.

Ground-Shaking Hazard

The FSP/SAC Infill Site is located within UBC Seismic Hazard Zone 3 (International Code Council 1997). The Zone 3 designation indicates that earthquakes in the region have the potential to make standing difficult and to cause stucco and some masonry walls to fall. Structures must be designed to meet the regulations and standards associated with Zone 3 hazards.

The infill site is located in a region of California characterized by low historical seismic activity. As mentioned above, the UBC recognizes no active seismic sources in the vicinity of FSP/SAC (International Conference of Building Officials 1997). The risk of surface rupture at the infill site is low because of its distance from active faults.

The measurement of the energy released at the point of origin, or epicenter, of an earthquake is referred to as the magnitude, which is generally expressed in the Richter Magnitude Scale or as moment magnitude. The scale used in the Richter Magnitude Scale is logarithmic so that each successively higher Richter magnitude reflects an increase in the energy of an earthquake of about 31.5 times. Moment magnitude is the estimation of an earthquake magnitude by using seismic moment, which utilizes rock rigidity, amount of slip, and area of rupture.

The greater the energy released from the fault rupture, the higher the magnitude of the earthquake. Earthquake energy is most intense at the fault epicenter; the farther an area is from an earthquake epicenter, the less likely it is that ground shaking will occur there. Geologic and soil units comprising unconsolidated, clay-free sands and silts can reach unstable conditions during ground shaking, which can result in extensive damage to structures built on them (described in “Liquefaction and Associated Hazards”).

Ground shaking can be described as ground acceleration as a fraction of the acceleration of gravity, expressed in units of “g,” where 1 g equals the force of gravity.

The intensity of ground shaking that would occur at the infill site as a result of an earthquake is partly related to the size of the earthquake, its distance from the infill site, and the response of the geologic materials within the infill site. As a rule, the greater the earthquake magnitude and the closer the fault rupture to the site, the greater the intensity of ground shaking will be.

Estimates of Earthquake Shaking

The FSP/SAC Infill Site is located in a region of California characterized by a low ground-shaking hazard. Based on a probabilistic seismic hazard map depicting the peak horizontal ground acceleration values exceeded at a 10 percent probability in 50 years (Cao et al. 2003, California Geological Survey 2008a), the probable peak horizontal ground acceleration at the infill site ranges from 0.1 to 0.2g (where 1g equals the force of gravity). This indicates that the ground-shaking hazard in the infill site is low. Farther to the east and west, the ground-shaking hazard increases, coinciding with the increase in abundance of associated faults and fault complexes (Cao et al. 2003; California Geological Survey 2008a). Additionally, the Safety Element of the Sacramento County General Plan shows the infill site as occurring in the low severity zone for shaking intensity (County of Sacramento 2011). The most severe ground motion would be expected to occur if significant activity were to take place along the Foothills fault system (Fugro West 2008).

LIQUEFACTION AND ASSOCIATED HAZARDS

Liquefaction is a phenomenon in which the strength and stiffness of unconsolidated sediments are reduced by earthquake shaking or other rapid loading. Poorly consolidated, water-saturated fine sands and silts have low plasticity and located within 50 feet of the ground surface are typically considered to be the most susceptible to liquefaction. Soils and sediments that are not water-saturated and that consist of coarser or finer materials are generally less susceptible to liquefaction. Geologic age also influences the potential for liquefaction. Sediments deposited within the most recent millennia are generally more susceptible to liquefaction than older, early Holocene sediments; Pleistocene sediments are even more resistant; and pre-Pleistocene sediments are generally not susceptible to liquefaction (California Geological Survey 2008b).

Two types of potential ground failure associated with liquefaction in the region are lateral spreading and differential settlement. In lateral spreading, a layer of ground at the surface is carried on an underlying layer of liquefied material over a gently sloping surface toward a river channel or other open face. In differential settlement (also called ground settlement and, in extreme cases, ground collapse), soil compacts and consolidates after the ground shaking ceases, when the layers that liquefy are not of uniform thickness, which is a common problem when the liquefaction occurs in artificial fills. Settlement can range from 1 percent to 5 percent, depending on the cohesiveness of the sediments (Tokimatsu and Seed 1984).

The potential for liquefaction, dynamic compaction, or seismically-induced settlement or bearing loss at the FSP/SAC Infill Site is low, based on the geologic age of site sediments, average relative density of the subsurface material, the depth to groundwater (as discussed in Section 3.7, “Hydrology and Water Quality,” of this volume), and anticipated groundshaking hazard. However, prior site investigations have encountered loose to medium dense, sandy soils in the upper 10–15 feet of the ground surface in portions of the infill site that may be prone to liquefaction/densification.

LANDSLIDES AND SEISMICALLY INDUCED SLOPE FAILURES

Within the limits of ground disturbance of the FSP/SAC Infill Site, there is no risk of naturally occurring large landslides because of the stable, cemented nature of the underlying geology. Additionally, the California Geological Survey places Folsom low in its landslide category (City of Folsom 1993), and the American River bluffs downstream of Folsom (they are located in Fair Oaks and Carmichael) are considered stable and are generally not subject to fracture or landslides (County of Sacramento 2011).

OTHER HAZARDS

Several other geologic and seismic hazards (i.e., land subsidence, volcanic activity, tsunami, seiche, and mudflow) that could be experienced in the larger region are unlikely to affect the FSP/SAC Infill Site. The infill site is located more than 95 miles from the Pacific Ocean and is not at risk for inundation by a tsunami. Topography surrounding the project site, while varied in elevation, does not present a reasonable setting for mudflows to occur that would be large enough to substantially affect the infill site. Seiches are waves in inland bodies of water produced by earthquakes or landslides. Significant seismic shaking near the infill site could cause seiches in Folsom Lake. However, a seiche wave from Folsom Lake would not have the ability to reach the infill site due to the restrictive height of the Folsom Dam and adjacent earthen dikes. Land subsidence occurs in deep, unconsolidated sedimentary deposits (commonly when deep groundwater is withdrawn, allowing compaction). These types of deposits do not underlie the infill site and there are no volcanoes in the vicinity. Seiche and tsunami effects unlikely at the infill site because there is a low potential for severe groundshaking of the sort that would produce such waves on Folsom Lake. The FSP/SAC Infill Site is not located in an area characterized by asbestos-containing rocks (Section 3.6, “Hazards and Hazardous Materials,” in this volume).

MINERAL RESOURCES

The California Geological Survey and the State Mining and Geology Board are the state agencies responsible for the classification and designation of areas containing, or potentially containing, significant mineral resources. Areas known as Mineral Resource Zones (MRZs) are classified on the basis of geologic factors, without regard to existing land use and land ownership. The primary objective of the process is to provide local agencies with information on the location, need, and importance of minerals within their respective jurisdictions. Areas are categorized into four general classifications (MRZ-1 through MRZ-4), as in Volume 1, Appendix 1B.

According to the Mineral Land Classification of the Folsom 15-Minute Quadrangle, Amador, El Dorado, Placer, and Sacramento Counties map (California Division of Mines and Geology 1984) and the County (County of Sacramento 20011), the infill site is classified as MRZ-3, an area containing mineral deposits, the significance of which cannot be evaluated from available data. No known mining operations exist within the immediate vicinity of the FSP/SAC Infill Site (County of Sacramento 2011).

PALEONTOLOGICAL RESOURCES

Paleontological resources (such as fossils) are considered limited, nonrenewable, and sensitive scientific resources. The FSP/SAC Infill Site is situated primarily in heavily weathered Mesozoic dioritic rocks composed mainly of granodiorite. These intrusive igneous and volcanic rocks have no potential for encompassing paleontological resources. Six geotechnical boring logs of work conducted in the area of the infill site (Fugro West 2008: Appendix A) indicate that topsoils are derived from deeply weathered and decomposed granodiorite bedrock. Portions of the infill site are covered with fill, but there are no alluvial deposits overlying the igneous and volcanic bedrock that could encompass fossil resources.

3.5.2 REGULATORY CONSIDERATIONS

A list of the applicable federal and state plans, policies, regulations, and laws is provided below. Complete summaries of the federal and state regulations are provided in Volume 1, Appendix 1B.

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

- Clean Water Act 402/National Pollutant Discharge Elimination System - The 1972 amendments to the CWA established the NPDES permit program to control discharges of pollutants from point sources. The NPDES program provides for both general permits (those that cover a number of similar or related activities) and individual permits.
- International Building Code - The design and construction of engineered facilities in the state of California must comply with the requirements of the International Building Code and the adoptions to that code adopted by the State of California.
- U.S. Geological Survey Landslide Hazard Program - The U.S. Geological Survey created the National Landslide Hazards Program to reduce long-term losses from landslide hazards by improving understanding of the causes of ground failure and suggesting mitigation strategies.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

GEOLOGY AND MINERALS

- Alquist-Priolo Earthquake Fault Zoning Act - California's Alquist-Priolo Act is intended to reduce the risk to life and property from surface fault rupture during earthquakes. It prohibits the location of

most types of structures intended for human occupancy across the traces of active faults and strictly regulates construction in the corridors along active faults.

- Seismic Hazards Mapping Act - The Seismic Hazards Mapping Act addresses identifying and mapping areas at risk of strong ground shaking, liquefaction, landslides, and other corollary hazards, and cities and counties are required to regulate development within mapped Seismic Hazard Zones.
- California Building Standards Code - The CBSC is based on the International Building Code and has been modified for California conditions with numerous, more detailed or more stringent regulations. The California Building Code requires extensive geotechnical analysis and engineering for grading, foundations, retaining walls, and other structures, including criteria for seismic design.
- Surface Mining and Reclamation Act of 1975 - The purpose of SMARA is to provide a comprehensive surface mining and reclamation policy that will encourage the production and conservation of mineral resources while ensuring that adverse environmental effects of mining are prevented or minimized.

PALEONTOLOGICAL RESOURCES

- State of California Environmental Quality Act (CEQA) Guidelines Section 15064.5(a)(3) - Section 15064.5(a)(3) provides protection for paleontological resources by requiring that they be identified and mitigated as historical resources.
- California Environmental Quality Act (13 Public Resources Code 21000 et seq.) - California requires identification of the environmental consequences of proposed projects to any object or site important to the scientific annals of California.

LOCAL PLANS, POLICIES, AND ORDINANCES

As a state agency, the California Department of Corrections and Rehabilitation (CDCR) is not subject to land use plans, policies, and ordinances adopted by local agencies. Nevertheless, a discussion of relevant local plans and policies is provided because conflicts with them could indicate the potential occurrence of other physical environmental effects.

GEOTECHNICAL INVESTIGATIONS

Local jurisdictions typically regulate construction activities through a multistage permitting process that may require a site-specific soil investigation. The purpose of the investigation is to provide a soil basis for the development of appropriate construction design. The site-specific soil report is based upon adequate test borings or excavations in the area where construction would occur and prepared by a civil engineer who is registered by the State.

A geotechnical report was completed for the FSP/SAC Infill Site (Fugro West 2008). All relevant recommendations from this report have been incorporated into the facility design and/or mitigation measures.

CITY OF FOLSOM GRADING ORDINANCE

Chapter 14.29 of the Folsom Municipal Code establishes standards for the preparation of sites and construction activities to protect the health, safety, and general welfare of those working or living near the site by protecting against unwarranted or unsafe grading, draining, or other aspects of development.

CITY OF FOLSOM GENERAL PLAN

Section 21.2.1 (part of the Land Use Element) of the City of Folsom General Plan (City of Folsom 1993) states that localized soil conditions in the hillside areas of east Folsom may require special development techniques to reduce slope erosion and to ensure slope stability. In addition, Goal 2, Policy 2.4 of the General Plan Land Use Element states that the City shall require slope analysis maps early in project review in order to judge future grading activity (City of Folsom 1993).

3.5.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

In accordance with Appendix G and Section 15065 of the State CEQA Guidelines, the level II infill correctional facility at the FSP/SAC Infill Site would result in a significant impact relating to geology, soils, seismicity, minerals, or paleontological resources if it would do any of the following:

- expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death from seismic hazards including earthquake fault rupture, strong seismic ground-shaking, seismic-related ground failure, including liquefactions, and landslides, or inundation by seiche, tsunami, or mudflow;
- result in substantial soil erosion or the loss of topsoil;
- be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in onsite or offsite landslide, lateral spreading, subsidence, liquefaction, or collapse;
- be located on expansive soil, as defined in Table 18-1-B of the California Building Code (CBC), creating substantial risks to life or property;
- have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems where sewers are not available for the disposal of wastewater;
- result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state, or result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan; or
- directly or indirectly destroy a unique paleontological resource or site or a unique geologic feature.

The State CEQA Guidelines (Section 15064.5) define a “substantial adverse change” as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

ISSUES NOT DISCUSSED FURTHER

Fault rupture: The FSP/SAC Infill Site is not located in an Alquist-Priolo Earthquake Fault Study Zone and the closest active fault zone is approximately 10 miles away. Consequently, fault rupture at the infill site from an earthquake is not anticipated and this issue is not evaluated further.

Landslides: Within the limits of ground disturbance of the FSP/SAC Infill Site and the immediate vicinity, there is no risk of naturally occurring landslides due to the stable, cemented nature of the underlying geology. The geotechnical report did not identify any landslide issues (Fugro West 2008). The California Geological Survey also places Folsom low in its landslide category (City of Folsom 1993) and the American River bluffs downstream from Folsom and in Fair Oaks and Carmichael are considered stable and are generally not subject to fracture or landslides (County of Sacramento 2011). This issue is not evaluated further.

Geologic and seismic hazards: Land subsidence, volcanic activity, tsunami, seiche, and mudflow are unlikely to affect the FSP/SAC Infill Site. The infill site is not underlain with the deep, unconsolidated sedimentary deposits associated with subsidence. There are no volcanoes in the vicinity, and the infill site is not near the ocean or other body of water capable of producing a tsunami. Although the infill site is adjacent to Folsom Lake, a seiche wave from Folsom Lake would not have the ability to reach the infill site due to the restrictive height of the Folsom Dam and adjacent earthen dikes. Furthermore, there are no steep, upslope areas that have the potential to generate mudflows that would impact the infill site. Consequently, theses hazards are not likely to affect the infill site and are not discussed further.

Septic systems: No septic systems are included as part of the infill development. Wastewater at FSP/SAC is collected and conveyed through pipelines within the prison grounds to the City of Folsom and Sacramento Regional County Sanitation District sewer system and is treated at the Sacramento Regional Wastewater Treatment Plant in Elk Grove. Because there are no existing or proposed septic systems at the FSP/SAC Infill Site, this issue is not evaluated further.

Mineral resources: Sacramento County (County of Sacramento 2007) is classified as MRZ-3, an area containing mineral deposits, the significance of which cannot be evaluated from available data. However, no known mining operations exist within the immediate vicinity of the FSP/SAC Infill Site (Sacramento County 2011) and the FSP/SAC infill site is not located within an area where known mineral resources are located. Therefore, construction of a new level II correctional facility would not result in the loss of availability of a known mineral resource. Therefore, this issue is not discussed further.

Paleontological resources: The FSP/SAC Infill Site is situated primarily in heavily weathered Mesozoic dioritic rocks composed mainly of granodiorite, which have no potential for encompassing paleontological resources. Therefore, the development of level II infill correctional facilities at FSP/SAC would not directly or indirectly destroy a unique paleontological resource or site or unique geologic feature and this issue is not discussed further.

PROJECT IMPACTS AND MITIGATION MEASURES

Impact 3.5-1: Seismic Hazard Impacts

Consistent with State requirements, CDCR must design facilities to meet CBC standards, which require structures to be designed to withstand expected seismic events and include specifications for design and construction. Geotechnical reports are required, depending on the project type and hazard zone, and the reports include additional design criteria as needed.

Ground Shaking

Although the FSP/SAC Infill Site is not identified as being within an Alquist-Priolo Fault Zone Study Zone (Bryant and Hart 2007), the site may experience ground shaking as a result of nearby fault activity that could affect the site or facility stability. Infill site features and structures must be designed to meet the regulations and standards associated with CBC seismic design categories. CDCR has prepared a geotechnical study for the infill site (Fugro West 2008), which identifies design guidelines that would meet and CBC criteria.

Liquefaction

Based on the geologic age of site soils, average relative density of the subsurface material, groundwater conditions, and anticipated ground-shaking hazard for the infill site, the potential for liquefaction, dynamic compaction, or seismically-induced settlement or bearing loss is considered low. However, loose to medium dense, sandy soils were encountered in the upper 10–15 feet of the ground surface in portions of the infill site, and these soils may be prone to liquefaction/densification.

A final geotechnical report would be prepared for the FSP/SAC Infill Site, including field investigation and field borings to address the medium to loose sands that may be prone to liquefaction/densification. The report would identify site conditions and determine appropriate design measures and standards for the facility's final design. If liquefiable soils or soils susceptible to seismically-induced settlement are determined to be present at any location where development-related activities would occur, corrective design actions would be taken, including removal and replacement of soils; onsite densification; grouting; and design of special foundations or other similar measures, depending on the extent and depth of susceptible soils. In accordance with CBC requirements, CDCR's engineer would also be responsible for determining the seismic design category for the site and the appropriate design standards associated with the determined category. All design standards would be incorporated into the final design and construction of the facility.

A single, level II infill correctional facility at the FSP/SAC Infill Site would be designed to comply with the most recent requirements of the CBC, which has provisions for seismic safety. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.5-2: Soil Erosion Impacts

Development of level II correctional facilities at the FSP/SAC Infill Site would involve grading, removal of vegetation cover, and excavating activities that would result in the temporary disturbance of soil such that wind and rain events could cause erosion, runoff, sedimentation, and downstream water quality degradation. Construction activities also could result in soil compaction and wind erosion effects that could adversely affect soils and reduce the revegetation potential at the construction sites and staging areas.

Consistent with State requirements and as discussed in Impact 3.7-1 (in Section 3.7, "Hydrology and Water Quality"), a Stormwater Pollution Prevention Plan (SWPPP) would be developed for the project by a qualified SWPPP developer. The objectives of the SWPPP are to identify pollutant sources that may affect the quality of stormwater associated with construction activity and identify, construct, and implement stormwater pollution prevention measures to reduce pollutants in stormwater discharges during and after construction. Therefore, the SWPPP would include a description of potential pollutants, the management of dredged sediments, and hazardous materials present on the site during construction (including vehicle and equipment fuels). The SWPPP would also include details of how best management practices (BMPs) for sediment and erosion control would be implemented. Implementation of the SWPPP would comply with state and federal water quality regulations.

Furthermore and as noted above, CDCR is required to construct all new facilities in accordance with CBC standards. These standards require that appropriate soil and geotechnical reports be prepared and that site-specific engineering design measures, including those related to general site grading, clearing and grubbing, soil stabilization, and general erosion control, be implemented to appropriately minimize potential adverse impacts related to erosion at the infill site. This, coupled with preparation of a site-specific SWPPP, would minimize potential adverse impacts related to erosion and loss of topsoil at the infill site.

Because CDCR would implement appropriate stormwater controls in accordance with federal and state requirements that would reduce potential runoff, development of a single, level II infill correctional facility at the FSP/SAC Infill Site would result in ***less-than-significant*** *impacts related to erosion.*

Mitigation Measures

No mitigation measures are required.

Impact 3.5-3: Expansive Soil Impacts

Expansive soils have the potential to compromise the structural integrity of infill site features. Visual classification of the site soils indicates that the soil expansion potential is low (Fugro West 2008). Nonetheless, further investigation of the potential for expansive soils would occur as part of the final site-specific geotechnical report that would be prepared if the FSP/SAC Infill Site is selected. Where expansive soils exist on the site, measures to reduce or eliminate problematic soils would be implemented, which could include excavation and replacement with engineered backfill, ground treatment processes, and direction of surface water and drainage away from foundation soils. Consistent with State requirements, CDCR is required to construct all new facilities in accordance with CBC standards. Conformance to these standards would minimize adverse impacts related to expansive soils.

CDCR would design and construct all structures for a single, level II infill correctional facility at the FSP/SAC Infill Site in accordance with CBC design standards, which regulate grading activities including construction on expansive soils. This impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

This page intentionally left blank.

3.6 HAZARDS AND HAZARDOUS MATERIALS

This section evaluates the potential for development of level II infill correctional facilities at the Folsom State Prison/California State Prison, Sacramento (FSP/SAC) Infill Site to expose construction workers and future occupants to existing hazards and hazardous materials, and surrounding residences and other land uses to hazards and hazardous materials. The analysis contained herein was derived, in part, from a government database search conducted by Environmental Data Resources in June of 2012 (provided in Appendix 4C, Volume 4). This records review included searches of the U.S. Environmental Protection Agency's (EPA's) and the California Department of Toxic Substances Control's (DTSC's) databases for known hazardous materials in the vicinity of the FSP/SAC Infill Site.

Impacts related to emergency response at the FSP/SAC Infill Site are addressed in Section 3.10, "Public Services," of this volume of the draft environmental impact report (DEIR). For more information on geologic hazards associated with development of the FSP/SAC Infill Site, refer to Section 3.5, "Geology, Soils, Seismicity, Minerals, and Paleontological Resources," of this volume. In addition, for information related to flooding and water quality at this site, refer to Section 3.7, "Hydrology and Water Quality," of this volume.

3.6.1 ENVIRONMENTAL SETTING

The FSP/SAC Infill Site is located to the north of the existing FSP/SAC facility. Historical research performed for a Phase I Environmental Site Assessment conducted in 2008 revealed that the infill site was occupied by a prison honor ranch/farm from 1880 through the 1970s. The area included facilities for common ranch activities, including blacksmithing; a hog farm; a poultry farm; a slaughterhouse; and a dairy complete with calving, milking, and pasteurization buildings and greenhouses. Numerous buildings were constructed and demolished throughout the historical use of the area for farming and livestock. Around 1949, the amount of the prison property used for orchards and row crops diminished and land use transitioned to expand dairy and livestock facilities. In the late 1970s, ranch/farm activities gave way to other prison work opportunities that supported the greater prison population, such as a fire department (located within old ranch buildings), a material recycling facility, and the Inmate Ward Labor program facility.

Existing land uses on the infill site, include fire protection facilities, which include a station for the fire protection vehicles and fire protection staff quarters; an outdoor area for inmates; an Inmate Ward Labor program facility, including five permanent structures and multiple temporary structures used for administrative purposes, storage, and maintenance; a recycling facility; two buildings used for storage and maintenance for a bike repair program; and two vacant structures.

HAZARDOUS MATERIALS

For the purposes of this analysis, a "hazardous material" is defined as any material that, because of quantity, concentration, or physical or chemical characteristics, poses a significant present or potential hazard to human health and safety, or to the environment, if released. Hazardous materials include, but are not limited to, hazardous substances, hazardous wastes, and any material that a handler or the administering regulatory agency has a reasonable basis for believing would be injurious to the health and safety of persons or harmful to the environment if released into the workplace or the environment (California Health and Safety Code, Section 25501 [o]). Several characteristics may cause a substance to be considered hazardous, including toxicity, ignitibility, corrosivity, or reactivity. Although often treated separately from hazardous materials, petroleum products (including crude oil and refined products such as fuels and lubricants), and natural gas are considered in this analysis because they may also pose a potential hazard to human health and safety if released into the environment.

POTENTIALLY HAZARDOUS BUILDING MATERIALS

Buildings in the area of the infill site might be contaminated with residual lead, which was used as a pigment and drying agent in oil-based paint until the Lead-Based Paint Poisoning Prevention Act of 1971 prohibited such use. In addition, weathering and routine maintenance of painted structures might have contaminated nearby soils with lead.

Prior to the 1980s, a variety of building construction materials commonly used asbestos, a mineral fiber, for insulation and as a fire retardant. There is no health threat if asbestos-containing materials remains undisturbed and does not become airborne. However, if asbestos-containing materials are damaged or disturbed by repair, remodeling, or demolition activities, microscopic fibers become airborne and can be inhaled. When airborne asbestos is inhaled, the thin fibers irritate tissues and resist the body's natural defenses. Asbestos is linked to cancers of the lung and the lining of internal organs, as well as to asbestosis and other diseases that inhibit lung function. As discussed above, many structures in the area of the infill site were constructed before the 1980s.

Polychlorinated biphenyls (PCBs) belong to a broad family of manufactured organic chemicals known as chlorinated hydrocarbons. They have a range of toxicity and vary in consistency from thin, light-colored liquids to yellow or black waxy solids. Because of their non-flammability, chemical stability, high boiling point, and electrical insulating properties, PCBs were used in hundreds of industrial and commercial applications. Although no longer commercially produced in the United States, PCBs may be present in equipment from before the 1979 PCB ban. Equipment on the infill site that might contain PCBs includes transformers, capacitors, and other electrical equipment; oil used in motors and hydraulic systems; and thermal insulation material (e.g., fiberglass, felt, foam, and cork).

Suspected asbestos-containing materials were removed from the dairy boiler house following the removal of the storage tank (described below). A number of transformers and ballasts were also removed from locations across the prison property, including the infill site.

NATURALLY OCCURRING HAZARDS

Asbestos is naturally occurring as a fibrous minerals found in certain types of rock formations, primarily ultramafic rocks. Weathering or human disturbance can break naturally occurring asbestos down to microscopic fibers that are suspended easily in air. When airborne asbestos is inhaled, these thin fibers irritate tissues and resist the body’s natural defenses. Ultramafic rocks in the region consist of serpentine, which can, but do not always, contain naturally occurring hazards such as asbestos.

Although serpentine rocks are known to occur in Sacramento County, the infill site is underlain with primarily granodiorite (a coarse-grained, plutonic rock, similar to granite in composition but with more plagioclase feldspar). The California Department of Conservation, Division of Mines and Geology, maps indicate that the nearest ultramafic rock unit is located north of Folsom Lake (CDC 2000). The infill site is located in an area with the least likelihood to contain naturally occurring asbestos. The area south of the infill site where the existing FSP and SAC facilities are located is mapped as moderately likely to contain naturally occurring asbestos (Higgins and Clinkenbeard 2006)

SITES OF POTENTIAL ENVIRONMENTAL CONCERN

Sites of potential concern are identified where there is the possible presence of any hazardous material under conditions that indicate the possibility of an existing release, a past release, or a threat of a release of the hazardous material or waste into structures on the property or into the ground, groundwater, or surface water of the property. This analysis considered potential effects based on proximity of the FSP/SAC Infill Site to known hazardous material sites identified through government

database record searches conducted by Environmental Data Resources in June 2012 (provided in Appendix 4C of this volume).

The only recognized environmental concerns in the vicinity of the FSP/SAC Infill Site, as described below, are on the CDCR property and are associated with past land use. Although these sites are historical in nature and have been remediated, they are important to note due to the potential for residual, undiscovered contamination and the presence of deed restrictions limiting development of the property.

Within the Infill Site: Hog Farm Waste Storage Area

The hog farm waste storage area is the historical site of the hog farm and within the infill site disturbance area. It was used to temporarily store wastes from other investigations and remedial activities conducted at the prison after the farm became inactive.

In the Vicinity of the Infill Site: FSP Facilities

There is a history of industrial use associated with FSP. The prison operated a license plate manufacturing plant from which caustic stripping bath liquids and paint sludges were stored in a drum storage area or discharged into an evaporation pond. Other areas of contamination that were associated with the prison include a second evaporation pond used for cannery wastewater and a scrap metal disposal area, light industrial areas, and firing ranges. High levels (above 1,000 milligrams per kilogram) of chromium, copper, lead, nickel, and zinc have been detected in the soil. Specific cleanup and other remedial actions are discussed below.

Former Camp 12 Firing Range

The former Camp 12 Firing Range consists of rifle, pistol, and shotgun ranges that have been remediated for lead contamination through the excavation of contaminated soils. The covenant made between DTSC and the California Department of Corrections and Rehabilitation (CDCR) in 2005 to restrict use of portions of the prison property restricts this area to commercial and industrial usage. The firing range is located southwest of the infill site.

Scrap Metal Disposal Area/Burn Pit

The scrap metal disposal area and burn pit are located south of the infill site. Remediation activities have included excavation of soil impacted with metals from the metal scrap disposal area. The covenant made between DTSC and CDCR in 2005 to restrict use of portions of the prison property restricts this area to commercial and industrial usage due to the presence of elevated concentrations of lead remaining in the soil.

Former Drum Storage Area

Lead contamination at the former Drum Storage Area located south of the infill site has been remediated to levels appropriate for commercial and industrial use. The covenant made between DTSC and CDCR in 2005 to restrict use of portions of the prison property restricts development of this area to commercial and industrial usage (Sacramento County Recording 2005).

Industrial Manufacturing and Processing Area

A Remedial Action Workplan was developed for the industrial manufacturing and processing area in 2005, which concluded that groundwater is the only resource affected. Where contaminated groundwater occurs, it is in a water-bearing zone 20–50 feet below the ground surface and almost completely isolated from the main aquifer. Contaminants in the affected groundwater include benzene, ethylbenzene, tuoluene, and xylenes at levels greater than California drinking water standards. The approved remedy included continued monitoring of groundwater to confirm reduction of xylenes (EDR 2012). The infill site is located north of, and up gradient from, the processing area. In August of 2005, DTSC certified that all appropriate responses had been completed in accordance with applicable regulations and that acceptable engineering practices have been implemented (EDR 2012).

Underground Storage Tank Sites

Five leaking underground storage tank sites have been documented in the vicinity of the FSP/SAC Infill Site: Garage/Bus Repair; Old Gasoline Station; Maintenance Fueling Area; and Green Valley Conservation Camp. These sites are not within 0.25 mile of the infill site, and the infill site is located on a topographic high point relative to these identified sites.

Garage/Bus Repair. The garage/bus repair site is located approximately 0.6 mile southwest of the FSP/SAC Infill Site. A diesel leak from an underground storage tank occurred in 1987. Excavation of contaminated soils occurred in 1998, and the case was closed by the State Water Resources Control Board (SWRCB) in 2008.

Old Gasoline Station. The old gas station is mapped southwest of the infill site, adjacent to the American River. A leak in an underground storage tank containing gasoline was detected in 1988. Four gasoline storage tanks were removed in 1998 and soil contaminated with gasoline and benzene was excavated. The area was backfilled and repaved. A waste oil underground storage tank was removed from the site in 1991. Cleanup of the site is complete and the case was close by Sacramento County and the Central Valley Regional Water Quality Control Board in 2007.

Maintenance Fuel Area. One gasoline, one diesel, and one waste oil underground storage tank were formerly located on the eastern side of the maintenance garage approximately 0.5 mile south of the FSP/SAC Infill Site. The former storage tanks and dispenser locations are covered with asphalt and concrete. The maintenance fuel area is being remediated under Regional Water Quality Control Board oversight due to gasoline contamination of the groundwater.

Green Valley Conservation Camp. The Green Valley Conservation Camp site is located on prison property approximately 0.3 mile southwest of the infill site. A leak in an underground storage tank was detected in 1998. Cleanup of the contaminated soil was completed in 2007.

Dairy Boiler House. The dairy boiler house is a remnant structure located across from the fire department and south of the recycling facility, within the FSP/SAC Infill Site. A 500-gallon diesel underground storage tank was removed from the area behind the dairy boiler house in 1992. Soils samples taken the same year were tested for petroleum hydrocarbon impacts and found to be below reporting limits.

In the Vicinity of the Infill Site: "Blue Pond"

Blue paint sludge resulting from inmate license plate manufacturing was historically dumped in an evaporation pond located south of the infill site. Soil from the pond site was excavated in 1988 and temporarily stored at the hog farm. A year later, soil tests indicated elevated concentrations of chromium, lead, nickel, and zinc. In 1994, 625 cubic yards of contaminated soil was removed from the stockpiled area. In 1995, 50 tons of additional soil was removed. Subsequent soil testing conducted in 1996 indicated that all contaminated soil had successfully been removed and remediation was confirmed as complete by DTSC.

In the Vicinity of the Infill Site: Toxic Pit

The SWRCB maps a toxic pit approximately 0.5 mile south of the infill site, near the intersection of Folsom Prison Road and Ryan Parkway, downgradient from the infill site. The case was opened in 1965, but no further information has been provided.

SAFETY HAZARDS

PROXIMITY TO SCHOOLS

Children are particularly sensitive to hazardous materials exposure, and additional protective regulations apply to projects that could use or disturb potentially hazardous products near schools. The nearest school is the Carl Sundahl Elementary School (9932 Inwood Road), located nearly 1 mile west of the FSP/SAC Infill Site.

PROXIMITY TO AIRPORTS

The nearest airports to the FSP/SAC Infill Site are the Cameron Airpark (located more than 9 miles to the east), Mather Airport (located 11 miles to the southwest), and McClellan Airfield (located more than 13 miles to the west). None of these facilities are close enough to the site (generally 2 miles or less) to create a safety hazard.

FIRE HAZARD

Folsom's climate is typical of much of the Sacramento Valley, with mild winters and hot, dry summers. The abundant vegetation combined with dry climate conditions make this area susceptible to wildfires. However, the California Department of Forestry and Fire Protection (2008) has not recommended that the area be mapped as a location with very high hazard severity.

The Folsom Prison Fire Department (FPFD) provides fire protection and emergency rescue for FSP/SAC as well as the residents of Folsom and surrounding communities in and around Sacramento County. FPFD has a fire station located within the infill site that provides fire protection and emergency rescue services for FSP/SAC facilities.

For more information on firefighting facilities and emergency service to the FSP/SAC Infill Site, refer to Section 3.10, "Public Services," of this volume.

3.6.2 REGULATORY CONSIDERATIONS

A list of the applicable federal and state plans, policies, regulations, and laws related to hazards and hazardous materials is provided below. Complete summaries of these regulations are provided in Volume 1, Appendix 1B.

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

- Resource Conservation and Recovery Act (RCRA) (42 U.S.C. Section 6901 et seq.) - RCRA established a framework for national programs to achieve environmentally sound management of both hazardous and non-hazardous wastes. The Hazardous Waste Management subchapter of the RCRA deals with issues including the export of hazardous waste, inspections of hazardous waste disposal facilities, and the identification and listing of hazardous waste.
- Comprehensive Environmental Response, Compensation, and Liability Act (42 U.S.C. Section 9601 et seq.) - CERCLA created a tax on the chemical and petroleum industries and provided federal authority to respond directly to releases of hazardous substances that may endanger public health or the environment. CERCLA established prohibitions and requirements concerning closed and abandoned hazardous waste sites; provided for liability of persons responsible for releases of hazardous waste; and established a trust fund to provide for cleanup when no responsible party could be identified.

- Emergency Planning and Community Right to Know Act (40 CFR Parts 350–372) - EPCRA establishes requirements for federal, state and local governments, Indian tribes, and industry regarding emergency planning and "Community Right-to-Know" reporting on hazardous and toxic chemicals.
- Hazardous Materials Transportation Act (49 U.S.C. Section 1801-1819 and 49 CFR Parts 101, 106, 107, and 171-180) - The transportation of hazardous materials is regulated by HMTA, which provides DOT with a broad mandate to regulate the transport of hazardous materials, with the purpose of adequately protecting the nation against risk to life and property which is inherent in the commercial transportation of hazardous materials.
- Chemical Accident Prevention Provisions (CFR Part 68) - This regulation sets forth the list of regulated substances, the petition process for adding to or deleting from the list, the requirements for owners or operators of stationary sources concerning the prevention of accidental releases, and the state accidental release prevention programs.
- Clean Air Act - This act protects the general public from exposure to airborne contaminants that are known to be hazardous to human health. Under the Clean Air Act, EPA established National Emissions Standards for Hazardous Air Pollutants, which are emissions standards for air pollutants, including asbestos.
- Clean Water Act (Section 402(p)) - The CWA is the primary federal legislation governing water quality whose objective is "to restore and maintain the chemical, physical, and biological integrity of the nation's waters," which includes oceans, bays, rivers, lakes, ponds, and wetlands. This act regulates discharges and spills of pollutants, including hazardous materials, to surface waters and groundwater.
- Safe Drinking Water Act (42 U.S.C. Section 300(f) et seq.) - This act regulates discharges of pollutants to underground aquifers.
- Toxic Substances Control Act (15 U.S.C. Section 2601 et seq.) - This act regulates the manufacturing, inventory, and disposition of industrial chemicals, including hazardous materials.
- Federal Insecticide, Fungicide, and Rodenticide Act (7 U.S.C. Section 136 and 40 CFR Parts 152–171) - This act regulates the manufacturing, distribution, sale, and use of pesticides.
- Uniform Fire Code - The UFC is the primary means for authorizing and enforcing procedures and mechanisms to ensure the safe handling and storage for hazardous materials at fixed facilities. To ensure that these safety measures are met, the UFC employs a permit system based on hazard classification.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

- California Health and Safety Code: Hazardous Materials Release Response Plans and Inventory Law (Section 25500 et seq.)- Under this law, facilities using hazardous materials are required to prepare Hazardous Materials Business Plans.
- Hazardous Waste Control Act (Section 25100 et seq.) - Similar to RCRA, the Hazardous Waste Control Act regulates the identification, generation, transportation, storage, and disposal of materials the State of California has deemed hazardous.
- Porter-Cologne Water Quality Act (California Water Code Section 13000 et seq.) - Under the Porter-Cologne Act, California must adopt water quality policies, plans, and objectives to ensure that the state's beneficial uses for water are reasonably protected. Each RWQCB must prepare and update basin plans to set forth water quality standards for surface water and groundwater and actions to control nonpoint and point sources of pollution to achieve and maintain these standards.
- Safe Drinking Water and Toxic Enforcement Act (Proposition 65) - The Safe Drinking Water and Toxic Enforcement Act regulates the discharge of contaminants to groundwater.
- California Government Code Section 65962.5 - Requires the California Department of Toxic Substances Control DTSC to compile and maintain lists of potentially contaminated sites located throughout the State of California.

- Air Toxic Control Measure - The ATCM governs the construction of projects in areas that contain asbestos and authorizes the Air Pollution Control Officer to apply the ATCM to any area that it determines contains NOA.
- Fire Hazard Severity Zones (Public Resources Code Sections 51175-51189 and Government Code Sections 51175–51189) - Requires identification of fire hazard severity zones within the state of California. The hazard ranges are measured quantitatively, based on: vegetation, topography, weather, crown fire potential, and ember production and movement within the area of question.

LOCAL PLANS, POLICIES, AND ORDINANCES

As a state agency, CDCR is not subject to land use plans, policies, and ordinances adopted by local agencies. Nevertheless, a discussion of relevant local plans and policies is provided because conflicts with them could indicate the potential occurrence of other physical environmental effects.

SACRAMENTO COUNTY ENVIRONMENTAL MANAGEMENT DEPARTMENT

The Environmental Compliance Division of the Sacramento County Environmental Management Department has been designated by the California Environmental Protection Agency as the Certified Unified Program Agency for Sacramento County. As the Certified Unified Program Agency, the Environmental Compliance Division is responsible for the implementation of the following six statewide environmental programs for Sacramento County:

- underground storage of hazardous substances (USTs),
- Hazardous Materials Business Plan requirements,
- Hazardous Waste Generator requirements,
- California Accidental Release Prevention program,
- Uniform Fire Code hazardous materials management plan, and
- aboveground storage tanks (Spill Prevention Control and Countermeasures Plan only).

Implementation of these programs involves:

- permitting and inspection of regulated facilities;
- providing educational guidance and notice of changing requirements stipulated in state or federal laws and regulations;
- investigations of complaints regarding spills or unauthorized releases; and
- administrative enforcement actions levied against facilities that have violated applicable laws and regulations (Sacramento County Environmental Management Department 2013).

AREA PLAN FOR EMERGENCY RESPONSE TO HAZARDOUS MATERIALS INCIDENTS IN SACRAMENTO COUNTY

The area plan provides information for agencies involved in hazardous materials response within Sacramento County, including, but not limited to, the Sacramento County Sheriff's Department, Sacramento City Fire Department, State Office of Emergency Services, Sacramento County Health Department, Public Works, and the California Highway Patrol, if needed to respond to a hazardous materials incident.

CITY OF FOLSOM GENERAL PLAN

The Hazardous Materials Element of the City of Folsom General Plan (1993) contains goals and policies relating to hazardous material use within the city. Specifically, the goal is "to protect the health

and welfare of the residents of Folsom through the management and regulation of hazardous materials in a manner that will focus on preventing problems."

3.6.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

In accordance with Appendix G and Section 15065 of the State of California Environmental Quality Act (CEQA) Guidelines, the level II infill correctional facility at the FSP/SAC Infill Site would result in a significant impact relating to hazards and hazardous materials if it would do any of the following:

- create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials;
- create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the likely release of hazardous materials into the environment;
- emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within 0.25 mile of an existing or proposed school;
- create a significant hazard to the public or the environment as a result of being included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5;
- result in a safety hazard for people residing or working in the project area for those projects located within an airport land use plan or within two miles of a public airport or public use airport where such a plan has not been adopted;
- for those projects within the vicinity of a private airstrip, result in a safety hazard for people residing or working in the project area; or
- expose people or structures to the risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands.

The State CEQA Guidelines (Section 15064.5) define a "substantial adverse change" as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

ISSUES NOT DISCUSSED FURTHER

Airport Hazards: Based on a review of recent aerial photographs, the infill site is not located within the vicinity of a private airstrip. Therefore, the safety hazard associated with the level II infill correctional facilities being located in the vicinity of a private airstrip is not discussed further. In addition, the closest public airport is the Cameron Airpark, which is located more than 9 miles east of the infill site. Therefore, safety hazards associated with the level II infill correctional facilities being located in an airport land use plan or within 2 miles of a public airport will not be discussed further.

School Hazards: The nearest school to the FSP/SAC Infill Site is nearly one mile to the west. In addition, a review of the City of Folsom General Plan indicates that planned land uses directly surrounding the infill site primarily include public and open space. As such, no schools are proposed for the areas surrounding the infill site. Therefore, safety hazards associated with the level II infill correctional facilities being located within 0.25 mile of an existing or proposed school are not discussed further.

PROJECT IMPACTS AND MITIGATION MEASURES

Impact 3.6-1: Construction-Related and Operational Hazardous Materials Impacts

Construction and operation of a single, level II infill correctional facility at the FSP/SAC Infill Site would increase the routine transportation, use, storage, and disposal of hazardous materials and petroleum

products (such as diesel fuel, lubricants, paints and solvents, and cement products containing strong basic or acidic chemicals).

Standard accident and hazardous materials recovery training and procedures are enforced by the state and followed by private state-licensed, certified, and bonded transportation companies and contractors. Further, pursuant to 40 Code of Federal Regulations (CFR) 112 requires that a spill prevention, containment, and countermeasures plan or, for smaller quantities, a spill prevention and response plan, that identifies best management practices (BMPs) for spill and release, and disposal of any spills or releases, must be established for the development of a single, level II infill correctional facility. As required under state and federal law, plans for notification and evacuation of site workers and local residents in the event of a hazardous materials release would be in place throughout construction.

The development of level II infill correctional facilities at the infill site would conform to the specifications in the spill prevention plans prepared under a Construction General Permit (2009-0009 DWQ), required by the State Water Resources Control Board (SWRCB), to avoid spills and releases of hazardous materials and wastes. Inspections would be conducted to verify consistent implementation of general construction permit conditions and BMPs would be required to minimize the potential for spills and releases and help ensure the immediate cleanup and response thereto. BMPs include, for example, the designation of special storage areas and labeling, containment berms, coverage from rain, and concrete washout areas.

The level II infill correctional facilities would be operated in accordance with the FSP's Sacramento County approved Hazardous Materials Business Plan, which includes an inventory of hazardous materials handled, facility floor plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures. In addition, the State of California Division of Occupational Safety and Health's (Cal OSHA's) regulations for the use of hazardous materials in the workplace, as detailed in California Code of Regulations (CCR) Title 8, include requirements for safety training, availability of safety equipment, accidents and illness prevention programs, hazardous substance exposure warnings, and preparation of an emergency action and fire prevention plan. Cal OSHA enforces hazard communication program regulations that contain training and information requirements, including procedures for identifying and labeling hazardous substances, communicating hazard information related to hazardous substances and their handling, and preparing health and safety plans to protect workers and employees at hazardous waste sites. The hazard communication program requires that Material Safety Data Sheets be available to employees and that employee information and training programs be documented.

Operation of a level II infill correctional facility at FSP/SAC would involve the routine transport of common hazardous materials. Facility maintenance activities would require the use of various common hazardous materials, including cleaners, paints, fuels, and oils and lubricants. The operation-related effects of hazardous materials handled onsite would generally be limited to the immediate areas where materials would be located because this is where exposure would most likely occur. Accordingly, the individuals most at risk would be the facilities and maintenance employees, or others in the immediate vicinity of hazardous materials. The routes through which these individuals could be exposed include inhalation, contact, ingestion, and injection. Exposure could occur as a result of an accident involving hazardous materials. Aside from accidents possibly occurring onsite, accidents during hazardous materials or hazardous waste transport to and from the site could expose individuals and the environment to risks at some distance from the site. However, transportation of hazardous materials on area roadways is regulated by the California Highway Patrol and California Department of Transportation, whereas use of these materials is regulated by DTSC under CCR Title 22.

Hazardous materials specific to correctional uses are generally limited to firearms, ammunition, and other miscellaneous weaponry, such as tear gas and pepper spray canisters. The level II infill correctional facility would include an armory for the safe and secure storage of firearms, ammunitions, and miscellaneous weaponry. The armory would be constructed to meet the "safe storage"

requirements of Dangerous Weapons Control Laws (Title 2, Part 4 of the California Penal Code) as regulated by the California Department of Justice. Therefore, because firearms and ammunition would be used and stored according to state regulations, the level II infill correctional facilities would not result in a safety risk related to the storage of weapons on the site.

Compliance with federal and state laws setting occupational safety standards and with the emergency preparedness plan and any other safety plans prepared for the level II infill correctional facilities to minimize construction and worker safety risks from both physical and chemical hazards in the workplace would reduce impacts to a less-than-significant level. With implementation of the regulations and procedures outlined above and standard Cal OSHA procedures, impacts associated with hazards to the public or environment through the routine transport, use, or disposal of hazardous materials would be reduced to a less-than-significant level.

Because the single, level II infill correctional facility at the FSP/SAC Infill Site would comply with existing regulations concerning routine transport, use, handling, and disposal of hazardous materials during construction and operational activities, this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.6-2: Site Contamination Impacts

FSP is listed on DTSC's Hazardous Waste and Substances List. Soil remediation has been completed and groundwater monitoring is ongoing. Deed restrictions at FSP have been implemented to limit development to adult housing and restrict the use of groundwater. Most identified sites of contamination are located more than 0.25 miles south of the infill site and downgradient. The temporary contaminated soil storage area located at the former hog farm could pose an environmental threat to human health. Although closure of this area was obtained through the DTSC, contaminated soils may remain in this area that could be exposed as a result of grading activities. In addition, farming and ranching activities (e.g., blacksmithing, water retention ponds) in the area may have resulted in undocumented contamination of site soils. Further characterization of the site is necessary to confirm that there is no residual contamination on the infill site and specify remedial actions, if required.

Components of the infill project involve the demolition of buildings that may expose construction workers to hazardous wastes or materials, including asbestos containing materials, lead-based paints, and PCBs, during demolition and removal of the building components. Potential construction worker exposure to hazardous materials is considered to be a significant impact because of the possible threat to human health from the handling of these materials.

The FSP/SAC Infill Site includes a former stockpile area for contaminated soils, as well as structures built prior to regulation of asbestos, lead, and PCBs in construction materials that would require demolition. These conditions represent the potential for a reasonably foreseeable upset and likely release of hazardous materials with development of a single, level II infill correctional facility that would be a significant impact to people or the environment.

Mitigation Measures

Mitigation Measure 3.6-2a

Prior to any demolition and construction activities involving the disturbance of soil on the FSP/SAC Infill Site, CDCR will perform a Phase II Environmental Site Assessment study in the areas where farming and ranching activities occurred, especially the hog farm waste storage area, to evaluate potential risks posed and determine if remediation is required.

If remediation is required, CDCR will comply with Sacramento County Environmental Management Department mitigation requirements, including remediation levels. Several mitigation measures will be considered in managing contaminated soil, including one or more of the following:

- Excavating and removing the contaminated soil prior to or during construction of the infill site, transporting the contaminated soil offsite in accordance with US Department of Transportation and Hazardous Materials Transportation Act requirements and disposing the contaminated soil in an appropriate landfill (based on the level of contamination identified) in accordance with the RCRA and Hazardous Waste Control Act regulations.

- Remediating the contaminated soil in place.

- Altering the locations of proposed buildings/structures to avoid contact with contaminated soil.

- Capping the contaminated soil in place to eliminate exposure of humans to airborne concentrations of chemicals of concern and to prevent the continued migration of contaminants in the subsurface. In order to assess whether contamination is associated with stockpiled soils at the former hog farm, it will be necessary to perform sampling in the area to assess the soil for the presence of residual fuel contamination. If contamination is identified, it will be remediated in accordance with requirements of the appropriate agencies (e.g., Sacramento County Environmental Management Department). Any contaminated soil removed from the area will be transported offsite in accordance with US Department of Transportation regulations and disposed at an appropriate landfill based on the concentration(s) of contaminants found.

Mitigation Measure 3.6-2b

A California-certified asbestos consultant and California Department of Health Services–certified lead project designer will prepare a hazardous materials specification for the abatement of the asbestos containing materials and lead-based paints. This specification should be the basis for selecting qualified contractors to perform the proposed asbestos and lead abatement work. CDCR will retain a California-licensed asbestos abatement contractor to perform the abatement of the asbestos containing materials, asbestos-containing construction materials, and lead-based paints deemed potentially hazardous. In addition, lamps used in fluorescent lights, ballasts, and electrical thermostats will be disposed of properly. All identified hazardous materials will be abated before demolition.

Significance after Mitigation

Implementation of Mitigation Measures 3.6-2a and 3.6-2b would ensure that hazardous materials are identified and abated before demolition and construction activities are implemented, which would reduce the potentially significant impacts to people and the environment due to potential release of hazardous materials to a **less-than-significant** level.

Impact 3.6-3: Known Hazardous Materials Site Impacts

The FSP/SAC Infill Site appears on lists of hazardous materials sites, including those compiled pursuant to California Government Code Section 65962.5. As discussed above, there is potential for residual soil contamination in the vicinity of the hog farm waste storage area from contaminated soils stockpiled at this site.

Although the known hazardous materials site on the FSP/SAC Infill Site has been cleaned up, there is potential for remnant contaminated soils that could be disturbed during demolition and site grading for a single, level II infill correctional facility. This impact is significant.

Mitigation Measures

Implement Mitigation Measure 3.6-2a.

Significance after Mitigation

Implementation of Mitigation Measures 3.6-2a would ensure that hazardous materials are identified and abated before demolition and construction activities are implemented, which would reduce the potentially significant impacts to people and the environment due to potential release of hazardous materials to a **less-than-significant** level.

Impact 3.6-4: Wildland Fire Impacts

The FSP/SAC Infill Site is not located in a high risk area for wildland fire hazards (California Department of Forestry and Fire Protection 2008). The infill site is surrounded by prison property, which currently consists of existing prison facilities, supporting structures, parking lots, a perimeter road, and landscaped areas. In addition, the prison facilities are surrounded by oak woodland that extends east towards Folsom Lake. The woodland area is traversed by fire breaks, patrol roads, and a couple utility lines. The oak woodland may increase exposure to anthropogenic ignition sources (e.g., discarded cigarettes, sparks emanating from vehicles).

The Folsom Prison Fire Department maintains its own onsite fire station and coordinates with the Folsom Fire Department. In addition, the level II infill correctional facility buildings that would be designed and constructed to meet all fire code requirements that would address ignition-resistive construction, interior fire sprinklers, and/or sufficient water supply and pressure. Emergency response services in place at CDCR that apply to the FSP/SAC Infill Site are adequate to meet the needs of the infill site.

The FSP/SAC Infill Site is not in a high-risk area for wildland fires; a new single, level II infill correctional facility would meet fire code requirements, and emergency response services are in place to combat fires on the property. Therefore, this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

3.7 HYDROLOGY AND WATER QUALITY

This section describes the existing hydrological setting at the Folsom State Prison and California State Prison, Sacramento (FSP/SAC) Infill Site, including runoff, storm drainage, and flood control. Regulations and policies affecting local hydrology and water quality are discussed, and impacts are identified that may result from development of the infill site. Mitigation measures are recommended to reduce potential impacts, where appropriate.

Impacts associated with water supply (including surface supplies and groundwater) are discussed in Section 3.12, "Utilities," of this volume of the draft environmental impact report (DEIR).

3.7.1 ENVIRONMENTAL SETTING

REGIONAL SETTING

The FSP/SAC Infill Site is located in the City of Folsom, approximately 22 miles east of downtown Sacramento, immediately east of the American River and south of the recently constructed Folsom Lake Crossing Road, Folsom Lake, and Folsom Dam in the northeastern corner of Sacramento County. The elevation of the infill site is approximately 400 feet above mean sea level.

The FSP/SAC Infill Site is located in a Mediterranean climate characterized by dry, hot summers and cool, wet winters. The 1980-2012 water year average annual precipitation in the area is 22.98 inches (PRISM 2013). Almost 93 percent of the precipitation falls from October to April.

AREA HYDROLOGY

SURFACE WATER

The FSP/SAC Infill Site is located within the American River watershed. The American River drains a large portion of the central Sierra Nevada, which is roughly bounded by Interstate 80 on the northern edge and by U.S. Highway 50 on the southern edge. The water from the American River is collected in Folsom Lake and Lake Natoma before being released and eventually flowing into the Sacramento River. The American River generally flows from Folsom Lake south to Lake Natoma before turning westward where it converges with the Sacramento River on the northwestern corner of downtown Sacramento.

Floodplains

Flood zones at the FSP/SAC Infill Site are mapped by the Federal Emergency Management Agency (FEMA). The infill site is located more than 250 feet above the American River in flood zone A (areas with a 1-percent annual chance of flooding) (FEMA 2013). Other than Folsom Lake itself, no other FEMA flood zones are mapped near the infill site.

The existing FSP/SAC facilities are not mapped as being within the preliminary 200-year floodplain mapping performed in conjunction with the U.S. Army Corps of Engineers' Sacramento and San Joaquin River Basins Comprehensive Study (California Department of Water Resources 2013).

Onsite Drainage

The onsite drainage is a combination of storm drains, concrete and unlined channels, natural channels, and a tunnel. From north to south, there are three main drainage systems in the vicinity of the FSP/SAC Infill Site. At the northern end of the infill site (labeled as Drainage Basin A), the 79-acre area containing the Inmate Work Labor facility (IWL), the fire station, and the recycling facility drains through multiple

conveyances, including a stone ditch, a culvert under Folsom Prison Road, and natural drainage paths flowing westward. Some runoff detention is provided by Pond 1 at the western portion of the sub-basin prior to the runoff eventually flowing down the hillslope and emptying into the American River.

The new Folsom Lake Crossing Road over the American River was opened in March 2009. Construction of the new road and bridge altered existing roads and drainages on the prison property. Several drain inlets were constructed to drain water into underground pipelines in the area northeast of IWL. Based on conversations with the FSP Correctional Plant Manager, the drain inlets became necessary after construction of Folsom Lake Crossing began and led to flooding during the wet season. These underground pipes empty into a new riprap channel that was built for the Folsom Lake Crossing project. The drainage ditch causes Drainage Basin A1 north of the IWL, which previously drained runoff northward, to divert runoff back onto the prison property. The new channel flows southwest around the IWL and recycling facilities before eventually emptying into an existing natural drainage channel in Drainage Basin A.

The 27-acre area to the south (Drainage Basin B) drains land containing part of the minimum security camp. Several drainages collect water in the sub-basin and route it west toward the American River. Three different ponds (Ponds 2-4) are located in the sub-basin that provide runoff regulation. Discharge from Pond 3 empties into the main drainage channel before it turns into a stone canal that empties into Pond 4. Pond 4 discharge can be controlled by a gate if unwanted constituents enter the drainage system and must be prevented from entering the river. Drainage from Pond 2 flows down a channel where it joins the main drainage from Pond 4 before flowing down the Old Power Canal and emptying into the American River.

The southernmost drainage basin (Drainage Basin C) is the largest basin based on topography, and has multiple outlets to the American River because of stormwater engineering. This basin includes the existing FSP/SAC facilities. Runoff is largely controlled by underground pipelines that collect water and route it toward the American River. The parking areas of the southern portion of the level II infill correctional facility are located in Drainage Basin C. An existing underground pipe that begins north of SAC flows to the southwest and connects with a nearly 2,000-footlong pipe that then routes water west and into Pond 4, which is on the boundary with Drainage Basin B to the north. Ultimately the water flows into the American River. Two sections of earthen drainage channel, approximately 600-700 feet long, route runoff from the northern portion of Drainage Basin C into the underground pipeline.

The footprint of the level II infill correctional facility is 35 acres. Existing ground elevations at the infill site range from about 427 feet to 363 feet, which is approximately a 6 percent slope. Currently, about 7-8 acres of the land at the infill site contain impervious structures or pavement. Based on the existing sub-drainage boundaries for the infill site, 22.3 acres are located in Drainage Basin A, which is 28 percent of the 79-acre drainage. Based on the existing stormwater drainage, the runoff from the portion of the facility in Drainage Basin C would flow into the underground pipes that drain into Pond 4 and the American River. The drainage area of these underground pipes is approximately 135 acres based on natural topography and stormwater mapping.

The infill site contains soils mapped as Andregg-Urban land complex, 2-8 percent slopes, with a small portion of the eastern portion mapped as Andregg Coarse sandy loam, 2-8 percent slopes, which are characterized as coarse sandy loam soils (National Cooperative Soil Survey 2013). These soils are classified as Hydrologic group B, which are defined as soils with moderately low runoff potential when thoroughly wet and water transmission through the soil is unimpeded.

Surface Water Quality

Section 303(d) of the federal Clean Water Act (CWA) requires states to identify water bodies that do not meet established water quality standards (known as total maximum daily loads [TMDLs]) and are not supporting their beneficial uses. The State Water Resources Control Board (SWRCB) published a Statewide 2008–2010 303(d) list of impaired water bodies (State Water Resources Control Board 2010)

that was subsequently amended with additional listings, then approved, by the U.S. Environmental Protection Agency (EPA) (EPA 2011). Impaired water bodies are water quality–limited segments. The SWRCB, as part of the California Environmental Protection Agency, identified the lower American River as impaired because some fish have elevated methylmercury levels (State Water Resources Control Board 2010, EPA 2011). The Central Valley Regional Water Quality Control Board (RWQCB) is developing a TMDL plan that will identify the total amount of mercury that the water can contain, and the level of mercury reductions required from various sources (RWQCB 2010). The sources of inorganic mercury in the American River watershed include tunnels and hydraulic mine workings from historical gold mining operations, urban and agricultural runoff, municipal discharges, and deposition from air. Certain bacteria in lakes and streambeds convert the mercury into highly toxic methylmercury.

The Central Valley RWQCB considers beneficial uses as being critical to water quality management in California. California state law defines beneficial uses of California's waters that may be protected against quality degradation to include (and not be limited to) "domestic; municipal; agricultural and industrial supply; power generation; recreation; aesthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves" (California Water Code Section 13050(f)). Protection and enhancement of existing and potential beneficial uses are primary goals of water quality planning. The beneficial uses of any specifically identified water body generally apply to its tributary streams to the extent that they could also support similar beneficial uses (Central Valley RWQCB 2011). The Water Quality Control Plan (Basin Plan) for the Sacramento River and San Joaquin River Basins define the beneficial uses that the Central Valley RWQCB has specifically designated for water bodies in the Central Valley, along with objectives to be met to protect those uses.

The Central Valley RWQCB Basin Plan for the Sacramento River and San Joaquin River Basins describes water quality standards that have been established for the lower American River downstream of Folsom Lake. These include the requirements that total dissolved solids shall not exceed 125 milligrams per liter (mg/l), the maximum concentration of arsenic shall not exceed 0.01 mg/l from Folsom Lake to the Sacramento River, and, except for periods of storm runoff, the turbidity shall be not exceed 10 nephelometric turbidity units (Central Valley RWQCB 2011). The more stringent turbidity requirement applies if there is any conflict with the general turbidity objective.

The Central Valley RWQCB also states that the direct discharge of wastes into the lower American River is inappropriate as a permanent disposal method. The direct discharge of municipal and industrial wastes (excluding stormwater discharges) into the river is prohibited (Central Valley RWQCB 2011).

Sacramento Coordinated Water Quality Monitoring Program

The Sacramento Regional County Sanitation District, the County of Sacramento Department of Water Resources and the City of Sacramento jointly established the Sacramento Coordinated Water Quality Monitoring Program (CMP) in May 1991. The CMP conducts water quality monitoring on the Sacramento and American Rivers to comply with federal National Pollutant Discharge Elimination System (NPDES) permit requirements. The water quality data collected by the CMP adhere to the current NPDES stormwater permit

The CMP water quality standards are based on objectives identified by the California Toxics Rule, the Central Valley RWQCB's Basin Plan for the Sacramento River Watershed, and EPA's criteria for ammonia and *E. coli* bacteria. For hardness-adjusted metals criteria (cadmium, chromium, copper, lead, nickel, silver, and zinc), the criteria used for comparison are adjusted for the corresponding hardness value for each sampling event and site.

The CMP reported for the 2010–2011 sampling events that, in general, the levels of the conventional parameters monitored (pH, temperature, dissolved oxygen, conductivity, chloride, turbidity, and total dissolved solids) met applicable Basin Plan water quality objectives for the lower American River (Sacramento Coordinated Water Quality Monitoring Program 2011). All total dissolved solids concentrations measured at lower American River sites during 2010–2011 met the Basin Plan water

quality objective of 125 mg/L within the 90th percentile, and the turbidity limit of 10 nephelometric turbidity units below Folsom Lake was not exceeded.

Folsom Lake Water

Folsom Lake water quality is generally acceptable for many beneficial uses. Water from the lake is suitable for municipal, domestic, industrial water supply, irrigation, power, and recreational uses as well as warm and cold freshwater habitat, warm freshwater spawning habitat, and wildlife habitat (Sacramento Area Flood Control Agency 2003). However, taste and odor problems have occurred in the past, which were attributed to algal blooms that are known to occur in the reservoir when water temperatures are elevated.

GROUNDWATER

Regional Groundwater

The infill site is located 3.3 miles west of the boundary for the California Department of Water Resources (DWR) Sacramento Valley Groundwater Basin – South American Subbasin (number 5-21.65) (DWR 2006). The 388-square-mile subbasin is bordered to the east by the Sierra Nevada, to the west by the Sacramento River, to the north by the American River, and to the south by the Cosumnes and Mokelumne Rivers (DWR 2006). Groundwater level trends analyzed by DWR indicated a consistent pattern of water levels through much of the basin. Water levels in the subbasin generally declined by approximately 20 feet from the mid-1960s to about 1980 (DWR 2006). Groundwater levels started to rise by 1983 and declined approximately 15 feet by 1995. The quality of the groundwater in the Sacramento Valley basin is considered to be good.

Local Groundwater

The Sacramento Groundwater Authority (SGA) was formed in 1998 as a joint powers authority to monitor and manage groundwater in Sacramento County north of the American River. A groundwater elevation contour map presented by SGA (2011) shows the spring 2010 groundwater elevation in the area of the infill site at approximately 130–140 below ground surface. Groundwater elevations in the vicinity can be highly variable between wells due to groundwater elevations generally following the rolling topography (SGA 2011). Monitoring indicates that groundwater elevations in the eastern portion of the SGA study remain largely unchanged over time because the area has historically used surface water, and groundwater use in the area is limited (SGA 2011).

3.7.2 REGULATORY CONSIDERATIONS

A list of the applicable federal, state and local plans, policies, regulations, and laws related to hydrology and water quality is provided below. Complete summaries of the federal and state regulations are provided in Volume 1, Appendix 1B.

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

- Clean Water Act - The CWA is the primary federal legislation governing water quality whose objective is “to restore and maintain the chemical, physical, and biological integrity of the nation’s waters,” which includes oceans, bays, rivers, lakes, ponds, and wetlands. This act regulates discharges and spills of pollutants, including hazardous materials, to surface waters and groundwater.
- Section 402 - The 1972 amendments to the CWA established the NPDES permit program to control discharges of pollutants from point sources.
- Section 404 - Section 404 of the CWA requires a project applicant to obtain a permit before engaging in any activity that involves any discharge of dredged or fill material into waters of the U.S., including wetlands. Wetlands are defined as those areas that are inundated or saturated by

surface water or groundwater sufficient to support a prevalence of vegetation typically adapted for life in saturated soil conditions.

- National Flood Insurance Act of 1968 and the Flood Disaster Protection Act of 1973 - These acts reduce the need for large publicly funded flood control structures and disaster relief by providing flood insurance and restricting development on floodplains, respectively.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

- Porter-Cologne Water Quality Control Act of 1969 - Under the Porter-Cologne Act, California must adopt water quality policies, plans, and objectives to ensure that the state's beneficial uses for water are reasonably protected. Each RWQCB must prepare and update basin plans to set forth water quality standards for surface water and groundwater and actions to control nonpoint and point sources of pollution to achieve and maintain these standards.
- Recycled Water Policy (State Board Resolution No. 2009-0011) - The Policy is intended to encourage the beneficial use of recycled water instead of sole disposal. The purpose of this Policy is to provide direction to the RWQCBs, proponents of recycled water projects, and the public regarding the appropriate criteria to be used by the State Water Board and the Regional Water Boards in issuing permits for recycled water projects.
- California State Nondegradation Policy - The nondegradation policy states that the disposal of wastes into State waters shall be regulated to achieve the highest water quality consistent with the maximum benefit to the people of the state and to promote the peace, health, safety, and welfare of the people of California.

LOCAL PLANS, POLICIES, AND ORDINANCES

As a state agency, the California Department of Corrections and Rehabilitation (CDCR) is not subject to local land use plans, policies, and ordinances adopted by local agencies. Nevertheless, a discussion of relevant local plans and policies is provided because conflicts with them could indicate the potential occurrence of other physical environmental effects.

CITY OF FOLSOM GENERAL PLAN

The goals and policies of the City of Folsom General Plan (1993) relating to water resources are provided below.

- **Policy 25.1** The surface and groundwater quality of Folsom shall not be degraded from City standards.
- **Policy 28.2** The quality and quantity of surface water runoff from a property shall not exceed existing flows or existing quality or shall comply with City standards for offsite drainage. The City shall implement a surface-runoff water quality monitoring program to insure compliance with City standards.
- **Policy 28.3** The city should maintain existing and develop new sources of water to ensure adequate, long term and high quality water supplies.

CITY OF FOLSOM STORMWATER ORDINANCE (FOLSOM MUNICIPAL CODE 8.70)

The City of Folsom was issued a Stormwater Permit by the State that requires the City to conduct a broad range of activities to prevent urban runoff pollution in the city. The City's stormwater ordinance was established to protect the quality of water in the storm drain system. The ordinance makes it illegal to discharge many kinds of pollutants into local storm drains, detention basins, creeks and rivers. Since 1990, the City has been a partner in the Sacramento Stormwater Quality Partnership along with the County of Sacramento and the Cities of Sacramento, Citrus Heights, Elk Grove, Galt and Rancho

Cordova. Together, they are implementing a comprehensive program involving public outreach, construction and industrial controls, water quality monitoring and other activities designed to protect the health of local creeks and rivers.

3.7.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

In accordance with Appendix G and Section 15065 of the State of California Environmental Quality Act (CEQA) Guidelines, the level II infill correctional facility at the FSP/SAC Infill Site would result in a significant impact relating to hydrology and water quality if it would do any of the following:

- violate any water quality standards or waste discharge requirements;
- substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level;
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on- or offsite;
- substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or offsite;
- create or contribute runoff that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff;
- otherwise substantially degrade water quality;
- place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or FIRM or other flood hazard delineation map;
- place within a 100-year flood hazard area structures that would impede or redirect flood flows; or
- expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of a levee or dam.

The State CEQA Guidelines (Section 15064.5) define a “substantial adverse change” as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

ISSUES NOT DISCUSSED FURTHER

Potential impacts related to seiches, tsunamis, or mudflows, which is often analyzed in the context of hydrology and water quality, are discussed in Section 3.5, “Geology, Soils, Seismicity, Minerals, and Paleontological Resources,” of this volume.

Groundwater supply: Construction and operation of a level II infill correctional facility at FSP/SAC would not substantially deplete groundwater supplies or interfere substantially with groundwater recharge to the extent that it would create a net deficit in aquifer volume or a lowering of the local groundwater table level because the new level II infill correctional facility would not rely on groundwater as a water source. As explained in Impact 3.12-1 in Section 3.12, “Utilities,” of this volume, FSP/SAC facilities, including the proposed level II infill correctional facility, receive surface water from Folsom Lake; existing water supplies are sufficient to serve the infill site; construction and operation of a level II infill correctional facility at the infill site would not require new or expanded entitlements. Furthermore, although construction of level II infill correctional facilities would result in additional impervious surfaces, it is not anticipated to significantly affect groundwater supply because sufficient stormwater drainage and detention basins would be constructed as part of the project to maintain stormwater runoff at or

below existing levels. Although groundwater recharge would occur over a smaller surface area compared to the baseline condition, infrastructure would be designed to allow infiltration to occur over a longer duration and thus not result in significant change to overall groundwater supplies. Therefore, development of level II infill correctional facilities at the FSP/SAC Infill Site would have no impact on groundwater supply or quality, and this issue is not discussed further.

Housing or structures in a 100-year flood hazard area: Construction and operation of level II infill correctional facility at FSP/SAC would not place housing in a 100-year flood hazard area or within the 200-year flood zone, or place structures in a 100-year flood hazard area that would redirect flood flows because the infill site is not located in a 100-year flood hazard area according to FEMA. Thus, these issues are not discussed further.

PROJECT IMPACTS AND MITIGATION MEASURES

Impact 3.7-1: Short-Term, Construction-Related Water Quality Degradation

Construction of the single, level II infill correctional facility at the FSP/SAC Infill Site, as well as the demolition and relocation of existing facilities, would include extensive ground-disturbing activities over approximately 60 acres and would include earth removal, grading, trenching, and restoration. Construction is proposed to begin in spring 2014 and would be scheduled for completion by spring 2016. Depending on scheduling, construction could potentially occur during two rainy seasons (October 1 through April 30). Because of the increase in exposed surfaces and the earth-moving activities, the potential for erosion and sedimentation runoff is higher during the rainy season. It should be noted that, upon completion of construction, approximately 15 acres of the infill site would be returned to pre-construction conditions.

Activities related to the construction of the infill site and the relocation of existing structures would create the potential for soil erosion and possibly increase sedimentation of stormwater facilities, both onsite and downstream. Construction activities also increase the potential for accidental release of pollutants that could affect not only surface waters, but the beneficial uses associated with them. Such pollutants include oil and gas from machinery, chemicals associated with construction, and waste material. Many construction-related pollutants have the potential to degrade water quality by increasing constituent levels in surface waters and exceed water quality standards. Construction activities could violate these standards if mitigation measures are not implemented and can cause harm to surrounding habitats and their associated plant and animal life.

The potential for erosion hazards within the FSP/SAC Infill Site is moderate given the steepness of the existing ground terrain. Rainfall and associated stormwater runoff could result in periods of sheet erosion within areas of exposed or stockpiled soils. If uncontrolled, these soil materials could cause sedimentation and blockage of drainage channels. Further, the compaction of soils by heavy equipment may reduce the infiltration capacity of soils and increase the potential for runoff and erosion. Stormwater runoff could also wash construction materials into receiving waterbodies and negatively impact water quality. Non-stormwater discharges could result from activities such as construction dewatering procedures, or discharge or accidental spills of hazardous substances such as fuels, oils, concrete, paints, solvents, cleaners, or other construction materials.

The Level II Infill Correctional Facilities Project would be implemented in compliance with applicable state laws. As part of the design and implementation of a level II infill correctional facility at FSP/SAC, CDCR or its contractor would retain a qualified Storm Water Pollution Prevention Plan (SWPPP) developer to prepare a SWPPP that would have to comply with established regulatory standards and would include site-specific best management practices (BMPs) and any other necessary site-specific WDRs or waivers under the Porter-Cologne Act.

The following list identifies standard BMPs that will be incorporated into the SWPPP for development of a level II infill correctional facility at FSP/SAC. These BMPs are based on practices outlined in the California Stormwater Quality Association's (CASQA) *Best Management Practice Handbook Portal* (California Stormwater Quality Association 2010):

- *Desilting basin and sediment trap:* Construction of a temporary basin designed to remove sediment from runoff will prevent constituents from reaching existing on- and offsite drainages by allowing sediment to settle before discharging water to natural drainages.
- *Erosion control blankets/mats, geotextiles, plastic covers:* These erosion control methods will be used on flat or sloped surfaces to keep soil in place and can be used to cover disturbed soil to prevent runoff.
- *Gravel/sandbag barrier:* A temporary sediment barrier will be constructed using gravel or sand filled bags to prevent sediment from disturbed areas from reaching existing drainages by reducing the volume of sheet flows.
- *Hydraulic, straw, and wood mulch:* The use of these various mulches will temporarily stabilize soil on surfaces with little or no slope.
- *Preservation of existing vegetation:* Preserving the existing vegetation to the maximum extent possible will provide protection of exposed surfaces from erosion and can keep sediment in place. Sensitive areas defined in Section 3.2, "Biological Resources," of this volume will be clearly indicated and protected during and after construction.

The following list identifies additional BMPs that may be incorporated into the SWPPP for development of a level II infill correctional facility at FSP/SAC. These BMPs are also based on practices outlined in the California Stormwater Quality Association's (CASQA) *Best Management Practice Handbook Portal* (California Stormwater Quality Association 2010):

- *Runoff control BMPs:* These measures include grading surfaces to control sheet flow, barriers or berms that force sheet flows around protected areas, and stormwater conveyances such as channels, drains, and swales. These practices and features collect runoff and redirect it to prevent contamination to surface waters. Calculations would be made for anticipated runoff, and the stormwater conveyances will be constructed, designed, and located to accommodate these flows.
- *Scheduling and planning:* Appropriate scheduling and planning provide ways to minimize disturbed areas, which reduces the amount of activity on the infill site that requires protection and minimizes the duration of exposure of disturbed soils to erosion.
- *Stabilized construction entrance/exit*. A graveled area or pad located at points where vehicles enter and leave a construction site can be built. This BMP provides a buffer area where vehicles can drop their mud and sediment to avoid transporting it onto public roads, to control erosion from surface runoff and to help control dust.
- *Storm drain inlet protection:* Protection consists of devices and procedures that detain or filter sediment from runoff, thereby preventing them from reaching drainage systems that would be used post-construction, as well as surface waters.

Additional concerns include potential pollutant exposure related to improper material storage and handling, as well as non-stormwater discharges. The following BMPs address these potential problems, which would be included, as appropriate to site conditions, in CDCR's SWPPP:

- *Concrete waste management:* Excess or leftover concrete would be properly disposed of in designated concrete waste facilities.
- *Material delivery and storage practices:* All materials, especially toxic or hazardous materials, would be covered to prevent exposure to stormwater and runoff. Toxic or hazardous materials would also be stored and transferred on impervious surfaces that would prevent immediate exposure to soils.

Vehicles and equipment used for material transport and storage, as well as any other vehicles, would be parked in clearly designated areas.

- *Street sweeping and maintenance:* Regular cleaning would occur at the entrances and exits to and from the infill site to avoid contamination of offsite areas.
- *Solid waste management:* An appropriate amount of conveniently located trash and waste containers would be placed around the infill site for proper disposal of solid wastes. All receptacles would have lids or covers that will not blow off in windy conditions.
- *Spill prevention and control:* Any spills or releases of materials would be cleaned up immediately and comprehensively. Appropriate and easily accessible cleanup equipment, including spill kits containing absorbents, would be located in several areas around the site. Used cleanup materials would be disposed of properly and in accordance with applicable regulations. Hazardous or toxic material spills must be treated as hazardous waste and be treated and disposed of accordingly.
- *Vehicle and equipment cleaning and refueling:* Vehicles and equipment that regularly enter and leave the infill site would be cleaned. Additionally, refueling of vehicles and equipment would occur offsite whenever possible. An onsite, designated fueling area with appropriate containment and cleanup materials would be used when offsite refueling is impractical.
- *Vehicle and equipment maintenance:* Offsite maintenance facilities would be used whenever possible. Whenever onsite maintenance is necessary, ensure designated maintenance areas are protected from stormwater runoff and are provided with proper spill cleanup and containment materials.

CDCR's SWPPP would also identify the following:

- Pollutants likely to be used during construction activities or that could be present in stormwater and nonstormwater discharges, as well as any other type of materials included in equipment operation.
- Personnel training requirements and procedures that would be used to ensure that all workers are aware of the applicable regulations regarding the permit requirements. Personnel would also be made aware of the BMPs designated and specified in the SWPPP.
- Site inspection and maintenance responsibilities.
- Spill prevention measures, including those mentioned above.
- A monitoring program to be implemented and carried out by CDCR's contractor, which would include site inspections during dry and wet weather conditions to ensure personnel are following SWPPP conditions. A sampling analysis plan would also be included, as per the any General Construction Permit.
- Appropriate supervisory personnel who would be responsible for carrying out the implementation of the SWPPP.

Because CDCR would implement adequate measures to control onsite stormwater and protect water quality as part of the planning and design phase of implementation, no adverse construction-related stormwater impacts would occur.

Construction activities during development of a single, level II infill correctional facility at the FSP/SAC Infill Site would involve grading and soil movement that could generate sediment, erosion, and other nonpoint-source pollutants in onsite stormwater. These pollutants could drain to offsite areas, thereby degrading local water quality. CDCR would comply with State requirements to implement adequate measures to control onsite stormwater (i.e., SWPPP and BMPs) and protect water quality. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.7-2: Stormwater System Impacts

Development of a single, level II infill correctional facility at the FSP/SAC Infill Site would result in an increase in impervious surfaces at the infill site. The footprint of the level II infill correctional facility would be approximately 35 acres, approximately half of which would be impervious surfaces. Of this acreage, approximately 8 acres is currently developed with impervious surfaces. Based on the existing sub-drainage boundaries for the site, 22.3 acres are located in Drainage Basin A, which is 28 percent of the 79-acre drainage. However, approximately 7 of the 8 acres of land already developed is in Drainage Basin A, which means the level II infill correctional facility would increase the impervious land in this sub-basin by about 15.3 acres, or about 19 percent. The level II infill correctional facility would occupy 3.7 acres in Drainage Basin B, which is 14 percent of the 27-acre drainage. The level II infill correctional facility would occupy 9 acres in Drainage Basin C, which would occupy about 7 percent of the drainage.

The increase in impervious surfaces at the FSP/SAC Infill Site would increase runoff into existing drainage channels and ponds. The increased runoff could exceed the capacity of existing detention basins that attenuate peak flows. Furthermore, existing earthen drainage ditches would be susceptible to erosion from increased flow and shear stress, and the capacity of culverts and underground pipes could be exceeded. To reduce the impact of increased runoff, the level II facilities would include up to two detention basins. Although the final sizes and exact locations of the detention basins would be determined in final site plans and drainage plans, the area of site disturbance analyzed throughout this volume of the EIR accounts for the construction and operation of detention basins.

The level II facilities would include storm drains to direct runoff from the infill site to detention basins, which temporarily retain stormwater runoff to allow sediment particles and certain pollutants to settle before entering the watershed. Properly designed detention systems release runoff slowly enough to reduce downstream peak flows to their pre-project levels, allow fine sediment to settle, and uptake dissolved nutrients in the runoff where vegetation is included. Furthermore, detention systems are most appropriate for areas where water percolates poorly through the soil. Therefore, the detention basins would likely alleviate the potential for flooding both onsite and in receiving waters. The detention basins would be designed so that pre-project and post-project runoff conditions would be substantially the same.

Other low-impact development (LID) methods to maintain pre-project runoff levels, including design considerations when planning roads, parking lots, buildings, or landscaping would be incorporated. The proposed detention basins would be designed to provide adequate stormwater storage capacity for a 100-year storm and control project stormwater discharge rates. In accordance with RWQCB requirements, the project must also consider and incorporate LID techniques to minimize runoff from the infill site. Additional information about the drainage characteristics including and runoff volume, time of concentration, and detention volume and information on proposed detention basins, such as capacity, design, and detention times, would be necessary to further evaluate compliance with the appropriate flood control requirements.

Final specifications of the project's drainage system would be designed to appropriately accommodate the stormwater runoff generated from the new level II infill correctional facility to maintain pre-project conditions. If drainage is controlled such that post-project runoff is equal or less than pre-project discharge rates, the level II infill correctional facility at FSP/SAC would not substantially increase the rate or amount of surface runoff in a manner that would result in on- or offsite flooding and the project would result in less than significant storm drainage impacts.

Because final drainage design specifications have not been completed, including stormwater flow paths and magnitudes based on a finalized site plan, development of a single, level II infill correctional facility at the FSP/SAC Infill Site has the potential to cause an increase in surface runoff that would exceed the

capacity of the stormwater drainage system, resulting in onsite and offsite flooding and erosion. This would be a significant impact.

Mitigation Measures

Mitigation Measure 3.7-2

To minimize any potential impact related to on- and offsite flooding as a result of a new single, level II infill correctional facility at the FSP/SAC Infill Site, prior to final project design, CDCR will assess drainage patterns and potential downstream flooding impacts including increased flow rates and volume and flood potential. Final project design will include design features to ensure that all runoff will not leave the infill site at rates exceeding pre-development conditions.

The detention basins will be designed to contain and control the project peak flow discharge rates to pre-project levels and to improve water quality. Discharge will be accomplished through a water quality outlet that has been designed to minimize concentrated flows, turbulence, and scour. The water quality outlet will be designed to empty the detention basins within 24–72 hours, with 40 hours as the preferred drawdown time. The 24-hour limit is specified to provide adequate settling time; the 72-hour limit is specified to mitigate vector control concerns.

The final drainage plan will include, but not be limited to, the following items:

- an accurate calculation of pre-project and post-project runoff scenarios, obtained using appropriate engineering methods, that accurately evaluates potential changes to runoff, including increased surface runoff;
- documentation of how the system meets necessary requirements, such as that 100-year flood flows be appropriately channeled and contained, such that the risk to people or damage to structures within or down gradient of the infill site do not occur;
- a description of any treatments necessary to protect earthen channels from erosion, and modifications that may be needed to existing underground pipe and culvert capacities; and
- a description of the proposed maintenance program for the onsite drainage system; project-specific standards for installing drainage systems.

Significance after Mitigation

Implementation of Mitigation Measure 3.7-2 would reduce the significant impacts related to on- and offsite flooding due to increased impervious surfaces and altered site drainage to a **less-than-significant** level by controlling post-project peak flow discharge rates at or below pre-project levels.

Impact 3.7-3: Long-Term Water Quality Degradation

Construction and operation of a single, level II infill correctional facility at the FSP/SAC Infill Site would increase the footprint of development on the infill site, adding substantial amounts of impervious surfaces, including roadways and parking areas, which could potentially increase the level of urban contaminants discharged into the stormwater drainage system.

Approximately 35 acres of the infill site would be developed (of which about 8 acres is already developed) with permanent uses associated with the new level II infill correctional facility. The development has the potential to increase the pollutant load of stormwater discharges as a result of proposed land uses. Anticipated pollutants associated with the infill site include trash, debris, heavy metals, and hydrocarbons from parking areas, as well as sediment from pervious areas that will not be

landscaped, pesticides from potential pest control activities, nutrients, fertilizers, oxygen-demanding substances such as green waste from landscaped areas, and organic compounds from uncovered parking areas and roadway/driveway systems.

In accordance with federal and state stormwater management regulations, new construction and substantial redevelopment must maintain pre-development hydrology, incorporate proper pollutant source controls, minimize pollutant exposure outdoors, and treat stormwater runoff through proper BMPs when source control or exposure protection are insufficient for reducing runoff pollutant loads. In accordance with RWQCB compliance guidelines, design of the infill site would be required to incorporate BMPs and LID stormwater management principles into project design. These would include detention systems and other suitable stormwater pollutant control BMPs to reduce the discharge of pollutants into stormwater to the maximum extent practicable.

While the potential for development of a single, level II infill correctional facility at the FSP/SAC Infill Site to cause or contribute to long-term discharges of urban contaminants into the stormwater drainage system could increase compared to existing conditions, CDCR would be required to comply with federal and state stormwater management regulations. These regulations require the incorporation of appropriate BMPs into the design of the development to prevent long-term water quality degradation. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.7-4: Dam Failure Impacts

The FSP/SAC Infill Site is not located within a 100-year flood hazard area and would, therefore, not place housing or structures within a 100-year flood hazard area. However, the infill site is lower in elevation than the Folsom Dam's spillway and does lie within a dam inundation area. Due to the close proximity to Folsom Lake and Folsom Dam, there is potential for exposure of people or structures to significant risk of loss, injury, or death as a result of dam failure. The risk of dam failure is low because large seismic events are unlikely to occur in the area and the Folsom Dam is been designed to prevent dam failure. Finally, CDCR, the City, and local emergency response agencies have prepared detailed emergency response plans that identify the measures and actions that would be taken to prevent human hazards in the event of a dam failure.

Because there is a low likelihood of dam failure near the single, level II infill correctional facility at the FSP/SAC Infill Site and appropriate emergency response measures are in place to respond to a dam failure, exposure impacts as a result of a dam failure would be considered ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

3.8 LAND USE, AGRICULTURE, AND FORESTRY RESOURCES

This section describes the existing onsite and surrounding land uses and evaluates the potential effect of development of level II infill correctional facilities at Folsom State Prison/California State Prison, Sacramento (FSP/SAC) on existing land uses, agriculture, and forestry resources. The analysis provided in this section is based on a review of local land use policies, including the City of Folsom General Plan and Zoning Code, and the California Department of Conservation (CDC) Farmland Mapping data. As a state agency, the California Department of Corrections and Rehabilitation (CDCR) must consider relevant federal or state land use policies. However, CDCR is generally not subject to local plans, policies, and ordinances. Nevertheless, CDCR has provided a discussion of relevant plans and policies because conflicts with these policies could result in environmental impacts and sometimes the local standards can provide guidance in the development of mitigation measures. The discussion does not imply that CDCR would be subject to local plans or ordinances, either directly or through the California Environmental Quality Act (CEQA) environmental review process.

3.8.1 ENVIRONMENTAL SETTING

ONSITE LAND USES

The existing FSP/SAC, as well as support and ancillary facilities and operations, are located in the City of Folsom, approximately 22 miles east of downtown Sacramento and immediately adjacent to Folsom Lake and Folsom Dam. Located on approximately 810 acres, the FSP/SAC facilities are bound by the American River to the west, Folsom Lake Crossing to the north, and East Natoma Street to the south and east. The FSP/SAC facilities are situated on the CDCR-owned parcels identified by the Sacramento Assessor's Office as 071-0010-021-0000.

The FSP/SAC Infill Site is located on the northern portion of the FSP/SAC property, just south of Folsom Lake Crossing Bridge. Existing land uses on the infill site include fire protection facilities for the existing FSP/SAC facilities, which include a station for the fire protection vehicles and fire protection staff quarters; an outdoor area for inmates; an inmate ward labor (IWL) site, including five permanent structures and multiple temporary structures used for administrative purposes, storage, and maintenance; a recycling facility; two buildings used for storage and maintenance for a bicycle repair program; and two vacant structures.

SURROUNDING LAND USES

Existing land uses surrounding the FSP/SAC property are described in Table 3.8-1 and are identified in Exhibit 2-3 of Chapter 2, "Project Description," of this volume.

Table 3.8-1 Existing Land Uses Surrounding the FSP/SAC Property

North	Open space, Folsom Lake Crossing Bridge, Folsom Dam, Folsom Lake
Northwest	Open space, American River, Folsom Dam Industrial Complex, low- and medium-density residential uses, commercial uses
West	American River, open space within the Folsom Lake State Recreation Area/American River Parkway, residential neighborhoods
South	Open space, Folsom City Hall, St. Jude's Hospital, Folsom City Park, Rodeo Park, commercial uses, low-density residential uses
Southeast	Folsom Water Treatment Plan, low-density residential uses
East	Open space, Folsom Lake State Recreation Area, low-density residential neighborhoods.

AGRICULTURAL DESIGNATIONS

The CDC Farmland Mapping and Monitoring Program (FMMP) is designed to inventory, map, and monitor the acreage of California farmland to document how much agricultural land was being converted to nonagricultural land or transferred into (or out of) Williamson Act contracts. (The Williamson Act is explained in Volume 1, Appendix 1B.) CDC's classifications are as follows (CDC 2012):

- Prime Farmland—land that has the best combination of features for the production of agricultural crops;
- Farmland of Statewide Importance—land other than Prime Farmland that has a good combination of physical and chemical features for the production of agricultural crops, but that has more limitations than Prime Farmland, such as greater slopes or less ability to store soil moisture;
- Unique Farmland—land of lesser quality soils used for the production of the state's leading agricultural cash crops;
- Farmland of Local Importance—land of importance to the local agricultural economy;
- Grazing Land—existing vegetation that is suitable to grazing;
- Urban and Built-Up Land—land occupied by structures in density of at least one dwelling unit per 1.5 acres;
- Land Committed to Nonagricultural Use—vacant areas; existing land that has a permanent commitment to development but has an existing land use of agricultural or grazing lands; and
- Other Land— land not included in any other mapping category, common examples of which include low-density rural developments, brush, timber, wetland, and vacant and nonagricultural land surrounded on all sides by urban development.

FMMP designations for the land on the FSP/SAC Infill Site (CDC 2012) are listed below:

- **Grazing**, approximately 10 acres.
- **Urban and Built-up Land**, approximately 24 acres.
- **Other Land**, approximately 25 acres.

Prime Farmland, Farmland of Statewide Importance, and Unique Farmland are defined as Important Farmland in Appendix G of the State CEQA Guidelines.

The FSP/SAC Infill Site does not contain any lands classified as Important Farmland under this definition, nor does it contain Williamson Act lands.

FORESTRY RESOURCES

Appendix G of the State CEQA Guidelines defines forestland as land that can support 10 percent native tree cover and woodland vegetation of any species—including hardwoods—under natural conditions, and that allows for management of one or more forest resources—including timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation—and other public benefits (California Public Resources Code [PRC] Section 12220[g]).

Habitat types at the FSP/SAC Infill Site include landscaped and developed areas associated with the existing IWL yard, firehouse, recycling facility, and roadways as well as and open space with nonnative grasses. The infill site does not contain native tree cover that would be classified as forestland under PRC Section 12220(g).

3.8.2 REGULATORY CONSIDERATIONS

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

No federal plans, policies, regulations, or laws related to land use planning, agriculture, or forestry resources are applicable to the FSP/SAC Infill Site.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

A list of the applicable state plans, policies, regulations, and laws addressing land use planning, agriculture, and forestry resources is provided below. Complete summaries of these regulations are provided in Volume 1, Appendix 1B.

- California Important Farmland System and Farmland Mapping and Monitoring Program - The FMMP was designed to inventory, map, and monitor the acreage of California farmland to document how much agricultural land was being converted to nonagricultural land or transferred into (or out of) Williamson Act contracts. Prime Farmland, Farmland of Statewide Importance, and Unique Farmland are defined as Important Farmland in Appendix G of the State CEQA Guidelines.
- California Land Conservation Act (Williamson Act) - The California Land Conservation Act (Williamson Act) was enacted in 1965 when population growth and rising property taxes were recognized as a threat to the viability of valuable farmland in California. The State is not subject to the Williamson Act.
- *Statewide Electrified Fence Habitat Conservation Plan* (HCP) (as discussed in Section 3.2, "Biological Resources," of this volume of the DEIR) - The approved HCP for the Statewide Electrified Fence Program includes numerous mitigation measures designed to minimize wildlife use in areas near the lethal electrified fences and to deter wildlife from making contact with the lethal electrified fences. The plan also includes a wildlife mortality monitoring program.

LOCAL PLANS, POLICIES, AND ORDINANCES

The FSP/SAC Infill Site is located on land that is owned or controlled by the State. As a state agency, CDCR is not subject to land use plans, policies, and ordinances adopted by local agencies. Nevertheless, a discussion of relevant local plans and policies is provided because conflicts with them could indicate the potential occurrence of other physical environmental effects.

CITY OF FOLSOM GENERAL PLAN

The City of Folsom has recently initiated a General Plan update process to establish a blueprint for city planning decisions through 2035; completion of this process is expected in fall of 2014. Although an update is in process, it is not yet adopted. Therefore, the following discussion is based on the current General Plan, which was adopted in 1988.

The following excerpts from the City's General Plan are goals and policies relevant to the development of level II infill correctional facilities at FSP/SAC.

GOAL 1 To retain and enhance Folsom's quality of life, separate identity and sense of community. Folsom's identity and quality of life are defined by:

- **Policy 4.** The State prison site, which provides a large, visual open area in the City.

GOAL 16 To allow for public and quasi-public land uses meeting the governmental service, education, cultural, recreational, and religious needs of Folsom residents.

- **Policy 16.2**. Public facilities, such as utility substations, water storage or treatment plants, pumping stations, and sewer treatment plants, should be located, designed, and maintained so that noise, light, glare, or odors associated with these facilities will not negatively impact nearby land uses. Building materials and landscaping shall be used to make these land uses less visually obtrusive from neighboring properties.

The General Plan land use designation for the infill site is "Public." This designation indicates lands owned by public agencies, intended for public and quasi-public land uses meeting the governmental service, education, cultural, recreational, and religions needs of Folsom residents (City of Folsom 1993). The City's General Plan describes the prison as a large visual open area. Planned land use designations surrounding the project area are described in Table 3.8-2.

Table 3.8-2 City of Folsom General Plan Land Use Designations Surrounding the FSP/SAC Property

Direction from FSP/SAC Property	General Plan Land Use Designation
North-Northeast	Open space
East	Single Family Residential, Neighborhood Commercial
South-Southeast	Single Family Residential, Specialty Commercial District, Public
Southwest	Public, Open Space
West	Open Space
Northwest	Public

Source: City of Folsom 1993

CITY OF FOLSOM ZONING ORDINANCE

The City's Zoning Ordinance provides detailed direction about the type and location of land uses that can occur within city zoning districts. The ordinance identifies the project area as Open Space and Conservation (OSC). The zoning code states that the OSC zone is intended to be applied to properties which should be generally maintained in an open or undeveloped state, or developed for permanent open uses as parks or greenbelts. Permitted uses include agricultural uses, parks, game or bird preserves, golf courses, scenic highway corridors, river or stream courses and flood plain areas. One single family dwelling unit for every 10 acres of agricultural land is also permitted. A variety of related uses are allowed with use permits, including picnic grounds, marinas, private clubs and cemeteries. Because the CDCR lands are state lands not subject to local land use policies, it has not applied zoning to the site reflective of existing land uses. Zoning designations surrounding the project area are described in Table 3.8-3.

Table 3.8-3 City of Folsom Zoning Districts Surrounding the FSP/SAC Property

Direction from the FSP/SAC Property	Zoning District
North-Northeast	Open Space and Conservation (OSC)
East	Agricultural Reserve (A-1-A), Residential Single Family Dwelling, Small Lot (R-1-M),
South-Southeast	Business Professional Planned Development (BP-PD), Central Business Commercial (C-2), Central Business Commercial Planned Development (C-2 PD), OSC
Southwest	OSC
West	OSC, General Commercial Planned Development (C-3 PD), Residential Multifamily Planned Development (R-M PD)
Northwest	OSC

Source: City of Folsom 2007

3.8.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

In accordance with Appendix G and Section 15065 of the State CEQA Guidelines, the level II infill correctional facility at the FSP/SAC Infill Site would result in a significant impact relating to public services if it would do any of the following:

- physically divide an established community;
- conflict with any applicable habitat conservation plan or natural community conservation plan;
- conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect;
- convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the FMMP of the California Resources Agency, to nonagricultural use;
- conflict with existing zoning for agricultural use, or a Williamson Act contract;
- conflict with existing zoning for, or cause rezoning of, forest land (as defined in California Public Resources Code Section 12220(g)), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104(g));
- result in the loss of forest land or conversion of forest land to non-forest use; or
- involve other changes in the existing environment, which, due to their location or nature, could result in conversion of Farmland to non-agricultural use or conversion of forest land to non-forest use.

The State CEQA Guidelines (Section 15064.5) define a “substantial adverse change” as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

ISSUES NOT DISCUSSED FURTHER

Division of an established community: Development of level II infill correctional facilities at FSP/SAC would not result in any physical barriers that would divide an established community. Construction would occur on existing State-owned prison grounds adjacent to existing facilities operated by the State of California. According to the City of Folsom General Plan land use map, the designation for the infill site is “Public.” Developed uses on the infill site are consistent with this designation. These uses (the Inmate Ward Labor Yard, firehouse, and recycling facility) will be relocated elsewhere within the state-owned FSP/SAC property. Therefore, there is no potential for the development of level II infill correctional facilities at FSP/SAC to physically divide an established community because the project would continue existing land uses (i.e., institutional facilities) and would be located within the state-owned property. This issue is not evaluated further.

Habitat or natural community conservation plans: Impacts related to potential conflicts with applicable habitat conservation plans or natural community conservation plans are addressed in Section 3.2, “Biological Resources,” of this volume of the DEIR, and are not discussed further within this section.

Conflicts with planning efforts: The FSP/SAC Infill Site is located entirely within CDCR property, and development of a level II infill correctional facility on the infill site would be consistent with the existing land use designation and zoning for the greater FSP/SAC property, as outlined in the City of Folsom General Plan and zoning ordinance (“Public”). The infill site is located within the FSP/SAC property in

such a way to minimize potential conflict with surrounding land uses, as it would be situated in the most remote area of the FSP/CSP property. The infill site is located in the northern extent of the property, and the new level II infill correctional facility would be located the longest distance possible from the residential, public, and commercial land uses that are concentrated to the south and east of the prison property. Therefore, the project would not conflict with any general plan policies. Further, and as noted above, CDCR is not subject to the goals, policies, and ordinances of local agencies. Nonetheless, no conflicts with existing City planning efforts would occur. No impact is anticipated, and this issue is not discussed further.

Conversion of Important Farmland: No agricultural uses currently exist at the FSP/SAC Infill Site, and the infill site is designated by the FMMP as "Urban and Built-up" and "Other." The designation for much of the adjacent lands surrounding the infill site is Urban and Built Up. The infill site is not on or near any land with the FMMP designation of Prime or Unique Farmland or Farmland of Statewide Importance, nor is it on or near any land with a Williamson Act contract. Thus, development of level II infill correctional facilities at FSP/SAC would not convert any prime farmland, unique farmland, or farmland of statewide importance, would not conflict with existing zoning for agricultural use of a Williamson Act contract, and would not involve any changes in the existing environment could result in conversion of farmland to nonagricultural use. Therefore, this topic is not addressed further.

Forestry resources: The FSP/SAC Infill Site does not contain forestry resources that would be defined as forest land under PRC Section 12220(g) and State CEQA Guidelines Appendix G. Therefore, the development of level II infill correctional facilities at the FSP/SAC Infill Site would not result in conversion of forest land to non-forest use. No impact would occur, and this issue is not evaluated further.

PROJECT IMPACTS AND MITIGATION MEASURES

No impacts related to land use and agricultural and forestry resources would occur with development of a single, level II infill correctional facility at the FSP/SAC Infill Site.

3.9 NOISE

This section describes ambient noise conditions in the vicinity of the Folsom State Prison/California State Prison, Sacramento (FSP/SAC) Infill Site and summarizes applicable regulations. This section also analyzes noise impacts associated with the implementation of a single, level II infill correctional facility at the FSP/SAC Infill Site, including a discussion of short-term construction and long-term operational noise sources, and compatibility of surrounding land uses with onsite noise levels. Information and modeling related to traffic noise levels are based on data provided in Section 3.11, "Transportation," and modeling results provided by Fehr & Peers in Appendix 4D of this volume of the draft environmental impact report (DEIR). Noise modeling inputs and results are provided in Appendix 4C of this volume.

3.9.1 ENVIRONMENTAL SETTING

NOISE FUNDAMENTALS

Acoustics is the scientific study that evaluates perception, propagation, absorption, and reflection of sound waves. Sound is a mechanical form of radiant energy, transmitted by a pressure wave through a solid, liquid, or gaseous medium. Sound that is loud, disagreeable, unexpected, or unwanted is generally defined as noise; consequently, the perception of sound is subjective in nature and can vary substantially from person to person. Common sources of environmental noise and noise levels are presented in Exhibit 3.9-1.

A sound wave is initiated in a medium by a vibrating object (e.g., vocal chords, the string of a guitar, the diaphragm of a radio speaker). The wave consists of minute variations in pressure, oscillating above and below the ambient atmospheric pressure. The number of pressure variation cycles occurring per second is referred to as the frequency of the sound wave and is expressed in hertz (Hz); 1 Hz is equivalent to one complete cycle per second.

Directly measuring sound pressure fluctuations would require the use of a very large and cumbersome range of numbers. To avoid this and have a more useable numbering system, the decibel (dB) scale was introduced. A sound level expressed in decibels is the logarithmic ratio of two like pressure quantities, with one pressure quantity being a reference sound pressure. The use of the decibel is a convenient way to handle the million-fold range of sound pressures to which the human ear is sensitive. A decibel is logarithmic; it does not follow normal algebraic methods and cannot be directly added. For example, a 65-dB source of sound, such as a truck, when joined by another 65-dB source, results in a sound amplitude of 68 dB, not 130 dB (i.e., doubling the source strength increases the sound pressure by 3 dB). A sound level increase of 10 dB corresponds to 10 times the acoustical energy, and an increase of 20 dB equates to a 100-fold increase in acoustical energy.

The loudness of sound perceived by the human ear depends primarily on the overall sound pressure level and frequency content of the sound source. The human ear is not equally sensitive to loudness at all frequencies in the audible spectrum. To better relate overall sound levels and loudness to human perception, frequency-dependent weighting networks were developed. The standard weighting networks are identified as A through E. There is a strong correlation between the way humans perceive sound and A-weighted sound levels (dBA). For this reason the dBA can be used to predict community response to noise from the environment, including noise from transportation and stationary sources.

Noise can be generated by various sources, including mobile sources (transportation noise) such as automobiles, trucks, and airplanes and stationary sources (non-transportation noise) such as construction sites, machinery, and commercial and industrial operations. As acoustic energy spreads through the atmosphere from the source to the receiver, noise levels attenuate (decrease) depending

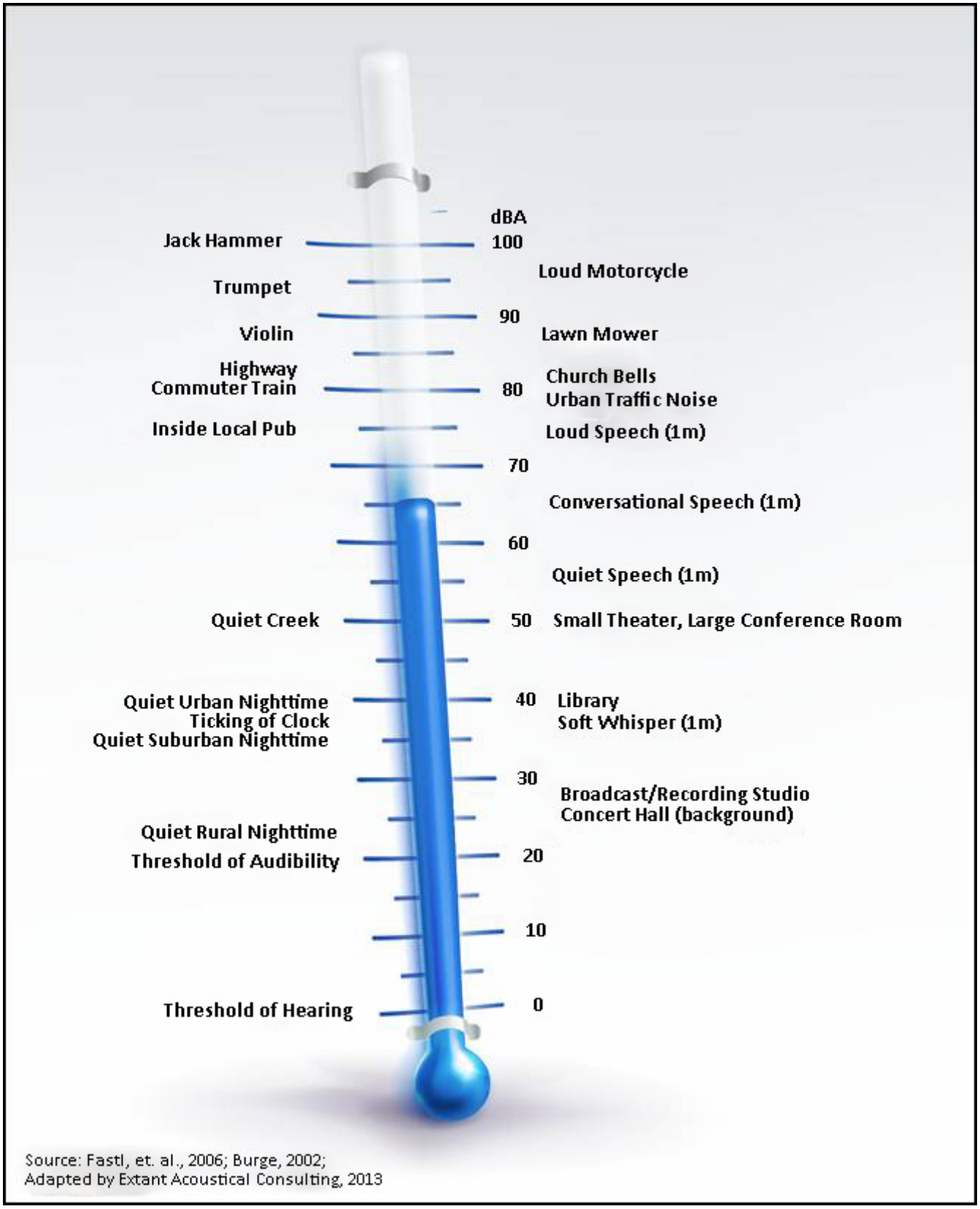


Exhibit 3.9-1 Common Noise Sources and Levels

on ground absorption characteristics, atmospheric conditions, and the presence of physical barriers (e.g., walls, building façades, berms). Noise generated from mobile sources generally attenuates at a rate of 3dBA (typical for hard surfaces, such as asphalt) to 4.5 dBA (typical for soft surfaces, such as grasslands) per doubling of distance, depending on the intervening ground type. Stationary noise sources spread with more spherical dispersion patterns that attenuate at a rate of 6–7.5 dBA per doubling of distance for hard and soft sites, respectively.

Atmospheric conditions such as wind speed, turbulence, temperature gradients, and humidity may additionally alter the propagation of noise and affect levels at a receiver. Furthermore, the presence of a large object (e.g., barrier, topographic feature, or intervening building façade) between the source and the receptor can provide substantial attenuation of noise levels at the receiver. The amount of noise level reduction or "shielding" provided by a barrier primarily depends on the size of the barrier, the location of the barrier in relation to the source and receivers, and the frequency spectra of the noise. Natural barriers such as berms, hills, or dense woods, and human-made features such as buildings and walls, may be used as noise barriers.

NOISE DESCRIPTORS

The intensity of environmental noise fluctuates over time, and several different descriptors of time-averaged noise levels can be used. The selection of a proper noise descriptor for a specific source depends on the spatial and temporal distribution, duration, and fluctuation of both the noise source and the environment. The noise descriptors most often used to describe environmental noise are defined below.

- ***L_{max} (Maximum Noise Level):*** The maximum instantaneous noise level during a specific period of time. The L_{max} may also be referred to as the "peak (noise) level."
- ***L_{min} (Minimum Noise Level):*** The minimum instantaneous noise level during a specific period of time.
- ***L_x (Statistical Descriptor):*** The noise level exceeded X percent of a specific period of time. For example, L_{50} is the median noise level, or level exceeded 50 percent of the time.
- ***L_{eq} (Equivalent Noise Level):*** The average noise level. The instantaneous noise levels during a specific period of time in dBA are converted to relative energy values. From the sum of the relative energy values, an average energy value is calculated, which is then converted back to dBA to determine the L_{eq}. In noise environments determined by major noise events, such as aircraft over-flights, the L_{eq} value is heavily influenced by the magnitude and number of single events that produce the high noise levels.
- ***L_{dn} (Day-Night Average Noise Level):*** The 24-hour L_{eq} with a 10-dBA "penalty" for noise events that occur during the noise-sensitive hours between 10 p.m. and 7 a.m. In other words, 10 dBA is "added" to noise events that occur in the nighttime hours, and this generates a higher reported noise level when determining compliance with noise standards. The L_{dn} attempts to account for the fact that noise during this specific period of time is a potential source of disturbance with respect to normal sleeping hours.
- ***CNEL (Community Noise Equivalent Level):*** The CNEL is similar to the L_{dn} described above, but with an additional 5-dBA "penalty" added to noise events that occur during the noise-sensitive hours between 7 p.m. and 10 p.m., which are typically reserved for relaxation, conversation, reading, and television. When the same 24-hour noise data are used, the reported CNEL is typically approximately 0.5 dBA higher than the L_{dn}.
- ***SEL (Sound Exposure Level):*** The cumulative exposure to sound energy over a stated period of time.

Community noise is commonly described in terms of the ambient noise level, which is defined as the all-encompassing noise level associated with a given noise environment. A common statistical tool to

measure the ambient noise level is the average, or equivalent, sound level L_{eq}, which corresponds to a steady-state A-weighted sound level containing the same total energy as a time-varying signal over a given time period (usually 1 hour). The L_{eq} is the foundation of the composite noise descriptors such as L_{dn} and CNEL, as defined above, and shows very good correlation with community response to noise.

ADVERSE EFFECTS OF NOISE ON HUMANS

Excessive and chronic exposure to elevated noise levels can result in auditory and non-auditory effects on humans. Auditory effects of noise on people are those related to temporary or permanent hearing loss caused by loud noises. Non-auditory effects of exposure to elevated noise levels are those related to behavioral and physiological effects. The non-auditory behavioral effects of noise on humans are associated primarily with the subjective effects of annoyance, nuisance, and dissatisfaction, which lead to interference with activities such as communications, sleep, and learning. The non-auditory physiological health effects of noise on humans have been the subject of considerable research attempting to discover correlations between exposure to elevated noise levels and health problems, such as hypertension and cardiovascular disease. The mass of research indicates that noise-related health issues are predominantly the result of behavioral stressors and not a direct noise-induced response. The extent to which noise contributes to non-auditory health effects remains a subject of considerable research, with no definitive conclusions to date.

The degree to which noise results in annoyance and interference is highly subjective and may be influenced by several non-acoustic factors. The number and effect of these non-acoustic environmental and physical factors vary depending on individual characteristics of the noise environment such as sensitivity, level of activity, location, time of day, and length of exposure. One key aspect in the prediction of human response to new noise environments is the individual level of adaptation to an existing noise environment. The greater the change in the noise levels that are attributed to a new noise source, relative to the environment an individual has become accustomed to, the less tolerable the new noise source will be to the individual.

With respect to how humans perceive and react to changes in noise levels, a 1-dBA increase is imperceptible, a three dBA increase is barely perceptible, a 6-dBA increase is clearly noticeable, and a 10-dBA increase is subjectively perceived as approximately twice as loud (Egan 1988: 21). These descriptions of subjective reactions to changes in noise levels were developed on the basis of test subjects' reactions to changes in the levels of steady-state pure tones or broad-band noise and to changes in levels of a given noise source. This information is probably most applicable to noise levels in the range of 50–70 dBA, as this is the usual range of voice and interior noise levels. For these reasons, a noise level increase of three dBA or more is typically considered substantial in terms of the degradation of the existing noise environment.

VIBRATION

Vibration is similar to noise in that it is a pressure wave traveling through an elastic medium, such as air; however, vibration relates to the excitation of a structure or surface, such as buildings or the ground. As is the case with airborne noise, structural, and groundborne vibrations can be described according to amplitude and frequency content. The vibratory motion can be depicted in terms of displacement, velocity, or acceleration. Human and structural response to different vibration levels is influenced by various factors, including ground type, distance between source and receptor, duration, and the number of perceived vibration events. 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 (e.g., explosions) in nature. 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 is defined as the maximum instantaneous positive or negative peak of a vibration signal, or the quantity of displacement measured from peak to trough of the vibration wave. Root-mean-square is defined as the positive and negative statistical measure of the magnitude of a varying quantity. The RMS of a signal is the average of the squared amplitude of the signal, typically calculated over a period of 1 second. 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 (Federal Transit Administration [FTA] 2006: 7-1 – 7-8, California Department of Transportation [Caltrans] 2004: 5-7). PPV and RMS vibration velocity are normally described in inches per second (in/sec).

Although PPV is appropriate for evaluating the potential for building damage, it is not always suitable for evaluating human response. The response of the human body to vibration relates well to average vibration amplitude; therefore, vibration impacts on humans are evaluated in terms of RMS vibration velocity. Similar to airborne sound, vibration velocity can be expressed in decibel notation as vibration decibels (VdB). The logarithmic nature of the decibel serves to compress the broad range of numbers required to describe vibration.

Typical outdoor sources of perceptible groundborne vibration include construction equipment, steel-wheeled trains, and traffic on rough roads. Although the effects of vibration may be imperceptible at low levels, effects may result in detectable vibrations and slight damage to nearby structures at moderate and high levels, respectively. At the highest levels of vibration, damage to structures is primarily architectural (e.g., loosening and cracking of plaster or stucco coatings) and rarely results in damage to structural components. The range of vibration that is relevant to this analysis occurs 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 in fragile buildings (FTA 2006: 8-1–8-8).

EXISTING NOISE ENVIRONMENT

The existing noise environment within the area of the FSP/SAC Infill Site is influenced primarily by transportation noise on the local roadway network and activities associated with the existing FSP and SAC correctional facilities. Traffic noise in the vicinity of the infill site is primarily from vehicular traffic on Folsom Crossing Road, which travels east–west approximately 150 feet north of the infill site's northern boundary. East Natoma Street, which travels northeast–southwest approximately 3,000 feet east of the infill site's eastern boundary, also contributes to the noise environment to a lesser extent. Heavy-duty construction operations are underway immediately north of the FSP/SAC Infill Site. These construction operations are associated with the Folsom Dam Joint Federal Project and are anticipated to continue through 2020. Aircraft flyovers emanate from airports in the region intermittently contribute to the existing noise environment. Existing daily operational activities at FSP and SAC consist of vehicle trips along prison access roads, mechanical system operations, public address loudspeaker announcements, and firing range activities, and these activities influence the noise environment within the immediate vicinity of the infill site.

EXISTING NOISE-SENSITIVE LAND USES

Noise-sensitive land uses are generally considered to include those uses for which noise exposure could result in health-related risks to individuals, as well as uses for which quiet is an essential element of their intended purpose. Residential dwellings are of primary concern because of the potential for increased and prolonged exposure of individuals to both interior and exterior noise levels. The nearest offsite noise-sensitive receptors are the residents of the Lake Pointe apartment complex across the American River, approximately 2,250 feet west of the infill site, as shown in Exhibit 3.9-2. Additional land uses such as parks, historic sites, cemeteries, and recreation areas are also considered sensitive to increases in exterior noise levels. Schools, health care facilities, places of worship, hotels, libraries, and other places where low interior noise levels are essential are also considered noise-sensitive land uses.

Source: Ascent Environmental 2013

Exhibit 3.9-2

Noise Monitoring Locations

The nearest onsite noise-sensitive land uses to the FSP/SAC Infill Site are correctional officer housing at the existing FSP and SAC facilities approximately 1,050 feet to the south and inmate housing units 225 feet to the south, measuring from the southern edge of the infill site. The nearest offsite residential dwelling is approximately 2,250 feet west across the American River.

AMBIENT NOISE SURVEY

An ambient noise survey was conducted by Ascent on February 21, 2013, to document the existing noise environment at various locations in the vicinity of the infill site. Noise level measurements were taken in accordance with American National Standards Institute (ANSI) standards at four locations using Larson Davis Laboratories (LDL) Model 820 precision integrating sound level meters (SLMs). The SLMs were calibrated before and after use with an LDL Model CAL200 acoustical calibrator to ensure the accuracy of the measurements. The equipment used meets all pertinent specifications of the ANSI for Type 1 SLMs (ANSI S1.4-1983 [revised 2006]). Survey locations are shown in Exhibit 3.9-2. The L_{eq} and L_{max} values taken at each location are presented below in Table 3.9-1.

Table 3.9-1 Summary of Results of the Short-term Daytime Community Noise Survey, February 21, 2013

Time	Noise Sources	A-Weighted Sound Level (dBA)	
		L_{eq}	L_{max}
1 – Intersection of Prison Road and East Natomas Road			
10:45–11:00 AM	Traffic on Folsom Lake Crossing, birds chirping	63.8	78.5
2 – Center of Considered Infill Site			
9:30–9:45 AM	Birds chirping, traffic on access roads, shooting range	48.5	53.9
3 – Folsom Prison Road			
10:15–10:30 AM	Generators, yard maintenance equipment, trucks on access road	53.5	70.1
4 – East of Lake Pointe Apartment Complex			
11:15–11:30 AM	Traffic on Folsom Lake Crossing, people talking	49.8	61

Notes: dBA = A-weighted decibels; L_{eq} = equivalent noise level; L_{max} = maximum noise level.
Source: Ascent 2013.

Average daytime hourly noise levels measured during the survey ranged from approximately 48 to 64 dBA L_{eq}, with maximum noise levels that ranged from 54 to 79dBA L_{max}. The primary noise source influencing noise measurement locations was vehicular traffic on Folsom Lake Crossing Road and Prison Road, as well as existing onsite generators, maintenance equipment, firing range operations, and truck operations. Meteorological conditions during the measurement period were favorable, with clear skies, temperatures ranging from 51 degrees Fahrenheit (°F) to 55°F, and no breeze.

EXISTING TRAFFIC NOISE

Existing traffic noise levels were modeled for roadway segments in the vicinity of the infill site based on the Federal Highway Administration's (FHWA's) Highway Traffic Noise Model (TNM) prediction methodologies (FHWA 1998) and on traffic data provided in the traffic impact study prepared for the contemplated development (Fehr & Peers 2013). The FHWA TNM incorporates state-of-the-art sound emissions and sound propagation algorithms, based on well-established theory or on accepted international standards. The acoustical algorithms contained within the FHWA TNM have been validated with respect to carefully conducted noise measurement programs, and show excellent agreement in most cases for sites with and without noise barriers. The noise modeling accounted for such factors as traffic volume, vehicle speed, roadway configuration, distance to the receiver, and propagation over different types of ground (acoustically soft and hard ground). Truck usage and speeds

on study area roadways were estimated from field observations, vehicle mixes indicative of roadway types and truck count data where available.

Table 3.9-2 summarizes the modeled levels of existing traffic noise at a representative distance of 100 feet from the centerline of each major roadway in the vicinity of the infill site and lists distances from roadway centerlines to the 60-dBA, 65-dBA, and 70-dBA L_{dn} traffic noise contours. Traffic noise modeling results are based on existing average daily traffic (ADT) volumes. As shown in Table 3.9-2, the location of the 60-dBA L_{dn} traffic noise contour along the local roadway network ranges from 100 feet to 417 feet from the centerline of the modeled roadways. The extent to which existing land uses in the vicinity of the infill site are affected by existing traffic noise depends on their respective proximity to the roadways and their individual sensitivity to noise. Refer to Appendix 4C in this volume of the DEIR for complete modeling inputs and results.

Table 3.9-2 Summary of Modeled Existing Traffic Noise Levels

Roadway	Segment Description	L_{dn} (dBA) 100 feet	Distance (feet) from Roadway Centerline to L_{dn} Contour		
			70 dBA	65 dBA	60 dBA
Folsom Lake Crossing	West of E. Natoma Street	70.0	90	194	417
E. Natoma Street	East of Folsom Lake Crossing	64.4	38	81	175
E. Natoma Street	Between Prison Road and Hancock Drive	60.8	22	46	100
Greenback Lane	At the Rainbow Bridge	66.6	48	104	223

Notes: dBA = A-weighted decibels; L_{dn} = day-night average noise level.
Source: Data modeled by Extant Acoustical Consulting 2013. Traffic data provided by Fehr & Peers 2013.

EXISTING AIRCRAFT NOISE

Three major operational airports are located in the vicinity of the FSP/SAC Infill Site: Mather Airport, McClellan Airpark, and Sacramento International Airport. The FSP/SAC Infill Site is approximately 10 nautical miles northeast of Mather Airport, 11 nautical miles east of McClellan Airpark, and 20 nautical miles east of Sacramento International Airport. The infill site is not located within the currently adopted 60 and 65 dB L_{dn}/CNEL noise contours of the Airport Land Use Compatibility Plans or Community Land Use Plans for Mather Airport, McClellan Airpark, or Sacramento International Airport. The nearest 60 dB CNEL noise contour would be associated with Mather Airport and is approximately 4 nautical miles south of the infill site boundary.

EXISTING FIRING RANGE NOISE

The California Department of Corrections and Rehabilitation (CDCR) currently operates and maintains a firing range north of the existing FSP and SAC facilities and adjacent to the planned infill site. The firing range is used for practice, training, and qualification of correctional officers and law enforcement agency personnel in communities surrounding the facility. During the ambient noise survey, the firing range was not available for observation or measurement. As a result, this analysis uses noise measurement data performed on similar facilities at other CDCR facilities.

Firing range operations vary from day to day but are assumed to be similar to other CDCR firing ranges currently in operation. Similar CDCR facilities are available for operation from 7:00 a.m. to 7:00 p.m. and are not expected to operate during nighttime hours. Officers most frequently use .38 and 9 millimeter (mm) pistols, shotguns, Mini-14 or AR-15 style rifles and 40mm launchers (used for riot control rounds and chemical dispersion arms).The firing range would be most heavily used during quarterly and annual officer qualification courses. Based on typical qualification days at similar facilities, a maximum-use day would include five courses of fire by 30 officers per course (150 courses total). Each course consists of 36 rounds of .38 or 9mm pistol ammunition and 25 rounds of 0.223 rifle

ammunition (Mini-14/AR-15) fired per officer (approximately 61 total rounds per officer). This results in an approximate maximum of 9,150 rounds per day that could be fired (61 rounds per officer x five courses x 30 officers per course) (Jones 2010). While other types of firing and training occur at the firing range, it is assumed for this analysis that the loudest noise levels would be generated during qualification days because of the intensity of use during these days.

Noise levels from the firing range were modeled within the SoundPLAN three-dimensional noise simulation model based on reference noise level data obtained from previous CDCR projects and noise level data from the Small Arms Range Noise Assessment Model v2.6 (SARNAM2). SARNAM2 was developed by the U.S. Army Corps of Engineers for assessment of noise impacts created by firing ranges (USACE 2003). Predicted exposure of onsite noise-sensitive receptors in the vicinity of the FSP/SAC Infill Site to existing firing range noise levels was modeled based on the assumptions outlined above (Table 3.9-3).

Table 3.9-3 Modeled Existing Firing Range Noise Levels

Description	Exterior Noise Levels (dBA)		Interior Noise Levels (dBA)	
	L_{eq}	L_{max}	L_{eq}	L_{max}
Onsite Receptors				
SAC	70	72	45	47
Onsite Correctional Officer Houses	62	64	37	39
FSP	54	55	29	30
Offsite Receptors (Nearby Housing Developments)				
Rancho Diablo	47	50	22	25
Cimmaron Hill	49	50	24	25
Folsom Bluffs	55	57	30	32
La Collina Del Lago	43	45	18	20
Lake Pointe Apartments	59	61	34	36
Lakeside Townhomes	57	58	32	33
North Granite Township	50	52	25	27
Sutter Woods	54	56	29	31
Twin Rocks	56	58	31	33

Notes: dBA = A-weighted decibels.
All predicted noise levels presented are exterior noise levels. Additional noise level attenuation would be provided by building façades.
Source: Extant Acoustical Consulting 2013

3.9.2 REGULATORY CONSIDERATIONS

Various private and public agencies have established noise guidelines and standards to protect citizens from potential hearing damage and other adverse physiological and social effects associated with noise. A list of the applicable federal, state, and local plans, policies, regulations, laws, and ordinances is provided below. Complete summaries of the federal and state regulations are provided in Volume 1, Appendix 1B.

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

- Federal Noise Control Act of 1972 - The Federal Noise Control Act was issued by the U.S. Environmental Protection Agency (EPA) in 1972 and established programs and guidelines to identify and address the effects of noise on public health, welfare, and the environment.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

- Title 24 – Title 24 of the California Code of Regulations, also known as the California Building Standards Code, establishes acoustical regulations and standards for both exterior and interior sound levels and insulation.

LOCAL PLANS, POLICIES, AND ORDINANCES

Because CDCR, a state agency, is the project proponent, compliance with local standards is not required. However, CDCR considers local noise standards as they relate to the compatibility between the contemplated development and various land uses adjacent to the infill sites. Local noise standards are used as guidelines for what CDCR considers acceptable noise levels in noise-sensitive areas.

CITY OF FOLSOM GENERAL PLAN NOISE ELEMENT

The following goals and policies of the City of Folsom General Plan (1993) are relevant to the development of a single, level II infill correctional facility at the FSP/SAC Infill Site:

- **Policy 30.4:** Areas within the City of Folsom shall be designated as noise impacted if exposed to existing or projected exterior noise levels exceeding 60 dB L_{dn}/CNEL or the performance standards of Table 26-3 of the Noise Element [reprinted in this document as Table 3.9-4].

Table 3.9-4 Noise Level Performance Standards for New Projects and Developments

Noise created by non-transportation-related noise sources associated with new projects or developments shall be controlled so as not to exceed the noise level standards set forth below as measured at any affected residentially designated lands or land use situated in either the incorporated or unincorporated areas. New residential development shall not be allowed where the ambient noise level due to non-transportation-related noise sources will exceed the noise level standards as set forth below:

Exterior Noise Level Standards, dB			
Category	Cumulative number of minutes in any one-hour time period	Daytime 7 AM–10 PM	Nighttime 10 PM–7 AM
1	30	50	45
2	15	55	50
3	5	60	55
4	1	65	60
5	0	70	65

Note: dB = A-weighted decibels
Source: City of Folsom 1988 (General Plan Noise Element, Table 26-3)

Each of the noise level standards specified above shall be reduced by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises.

Noise from single occurrences such as the passage of locomotives, heavy trucks, or aircraft should also be evaluated in terms of single event noise levels. The maximum noise level created by such an event may have the potential to result in activity interference even though the cumulative noise exposure in terms of L_{dn}/CNEL is within acceptable limits. The potential for sleep disturbance is usually of primary concern, and should be evaluated on a case-by-case basis.

- **Policy 30.6:** When industrial, commercial land uses or other uses including non-transportation-related noise sources are proposed which would affect areas containing noise sensitive land uses, noise levels generated by the proposed use shall not exceed the performance standards contained within Table 26-3 [Table 3.9-4].

- **Policy 30.15:** If noise barriers are required to achieve the noise level standards contained within this Element, the following construction practices are recommended:
  1. Noise barriers exceeding six feet in height relative to the roadway should incorporate an earth berm to raise the height of the base so that the total height of the vertical planar portion of barrier is less than six feet.
  2. The total height of the noise barrier above roadway elevation should normally be limited to 12 feet.
  3. The noise barriers should be designed so that their appearance is consistent with other noise barriers in the project vicinity.

CITY OF FOLSOM MUNICIPAL CODE, NOISE CONTROL

The following objectives and policies in the *City of Folsom Municipal Code* are related to potential noise impacts and are relevant to the infill facility.

Exterior Noise Standards (Section 8.42.040)

A. It is unlawful for any person at any location within the incorporated area of the city to create any noise, or to allow the creation of any noise, on property owned, leased, occupied or otherwise controlled by such person which causes the exterior noise level when measured at any affected single- or multiple-family residence, school, church, hospital or public library situated in either the incorporated or unincorporated area to exceed the noise level standards as set forth in Table 8.42.040 [reprinted in this document as Table 3.9-5].

Table 3.9-5 Exterior Noise Level Standards

Noise Level Category	Cumulative Number of minutes in any 1-hour time period	Daytime (dB) (7 AM–10 PM)	Nighttime (dB) (10 PM–7 AM)
1	30	50	45
2	15	55	50
3	5	60	55
4	1	65	60
5	0	70	65

Note: dB = A-weighted decibels
Source: City of Folsom 1993 (Municipal Code, Noise Control, Table 8.42.040)

B. In the event the measured ambient noise level exceeds the applicable noise level standard in any category above, the applicable standard shall be adjusted so as to equal the ambient noise level.

C. Each of the noise level standards specified above shall be reduced by five dB for simple tone noises, noises consisting primarily of speech or music, or for recurring noises.

D. If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level can be measured, the noise level measured while the source is in operation shall be the noise level standards as specified above.

Interior Noise Standards (Section 8.42.050)

A. It is unlawful for any person, at any location within the city, to operate or cause to be operated within a dwelling unit, any source of sound or to allow the creation of any noise which causes the noise level when measured inside a receiving dwelling unit situated in the area either within the city

or adjacent to the city to exceed the noise level standards as set forth in the Table 8.42.050 [reprinted in this document as Table 3.9-6].

Table 3.9-6 Interior Noise Level Standards

Noise Level Category	Cumulative Number of minutes in any 1-hour time period	Daytime (dB) (7 AM–10 PM)	Nighttime (dB) (10 PM–7 AM)
1	5	45	35
2	1	50	40
3	0	55	45

Note: dB = A-weighted decibels
Source: City of Folsom 1993 (Municipal Code, Noise Control, Table 8.42.050)

B. In the event the measured ambient noise level exceeds the applicable noise level standard in any category above, the applicable standard shall be adjusted so as to equal the ambient noise level.

C. Each of the noise level standards specified above shall be reduced by 5 dB for simple tone noises, noises consisting primarily of speech or music, or for recurring impulsive noises.

D. If the intruding noise source is continuous and cannot reasonably be discontinued or stopped for a time period whereby the ambient noise level can be measured, the noise level measured while the source is in operation shall be the noise level standards as specified above.

Noise Source Exemptions (Section 8.42.060)

Section 8.42.060 of the City of Folsom Municipal Code establishes several activities that are exempt from the associated exterior noise provisions, including:

C. Noise sources associated with construction, provided such activities do not take place before 7 a.m. or after 6 p.m. on any day except Saturday or Sunday, or before 8 a.m. or after 5 p.m. on Saturday or Sunday;

H. Any activity to the extent regulation thereof has been preempted by state or Federal law.

Electrical Substations (Section 8.42.080)

Notwithstanding the provisions of Sections 8.42.040 and 8.42.050, noise sources associated with the operation of electrical substations shall not exceed 50 dB when measured as provided in Section 8.42.030.

Vibration Regulations

The California Environmental Quality Act (CEQA) states that the potential for excessive groundborne noise and vibration levels must be analyzed; however, it does not define the term “excessive” vibration. Numerous public and private organizations and governing bodies have provided guidelines to assist in the analysis of groundborne noise and vibration; however, federal and State agencies have yet to establish specific groundborne noise and vibration requirements. Publications of FTA and Caltrans are two of the seminal works for the analysis of groundborne noise and vibration relating to transportation and construction-induced vibration. Caltrans guidelines recommend that a standard of 0.2 in/sec PPV not be exceeded for the protection of normal residential buildings, and that 0.08 in/sec PPV not be exceeded for the protection of old or historically significant structures (Caltrans 2004: 17). With respect to human response within residential uses (i.e., annoyance), FTA recommends a maximum acceptable vibration standard of 80 VdB (FTA 2006: 7-5 – 7-8).

3.9.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

In accordance with Appendix F and Section 15065 of the State CEQA Guidelines, the level II infill correctional facility at the FSP/SAC Infill Site would result in a significant impact related to noise if it would do any of the following:

- expose persons to or generate noise levels in excess of relevant standards (*e.g.*, exterior and interior noise level standards from the *City of Folsom General Plan* and *City of Folsom Municipal Code, Noise Control* as presented above in Section 3.9.2, "Regulatory Considerations," shown in Policy 30.4 and Table 3.9-4);
- result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project, as listed in Tables 3.9-1 and 3.9-2 or modeled for the existing noise environment;
- result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project, as listed in Tables 3.9-1 and 3.9-2 or modeled for the existing noise environment;
- expose people residing or working in the area to excessive noise levels, for a project located within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport;
- expose people residing or working in the project area to excessive noise levels, for a project within the vicinity of a private airstrip; and
- expose persons to or generate excessive groundborne vibration or groundborne noise levels in excess of applicable as presented above in Section 3.9.2, "Regulatory Background," and Caltrans' recommended standard of 0.2 in/sec PPV with respect to the prevention of structural damage for normal buildings or FTA's maximum acceptable vibration standard of 80 VdB with respect to human response (i.e., annoyance at nearby vibration-sensitive land uses [i.e., residential]).

The State CEQA Guidelines (Section 15064.5) define a "substantial adverse change" as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

Generally, a project may have a significant effect on the environment with regard to noise if it would substantially increase the ambient noise levels for adjoining areas or expose people to severe noise levels. In practice, more specific professional standards have been implemented. These standards state that a noise impact may be considered significant if it would generate noise that would conflict with local planning criteria or ordinances, or substantially increase noise levels at noise-sensitive land uses.

METHODOLOGY

For this analysis, the significance of anticipated noise effects is based on a comparison between predicted noise levels and noise criteria defined by City of Folsom. Noise impacts are considered significant if existing or future noise-sensitive land uses would be exposed to noise levels in excess of the *City of Folsom General Plan* Noise Element or City of Folsom Municipal Code standards as described above (see Section 3.9.2, "Regulatory Considerations"), or if implementation of the contemplated development at FSP/SAC would result in an increase in ambient noise levels at noise-sensitive land uses in excess of those listed in Table 3.9-7.

Table 3.9-7 Significant Change in Ambient Noise Levels	
Existing Ambient Noise Level, L_{dn}/CNEL	Significant Increase
< 60 dBA	+ 5 dBA or greater
> 60 dBA	+ 3 dBA or greater

Note: dBA = A-weighted decibels; CNEL = community noise equivalent level; L_{dn} = day-night average noise level
Sources: Adapted from FICON 1992: 31-32, Caltrans 1998: 40-43

Data included in Chapter 2, "Project Description" of this volume of the DEIR and obtained during onsite noise surveys were used to determine potential locations of sensitive receptors and potential noise- and vibration-generating land uses associated with the development of a level II infill correctional facility at FSP/SAC. Noise-sensitive land uses and major noise sources near the infill site were identified based on existing documentation and site reconnaissance data.

Traffic noise modeling was conducted based on average daily traffic volumes obtained from the traffic analysis prepared by Fehr & Peers for the contemplated development at the FSP/SAC Infill Site, as discussed in Section 3.11, "Transportation," in this volume. Predicted traffic noise levels along affected roadways in the vicinity of the infill site were modeled based on the FHWA TNM modeling program. The infill facility's contribution to the existing traffic noise levels along area roadways was determined by comparing the predicted noise levels at a reference distance of 100 feet from the roadway centerline, for the baseline, existing plus approved projects, and cumulative (2020) conditions with and without development-generated traffic.

The SoundPLAN® computer noise model was used for computing short-term construction-related and long-term operational sound levels.

To assess the impacts of potential short-term construction noise on sensitive receptors, the sensitive receptors and their relative exposure to construction noise were identified (considering intervening building façades and distance). The construction noise that would be generated by the contemplated development was predicted by using the Federal Transit Administration Noise and Vibration Impact Assessment methodology (FTA 2006: 12-1 – 12-15). The emission noise levels referenced and the usage factors were based on the Federal Highway Administration Roadway Construction Noise Model. The noise levels were calculated for specific construction equipment and the resulting noise levels at sensitive receptors.

Potential noise impacts from long-term (operation-related) stationary sources were assessed based on existing documentation (*e.g.*, equipment noise levels) and site reconnaissance data. This analysis also included an evaluation of the contemplated development's noise-generating uses that could affect noise-sensitive receptors near the infill site.

To assess the land use compatibility of the infill correctional facility with existing on- and offsite noise levels, predicted traffic noise contours were used to determine if development of the infill site would exceed the relevant noise criteria.

Groundborne vibration impacts were qualitatively assessed based on existing documentation (*e.g.*, vibration levels produced by specific construction equipment operations) and the distance of sensitive receptors from the given source.

PROJECT IMPACTS AND MITIGATION MEASURES

Impact 3.9-1: Short-Term Construction-Generated Noise Levels

Construction noise levels in the vicinity of the infill site would fluctuate depending on the particular type, number, and duration of usage of the various pieces of equipment. The effects of construction noise

depend largely on the types of construction activities occurring on any given day, noise levels generated by those activities, distances to noise-sensitive receptors, and the existing ambient noise environment in the vicinity of the receiver. Construction generally occurs in several discrete stages, with the equipment mix and associated noise characteristics varying for each operation. These stages alter the characteristics of the noise environment generated at the infill site and in the surrounding area for the duration of the construction process. It is assumed that the construction equipment fleet mixes and utilization would occur in four separate phases of construction (described in further detail in Chapter 3, "Project Description," of Volume 1 of this DEIR): demolition and site preparation (Phase 1), grading (Phase 2), utilities (Phase 3), and construction (Phase 4). Construction at the FSP/SAC Infill Site is expected to begin in spring 2014 and would be completed by spring 2016.

Phase 2, grading is anticipated to generate the most substantial noise levels due to onsite equipment associated with grading, compacting, and excavation operations. Grading and site preparation equipment typically includes backhoes, bulldozers, and loaders; excavation equipment such as graders and scrapers; and compaction equipment. Erecting large structural elements and mechanical systems, as occurs in the construction phase (Phase 4), could require the use of a crane for placement and assembly tasks, which may also generate substantial noise. Table 3.9-8 lists the noise levels typically generated by various types of construction equipment.

Table 3.9-8 Noise Emission Levels from Construction Equipment

Equipment Type	Typical Noise Level (dBA) at 50 feet
Air Compressor	78
Asphalt Paver	77
Backhoe	78
Compactor	83
Concrete Pump	81
Crane, Mobile	81
Dozer	82
Front-End Loader	79
Generator	81
Grader	85
Pneumatic Tools	85
Rock Drill	81
Scraper	84
Trucks	74–81
Water Pump	81

Notes: dBA = A-weighted decibels.
All equipment is fitted with a properly maintained and operational noise control device, per manufacturer specifications. Noise levels listed are manufacturer specified noise levels for each piece of heavy construction equipment.
Source: FHWA RCNM 2006, FTA 2006

To assess noise levels associated with the various equipment types and operations, construction equipment can be considered to operate in two modes, mobile and stationary. Mobile equipment sources move around a construction site performing tasks in a recurring manner (*e.g.*, loaders, graders, dozers). Stationary equipment operates in a given location for an extended period of time to perform continuous or periodic operations. Thus, it is necessary to determine the location of stationary sources during specific phases, or the effective acoustical center of operations for mobile equipment during

various phases of the construction process. Operational characteristics of heavy construction equipment are additionally typified by short periods of full-power operation followed by extended periods of operation at lower power, idling, or powered-off conditions. These characteristics are accounted for through the application of typical usage factors to the reference noise levels.

Based on the reference noise levels, usage rates, fleet mixes, and operational characteristics discussed above, overall hourly average noise levels attributable to construction activities at the infill site were predicted at existing onsite and offsite noise-sensitive receptors in the vicinity of the infill site.

The nearest onsite noise sensitive receptors are primarily the main inmate housing units at existing FSP/SAC facilities. The onsite staff housing is located downgradient from the infill site and is largely shielded by existing correctional facilities. Distances from the approximate acoustical center of construction activities for the FSP/SAC Infill Site, to onsite noise-sensitive receptors at the SAC facility, range from 1,000 feet to nearly 4,000 feet. Distances from the approximate acoustical center of construction activities for the infill site to onsite noise-sensitive receptors at the FSP facility range from 1,750 feet to nearly 3,000 feet.

The nearest offsite noise-sensitive receptor is a multi-family residential use, Lake Point Apartments, located approximately 2,250 feet west of the infill site, adjacent to Folsom-Auburn Road and Folsom Lake Crossing. Table 3.9-9 shows the predicted hourly average noise levels from construction activities associated with the development of the single correctional facility, at existing onsite and offsite noise-sensitive receptors, accounting for the usage factor of individual pieces of equipment, topographical shielding, and absorption effects.

Table 3.9-9 Predicted Single Facility Construction Noise Levels by Phase

Location	Noise Level (L_{eq}, dBA)			
	Phase 1	Phase 2	Phase 3	Phase 4
Onsite Receptors				
FSP	42	42	40	42
Onsite Residential	44	46	43	45
SAC	59	61	57	60
Offsite Receptors				
Cimmaron Hill	25	25	22	25
Folsom Bluffs	38	43	36	39
La Collina Del Lago 01	33	35	32	34
La Collina Del Lago 02	35	37	34	36
Lake Pointe Apartments	43	45	41	44
Lakeside Townhomes	40	42	38	41
North Granite Township	33	34	31	33
Rancho Diablo	37	39	35	38
Sutter Woods	39	41	37	40
Twin Rocks	40	42	38	41

Notes: dBA = A-weighted decibels.
All predicted noise levels presented are exterior noise levels. Additional noise level attenuation would be provided by building façades.
Source: Extant Acoustical Consulting 2013

As indicated in Table 3.9-8, operational noise levels for typical construction activities would range from 74 to 85 dBA at a distance of 50 feet. Table 3.9-9 shows the predicted hourly average noise levels that would be attributable to construction activities of the considered single infill site at existing on- and offsite noise sensitive receptors when accounting for the usage factor of individual pieces of equipment, topographical shielding and absorption effects.

As presented in Section 3.9.3, "Regulatory Considerations," Title 24 regulations establish interior criteria of 70 dBA L_{eq} during active hours and 45 dBA L_{eq} during sleeping hours within noise-sensitive institutional uses. Building façades constructed with a wood frame and a stucco or wood sheathing exterior typically provide a minimum exterior-to-interior noise reduction of 25 dBA with windows closed, whereas a building constructed of a steel or concrete frame, a curtain wall or masonry exterior wall, and fixed plate-glass windows of 1/4-inch thickness typically provides an exterior-to-interior noise reduction of 30–40 dBA with windows closed (Paul S. Veneklasen & Associates 1973, cited in Caltrans 2002).

As shown in Table 3.9-9, construction operations and related activities during Phase 2 are predicted to generate maximum exterior hourly noise levels of 61 dBA L_{eq} at the nearest onsite noise-sensitive receptors (the existing SAC facility). Assuming an average exterior-to-interior noise reduction of 25 dBA (with windows closed; prison windows are not operable), interior noise levels would not exceed the Title 24 criteria of 70 dBA L_{eq} onsite or offsite noise-sensitive institutional receptors during Phase 2.

Construction operations and related activities during Phase 2 are predicted to generate maximum exterior hourly noise levels of 45 dBA L_{eq} at the nearest offsite noise-sensitive receptor; the Lake Pointe Apartments adjacent to Folsom-Auburn Road. Construction activities associated with the infill facility are would occur Monday through Friday, between the hours of 7 a.m. and 6 p.m.; as such, construction operations associated with the development of the infill facility would be exempt from the City of Folsom Municipal Code noise level criteria. Additionally, construction noise levels generated from development at the infill site would not exceed the City of Folsom Code exterior noise level criteria during daytime hours (7 a.m. to 10 p.m.).

While construction of a single, level II infill correctional facility at the FSP/SAC Infill Site would involve short-term construction activities, these construction activities would not expose onsite or offsite sensitive receptors to substantial, temporary noise levels that exceed the applicable noise standards. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.9-2: Groundborne Noise and Vibration Levels at Sensitive Receptors from Construction Activities

Construction activities for the single, level II infill correctional facility on the FSP/SAC Infill Site may result in varying degrees of temporary ground vibration, depending on the specific construction equipment used and operations involved. Groundborne vibration levels caused by various types of construction equipment are summarized in Table 3.9-10. The representative vibration levels identified for various construction equipment types show that sensitive receptors could be exposed to groundborne vibration levels exceeding recommended Caltrans and FTA thresholds of significance for exposing existing residential areas to peak particle velocities.

Table 3.9-10 Representative Vibration Source Levels for Construction Equipment		
Equipment	PPV at 25 feet (in/sec)	Approximate Lv (VdB) at 25 feet
Large Bulldozer	0.089	87
Trucks	0.076	86
Jackhammer	0.035	79
Small Bulldozer	0.003	58

Notes: Lv = RMS velocity expressed in vibration decibels (VdB), assuming a crest factor of 4; PPV = peak particle velocity.
Source: Federal Transit Administration 2006

To evaluate vibration impacts at residential receptors, the construction activity generating the highest PPV (large bulldozer) was analyzed. The distance from grading activities to the nearest onsite sensitive receptor would be approximately 250 feet. The resulting groundborne vibration levels resulting from construction activities is predicted to be 0.003 in/sec PPV at the nearest onsite residential receptor. Therefore, groundborne vibration levels attributable to construction activities would not exceed the Caltrans-recommended threshold of significance of 0.2 PPV in/sec for exposing residential uses to vibration PPV from construction.

*Implementation of infill facility at the FSP/SAC Infill Site would not expose sensitive receptors to groundborne noise and vibration levels that could exceed the Caltrans-recommended threshold of significance. This would be a **less-than-significant** impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.9-3 Long-Term Increase in Traffic Noise Levels at Existing Noise-Sensitive Receptors

Long-term operation of the FSP/SAC Infill Site would result in an increase in ADT volumes on the local roadway network and, consequently, an increase in noise levels from traffic sources along affected roadway segments. To examine the traffic noise impacts, traffic noise levels associated with the infill facility were modeled for roadway segments in the vicinity of the infill site, using vehicle noise level emissions and sound propagation algorithms based on the FHWA TNM. Traffic noise levels were modeled under the following conditions: existing (Table 3.9-2), existing plus single facility, cumulative (2020) , and cumulative (2020) plus single facility. ADT volumes and distribution of those volumes were obtained from the transportation impact analysis prepared for this project (Fehr & Peers 2013; refer to Section 3.11 and Appendix 4D of this volume). Vehicle speeds and truck volumes on local area roadways were determined from field observations conducted on February 21, 2013.

Tables 3.9-11 and 3.9-12 summarize modeled CNEL noise levels at 100 feet from the roadway centerline for affected roadway segments in the vicinity of the infill site under modeled conditions, with and without implementation of a single, level II infill correctional facility. The traffic noise levels presented in Tables 3.9-11 and 3.9-12 represent an application of conservative traffic noise modeling methodologies, which assume no natural or artificial shielding from existing or proposed structures or topography. Actual traffic noise exposure levels at noise-sensitive receptors in the vicinity of the infill site would vary depending on a combination of factors such as variations in daily traffic volumes, shielding provided by existing and proposed structures, and meteorological conditions. Refer to Appendix 4C in this volume for complete modeling inputs and results.

Table 3.9-11 Predicted Traffic Noise Levels – Existing Conditions and Existing Conditions Plus Single Facility

Roadway	Segment Description	L_{dn} at 100 Feet, dBA			
		Existing Conditions*	Existing plus Infill Facility	Net Change	Significant Impact?
Folsom Lake Crossing	West of E. Natoma Street	70	70	<1	No
E. Natoma Street	East of Folsom Lake Crossing	64	64	<1	No
E. Natoma Street	Between Prison Road and Hancock Drive	61	61	<1	No
Greenback Lane	At the Rainbow Bridge	67	67	<1	No

Notes: dBA = A-weighted decibels L_{dn} = day-night average noise level
* Traffic noise levels are predicted at a standard distance of 100 feet from the roadway centerline and do not account for shielding from existing noise barriers or intervening structures. Traffic noise levels may vary depending on actual setback distances and localized shielding.
Source: Extant Acoustical Consulting 2013.

Table 3.9-12 Predicted Traffic Noise Levels – Cumulative (2020) Conditions and Cumulative (2020) Conditions Plus Single Facility

Roadway	Segment Description	L_{dn} at 100 Feet, dBA			
		2020 Conditions*	2020 plus Infill Facility	Net Change	Significant Impact?
Folsom Lake Crossing	West of E. Natoma Street	72	72	<1	No
E. Natoma Street	East of Folsom Lake Crossing	66	66	<1	No
E. Natoma Street	Between Prison Road and Hancock Drive	62	62	<1	No
Greenback Lane	At the Rainbow Bridge	67	67	<1	No

Notes: dBA = A-weighted decibels L_{dn} = day-night average noise level
* Traffic noise levels are predicted at a standard distance of 100 feet from the roadway centerline and do not account for shielding from existing noise barriers or intervening structures. Traffic noise levels may vary depending on actual setback distances and localized shielding.
Source: Extant Acoustical Consulting, 2013.

As shown in Tables 3.9-11 and 3.9-12, existing conditions and future 2020 cumulative conditions at the modeled roadway segments exceed the 60 dBA General Plan Noise Element criteria. Also shown in Tables 3.9-11 and 3.9-12, the largest increase in roadway noise associated with the development of a single, level II infill correctional facility at the FSP/SAC Infill Site would be less than 1 dBA on any affected road segment, which would be barely perceptible. Therefore, the development of the level II facility at FSP/SAC would not change the L_{dn} at 100 feet dBA on those segments compared to existing or 2020 conditions and would not be the cause of traffic noise levels exceeding the 60 dBA General Plan Noise Element criteria.

Development of a single, level II infill correctional facility at the FSP/SAC Infill Site would not result in a significant increase in traffic noise levels (increase greater than 3-5 dBA). Furthermore, development would not cause traffic noise levels to exceed the City of Folsom exterior noise level criteria of 60 dBA L_{dn} for the roadway segments shown in Tables 3.9-11 and 3.9-12.

While implementation of a single, level II infill correctional facility at the FSP/SAC Infill Site could result in an increase of ADT in the vicinity of the infill site, the increased traffic volumes would not result in a significant (3–5 dBA or greater) increase in traffic noise along roadways in the vicinity of the FSP/SAC Infill Site, and would not cause an exceedance of the City of Folsom noise level criteria. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.9-4: Long-Term Increase in Onsite Noise Levels from Operation of Stationary Noise Sources

Development of an infill correctional facility at the infill site could introduce several onsite stationary noise sources associated with support and operation of the facility. Stationary noise sources associated with operations of similar CDCR facilities often include heating, ventilation, and air conditioning (HVAC) equipment; mechanical equipment; emergency electrical generators; and loading dock operations. Correctional facilities generally incorporate outdoor public address (PA) systems, multiple alarms, and outdoor recreation facilities for inmates. The noise levels associated with operation of these sources are described separately below.

Support infrastructure for the single facility that are typically handled at a central plant, such as HVAC, mechanical systems, emergency generators, and utility distribution areas, would be facilitated through the existing infrastructure support of FSP/SAC facilities. As such, this analysis does not incorporate further discussion or evaluation of noise levels typically associated with the operation of a central utility plant or associated infrastructure support services.

Public Address System

Development of the infill site would include the installation of a public address (PA) system throughout the facility. The number and orientation of PA system components have not yet been determined. Based on reference noise measurements conducted at similar correctional facilities, noise levels for outdoor PA systems can reach intermittent levels of approximately 70–90 dBA L_{max} at 50 feet. Operation of PA systems is generally intermittent and limited in nature (i.e., less than 1 minute in duration), typically involving announcements, daily instructions or other communications necessary for the safety of inmates and correctional staff.

The inmates and personnel within the facility are the intended audience for information distributed over the PA system when it is in use, and PA system sound levels will be loud enough to allow clear intelligibility and effective communication. Because inmates and personnel within the infill facility are considered the intended audience and users of the PA system, onsite receptors within the infill facility are not considered to be “noise sensitive” with respect to this noise source, just as inmates at the existing FSP and SAC facilities are not considered “sensitive” to existing PA system noise levels.

Onsite residences located 1,050 feet from the FSP/SAC Infill Site would be considered sensitive land uses. Offsite noise-sensitive land uses in the vicinity of the infill site include residential land uses west, east, and south of the infill site. Modeled noise levels at these noise-sensitive receptors are presented in Table 3.9-13.

As presented in Table 3.9-13, exterior noise levels generated by operation of a PA system at a single, level II infill correctional facility would be 35 to dBA L_{eq} and 50 dBA L_{max} at onsite correctional officer residences. Assuming an average exterior-to-interior noise reduction of 25 dBA (with windows closed; prison windows are not operable), interior noise levels would not exceed the Title 24 regulations of 70 dBA L_{eq} during active hours or 45 dBA L_{eq} during sleeping hours at offsite and onsite noise-sensitive institutional receptors.

Table 3.9-13 Modeled Public Address System Noise Levels		
Description	Noise Levels (dBA)	
	L_{eq}	L_{max}
Onsite Receptors		
Onsite Residential	35	50
Cimmaron Hill	17	32
Folsom Bluffs	30	44
La Collina Del Lago	30	45
Lake Pointe Apartments	35	49
Lakeside Townhomes	35	50
North Granite Township	27	42
Rancho Diablo	31	46
Sutter Woods	36	49
Twin Rocks	35	49

Notes: dBA = A-weighted decibels.
All predicted noise levels presented are exterior noise levels. Additional noise level attenuation would be provided by building façades.
Source: Extant Acoustical Consulting LLC, 2013

Exterior noise levels generated from the operation of a PA system at the infill correctional facility are anticipated to be approximately 36 dBA L_{eq} and 49 dBA L_{max} at the nearest offsite residential land use. As such, PA system noise levels are not anticipated to exceed the City of Folsom exterior noise level criteria outlined in Tables 3.9-4 through 3.9-6.

Parking Lot Activities

Development of an infill correctional facility at the FSP/SAC Infill Site would require additional parking for staff and visitors of the infill facility. Parking would be located directly adjacent to the infill facility, south of the infill facility and north of the northernmost housing unit at SAC. Reference noise level measurements have been collected previously of parking lot activities, including average sound exposure levels associated with a single parking event (consisting of vehicle arrival, limited idling, occupants exiting the vehicle, door closures, conversations among passengers, occupants entering the vehicle, startup, and departure of the vehicle). Based on those measurements, average SEL associated with a single parking event are approximately 71 dB SEL at a distance of 50 feet.

As described in detail in Section 3.11, “Transportation,” the single facility is anticipated to have an estimated staff of 193 personnel. The number of parking spaces planned for the infill facility is based on the total number of staff for the second and third watches; additional spaces are included for weekend visitation, assumed for 15 percent of the inmate population. Therefore, the single facility is planned to include approximately 207 parking stalls. These assumptions were used as input to the SoundPLAN noise simulations model created for the contemplated development. The resultant parking noise levels at noise-sensitive uses in the vicinity are shown in Table 3.9-14.

Table 3.9-14 Modeled Parking Lot Noise Levels		
Description	Noise Levels (dBA)	
	L_{eq}	L_{max}
Onsite Receptors		
Onsite Residential	21	41
Cimmaron Hill	--[1]	--[1]
Folsom Bluffs	--[1]	--[1]
La Collina Del Lago	--[1]	--[1]
Lake Pointe Apartments	--[1]	--[1]
Lakeside Townhomes	--[1]	--[1]
North Granite Township	--[1]	--[1]
Rancho Diablo	--[1]	--[1]
Sutter Woods	--[1]	--[1]
Twin Rocks	--[1]	--[1]

Notes: dBA = A-weighted decibels; L_{eq} = equivalent noise level; L_{max} = maximum noise level.
All predicted noise levels presented are exterior noise levels. Additional noise level attenuation (typically 25 dBA or greater) would be provided by building façades.
Parking operation noise levels at this location are predicted to well below, and will be dominated by the ambient noise environment; as such, they are not reported.
Source: Extant Acoustical Consulting 2013.

Exterior noise levels generated from the parking operations at the single, level II infill correctional facility would be 12–31 dBA L_{eq} and 32–56 dBA L_{max} at offsite institutional land uses in the vicinity of the FSP/SAC Infill Site. Assuming an average exterior-to-interior noise reduction of 25 dBA (with windows closed; prison windows are not operable), interior noise levels would not exceed the Title 24 regulations of 70 dBA L_{eq} during active hours or 45 dBA L_{eq} during sleeping hours at offsite noise-sensitive institutional receptors.

Exterior noise levels generated from the parking operations at the single infill correctional facility are anticipated to be considerably less than those reported above at the nearest offsite residential land use and would be dominated by the existing ambient noise. Noise levels would not be anticipated to approach or exceed the City of Folsom exterior noise level criteria as presented in Tables 3.9-4 through 3.9-6.

Other Stationary Noise Sources

Additional intermittent noise sources attributable to operation of the infill site include the opening and closing of entries, adult voices, ancillary mechanical equipment, and the use of maintenance equipment. Such noise-generating activities occur infrequently and are generally intermittent. Because of the infrequent and intermittent nature of these noise sources, it is not feasible to address the individual noise impacts. Such noise events occur infrequently and would be similar to noise events and noise levels already occurring in the vicinity of the infill site; therefore, significant noise level increases (3–5 dBA or greater) at nearby noise-sensitive receptors would not occur. Additionally, equipment, vehicles, devices, and activities used in an emergency capacity would be considered exempt under the City of Folsom Municipal Code.

Operation of a single, level II infill correctional facility at the FSP/SAC Infill Site would result in additional onsite stationary-source noise being introduced in the vicinity of the infill site. Operational and stationary noise sources associated with the development of the infill facilities would not result in a noticeable (3 dBA or greater) increase in noise levels in the vicinity of the FSP/SAC Infill Site, and

*would not cause an exceedance of the City of Folsom stationary source noise level criteria. This would be a **less-than-significant** impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.9-5: Potential for Incompatibility of Proposed Onsite Land Uses with the Ambient Noise Environment

The noise compatibility standards for prisons are established in Title 24 of the California Code of Regulations. The section states: "Housing areas [for inmates] shall be designed and constructed so that the average noise level does not exceed 70 decibels during periods of activity and 45 decibels during sleeping hours." (Part 1, Title 24, CCR 2001:143)

The nearest operational airport/airstrip in the vicinity of the infill site being considered is Mather Airport; Mather Airport is more than 4 nautical miles south of the development site; aircraft noise may be audible, depending on varying environmental effects, but it is not anticipated to contribute substantially to the ambient noise environment on the infill site.

Based on the noise monitoring conducted at the infill site, average daytime noise levels currently range from approximately 49 to 54 dBA L_{eq} (Table 3.9-1). Development of the single, level II infill correctional facility would not result in a significant increase in traffic noise levels from Folsom Lake Crossing Road north of the infill site. Based on the measurements of existing ambient noise levels obtained at the infill site and assuming an average exterior-to-interior noise reduction of 25 dBA, predicted ambient interior noise levels would not exceed the State's recommended daytime or nighttime noise compatibility standards for prisons of 70 dBA L_{eq} and 45 dBA L_{eq}, respectively.

Development of a single, level II infill correctional facility at the FSP/SAC Infill Site would not affect the location, configuration or operation of the existing firing range. It is expected that operations of the existing firing range would continue during and following the development of an infill correctional facility. As such, exposure of existing onsite noise-sensitive receptors to firing range noise would remain consistent with existing conditions (Table 3.9-15).

Table 3.9-15 Modeled Firing Range Noise Levels – Single Housing Unit

Description	Exterior Noise Levels (dBA)		Interior Noise Levels (dBA)	
	L_{eq}	L_{max}	L_{eq}	L_{max}
Single Infill Housing Unit 01	55	57	30	32
Single Infill Housing Unit 02	65	66	40	41
Single Infill Housing Unit 03	67	71	42	46
Single Infill Facility - Family Visiting	62	64	37	39
Single Infill Facility - Activity Field	76	78	51	53

Notes: dBA = A-weighted decibels; L_{eq} = equivalent noise level; L_{max} = maximum noise level.
Source: Extant Acoustical Consulting 2013.

Modeled firing range noise levels at the infill facility would be 55–67 dBA L_{eq} and 57–71 dBA L_{max} at the exterior building façades of the inmate housing units. As previously mentioned, the hours of operation for the firing range are restricted to daytime hours; therefore, firing range noise levels would not affect the nighttime noise levels at the infill facility. Assuming an average exterior-to-interior noise reduction of 25 dBA (with windows closed; prison windows are not operable), interior noise levels at onsite noise-

sensitive institutional receptors within the infill facility would not be anticipated to exceed the Title 24 regulations of 70 dBA $L_{eq\ d}$uring active hours or 45 dBA L_{eq} during sleeping hours.

Implementation of a single, level II infill correctional facility at the FSP/SAC Infill Site would not expose onsite noise-sensitive land uses to noise levels exceeding applicable criteria. This would be a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

3.10 PUBLIC SERVICES

This section describes the existing police, fire, and emergency services provided to the Folsom State Prison/California State Prison, Sacramento (FSP/SAC) Infill Site, as well as existing schools and parks. Impacts are evaluated in relation to increased demand for public services associated with the development of a single, level II infill correctional facility at the FSP/SAC Infill Site, and any actions needed to provide increased services that could lead to physical environmental effects. The information provided in this section is derived, in part, from the adopted *Folsom Women's Facility Project: Initial Study/Proposed Negative Declaration* prepared for a women's facility at this California Department of Corrections and Rehabilitation (CDCR) property in 2012 (CDCR 2012). Public utilities at FSP/SAC (i.e., water supply, wastewater treatment and disposal, solid waste disposal, and electricity and natural gas systems) are discussed separately in Section 3.12, "Utilities," of this volume of the draft environmental impact report (DEIR).

3.10.1 ENVIRONMENTAL SETTING

POLICE SERVICES

The FSP and SAC facilities are staffed with correctional officers equipped to manage site security. This includes 643 officers at FSP and 1,016 officers at SAC (as of 2010) (CDCR 2010a, CDCR 2010b). When outside police services are required, the City of Folsom Police Department (FPD) provides additional services through an existing mutual aid agreement. FPD is located at 46 Natoma Street, approximately 1.3 miles southwest of the infill site. The City's police department has a staff of 110, including officers and support staff (City of Folsom 2013a). The City of Folsom maintains a ratio of 1.3 police officers per 1,000 residents.

FIRE PROTECTION

The FSP Fire Department (FSPFD) is located onsite at 300 Prison Road and provides fire protection and emergency rescue services for both the existing Folsom prison facilities. The FSPFD is staffed by a mostly volunteer force and consists of one fire station with one fire chief, five fire captains, 14 inmate firefighters, and one hazardous materials specialist. The FSPFD maintains a mutual aid agreement with the City of Folsom Fire Department (CDCR 2012). These calls generally involve auto accidents, grass fires, or advanced life support services.

The City of Folsom Fire Department has four stations. Station 38 is the nearest station to the infill site and is located at 1300 Blue Ravine Road, approximately three miles southwest of FSP/SAC. The City's fire department provides fire protection and emergency medical services for a population of approximately 65,000 people and responds to more than 6,000 requests for service annually, a daily average of more than 16 calls (City of Folsom 2013b). The City's fire department responds to fire, paramedic, and public assistance calls utilizing fire engines, a truck company, grass units, an air unit, and paramedic ambulances (CDCR 2012).

EMERGENCY SERVICES

As stated above, the FSPFD provides fire protection, emergency medical service, and ambulance transport service for FSP/SAC. In addition, there is a staff of approximately160 medical personnel employed at the FSP facility and 260 medical employees at the SAC facility (CDCR 2010a, CDCR 2010b). Regionally, the FSPFD utilizes cross-trained firefighter/paramedics to provide paramedic/advanced life support services from all four of its stations. These personnel staff all fire

vehicles; including the engine companies, ladder truck, and paramedic ambulances (City of Folsom 2013c).

FSP has an Emergency Preparedness Plan tailored to the specific site needs of the institution, in compliance with the California Emergency Services Act of 1970. The plan specifies measures to be implemented within the facility during certain types of emergencies, such as fire, flood, earthquake, war, and civil disturbance. Employees are trained in the use of emergency equipment and medical aid for these situations.

SCHOOLS

The FSP/SAC Infill Site is located in the Folsom Cordova Unified School District. The Folsom Cordova Unified School District includes 19 elementary schools, four middle schools, two high schools, five alternative schools, and one charter school, and serves approximately 19,500 students (Folsom Cordova Unified School District 2013). The nearest schools to the infill site are Carl Sundahl Elementary (9932 Inwood Road), Blanche Sprentz Elementary (249 Flower Drive), and Theodore Judah Elementary (101 Dean Way).

The nearby San Juan Unified School District serves the northeast area of Sacramento County, including Arcade, Arden, Carmichael, Citrus Heights, and Fair Oaks, along with portions of Folsom, Gold River, and Orangevale. The district serves 40,000 students in 70 schools (San Juan Unified School District 2013).

PARKS

The City of Folsom has 43 parks with more than 300 developed acres, 20 baseball/softball fields, 18 outdoor basketball courts, 17 tennis courts, and 14 soccer fields. The FSP/SAC Infill Site is located in the area designated as District F in the Folsom Parks and Recreation Master Plan. District F includes the area between Natoma Street and Folsom Lake on the north, the Central Business District to the southwest, and Blue Ravine Boulevard along the southeasterly and easterly sides. The existing parks in this district include Folsom Lake Recreation Area, B.T. Collins Park, Ed Mitchell Neighborhood Park, Folsom City Park/Zoo, R.G. Smith Clubhouse, Briggs Ranch Mini Park, and Elvie Perazzo Briggs Park. The American River Parkway borders District F to the west (City of Folsom 1996). The American River Parkway includes open space and a paved trail connecting Sacramento's parks, downtown Sacramento, the Sacramento and American Rivers, and Folsom Lake. The Folsom Lake State Recreation Area is located north of the FSP/SAC Infill Site. Recreational opportunities at the recreation area include hiking, biking, camping, picnicking, horseback riding, boating, and fishing.

3.10.2 REGULATORY CONSIDERATIONS

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

No federal regulations or laws related to public services apply to the development of level II infill correctional facilities at FSP/SAC.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

A list of the state plans, policies, regulations, and laws relating to public services that may apply to the FSP/SAC Infill Site is provided below. A full description of the applicable regulatory considerations is provided in Volume 1, Appendix 1B.

- Fire Safe Regulations (California Code of Regulations Title 14 and Title 19) - Title 14 establishes minimum wildfire protection standards in conjunction with building construction and development in

the State Responsibility Area. Title 19 contains regulations that have been developed by the State Fire Marshal for the purpose of establishing additional fire protection for group occupancies, such as places of assembly, schools, high rise buildings, hospitals and organized camps.

- California Building Standards Codes - Title 24 Part 9, the California Fire Code, is based on the International Fire Code, with the express purpose of prescribing regulations governing the safeguarding of life and property from fire and explosion hazards arising from the storage, handling and use of hazardous substances, materials and devices, and from conditions hazardous to life or property in the occupancy of buildings and premises.
- California Emergency Services Act - The California Emergency Services Act of 1970 established authority for the preparation of an emergency preparedness plan for prisons. All institutions are required to ensure preparedness in dealing with disasters such as earthquakes, fires, and floods.
- Senate Bill 50 - Senate Bill 50 instituted a new school facility program by which school districts can apply for state construction and modernization funds. This legislation imposed limitations on the power of cities and counties to require mitigation of school facilities impacts as a condition of approving new development. It also provided the authority for school districts to levy fees at three different levels.
- California Education Code - Section 17620 authorizes school districts to levy a fee, charge, dedication, or other requirement against any development project for the construction or reconstruction of school facilities, provided that the district can show justification for levying of fees.
- California Government Code - Section 65995 limits the fee to be collected by school districts under the Education Code to the statutory fee unless a school district conducts a Facility Needs Assessment and meets certain conditions.

LOCAL PLANS, POLICIES, AND ORDINANCES

The FSP/SAC Infill Site is located on land that is owned or controlled by the State. As a state agency, CDCR is not subject to land use plans, policies, and ordinances adopted by local agencies. Nevertheless, a discussion of relevant local plans and policies is provided because conflicts with them could indicate the potential occurrence of other physical environmental effects.

CITY OF FOLSOM GENERAL PLAN

The City of Folsom's General Plan (1993) contains goals and policies relating to public facilities within the City. Specifically, the goal is to set targets for the ultimate build-out of the City, to plan for the provision of public facilities and services to meet this level of development, and to phase development according to the capacity of public facilities and services to meet those targets. To meet this goal, the City of Folsom has established a policy to not issue permits for construction of new development until one of the following conditions is met: (1) the applicant can provide for the installation and/or financing (through fees or other means) of needed public facilities; (2) the project is included in the area covered by an existing facilities plan approved by the City; or (3) the project can be served by onsite or private facilities meeting city and county health and safety issues.

The City of Folsom's General Plan includes policies designed to meet the following recreation goals:

GOAL 35: Achieve and maintain quality parks that provide optimum satisfaction to the leisure and recreation needs of the citizens;

GOAL 36: Acquire and improve land and facilities for recreational use in pace with local needs; and

GOAL 39: Effectively use the resources of the City of Folsom and other governmental entities (such as school districts, county, state, and federal agencies) to accomplish coordinated, effective planning of recreation and leisure activities.

CITY OF FOLSOM EMERGENCY OPERATIONS PLAN

The City of Folsom Emergency Operations Plan addresses the planned response to emergencies associated with disasters, technological incidents, or other dangerous conditions created by either humans or nature. The plan provides an overview of operational concepts; identifies components of the city emergency management organization; and describes the overall responsibilities of local, state, and federal entities.

CITY OF FOLSOM PARKS AND RECREATION MASTER PLAN

The City's Parks and Recreation Master Plan (City of Folsom 1996) was developed to serve as a guide to the orderly development, renovation, and improvement of parks, recreation programs, facilities, and services for the City's Parks Department, as well as guide the preservation, management, and use of open space lands in the community. The Master Plan documents the need for additional parks and recreation facilities in the City of Folsom due to growth. It estimates that, by 2015, the City will need more than 500 acres of parks and recreation facilities to serve its population.

3.10.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

In accordance with Appendix G and Section 15065 of the State of California Environmental Quality Act (CEQA) Guidelines, the level II infill correctional facility at the FSP/SAC Infill Site would result in a significant impact relating to public services if it would do any of the following:

- result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or in the need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives;
- impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan;
- 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; or
- include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment.

The State CEQA Guidelines (Section 15064.5) define a "substantial adverse change" as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

ISSUES NOT DISCUSSED FURTHER

Recreational facilities: As described in Section 3.4, "Employment, Population, and Housing," of this volume of the DEIR, new staff at FSP/SAC would reside primarily in Sacramento, El Dorado, and Placer Counties and would be distributed among several cities and unincorporated communities. Any increase in the use of recreational facilities that may occur as a result of new employees would be minimal and distributed such that they would not be expected to cause substantial deterioration of any one facility, or would require the construction of new facilities. Therefore, no significant recreational impacts would occur and this issue is not discussed further.

PROJECT IMPACTS AND MITIGATION MEASURES

Impact 3.10-1: Impacts on Police Services

Development of a single, level II infill correctional facility at the FSP/SAC Infill Site would increase the number of employees at the FSP facilities by up to 193 new staff members, 104 of whom would be correctional officers. These new correctional officers, along with the existing police and correctional officers at the existing FSP/SAC facilities, would provide police protection at the new level II facility. To provide additional police presence when support is needed, CDCR would continue mutual aid agreements with the Folsom Police Department.

As described in Section 3.4, "Employment, Population, and Housing," in this volume of the DEIR, the additional employee population would be expected to come largely from the existing regional workforce. In the event that some of these new employees are new residents to the area, they would likely be dispersed throughout the surrounding communities and would not cause a substantial increase in demand for police protection services. Further, there is no known connection between prisons and increased crime rates in the surrounding communities. Therefore, demand on police services in the neighboring communities is not expected to increase substantially as a result of the development of the single, level II infill correctional facility at FSP/SAC.

Development of the single, level II infill correctional facility at the FSP/SAC Infill Site would not create substantial demand for new police protection facilities in any one community; would provide for onsite security needs through the employment of 104 new correctional officers; and would result in a relatively small increase in the volume of calls to the Folsom Police Department. No new police facilities or personnel would be required. This impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.10-2: Impacts on Fire Protection Services

The development of a single, level II infill correctional facility at the FSP/SAC Infill Site would result in an increase in the number of employees at the prison site of up to 193 staff. As described in Section 3.4, "Employment, Population, and Housing," of this volume of the DEIR, the additional employee population would not generate a substantial number of new residents or concentrate new residents within any one community. Rather, new staff would be distributed throughout the area. Therefore, development of a level II infill correctional facility at the FSP/SAC Infill Site would not create substantial demand for new fire protection service facilities in any one community, and adverse physical impacts associated with such facilities would not occur.

Relocation of the existing FSPFD facilities would be required to construct a level II infill correctional facility at the FSP/SAC Infill Site. The new fire station would be constructed on approximately three acres adjacent to the eastern edge of SAC's secure perimeter and the northeastern corner of the FSP facilities (Exhibit 2-2). Construction-related impacts associated with the relocated fire station have been evaluated throughout the technical resources sections in Chapter 3 of this volume of the DEIR. The relocated facility would increase the capacity of the onsite fire services. It is anticipated that the new station would be designed to accommodate an additional service vehicle bay, as well as an additional office and housing space for supplemental staff that may be needed to serve existing FSP/SAC facilities and the new level II facility. Although the FSPFD would be equipped to manage most fire protection services onsite, they may require assistance from the Folsom Fire Department's ladder truck in the case of a fire in a multistory building. These services would continue to be provided through CDCR's mutual aid agreement with the FSPFD.

Consistent with State requirements, CDCR is required to construct all new facilities in accordance with California Building Code standards, including standards addressing fire safety design. Conformance to these standards would minimize adverse impacts related to fire safety. Primary emergency access to the FSP/SAC Infill Site would be provided by the new access road off of Folsom Lake Crossing. Secondary access would be available via Folsom Prison Road off of East Natoma Street. The level II infill correctional facilities would contain water sprinkler systems sufficient to handle most fire emergencies and adequate and accessible fire suppression systems. In addition, CDCR would consult with the State Fire Marshall to ensure structures are designed to minimize fire hazards including proper landscaping practices, construction standards and techniques, adequate emergency water supply facilities, and access. Therefore, it is not anticipated that the development of level II infill correctional facilities at FSP/SAC would significantly affect the ability of fire departments to continue to provide adequate levels of fire protection services to the FSP/SAC Infill Site or surrounding areas.

Implementation of the single, level II infill correctional facilities at the FSP/SAC Infill Site would not create substantial demand for new fire facilities in any one community; would generate few calls for offsite fire protection services; and would be designed consistent with State fire regulations. The contemplated development at FSP/SAC would include the construction of a new fire station that would meet the fire response needs of the infill facility and existing facilities at FSP/SAC. This impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.10-3: Impacts on Emergency Services

Primary emergency medical services to the FSP/SAC Infill Site would be provided by the onsite FSPFD. The City of Folsom Fire Department would also provide emergency medical services to the site through the existing mutual aid agreement. These services are supplemented by onsite medical staff that work at FSP/SAC. As discussed above for fire protection services, these facilities would be capable of supporting the development of level II infill correctional facilities at FSP/SAC.

The California Emergency Services Act of 1970 established authority for the preparation of an Emergency Preparedness Plan for prisons. Each CDCR institution must assign an emergency coordinator to implement this plan and must prepare an Emergency Preparedness Plan for submission to the Director of Corrections for review and approval and must assign an emergency coordinator to implement this plan. In accordance with the act, such a plan was developed for FSP/SAC according to the requirements of the California Office of Emergency Services and organized according to the specific site needs for this institution. All institutions are required to ensure preparedness in dealing with disasters such as earthquakes, fires, and floods. The emergency plan for FSP includes contingency plans to respond to the following types of emergency situations: war, flood, civil disturbance, pollution, earthquake, and fire. The plan provides detailed routes of egress to more secure buildings and/or areas in the event of an emergency evacuation of buildings and/or other areas within FSP/SAC. Employees are trained to follow specific instructions and precautionary measures for emergencies, and in the use of emergency equipment and medical aids. Development of the level II infill correctional facility at FSP/SAC would not interfere with plan compliance. Following the existing Emergency Preparedness Plan for FSP/SAC would address any potential impairment to the implementation of or physical interference with an adopted emergency response plan or emergency evacuation plan.

Development of single, level II infill correctional facilities at the FSP/SAC Infill Site would not result in increased emergency service requirements or physically interfere with or impair implementation of the emergency response plan. This impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.10-4: Impacts on Schools

Any potential impact related to the provision of school services is related to an increase in community population as a result of the employment opportunities. As discussed in Section 3.4, "Employment, Population, and Housing," of this volume, most of the FSP/SAC Infill Site employees would likely be dispersed throughout Sacramento, Placer, and El Dorado Counties, similar to the distribution of existing FSP/SAC employees and their families. To the degree that employees would reside in new housing in areas, this housing would be subject to school impact fees. Although these fees are not typically sufficient to fully fund construction costs, California Government Code Section 65996 has deemed that payment of school fees is full mitigation of school impacts under CEQA. In addition to school impact fees, school districts have a variety of other funding sources that offset the construction of new schools, including matching state funds and various local bond fund opportunities.

Approximately 193 staff would be employed at the single, level II infill correctional facility at FSP/SAC. Based on regional employment trends, implementation of a single, level II infill correctional facility at FSP/SAC is not anticipated to result in the creation of substantial new employment opportunities that would require the migration of people from outside the region (see Section 3.4, "Employment, Population, and Housing," of this volume). According to zip code data that identifies the residential communities where current FSP and SAC employees reside, 90 percent of existing employees and their families live in Sacramento, Placer, and El Dorado Counties. Approximately 15 percent of existing employees reside in Folsom. Assuming an average of one child per employee (based on a national average family size, as described in Section 3.4) and 193 new employees, children of employees at the infill site can be assumed to contribute approximately 29 students to schools in Folsom. Even under worst-case conditions, this represents a small (less than 1 percent) increase in enrollment in area schools. Further, for direct impacts on schools, California Government Code Section 65996 has deemed that payment of school fees by residential developers is full mitigation of school impacts under CEQA.

In accordance with Assembly Bill (AB) 900 (2007) and California Government Code Section 15819.403, local mitigation costs will be provided by CDCR to local government and school districts as required by California Penal Code Section 7005.5 (c) and (d) (these local mitigation costs are unrelated to CEQA requirements). Under this section of the penal code, CDCR would provide $800 per bed being constructed as part of the Level II Infill Correctional Facility Project. Of this, CDCR will pay $400 per bed directly to the Sacramento County superintendent of schools for allocation among affected local education agencies. CDCR would pay the remaining $400 per bed to the City of Folsom and County of Sacramento upon receipt of resolutions adopted by the governing bodies indicating agreement by these entities regarding the specific allocations to each entity.

A concentrated increase in school-age children is not anticipated as a result of the employment opportunity presented by the development of a single, level II infill correctional facility at the FSP/SAC Infill Site. Increases in population resulting from new positions created by the infill facilities would be accommodated in the existing planned housing within the surrounding communities. New housing developments would be required to pay school impact fees. Further, for direct impacts on schools, California Government Code Section 65996 has deemed that payment of school fees by residential developers is full mitigation of school impacts under CEQA. In accordance with AB 900 and California Government Code Section 15819.403, CDCR would also contribute $400 per bed to the superintendent of Sacramento County schools for distribution to affected school districts, affected by implementation of the single, level II infill correctional facility at the FSP/SAC Infill Site. School impacts would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

This page intentionally left blank.

3.11 TRANSPORTATION

This section describes the existing circulation patterns in the vicinity of the Folsom State Prison and California State Prison, Sacramento (FSP/SAC) and evaluates transportation impacts due to construction and operation of a single, level II infill correctional facility based on a traffic analysis conducted by Fehr & Peers (2013) (included as Appendix 4D of this volume). The analyses in this section are based on traffic volume data collected in January 2013; site visits conducted in January 2013; and incorporation, where appropriate, of data from local and regional transportation studies. Impacts related to potential hazards due to local airports are addressed in Section 3.6, "Hazards and Hazardous Materials," of this volume of the draft environmental impact report (DEIR).

3.11.1 ENVIRONMENTAL SETTING

EXISTING ROADWAY NETWORK

Exhibit 3.11-1 illustrates the existing street system serving the FSP/SAC study area. U.S. Highway 50 (US 50) provides primary regional access to the study area. Access to the FSP/SAC Infill Site would be provided from E. Natoma Street, Folsom Lake Crossing, and Folsom Boulevard/Folsom-Auburn Road. Brief descriptions, including physical characteristics of principal roads and highways serving the study area, are detailed below.

US 50 is an east-west interstate highway that passes through Folsom, California on the south side of the city. US 50 extends through Sacramento to the west, and South Lake Tahoe to the east. Through Folsom, US 50 is a six-lane facility with interchanges at Folsom Boulevard, Prairie City Road, and E. Bidwell Street–Scott Road.

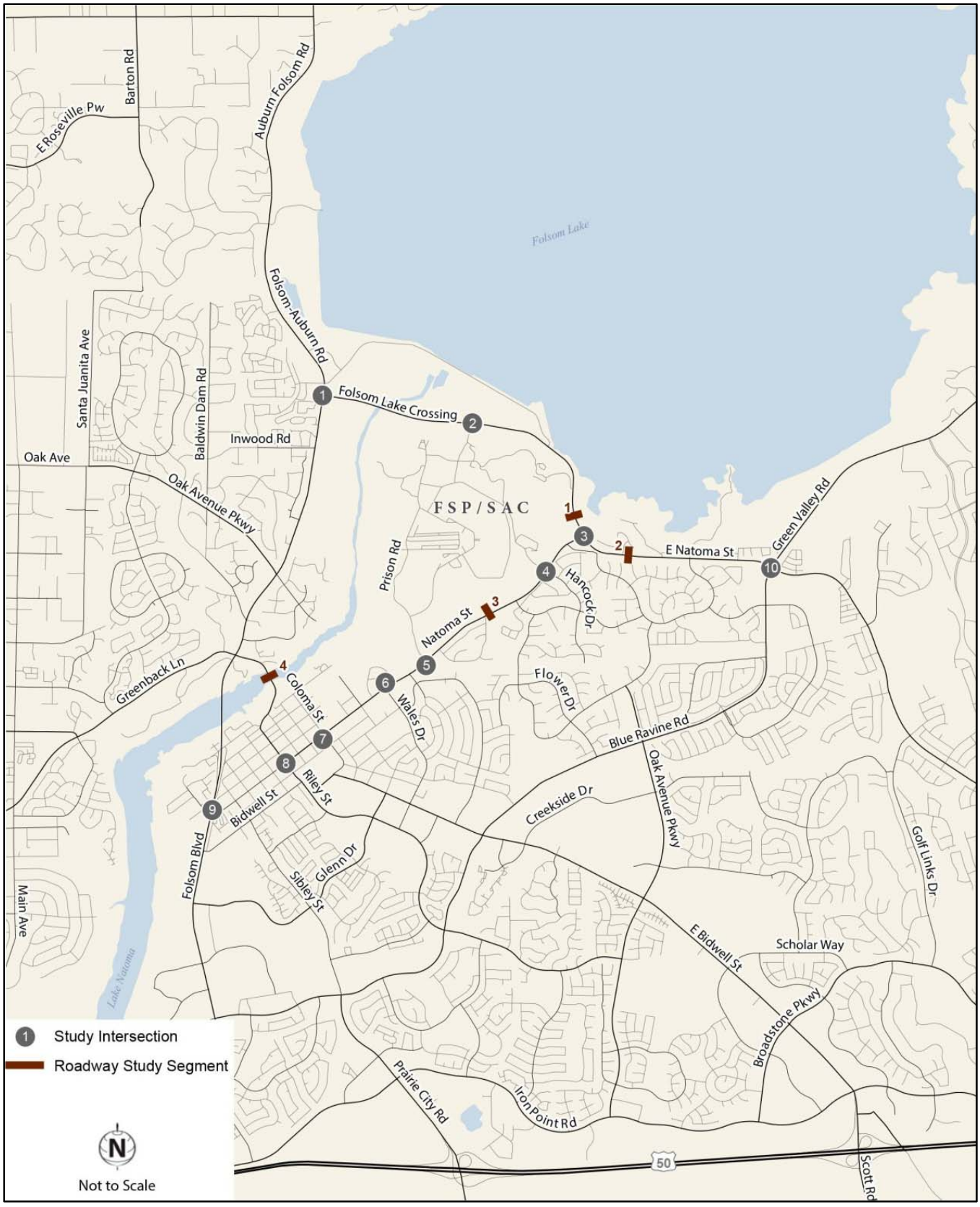
E. Natoma Street is generally an east-west arterial roadway that connects to Folsom Boulevard to the west and Empire Ranch Road to the east. Natoma Street transitions to E. Natoma Street at Wales Drive. Adjacent to FSP/SAC, E. Natoma Street is a two-lane roadway with left-turn pockets at intersections. The posted speed limit on E. Natoma Street adjacent to FSP/SAC ranges from 35 to 45 miles per hour (mph).

Folsom Lake Crossing is a four-lane arterial roadway that runs along the south side of Folsom Lake from Folsom-Auburn Road to E. Natoma Street. Folsom Lake Crossing borders the north side of the FSP/SAC Infill Site. The posted speed limit of Folsom Lake Crossing is 55 mph.

Folsom Boulevard is an arterial roadway that runs closely along US 50 from Sacramento to Folsom. Folsom Boulevard becomes Folsom-Auburn Road in Folsom at the intersection with Greenback Lane. Folsom Boulevard is generally a four-lane roadway north and south of Natoma Street. Folsom-Auburn Road is generally a four-lane roadway north and south of Folsom Lake Crossing. The Sacramento Regional Transit (RT) Gold Line Light Rail runs along Folsom Boulevard from Downtown Sacramento to Historic Folsom at Leidesdorff Street.

EXISTING TRANSIT FACILITIES

The City of Folsom Transit Division provides fixed-route and dial-a-ride service throughout Folsom. Fixed route service is provided Monday through Friday for two routes. Route 10 runs from 5:25 a.m. to 8:45 p.m., and connects to Sacramento RT Light Rail and bus service Line 24. Route 20 runs during the morning commute period from 7:00 a.m. to 7:45 a.m. Monday through Friday, and during the afternoon commute period from 3:15 p.m. to 3:45 p.m. Monday, Tuesday, Thursday, and Friday, and from 1:40 p.m. to 2:15 p.m. on Wednesdays. Route 10 provides service to FSP/SAC during peak commute times at 5:31 a.m., 6:11 a.m., 7:11 a.m., 2:22 p.m., and 4:22 p.m.



Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-1 Existing FSP/SAC Roadway Network and Traffic Study Locations

The Folsom Stage Line Dial-A-Ride service is provided for senior citizens age 55 and older, and residents with physical, developmental, or mental disabilities.

Sacramento RT provides bus and light rail service in the Sacramento region. The Gold Line Light Rail and bus service Line 24 serve the City of Folsom. Light Rail service is provided seven days per week, including holidays. Bus service is provided Monday through Friday from 6:00 a.m. to 7:22 p.m. Weekend and holiday service is not provided.

EXISTING BICYCLE AND PEDESTRIAN FACILITIES

The City of Folsom has an extensive bicycle network including bike lanes on Natoma Street, Folsom Lake Crossing, Folsom Boulevard, Folsom-Auburn Road, Blue Ravine Road, and Green Valley Road. There is also an existing Class I bike path along the north side of Folsom Lake Crossing, and along the west side of the American River (American River Trail). Exhibit 3.11-2 shows the existing bicycle facilities near the FSP/SAC Infill Site.

Sidewalks exist along most of Natoma Street between Folsom Boulevard and Fargo Way. From Fargo Way to Briggs Ranch Drive, there are no sidewalks on E. Natoma Street. There are also small sections of sidewalk on E. Natoma Street east of Folsom Lake Crossing and on Folsom-Auburn Road, primarily adjacent to commercial and residential development.

PROPOSED PROJECT TRAFFIC ELEMENTS

The extent of the analysis in this transportation section was determined based on an evaluation of the area within which traffic generated by construction and operation of a level II infill correctional facility at FSP/SAC may be sufficient to cause traffic conditions to degrade. The trip generation associated with a new single, level II infill correctional facility at the FSP/SAC Infill Site is based on the number of new employees, their corresponding shift times, and the increase in delivery and service vehicle trips to the site.

INFILL SITE ACCESS

It is assumed that all vehicle trips associated with the level II infill correctional facility would access the FSP/SAC infill site via a new entrance at Folsom Lake Crossing. No development-related trips would utilize the existing FSP/SAC entrance from Natoma Street. The new entrance would be secured with a guard station similar to the existing guard station for FSP/SAC.

EMPLOYEE TRAFFIC

The development of level II infill correctional facilities at FSP/SAC would include new custody and support staff (non-custody or administrative) employees. Custody staff generally works in three shifts:

- First Watch - 10:00 p.m. to 6:00 a.m.
- Second Watch - 6:00 a.m. to 2:00 p.m.
- Third Watch - 2:00 p.m. to 10:00 p.m.

Most support staff generally work a second-watch shift from 8:00 a.m. to 5:00 p.m. A small number of support staff work a first- or third-watch shift. For analysis purposes, it was assumed that the first- and third-watch support staff would work from 10:00 p.m. to 6:00 a.m. and from 2:00 p.m. to 10:00 p.m., respectively. The first- and third-watch support staff would arrive and depart outside the peak hours of the roadway (7:00 a.m. to 9:00 a.m., and 4:00 p.m. to 6:00 p.m.) and therefore would not generate a.m. and p.m. peak hour trips. By assuming that these trips are made in conjunction with the first and third watches of the custody employees, the trips are accounted for in the daily trip generation estimates.

Source: City of Folsom Bike Map, www.folsom.ca.us

Exhibit 3.11-2 City of Folsom Bicycle Facilities in the Vicinity of FSP/SAC

The single, level II infill correctional facility would employ 193 additional weekday staff:

- 16 new custody employees during the first watch (10:00 p.m. to 6:00 a.m.),
- 57 new custody employees during the second watch (6:00 a.m. to 2:00 p.m.),
- 31 new custody employees during the third watch (2:00 p.m. to 10:00 p.m.),
- 2 new support staff employees during the first watch (10:00 p.m. to 6:00 a.m.),
- 81 new support staff employees during the second watch (8:00 a.m. to 5:00 p.m.), and
- 6 new support staff employees during the third watch (2:00 p.m. to 10:00 p.m.).

The staffing spreadsheets provided by the California Department of Corrections and Rehabilitation (CDCR) are provided in Appendix 4D, Volume 4.

Estimates of potential trips generated by these employees were developed using the following key assumptions:

- all employees would arrive within one hour of the beginning of their shift and leave within one hour of the end of their shift only (i.e., all employees arrive/leave within one hour of the other employees on their watch);
- all employees would make two trips per day (i.e., one trip to work and one trip from work); and
- all employees would arrive to the site individually by personal vehicle.

INMATE TRANSFERS

The operation of level II infill correctional facilities at FSP/SAC would generate a negligible number of inmate transfers trips (i.e., less than five per day). The transfer of inmates would be conducted in accordance with CDCR's existing inmate transfer system, and therefore is not considered a part of the proposed project requiring evaluation under CEQA. Therefore, the trip generation estimates from the level II infill correctional facility do not account for these trips.

VISITOR TRAFFIC

Visiting hours are limited to weekends and holidays; therefore, these trips would not affect the weekday a.m. and p.m. peak hour study periods.

DELIVERY AND SERVICE VEHICLES

Based on the projected increase in inmate population, a total of five additional service and delivery vehicles have been projected for a typical weekday during peak operating conditions. Because each vehicle would generate two daily trips (one inbound and one outbound), a total of 10 additional daily trips would be generated by the operation of a single, level II infill correctional facility at the FSP/SAC Infill Site. It was assumed that the deliveries would be spaced out throughout the day. Therefore, to present a conservative analysis, it was assumed that three service/delivery trips would occur during the a.m. peak hour and three trips would occur during the p.m. peak hour.

ANALYSIS METHODOLOGY

This transportation section assesses the operation of street segments, key intersections, and freeway ramps in the study area, based on the anticipated distribution of traffic related to the construction and operation of a single, level II infill correctional facility at FSP/SAC.

TRAFFIC STUDY LOCATIONS

Exhibit 3.11-1, above, shows the study intersections and roadway segments. Intersection and roadway operations were evaluated to determine if there would be any potential impacts on the surrounding roadway network with the implementation of level II infill correctional facilities at FSP/SAC. Based on past studies in the FSP/SAC area and consultation with staff from the City of Folsom (City), the following 10 intersections and four roadway segments were selected for analysis in this volume of the DEIR:

Intersections

1. Folsom-Auburn Road/Folsom Lake Crossing
2. Folsom Lake Crossing/North Prison Access
3. E. Natoma Street/Folsom Lake Crossing
4. E. Natoma Street/Folsom Prison Road/Hancock Drive
5. E. Natoma Street/Prison Road
6. Natoma Street/Wales Drive
7. Natoma Street/Coloma Street
8. Natoma Street/ Riley Street
9. Folsom Boulevard/Natoma Street
10. E. Natoma Street/Green Valley Road/Blue Ravine Road

Roadway Segments

1. Folsom Lake Crossing – West of E. Natoma Street
2. E. Natoma Street – East of Folsom Lake Crossing
3. E. Natoma Street – Between Prison Road and Hancock Drive
4. Greenback Lane – At the Rainbow Bridge

LEVEL OF SERVICE

The quality of roadway facility operations is described with the term “level of service” (LOS). LOS is a qualitative description of traffic flow based on such factors as speed, travel time, delay, and freedom to maneuver. Six levels are defined, with LOS A representing the best operating conditions (minimal vehicular congestion) and LOS F representing the worst operating conditions (substantial vehicular congestion). LOS E represents “at-capacity” operations. When traffic volumes exceed capacity, stop-and-go conditions result and operations are designated as LOS F. Two methods were used to evaluate the study intersections: one method for the signalized intersections and another method for the unsignalized intersections, as described below.

Signalized Intersections

For signalized intersections, the LOS methodology described in Chapter 16 of the Transportation Research Board’s (TRB’s) *Highway Capacity Manual* (HCM) (TRB 2000) was applied. (This reference is commonly referred to as the *HCM 2000.*) This methodology determines the LOS by comparing the average control delay for all vehicles approaching the intersection to the delay thresholds, which are presented in Table 3.11-1.

Unsignalized Intersections

Operations of the unsignalized study intersections (i.e., stop sign controlled) were evaluated using the methodology contained in Chapter 17 of the *HCM 2000*. The LOS rating is based on the average control delay expressed in seconds per vehicle. At all-way stop-controlled intersections, LOS is based on the average delay experienced on all approaches. At side-street stop-controlled intersections, LOS is calculated for the stopped movements and the left-turn movement from the major street. Typically,

the movement (or lane if more than one movement occurs in a lane) with the worst LOS rating is reported. Table 3.11-1, shows the LOS thresholds for unsignalized intersections.

Table 3.11-1 Intersection Level of Service Definitions

Level of Service	Description	Signalized Intersection Average Delay per Vehicle (seconds)	Unsignalized Intersection Average Delay per Vehicle (seconds)
A	Represents free flow. Individual users are virtually unaffected by others in the traffic stream.	≤ 10.0	< 10.0
B	Stable flow, but the presence of other users in the traffic stream begins to be noticeable.	10.1 to 20.0	> 10.0 to 15.0
C	Stable flow, but the operation of individual users becomes significantly affected by interactions with others in the traffic stream.	20.1 to 35.0	> 15.0 to 25.0
D	Represents high-density, but stable flow.	35.1 to 55.0	> 25.0 to 35.0
E	Represents operating conditions at or near the capacity level.	55.1 to 80.0	> 35.0 to 50.0
F	Represents forced or breakdown flow.	> 80.0	> 50.0

Source: TRB 2000

Roadway Segments

Levels of service for the roadway segments were evaluated by comparing the measured average daily traffic (ADT) volumes for the study roadway segments to the volume thresholds presented in the *County of Sacramento's Traffic Impact Study Analysis Guidelines* (County of Sacramento 2004). Table 3.11-2 presents threshold volumes for various roadway types.

Table 3.11-2 Daily Roadway Segment Level of Service Thresholds

Facility Type	Number of Lanes	Total Daily Vehicles in Both Directions				
		LOS A	LOS B	LOS C	LOS D	LOS E
Arterial, Moderate Access Control[1]	2	10,800	12,600	14,400	16,200	18,000
	4	21,600	25,200	28,800	32,400	36,000
	6	32,400	37,800	43,200	48,600	54,000
Arterial, High Access Control[2]	2	12,000	14,000	16,000	18,000	20,000
	4	24,000	28,000	32,000	36,000	40,000
	6	36,000	42,000	48,000	54,000	60,000

Notes:
[1] A Moderate Access Control Arterial includes 2-4 stops per mile, limited driveways, and a speed limit of 35-45 mph
[2] A High Access Control Arterial includes 1-2 stops per mile, no driveways, and a speed limit of 45-55 mph
Source: County of Sacramento 2004

This planning-level analysis determines whether the study roadway segments are operating below or over capacity. Because this type of analysis is general in nature and does not take into account delays related to intersection operations and other factors affecting capacity, impacts usually defer to a more detailed operational analysis (intersection LOS).

LEVEL OF SERVICE STANDARDS

CITY OF FOLSOM

Policy 17.17 of the *City of Folsom General Plan* (1993) specifies that the City will strive to achieve at least a LOS C throughout the City. This policy acknowledges that during buildout, temporarily worse LOS may occur where roadway improvements have not been adequately phased as development proceeds. For the purposes of this study, LOS C is the minimum acceptable LOS for City of Folsom roadway facilities.

CALIFORNIA DEPARTMENT OF TRANSPORTATION

The *US 50 Corridor System Management Plan*, prepared by the California Department of Transportation (Caltrans) (2009), shows a 20-year concept LOS F for US 50 in the vicinity of Folsom Boulevard because improvements necessary to achieve LOS E are not considered feasible due to environmental, right-of-way, financial, and other constraints. For the purposes of this study, LOS E is the minimum acceptable LOS for Caltrans roadway facilities.

EXISTING TRAFFIC VOLUMES AND LEVELS OF SERVICE

EXISTING TRAFFIC VOLUMES

Daily traffic volume data were collected using machine counting equipment (hoses) on the study roadway segments in January 2013. Weekday a.m. (7:00 a.m. to 9:00 a.m.) and p.m. (4:00 to 6:00 p.m.) peak period intersection turning movement counts were also collected at the study intersections on a weekday in January 2013. Peak hour intersection turning movement counts were conducted to coincide with the shift changes from the existing FSP/SAC facility, which represent the peak traffic flow periods within the study area, as indicated in the daily traffic count worksheets provided in Appendix 4D of this volume. These periods also represent the projected peak times in which the level II infill correctional facility would generate vehicular traffic.

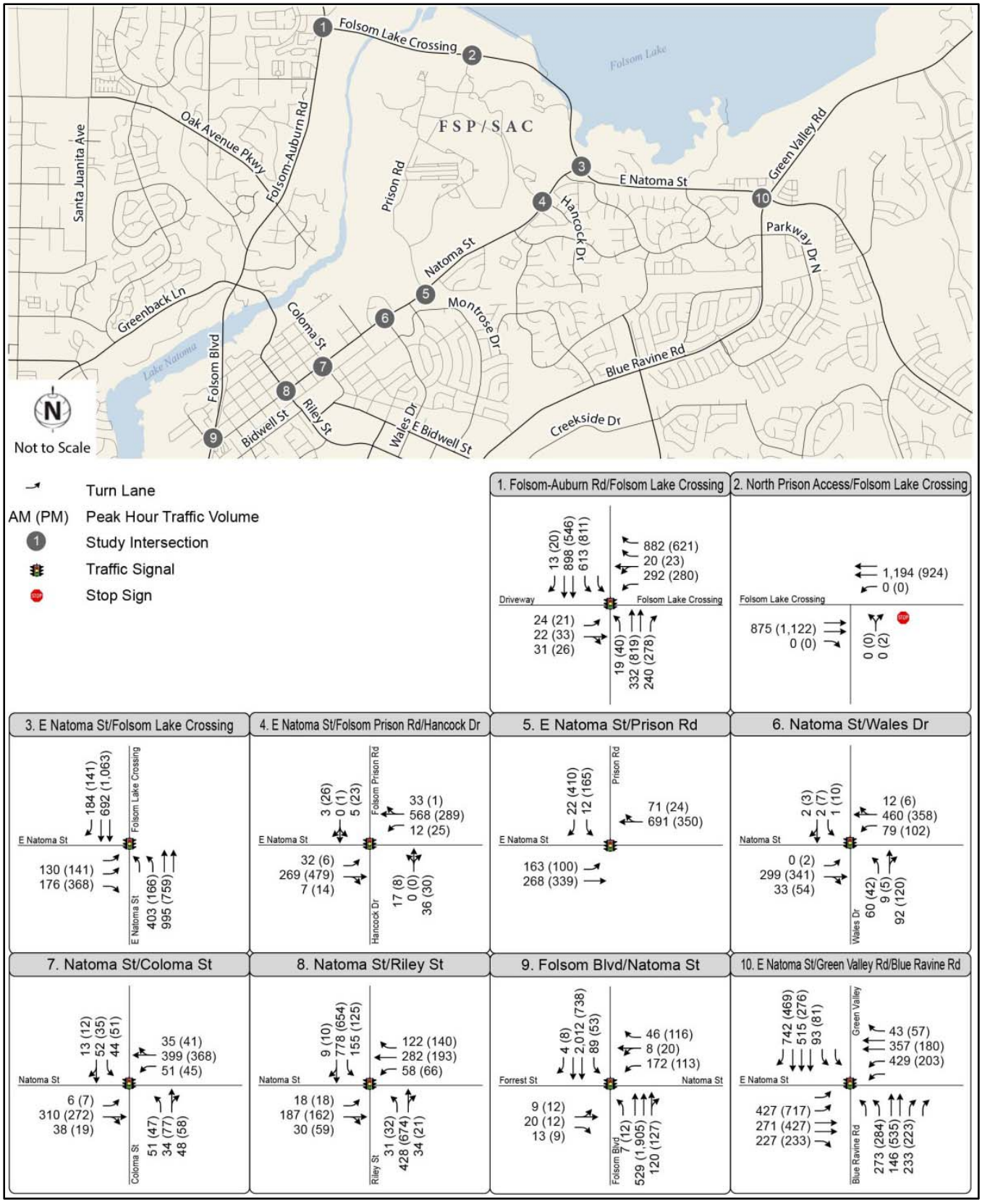
Exhibit 3.11-3 displays the existing peak hour intersection turning movement volumes and lane configurations at the study intersections.

EXISTING INTERSECTION LEVELS OF SERVICE

The existing a.m. and p.m. peak hour intersection delay and LOS were determined using Synchro 7 analysis software, which utilizes *HCM 2000* methodology. The analysis was based on traffic signal timings provided by the City, lane configurations, and field observations made in 2013. Intersection peak hour factors (PHF) were determined based on the count data collected at each study intersection. The percentages of heavy vehicles were assumed to be at least two percent of vehicular traffic. Table 3.11-3 summarizes the existing LOS results at the study intersections. The technical calculations are provided in Appendix 4D of this volume.

As indicated in Table 3.11-3, all of the analyzed intersections currently operate at acceptable levels of service, except:

- Natoma Street/Riley Street (a.m. and p.m. peak hours), and
- E. Natoma Street/Green Valley Road/Blue Ravine Road (a.m. peak hour)



Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-3 Existing Traffic Volumes

Table 3.11-3 Intersection Level of Service Results – Existing Conditions

Intersection	Traffic Control[1]	AM Peak[2]		PM Peak[2]	
		Delay[3]	LOS	Delay[3]	LOS
1. Folsom-Auburn Rd/Folsom Lake Crossing	Signal	19.3	B	34.2	C
2. Folsom Lake Crossing/North Prison Access	SSSC	0.0 (0.0)	A (A)	0.0 (13.5)	A (B)
3. E. Natoma St/Folsom Lake Crossing	Signal	14.4	B	16.7	B
4. E. Natoma St/Folsom Prison Rd/Hancock Dr	SSSC	1.5 (22.3)	A (C)	2.0 (18.6)	A (C)
5. E. Natoma St/Prison Rd	Signal	19.3	B	14.4	B
6. Natoma St/Wales Dr	Signal	12.6	B	16.8	B
7. Natoma St/Coloma St	Signal	16.1	B	16.7	B
8. Natoma St/ Riley St	Signal	**52.7**	**D**	**42.9**	**D**
9. Folsom Blvd/Natoma St	Signal	26.7	C	17.3	B
10. E. Natoma St/Green Valley Rd/Blue Ravine Rd	Signal	**49.2**	**D**	34.6	C

Notes: Unacceptable operations are highlighted in **bold** text.
[1] SSSC = Side-Street Stop Control
[2] The a.m. peak hour is between 7:00 a.m. and 9:00 a.m. The p.m. peak hour is between 4:00 p.m. and 6:00 p.m.
[3] Delay is reported in seconds per vehicle for the overall intersection for signalized intersections. Delay is reported in seconds per vehicle for the overall intersection (worst movement) for side-street stop-controlled intersections.
Source: Fehr & Peers 2013

EXISTING ROADWAY SEGMENT LEVEL OF SERVICE

The existing roadway segment level of service was determined by comparing daily traffic volumes to the thresholds in Table 3.11-2. Table 3.11-4 summarizes the existing LOS for the analyzed roadway segments. The segment of Greenback Lane over the Rainbow Bridge currently operates at LOS F. The remaining study roadway segments operate at acceptable levels of service.

Table 3.11-4 Roadway Segment Levels of Service Results - Existing Conditions

Roadway	Location	Roadway Type	Number of Lanes	Volume[1]	LOS
Folsom Lake Crossing	West of E. Natoma Street	High Access Control Arterial	4	21,623	A
E. Natoma Street	East of Folsom Lake Crossing	Moderate Access Control Arterial	4	24,237	B
E. Natoma Street	Between Prison Road and Hancock Drive	Moderate Access Control Arterial	2	10,475	A
Greenback Lane	At the Rainbow Bridge	Moderate Access Control Arterial	2	**24,232**	**F**

Notes: Unacceptable operations are highlighted in **bold** text.
[1] Two-way daily traffic volumes.
Source: Fehr & Peers 2013

EXISTING CALTRANS FACILITIES LEVEL OF SERVICE

The Caltrans *Guide for the Preparation of Traffic Impact Studies* (Caltrans December 2002) requires analysis if a project may add traffic to a Caltrans facility. The following Caltrans facilities were analyzed:

Intersections

- Folsom Boulevard/US 50 westbound (WB) Ramps
- Folsom Boulevard/US 50 eastbound (EB) Ramps
- E. Bidwell Street/US 50 WB Ramps

Traffic volumes from the *Island at Parkshore Drive Residential Project Transportation Impact Study* (Fehr & Peers 2011) were used to analyze the US 50/Folsom Boulevard interchange. Traffic volumes were collected at the E. Bidwell Street/US 50 WB Ramps in February 2013. Table 3.11-5 shows the peak hour intersection level of service. As shown in Table 3.11-5, the freeway ramp intersections operate at acceptable levels of service under existing conditions.

Table 3.11-5 Caltrans Intersection Level of Service Results – Existing Conditions

Intersection	Traffic Control	AM Peak[1]		PM Peak[1]	
		Delay[2]	LOS	Delay[2]	LOS
Folsom Boulevard/US 50 WB Ramps	Signal	8.2	A	9.5	A
Folsom Boulevard/US 50 EB Ramps	Signal	19.7	B	26.2	C
E. Bidwell Street/US 50 WB Ramps	Signal	NA		22.4	C

Notes: Unacceptable operations highlighted in **bold** text.
[1] The a.m. peak hour is between 7:00 a.m. and 9:00 a.m. The p.m. peak hour is between 4:00 p.m. and 6:00 p.m.
[2] Delay is reported in seconds per vehicle for the overall intersection for signalized intersections.
Source: Fehr & Peers 2013

3.11.2 REGULATORY CONSIDERATIONS

A list of the applicable federal, state, and local plans, policies, regulations, laws, and ordinances is provided below. Complete summaries of the federal and state regulations are provided in Appendix 1B of Volume 1.

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

No federal plans, policies, regulations, or laws related to transportation are applicable to the construction and operation of level II infill correctional facilities at FSP/SAC.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

The following state guidelines are applicable to the construction and operation of level II infill correctional facilities at FSP/SAC:

- Caltrans Guide for the Preparation of Traffic Impact Studies – The Caltrans Guide for the Preparation of Traffic Impact Studies provides guidance on the evaluation of traffic impacts to State highway facilities. The document outlines when a traffic impact study is needed and what should be included in the scope of the study. (Caltrans 2002)

LOCAL PLANS, POLICIES, AND ORDINANCES

The FSP/SAC Infill Site is located on land that is owned or controlled by the State. As a state agency, CDCR is not subject to land use plans, policies, and ordinances adopted by local agencies. Nevertheless, a discussion of relevant local plans and policies is provided because conflicts with them could indicate the potential occurrence of other physical environmental effects.

CITY OF FOLSOM GENERAL PLAN

The City of Folsom *General Plan* (1993) is in the process of being updated, with expected completion in Fall 2014. The General Plan is "a long term policy guide for the physical, economic, and environmental growth of the City. It is comprised of goals, policies, and implementation programs which are based on an assessment of current and future needs and available resources."

SACRAMENTO AREA COUNCIL OF GOVERNMENTS METROPOLITAN TRANSPORTATION PLAN/SUSTAINABLE COMMUNITIES STRATEGY

The Sacramento Area Council of Governments (SACOG) is an association of local governments from six counties and 22 cities within the Sacramento Region. The counties include El Dorado, Placer, Sacramento, Sutter, Yolo, and Yuba. SACOG provides transportation planning and funding for the region.

The *2035 Metropolitan Transportation Plan/ Sustainable Communities Strategy (MTP/SCS)* (SACOG, 2011) is a long-range plan for transportation improvements in the region. The plan is based on projections for growth in population, housing, and jobs.

SACRAMENTO COUNTY TRAFFIC IMPACT STUDY ANALYSIS GUIDELINES

The Sacramento County *Traffic Impact Study Analysis Guidelines* (2004) provides evaluation criteria for traffic impact studies including guidance on when a study is needed, analysis scenarios and methodologies, and LOS thresholds.

3.11.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

In accordance with Appendix G and Section 15065 of the State of California Environmental Quality Act (CEQA) Guidelines, and based on the criteria developed for the transportation impact analysis, the level II infill correctional facilities at the FSP/SAC Infill Site would result in a significant impact relating to transportation or traffic if it would do any of the following:

- cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections);
- exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways;
- result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks;
- substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment);
- result in inadequate emergency access;
- result in inadequate parking capacity; or
- conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks).

The specific criteria used to determine whether an impact would be significant are described below.

The State CEQA Guidelines (Section 15064.5) define a “substantial adverse change” as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

TRAFFIC OPERATIONS

Intersections

The following thresholds of significance were obtained from recently completed environmental studies in Folsom (*Island at Parkshore Drive Residential Project Transportation Impact Study* [Fehr & Peers, 2011] and *Folsom South of US 50 Specific Plan Project Draft EIR/EIS* [AECOM, 2010]). The construction and operation of a single, level II infill correctional facility at FSP/SAC would cause a significant impact at a study intersection if it would:

- cause the LOS to degrade from an acceptable LOS (LOS A, B, or C) to an unacceptable LOS (LOS D, E, or F) or
- increase the average delay by five seconds or more at an intersection that operates (or is projected to operate) at an unacceptable LOS D, E, or F without the contemplated development.

Intersection LOS was determined based on methodology contained in the *HCM 2000*.

Roadway Segments

The construction and operation of a single, level II infill correctional facility at FSP/SAC would cause a significant impact to a roadway segment if it would:

- cause the LOS to degrade from an acceptable LOS (LOS A, B, or C) to an unacceptable LOS (LOS D, E, or F);
- increase the traffic on a roadway segment that already operates at an unacceptable LOS D, E, or F without the contemplated development; or
- roadway segment LOS is determined based on the roadway segment capacity thresholds in Table 3.11-2.

Caltrans Facilities

The construction and operation of a single, level II infill correctional facility at FSP/SAC would cause a significant impact to a Caltrans facility if it would:

- generate more than 100 peak hour trips assigned to a State highway facility, and causes the LOS of the highway facility to degrade from an acceptable LOS (LOS A, B, or C) to an unacceptable LOS (LOS D, E, or F);
- generate 50 to 100 peak hour trips assigned to a State highway facility that is approaching unstable traffic flow conditions (LOS C or D);
- generate 1 to 49 peak hour trips assigned to a State highway facility that is experiencing unstable or forced traffic flow conditions (LOS E or F);
- cause an intersection on the US 50 freeway system to worsen from LOS E or better to LOS F, or add traffic to an intersection already operating at LOS F; or
- the Caltrans facilities in the study area are the ramp terminal intersections at the US 50/Folsom Boulevard interchange and the US 50 WB Ramps/E. Bidwell Street intersection. The intersection LOS is determined based on methodology contained in the *HCM 2000*.

Construction Traffic

The construction and operation of a single, level II infill correctional facility at FSP/SAC would cause a significant impact if intersection or roadway LOS would temporarily degrade from an acceptable LOS (LOS A, B, or C) to an unacceptable LOS (LOS D, E, or F) because of the presence of construction traffic. While the daily construction trip generation was estimated, the number of peak hour construction trips would be based on a variety of unknown factors, including shift schedules, haul routes, the origins and destinations of equipment and fill dirt, etc. For that reason, construction impacts are addressed qualitatively.

ISSUES NOT DISCUSSED FURTHER

Bicycle, pedestrian, and transit facilities: Implementation a single, level II infill correctional facility at FSP/SAC could generate some demand for pedestrian facilities, bicycle facilities, and public transit service. Based on employee zip code data used to develop the trip distribution for the contemplated development, approximately 15 percent of the employees would be expected to live within the City of Folsom. However, given the location of the infill site access driveway, from Folsom Lake Crossing where vehicle speeds are high and compatible land uses are not located nearby, the FSP/SAC Infill Site is anticipated to generate minimal pedestrian demand, if any. Furthermore, there are no plans to construct sidewalks to link the FSP/SAC Infill Site to major activity centers in Folsom.

In terms of bicycle facilities, data from the 2000 U.S. Census shows that approximately 2 percent of people who live and work in Folsom ride their bike to work. Bicycle facilities are currently provided on Folsom Lake Crossing, including Class II bike lanes and a Class I bike path on the north side of the roadway. As such, any potential demand for bicycle facilities by the new level II infill correctional facility would be served by these existing facilities.

Custody staff are required to bring their personal protection equipment to work each day. This equipment would make travel by walking, bicycling, and transit very difficult. For that reason, the existing employees typically use automobiles to commute to and from the prison site. Any new employees are expected to continue this trend. Therefore, the bicycle, pedestrian, and transit demand would primarily be visitors. Visitors are only allowed on weekends and holidays, which are low-demand traffic periods. Transportation facilities are designed based on the peak period demand. The additional demand created by visitors would be accommodated within the existing capacity for the various modes.

Development of the infill site would remain internal to existing CDCR property and would not extend outside of FSP/SAC such that potential conflicts with existing alternative transportation opportunities or the plans, policies, or programs designed to promote alternative transportation would occur. In addition, existing transit service is provided to the FSP/SAC Infill Site via the Folsom Stage Line fixed-route service; therefore, any potential demand would be served and the new correctional facility at the FSP/SAC Infill Site would not create inconsistencies with adopted transit system plans, guidelines, policies, or standards. Therefore, of a level II infill correctional facility at FSP/SAC would not conflict with any existing or planned pedestrian or bicycle facilities or be inconsistent with alternative transportation plans, guidelines, policies, or standards. This issue is not discussed further.

Hazardous design features: A single, level II infill correctional facility at the FSP/SAC Infill Site would use the existing North Prison Access from Folsom Lake Crossing. This intersection does not include any sharp curves, and includes an eastbound right-turn pocket, a westbound left-turn pocket, and a northbound to westbound acceleration lane to reduce turn movement conflicts. Therefore, implementation of a level II infill correctional facility at the FSP/SAC Infill Site would not result in hazardous design features and this issue is not discussed further.

Emergency vehicle access: Emergency vehicle access to the FSP/SAC Infill Site would be provided via the main FSP/SAC entry point on E. Natoma Road and at the contemplated North Prison Access from Folsom Lake Crossing. Both of these access points can accommodate large emergency vehicles (i.e., fire trucks) and provide adequate turning radii. In addition, the level II infill correctional facility driveway and internal roadways would be designed to accommodate large emergency vehicles. Therefore, implementation of a level II infill correctional facility at the FSP/SAC Infill Site would include adequate emergency vehicle access via two access points to the CDCR property and this issue is not discussed further.

Impacts related to potential hazards due to changes in air traffic patterns as a result of development of the infill site are addressed in Section 3.6, “Hazards and Hazardous Materials,” of this volume of the DEIR.

PROJECT IMPACTS AND MITIGATION MEASURES

This section presents an analysis of the following scenarios:

- Existing plus Level II Infill Correctional Facility
- Cumulative
- Cumulative plus Level II Infill Correctional Facility

Detailed descriptions of each scenario are provided below. It should be noted that the number and types of scenarios analyzed in this volume may differ from the evaluations of the other infill sites contained in Volumes 2, 3, 4, and 5. This is due to preferences expressed by the local agency responsible for managing local traffic volumes, which have been accommodated by CDCR in the EIR analysis to the extent practicable and feasible.

WEEKDAY PROJECT TRIP GENERATION

The daily, a.m., and p.m. peak hour trip generation estimates for a single, level II infill correctional facility at FSP/SAC are summarized in Table 3.11-6.

The single, level II infill correctional facility at FSP/SAC is projected to generate a total of 396 daily trips, with 84 trips occurring during the a.m. peak hour of adjacent street traffic and 84 trips occurring during the p.m. peak hour of adjacent street traffic. During the p.m. peak hour (i.e., the peak hour in which the project generates the most traffic, 1:30 p.m. to 2:30 p.m.), the contemplated development of level II infill correctional facilities is expected to generate 94 trips.

TRIP DISTRIBUTION

Development-generated traffic was distributed to the external roadway network and study intersections based on existing employee zip code data and traffic counts at the driveway of the existing FSP/SAC facility. The following distribution was used:

- 28 percent travels to/from west on US 50,
- 10 percent travels to/from east on US 50,
- 2 percent travels to/from south on Prairie City Road,
- 5 percent travels to/from east on Green Valley Road,
- 20 percent travels to/from north on Folsom-Auburn Road,
- 20 percent travel to/from west on Greenback Lane, and
- 15 percent stay within the City of Folsom.

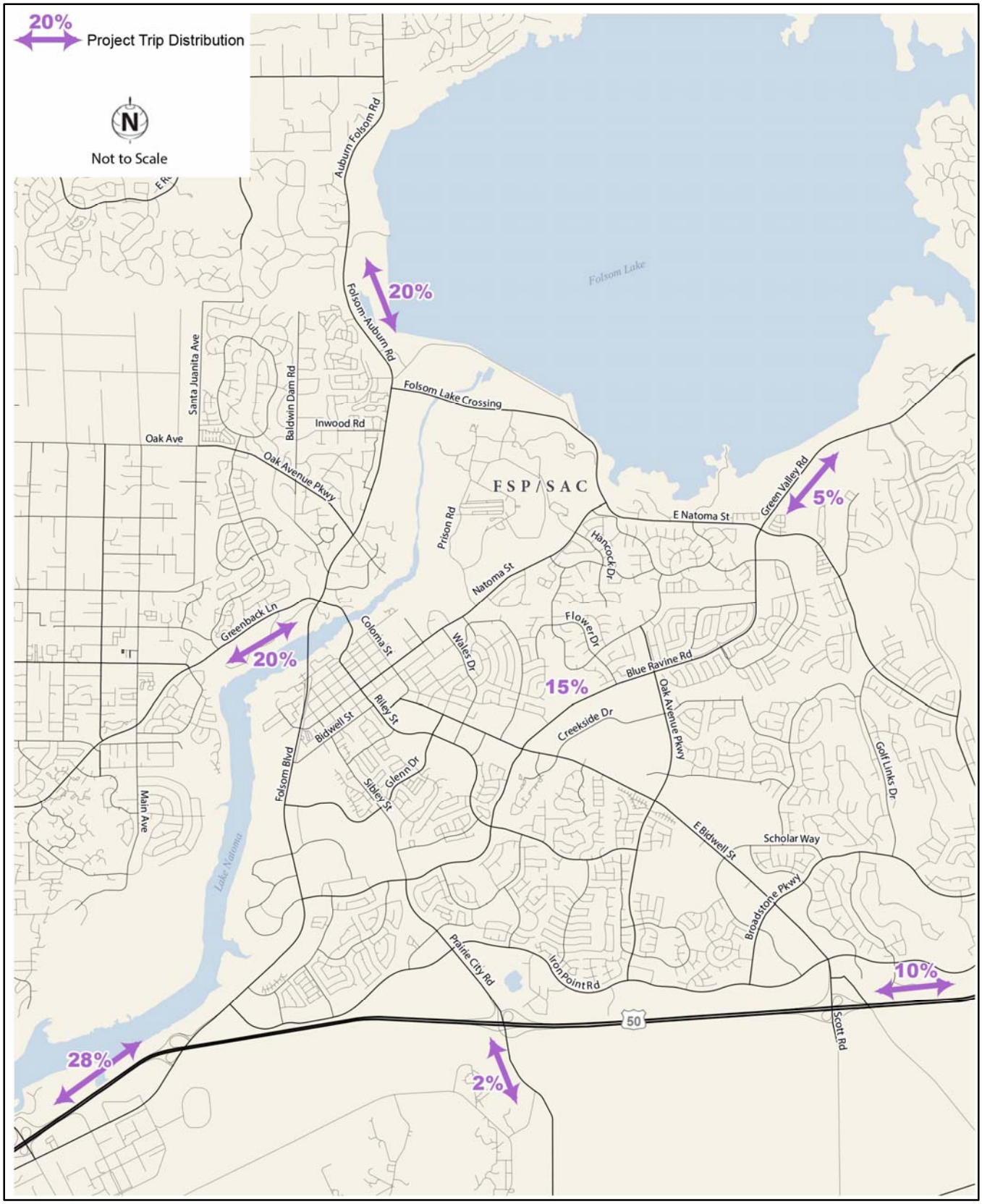
Exhibit 3.11-4 shows the trip distribution for the contemplated development and Exhibit 3.11-5 shows the anticipated trip assignment.

It is assumed that all vehicle trips associated with the level II infill correctional facility would access the infill site via a new entrance at Folsom Lake Crossing. No development-related trips would utilize the existing FSP/SAC entrance from Natoma Street. The new entrance would be secured with a guard station similar to the existing guard station for FSP/SAC.

Table 3.11-6 Estimated Project Trip Generation – Level II Infill Correctional Facility at FSP/SAC

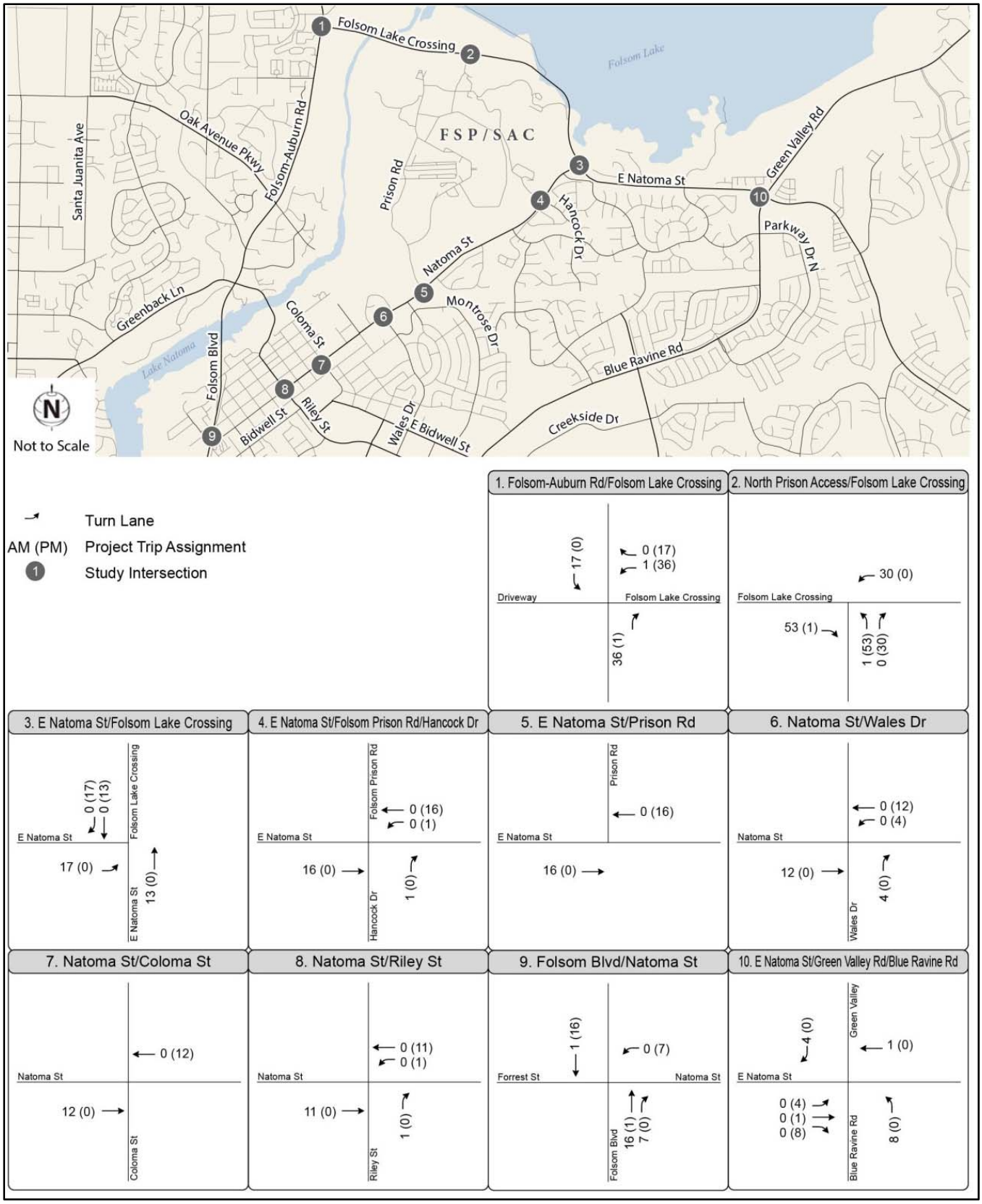
Trip Type	Number of People	Number of Vehicles	Daily Trips	5:30 AM to 6:30 AM			AM Peak Hour of Adjacent Street Traffic[1]			1:30 PM to 2:30 PM			PM Peak Hour of Adjacent Street Traffic[1]		
				Trips In	Trips Out	Total Trips	Trips In	Trips Out	Total Trips	Trips In	Trips Out	Total Trips	Trips In	Trips Out	Total Trips
Employee Trips															
Custody Employees															
1st Watch (10p.m.-6a.m.)	16	16	32	0	16	16	0	0	0	0	0	0	0	0	0
2nd Watch (6a.m.-2p.m.)	57	57	114	57	0	57	0	0	0	0	57	57	0	0	0
3rd Watch (2p.m.-10p.m.)	31	31	62	0	0	0	0	0	0	31	0	31	0	0	0
Custody Subtotal	*104*	*104*	*208*	*57*	*16*	*73*	*0*	*0*	*0*	*31*	*57*	*88*	*0*	*0*	*0*
Support Staff Employees															
1st Watch (10p.m.-6a.m.)	2	2	4	0	2	2	0	0	0	0	0	0	0	0	0
2nd Watch (8a.m.-5p.m.)	81	81	162	0	0	0	81	0	81	0	0	0	0	81	81
3rd Watch (2p.m.-10p.m.)	6	6	12	0	0	0	0	0	0	6	0	6	0	0	0
Support Staff Subtotal	*89*	*89*	*178*	*0*	*2*	*2*	*81*	*0*	*81*	*6*	*0*	*6*	*0*	*81*	*81*
Employee Trip Total	***193***	***193***	***386***	***57***	***18***	***75***	***81***	***0***	***81***	***37***	***57***	***94***	***0***	***81***	***81***
Delivery/Service Vehicle *Trips*															
Delivery/Service Trucks	--	5	10	0	0	0	2	1	3	0	0	0	1	2	3
Delivery/Service Trip Total	***--***	***5***	***10***	***0***	***0***	***0***	***2***	***1***	***3***	***0***	***0***	***0***	***1***	***2***	***3***
Total Project Trips			**396**	**57**	**18**	**75**	**83**	**1**	**84**	**37**	**57**	**94**	**1**	**83**	**84**

Notes: [1] The a.m. and p.m. peak hours of adjacent street traffic corresponds with the morning and evening commute peak hours and fall between 7:00 a.m. and 9:00 a.m. and between 4:00 p.m. and 6:00 p.m. For analysis purposes it was assumed that all employees that arrive during the a.m. and p.m. peak hours arrive within one hour of each other.
Source: Fehr & Peers 2013



Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-4 **Single, Level II Infill Correctional Facility Trip Distribution**



Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-5 Level II Infill Correctional Facility Trip Assignment

EXISTING PLUS LEVEL II INFILL CORRECTIONAL FACILITY CONDITIONS

To evaluate the potential traffic impacts of construction and operation of a single, level II infill correctional facility at FSP/SAC on the local roadway system, the traffic study developed estimates of traffic conditions with the new facility. A separate project (the Folsom Dam Joint Federal Project) includes installation of a temporary traffic signal at the Folsom Lake Crossing/North Prison Access intersection during approximately the same timeframe as the FSP/SAC Infill Site construction phases. However, that signal is expected to be removed by the time operations begin at the correctional facility, so it was not assumed for this scenario.

Impact 3.11-1: Impacts on Intersection Operations

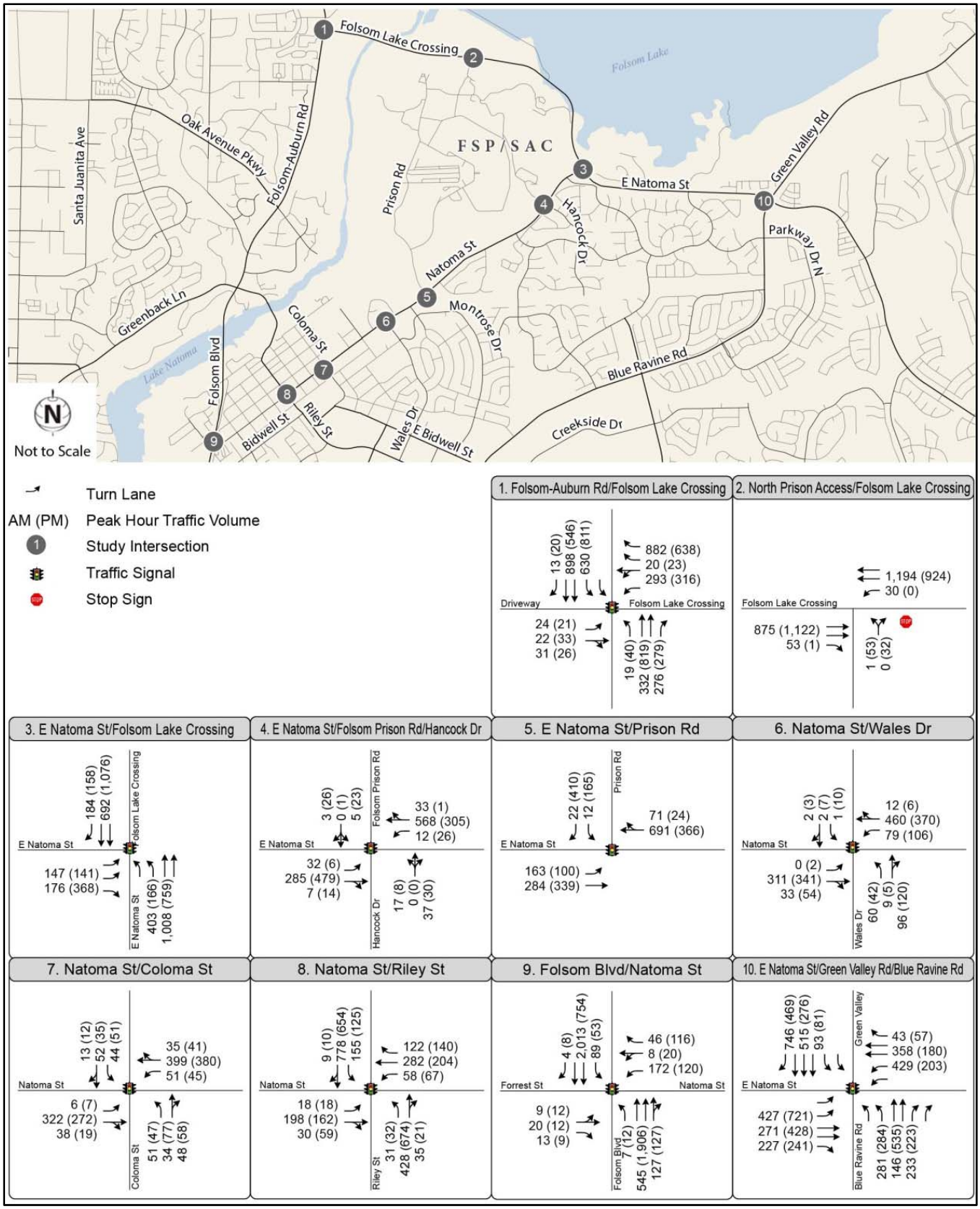
To evaluate the potential impacts of construction and operation of a single, level II infill correctional facility at FSP/SAC on the local roadway system, development-generated traffic volumes were added to the existing traffic volumes for existing plus level II infill correctional facility conditions analysis. Exhibit 3.11-6 shows the existing plus level II infill correctional facility intersection turning movement volumes. Existing plus level II infill correctional facility conditions intersection LOS analysis was performed using Synchro 7 software, which utilizes *HCM 2000* methodology. Table 3.11-7 shows the existing plus level II infill correctional facility LOS results at the study intersections.

Under existing conditions, the Natoma Street/Riley Street intersection and the E. Natoma Street/Green Valley Road/Blue Ravine Road intersection operate at an unacceptable LOS D. The level II infill correctional facility does not increase delay at these intersections by more than five seconds, therefore the infill facility would not create an impact at these locations. However, the addition of trips attributable to the infill facility would degrade traffic operations from an acceptable LOS to an unacceptable LOS at the following locations:

- Folsom-Auburn Road/Folsom Lake Crossing intersection – p.m. peak hour, and
- Folsom Lake Crossing/North Prison Access intersection – p.m. peak hour.

The average delay at the Folsom-Auburn Road/Folsom Lake Crossing intersection would increase from 34 seconds to 35 seconds, which exceeds the established threshold of LOS C (without development of the infill site) by degrading to LOS D (with development of the infill site). Implementation of a single, level II infill correctional facility at the FSP/SAC Infill Site would also result in unacceptable LOS D operations in the p.m. peak hour at the Folsom Lake Crossing/North Prison Access intersection under existing plus level II infill correctional facility conditions. The infill facility would add traffic to the northbound approach of the intersection and cause the northbound left-turn movement to operate at LOS D due to heavy conflicting traffic flows. The increase in delay would only be experienced by motorists exiting the infill site and turning left or right in the p.m. peak hour. The intersection's current configuration provides a 280-foot acceleration lane to facilitate this movement. Nonetheless, implementation of a level II infill correctional facility at FSP/SAC would result in the unacceptable degradation of intersection operations during the p.m. peak hour at the Folsom Lake Crossing/North Prison Access intersection.

The additional traffic associated with a single, level II infill correctional facility at FSP/SAC would degrade traffic operations at the Folsom-Auburn Road/Folsom Lake Crossing and Folsom Lake Crossing/North Prison Access intersections from an acceptable LOS to an unacceptable LOS. This would be a significant impact.



Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-6 Existing plus Level II Infill Correctional Facility Traffic Volumes

Table 3.11-7 Intersection Level of Service Results – Existing Plus Level II Infill Correctional Facility Conditions

Intersection	Traffic Control[1]	Existing				Existing plus Level II Infill Correctional Facility			
		AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]	
		Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
1. Folsom-Auburn Road/ Folsom Lake Crossing	Signal	19.3	B	34.2	C	19.7	B	**35.4**	**D**
2. Folsom Lake Crossing/ North Prison Access	SSSC	0.0 (0.0)	A (A)	0.0 (13.5)	A (B)	0.2 (17.8)	A (C)	1.0 **(26.3)**	A **(D)**
3. E. Natoma Street/ Folsom Lake Crossing	Signal	14.4	B	16.7	B	14.5	B	16.9	B
4. E. Natoma Street/ Folsom Prison Road/ Hancock Drive	SSSC	1.5 (22.3)	A (C)	2.0 (18.6)	A (C)	1.5 (22.8)	A (C)	2.0 (19.1)	A (C)
5. E. Natoma Street/ Prison Road	Signal	19.3	B	14.4	B	19.0	B	14.8	B
6. Natoma Street/ Wales Drive	Signal	12.6	B	16.8	B	12.7	B	16.8	B
7. Natoma Street/ Coloma Street	Signal	16.1	B	16.7	B	16.1	B	16.8	B
8. Natoma Street/ Riley Street	Signal	**52.7**	**D**	**42.9**	**D**	**52.7**	**D**	**43.0**	**D**
9. Folsom Boulevard/ Natoma Street	Signal	26.7	C	17.3	B	26.7	C	17.6	B
10. E. Natoma Street/ Green Valley Road/Blue Ravine Road	Signal	**49.2**	**D**	34.6	C	**49.9**	**D**	34.7	C

Notes: Unacceptable operations highlighted in **bold** text. Shaded text indicates a potentially significant impact.
[1] SSSC = Side Street Stop Control
[2] The a.m. peak hour is between 7:00 a.m. and 9:00 a.m. The p.m. peak hour is between 4:00 p.m. and 6:00 p.m.
[3] Delay is reported in seconds per vehicle for the overall intersection for signalized intersections. Delay is reported in seconds per vehicle for the overall intersection (worst movement) for side street stop controlled intersections.
Source: Fehr & Peers 2013

Mitigation Measures

Mitigation Measure 3.11-1a

CDCR will coordinate with the City of Folsom and arrange for optimization of signal timings at the Folsom-Auburn Road/Folsom Lake Crossing and Folsom-Auburn Road/Folsom Dam Road intersections to provide lower overall delay during the p.m. peak hour. The signal timings of both intersections will be coordinated given their proximity to each other and will be implemented prior to operation of the single, level II infill correctional facility at FSP/SAC.

Mitigation Measure 3.11-1b

CDCR will coordinate with the City of Folsom to provide a right-turn pocket on the northbound approach of the North Prison Access as it intersects with Folsom Lake Crossing. Improvement of this intersection will be completed prior to operation of the single, level II infill correctional facility at FSP/SAC.

Significance after Mitigation

Implementation of Mitigation Measure 3.11-1a would result in acceptable LOS at the Folsom-Auburn Road/Folsom Lake Crossing intersection during both peak hours.

Although the intersection of Folsom Lake Crossing/North Prison Access operates unacceptably based on the City's LOS policy, the intersection does not meet the peak hour signal warrant based on the *MUTCD* (Caltrans, 2012). Refer to Appendix 4D in this volume for the technical calculations. Additionally, the installation of an unwarranted traffic signal usually increases rear end collisions. A signal at an intersection with low volume on the side-street approach would usually be green for the major street, so a red indication may be missed by regular travelers. As a result, low-volume intersections are not recommended for signalization due to traffic safety concerns; for the purposes of this analysis, signalization of the intersection of Folsom Lake Crossing/North Prison Access is considered infeasible.

Impacts at Folsom Lake Crossing/North Prison Access intersection would only affect vehicles leaving the FSP/SAC Infill Site. While typically signalization of the intersection would be considered, the intersection does not meet the peak hour signal warrant based on the *MUTCD* (Caltrans, 2012). Refer to Appendix 4D in this volume for the technical calculations. The installation of an unwarranted traffic signal usually increases rear end collisions. As a result, low-volume intersections are not recommended for signalization due to traffic safety concerns, and for the purposes of this analysis, are considered infeasible. Therefore, other mitigation was considered for this intersection.

The level II infill correctional facility would not increase delay for the through movements on Folsom Lake Crossing. Northbound vehicle queues at the North Prison Access are expected to be approximately two vehicles long. Folsom Lake Crossing is already striped with a 280-foot acceleration lane to facilitate the northbound to westbound left -turn movement. The acceleration lane would provide a refuge area for vehicles making that movement, similar to a two-way left-turn lane. Implementation of Mitigation Measure 3.11-1b would reduce delay for right-turning traffic from LOS D to B. However, the left-turn movement delay would remain at LOS D, which would be considered unacceptable. This mitigation measure will be implemented prior to occupancy or earlier if specified by the construction transportation management plan (discussed in Mitigation 3.11-5). No other feasible mitigation is available.

Implementation of Mitigation Measure 3.11-1a, described above, would reduce potential impacts of the single, level II infill correctional facility to a less-than-significant level for the Folsom-Auburn Road/Folsom Lake Crossing intersection. The mitigation measure would result in LOS C operations at Folsom-Auburn Road/Folsom Lake Crossing. This mitigation measure will be implemented prior to occupancy or earlier if specified by the construction transportation management plan.

However, feasible mitigation is not available that would reduce potentially significant impacts associated with northbound left-turn movements at the intersection of Folsom Lake Crossing/North Prison Access. Therefore, even with implementation of the aforementioned mitigation measures, impacts would be **significant and unavoidable**.

Impact 3.11-2: Impacts on Roadway Segment Operations

Daily traffic volumes on each study roadway segment were projected under existing plus level II infill correctional facility conditions to determine the potential impacts of a level II infill correctional facility at FSP/SAC. Table 3.11-8 summarizes the projected daily volumes and levels of service on each study segment.

Under existing conditions, Greenback Lane at the Rainbow Bridge operates at an unacceptable LOS F; however, operation of a level II infill correctional facility at FSP/SAC is not expected to add any traffic to this roadway. No other study roadway segments would operate unacceptably with development of the infill site.

Table 3.11-8 Roadway Segment Levels of Service Results - Existing plus Level II Infill Correctional Facility Conditions

Roadway	Location	Roadway Type	Number of Lanes	Existing		Existing plus Level II Infill Correctional Facility	
				Volume[1]	LOS	Volume[1]	LOS
Folsom Lake Crossing	West of E. Natoma Street	High Access Control Arterial	4	21,623	A	21,767	A
E. Natoma Street	East of Folsom Lake Crossing	Moderate Access Control Arterial	4	24,237	B	24,303	B
E. Natoma Street	Between Prison Road and Hancock Drive	Moderate Access Control Arterial	2	10,475	A	10,547	A
Greenback Lane	At the Rainbow Bridge	Moderate Access Control Arterial	2	**24,232**	**F**	**24,232**	**F**

Notes: Unacceptable operations highlighted in **bold** text. Shaded text indicates a potentially significant impact.
[1] Two-way daily traffic volumes.
Source: Fehr & Peers 2013

*Implementation of a single, level II infill correctional facility at the FSP/SAC Infill Site would not add traffic to Greenback Lane at the Rainbow Bridge, which operates at an unacceptable level under existing conditions; all other roadway segments would continue to operate at acceptable levels. Therefore, the project would have a **less-than-significant** impact on roadway segments.*

Mitigation Measures

No mitigation measures are required.

Impact 3.11-3: Impacts on Caltrans Facility Operations

According to the Caltrans *Guide for the Preparation of Traffic Impact Studies* (2002), analysis of impacts related to a particular development is not required for intersections that operate at LOS D or better without the contemplated development, if the development would generate fewer than 49 trips on the Caltrans facilities. Implementation of a single, level II infill correctional facility at the FSP/SAC Infill Site would add 24 a.m. and p.m. peak hour trips to the US 50/Folsom Boulevard interchange ramp terminal intersections and eight peak hour trips to the E. Bidwell Street/US 50 WB off-ramp intersection. All three of the ramp terminal intersections operate acceptably at LOS C or better under existing conditions (see Table 3.11-5). Therefore, existing plus level II infill correctional facility analysis is not required. Refer to Appendix 4D in this volume for technical calculations. Freeway segments were not analyzed due to the low number of vehicle trips expected to use the freeway.

*Implementation of a single, level II infill correctional facility at the FSP/SAC Infill Site would not exceed screening thresholds for nearby Caltrans facilities. This would be a **less-than-significant** impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.11-4: Impacts on Parking

A parking accumulation analysis was performed to determine the maximum parking demand for the FSP/SAC Infill Site. The parking demand calculations considered the anticipated parking demand of each shift for the site, accounting for overlap in the shift schedules. Table 3.11-9 shows the projected hourly parking demand of a level II infill correctional facility for a typical weekday. The parking demand was calculated based on the following assumptions:

- This correctional facility is unlike other types of land use for which published parking demand rates are available.
- Because of overlapping shifts, the analysis must account for the presence of employees from multiple shifts at the same time.
- Employees do not arrive for their shift exactly when it begins. It is assumed that employees arrive several minutes before their shift begins.
- Employees also do not depart immediately when their shift ends. For purposes of this analysis, it is assumed that employees depart within the one hour period after their shift ends.

As shown in Table 3.11-9, the maximum parking demand for a single level II infill correctional facility at FSP/SAC on a typical weekday would be 175 spaces. As noted in Chapter 3, "Project Description," of Volume 1, a single, level II infill correctional facility would include no fewer than 207 parking spaces, which is more than the peak demand on a typical weekday. Furthermore and as noted above, the infill facility would allow visitors only on holidays and weekends, which coincides with days on which the support staff would not be located onsite, and onsite staffing would be limited to correctional staff. As noted in Chapter 3, "Project Description," of Volume 1 and Chapter 2, "Project Description," of this volume, it is assumed that up to 15 percent of inmates would receive a visitor (120 visitors total) on a given weekend day or holiday. This visitation, coupled with the decrease in staff parking needs onsite during weekends and holidays, would not result in inadequate parking onsite.

Table 3.11-9 Estimated Weekday Parking Demand

Hour Beginning	Hour Ending	Watch1	Watch 2	Watch 3	Watch 2 (Support Staff)	Total
12:00 a.m.	1:00 a.m.	18				18
1:00 a.m.	2:00 a.m.	18				18
2:00 a.m.	3:00 a.m.	18				18
3:00 a.m.	4:00 a.m.	18				18
4:00 a.m.	5:00 a.m.	18				18
5:00 a.m.	6:00 a.m.	18	57			75
6:00 a.m.	7:00 a.m.	18	57			75
7:00 a.m.	8:00 a.m.		57		81	138
8:00 a.m.	9:00 a.m.		57		81	138
9:00 a.m.	10:00 a.m.		57		81	138
10:00 a.m.	11:00 a.m.		57		81	138
11:00 a.m.	12:00 p.m.		57		81	138
12:00 p.m.	1:00 p.m.		57		81	138
1:00 p.m.	2:00 p.m.		57	37	81	**175**
2:00 p.m.	3:00 p.m.		57	37	81	**175**
3:00 p.m.	4:00 p.m.			37	81	118
4:00 p.m.	5:00 p.m.			37	81	118

Table 3.11-9 Estimated Weekday Parking Demand						
Hour Beginning	Hour Ending	Watch1	Watch 2	Watch 3	Watch 2 (Support Staff)	Total
5:00 p.m.	6:00 p.m.			37	81	118
6:00 p.m.	7:00 p.m.			37		37
7:00 p.m.	8:00 p.m.			37		37
8:00 p.m.	9:00 p.m.			37		37
9:00 p.m.	10:00 p.m.	18		37		55
10:00 p.m.	11:00 p.m.	18		37		55
11:00 p.m.	12:00 a.m.	18				18

Notes: Watch 1 = 10:00 p.m. to 6:00 a.m., Watch 2 = 6:00 a.m. to 2:00 p.m., Watch 3 = 2:00 p.m. to 10:00 p.m., Watch 2 (Support Staff) = 8:00 a.m. to 5:00 p.m.
Source: Fehr & Peers 2013

Implementation of the single, level II infill correctional facility at the FSP/SAC Infill Site would not result in inadequate parking supply to support anticipated demand. Therefore, this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.11-5: Construction-Related Traffic Impacts

Traffic generated during construction of a single, level II infill correctional facility at the FSP/SAC Infill Site would be attributable to trucks and construction workers' trips to and from the infill site. Construction would include four general phases in the following order: demolition/site preparation, grading, utilities, and building construction. Each phase would take place concurrently with the previous and following phase for some period of time. Construction traffic trip generation was estimated based on the following assumptions:

- The number of daily employees during each phase was calculated based on data provided by CDCR regarding construction activities at the California Health Care Facility (CHCF) Project in Stockton, California, which is currently under construction. Construction traffic was scaled based on the relative sizes of projects.
- The number of truck trips during demolition/site preparation and grading were calculated based on the cubic yards of material to be moved to/from the site and assumed an average capacity of 20 cubic yards per truck.
- The numbers of truck trips during utilities and building construction were assumed to be 20 one-way trips per day.

Table 3.11-10 shows the estimated trip generation during each phase of construction, including concurrent phases (phases that partially overlap), based on the number of expected construction employees and the number of truck trips.

Table 3.11-10 Estimated Construction Trip Generation

Construction Phase	Employee Trips per Day[1]	Truck Trips per Day[2]	Daily Trips		Notes
			Single Phase	Concurrent Phase	
Demolition/Site Preparation	186	12	198	578	Demolition = 2 months; 1 month concurrent with grading
Grading	364	16	380	442	Grading = 3 months; 1 month concurrent with demolition; 1 month concurrent with utilities
Utilities	42	20	62	744	Utilities = 8 months; 1 month concurrent with grading; 6 months concurrent with building construction
Building Construction	662	20	682		Building Construction = 23months; 6 months concurrent with utilities

Notes:
[1] Based on data provided by CDCR regarding the construction activities at the CHCF Stockton site.
[2] Based on cubic yards of material to be moved to/from the site during demolition/site preparation and grading. Based on 20 one-way trips per day during utilities and building construction.
Source: Fehr & Peers 2013

Construction of a level II infill correctional facility at the FSP/SAC Infill Site would generate between 62 and 744 daily trips, depending on the phase(s). Construction of a level II infill correctional facility at the FSP/SAC Infill Site would generate an estimated 744 daily trips during the peak period of construction traffic, anticipated to be the six months when utilities and building construction are taking place concurrently. These trips, when added to the local roadway network, could result in some of the same traffic impacts described for operation of the FSP/SAC Infill Site. The level II infill correctional facility is expected to generate 396 daily trips, which is more than the trip generation of the demolition/site preparation, grading, or utilities phase. During those single phases (approximately three months in duration), construction impacts would be the same or less than those for operation of a level II infill correctional facility at FSP/SAC. For the remainder of the construction period (i.e., during the building construction phase and the concurrent phases), the daily trip generation will vary from 442 daily trips to 744 daily trips.

The traffic impacts during construction would depend on the construction workers' shifts. Construction traffic could result in temporary impacts at the following intersections, which currently operate at LOS C or worse:

- Folsom-Auburn Road/Folsom Lake Crossing (p.m. peak hour)
- E. Natoma Street/Folsom Prison Road/Hancock Drive (a.m. and p.m. peak hours)
- Natoma Street/Riley Street (a.m. and p.m. peak hours)
- E. Natoma Street/Green Valley Road/Blue Ravine Road (a.m. and p.m. peak hours)

The access to the FSP/SAC Infill Site (North Prison Access/Folsom Lake Crossing) would serve as the access for construction traffic. The intersection would operate unacceptably during the concurrent construction phases and the building construction and grading single phases with the existing lane configurations and traffic control. However, a separate project (the Folsom Dam Joint Federal Project) includes installation of a temporary traffic signal at this intersection during approximately the same timeframe as the FSP/SAC Infill Site construction phases. Even with the temporary improvements at the infill site access, construction activity would likely create impacts at intersections that operate at or close to LOS D under existing conditions. The number of trips generated on a daily basis by construction activity would be greater than the operation of a level II infill correctional facility at FSP/SAC for approximately 26 months.

With implementation of a single, level II infill correctional facility at the FSP/SAC Infill Site, construction traffic could result in significant short-term traffic impact on several local intersections. Therefore, this impact would be significant.

Mitigation Measures

Mitigation Measure 3.11-5

CDCR will prepare a construction traffic management plan (TMP) in consultation with the applicable transportation entities, including Caltrans for state roadway facilities and the City of Folsom. This mitigation measure will be implemented prior to construction. The applicant will implement the construction TMP during project construction.

The TMP will address the following:

- scheduling for oversized material deliveries to the work site and haul routes, including flagging, scheduling off-peak deliveries, etc.,
- the cumulative effect of construction traffic with other concurrent, major construction projects nearby
- daily construction time windows during which construction is restricted, and
- other actions to be identified and developed as may be needed by the construction manager/resident engineer to ensure that temporary impacts on transportation facilities are minimized.

To minimize potential impacts, the TMP will restrict, to the extent feasible, peak hour trips entering and exiting FSP/SAC to 50 passenger car equivalents (PCEs). The TMP will include an updated evaluation of current operational characteristics of the roadways to determine if the construction traffic would cause unacceptable operations. If so, the TMP would specify temporary mitigations as needed, including but not limited to temporary operational improvements or limiting the hours or amount of construction trips on affected roadway segments. The TMP will also evaluate pavement conditions along the haul routes designated in the TMP, and, if necessary, specify mitigations to:

- avoid or minimize the use of haul routes where the pavement condition is physically deficient, according to each jurisdictions' standards, or
- enter into mitigation agreements to improve the physical condition of haul routes that are in a physically deficient condition.

Determination of whether the pavement condition is "acceptable" or "deficient" will be defined by the presiding jurisdiction's pavement management criteria.

Significance after Mitigation

Although the construction TMP would reduce the significance of this impact and would substantially improve and manage construction-related traffic conditions on area roadways, until the specific parameters of the construction activities and the details of the TMP are developed, it is possible that feasible mitigation measures would not be available for all construction-related impacts. However, the details of these improvements cannot feasibly be developed at this time. Further, it is considered unlikely that the peak-hour construction traffic associated with development of the infill site could be reduced to below the performance standard identified

above. Therefore, for purposes of CEQA, this impact is concluded to remain **significant and unavoidable**.

CUMULATIVE (2035) CONDITIONS

Long-term cumulative conditions are assumed to represent 2035 conditions. Traffic operations related to a single level II infill correctional facility at the FSP/SAC Infill Site under 2035 conditions are presented below.

Cumulative Roadway Network

For the cumulative analysis, the following roadway network improvements included in the *2035 Metropolitan Transportation Plan/Sustainable Communities Strategy* (SACOG 2011) were assumed to be in place by 2035. Therefore, these improvements were included in the cumulative no project scenario.

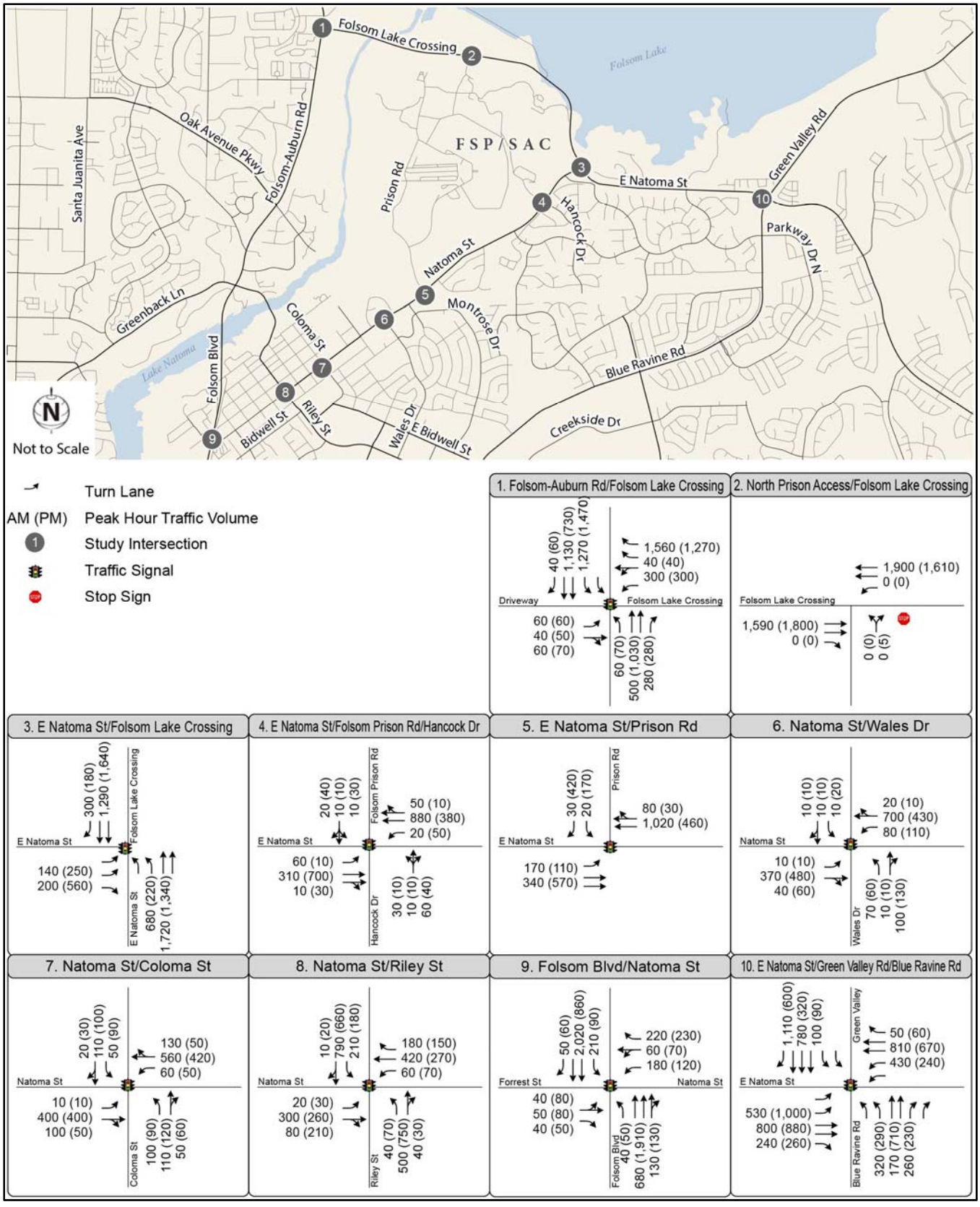
- E. Natoma Street from Fargo Way to Folsom Lake Crossing – Widen from two lanes to four lanes
- Green Valley Road from E. Natoma Street to Sacramento/El Dorado County line – Widen to four lanes
- US 50 at Empire Ranch Road – Construct new interchange with US 50
- US 50 at Oak Avenue Parkway – Construct new interchange with US 50
- The addition of the US 50/Empire Ranch Road interchange will provide a more direct route to and from US 50 than the US 50/East Bidwell Street interchange. Under cumulative conditions, traffic associated with the level II infill correctional facility to/from the east on US 50 is expected to use the US 50/Empire Ranch Road interchange.

Cumulative Traffic Forecasts

Traffic forecasts representing 2035 were developed using SACOG's Sacramento Metropolitan (SACMET) Travel Demand Model. The SACMET model roadway network included the improvements listed above and all planned and approved land use development in the area. The Folsom Women's Facility at Folsom State Prison was not included in the travel demand model. Therefore, traffic volumes from the women's facility were added to the forecasted volumes from the model. Additionally, as noted in Chapter 5, "Cumulative Impacts" of this volume of the DEIR, the Big House Museum, which is a separate project currently under consideration by CDCR, would be located at FSP/SAC, south of the existing FSP facility. The proposed museum would include a secondary turn lane and additional emergency passing lane along Prison Road in order to maintain free flow traffic conditions. However, as the contemplated level II infill correctional facility would be accessed via Folsom Lake Crossing, these onsite improvements would not affect or improve project-related traffic volumes and flow.

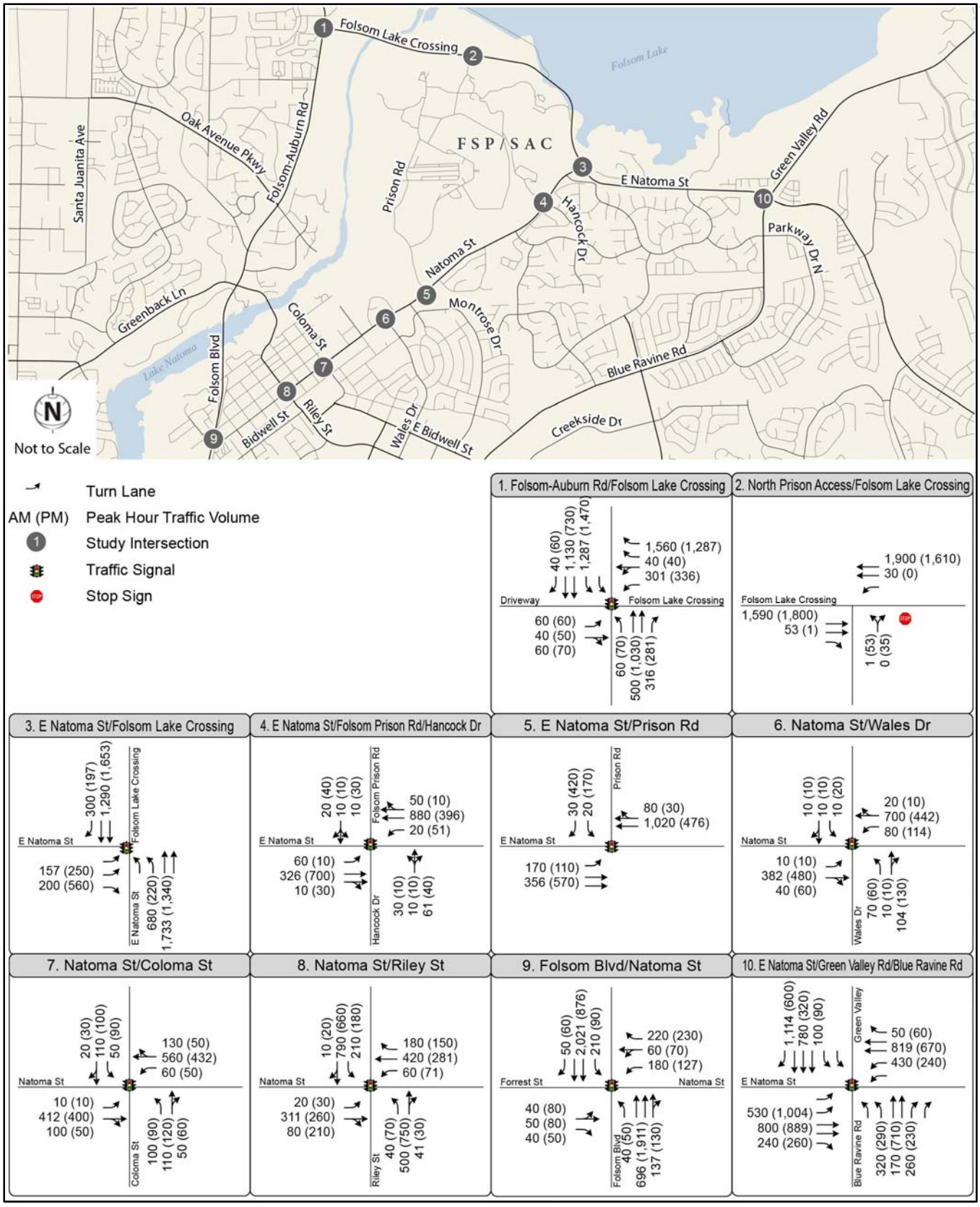
Traffic forecasts were developed using the difference method, in which the growth between the future year and base year model volumes was added to existing traffic counts. Exhibit 3.11-7 presents the cumulative no project traffic volumes.

Cumulative plus single, level II infill correctional facility traffic volumes were developed by adding the contemplated development's traffic (Exhibit 3.11-5) to the cumulative no project volumes. Daily trips associated with a single, level II infill correctional facility were added to the cumulative ADT for each of the study roadway segments. Cumulative plus level II infill correctional facility traffic volumes are presented in Exhibit 3.11-8.



Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-7 Cumulative No Project Traffic Volumes



Source: Data compiled by Fehr & Peers in 2013

Exhibit 3.11-8 Cumulative plus Level II Infill Correctional Facility Traffic Volumes

CUMULATIVE (2035) TRAFFIC OPERATIONS IMPACTS

Analysis was performed under cumulative plus level II infill correctional facility conditions to determine the potential impacts of the level II infill correctional facility on peak hour intersection operations and daily roadway segment operations.

Impact 3.11-6: Cumulative Impacts on Intersection Operations

Intersection LOS analysis for cumulative plus single, level II infill correctional facility conditions was performed using Synchro 7 software, which utilizes *HCM 2000* methodology. Table 3.11-11 shows the cumulative plus level II infill correctional facility LOS at the study intersections.

Table 3.11-11 Intersection Level of Service Results – Cumulative plus Level II Infill Correctional Facility Conditions

Intersection	Traffic Control[1]	Cumulative No Project				Cumulative plus Level II Infill Correctional Facility			
		AM Peak[2]		PM Peak[2]		AM Peak[2]		PM Peak[2]	
		Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS	Delay[3]	LOS
1. Folsom-Auburn Road/ Folsom Lake Crossing	Signal	30.4	C	**66.7**	**E**	30.8	C	**68.5**	**E**
2. Folsom Lake Crossing/ North Prison Access	SSSC	0.0 (0.0)	A (A)	0.0 (18.4)	A (C)	0.1 **(33.9)**	A **(D)**	1.7 **(69.0)**	A **(F)**
3. E. Natoma Street /Folsom Lake Crossing	Signal	24.0	C	33.0	C	24.5	C	33.6	C
4. E. Natoma Street/ Folsom Prison Road/ Hancock Drive	SSSC	2.9 **(31.3)**	A **(D)**	2.6 (21.7)	A (C)	2.9 **(31.9)**	A **(D)**	2.7 (22.4)	A (C)
5. E. Natoma Street/ Prison Road	Signal	10.4	B	10.4	B	10.3	B	10.5	B
6. Natoma Street/Wales Drive	Signal	18.7	B	25.3	C	18.6	B	26.4	C
7. Natoma Street/Coloma Street	Signal	27.8	C	23.6	C	27.8	C	23.6	C
8. Natoma Street/ Riley Street	Signal	**45.4**	**D**	**60.2**	**E**	**45.6**	**D**	**60.3**	**E**
9. Folsom Boulevard/ Natoma Street	Signal	**36.2**	**D**	30.0	C	**36.2**	**D**	30.2	C
10. E. Natoma Street/ Green Valley Road/Blue Ravine Road	Signal	**136.0**	**F**	**50.9**	**D**	**137.1**	**F**	**51.1**	**D**

Notes: Unacceptable operations are highlighted in **bold** text. Shaded text indicates a potentially significant impact.
[1] SSSC = Side-Street Stop-Control
[2] The a.m. peak hour is between 7:00 a.m. and 9:00 a.m. The p.m. peak hour is between 4:00 p.m. and 6:00 p.m.
[3] Delay is reported in seconds per vehicle for the overall intersection for signalized intersections. Delay is reported in seconds per vehicle for the overall intersection (worst movement) for side-street stop-controlled intersections.
Source: Fehr & Peers 2013

Under cumulative no project conditions, five study intersections would operate at an unacceptable LOS in one or both peak hours. The operation of a level II infill correctional facility at FSP/SAC would not increase delay at these intersections by more than five seconds; therefore, development at the infill site would not contribute to a cumulative impact at these locations. However, the addition of trips associated

with the level II infill correctional facilities would degrade traffic operations from an acceptable LOS to an unacceptable LOS at the following location:

- North Prison Access/Folsom Lake Crossing – a.m. and p.m. peak hour

Implementation of a level II infill correctional facility at the FSP/SAC Infill Site would add vehicle traffic to the North Prison Access/Folsom Lake Crossing intersection, degrading the LOS of the side street (North Prison Access) approach to LOS D during the a.m. peak hour and LOS F during the p.m. peak hour. As discussed in Impact 3.11-1, this impact would only affect vehicles leaving the FSP/SAC Infill Site. Implementation of a level II infill correctional facility at FSP/SAC would not increase delay for the through movements on Folsom Lake Crossing.

Implementation of a single, level II infill correctional facility at the FSP/SAC Infill Site would result in the unacceptable degradation of intersection operations during the a.m. and p.m. peak hours at the Folsom Lake Crossing/North Prison Access intersection. This would be a significant cumulative impact and the project's contribution would be considerable.

Mitigation Measures

Implement Mitigation Measure 3.11-1b (North Prison Access/Folsom Lake Crossing intersection).

Significance after Mitigation

As noted in Impact 3.11-1, although the North Prison Access/Folsom Lake Crossing intersection operates unacceptably based on the City's LOS policy, the intersection does not meet the peak hour signal warrant based on the *MUTCD* (Caltrans 2012). Additionally, traffic signals are not recommended at intersections with low side-street volumes for the safety reasons, as discussed in Mitigation Measure 3.11-1b.

Long delays for the northbound left-turn movement may encourage motorists to turn right at the intersection instead. Motorists who turn right would either make a U-turn at the next signalized intersection to go west or divert to E. Natoma Street. In the p.m. peak hour, the 16 motorists going to US 50 are most likely to divert to E. Natoma Street. Based on the analysis results, an additional 16 motorists on E. Natoma Street would not cause an additional impact if diversion were to occur.

Mitigation Measure 3.11-1b would reduce delay along the northbound approach, but not that of the left-turn movement. Because there are no feasible mitigation measures to reduce this impact, the unacceptable degradation of intersection operations during the a.m. and p.m. peak hours at the Folsom Lake Crossing/North Prison Access intersection under cumulative conditions would remain significant and unavoidable. Furthermore, as noted above, it is unknown at this time whether the City of Folsom would assist CDCR with implementation of Mitigation Measure 3.11-1b.

Impacts at the North Prison Access and Folsom Lake Crossing intersection would only affect vehicles leaving the FSP/SAC Infill Site. While typically signalization of the intersection would be considered, the intersection does not meet the peak hour signal warrant based on the *MUTCD* (Caltrans, 2012). Refer to Appendix 5D in this volume for the technical calculations. The installation of an unwarranted traffic signal usually increases rear-end collisions. As a result, low-volume intersections are not recommended for signalization due to traffic safety concerns; for the purposes of this analysis, signalization is considered infeasible. Therefore, other mitigation was considered for this intersection.

The level II infill correctional facility would not increase delay for the through movements on Folsom Lake Crossing. Northbound vehicle queues at the North Prison Access are expected to

be approximately two vehicles long. Folsom Lake Crossing is already striped with a 280-foot acceleration lane to facilitate the northbound to westbound left -turn movement. The acceleration lane would provide a refuge area for vehicles making that movement, similar to a two-way left-turn lane. Implementation of Mitigation Measure 3.11-1b would reduce delay for right-turning traffic from LOS D to B. However, the left-turn movement delay would remain at LOS D, which would be considered unacceptable. This mitigation measure will be implemented prior to occupancy or earlier if specified by the construction TMP. No other feasible mitigation is available.

Implementation of Mitigation Measure 3.11-1b would reduce potential impacts of the level II infill correctional facility. However, implementation of this mitigation measure is within the responsibility and jurisdiction of another public agency and not CDCR. It is unknown at this time whether the City of Folsom would implement its share of the measures, and CDCR would only fund its fair share based on traffic from the project. Unless there is participation by the City and CDCR in time for the improvements to be operational by buildout of the infill facility, operation of this intersection would remain unmitigated. Further, while reduced, feasible mitigation is not available that would reduce potentially significant impacts to a less-than-significant level. Therefore, even with implementation of the aforementioned mitigation measures, impacts would be **significant and unavoidable**.

Impact 3.11-7: Cumulative Impacts on Roadway Segment Operations

Daily traffic volumes on each study roadway segment were projected under cumulative plus level II infill correctional facility conditions to determine the potential impacts of a level II infill correctional facility at FSP/SAC. Table 3.11-12 summarizes the daily volume and LOS for each study segment. Under cumulative conditions, Greenback Lane at the Rainbow Bridge currently operates at an unacceptable LOS F; however, the contemplated development at the FSP/SAC Infill Site would not add any traffic to this roadway.

Table 3.11-12 Roadway Segment Level of Service Results - Cumulative plus Level II Infill Correctional Facility Conditions

Roadway	Location	Roadway Type	Number of Lanes	Cumulative		Cumulative Plus Level II Infill Correctional Facility	
				Volume[1]	LOS	Volume[1]	LOS
Folsom Lake Crossing	West of E. Natoma Street	High Access Control Arterial	4	**35,980**	**D**	**36,124**	**E**
E. Natoma Street	East of Folsom Lake Crossing	Moderate Access Control Arterial	4	**38,330**	**F**	**38,396**	**F**
E. Natoma Street	Between Prison Road and Hancock Drive	Moderate Access Control Arterial	2	13,030	C	13,102	C
Greenback Lane	At the Rainbow Bridge	Moderate Access Control Arterial	2	**27,780**	**F**	**27,780**	**F**

Notes: Unacceptable operations are highlighted in **bold** text. Shaded text indicates a potentially significant impact.
[1] Daily traffic volume data was collected in January 2013.
Source: Fehr & Peers 2013

Folsom Lake Crossing and E. Natoma Street, east of Folsom Lake Crossing, are projected to operate at unacceptable levels under cumulative conditions. Development of a level II infill correctional facility at FSP/SAC would add 144 daily trips to Folsom Lake Crossing and 66 trips to E. Natoma Street east of Folsom Lake Crossing, which would represent 0.4 percent of all trips on Folsom Lake Crossing and 0.2 percent of all trips on E. Natoma Street.

Implementation of a single, level II infill correctional facility at the FSP/SAC Infill Site would add traffic to two roadway segments that are projected to operate at unacceptable LOS under cumulative conditions. This would be a significant impact.

Mitigation Measures

No feasible mitigation measures are available.

Significance after Mitigation

Due to lack of available, additional right-of-way along both roadway segments, there are no feasible mitigation measures for this impact; therefore, the level II infill correctional facility's traffic contribution to this intersection would exacerbate already unacceptable operating conditions. This would be a **significant and unavoidable cumulative impact** and the project's contribution would be considerable.

Impact 3.11-8: Cumulative Impacts on Caltrans Facility Operations

According to the Caltrans *Guide for the Preparation of Traffic Impact Studies* (2002), analysis of impacts related to a particular development is not required for intersections that operate at LOS D or better without the contemplated development, if the development would generate fewer than 49 trips on the Caltrans facilities. The level II infill correctional facility at FSP/SAC would add 24 peak hour trips to the US 50/Folsom Boulevard interchange ramp terminal intersections and eight peak hour trips to the US 50/Empire Ranch Road interchange ramp terminal intersections. All four of the ramp terminal intersections are expected to operate acceptably at LOS D or better under cumulative no project conditions. (Technical calculations for the US 50/Folsom Boulevard interchange ramp terminal intersections are provided in Appendix 4D in this volume.) The US 50/Empire Ranch Road interchange would be newly constructed and should be designed to operate at acceptable LOS under cumulative conditions. Therefore, cumulative plus level II infill correctional facility analysis is not required. Refer to Appendix 4D for technical calculations. Freeway segments were not analyzed due to the low number of vehicle trips expected to use the freeway.

*Implementation of a single, level II infill correctional facility at the FSP/SAC Infill Site would not exceed screening thresholds for nearby Caltrans facilities. This would be a **less-than-significant** cumulative impact.*

Mitigation Measures

No mitigation measures are required.

3.12 UTILITIES

This section evaluates the adequacy of existing and planned future utilities to serve the Folsom State Prison/California State Prison, Sacramento (FSP/SAC) Infill Site and evaluates the potential effect of the contemplated single, level II infill correctional facility on the following services and utilities:

- water supply, distribution, and treatment;
- wastewater treatment and disposal;
- solid waste disposal; and
- energy (electricity and natural gas).

The analysis provided in this section is based on a review of utilities agreements, consultation with project engineers, and existing technical reports, including the following:

- Advanced Utility Planning Report – Proposed Prison Medical Facility at Folsom Prison (Kimley-Horn 2009)

Storm drainage, surface water quality, and groundwater quality are addressed in Section 3.7, "Hydrology and Water Quality," of this volume of the draft environmental impact report (DEIR). The development of a level II infill correctional facility at the FSP/SAC Infill Site would include storm drains to direct runoff from the infill site to detention basins, which temporarily detain stormwater runoff to allow sediment particles and certain pollutants to settle before entering the watershed. In addition, low-impact development (LID) methods to maintain pre-project runoff levels, such as design considerations when planning roads, parking lots, buildings, or landscaping, would be incorporated to the maximum extent practicable. As required by Mitigation Measure 3.7-2, the final specifications of the project's drainage system would be designed to appropriately accommodate the stormwater runoff generated from the new level II infill correctional facility to maintain pre-project conditions. Therefore, impacts associated with the capacity of the existing stormwater drainage system are not analyzed further in this section. However, it should be noted that the impacts of construction of the storm drainage system have been evaluated throughout the technical resources sections in Chapter 3 of this DEIR.

3.12.1 ENVIRONMENTAL SETTING

WATER

FSP/SAC receives raw water through a diversion from Folsom Lake under a Memorandum of Understanding (MOU) between the State of California, the U.S. Army Corps of Engineers (USACE), and the U.S. Bureau of Reclamation (USBR), which was initiated in the 1890s when the prison was constructed. Under the MOU, USBR provides up to 4,000 acre-feet per year (afy) (3,568,604 gallons per day [gpd]) of raw water from Folsom Lake by piping water from Folsom Dam (Kimley-Horn 2009). As the water rights afforded to FSP/SAC by the MOU are pre-1914 appropriative rights, the allotted supply is considered stable through normal, single-dry, and multiple-dry year conditions.

Water is delivered to FSP/SAC from Folsom Lake through the Natomas Pipeline, an 84-inch water intake pipeline, which splits into two separate lines just north of the California Department of Corrections and Rehabilitation (CDCR) property. One line goes into a dedicated FSP/SAC water treatment plant (WTP) that supplies water to the FSP and SAC facilities; and the other line transports raw water to the City of Folsom's (City's) WTP. The prison water diverted from the raw water intake is conveyed to the prison's WTP, which operates from 5 a.m. to midnight and the raw water intake has a design capacity of 4 million gallons per day (mgd) (4,480 afy). The FSP/SAC WTP has capacity to treat and produce 3.6–3.8 mgd (approximately 4,000–4,480 afy). The treated water is pumped to two 1-million gallon (MG) storage tanks, before distribution throughout the FSP/SAC facilities (Kimley-Horn 2009).

In 2009, the reported average water use for FSP/SAC was 2 mgd (2,200 afy). Higher rates were reported in the summer months, related to support of irrigation demands. Because of sewer constraints, several programs have been implemented since 2009 to reduce water use. Actions included installation of low-flush toilets, timer-limited showers, and improvements to existing infrastructure.

Current water usage data are provided in Table 3.12-1, reflecting the combined demand from both FSP and SAC from January 2010 through March 2012.

Table 3.12-1 Existing FSP/SAC Water Demand, January 2010 – March 2012

	Gallons per Day
Average	1,175,817 gpd
Minimum	1,005,290 gpd
Maximum	1,464,000 gpd

Source: Vanir Construction 2012. Compiled by Ascent in 2013.

In late January 2013, the Folsom Women's Facility (FWF) began operation at the CDCR property at FSP/SAC. The FWF provides housing for up to 403 female inmates. While reliable water demand data is not yet available, it is estimated that FWF will have a water demand of approximately 150 gallons per inmate per day (gpid) for a total of 68 afy at full capacity (CDCR 2012).

GLOBAL CLIMATE CHANGE AND WATER SUPPLY

In recent years, scientific consensus has begun to accept that Earth's climate is changing and this consensus has broadened to consider increasing concentrations of greenhouse gases, attributable to anthropogenic activities, as a primary cause of global climate change. The United Nations Intergovernmental Panel on Climate Change predicts that changes in Earth's climate will continue through the 21st century and that the rate of change may increase substantially in the future because of human activity (IPCC 2001, 2007). Extensive background information on global climate change, including modeling and trends, is found in Chapter 5, "Cumulative Impacts," of this volume.

Today, the issue of global climate change has begun to play an increasing role in scientific and policy debates in multiple issue areas. Of particular concern are the existing and potential future effects of global climate change on hydrologic systems and water management (e.g., domestic water supply, agricultural water supplies, flood control, and water quality). There is evidence that global climate change has already had an effect on California's hydrologic system; for example, historical data indicate a trend toward declining volumes of spring and summer runoff from the Sierra Nevada.

California water planners and managers have considered the implications of statewide and regional climate change (rather than global-scale changes) on the reliability and safety of their systems. The California Water Plan (Bulletin 160) first briefly addressed climate change in 1993 (DWR 1994). This analysis has been expanded and refined in the 2005 update of the California Water Plan, which explores a wide range of climate impacts and risks, including risks to water resources (Kiparsky and Gleick 2005, Roos 2005). The 2005 update also describes efforts that should be taken to quantitatively evaluate climate change effects for the next update of the California Water Plan (DWR 2005).

WASTEWATER

Wastewater collection is provided to the FSP/SAC Infill Site through the City of Folsom sewer collection system and the Sacramento Regional County Sanitation District (SRCSD) conveyance and wastewater treatment system. The City's sewer collection system consists of more than 267 miles of sanitary sewer pipe and nine pump stations. The City's wastewater is conveyed through the SRCSD's regional sewer pipelines for treatment at SRCSD's Sacramento Regional Wastewater Treatment Plant (SRWTP) in Elk Grove, Sacramento County. The SRWTP treats, on average, 141 mgd and has a capacity to treat up to 181 mgd (SRCSD 2012). The SRWTP operates under the Central Valley Regional Water Quality Control Board–issued National Pollution Discharge Elimination System (NPDES) permit.

The FSP sewer collection system collects flows from the areas north of the secured perimeter, including the fire station and the minimum security camp, and from a residential area to the east of the secure perimeter. It exits the secure perimeter near the East Gate and then proceeds through a comminutor (a machine that breaks up solids) and flow meter along the west edge of FSP. A separate sewer collection system serves the newer SAC facility and the Prison Industry Authority (PIA) facilities. The wastewater collected from these facilities flows into a pipeline that follows the south side of the residential area, then along a creek to the comminutor located where this line meets the FSP line along the American River. From this point, a 20-inch interceptor follows the river to the connection with the City's system. In addition to the FSP/SAC flows, sewer service is provided to the FWF facility, which began operating in late January 2013. This facility connects into the City's 27-inch sewer line in Folsom Boulevard.

In 1973, the City and CDCR signed an agreement for joint sewage disposal. The agreement included provisions for the sharing of capital costs, treatment costs, and maintenance and operating costs. Recent disputes have arisen between the City and CDCR regarding the allocation and sharing of costs under the 1973 agreement. These issues were resolved with a new agreement for joint sewage disposal, approved on April 12, 2007, which replaced the 1973 agreement. The 2007 agreement limited prison wastewater flows into the City sewer system to an average rate of 1.15 mgd and a maximum rate of 2.50 mgd.

CDCR actively implements water-saving measures at all of its facilities. The SAC and FWF facilities have installed flush-restricting valves on all inmate lavatory fixtures, thereby limiting the number of consecutive flushes. Recorded flows from FSP/SAC from January 2010 through March 2012, and estimated flows from FWF are shown in Table 3.12-2.

Table 3.12-2 FSP/SAC Wastewater Flows, January 2010–March 2012

	Average Flow (million gallons per day [mgd])	Per Inmate (gpid)
FSP/SAC Average	0.92	159
FWF Average Flow (Estimated) [1]	0.05	124
Total Average Flow	**0.97**	N/A
FSP/SAC Minimum	0.73	126
FSP/SAC Maximum	0.99	171

Notes: mgd = million gallons per day; gpid = gallons per inmate per day
[1] FWF flows are based on a demand factor of 130 gpid
Source: Vanir Construction 2012.

ELECTRICAL SERVICE

The Sacramento Municipal Utility District (SMUD) supplies electricity to Sacramento County, including FSP/SAC, as well as a small portion of Placer County. Infrastructure serving FSP/SAC includes a 69-kilovolt (kV) transmission line that runs down East Natoma Street. An additional 230-kV transmission line runs parallel to Folsom Dam Road in an easement at the north and northeast sides of the infill site. The current prison service is pulled from the 69-kV line at the intersection of East Natoma Street and Hancock Drive. The service then runs west in an existing 10-foot-wide SMUD easement into the prison property just north of the PIA, runs north around the SAC yards, and terminates at the substation on the eastern edge of the minimum-security camp.

The existing substation, which is part of FSP, is capable of supplying 12.5 megavolt-amps. A 4-kV distribution system, also part of FSP, is utilized to provide power to the SAC facilities. The current load that FSP/SAC uses from the substation is 6 megawatts (MW). The maximum peak demand load provided by SMUD to FSP/SAC during the past 2 years was approximately 6.2 MW.

NATURAL GAS

Pacific Gas and Electric (PG&E) currently provides natural gas service to FSP/SAC. PG&E has an 8-inch gas main that runs along East Natoma Street, and the prison property is served from this line. The line

enters the prison property near the intersection of Prison Road and East Natoma Street. From there, a 20-foot-wide PG&E easement runs north. A gas line also runs up the road just north of the PIA, as well as a 3-inch gas main that runs north from the minimum security camp toward the inmate ward labor (IWL) area.

The infill site is served by two existing meters. One is a 4-inch meter with a delivery pressure of 5 pounds per square inch (psi) and a connected load of approximately 8,000 mega–British thermal units (BTUs) per hour (mbh). The other is a 6-inch meter with a delivery pressure of 6–8 psi and a connected load of 20,000 mbh.

SOLID WASTE

The County of Sacramento has one primary landfill to receive solid waste from most land uses, the Kiefer Landfill, located at 12701 Kiefer Boulevard. The Kiefer Landfill is approximately 14 miles south of FSP/SAC and is designated as a Class III landfill. Class III landfills are lined and accept most household and commercial waste, including most construction waste. They do not accept most hazardous wastes, although the Kiefer Landfill does accept autoclaved (sterilized and compacted) hazardous waste.

Kiefer Landfill has a remaining capacity of approximately 113 million cubic yards, as of 2005, and is expected to have capacity until at least 2063. When Kiefer Landfill's solid waste facility permit expires in 2035, the Sacramento County Department of Waste Management and Recycling plans to revise the permit so that the landfill can continue to operate until it reaches capacity. The Kiefer Landfill is permitted to receive a maximum daily amount of 10,815 tons and currently receives an average of approximately 1,800 tons a day (6 percent of the maximum).

Statewide, CDCR generates approximately 3.6 pounds of solid waste per inmate per day. This average indicates that currently, with a population of approximately 5,611 inmates (June 2012), FSP/SAC generates an estimated 20,200 pounds (10.1 tons) of waste daily and 3,596 tons annually. FSP/SAC also operates a recycling and salvage program, which primarily salvages metal, cardboard, and white paper. This program currently recycles 70 percent of FSP/SAC's waste, thereby reducing the waste delivered to landfills.

3.12.2 REGULATORY CONSIDERATIONS

A list of the applicable federal and state plans, policies, regulations, and laws is provided below. Complete summaries of these regulations are provided in Volume 1, Appendix 1B.

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

The only federal plan or policy applicable to the project is related to potential transportation of hazardous materials (medical waste).

- Hazardous Materials Transportation Act - the transportation of hazardous materials is regulated by the Hazardous Materials Transportation Act (HMTA), which is administered by the US Department of Transportation (DOT). The HMTA governs the safe transportation of hazardous materials by all modes, excluding bulk transportation by water.

STATE PLANS, POLICIES, REGULATIONS AND LAWS

WATER SUPPLY

- California Water Code - The California Water Code outlines the general state authority and responsibilities over water in California.
- Urban Water Management Planning Act - The Urban Water Management Planning Act requires water suppliers to document water supplies available during normal, single dry, and multiple dry

water years during a 20-year projection period, and to document the existing and projected future water demand during a 20-year projection period.

- Senate Bills 610 and 221 - SB 610 amended the Water Code requirements within the CEQA process and broadened the types of information required in a UWMP. SB 610 requires the preparation of "water supply assessments" for large developments (i.e., more than 500 dwelling units or nonresidential equivalent) proposed under the jurisdiction of a County or City lead agency.
- California Water Code Part 2.10 - Water Code Part 2.10 clarifies the roles and responsibilities, under CEQA, of the lead agency and the water supplier (i.e., the public water system) with respect to describing current and future supplies compared to current and future demand. It also defines the projects for which a WSA must be prepared as well as the responsibilities of the lead agency related to the WSA.

WATER AND WASTEWATER DISTRIBUTION

There are no state regulations relevant to the contemplated development at the FSP/SAC Infill Site that pertains to water and wastewater distribution infrastructure.

ELECTRICITY AND NATURAL GAS

- California Building Code (CBC), Title 24, Part 6 - California Building Code (CBC), Title 24, Part 6, establishes building energy efficiency standards for new construction (including requirements for new buildings, additions, alterations, nonresidential buildings, and repairs).

SOLID WASTE

- California Waste Management Act of 1989 - The California Waste Management Act requires each county to submit a management plan to the California Integrated Waste Management Board that includes an adopted Source Reduction and Recycling Element from each of its cities as well as for the unincorporated area.

CDCR DESIGN CRITERIA GUIDELINES

The CDCR *Design Criteria Guidelines* (DCG) establishes general sustainable design principles for the design of correctional facilities. The DCG provides guidelines that comply with various regulatory requirements, including those described as follows.

- **Executive Order S-20-04** requires that the state takes aggressive action to reduce electricity usage in state facilities by retrofitting, building and operating the most energy and resource efficient buildings by taking cost-effective measures. These measures are intended to reduce grid-based energy purchases for state-owned buildings by 20 percent of 2009 levels by 2015.
- The **Green Building Action Plan** is detailed direction that accompanies Executive Order 2-20-04.
- **Assembly Bill (AB) 32** requires a reduction in greenhouse gas (GHG) emissions to 1990 levels by 2020. The California Air Resources Board has established a reporting program (Climate Action Registry) that includes publicly-owned utilities and all electricity consumed in the state or imported into the state.

The DCGs requires that new or renovated buildings with floor area of 10,000 square feet or greater, which are subject to Title 24, meet Leadership in Energy and Environmental Design (LEED) Silver or higher certification. All projects must also implement cost-effective measures to conserve water, such as water-saving fixtures and conservation practices. In addition, the guidelines contain various building reuse and recycling requirements to reduce waste production at CDCR facilities.

LOCAL PLANS, POLICIES, AND ORDINANCES

The FSP/SAC Infill Site is located on land that is owned or controlled by the State. As a state agency, CDCR is not subject to land use plans, policies, and ordinances adopted by local agencies. Nevertheless, a discussion of relevant local plans and policies is provided because conflicts with them could indicate the potential occurrence of other physical environmental effects.

CITY OF FOLSOM GENERAL PLAN

The following policies the City of Folsom General Plan relating to utilities and service systems are considered in relation to the contemplated development at the FSP/SAC Infill Site:

- **Policy 40.1:** No permit for construction shall be issued for any new development not served by existing municipal facilities until the following conditions have been met:
  1. The applicant can provide for the installation and/or financing (through fees or other means) of needed public facilities.
  2. The project is included in the area covered by an existing facilities plan approved by the City.
  3. The project can be served by onsite or private facilities meeting City and County health and safety requirements.
- **Policy 40.2:** The City shall require the preparation of a facilities plan for an identified area when:
  1. Development of an area necessitates the provision, extension, and/or expansion of municipal services and facilities which are not customarily constructed by a developer; or
  2. There is a need for services or facilities not otherwise funded by regular City fees; or
  3. The construction of the necessary services and facilities cannot be logically or economically provided by one landowner/developer in the normal sequence of orderly development.
- **Policy 16.2:** Public facilities, such as utility substations, water storage or treatment plants, should be located, designed, and maintained so that noise, light, glare, or odors associated with these facilities will not negatively impact nearby land uses. Building materials and landscaping shall be used to make these land uses less visually obtrusive from neighboring properties.
- **Policy 22.1:** Continue to implement state energy-efficient standards.

3.12.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

In accordance with Appendix G and Section 15065 of the State of California Environmental Quality Act (CEQA) Guidelines, the level II infill correctional facility at the FSP/SAC Infill Site would result in a significant impact relating to utilities if it would do any of the following:

- result in a lack of sufficient water supplies available to serve the project from existing resources and entitlements, and/or a need for new or expanded entitlements;
- require or result in the construction of new water treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- require or result in the construction of new wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects;
- exceed wastewater treatment requirements of the applicable regional water quality control board (RWQCB);
- result in a determination by the wastewater treatment provider which serves or may serve the project that it has inadequate capacity to serve the project's projected demand in addition to the provider's existing commitments;
- generate waste materials that would exceed the permitted capacity of local landfills;

- violate federal, state, and/or local statutes and regulations related to solid waste; or
- create demand for electricity or natural gas service that would require or result in the construction of new electricity or natural gas facilities or expansion of existing facilities, the construction of which could cause significant environmental effects.

The State CEQA Guidelines (Section 15064.5) define a "substantial adverse change" as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

ISSUES NOT DISCUSSED FURTHER

Water treatment facilities: As discussed above, water from Folsom Lake is treated at the prison WTP. The WTP has a process capacity of 3.7 mgd, allowing use of up to 4,147 afy. Implementation of the contemplated development at the infill site would increase water demand from approximately 1,318 to approximately 1,552 afy, which is well below the capacity of CDCR's WTP. Because the increase in demand would be met by the WTP's existing capacity, and because the NPDES permit requirements would be met, no new water treatment facilities would be required that could result in significant impacts. Therefore, this topic is not discussed further.

PROJECT IMPACTS AND MITIGATION MEASURES

Impact 3.12-1: Impacts on Water Supply

A single, level II infill correctional facility at the FSP/SAC Infill Site would house 792 inmates at full buildout. CDCR assumes an average daily water demand factor of 150 gpid based on the facility design, which would include water conservation devices. (Note that, although this factor is based on the number of inmates, it encompasses potable-water demand for the entire facility, such as landscaping and staff demands.) Given this demand factor, the contemplated level II infill correctional facility's water requirement is estimated to be 118,800 gpd (133 afy) at full buildout.

As discussed above, water is supplied to the water treatment facility at FSP/SAC, where it is treated onsite. These facilities have been sized to handle up to 3.6–3.8 mgd, which is more than the average daily amount of CDCR's existing surface water rights. Table 3.12-3 provides the estimated potable water demand of a single, level II infill correctional facility added to existing demands at FSP/SAC, as well as the estimated demands of FWF. As shown, the anticipated average demand of 1,355,067 gpd and the anticipated peak water demand of 1,786,650 gpd are less than the existing allocation agreement. Therefore, the projected demand of the level II infill correctional facility, in conjunction with existing and projected water demands at FSP/SAC, would not exceed the capacity of existing water treatment facilities or CDCR's existing water rights allocation.

Table 3.12-3 Estimated Potable Water Demand of a Single, Level II infill correctional Facility at FSP/SAC

Facility	Average Daily Demand (gallons)	Peak Daily Demand[1] (gallons)
Existing FSP/SAC Demand	1,175,817	1,464,000
FWF Demand (Estimated)	60,450	108,810
Single, Level II infill correctional Facility Demand (Estimated)	118,800	213,840
Total	**1,355,067**	**1,786,650**
Allocation	3,568,604	3,568,604
Remaining Supply	**2,213,537**	**1,781,954**

Notes : [1] Based on peak monthly demand from January 2010 through March 2012
Source: Analysis by Ascent in 2013.

Long-term Water Sufficiency Analysis

As noted above, CDCR, as part of its MOU with USACE and USBR, has pre-1914 water rights to up to 4,000 afy from Folsom Lake. As such, the reliability of water supplies to FSP/SAC and the infill site would be considered stable during normal, single-dry, and multiple-dry year conditions. As currently projected (Table 3.12-3), FSP/SAC, FWF, and the contemplated single, level II infill correctional facility would require an average of 1,355,067 gallons per day which equates to approximately 1,480 afy. At peak demand, these facilities would require up to 1,786,650 gallons per day, which equates to approximately 2,000 afy. This water demand would be met by CDCR's water right for raw water supplies from Folsom Lake.

Existing water supplies are sufficient to serve the contemplated single, level II infill correctional facility at the FSP/SAC Infill Site from existing resources and entitlements, and implementation of the contemplated development would not require new or expanded entitlements. The impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.12-2: Impacts to Wastewater Treatment Capacity

CDCR facilities are authorized to release wastewater at an average rate of 1.15 mgd, up to a maximum of 2.50 mgd, to the SRWTP through the City of Folsom and SRCSD conveyance systems. The SRWTP is required to operate in compliance with its current NPDES permit, thereby ensuring that wastewater treatment requirements are met. The SRWTP is currently planning a major upgrade to meet recent NPDES permit requirements.

The contemplated single, level II infill correctional facility at the FSP/SAC Infill Site would house 792 new inmates. Based on an average discharge rate of 130 gpid, a single, level II infill correctional facility would result in an additional 102,960 gpd (0.103 mgd) of wastewater discharge. As shown in Table 3.12-4, combining the wastewater discharge from the infill site with the existing wastewater discharge from the adjacent FSP/SAC and FWF facilities would result in a total of 1.07 mgd discharged from the CDCR facilities to the SRWTP through the City of Folsom sewer system.

Table 3.12-4 Estimated Wastewater Flow Rate

Facility	Average Daily Flow (mgd)
FSP/SAC Maximum Flow	0.92
FWF Estimated Flow	0.05
Estimated Single Infill Facility Flow	0.10
Total Estimated Sewer Flow	**1.07**

Source: Vanir Construction 2012.

The total estimated flow of 1.07 mgd from FSP/SAC, FWF, and the contemplated single, level II infill correctional facility at the FSP/SAC Infill Site would not exceed the daily discharge allowance of 1.15 mgd. Therefore, adequate wastewater treatment services are available and no new facilities would be required that could result in significant environmental impacts. This would be considered a ***less-than-significant*** *impact.*

Mitigation Measures

No mitigation measures are required.

Impact 3.12-3: Impacts to Electricity and Natural Gas Facilities

As described in Section 5.2 of this volume, in compliance with Governor Arnold Schwarzenegger's Executive Order S-20-04, which requires all state projects larger than 10,000 square feet to meet LEED Silver standards, CDCR has committed to meeting or exceeding LEED Silver standards for the contemplated single, level II infill correctional facilities at the FSP/SAC Infill Site. Nonetheless, construction and operation of a level II infill correctional facility at FSP/SAC would result in an increase in demand for electricity at FSP/SAC. Although the demand has not been fully defined, project engineers have estimated a single facility would require a new line that would deliver an average of 3,099 kilovolt-amps (kVA) (Vanir 2012c). The specific amount of electricity needed to operate the facility would be determined when and if the design of a single, level II infill correctional facility at FSP/SAC is finalized.

The potential level II infill correctional facility at FSP/SAC would utilize existing onsite electrical equipment, such as substation switchgear, transformers, and backup power generators. The level II facility's emergency generators would automatically and immediately start up and send power to predetermined areas of the facility and would be designed to provide power for 72 hours. These improvements would be installed during construction and are discussed in Chapter 2, "Project Description," of this volume of the DEIR.

Construction and operation of a level II infill correctional facility at FSP/SAC would also result in an increase in natural gas demand at FSP/SAC. Although the amount of demand has not been fully defined, project engineers estimate that a new gas line would be designed to deliver a peak of 9.65 cubic feet per hour (cfh) or 9,650 mbh (thousand Btu per hour) (Vanir 2012c). The specific amount of natural gas needed to operate the single facility would be determined when the project design is completed. Development of the infill site is not expected to require offsite natural gas infrastructure improvements. Onsite improvements typically include minor trenching work in previously disturbed areas.

The potential environmental impacts of construction and operation of the single facility, including utility connections, have been considered and evaluated throughout the environmental resource sections in Chapter 3 of this volume of the DEIR. Where necessary, mitigation recommended would substantially reduce construction-related impacts associated with onsite electrical and natural gas improvements.

CDCR would continue to coordinate with PG&E and SMUD, the local gas and electricity service providers, respectively, regarding service for the single facility at FSP/SAC. PG&E and SMUD have the capacity to serve the projected gas and electrical demand of the contemplated correctional facility with existing regional infrastructure and systemwide utility capacity. Additional demand due to the single, level II infill correctional facility at the FSP/SAC Infill Site is not anticipated to require offsite improvements, such as higher load-bearing transmission lines and potential improvements to substations. The existing power service lines described above would accommodate the service area and could accommodate the contemplated development. PG&E and SMUD are responsible for all improvements and maintenance of their facilities and utility infrastructure. It should be noted that a discussion of energy conservation related to development at the infill site is included within Chapter 4, "Cumulative Impacts of the Proposed Project" of Volume 1 of this DEIR.

Because minor electrical and natural gas infrastructure improvements for the single, level II infill correctional facility at the FSP/SAC Infill Site would be constructed in highly developed onsite areas, and no offsite improvements would be necessary to accommodate the electricity and natural gas demands of the contemplated development, impacts associated with the construction of new electrical and natural gas facilities would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

Impact 3.12-4: Impacts to Solid Waste Facilities

Based on CDCR estimates, the average solid waste generation rate is 3.6 pounds per inmate per day. As discussed above, the December 2012 FSP/SAC population is estimated to have generated 17,514 pounds (8.8 tons) of waste daily.

Construction and operation of a single, level II infill correctional facility at the FSP/SAC Infill Site would be anticipated to generate an additional 2,850 pounds of solid waste per day (3.6 pounds per inmate per day x 792 inmates), or 1.4 tons per day. This would constitute a 10-percent increase in waste generated by these CDCR facilities. However, this increased amount of solid waste would not occupy a substantial amount of the landfill's available capacity and would not result in the need to expand or construct new landfill facilities.

Medical waste, which would be minor and associated with health care units included in the facility, would be transported in accordance with the HMTA, and disposed at appropriate facilities. Because medical waste would be minor, it is expected that it would be accommodated without meaningfully effecting capacity at any disposal facility.

As noted above, Kiefer Landfill is permitted to receive a maximum daily amount of 10,815 tons and currently receives an average of approximately 1,800 tons a day (6 percent of the maximum). The daily throughput associated with the contemplated development at the infill site would represent 0.02 percent of the remaining average daily throughput capacity at Kiefer Landfill. This would not be considered substantial with respect to the daily throughput capacity at the landfill. Additionally, it should be noted that CDCR would comply with all applicable federal, state, and local statutes and regulations related to solid waste and would likely reduce its generated solid waste below the daily projected amount. The level II infill correctional facility would have its own recycling program that would result in the weekly diversion of recyclable waste from the waste stream, reducing the amount of waste that would be sent to a local landfill. Recycled waste includes cardboard, recycled paper, and co-mingled recyclables such as plastic, tin, aluminum, and glass. Recyclable waste would be collected from multiple locations throughout the level II infill correctional facility and staged onsite for pickup by a contractor.

Although development of a single, level II infill correctional facility would increase solid waste generation at the FSP/SAC Infill Site during construction and operation, the Kiefer Landfill is projected to have capacity to accept the increased solid waste and the contemplated development would not consume a substantial amount of the available capacity of area landfills or result in the need to expand or construction new landfill facilities. Therefore, this impact would be ***less than significant****.*

Mitigation Measures

No mitigation measures are required.

3.13 VISUAL RESOURCES

This section describes the existing visual characteristics and quality of the Folsom State Prison/ California State Prison, Sacramento (FSP/SAC) Infill Site, the California Department of Corrections and Rehabilitation (CDCR) property, and the surrounding area and evaluates the effects of development of the infill site on the visual environment, including impacts as a result of light and glare. Visual resources are the natural and human-built features of the landscape that can be seen and that contribute to an attractive landscape appearance and the public's enjoyment of the environment. Visual quality is dependent on the degree to which landscape features combine to provide striking and distinctive visual patterns; whether or not intrusive elements are dominant in the views; and the visual or compositional harmony of the views. A scenic vista is generally considered a view of an area that has "remarkable" or unique scenery or a resource that is unique to the area.

The viewer's distance from landscape elements plays an important role in the determination of an area's visual quality. Visibility and visual dominance of landscape elements depend on their placement within a viewshed. A viewshed is defined as all of the surface area visible from a particular location (e.g., an overlook) or sequence of locations (e.g., a roadway or trail) (FHWA 1988).

Viewer sensitivity is also considered in assessing the impacts of visual change and is a function of several factors. The sensitivity of the viewer or viewer concern is based on the visibility of resources in the landscape, proximity of viewers to the visual resource, elevation of viewers relative to the visual resource, frequency and duration of views, numbers of viewers, and types and expectations of individuals and viewer groups.

Assessing the effects of a project on visual resources is a subjective process, and reasonable people may disagree as to whether a visual change would be considered an adverse effect on the environment. The following analysis takes into consideration the aspects of existing visual character and visual quality, as well as the sensitivity of viewers to visual change.

This visual resources analysis is based on field surveys of the site completed in 2013 and surrounding areas and on interpretation and analysis of existing views of the infill site and surrounding area. Visual simulations are used to draw conclusions regarding the appearance and effects of the project on visual resources.

3.13.1 ENVIRONMENTAL SETTING

FSP/SAC is located in the northern portion of the City of Folsom, approximately 0.5 mile south of the Folsom Dam. Folsom is at the eastern edge of the Sacramento Valley, at the transition zone between the Sierra Nevada foothills and the valley. Major geographic features in the vicinity include Folsom Lake, a human-made reservoir, and the canyon of the American River downstream of Folsom Lake. Public open space areas in the vicinity that contain scenic resources include the Folsom Lake State Recreation Area (FLSRA), Folsom Powerhouse State Historic Park (FPSHP), and the American River Parkway.

VISUAL CHARACTER OF THE SURROUNDING AREA

The American River Parkway, a regional parkway running from the Sacramento River to Folsom Lake, is approximately 0.25 mile west of the infill site. The American River Parkway contains the American River Bike Trail (also known as the Jedediah Smith Memorial Trail), a 32-mile long multi-use pathway with high scenic value that parallels the American River from Discovery Park in Sacramento to Beale's Point at Folsom Lake. A portion of the American River Bike Trail runs along the west rim of the canyon of the American River to the west of the infill site. Scenic vistas of the American River are visible along

long stretches of bike trail, and scenic vistas of Folsom are visible from certain points along the trail within the city.

In the vicinity of the infill site, dense stands of trees along the boundary of the American River Parkway screen the adjacent residential and commercial uses that are west of the parkway. Landscaping in the suburban residential neighborhoods and commercial areas west of the parkway includes numerous mature trees and shrubs.

The area north of the infill site is dominated by the Folsom Lake Crossing Bridge and Folsom Dam. Currently, a new spillway is under construction in the area between the bridge and the existing dam. This area is disturbed and is dominated by the face of the existing concrete spillway structure and the earthen dam, embankments armored with rock, bare slopes, transmission lines, and hydroelectric facilities.

VISUAL CHARACTER OF THE INFILL SITE AND IMMEDIATE AREA

The FSP/SAC Infill Site is located in the north-central portion of the existing FSP/SAC site, which contains developed and undeveloped land. The infill site is characterized by rolling foothill topography with elevations ranging from approximately 350 to 425 feet above mean sea level. A large portion of the infill site is developed with existing service facilities, roads, and a fire station. Undeveloped portions of the infill site are characterized primarily by annual grassland with scattered trees and shrubs, including coyote brush, blue elderberry, blue oak, interior live oak, and walnut. Some landscaping grows adjacent to existing buildings. The security fencing, high-mast lighting standards, and existing prison buildings are visible from the infill site.

VISIBILITY FROM OFFSITE AREAS

A field reconnaissance was conducted in December 2012 to survey publicly accessible viewing points that would represent common views toward the FSP/SAC Infill Site. Photographs were taken from various viewpoints outside of the prison facilities to determine the visibility of the infill site from public roads, public open space/recreational areas, and residential areas. Representative viewpoints were selected based on visibility of the site (unobstructed or partially obstructed views) and on the sensitivity of the potential viewers. Based on the reconnaissance, three viewpoints were selected for detailed analysis, one of which was selected for visual simulation. Exhibit 3.13-1 shows the location of photographs and orientation of the selected viewpoints.

The infill site is visible primarily from areas to the west and northeast of the State-owned property. Views of the infill site from the closest residential areas to the east and west are obscured by existing structures, vegetation, and terrain. The closest residential neighborhoods are approximately 2,300 feet west of the infill site off of Folsom-Auburn Road.

Viewer groups with views of the infill site include residents of the area, who would observe the site while traveling to and from their homes; recreational users of the American River Bike Trail; bicycle commuters using the same trail; and commuters passing through the area on Folsom Lake Crossing Bridge.

The following representative viewpoints include views from neighborhoods to the east and west of the infill site, a view from westbound Folsom Lake Crossing Bridge (bike path); a view to the southeast from the American River Bike Trail near the west end of the Folsom Lake Crossing Bridge; and a view to the east from the American River Bike Trail 0.3 mile south of the Folsom Lake Crossing Bridge.

VIEWPOINT 1: VIEW WEST FROM EAST NATOMA STREET AT HANCOCK DRIVE

Viewpoint 1, shown in Exhibit 3.13-2, is from the neighborhood east of the State-owned property. The FSP/SAC Infill Site is not visible in this view; it is blocked by vegetation and the terrain.

Source: Ascent Environmental 2013

Exhibit 3.13-1

FSP/SAC Infill Site Location Map for Selected Viewpoints

ASCENT ENVIRONMENTAL

Source: Ascent Environmental, 2013

Exhibit 3.13-2

Viewpoint 1

VIEWPOINT 2: VIEW EAST FROM FOLSOM-AUBURN ROAD AT INWOOD ROAD

Viewpoint 2, shown in Exhibit 3.13-3, shows the view from the neighborhood west of the American River Parkway and west of Folsom-Auburn Road. Views toward the FSP/SAC Infill Site are blocked by tall, dense vegetation.

VIEWPOINT 3: VIEW FROM WESTBOUND FOLSOM LAKE CROSSING BRIDGE

Viewpoint 3, shown in Exhibit 3.13-4, is from the bike path located on the north side of the Folsom Lake Crossing Bridge. The photograph depicts the view toward the infill site from Folsom Lake Crossing Bridge looking to the southwest. Folsom Lake Crossing, which includes a bike path on the north side of the roadway, runs roughly east-west along the northern edge of the FSP/SAC property. Existing facilities visible from this point include recycling and water treatment facilities. Viewer groups along this route would be commuters (motorists and bicyclists), recreational bicyclists, and motorists visiting the Folsom Lake area.

VIEWPOINT 4: VIEW FROM AMERICAN RIVER BIKE TRAIL NEAR FOLSOM LAKE CROSSING BRIDGE

Viewpoint 4, shown in Exhibit 3.13-5, is from the American River Bike Trail near the west end of the Folsom Lake Crossing Bridge. This view is looking southeast across the American River Canyon toward the infill site. The foreground of the view contains a chain-link fence topped with razor wire that parallels the rim of the canyon. Existing facilities visible across the canyon include outbuildings associated with the FSP/SAC, access roads, and terraced and rock-armored slopes below the infill site. The structures on the FSP/SAC Infill Site and in adjacent areas are partially or fully screened by vegetation, which consists of trees and shrubs. Tree-covered, low-lying hills are visible in the background beyond the FSP/SAC property.

Viewer groups would be people using the trail for recreation and leisure, pedestrian, and bicycling activities. This view is also representative of the view from the bridge for eastbound motorists. Views from the bike path on the north side of the bridge are limited by bridge railings and the fact that the bike path sits lower than the roadway bridge deck.

VIEWPOINT 5: VIEW FROM AMERICAN RIVER BIKE TRAIL

Viewpoint 5, shown in Exhibit 3.13-6, is from the American River Bike Trail, approximately 0.3 mile south of Folsom Lake Crossing Bridge. This view is looking east across the canyon from the infill site. Existing facilities visible from the American Bike Trail include the FSP facility, as well as numerous outbuildings in the middle ground, with a low-lying hill visible in the background. Viewer groups would be people using the trail for recreation and leisure (pedestrian and bicycling) activities.

LIGHT AND GLARE CONDITIONS

The terms “glare” and “skyglow” are used throughout this analysis to describe the visual effects of lighting. For the purposes of this impact analysis, glare is considered to be direct exposure to bright lights and skyglow is a glow that extends beyond the light source and can dominate or partially dominate views above the horizon.

The existing FSP/SAC facilities are the predominant light source in the project area and in the general vicinity of the CDCR property. The existing prison lights are visible from downtown Folsom, 1.5 miles to the south. Existing lighting includes perimeter lighting, consisting of high-pressure sodium lights on 30- to 35-foot poles, similar to commercial parking lot lighting; guard tower lighting and high-mast (60–100 feet tall) lighting on cell blocks and yards; lighting on access roads and ancillary uses; and other lighting

for site security. As a result, indirect lighting and skyglow are visible from locations adjacent to and within 5 miles of the existing facilities.

3.13.2 REGULATORY CONSIDERATIONS

A list of the applicable federal and state plans, policies, regulations, and laws relating to visual resources applicable to the FSP/SAC Infill Site is provided below. Complete summaries of these regulations are provided in Volume 1, Appendix 1B.

FEDERAL PLANS, POLICIES, REGULATIONS, AND LAWS

- National Scenic Byways Program - Under the National Scenic Byways Program, the U.S. Secretary of Transportation recognizes certain roads as National Scenic Byways or All-American Roads based on their archaeological, cultural, historic, natural, recreational, and scenic qualities. This program provides resources to help manage the intrinsic qualities in the broader byway corridor to be treasured and shared.

STATE PLANS, POLICIES, REGULATIONS, AND LAWS

- California Scenic Highway Program - California's Scenic Highway Program was created to protect and enhance the natural scenic beauty of California highways and adjacent corridors through special conservation treatment. A highway may be designated scenic depending upon how much of the natural landscape can be seen by travelers, the scenic quality of the landscape, and the extent to which development intrudes upon the traveler's enjoyment of the view.

LOCAL PLANS, POLICIES, AND ORDINANCES

The FSP/SAC Infill Site is located on land that is owned or controlled by the State. As a state agency, CDCR is not subject to land use plans, policies, and ordinances adopted by local agencies. Nevertheless, a discussion of relevant local plans and policies is provided because conflicts with them could indicate the potential occurrence of other physical environmental effects.

FOLSOM LAKE STATE RECREATION AREA AND FOLSOM POWERHOUSE STATE HISTORIC PARK GENERAL PLAN/RESOURCE MANAGEMENT PLAN

The portion of the American River Parkway (Parkway) directly west of the FSP/SAC property, known as the Natoma Canyon management zone, is owned by the U.S. Bureau of Reclamation and operated by the California Department of Parks and Recreation. This area includes a portion of the Jedediah Smith Memorial Bicycle Trail/National Recreation Trail. This portion of the Parkway is designated "Conservation" on the FLSRA and FPSHP General Plan/Resource Management Plan (CDPA 2007). Areas designated "Conservation" are those areas whose natural and cultural resource values will be protected and restored while accommodating lower intensity recreation and interpretation that is compatible with the dependent on the resource values. These areas offer opportunities for more challenge- and adventure-based recreational activities in a more natural setting. Resource management emphasizes protecting and restoring natural processes with only minor modification of non-sensitive resources permitted to accommodate additional visitor use as appropriate (CDPA 2007: III-9).

Source: Ascent Environmental, 2013

Exhibit 3.13-3

Viewpoint 2

Source: Ascent Environmental, 2013

Exhibit 3.13-4

Viewpoint 3

Existing View

Simulation

X12010055 05 004

Source: Ascent Environmental, 2013

Exhibit 3.13-5

Viewpoint 4

ASCENT ENVIRONMENTAL

Source: Ascent Environmental, 2013

Exhibit 3.13-6

Viewpoint 5

The Parkwide Management Goals and Guidelines addressing visual resource management include the following (CDPA 2007: III-140 to III-141):

- Work with neighboring jurisdictions to protect key visual resources and the park form continued visual intrusion from surrounding development.
- The Natoma Canyon management zone links Folsom Lake and Lake Natoma and extends from Folsom Dam downstream along the American River Canyon to the Rainbow Bridge in Folsom. The management intent for this zone is to maintain and enhance the natural scenic character of the area, improve trail connectivity, and expand opportunities for interpretation and education.

CITY OF FOLSOM GENERAL PLAN

The City has recently initiated a General Plan update process to establish a blueprint for city planning decisions through 2035; completion of this process is expected in fall 2014. Therefore, the following discussion is based on the current General Plan, which was adopted in 1993. The following excerpts from the City's General Plan are goals and policies relevant to the contemplated development at the infill site.

GOAL 1 To retain and enhance Folsom's quality of life, separate identity and sense of community. Folsom's identity and quality of life are defined by:

- **Policy 4.** The State prison site, which provides a large, visual open area in the City.

GOAL 16 To allow for public and quasi-public land uses meeting the governmental service, education, cultural, recreational, and religious needs of Folsom residents.

- **Policy 16.2.** Public facilities, such as utility substations, water storage or treatment plants, pumping stations, and sewer treatment plants, should be located, designed, and maintained so that noise, light, glare, or odors associated with these facilities will not negatively impact nearby land uses. Building materials and landscaping shall be used to make these land uses less visually obtrusive from neighboring properties.

3.13.3 IMPACTS AND MITIGATION MEASURES

SIGNIFICANCE CRITERIA

In accordance with Appendix G and Section 15065 of the State of California Environmental Quality Act (CEQA) Guidelines, the level II infill correctional facility at the FSP/SAC Infill Site would result in a significant impact relating to visual resources if it 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 the site and its surroundings; or
- create a new source of substantial light or glare that would adversely affect day or nighttime views in the area.

The State CEQA Guidelines (Section 15064.5) define a "substantial adverse change" as physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings.

ISSUES NOT DISCUSSED FURTHER

Scenic resources: Because no officially designated or eligible state scenic highways are within the project area, the contemplated development at the FSP/SAC Infill Site would have no effect on scenic resources, including scenic trees, geologic features, rock outcroppings, and historic buildings located within a state scenic highway. Therefore, this topic is not evaluated further.

PROJECT IMPACTS AND MITIGATION MEASURES

Impact 3.13-1: Substantial Degradation of a Scenic Vista

A scenic vista is generally considered a view that has remarkable or unique scenery or resources that are indigenous to an area. While the FSP/SAC Infill Site contains visual resources, including tree- and shrub-covered slopes, it is not considered to possess qualities that are remarkable for the area. Views of the site from Folsom Lake Crossing Road would not be part of a scenic vista since the view contains road embankments, fencing, and structures (Exhibit 3.13-4, Viewpoint 3).

Views from the American River Bike Trail offer a variety of opportunities to view natural settings that are unique to the area; the American River Bike Trail currently provides views of the infill site that include vegetated hillsides interspersed with partially visible institutional buildings. Security fencing is clearly visible in the foreground and somewhat disrupts the natural look of the canyon areas. The FLSRA/FPSHP General Plan/Resource Management Plan includes a policy to protect key visual resources and the park from continued visual intrusion from surrounding development. With implementation of the infill facility, level II infill correctional facilities would become clearly visible in the middle- to background as a result of removal of onsite trees and vegetation. The infill development would continue the developed footprint of the existing FSP/SAC prison property, but with less vegetation to screen the site from views from the American River Bike Trail. While existing views from the bike trail are interrupted with human-made features, the infill project would increase the number and prominence of these features within the viewshed. This would be inconsistent with the FLSRA/FPSHP General Plan/Resource Management Plan (Exhibit 3.13-5, Viewpoint 4). Because the American River Bike Trail offers views that could be considered scenic vistas and because the project would not be consistent with the FLSRA/FPSHP General Plan/Resource Management Plan, the infill project would degrade a scenic vista.

Implementation of the single, level II infill correctional facility at the FSP/SAC Infill Site would result in the substantial degradation of views from the American River Bike Trail, which could be considered a scenic vista, and would provide visual intrusion inconsistent with policies in the FLSRA/FPSHP General Plan/Resource Management Plan. This would be a significant impact.

Mitigation Measures

Mitigation Measure 3.13-1

The following measures will be implemented by CDCR:

- Use paint and other design elements on the building walls to blend the buildings with their surroundings.

- Use landscaping where feasible outside the secure perimeter to minimize direct line-of-sight views of the facility from the American River Bike Trail.

Significance after Mitigation

Although CDCR will make its best effort to design facilities to reduce visual impacts through implementation of Mitigation Measure 3.13-1, the contemplated infill facility would nevertheless result in a substantial change in the local viewshed from the scenic American River Bike Trail. Impacts would be reduced; however, because of the physical limitations of site-required security protocols, other design treatments (e.g., facades, interior landscaping, and architectural additions) are not feasible. Therefore, a **significant and unavoidable** scenic vista impact would remain.

Impact 3.13-2: Visual Character Impacts

Once completed, the structures of the single, level II infill correctional facility, fencing, and lighting masts would be visible in views from the American River Bike Trail and Folsom Lake Crossing Bridge (Viewpoint 3, Viewpoint 4, and Viewpoint 5). This would permanently alter the visual character of the infill site by converting it from a sloping, partially wooded area with scattered structures to a leveled constructed pad with clearly visible, uniform structures with light surfaces and no vegetation. Overall views of the site from surrounding areas could substantially change, and views of institutional facilities could become prominent features in the viewshed, depending on the specific location. Therefore, the infill project could result in a degradation of visual quality of the site and its surroundings.

The structures of the single, level II infill correctional facility at the FSP/SAC Infill Site, including fencing and lighting masts, could substantially change, and views of institutional facilities could become prominent features in the viewshed, depending on the specific location. Therefore, the infill project could result in a degradation of visual quality of the site and its surroundings. This is considered a significant impact.

Mitigation Measures

Implement Mitigation Measure 3.13-1.

Significance after Mitigation

Although CDCR will make its best effort to design facilities to reduce visual impacts through implementation of Mitigation Measure 3.13-1, the infill facility would nevertheless result in a substantial change in the local viewshed. Impacts would be reduced; however, because of the physical limitations of site-required security protocols, other design treatments (e.g., facades, interior landscaping, and architectural additions) are not feasible. Therefore, a **significant and unavoidable** scenic vista impact would remain.

Impact 3.13-3: Light and Glare Impacts

The contemplated single, level II infill correctional facility at the FSP/SAC Infill Site would be constructed with materials similar to those used for the SAC facility. Because it is essential that CDCR maintain adequate site security and line-of-sight, non-reflective materials are used in building design. Therefore, the contemplated infill facility would not result in any daytime glare-related impacts.

CDCR uses state-of-the-art lighting in all its new facilities, which is designed to cast light only where needed and to cut off glare to offsite areas. Similar to lighting at the existing FSP/SAC facilities, perimeter fence luminaries, 30 feet above ground level, would be located 6 feet inside the exterior fence and spaced 80 feet apart along the level II facility perimeter. This perimeter fence lighting would be angled in toward the facility and perimeter security zones.

High-mast lighting would be installed in the interior yard of the level II facility. The high-mast lighting would be a maximum of 100 feet high, with self-lowering devices and all required attachments to

perform maintenance. Other onsite lighting would be installed for the illumination of guard towers, parking lots, circulation roads, internal site features, and for all-purpose lighting in courtyards. This lighting would be in the form of high-pressure sodium lights on 35-foot poles, similar to typical retail parking lot lighting. Exhibit 3.13-7 provides a simulation of nighttime lighting conditions that would occur with the project.

The single, level II infill correctional facility would be constructed north of the existing FSP/SAC facilities. The lighting for the single facility would be similar in appearance to existing lighting at the FSP and SAC facilities. However, the contemplated development would increase the number of light standards and luminaires and would expand the lighted area of the prison property to the north, adjacent to the Folsom Lake Crossing Bridge. Building lighting within the limits of the contemplated single facility would also contribute to the overall lighting on the infill site. All lighting associated with the contemplated development would be directed inward to the site and would be viewed against the backdrop of existing lighting at the FSP/SAC facilities south of the infill site, existing street lighting in neighborhoods and commercial areas to the west, lighting on Folsom Lake Crossing Bridge, and lighting associated with Folsom Dam to the north.

Regarding glare, the infill project would be located approximately 2,300 feet from the nearest residential areas, which are located west of FSP/SAC off of Folsom-Auburn Road. Therefore, the infill project would not result in a substantial increase in glare that would directly affect residential areas. Therefore, impacts related to increased glare in the vicinity of the FSP/SAC Infill Site are considered less than significant.

Existing skyglow visible in the Folsom area is created by the high-mast lights at existing FSP/SAC facilities. The level II infill correctional facility at FSP/SAC would install high-mast lighting on the northern portion of the FSP/SAC site and would expand the overall lighted area of the prison property. Therefore, the contemplated development would contribute to additional skyglow in the Folsom area.

The lighting for the contemplated single, level II infill correctional facility at the FSP/SAC Infill Site would be similar in appearance to existing lighting at FSP/SAC facilities and would be viewed against the backdrop of existing lighting at the FSP/SAC facilities located south of the infill site, existing street lighting in neighborhoods and commercial areas to the west, lighting on Folsom Lake Crossing Bridge, and lighting associated with Folsom Dam to the north. Because of the increased number of lighting sources, the infill project would contribute to a substantial increase in skyglow that could be viewed from offsite areas. This would be a significant impact.

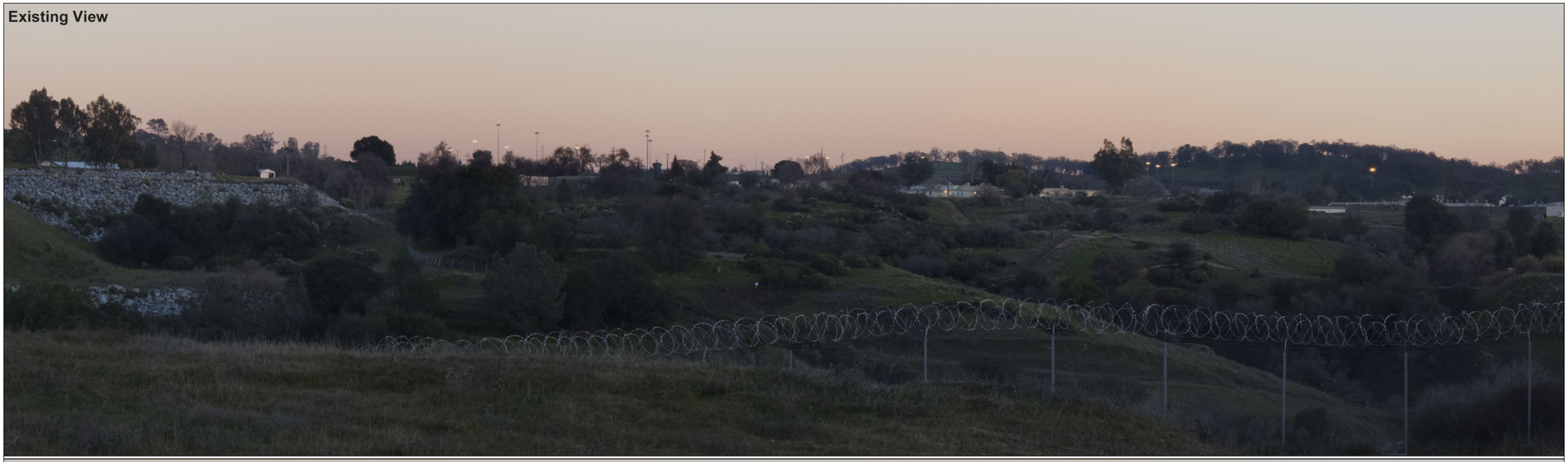
Mitigation Measures

No feasible mitigation is available.

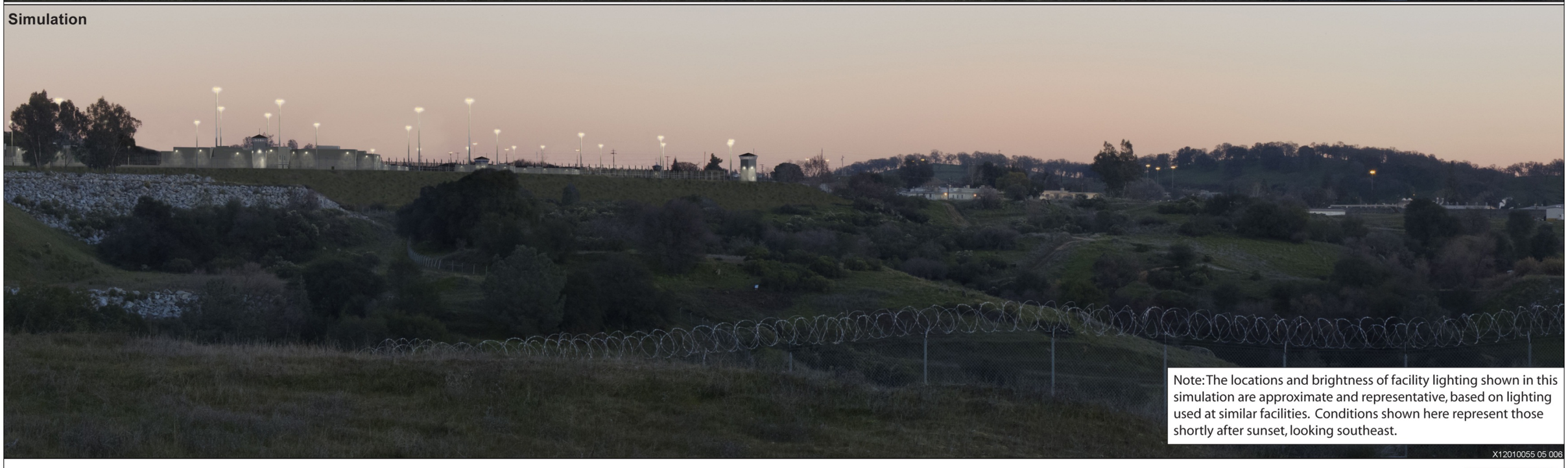
Significance after Mitigation

CDCR uses state-of-the-art lighting in all its new facilities, which is designed to cast light only where needed and to cut off glare to offsite areas. There are no other known measures that CDCR can implement that would provide sufficient lighting to maintain security needs without some of this light being visible off the CDCR property. Therefore, no mitigation measures are available to decrease the effects of skyglow from high-mast lighting. This impact would remain **significant and unavoidable**.

Existing View



Simulation



X12010055 05 006

Source: Ascent Environmental, 2013

Exhibit 3.13-7

Night View – Existing and Simulated Lighting Conditions from Viewpoint 4

ASCENT ENVIRONMENTAL

4 CUMULATIVE IMPACTS

4.1 INTRODUCTION TO THE CUMULATIVE ANALYSIS

Section 15130 of the State of California Environmental Quality Act (CEQA) Guidelines requires that an environmental impact report (EIR) discuss cumulative impacts of a project and determine whether the project's incremental effect is "cumulatively considerable." The definition of cumulatively considerable is provided in Section 15065(a)(3):

> "Cumulatively considerable" means that the incremental effects of an individual project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.

According to Section 15130(b) of the State CEQA Guidelines,

> [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 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.

For purposes of this EIR, the project would have a significant cumulative effect if it meets either one of the following criteria:

- the cumulative effects of related projects (past, current, and probable future projects) without the project are not significant but the project's incremental impact is substantial enough, when added to the cumulative effects, to result in a significant impact; or
- the cumulative effects of related projects (past, current, and probable future projects) without the project are already significant and the project represents a considerable contribution to the already significant effect. The standards used herein to determine "considerability" are that the impact either must be substantial or must exceed an established threshold of significance.

Mitigation measures are to be developed, where feasible, that reduce the project's contribution to cumulative effects to less than considerable.

Volume 1 of this draft EIR (DEIR) evaluates cumulative impacts statewide that pertain to greenhouse gas emissions, of the development of the Level II Infill Correctional Facilities Project, as described in Chapter 3, "Project Description" in Volume 1 of this EIR. This volume focuses on the cumulative impacts of development at the Folsom State Prison (FSP)/California State Prison, Sacramento (SAC) Infill Site in combination with other projects throughout the region that could result in more extensive local/regional environmental effects. Chapter 3, "Environmental Setting, Thresholds of Significance, Environmental Impacts of the Project, and Mitigation Measures," of this volume identified potentially significant environmental impacts associated with development of a single, level II infill correctional facility at the FSP/SAC Infill Site. These issues, and others that could contribute considerably to cumulatively significant effects, are discussed below in the context of cumulative development.

4.2 RELATED PROJECTS

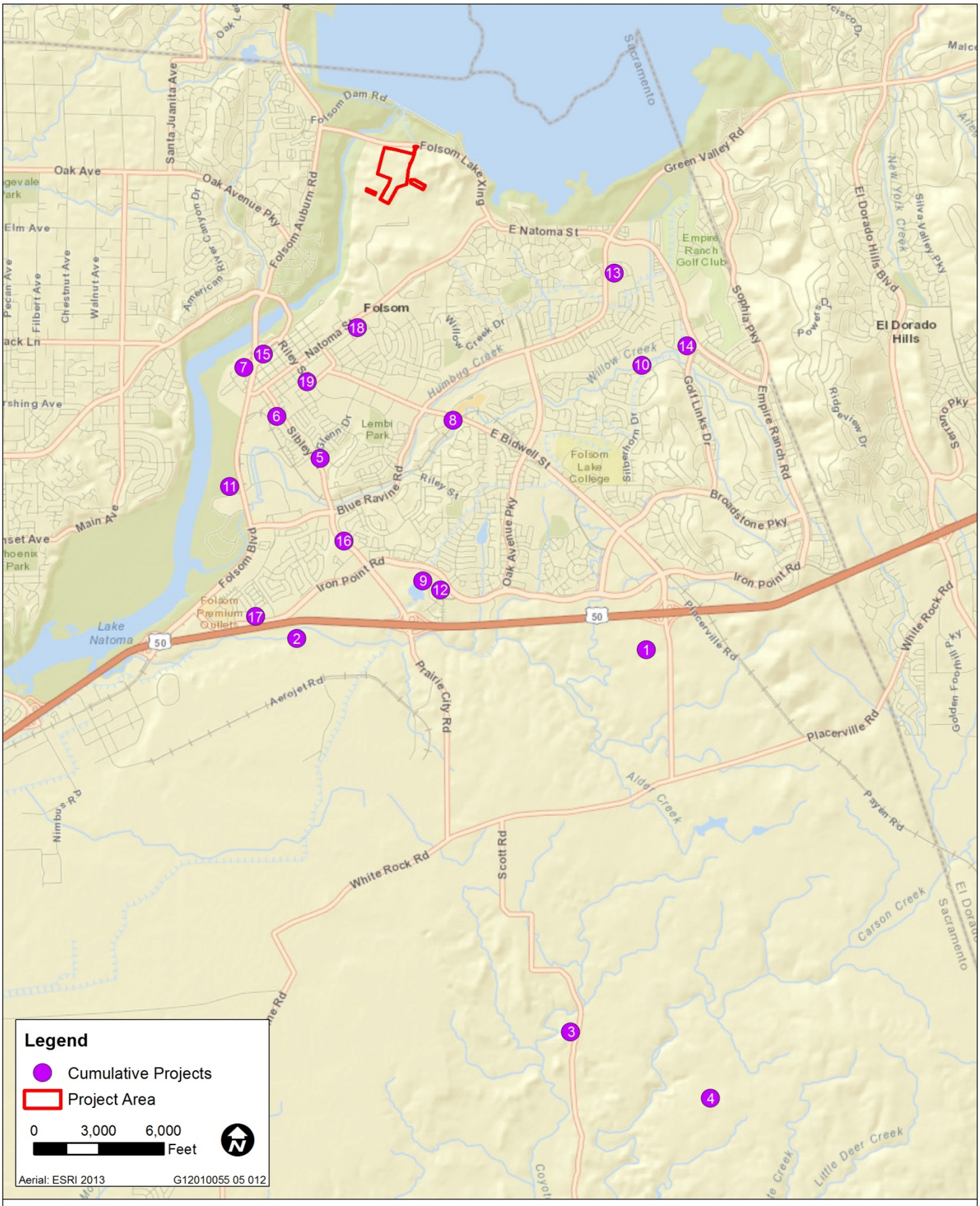
The analysis of cumulative environmental impacts associated with development of a single, level II infill correctional facility at the FSP/SAC Infill Site addresses the potential incremental impacts of the project in combination with those of other past, present, and probable future projects and land use changes.

The projects listed in Table 4-1 (correlated with their locations in Exhibit 4-1) are not intended to be an all-inclusive list of projects in the region, but rather an identification of projects constructed, approved, or under review in the vicinity of the FSP/SAC Infill Site and the City of Folsom that have some relation to the environmental impacts of construction and operation of a single, level II infill correctional facility at the FSP/SAC Infill Site. The list of projects used in this cumulative analysis is based on information for approved and pending projects obtained from the City of Folsom and is consistent with the cumulative projects evaluated in the analysis of cumulative transportation impacts in Section 3.11, "Transportation," of this volume.

Table 4-1 List of Projects in the Vicinity of the FSP/SAC Infill Site

Exhibit 4-1 Map Key	Project Name	Developed or Proposed Land Use	Size (Acreage and/or Dwelling Units)	Jurisdiction
	Folsom Women's Facility at Folsom State Prison	Reactivation of the former Folsom Transitional Treatment Facility to house 403 female offenders; maximum of 100 new staff to operate the facility	No new acreage; reactivate existing housing for 403 female offenders	CDCR
	Folsom "Big House" Prison Museum	Museum related to the history of corrections in California to be accessed via existing Prison Road, similar to current Folsom Prison Museum	35,000 gsf	CDCR
1	South of U.S. Highway 50 Specific Plan/Annexation	10,093 dwelling units, 523 acres commercial and industrial	3,502 acres (1,053 of which would be preserved as open space)	City of Folsom
2	Easton Place and Glenborough at Easton	4,883 dwelling units, 3.5 million square feet commercial and office	1,391 acres	City of Folsom
3	Greenwaste Recycling Project (Site 4—potential site)	12 new employees, estimated average of 385 tons of solid waste daily	140 acres	City of Folsom
4	Teichert/Desilva Gates-Barton Ranch/Walltown Quarries	Estimated 50 employees per each of the 3 quarries (150 employees total), 7 million tons of aggregate production per year per mine, with a maximum 135 million tons total aggregate production for the life of each project	583 acres/480 acres/ 613 acres (1,676 acres total)	City of Folsom
5	Addison Place Subdivision	Single Family Residential	38 DUs	City of Folsom
6	Granite City Apartments	Affordable Housing Apartments	80 DUs	City of Folsom
7	Folsom Village	Residential/Commercial	59 DUs; 5,700 gsf	City of Folsom
8	Oakmont of Folsom	Senior Residential	60,000 gsf	City of Folsom
9	Parkside Subdivision	Single Family Residential	78 DUs	City of Folsom
10	Parkway Villages H1 and H2	Residential Condominium	56 DUs	City of Folsom
11	The Island Subdivision	Single Family Residential	350 DUs	City of Folsom
12	Willow Bridge Subdivision	Single Family Residential	115 DUs	City of Folsom
13	Marbella at Parkway/ The Collection-Trails at Folsom	Single Family Residential	134 DUs	City of Folsom
14	Serenade Senior Apartments	Senior Residential	218 DUs	City of Folsom
15	Westwood Cellars	Commercial/Office	3,693 gsf	City of Folsom
16	The Learning Experience	Daycare Facility	10,000 gsf	City of Folsom
17	DeVry University	Education	30,000 gsf	City of Folsom
18	General Real Estate	Office	10,810 gsf	City of Folsom
19	701 Bidwell Street	Commercial/Office	7,791 gsf	City of Folsom

Note: gsf = gross square feet; DU – dwelling unit
Source: City of Folsom.



Source: adapted by Ascent Environmental 2013

Exhibit 4-1 Approximate Locations of Cumulative Projects

4.3 GEOGRAPHIC SCOPE OF THE CUMULATIVE ANALYSIS

The geographic area that could be affected by development of a single, level II infill correctional facility at the FSP/SAC Infill Site varies depending on the type of environmental resource being considered. The general geographic area associated with various environmental effects of construction and operation of a single, level II infill correctional facility at the FSP/SAC Infill Site defines the boundaries of the area used for compiling the list of projects considered in the cumulative impact analysis. Table 4-2 presents the general geographic areas associated with the different resources addressed in this DEIR and evaluated in those sections of this cumulative analysis.

Table 4-2 Geographic Scope of Cumulative Impacts

Resource Issue	Geographic Area
Air Quality and Climate Change	Regional (Sacramento Valley Air Basin—pollutant emissions that have regional effects) Local (immediate project vicinity—pollutant emissions that are highly localized) Global (greenhouse gas emissions)
Biological Resources	Regional (Sacramento Valley and Sierra Nevada Foothill region of eastern Sacramento County and Western El Dorado County)
Cultural Resources	Local (limited to CDCR property)
Employment, Population, and Housing	Regional (Sacramento, Placer, El Dorado counties) and local
Geology, Soils, Seismicity, Mineral Resources, and Paleontological Resources	Local (limited to CDCR property)
Hazards and Hazardous Materials	Local (immediate project vicinity or limited to CDCR property)
Hydrology and Water Quality	Local (immediate project vicinity—local watershed)
Land Use, Agriculture, and Forestry Resources	Regional (Sacramento County) and local (City of Folsom)
Noise	Local (immediate project vicinity—effects are highly localized)
Public Services	Local (local service area
Transportation	Regional and local (discussed in Section 3.11, “Transportation”)
Utilities	Regional (regional utility area)
Visual Resources (light and glare; aesthetics)	Local (immediate project vicinity)

Note: CDCR = California Department of Corrections and Rehabilitation
Source: Data compiled by Ascent in 2013

4.4 ANALYSIS OF CUMULATIVE IMPACTS

4.4.1 AIR QUALITY

SHORT-TERM CONSTRUCTION-RELATED IMPACTS

The Sacramento Metropolitan Air Quality Management District (SMAQMD) has established a significance threshold of 85 pounds per day (lb/day) for NO_X which is a precursor to ozone formation. Compliance with SMAQMD’s Architectural Coatings Rule would minimize reactive organic gases

(ROG) emissions during construction. SMAQMD acknowledges that the entire Sacramento Valley Air Basin (SVAB) violates state and federal ambient air quality standards for ozone and particulate matter (PM_{10} and $PM_{2.5}$) due to the combined levels of emissions generated by sources throughout the SVAB (including but not limited to the projects listed in Table 4-1). This is considered to be a significant cumulative impact.

SMAQMD considers emissions of NO_X from an individual project that exceed that exceed the 85 lb/day threshold to be a substantial contribution to this basin-wide (i.e., cumulative) impact. Emissions of NO_X during construction at the FSP/SAC Infill Site (as described in Impact 3.1-1 in Chapter 3 of this volume) would exceed SMAQMD's daily threshold during the 2014 construction year. Therefore, construction-generated emissions due to development of a single, level II infill correctional facility at the FSP/SAC Infill Site would be a cumulatively considerable contribution to ozone emissions. Implementation of NO_X emissions reduction measures, which include measures such as minimizing land disturbance, watering graded areas, street sweeping, limited vehicle speeds, and revegetation, as required by Mitigation Measure 3.1-1 would reduce project-related emissions by 20 percent. Furthermore, CDCR would pay a mitigation fee into the SMAQMD's offsite mitigation program to offset the residual impact. By reducing NO_X emissions and by paying the appropriate offsite mitigation fee, construction-generated emissions of NO_X due to development of a single, level II infill correctional facility at the FSP/SAC Infill Site would be reduced to below a level that is considerable.

According to SMAQMD guidance, PM_{10} emissions from projects in which less than 15 acres would be actively disturbed on any given day during construction and that would implement SMAQMD's basic construction emission control practices are considered less than significant. The maximum daily disturbed acreage related to development of a single, level II infill correctional facility at the FSP/SAC Infill Site is estimated at approximately 13.21 acres (i.e., 25 percent of the total 52.83-acre site disturbance acreage, consistent with SMAQMD's recommendation). However, as noted in Impact 3.1-1 of Chapter 3 of this volume of the DEIR, SMAQMD's recommended basic construction emission control practices are not currently part of the project description. Therefore, PM_{10} and $PM_{2.5}$ emissions from construction could contribute cumulatively to pollutant concentrations that exceed California ambient air quality standards. Implementation of Basic Construction Emission Control Practices described in Mitigation Measures 3.1-1a and 3.1-1b would lead to a reduction in PM_{10} emissions during the worst-case scenario (construction year 2014). SMAQMD considers PM_{10} emissions from projects that include less than 15 acres of daily disturbance and incorporate the Basic Construction Emission Control Practices to be less than significant. Assuming that all related projects also implement all feasible construction emission control measures consistent with SMAQMD guidelines and regulations, construction emissions from related projects may be less than significant; however, it is likely that larger projects would result in significant and unavoidable air quality impacts on their own. Given the scale of development that would occur with the related projects (Table 4-1) combined with the nonattainment status of the SVAB for ozone, PM_{10}, and $PM_{2.5}$, construction of the contemplated single, level II infill correctional facility at the FSP/SAC Infill Site would likely result in a cumulatively considerable construction-related air quality impact. This would particularly be the case given that dust-emitting construction activity for other projects would occur in close proximity. Although all available feasible mitigation (as described in Mitigation Measures 3.1-1a and 3.1-1b in Chapter 3 of this volume) would be implemented to reduce the contribution from construction of the single, level II infill correctional facility at the FSP/SAC Infill Site to cumulative air quality impacts, they are not sufficient to reduce the project's cumulative contribution to below a level that is considerable. This would be a considerable contribution to a significant cumulative air quality impact.

The SVAB is in nonattainment status for ozone, PM_{10}, and $PM_{2.5}$. This is a result of past cumulative development in the basin, as well as transport of pollutants from other basins. New development, including the contemplated single, level II infill correctional facility at the FSP/SAC Infill Site, would be required to comply with SMAQMD measures that would reduce potential new construction emissions of criteria pollutants and ozone precursors. However, adding construction emissions due to related projects as well the contemplated single, level II infill correctional facility to a cumulatively adverse

condition would exacerbate air quality impacts. Therefore, the project would contribute to cumulative short-term construction-related air quality impacts. Because mitigation would not be sufficient to reduce the contribution below a level that is considerable, this would be a ***significant and unavoidable*** *cumulative impact.*

LONG-TERM OPERATION-RELATED IMPACTS

Because SMAQMD is designated as nonattainment for ozone, PM_{10}, and $PM_{2.5}$, stationary and mobile-source emissions could contribute on a cumulative basis to pollutant concentrations that exceed the ambient air quality standards due to growth in the area. This is considered to be a significant cumulative impact.

Long-term operation of a single, level II infill correctional facility at the FSP/SAC Infill Site would result in regional emissions of ROG, NO_X, PM_{10}, and $PM_{2.5}$ from area and mobile sources. However, these levels would not exceed SMAQMD's significance thresholds for ROG and NO_X and would not generate substantial operational emissions of PM_{10}, $PM_{2.5}$ or toxic air contaminants (as described in Impacts 3.1-2 and 3.1-3 in Chapter 3 of this volume). Also, long-term operation of the contemplated infill facility, individually and together, would not result in concentrations of, carbon monoxide (CO), or other criteria air pollutants that would exceed ambient air quality standards; or emissions of toxic air contaminants, including diesel PM, that would result in the exposure of sensitive receptors to substantial pollutant concentrations. Emissions from stationary sources of emissions would be regulated through SMAQMD's permitting process and implementation of best available control technologies (BACT). SMAQMD's thresholds are set at a level that avoids a potential conflict with air quality attainment plans, which are required to reach attainment of federal and state air quality standards. Consequently, the long-term operation of single, level II infill correctional facility at the FSP/SAC Infill Site would not contribute to an increase in regional emissions (the projected emissions inventory for the SVAB) that would conflict with the emissions budget used for regional air quality planning (i.e., SMAQMD's air quality attainment plans).

Operation of a single, level II infill correctional facility at the FSP/SAC Infill Site would generate emissions that are below SMAQMD thresholds, which were established to reach attainment with air quality standards. Further, the contemplated single, level II infill correctional facility would comply with land use designations used in the development of the air quality attainment plan and the facility would be required to implement all feasible measures in the plan aimed at attaining long-term air quality standards. Contribution of the long-term operational emissions to the nonattainment of air quality standards would therefore not be considerable. The project's long-term operational emissions would not considerably contribute emissions which would exceed applicable air quality standards. Therefore, operational emissions generated by the contemplated development would result in a ***less-than-significant*** *cumulative air quality impact.*

4.4.2 BIOLOGICAL RESOURCES

Past development in the Sacramento Valley and Sierra Nevada Foothill region of eastern Sacramento County and Western El Dorado County, ranging from conversion of land to agricultural production more than a hundred years ago to more recent expansion of urban and residential development, has resulted in a substantial loss of native habitat to other uses. This land conversion has had an overall adverse effect on many native plant and wildlife species in the region and has resulted in loss of special-status species populations and known suitable and potential habitat for these species. For some species, such as Swainson's hawk, habitat losses have been great and have had a substantial effect on regional population numbers. It is expected that habitat value would continue to decrease as commercial and residential development progresses in the region. This is a significant cumulative impact related to regional biological diversity.

Operation of a lethal electrified fence at the FSP/SAC Infill Site could result in the death (i.e., electrocution) of sensitive and common wildlife species, some of which are protected under the Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code. Other planned, proposed, and approved projects in the region could also result in significant impacts to wildlife species. As described in Impact 3.2-7 of this volume, it is not expected that construction and operation of a single, level II infill correctional facility at the FSP/SAC Infill Site would eliminate any resident or migratory animal or bird species or reduce species diversity in the vicinity of the infill site or region; however, it is possible that the local population of one or more native birds, protected by the MBTA and the Fish and Game Code, could be substantially affected. CDCR would implement Mitigation Measure 3.2-7, which would result in CDCR's coordination with the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW) and implementation of measures to minimize, deter, and compensate for the infill development's impact on native wildlife populations. It is assumed that other cumulative developments would be required to implement similar measures.

As described in Section 3.2, "Biological Resources," in Chapter 3 of this volume, the FSP/SAC Infill Site consists primarily of patches of annual grassland surrounded by existing correctional facilities, roads, and a fire station, and provides limited habitat value for biological resources. Development of a single, level II infill correctional facility on the FSP/SAC Infill Site would result in potentially significant impacts on valley elderberry longhorn beetle; Swainson's hawk, white-tailed kite, burrowing owl, and other nesting raptors; grasshopper sparrow, loggerhead shrike, and migratory birds; special-status bats; stream habitat; and federally protected waters of the U.S. However, these potential impacts would be mitigated to less-than-significant levels with implementation of Mitigation Measures 3.2-1 through 3.2-7 of this volume. Therefore, development of a single, level II infill correctional facility at the FSP/SAC Infill Site would not considerably contribute to biological resource impacts in the region.

Cumulative developments could result in potentially significant biological impacts. However, with implementation of the mitigation measures proposed for the FSP/SAC Infill Site, the project's contribution to these impacts due to the construction and operation of single, level II infill correctional facilities at the FSP/SAC Infill Site would be reduced to a less-than-significant level. Therefore, while the overall cumulative condition is adverse, the project's contribution to cumulative biological resource impacts would not be considerable and the project would have a ***less-than-significant*** *cumulative biological resource impact.*

4.4.3 CULTURAL RESOURCES

Historic and archaeological resource impacts are site-specific rather than regional in nature. The project and any related development would be subject to mitigation to avoid the loss of identified or previously undiscovered historic, archaeological resources, and human remains. Furthermore, the historical setting of the Folsom Prison Secure Perimeter Historic District would not be compromised by development of a single, level II infill correctional facility at the FSP/SAC Infill Site because the barriers (landscape topography and prison walls) between the infill site and the District block lines of sight and no other historically significant buildings or structures were identified. Therefore, cumulative cultural resource impacts would be **less than significant** and are not addressed further.

4.4.4 EMPLOYMENT, POPULATION, AND HOUSING

As described in Section 3.4, "Employment, Population, and Housing," in Chapter 3 of this volume, Sacramento, Placer, and El Dorado counties are projected to experience cumulative population growth (see Table 3.4-1 for projected 2025 populations of these counties). This population growth is regulated and monitored by each respective jurisdiction. It is anticipated and reasonable to assume that local jurisdictions would only approve growth and development that is consistent with and planned for in their growth projections and planning documents, consistent with relevant planning and zoning laws. Also, ample housing exists throughout the region (Table 3.4-2 in Chapter 3 of this volume), especially given

the current national slowdown in the housing market (including a substantial number of foreclosures in the region). Therefore, cumulative population, employment, and housing impacts would be less than significant.

Development of a single, level II infill correctional facility at the FSP/SAC Infill Site would result in a maximum of 193 new employees, most of whom would be expected to be current residents of the region. It is anticipated that Sacramento County would receive the largest percentage (64 percent) of new employees. However, project-generated population growth would be small enough to be indistinguishable from projected local growth for these areas. Project-generated growth, by itself, would not stimulate construction of any new housing, local government facilities, or utilities infrastructure in any one jurisdiction because new employees would be widely distributed throughout the region. For these reasons, employment, population, and housing impacts related to development of a single, level II infill correctional facility at the FSP/SAC Infill Site would not result in a considerable contribution to cumulative population, employment, and housing impacts.

Local jurisdictions are anticipated to only approve growth and development that is consistent with and planned for in their growth projections. Therefore, cumulative population, employment, and housing impacts would be less than significant. Development of a single, level II infill correctional facility at the FSP/SAC Infill Site would result in population growth that would be indistinguishable from projected local growth, and employee residences would be widely distributed throughout the region. Therefore, the employment, population, and housing impacts related to development of a single, level II infill correctional facility at the FSP/SAC Infill Site would not result in a considerable contribution such that new significant cumulative population, employment, and housing impacts would occur. This is a ***less-than-significant*** *cumulative impact.*

4.4.5 GEOLOGY, SOILS, SEISMICITY, MINERALS, AND PALEONTOLOGICAL RESOURCES

Geotechnical and paleontological impacts are site-specific rather than regional in nature and any development occurring within the Folsom area would be subject to, at minimum, uniform site development and construction standards relative to seismic and other geologic conditions that are prevalent within the region, such as California Building Code standards. Therefore, cumulative geology, soils, seismicity, and paleontological impacts would be **less than significant** and are not addressed further.

4.4.6 GREENHOUSE GAS EMISSIONS

An individual project cannot generate enough greenhouse gas (GHG) emissions to substantially influence global climate change. A project participates in this potential cumulative impact to the extent that its incremental contribution, combined with the cumulative contributions of all other sources of GHGs, when taken together, causes global climate change impacts. Because climate change is an inherently cumulative effect, the analysis of GHG emissions and climate change is provided in Chapter 5 of Volume 1 of this DEIR, as that cumulative analysis looks at the contribution of GHGs due to the overall construction and operation of level II infill correctional facilities, regardless of which final sites are chosen for the facilities.

4.4.7 HAZARDS AND HAZARDOUS MATERIALS

Hazardous materials impacts are site-specific rather than regional in nature. In addition, the storage, use, disposal, and transport of hazardous materials are extensively regulated by various federal, state, and local agencies. Therefore, hazardous materials impacts would be **less than significant** and are not addressed further.

The FSP/SAC Infill Site is not located in a high risk area for wildland fire hazards (California Department of Forestry and Fire Protection 2008) and the new single, level II infill correctional facility would include onsite personnel and facilities equipped to fight fires, mutual-aid agreements, and building and maintenance practices that would make the new facility defensible. To the degree that other projects are constructed in the adjacent areas of high fire hazard risk, there may be an increased propensity for wildland fires that could spread to the FSP/SAC Infill Site. However, most of the cumulative projects are not in an area of high fire hazard, and those that are would be required to construct or contribute to sufficient fire protection services and to implement fire-safe building practices. Therefore, there is not a cumulative impact related to wildfire hazard.

Construction and operation of a single, level II infill correctional facility at the FSP/SAC Infill Site and related projects would be required to ensure sufficient fire protection services and implement fire-safe building practices. Therefore, cumulative hazards impacts would not be cumulatively adverse and the construction and operation of a single, level II infill correctional facility at the FSP/SAC Infill Site would not have a considerable contribution such that a new significant cumulative impact would occur. This is a ***less than significant*** *cumulative hazards impact.*

4.4.8 HYDROLOGY AND WATER QUALITY

WATER QUALITY

Overall water quality in the region has degraded over time as natural habitat has been converted to urban uses, and these uses have resulted in runoff of various pollutants into local and regional waterways. A variety of programs have been implemented with the goal of halting degradation of water quality and reversing this trend. Several state and federal agencies are involved in these programs, many of which are required by or originate in the federal Clean Water Act. Nonetheless, a cumulative adverse water quality condition exists.

Construction of a single, level II infill correctional facility at the FSP/SAC Infill Site as well as construction of related projects would result in surface disturbance through ground scraping, grading, trenching, and compaction associated with typical development activities. Existing vegetation would be removed thereby increasing the potential for erosion. (The potential for erosion hazards within the FSP/SAC Infill Site is moderate given the steepness of the existing ground terrain.) Operational activities and proposed land uses (e.g., roadways, parking areas) would generate atmospheric pollution, tire-wear residues, petroleum products, and oil and grease, all of which would be carried in stormwater runoff. These constituents could enter the storm drainage system and adversely affect water quality. However, a Storm Water Pollution Prevention Plan (SWPPP) that would include site-specific BMPs and any other necessary site-specific Waste Discharge Requirements (WDRs) or waivers under the Porter-Cologne Act to would be prepared for each project sufficiently reduce the potential surface water quality impacts during construction. In accordance with federal and state stormwater regulations, new construction and substantial redevelopment projects must maintain pre-project hydrology and incorporate proper pollutant source controls, minimize pollutant exposure outdoors, and treat stormwater runoff through proper post-construction BMPs when source control or exposure protection are insufficient for reducing pollutant loads. Specifically, CDCR would be required to incorporate BMPs and low impact development stormwater management principles for operation of a single, level II infill correctional facilities at the FSP/SAC Infill Site, which would provide some treatment of pollutants and would maintain the infill site's pre-project levels of stormwater runoff.

Water quality regulations require implementation of construction and post-construction site-specific BMPs and water quality protection measures. Therefore, the construction and operation of a single, level II infill correctional facility at the FSP/SAC Infill Site and the construction and operation of related projects would reduce site-specific water quality impacts, such that cumulatively adverse hydrology and

water quality impacts would not occur and the project would not have a considerable contribution such that a new significant cumulative impact would occur. This is a ***less-than-significant*** *cumulative impact*

STORMWATER DRAINAGE

Development of a single, level II infill correctional facility at the FSP/SAC Infill Site and the development of related projects would result in the addition of impervious surfaces, which would increase runoff. However, in accordance with federal and state stormwater regulations, new construction and substantial redevelopment projects must maintain pre-project hydrology and incorporate proper pollutant source controls, minimize pollutant exposure outdoors, and treat stormwater runoff through proper post-construction BMPs when source control or exposure protection are insufficient for reducing pollutant loads. Therefore, before any construction-related ground disturbance, final drainage plans would be required to demonstrate that all runoff would be appropriately conveyed and not leave the project sites at rates exceeding pre-infill site runoff conditions. Therefore, this would be a less-than-significant cumulative impact.

Specifically, at the FSP/SAC Infill Site, as required by Mitigation Measure 3.7-2 in Chapter 3 of this volume, the level II infill correctional facility's drainage plan and detention basins must control peak flow discharge rates to pre-project levels and improve water quality. All Central Valley Regional Water Quality Control Board requirements would be followed in the development of the final drainage plan. New storm drainage facilities will be constructed and existing facilities reconfigured in order to accommodate increased surface flows associated with the infill site's increase in impervious surfaces. New detention basins or ponds would temporarily detain stormwater runoff to allow sediment and other pollutants to settle and prevent them from flowing directly into receiving waterbodies. These facilities would adhere to the requirements of the existing National Pollutant Discharge Elimination System permit, including the associated monitoring and reporting program.

In accordance with federal and state stormwater regulations, new construction and significant redevelopment must maintain pre-project hydrology and incorporate proper pollutant source controls. Therefore, a single, level II infill correctional facility at the FSP/SAC Infill Site would provide adequate stormwater drainage facilities on the CDCR property to accommodate stormwater runoff demands, and other cumulative developments would be required provide adequate stormwater facilities. Therefore, the development of a single, level II infill correctional facility at the FSP/SAC Infill Site would not have a considerable contribution to cumulative stormwater drainage impacts such that a new cumulative impact would occur. This is a ***less-than-significant*** *cumulative impact.*

DAM FAILURE

Due to the close proximity to Folsom Lake and Folsom Dam, there is potential for exposure of people or structures to significant risk of loss, injury, or death as a result of dam failure or seiche. However, the Folsom Dam and the FSP/SAC Infill Site are located in a region of California characterized by a low ground-shaking hazard and infill site's height above the lake surface make seiche effects unlikely. CDCR, the City of Folsom, and local emergency response agencies have prepared detailed emergency response plans that identify the measures and actions that would be taken to prevent human hazards in the event of a dam failure.

Because the FSP/SAC Infill Site is located above the Folsom Lake surface and because local agencies have prepared detailed emergency response plans that identify the measures and actions that would be taken to prevent human hazards in the event of a dam failure, this would be a ***less-than-significant*** *cumulative impact.*

4.4.9 LAND USE, AGRICULTURE, AND FORESTRY RESOURCES

No existing or reasonably foreseeable land use impacts have been identified as a result of development of a single, level II infill correctional facility at the FSP/SAC Infill Site because it would not physically divide a community or conflict with any policies adopted for the purposes of avoiding environmental or agricultural impacts. While development of the infill site in combination with the related projects would result in land use changes, such changes are generally consistent with the goals and policies found in the City's and County's General Plan. Therefore, cumulative land use impacts would be less than significant.

The cumulative loss of farmland in the region is considered a significant cumulative condition. However, as discussed in Section 3.4, "Land Use, Agriculture, and Forestry Resources," in Chapter 3 of this volume development of a single, level II infill correctional facility at the FSP/SAC Infill Site would not result in conversion of forest land to non-forest use; would not convert any prime farmland, unique farmland, or farmland of statewide importance; would not conflict with existing zoning for agricultural use of a Williamson Act contract; and would not involve any changes in the existing environment that could result in conversion of farmland to nonagricultural use. Therefore, development of a single, level II infill correctional facility at the FSP/SAC Infill Site would not contribute to the cumulative loss of farmland in the region.

Cumulative projects would comply with local policies and plans for development, but could result in the cumulative loss of farmland. Development of a single, level II infill correctional facility at the FSP/SAC Infill Site would not result in any land use impacts (physically divide a community or violate a policy intended to avoid a significant environmental impact) nor impacts to important farmland, and would be consistent with relevant policies of state and local jurisdictions. Therefore, the project would not have a considerable contribution to cumulative land use, agriculture, and forestry resources impacts and would result in ***less than significant*** *cumulative land use impacts.*

4.4.10 NOISE

The geographic context for the analysis of cumulative noise impacts depends on the impact being analyzed. As described in Section 3.9 in Chapter 3 of this volume, noise is a localized occurrence and attenuates with distance. For construction and stationary source impacts, only the immediate area around a site would be included in the cumulative context. For example, construction and stationary source impacts related to noise dissipate/attenuate quickly as the distance between the site and the receptor increases. As a result, only those construction projects located within a distance of no more than 1,000 feet would be considered within the cumulative context of construction and stationary source noise.

For operational/roadway related impacts, the context is the increase in roadway volumes as a result of existing and future development within the area. It should be noted that future roadway volumes contain regional growth calculations as they would affect traffic volumes within the area, and are thus considered cumulative. Traffic-related noise increases discussed under in Section 3.9 include an evaluation of cumulative impacts, as both increases in noise associated with development of the infill site and regional traffic levels are analyzed.

Construction of a single, level II infill correctional facility at the FSP/SAC Infill Site would result in less-than-significant site-specific noise impacts and would not otherwise expose offsite receptors to significant construction noise. City noise regulations limit construction activities to daytime hours and noise levels are not directly additive and attenuate rapidly with distance. No projects shown in Exhibit 4-1 are located close enough (i.e., 1,000 feet) to the infill site that they could combine with construction noise from development at the infill site. Therefore, there is not a cumulative noise impact. Therefore,

construction of a single, level II infill correctional facility would not cause a cumulatively considerable incremental contribution to cumulative noise impacts.

Construction at the infill site would produce temporary vibration. However, the construction vibration impact of the contemplated development would be less than significant due to the distance between source and receptors. Potential cumulative construction vibration impacts are considered extremely localized (less than 500 feet) and no cumulative projects or receptors are located within 500 feet of the infill site. As such, construction vibration at the infill site would not be considered cumulatively considerable.

As described in Section 3.9, "Noise," operational noise levels associated with operation of a single, level II infill correctional facility at the FSP/SAC Infill Site would not result in noise levels that exceed state exterior or interior noise compatibility standards. Further, as noted in Tables 3.9-13 and 3.9-14 of Section 3.9, "Noise" of this volume of the DEIR, potential operational noise levels associated with an infill facility at the FSP/SAC Infill Site as perceived at offsite receptors would be substantially less (>10 dBA) than Title 24 standards. As such, development of the infill facility would not be considered cumulatively considerable such that noise levels may exceed state noise compatibility standards. Therefore, the contemplated development would not result in a considerable contribution to operational noise impacts.

Future traffic noise levels were modeled using the Federal Highway Administration (FHWA) Traffic Noise Prediction Model and are presented in Table 3.9-12 of Section 3.9, "Noise" in Chapter 3 of this volume of the DEIR. Substantial permanent increases (i.e. greater than 3 A-weighted decibels [dBA]) in roadway noise levels would not occur at any of the study roadway segments, and no significant cumulative impacts are anticipated.

Traffic noise levels would not exceed applicable exterior standards (65 decibels [dB] day-night noise level [L_{dn}]) or result in a substantial increase in ambient noise levels at the CDCR property, as shown in the aforementioned tables. Assuming a 25-dB reduction as a result of exterior-to-interior transmission loss from building façades, interior traffic noise levels would not exceed applicable interior standards (State of California Title 24 Noise Standards for Detention Facilities, 70 dB equivalent noise level [L_{eq}] daytime and 45 dB L_{eq} nighttime). Therefore, cumulative vehicular noise sources are not expected to result in noise in excess of applicable standards or in a substantial increase in ambient noise levels at the FSP/SAC Infill Site.

A single, level II infill correctional facility at the FSP/SAC Infill Site plus cumulative development would not result in cumulatively considerable construction, vibration, or onsite operational noise impacts. The contemplated development would not result in noise levels that would cumulatively combine with other cumulative projects such that they would exceed state construction or operational noise compatibility standards. Further, the contemplated development, in combination with cumulative development, would not result in a substantial increase in traffic noise along area roadways. Therefore, the project (single and double facility) would not have a considerable contribution such that a new cumulative noise impact would occur. Cumulative noise impacts would be ***less than significant****.*

4.4.11 PUBLIC SERVICES

Cumulative development in the region, including the development of a single, level II infill correctional facility at the FSP/SAC Infill Site, would result in the concentration of persons and structures within local police and fire jurisdictions. It is anticipated that local jurisdictions would require that all new cumulative development provide or fund the necessary police, fire and emergency response services to serve those developments consistent with relevant local policies addressing these issues. Therefore, cumulative public services impacts would be less than significant. As described in Section 3.10, "Public Services," in Chapter 3 of this volume, the new single, level II infill correctional facility would utilize

existing FSP/SAC fire response personnel, and law enforcement would be provided by the correctional personnel staffing the facilities at all times. Although assistance from other local fire, law enforcement, and emergency response agencies could be required if an incident at the infill site were to exceed the capabilities of onsite personnel and facilities, this back-up assistance is currently provided for FSP/SAC by these agencies, and a new single, level II infill correctional facility would not be expected to substantially increase the demand for these agencies to provide this back-up assistance. Therefore, the project would not result in a cumulatively considerable contribution such that a significant cumulative public services impact would occur.

Development of a single, level II infill correctional facility at the FSP/SAC Infill Site would not result in a substantial population increase throughout the region and would utilize existing FSP/SAC fire response and law enforcement personnel. In addition, cumulative development would provide or fund the necessary police, fire and emergency response services to serve those developments consistent with relevant local policies addressing these issues. Therefore, cumulative impacts to police, fire, and emergency services demands would be ***less than significant*** *and the project would not result in a cumulatively considerable contribution such that a significant cumulative public services impact would occur.*

4.4.12 TRANSPORTATION

Cumulative traffic impacts are evaluated and presented in Section 3.11, “Transportation,” in Chapter 3 of this volume.

4.4.13 UTILITIES

WATER SUPPLY

The geographic area that could be affected by the single, level II infill correctional facility at the FSP/SAC Infill Site is the area that is served by water supplies from Folsom Reservoir, the source of the FSP/SAC water supply. As discussed in Section 3.12, “Utilities and Service Systems,” in Chapter 3 of this volume, water is supplied to FSP/SAC from Folsom Lake. Existing agreements allow the FSP/SAC facilities to receive up to 4,000 afy of raw water, which is then treated at an onsite water treatment plant. Because CDCR relies on a firm water right of 4,000 acre-feet per year (afy) granted to the FSP/SAC facilities, it does not contribute to water demand within the rest of the service area. The estimated potable water demand of 1,519 afy, considering recorded demand from the existing FSP/SAC, estimates of the newly-established Folsom Women’s Facility (FWF), and the contemplated single, level II infill correctional facility, is substantially less than the existing CDCR water rights, which total 4,000 afy. Furthermore, this estimated potable water demand is less than historic water usage, which was 2,200 afy in 2009 (see Section 3.12.1 of this volume). Therefore, no new or expanded entitlements would be required as a result of a single, level II infill correctional facility at the FSP/SAC Infill Site and the project would not contribute to a cumulatively significant water supply impact.

CDCR relies on a firm water right of 4,000 afy for the FSP/SAC facilities. Because FSP/SAC, including operation of the proposed single, level II infill correctional facility, would demand substantially less water than the existing water right, the project would result in a ***less-than-considerable contribution*** *to cumulative impacts on local and regional water supplies. This would be a* ***less-than-significant*** *cumulative water supply impact and the infill facility would not result in a considerable contribution such that a new significant cumulative water supply impact would occur.*

WASTEWATER TREATMENT

The FSP/SAC facilities are authorized to release an average daily rate of 1.15 mgd and up to a maximum of 2.50 mgd of wastewater to the Sacramento Regional Wastewater Treatment Plant

(SRWTP) through the City of Folsom and the Sacramento Regional County Sanitation District (SRCSD) conveyance systems. As discussed in Section 3.12, "Utilities," the total estimated flow of 1.10 mgd from FSP/SAC, FWF, and the proposed single, level II infill correctional facility would not exceed the daily discharge rate of 1.15 mgd, and is well below the maximum flow rate of 2.50 mgd. Therefore, a new single, level II infill correctional facility at the FSP/SAC Infill Site would not require the expansion or development of new wastewater treatment facilities. Furthermore, the cumulative development would provide or fund the necessary wastewater treatment disposal and treatment facilities to serve those developments consistent with relevant local policies.

Because adequate treatment capacity is available to treat wastewater flows from cumulative development, no significant cumulative wastewater treatment impact would occur. Further, development of a single, level II infill correctional facility at the FSP/SAC Infill Site would not result in an exceedance of the existing wastewater treatment agreement with the SRWTP. The single, level II infill correctional facility at the FSP/SAC Infill Site would not, either individually or in combination with other development, require the expansion of existing wastewater treatment facilities. Therefore, and the project would result in a ***less-than-significant*** *cumulative wastewater treatment impact and would not result in a considerable contribution such that a new significant cumulative wastewater treatment impact would occur.*

SOLID WASTE, ELECTRICITY AND NATURAL GAS

The single, level II infill correctional facility proposed at the FSP/SAC Infill Site, in combination with cumulative development in the region, would increase demands for solid waste disposal. However, the Kiefer Landfill has a remaining capacity of approximately 113 million cubic yards, as of 2005, and is expected to have capacity until at least 2063. Therefore cumulative solid waste impacts would be less than significant. Construction and operation of a single, level II infill correctional facility at the FSP/SAC Infill Site would be anticipated to generate an additional 2,850 pounds of solid waste per day. This would constitute a 10 percent increase in waste generated from FSP/SAC. This increase would not require a substantial amount of the landfill's available capacity and would not result in the need to expand or construct new landfill facilities. In addition, the single, level II infill correctional facility would have its own recycling program that would result in the weekly diversion of recyclable waste from the waste stream, reducing the amount of infill site waste that would need to be sent to a local landfill. Therefore, the project would not have a considerable contribution such that a new significant cumulative solid waste impact would occur.

Development of a single, level II infill correctional facility at the FSP/SAC Infill Site, in combination with cumulative development in the region, would result in an increase in electrical demands. Sacramento Metropolitan Utility District (SMUD), the local electricity service provider, anticipates it would have the capacity to serve the single, level II infill correctional facility demand with existing infrastructure and system-wide utility capacity. This would be a less-than-significant cumulative impact. The additional project-generated demand is not anticipated to require offsite improvements such as higher load bearing transmission lines or potential improvements to substations. CDCR would continue to coordinate with SMUD regarding service for the contemplated single, level II infill correctional facility at the FSP/SAC Infill Site. SMUD is responsible for all improvements and maintenance of its facilities and utilities infrastructure. Therefore, the project would not have a considerable contribution such that a new significant cumulative electricity impact would occur.

Development of a single, level II infill correctional facility at the FSP/SAC Infill Site, in combination with cumulative development in the region, would result in an increase in natural gas demands. Pacific Gas and Electric (PG&E), the local natural gas service provider, anticipates it would have the capacity to serve the single, level II infill correctional facility demand with existing infrastructure and system-wide utility capacity. This would be a less-than-significant cumulative impact. No offsite improvements would be needed to satisfy the additional project-generated demand for natural gas. In addition, the proposed project would not limit PG&E's ability to serve other existing and future development in the region,

including related projects. The total amount of energy supplied by PG&E in its northern and central California service area is estimated to be 887 million cubic feet per day of natural gas. More natural gas is projected to become available as additional natural gas sources are developed in the future. CDCR would continue to coordinate with PG&E, the local gas and electricity service provider, regarding service for the single, level II infill correctional facility at the FSP/SAC Infill Site. Therefore, the project would not have a considerable contribution such that a new significant cumulative natural gas impact would occur.

The Kiefer Landfill, SMUD, and PG&E have adequate capacity to meet the demands associated with a single, level II infill correctional facility at the FSP/SAC Infill Site. Therefore, the development of a single, level II infill correctional facility at the FSP/SAC Infill Site would not result in a considerable contribution such that a new significant cumulative solid waste, electricity, or natural gas impacts would occur. This is a ***less-than-significant*** *cumulative utilities impact.*

4.4.14 VISUAL RESOURCES

Development of past and current projects, and future proposed projects continue to alter the visual environment of Folsom and the surrounding area. In general, the visual resource impacts of the related projects listed in Table 4-1 are site specific and would not necessarily combine with other projects that are not in the same viewshed to create a cumulative impact. For the FSP/SAC Infill Site, there are no related projects that are in close enough proximity that a cumulative effect would occur in the viewsheds that include the infill site. Therefore, development of a single, level II infill correctional facility at the FSP/SAC Infill Site would not make a substantial contribution to any significant cumulative impact related to viewsheds.

However, a significant cumulative impact exists as a result of skyglow that is created by various light sources in the area, including high mast lights at existing FSP/SAC facilities, lighting on Folsom Lake Crossing Bridge, lighting associated with the Folsom Dam to the north and lighting from parking lots and streets in the area. Therefore, development of a single, level II infill correctional facility at the FSP/SAC Infill Site would contribute to additional skyglow in the Folsom area, which is considered a potentially significant impact. CDCR uses state-of-the-art lighting in all its new facilities, which is designed to cast light only where needed, and to cut off glare to offsite areas. There are no other known measures that CDCR can implement that would provide sufficient lighting to maintain security needs without some of this light being visible off the CDCR property. Therefore, no mitigation measures are available to decrease the effects of skyglow from high mast lighting. The project would result in a considerable, significant and unavoidable, contribution to this cumulative skyglow impact.

Development of a single, level II infill correctional facility at the FSP/SAC Infill Site, in combination with cumulative development, would not result in substantial changes to the local viewshed because it would be compatible with the surrounding visual environment. However, new lighting sources associated with a single, level II infill correctional facility and cumulative development would result in a considerable contribution to a ***significant and unavoidable*** *cumulative skyglow impact.*

This page intentionally left blank.

5 OTHER CEQA SECTIONS

5.1 SIGNIFICANT UNAVOIDABLE IMPACTS

5.1.1 CALIFORNIA ENVIRONMENTAL QUALITY ACT GUIDELINES

Section 21100(b)(2)(A) of the State of California Environmental Quality Act (CEQA) Guidelines provides that an environmental impact report (EIR) shall include a detailed statement setting forth "in a separate section: any significant effect on the environment that cannot be avoided if the project is implemented." Accordingly, this section provides a summary of significant environmental impacts of development of the Folsom State Prison/California State Prison, Sacramento (FSP/SAC) Infill Site with a level II infill correctional facility that cannot be mitigated to a less-than-significant level.

5.1.2 SIGNIFICANT UNAVOIDABLE IMPACTS OF THE PROJECT

Chapter 3, "Environmental Setting, Thresholds of Significance, Environmental Impacts, and Mitigation Measures," provides a description of the potential environmental impacts of the project and recommends various mitigation measures to reduce impacts, to the extent feasible. Chapter 4, "Cumulative Impacts," determines whether the incremental effects of this project are significant when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of reasonably foreseeable future projects. After implementation of the recommended mitigation measures, most of the impacts associated with development of level II infill correctional facilities at the FSP/SAC Infill Site would be reduced to a less-than-significant level. The following impacts are considered significant and unavoidable; that is, no feasible mitigation is available to reduce the project's impacts to a less-than-significant level at the FSP/SAC Infill Site. Chapter 5, "Alternatives" in Volume 1 of this DEIR considers alternatives to development of the FSP/SAC Infill Site that may be capable of reducing or avoiding some of these impacts.

The significant and unavoidable environmental impacts of development of level II infill correctional facilities at the FSP/SAC Infill Site are summarized below.

TRANSPORTATION

Impact 3.11-1: Impacts on Intersection Operations

Operation of a level II infill correctional facility at FSP/SAC would result in the unacceptable degradation of intersection operations during the p.m. peak hour at the Folsom Lake Crossing/North Prison Access and Folsom-Auburn Road/Folsom Lake Crossing intersections. To mitigate the potential transportation impacts associated with development, CDCR would optimize signal timings at the Folsom-Auburn Road/Folsom Lake Crossing intersection and provide a right-turn pocket on the northbound approach of the North Prison Access as it intersects with Folsom Lake Crossing. However, feasible mitigation is not available that would improve impacts associated with left-turn movements at the intersection of Folsom Lake Crossing/North Prison Access. Therefore, even with implementation of the aforementioned mitigation measures, impacts would be **significant and unavoidable**.

Impact 3.11-5: Construction-Related Traffic Impacts

With development of either a single or a double, level II infill correctional facility at the MCSP Infill Site, construction traffic could result in significant short-term traffic impact on several local intersections. Although CDCR would prepare and implement a construction traffic management plan (TMP) to

improve and manage construction-related traffic conditions on area roadways, until the specific parameters of the construction activities and the details of the TMP are developed, it is possible that feasible mitigation measures would not be available for all construction-related impacts. However, the details of these improvements cannot feasibly be developed at this time. Further, it is considered unlikely that the construction traffic associated with development of the infill site could be reduced to below the performance standard identified above. Therefore, for purposes of CEQA, this impact is concluded to remain **significant and unavoidable**.

Impact 3.11-6: Cumulative Impacts on Intersection Operations

Under cumulative (2035) conditions, operation of a level II infill correctional facility would result in the unacceptable degradation of intersection operations during the a.m. and p.m. peak hours at the Folsom Lake Crossing/North Prison Access intersection. CDCR would implement all feasible mitigation for this intersection, including provision of a right-turn pocket on the northbound approach of the North Prison Access as it intersects with Folsom Lake Crossing. However, feasible mitigation is not available that would improve impacts associated with left-turn movements at the intersection of Folsom Lake Crossing/North Prison Access. Therefore, even with implementation of the aforementioned mitigation measures, impacts would be **significant and unavoidable**.

Impact 3.11-7: Cumulative Impacts on Roadway Segment Operations

Operation of a single, level II infill correctional facility at the FSP/SAC Infill Site would add traffic to two roadway segments (Folsom Lake Crossing and E. Natoma Street, east of Folsom Lake Crossing) that are projected to operate at unacceptable LOS under cumulative (2035) conditions. No feasible mitigation is available to improve traffic flows along these segments, and impacts would be **significant and unavoidable**.

VISUAL RESOURCES

Impact 3.13-1: Substantial Degradation of a Scenic Vista

The removal of onsite trees and vegetation at the infill site would reduce the amount of screening of the facility from the American River Bike Trail. CDCR would use non-reflective paint and other design elements on the building walls to blend the buildings with their surroundings and landscaping outside the secure perimeter to minimize direct line-of-sight views of the facility. However, although impacts would be reduced with implementation of this mitigation, they would remain **significant and unavoidable**.

Impact 3.13-2: Visual Character Impacts

The level II infill correctional facilities would be visible in views from the American River Bike Trail and Folsom Lake Crossing Bridge. Although impacts would be reduced through the use of non-reflective paint and other design elements on the building exterior, they would remain **significant and unavoidable**.

Impact 3.13-3: Light and Glare Impacts

The increased number of lighting sources that would be operational at the infill site upon implementation of a level II infill correctional facility would contribute to an increase in nighttime glare in adjacent neighborhoods and skyglow that could be viewed from offsite areas. No feasible mitigation is available, and the impact would be **significant and unavoidable**.

5.2 SIGNIFICANT IRREVERSIBLE ENVIRONMENTAL CHANGES

The State CEQA Guidelines require a discussion of the significant irreversible environmental changes which would be involved in the project should it be 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. Development of the FSP/SAC Infill Site would result in the irreversible and irretrievable commitment of energy and material resources during construction, operation, and maintenance, including the following resources:

- construction materials, including such resources as rocks, wood, concrete, glass, roof shingles, and steel;
- land area committed to new project facilities;
- water supply for project operation; 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 and operation.

In compliance with Governor Arnold Schwarzenegger's Executive Order S-20-04, which requires all state projects over 10,000 square feet to meet Leadership in Energy and Environmental Design (LEED) Silver standards, as stated in Chapter 3, "Project Description," in Volume 1 of this draft EIR (DEIR), CDCR has committed to meeting or exceeding LEED Silver standards for the proposed level II infill correctional facilities. The design process would operate under the expectation of best long-term cost and environmental value, having a direct connection to the concept of sustainability and a possible result of LEED Gold or Platinum. As part of this process, efforts would be made to utilize recycled and renewable materials, and the buildings would be designed using energy-efficient technologies. Some nonrenewable resources would still be required, however. These nonrenewable resources are expected to account for a minimal portion of the region's resources and would not affect the availability of similar resources for other needs within the region. Long-term operational energy and natural resource consumption is expected to be less than significant. Construction activities would not result in inefficient use of energy or natural resources. Construction contractors selected would use best available engineering techniques, construction and design practices, and equipment operating procedures. Because the contemplated development would be LEED-certified and use energy efficient materials where appropriate, potential irreversible changes related to long-term consumption of energy and natural resources would be less than significant.

5.3 GROWTH INDUCEMENT

5.3.1 STATE CEQA GUIDELINES

CEQA Section 21100(b)(5) specifies that growth-inducing impacts of a project must be addressed in an EIR. State CEQA Guidelines Section 15126(d) states that a proposed project is growth inducing if it could "foster economic or population growth, or the construction of additional housing, either directly or indirectly, in the surrounding environment." Included in the definition are projects that would remove obstacles to population growth. Examples of growth-inducing actions include developing water, wastewater, fire, or other types of services in previously unserved areas, extending transportation routes into previously undeveloped areas, and establishing major new employment opportunities. The following is a summary of the direct and indirect growth-inducing impacts that could result with implementation of the contemplated development at FSP/SAC.

5.3.2 GROWTH-INDUCING IMPACTS OF THE PROJECT

Development at the infill site would foster substantial short-term and long-economic growth associated with construction-related and operational employment opportunities. Construction would begin in spring 2014. The contemplated infill facility is estimated to take approximately 26 months to complete. During construction, the estimated peak level of construction workers at any given time would be 355. Upon initiation of operational activities, the proposed facility would employ 193 people, including correctional

officers, medical/mental health personnel, vocational and educational staff, facility maintenance personnel, and administrative support staff. Operation of the level II infill correctional facility would foster long-term growth in three ways:

- direct growth related to employment at the level II infill correctional facility,
- growth related to induced employment resulting from jobs created to provide goods and services to the employees, and
- growth resulting from facility expenditures.

CDCR estimates that each new position creates approximately 0.5 indirect or secondary jobs through payrolls and the purchase of local goods and services. Based on the wide geographic distribution of residences of existing employees of the FSP/SAC, and given that most induced jobs would require skill levels that could be provided by existing residents of the region (i.e., Counties of Sacramento, Placer, and El Dorado), induced employment is not anticipated to have a substantial effect on population growth. Implementation of the proposed project would not substantially increase population growth in the surrounding region because it would not require the construction of new housing (see Section 3.4, "Employment, Population, and Housing," of this volume for further discussion). The contemplated development would not remove barriers to population growth because no new or expanded (beyond what is currently planned by local jurisdictions) public infrastructure facilities would be installed. It is also unlikely to tax existing local or regional community service facilities based on the anticipated geographic distribution of potential employees (see Section 3.10, "Public Services," for additional discussion).

Although the contemplated development would foster some economic and population growth associated with new employment opportunities at the level II infill correctional facility, this growth would not substantially affect the ability of public service providers to serve their existing customers, nor would it require the construction of new facilities to serve the project. This growth would be widely dispersed throughout Sacramento County, Placer County, and El Dorado Counties and would not result in an increased demand for housing in these areas. As noted in Section 3.4, "Employment, Population, and Housing," of this volume, the population and employment growth expected with implementation of a level II infill correctional facility at the FSP/SAC Infill Site would not exceed the projections of local general plans in the communities surrounding the infill site. Additionally, the contemplated development would not extend infrastructure and public services to serve areas outside of the existing CDCR property, which includes the infill site and FSP/SAC.

In conclusion, the potential level II infill correctional facility has the potential to stimulate the economy both directly (by providing jobs) and indirectly (by creating a demand for local goods and services) in the region. Because of the general availability in the labor market and current unemployment rates, there would be an opportunity to fill some positions with local residents, while other positions would be filled by new employees that would relocate to the region. This in-migration would not substantially affect housing growth because new housing generated by the development would account for only a small percentage of existing housing, and the current high number of foreclosures in the region caused by current economic conditions may result in decreased demand. Further, the contemplated development would not meaningfully affect employment or other growth in the region, given the size of the regional economy. Therefore, the project would not contribute to substantial population growth.

6 REFERENCES

CHAPTER 1, INTRODUCTION

California Department of Corrections and Rehabilitation. 2005. Monthly Report of Population as of Midnight December 31, 2004. January 5. Available at: http://www.cdcr.ca.gov/Reports_Research/Offender_Information _Services_Branch/Population_Reports.html. Accessed February 12, 2013.

_____. 2006. Monthly Report of Population as of Midnight December 31, 2005. January 4. Available at: http://www.cdcr.ca.gov/Reports_Research/Offender_Information_Services_Branch/Population_Reports.html. Accessed February 12, 2013.

_____. 2007. Monthly Report of Population as of Midnight December 31, 2006. January 3. Available at: http://www.cdcr.ca.gov/Reports_Research/Offender_Information_Services_Branch/Population_Reports.html. Accessed February 12, 2013.

_____. 2008. Monthly Report of Population as of Midnight December 31, 2007. January 3. Available at: http://www.cdcr.ca.gov/Reports_Research/Offender_Information_Services_Branch/Population_Reports.html. Accessed February 12, 2013.

_____. 2009. Monthly Report of Population as of Midnight December 31, 2008. January 5. Available at: http://www.cdcr.ca.gov/Reports_Research/Offender_Information_Services_Branch/Population_Reports.html. Accessed February 12, 2013.

_____. 2010. Monthly Report of Population as of Midnight December 31, 2009. January 5. Available at: http://www.cdcr.ca.gov/Reports_Research/Offender_Information_Services_Branch/Population_Reports.html. Accessed February 12, 2013.

_____. 2011. Monthly Report of Population as of Midnight December 31, 2010. January 4. Available at: http://www.cdcr.ca.gov/Reports_Research/Offender_Information_Services_Branch/Population_Reports.html. Accessed February 12, 2013.

_____. 2012. Monthly Report of Population as of Midnight December 31, 2011. January 5. Available at: http://www.cdcr.ca.gov/Reports_Research/Offender_Information_Services_Branch/Population_Reports.html. Accessed February 12, 2013.

_____. 2013. Monthly Report of Population as of Midnight December 31, 2012. January 3. Available at: http://www.cdcr.ca.gov/Reports_Research/Offender_Information_Services_Branch/Population_Reports.html. Accessed February 12, 2013.

CDCR. *See* California Department of Corrections and Rehabilitation.

CHAPTER 2, PROJECT DESCRIPTION

California Department of Corrections and Rehabilitation. 2012. Prototype Level II Facility Drawings.

_____. 2013 (April). Reported Water Usage Data – Folsom State Prison and California State Prison, Sacramento.

CDCR. *See* California Department of Corrections and Rehabilitation.

Sacramento Regional County Sanitation District. 2012. Our Regional Sewer System. Sacramento County, CA.

SRCSD. *See* Sacramento Regional County Sanitation District.

CHAPTER 3, INTRODUCTION TO THE ANALYSIS

Section 3.1, Air Quality

ARB. *See* California Air Resources Board.

California Air Resources Board. 2003. *HARP User's Guide.* Sacramento, CA. Available: <http://www.arb.ca.gov/toxics/harp/docs/userguide/allchapters.pdf>. Accessed March 2013.

_____. 2004. *2004 Revision to the California State Implementation Plan for Carbon Monoxide Updated Maintenance Plan For Ten Federal Planning Areas*. Available: <http://www.arb.ca.gov/planning/sip/co/final_2004_co_plan_update.pdf>. Accessed March 2013.

_____. 2005. *Air Quality and Land Use Handbook: A Community Health Perspective*. Sacramento, CA.

_____. 2009. *The California Almanac of Emissions and Air Quality*-The 2009 Edition. Sacramento, CA. Available: <http://www.arb.ca.gov/aqd/almanac/almanac09/almanac09.htm>. Accessed March 2013.

_____. 2011. 2007 *State Strategy for California's State Implementation Plan (SIP) for Federal PM2.5 and 8-Hour Ozone Standards*. Available: <http://www.arb.ca.gov/planning/sip/2007sip/2007sip.htm#2009rev>. Last updated October 5, 2011. Accessed March 2013.

_____. 2012a. Ambient Air Quality Standards. Available: <http://www.arb.ca.gov/research/aaqs/aaqs2.pdf>. Accessed March 2013.

_____. 2012b. Attainment Designations. Available: <http://www.arb.ca.gov/desig/adm/adm.htm>. Last updated May 8, 2012. Accessed March 2013.

_____. 2013a. *Air Quality Data Statistics.* Available: <http://www.arb.ca.gov/adam/welcome.html>. Accessed March 2013.

_____. 2013b. Emissions Inventory for Sacramento Valley Air Basin. Available: <http://www.arb.ca.gov/app/emsinv/emseic1_query.php >. Accessed March 2013.

_____. 2013c. Community Health Air Pollution Information System. Available: <http://www.arb.ca.gov/ch/chapis1/chapis1.htm>. Accessed March 2013.

EPA. *See* U.S. Environmental Protection Agency.

Godish, T. 2004. *Air Quality*. Lewis Publishers. Boca Raton, FL.

Sacramento Metropolitan Air Quality Management District. 2010. Air Quality Standards Attainment Status. Available: <http://www.airquality.org/aqdata/attainmentstat.shtml>. Last updated July 19, 2010. Accessed March 2013.

_____. 2011a. *Guide to Air Quality Assessment*. Available: <http://www.airquality.org/ceqa/ceqaguideupdate.shtml>. Last updated June 2011. Accessed March 2013.

_____. 2011b. 8-Hour Ozone (1997 NAAQS). Available: <http://www.airquality.org/plans/federal/ozone/8hr1997/index.shtml>. Accessed March 2013.

_____. 2012. 8-Hour Ozone (2008 NAAQS). Available: http://www.airquality.org/plans/federal/ozone/8hr2008/index.shtml. Accessed March 2013.

SMAQMD. *See* Sacramento Metropolitan Air Quality Management District.

U.S. Environmental Protection Agency. 2012. Six Common Air Pollutants. Available: <http://www.epa.gov/air/urbanair/>. Last updated April 20, 2012. Accessed March 2013.

Western Regional Climate Center. 2012, Folsom, California – Period of Record General Climate Summary – Temperature. Available: <http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca3111>. Accessed March 2013.

———. 2013a, Average Wind Direction. Available: <http://www.wrcc.dri.edu/climatedata/climtables/westwinddir/>. Accessed March 2013.

———. 2013b, Average Wind Speeds – MPH. Available: <http://www.wrcc.dri.edu/climatedata/climtables/westwind/>. Accessed March 2013.

WRCC. *See* Western Regional Climate Center.

Zhu, Y., W. C. Hinds, S. Kim, and S. Shen. 2002. Study of Ultrafine Particles Near a Major Highway with Heavy-duty Diesel Traffic. In *Atmospheric Environment* 36:4323–4335.

Section 3.2, Biological Resources

California Department of Corrections. 1996a. *Draft Environmental Impact Report (DEIR), Statewide Electrified Fence Project*. Prepared by Michael Brandman Associates, Sacramento, CA.

_____. 1996b. *Handbook for Reducing Wildlife Use of Prison Perimeters. Statewide Electrified Fence Project*. Prepared by Michael Brandman Associates, Sacramento, CA.

_____. 1997. *Final Environmental Impact Report (FEIR), Statewide Electrified Fence Project*. Prepared by Michael Brandman Associates, Sacramento, CA.

_____. 1999a. *FEIR Addendum, Statewide Electrified Fence Project*. Prepared by EDAW, Inc., Sacramento, CA.

_____. 1999b. *Habitat Conservation Plan for the Statewide Electrified Fence Project*. Prepared by EDAW, Inc., Sacramento, CA.

California Department of Fish and Game. 1994 (November). *Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (*Buteo swainsoni*) in the Central Valley of California*. Sacramento, CA.

_____. 2007 (June). *California Swainson's Hawk Inventory: 2005-2006*.

_____. 2012 (May). *Staff Report on Burrowing Owl Mitigation*. State of California Natural Resources Agency. Sacramento, CA.

California Natural Diversity Database. 2013 (January). Rarefind 4 Commercial Version. An Online Subscription Database Application for the Use of the California Department of Fish and Wildlife's Natural Diversity Database. Biogeographic Data Branch, California Department of Fish and Wildlife, Sacramento, CA. Accessed January 9, 2013.

California Department of Fish and Wildlife. Natural Diversity Database. January 2013. Special Vascular Plants, Bryophytes, and Lichens List. Quarterly publication.

California Native Plant Society. 2013. Inventory of Rare and Endangered Plants (online edition, v8-01a). California Native Plant Society. Sacramento, CA. Available: http://www.cnps.org/inventory. Accessed January 9, 2013.

California Wildlife Habitat Relationships System. 2011. Swainson's Hawk (*Buteo swainsoni)*.

CDC. *See* California Department of Corrections.

City of Folsom. 1993 (January Update). City of Folsom General Plan.

ICF Jones & Stokes. 2009. *Preliminary Delineation of Wetlands and Other Water Bodies California Health Care Facility – Folsom*. Sacramento, CA. Prepared for California Prison Health Care Receivership Corporation.

Shuford, W. D. and T. Gardali (Editors). 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds No. 1.Western Field Ornithologists, Camarillo, CA and California Department of Fish and Game, Sacramento, CA.

Swainson's Hawk Technical Advisory Committee. 2000. Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley. Sacramento, CA.

U.S. Fish and Wildlife Service. 1999. *Conservation Guidelines for the Valley Elderberry Longhorn Beetle*. Sacramento Fish and Wildlife Office. Sacramento, CA.

_____. 2013. List of Federal Endangered and Threatened Species that Occur in or May Be Affected by Projects in the Folsom USGS 7.5-Minute Quadrangle. An online database for building lists of species that may be affected by projects in specific counties of quadrangles. Available: www.fws.gov/sacramento/es_species/Lists/es_species-lists_quad-finder_quick listcfm?ID=511B. Last updated September 18, 2011. Accessed January 9, 2013.

Witham, C.W. 2006. Field Guide to the Vernal Pools of Mather Field, Sacramento County. California Native Plant Society Sacramento Valley Chapter. Sacramento, CA.

Section 3.3, Cultural Resources

ICF International. 2013. Archaeological Inventory Report for the California Department of Corrections Level II Infill Project, Amador, Sacramento, San Bernardino, and Solano Counties, California March 2013.

ICF Jones & Stokes. 2009. Draft Historic Properties Inventory Report and California Register Evaluation for the California Health Care Facility, Folsom Prison Project Sacramento County, California. July 2009.

Section 3.4, Employment, Population, and Housing

California Department of Finance. 2012 (May). Interim Projections for California and Its Counties 2010-2050. Sacramento, CA. Available: http://www.dof.ca.gov/research/demographic/reports/projections/interim/view.php. Accessed February 6, 2013.

California Employment Development Department. 2013 (January 18). Report 400 C, Monthly Labor Force Data for Counties. Available: http://www.calmis.ca.gov/file/lfmonth/1212pcou.pdf. Accessed January 22, 2013.

EDD. *See* California Employment Development Department.

El Dorado County. 2009. El Dorado County General Plan (Housing Element). April.

U.S. Census Bureau. 2011a. Selected Economic Characteristics. 2009–2011 American Community Survey 3-year Estimates. Available: http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_11_3YR_DP03&prodType=table. Accessed January 22, 2013.

———. 2011b. Selected Housing Characteristics. 2009–2011 American Community Survey 3-year Estimates. Available: http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_11_3YR_DP04&prodType=table. Accessed February 4, 2013.

———. 2013a. State & County QuickFacts: Sacramento County, California. Available: http://quickfacts.census.gov/qfd/states/06/06067.html. Last revised January 10, 2013. Accessed February 4, 2013.

———. 2013b. State & County QuickFacts: Placer County, California. Available: http://quickfacts.census.gov/qfd/states/06/06061.html. Last revised January 10, 2013. Accessed February 5, 2013.

———. 2013c. State & County QuickFacts: El Dorado County, California. Available: http://quickfacts.census.gov/qfd/states/06/06017.html. Last revised January 10, 2013. Accessed February 5, 2013.

Section 3.5, Geology, Soils, Seismicity, Mineral Resources, and Paleontological Resources

Bryant, W.A. and E.W. Hart. 2007. Fault-hazard Rupture Zones in California. Alquist-Priolo Earthquake Fault Zoning Act with Index to Earthquake Fault Zones Maps. California Geological Survey. Special Publication 42, Interim Revision 2007.

California Division of Mines and Geology. 1984. Mineral Land Classification of the Folsom 15-Minute Quadrangle, Amador, El Dorado, Placer, and Sacramento Counties, California. (Open-File Report 84-50.) Sacramento, CA.

California Geological Survey. 2008a. Seismic Shaking Hazards in California. Updated: June 12, 2008. Available: <http://redirect.conservation.ca.gov/cgs/rghm/pshamap/pshamain.html >. Accessed: February 5 2013.

———. 2008b. Guidelines for Evaluating and Mitigating Seismic Hazards in California. (Special Publication 117A), Revised 2008, Sacramento, CA.

Cao, T., W. A. Bryant, B. Rowshandel, D. Branum, and C. J. Wills. 2003. The Revised 2002 California Probabilistic Seismic Hazard Maps. Available: <http://www.consrv.ca.gov/CGS/rghm/psha/fault_parameters/pdf/2002_CA_Hazard_Maps.pdf>. Accesses February 5, 2013.

City of Folsom. 1993 (January Update). City of Folsom General Plan.

County of Sacramento. 2011. Sacramento County General Plan of 2005–2030. Amended and adopted November 9. Community Planning and Development Department. Sacramento, CA. Available: <http://www.msa2.saccounty.net/planning/Pages/GeneralPlan.aspx>. Accessed January 29, 2013.

Fugro West. 2008 (November 4). Draft Geotechnical Feasibility Report for the Proposed Expansion at Folsom State Prison, Folsom, California. Prepared for Kimley-Horn and Associates, Roseville, CA.

Gutierrez, C.I. Compiler. 2011. Preliminary Geologic Map of the Sacramento 30' x 60' Quadrangle, California. California Geological Survey.

Hackel, O. 1966. Summary of the geology of the Great Valley. Pages 217–238 in Bailey, E. G. (ed.), Geology of Northern California, California Division of Mines and Geology Bulletin 190. San Francisco, CA.

International Code Council. 1997. Uniform Building Code. Albany, NY: Delmar Publishers.

International Conference of Building Officials. 1997. Maps of Known Active Fault Near-Source Zones in California and Adjacent Portions of Nevada: To be used with 1997 Uniform Building Code. Whittier, CA.

Jennings, C.W. 1977. Geologic Map of California. Geologic Data Map No. 2. California Division of Mines and Geology. Sacramento, CA.

Jennings, C.W. and W.A. Bryant. 2010. Fault Activity Map of California. California Geologic Data Map Series, Geologic Data Map No. 6. California Geological Survey. Sacramento, CA. Available: http://www.conservation.ca.gov/cgs/cgs_history/Pages/2010_faultmap.aspx. Accessed February 5, 2013.

Natural Resources Conservation Service. 2013. Web Soil Survey. USDA NRCS. http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm. Accessed February 4, 2013.

Tokimatsu, K., and H.B. Seed. 1984. Simplified Procedures for the Evaluation of Settlements in Clean Sands. (Report No. UCB/BT-84/16.) Earthquake Engineering Research Center. University of California, Berkeley, CA.

Wagner, D.L., Jennings, C.W., Bedrossian, T.L., and E.J. Bortugno. 1981. Geologic Map of the Sacramento Quadrangle. (Regional Geologic Map No. 7A, scale 1:250000.) Sacramento, CA: California Division of Mines and Geology.

Section 3.6, Hazards and Hazardous Materials

California Department of Conservation, Division of Mines and Geology (CDC). 2000. A General Location Guide for Ultramafic Rocks in California – Areas More Likely to Contain Naturally Occurring Asbestos. Compiled By Ronald K. Churchill and Robert L. Hill. August 2000.

California Department of Forestry and Fire Protection. 2008. Very High Fire Hazard Severity Zones in LRA, As Recommended by CAL FIRE: Sacramento County.

City of Folsom. 1993 (January Update). *City of Folsom General Plan*.

EDR. *See* Environmental Data Resources.

Environmental Data Resources. 2012. The EDR Radius Map Report with Geocheck: Infill Site at CSP-Sac. Folsom Prison Road, Folsom, CA 95630.

Higgins, C.T., and Clinkenbeard, J. P. 2006. Relative Likelihood for the Presence of Naturally Occurring Asbestos in Eastern Sacramento County, California. California Department of Conservation, California Geological Survey.

Sacramento County Environmental Management Department. Environmental Compliance Division website. Available: <http://www.emd.saccounty.net/EnvComp/ EnvironmentalCompliance.html>. Accessed February 26, 2013.

Sacramento County Recording. 2005. Covenant to Restrict Use of Property: Environmental Restriction (Re: Assessor's Parcel Numbers, 071-0010-011-0000, 071-0010-010-0000, and 071-0010-007-0000, Folsom State Prison).

Section 3.7, Hydrology and Water Quality

California Department of Water Resources. 2006. California's Groundwater Bulletin 118, Sacramento Valley Groundwater Basin, South American Subbasin.

———. 2013. Best Available Map (BAM) Web Viewer. Available at: http://gis.bam.water.ca.gov/bam/. Accessed February 2013.

California Stormwater Quality Association. 2010. Best Management Practice Handbook Portal: Construction. Available at: www.casqa.org.

CASQA. *See* California Stormwater Quality Association.

Central Valley Regional Water Quality Control Board. 2010. American River Watershed Methylmercury TMDL & Mercury Control Program Information Sheet.

———. 2011. Water Quality Control Plan (Basin Plan) for the Sacramento River and San Joaquin River Basins. Available at: http://www.waterboards.ca.gov/centralvalley/water_issues/basin_plans/sacsjr.pdf.

EPA. *See* U.S. Environmental Protection Agency.

Federal Emergency Management Agency. 2013. FEMA's Map Service Center (MSC) http://msc.fema.gov/. Accessed February 2013.

City of Folsom. 1993 (January Update). City of Folsom General Plan.

PRISM. 2013. PRISM Climate Group, Oregon State University, http://prism.oregonstate.edu. Accessed January 2013.

Sacramento Area Flood Control Agency. 2003. Long-Term Reoperation of Folsom Dam and Reservoir, Final Environmental Assessment. Sacramento, CA.

Sacramento Coordinated Water Quality Monitoring Program. 2011. Receiving Water Monitoring Annual Data Review 2010-2011. Prepared by Larry Walker Associates and Laboratory Delta Consultants, Inc.

Sacramento Groundwater Authority. 2011. Groundwater Level Monitoring Plan for the Sacramento Groundwater Authority CASGEM Well Network.

State Water Resources Control Board. 2009a. Order 2009-0009-DWQ, NPDES General Permit No. CAS000002: National Pollutant Discharge Elimination System (NPDES) California General

Permit for Storm Water Discharges Associated with Construction and Land Disturbance Activities. Updated by Order 2010-0014-DWQ. Available at: http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml.

———. 2009b. Recycled Water Policy. Available at: http://www.waterboards.ca.gov/water_issues/programs/water_recycling_policy/docs/recycledwaterpolicy_approved.pdf.

———. 2009c. Resolution No. 2009-0011 Adoption of a Policy for Water Quality Control for Recycled Water. Available at: http://www.waterboards.ca.gov/board_decisions/adopted_orders/resolutions/2009/rs2009_0011.pdf.

———. 2009d. Statewide General Permit for Landscape Irrigation Uses of Municipal Recycled Water. Available at: http://www.waterboards.ca.gov/water_issues/programs/water_recycling_policy/docs/wqo_2009_0006_general_permit.pdf.

———. 2010. U.S. Environmental Protection Agency Approved List of California Statewide 2008 - 2010 303(d) Impaired Water Bodies. Available at: http://www.swrcb.ca.gov/centralvalley/water_issues/tmdl/impaired_waters_list/2008_2010_usepa_303dlist/20082010_usepa_aprvd_303dlist.pdf.

SWRCB. *See* State Water Resources Control Board.

U.S. Environmental Protection Agency. 2011. U.S. Environmental Protection Agency's Final Approval Letter and Enclosure for California's 2010 303(d) List. Available at: http://www.swrcb.ca.gov/centralvalley/water_issues/tmdl/impaired_waters_list/usepa_apprvl_ltr_final.pdf.

Section 3.8, Land Use, Agriculture and Forestry Resources

California Department of Conservation, Division of Land Resource Protection. 2012 (January). Farmland Mapping and Monitoring Program. Sacramento County Important Farmland 2010.

City of Folsom. 1993. City of Folsom General Plan. January.

_____. 2007. City of Folsom Zoning Map. Available at: http://www.folsom.ca.us/depts/community_development/planning/zoning.asp

Section 3.9, Noise

Airport Land Use Commission for Sacramento, Sutter, Yolo, and Yuba Counties. 1997 (May). *Mather Airport Comprehensive Land Use Plan*. Sacramento, CA.

American National Standard Institute. 2006. *American National Standard Specification for Sound Level Meters, ANSI S1.4-1983-2006*. New York, NY.

ANSI. *See* American National Standard Institute.

Ascent Environmental. 2013. *Ambient Noise Measurement Surveys*. Sacramento, CA.

Brown and Buntin Associates. 1988 (October). *26.0 Noise Element*. Visalia, CA.

Burge, Paul L. 2002 (August). *The Power of Public Participation, Inter-noise 2002*. Dearborn, MI.

California Department of Transportation. 1998 (October). *Technical Noise Supplement*. Sacramento, CA.

———. 2002 (February 20). *Transportation Related Earthborne Vibrations*. Sacramento, CA.

———. 2004 (June). *Transportation and Construction Induced Vibration Guidance Manual*. Sacramento, CA.

———. 2007 (December). *2006 Average Annual Daily Truck Traffic on the California State Highway System*. Sacramento, CA.

———. 2009 (November). *Technical Noise Supplement*. Sacramento, CA.

Caltrans. *See* California Department of Transportation.

Code Publishing Company. 2008 (November). *Folsom Municipal Code*. Seattle, WA.

Department of Environmental Review And Assessment. 2007 (July). *Final Environmental Impact Report: Sacramento International Airport Master Plan*. Sacramento, CA.

EDAW. *McClellan Air Force Base Final Reuse Plan*. Los Angeles, CA.

Egan, M. D. 1972. *Concepts in Architectural Acoustics*. McGraw-Hill, Inc.

EPA. *See* U.S. Environmental Protection Agency.

Fastl, Hugo et. al. 2006 (December). *Loudness-thermometer: Evidence for Cognitive Effect?, Inter-noise 2006*. Honolulu, HI.

Federal Highway Administration. 1978 (December). *Federal Highway Traffic Noise Prediction Model FHWA RD 77-108*. Washington DC.

———. 1998 (February). *FHWA RD Traffic Noise Model (FHWA TNM®) Technical Manual. FHWA-PD-96-010*. Washington DC.

———. 2006 (January). *Roadway Construction Noise Model Version 1.0 (FHWA RCNM V. 1.0)*. Washington DC.

Federal Interagency Committee on Aviation Noise. 1992. *Federal Agency Review of Selected Airport Noise Analysis Issues*.

Federal Transit Administration. 2006 (May). *Transit Noise and Vibration Impact Assessment*. Washington, DC. Prepared by: Harris Miller Miller & Hanson Inc., Burlington, MA.

Fehr and Peers. 2013. *Traffic Impact Analysis for CDCR Infill Housing - FSP-SAC*. Roseville, CA.

FHWA. *See* Federal Highway Administration.

FICON. *See* Federal Interagency Committee on Noise.

FTA. *See* Federal Transit Administration.

Governor's Office of Planning and Research. 2003. *General Plan Guidelines*. Pages 250-251. Sacramento, CA.

ICF Jones and Stokes. Noise, *CHCF-Folsom Draft EIR*. Sacramento, CA.

International Organization for Standardization. 1996 (December). *Acoustics - Attenuation of Sound During Propagation Outdoors*. Switzerland.

ISO. *See* International Organization for Standardization.

U.S. Army Corps of Engineers. 1999 (May). *The Small Arms Range Noise Assessment Model (SARNAM)*. Engineer Research and Development Center /Construction Engineering Research Laboratory (ERDC/CERL) Champaign, IL

U.S. Environmental Protection Agency. 1971 (December). *Noise from Construction Equipment and Operations, Building Equipment, and Home Appliances.* Washington, DC.

Section 3.10, Public Services

California Department of Corrections and Rehabilitation. 2012. Folsom Women's Facility Project: Initial Study Proposed Negative Declaration. Prepared for California Department of Corrections and Rehabilitation. Sacramento, CA. August 2012.

———. 2010a. Prison Facilities: California State Prison, Sacramento (SAC). Available at: http://www.cdcr.ca.gov/Facilities_Locator/SAC-Institution_Stats.html. Accessed February 21, 2013.

———. 2010b. Prison Facilities: Folsom State Prison (FSP). Available at: http://www.cdcr.ca.gov/ Facilities_Locator/FSP-Institution_Stats.html. Accessed February 21, 2013.

CDCR. *See* California Department of Corrections and Rehabilitation.

City of Folsom. 1993 (January Update). City of Folsom General Plan.

———. 1996. *City of Folsom Parks and Recreation Master Plan*. Update – May 28, 1996. Prepared by RJM Design Group, Inc. and Williams Kuebelbeck & Associates.

———. 2013a. City of Folsom Police Department. Available at: http://www.folsom.ca.us/depts/police/ default.asp. Accessed February 21, 2013.

———. 2013b. Department Staffing. Available at: http://www.folsom.ca.us/depts/fire/about_folsom_fire/ staff.asp. Accessed February 21, 2013.

———. 2013c. Emergency Medical Services. Available at: http://www.folsom.ca.us/depts/fire/services/ emergency/default.asp. Accessed February 21, 2013.

Folsom Cordova School District. 2013. Welcome to our District. Available at: http://www.fcusd.org/ domain/739. Accessed February 21, 2013.

Mercy Hospital. 2012. Fast Facts: Mercy Hospital of Folsom 2012.

San Juan Unified School District. 2013. About San Juan. Available at: http://www.sanjuan.edu/ about.cfm?subpage=1. Accessed February 21, 2013.

Section 3.11, Transportation

AECOM. 2010. *Folsom South of U.S. 50 Specific Plan Project Draft EIR/EIS*.

California Department of Transportation (Caltrans). 2012. *California Manual on Uniform Traffic Control Devices.*

———. May 2009.*US 50 Corridor System Management Plan*.

———. December 2002, *Guide for the Preparation of Traffic Impact Studies*.

City of Folsom. 1993 (January Update). City of Folsom General Plan.

———. Parks and Recreation Department. 2012. Bike Map. http://www.folsom.ca.us/depts/parks_n_recreation/bike_trails/bike_map.asp.

County of Sacramento. 2004. *Traffic Impact Study Analysis Guidelines*.

Fehr & Peers. 2011. *Island at Parkshore Drive Residential Project Transportation Impact Study*.

———. 2013. Traffic Impact Analysis for Level II Infill Correctional Facilities at Folsom State Prison/California State Prison, Sacramento. Rocklin, CA.

Sacramento Area Council of Governments, 2011. *2035 Metropolitan Transportation Plan/ Sustainable Communities Strategy (MTP/SCS).*

Transportation Research Board. 2000. *Highway Capacity Manual*. Washington, D.C.

Section 3.12, Utilities

California Department of Corrections and Rehabilitation (CDCR). 2012. Folsom Women's Facility Project: Initial Study Proposed Negative Declaration. Prepared for California Department of Corrections and Rehabilitation. Sacramento, CA. August 2012.

California Department of Water Resources. 1994 (October). California Water Plan – Bulletin 160-93.

———. 2005 (December). California Water Plan – Bulletin 160-05.

Intergovernmental Panel on Climate Change. 2001: Climate Change 2001: Mitigation - Contribution of Working Group III to the Third Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) [Metz, B., O. Davidson, R. Swart, and J. Pan (eds.)]. Cambridge University Press, Cambridge, 700 pp.

———. 2007 (February). Climate Change 2007: The Physical Basis. Contribution of Working Group I to the Fourth Assessment Report of the IPCC. Geneva, Switzerland. Available: <http://www.ipcc.ch/ipccreports/ar4-wg1.htm>.

Kimley-Horn. 2009. Advanced Utility Planning Report – Proposed Prison Medical Facility at Folsom Prison.

Kiparsky, M. & Gleick, P. H. 2005. Climate change and California water resources. *In the World's Water 2004-2005*. Gleick, P. H. (ed.). Island Press, Washington, DC.

Roos, Maurice. 2005. Accounting for Climate Change.

Sacramento Regional County Sanitation District (SRCSD) 2012. Our Regional Sewer System. Sacramento County, CA.

Vanir Construction Management. 2012. *Water Consumption and Wastewater Flow at FSP/SAC Infill Site*.

Section 3.13, Visual Resources

California Department of Parks and Recreation. 2007. *Folsom Lake State Recreation Area and Folsom Powerhouse State Historic Park General Plan/Resource Management Plan*. Volume 1, Preliminary Plan. November.

City of Folsom. 1993 (January Update). *City of Folsom General Plan*.

Federal Highway Administration. 1988. *Visual Impact Assessment for Highway Projects*.

CHAPTER 4, CUMULATIVE IMPACTS

No references cited.

CHAPTER 5, OTHER CEQA CONSIDERATIONS

No references cited.